



**COMPARISON AND ADAPTATION OF SOCIAL
CHANGE DYNAMICS FOR THE COLLECTIVE
ABANDONMENT OF OPEN DEFECATION REPORT**



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Executive Summary

Introduction

Sanitation is a basic condition for development. Improved sanitation is important because it makes human health better, promotes economic and social development and also helps the environment (Eade and Williams, 1995). The identification of waste management as integral to sustainable urban development is increasingly recognized by the international aid and development community (Ali and Saywell, 1996). This is because total sanitation in Africa faces lots of challenges which are related to the behaviour of the populations both in rural environments as well as deprived urban settings (peri-urban areas). Examples of the challenges are lack of infrastructure, indiscriminate disposal of waste water in public places, lack of control for the collection and treatment of waste and more importantly open defecation. The effects of open defecation are many. It does not only affect the ground water but remains one of the essential causes of diseases like bilharzias, tuberculosis and other respiratory diseases.

The experience of poor nations such as Ghana shows that the physical provision of services (toilets, KVIPs, refuse disposal containers, etc) alone is not a sufficient pre-condition for sustainability or improvement of health and well being of people. Greater attention needs to be focused on elements of behavioral change and sustainability through user participation in planning, implementation, management and cost sharing.

WaterAid Ghana, as part of its contribution to attaining total sanitation in West Africa in general and Ghana in particular, commissioned the present study in order to identify key strategies and actions that can be adapted for complete and collective abandonment of open defecation. The study is part of a bigger study covering four nations: Burkina, Ghana, Mali and Nigeria. The specific objectives of the study were:

1. To understand the nature of social dynamics in urban environment
2. To identify the factors of social change of the various ethno linguistics groups
3. To investigate the means of promotion for a collective abandonment of open defecation
4. To examine the ways and means of promoting hygiene in rural and peri-urban areas, and,
5. To identify the actions required for the development of communities.

Methodology

The approach was participatory in nature involving the combination of several techniques to achieve the above varied objectives. The study was conducted in three regions (Eastern, Northern and Upper West) of Ghana. Four districts were sampled: Two districts, Tamale Metropolis Metropolitan Assembly and Gushegu Districts in the Northern Region, Kwahu North District in the Eastern Region and Wa East District in the Upper West Region. In all, a total of 2,864 respondents were interviewed across all four districts. The target respondents were household heads, members of community based organisations (CBOs), opinion leaders¹, NGOs operating in the

¹ The inclusion of opinion leaders was to enable the capitalisation of good practices.

communities and members of community project implementation groups or committees (e.g., Water and sanitation committees). The specific techniques employed for data collection were:

- i. Interviews involving the administration of questionnaires to sampled household respondents
- ii. Desk studies: This involved a review of relevant literature on open defecation
- iii. Observation of household and school environment with emphasis on sanitary practices
- iv. Focus group discussions with opinion leaders, members of CBOs and community project implementation groups.

The data analysis approach combined both qualitative and quantitative (statistical) data analysis techniques. Analysis of data was done by the use of Statistical Package for Social Scientist (SPSS) computer software which involved a careful matching of study objectives and expected outcome.

Major Findings

National sanitation policy

The national sanitation goal has been to improve access to safe water supply and sanitation and to reduce the proportion of population without access to basic water supply and sanitation by 50% by 2015 and 75% by 2025 (MLGRDE, 2007).

Emphasis is placed on the need to ensure systematic collection of data on wastes from all sectors of the economy to support relevant research and development to meet the challenges of managing wastes associated with the growing economy in terms of urbanization. The policy supports building partnership with the private sector within an expanded network of actors through effective public sector facilitation and coordination. The sanitation policy of Ghana therefore operates around capacity development, information, education and communication, legislation and regulation, levels of service and sustainable financing and cost recovery. The rest are research and development and monitoring and evaluation.

State Structures intervening in sanitation

The institutions concerned with implementing environmental sanitation policy have been divided into the “principal sector agencies” with direct responsibility for aspects of environmental sanitation, and the “allied sector agencies” which play a supporting role. The MLGRDE is the lead sector agency. Its functions include co-ordination and formulation of environmental sanitation policy including monitoring and evaluation, developing and issuing technical guidelines on environmental sanitation services and their management, promulgation of national legislation and model bye-laws, direction and supervision of the National Environmental Sanitation Policy Coordination Council (NESPoCC) and facilitating the mobilization of funds for sector plans and programmes.

NESPoCC is made up of representatives from relevant Government agencies, NGOs and private sector groups. NESPoCC is responsible for coordinating policy and ensuring effective communication and co-operation between the many different agencies involved in environmental sanitation, within the context of a coherent national programme, expediting implementation of the national environmental

sanitation policy and overseeing the preparation of a national strategy and its related financing plan. Within MLGRDE, the Environmental Health and Sanitation Directorate (EHSD) and the Regional Environmental Health Offices (REHOs) play leading roles in supporting environmental sanitation. The Assemblies also carry out five distinct functions with respect to environmental sanitation.

NGOs intervening in sanitation

NGOs and other civil society organizations (CSOS) help to increase understanding on the framework for the measurement and monitoring of outputs towards water and sanitation². Importantly, NGOs/CSOs in sanitation sector act to strengthen collaboration with similar civil society initiatives at the international level, especially in Africa and within the Commonwealth. Prominent among these are the group of NGOs in water and Sanitation (CONIWAS). Examples are PRONET, APDO, NewEnergy, Church of Christ Rural Water Project. Others are Community Life Improvement Project (CLIP) and Ghana Young Artisans Movement.

Socio-economic characteristics

1. The economic activities in the sampled districts fall within the traditional three main sectors (agriculture, industry and services) of the Ghanaian economy with majority employed in the agricultural sector.
2. Tamale Metropolis harbours Dagombas (72.3%), Mamprusi (9.1%), Gonja (6.3%), Ashanti/Akan (6.3%) and Hausa (3.5%). In Gushegu District, about 54% of the respondents are Dagombas followed by Konkombas (27.4%) and Mamprusis (9.7%). The population in the Wa East district has a close distribution among the major ethnic groups in the district (Chakala (21.1%), Sissala (20.8%), Wala (27.9%), Dagarti (16%) and Lobi (7.7%)). The Ewe ethnic group is the majority of the population of the Kwahu North district contributing to over 50% of the district's total population. Other significant ethnic groups in the district are the Ashanti (27.5%) and Fante (10.1%).
3. The main religion in Northern Region is Islam whereas Catholics dominate in the Upper West region.
4. Majority of those who have had at least a diploma qualification live in urban Tamale.
5. Adult literacy rates for males and females in the Tamale Metropolis are 55% and 35%, respectively, and 18.5% (males) and 7.6% (females) in the Gushegu district. The rest are 25% (males) and 50% (females) in the Wa district and 50% (males) and 34.1% (females) in the Kwahu North district. Thus, adult literacy rate for male is relatively high in all districts except in Wa East district. In terms of gender, enrolment for boys is also high in Tamale Metropolis, Gushegu and Wa East districts compared with Kwahu North district. Female enrolment at JSS in Kwahu North district is also relatively high compared to their male counterparts whereas the rest of the districts record high JSS enrolment for boys.

² The District Assemblies also play significant role in coordinating the work of NGOs and CSOs in the promotion of water and sanitation.

6. About 45% of all Ghanaians spend their annual income on food and beverage. This is followed by alcohol and tobacco and then clothing.
7. Bicycle is owned largely by people living in rural areas (Gushegu, Wa East and Kwahu North). The ownership of household assets that are electricity dependent (refrigerator, fan, video player, TV, tape recorder, etc) is common in urban Tamale.
8. Radio broadcast is the main source of information about health for the sample respondents. About 73% of respondents in Tamale Metropolis, 29% in Gushegu, 47% in Wa and 29% in Kwahu North said they derive information of health issues on the radio. Radio broadcasts and announcements are termed as an effective in information dissemination on health issues. Next to radio as a source of health information was identified as health providers. Other sources of information are community leaders, CBOs, women groups and community committees.
9. The Assembly person is seen described as the most influential person in the communities. Together, chiefs and Assembly persons are critical change agents in the communities and any intervention which has them as target can be successful.
10. On average, 16% of the respondents complained that they have no jobs.

Water, hygiene and sanitation

11. The use of water closet (WC) is common in urban Tamale because water is relatively available compared with other districts which are of rural nature. About 47% of respondents in Kwahu North rely on pit latrines as sanitation infrastructure. Majority (42%) of respondents who use public toilets live in Tamale Metropolis. Those without any toilet facility constitute about 36% in Tamale Metropolis, 90% in Gushegu, 64% in Wa East and 29% in Kwahu North . Less than 10% of the sampled population use improved toilet facilities in Ghana (MLGRDE, 2007)³. There is also an uneven distribution of improved toilet facilities between urban and rural districts across the country and nearly all respondents without a toilet facility resort to indiscriminate disposal of wastes, particularly human excreta.
12. Indiscriminate disposal of liquid waste together with poor drainage system in the districts result in water logging and stagnant pools thereby posing health threats in to lives of the communities. Almost 95% of households dispose of liquid waste onto streets, gutters or compounds and only 5% utilize sewerage system. Streets, compounds, bush, etc are the major recipients of liquid waste in the four regions implying that open defecation is high in those regions. Whereas non-availability of toilet facilities may be the major factor limiting accessibility to improved sanitation (e.g., use of toilet facilities like WCs) in the rural districts non-availability of water is the main reason restricting factor for using WCs in Tamale Metropolis. The scarcity of water in the area suggests

³ This percentage is higher (about 63%) when those who share toilet facilities are included in the definition.

that total sanitation cannot be attained by the provision of sanitation facilities that are water dependent (e.g., WCs).

13. Pipe borne water is the main source of drinking water in Tamale Metropolis⁴. The supply of pipe borne water in the rest of the districts is limited. This is largely attributed to unavailability of such facility in the rural districts. For instance only 22.3%, 4.9% and 2.3% of the respondents drink pipe borne water in Wa East, Kwahu North and Gushegu, respectively. With the exception of Tamale Metropolis, majority of the respondents in the remaining three districts rely on wells, bore holes, spring, rivers/streams and dug outs as their sources of drinking water. Generally, water from these sources have low quality due to lack of treatment as is the case for pipe borne water. And because majority of the respondents practice indiscriminate waste disposal and for that matter open defecation, the quality of most water sources (wells, rivers, dug outs, etc) are threatened. The implication is that the people of Gushegu, Wa East and Kwahu North are more prone to diseases emanating from contamination as a result of open defecation.
14. On average, about 25% of all respondents said they wash their hands with soap after toilet. Respondents also clean around their environments but this is common in the Wa East district.
15. Household solid wastes are collected, burnt, dumped at public sites, dumped elsewhere or buried. Generally, burning or burying of wastes is minimally practiced with indiscriminate disposal accounting for 27%, 76%, 56% and 49%, respectively in Tamale Metropolis, Gushegu, Wa East and Kwahu North districts. About half of the respondents practice uncontrolled solid waste disposal. Other forms of waste disposal behaviours include throwing wastes into the bush, gutter or behind the house, abandonment of waste on the compound and in uncompleted buildings. On average, 40% and 47% of all respondents resort to the bush or gutter (and behind the house) as ways of disposing of solid wastes. Bad sanitary behaviour is a national problem. This problem is largely attributable to the lack of awareness about, and understanding of the linkages between unsafe excreta disposal and its health impact leading to diarrhoea, cholera, malaria and other diseases.

Recurrent illnesses

16. Poor sanitary conditions account for most of the diseases (e.g. malaria, diarrhoea, skin disease, etc). The most recurrent diseases in the study area are malaria, upper respiratory tract infection, hypertension and diarrhoea. Malaria tops the list of recurrent illness. Malaria is widespread and persistent in Ghana and accounts for about 42% of all recurrent diseases in the country (MoH, 2008). Similarly, the main problems confronting communities in the sampled districts include pollution (air and water), poor state of health facilities, frequent outbreak of communicable diseases, lack of educational facilities, lack of infrastructure for sanitation, unemployment among others. The main problem in urban Tamale is pollution of air and water followed by inadequate infrastructure for sanitation. The problem with absence of

⁴ The definition of pipe borne water includes mechanised systems.

educational infrastructure (schools, libraries, etc) remains a rural problem affecting Gushegu, Wa East and Kwahu North districts.

17. Most people want toilets for reasons of convenience, privacy and status, rather than ensuring good sanitation or prevention of diseases leading to death. Empirical studies show that improved sanitation habits lead to reduction in sickness and health expenditure and enhanced personal hygiene (GYAM, 2008).

Ethnic Groups and Open Defecation

18. The major ethnic groups that practice open defecation in Northern region are the Dagombas, Mamprusis, Konkombas and Gonjas whereas the Akans and Ewe do the same in the Eastern region. In the Upper West region, Chakala, Sissala, Wala, Dagaati and Lobi constitute the main ethnic groups practising open defecation. Generally, open defecation is practiced widely in societies because it is costless. Another reason is that there is lack of effective regulatory policies as well as incentives for self discipline.
19. There is the need for the project to build on the good practices such as regular clean up exercise, solid waste burning/burial and active the influential role of Assembly persons in community mobilisation. Other good practices are the high awareness of risks associated with open air defecation and the existence of WATSAN committees in the communities as well as effective tools of communication (use of *gong gong*).
20. Women are mostly directly concerned with water and sanitation matters at the household level. The argument is that women possess more managerial skills and experience in services at a neighbourhood level related to health and food. There is the need to consciously involve women in the process.

Socio-Economic Factors that Promote Open Defecation

21. Literature has shown that the technical feasibility of a particular sanitation system depends on cost and affordability, communal or household facilities, ground conditions, population density, upgrading potential, reuse of waste, anal cleansing materials, timing and maintenance. Waste disposal habits or behavior in poor countries are highly determined by climate, housing conditions, existing levels of service, effectiveness of regulations and cultural practices (Karl (2007).
22. The socio-economic determinants of open defecation in the study are many. The first is indiscipline. Indiscipline is an attitudinal problem involving people being careless. The next is poverty. Majority of the respondents cannot afford to construct improved ways of waste disposal because they are poor. Poor people live as sick people because they live in poor environments. Open defecation in the study area is also as a result of inability of state structures responsible for promoting sanitation at public places to provide the requisite facilities or maintaining the existing ones. Yet the laws enjoining landlords to provide sanitation facilities are not being enforced.

Socio-Cultural Factors Responsible for Open Defecation

23. Karl (2007) documented that open defecation is stimulated by four social conditions. These are: i) conditions where people are very healthy with little diarrhoea, ii) where there is socially divided community with low cohesion, iii) where there is a weak tradition of joint action, and, iv) where women have little voice. On the contrary, sampled respondents indulge in open defecation because of the belief that visiting a public toilet or so will cause one to be possessed by demons or lose your magical powers. Others said they engage in it because they want to protect their bodies from bad odour or smell (after using toilet).
24. Over 70% of the respondents agree that open defecation has advantages. The argument is that open defecation poses health hazards and can lead to an outbreak of diseases. Again, that it is dehumanizing because one's privacy can be exposed.
25. Majority of the respondents think that the provision of toilets to every household is useful for attaining total sanitation. Nevertheless, enacting laws and bye laws and education of the general public by sanitary officers are equally important. Education and advocacy involving the use of radio and television is useful. Religious leaders and unit committee members also have roles to play.
26. Communication strategies are similar in all sampled communities. The mechanisms of communication include radio, chiefs/elders, community leaders (Village Development Chair persons, Assembly persons, etc), members of CBOs, women leaders, community committees, etc). The use of 'gong-gong' is the commonest technique of communication. Others are the organisation of community durbars, meetings (mostly in the evenings) and festivals.

Capitalisation of Good Practices

27. Capitalisation of a good practice is based on the type and quality of the practice. Good practices can be largely derived from the experiences of community opinion leaders, NGOs, members of community based organisations (CBOs) and members of community project implementation groups.
28. In so far as behaviour change is concerned, a powerful entry point to initiate a community led process is Community Led Total Sanitation (CLTS) that focuses on igniting a change in sanitation behaviour rather than constructing toilets. It does this through a process of social awakening that is stimulated by facilitators from within or outside the community. It concentrates on the whole community rather than on individual behaviours. CLTS concentrates on ending open defecation as a first step and entry point in changing behaviour. It starts by enabling people to do their own sanitation profile through appraisal, observation and analysis of their practices of open defecation and the effects these have. This kindles feelings of shame and disgust, and often a desire to stop open defecation and clean up their neighbourhood.

Comparison of dynamics and forces of change of socio linguistic groups to the factors of success of programmes evaluated

29. Governance is involvement of local populations and all actors in the management of territory with the goal to optimize the chances of success of local development programs. So, it is necessary to integrate a maximum of actors and to increase partnerships.
30. Individual users are the ultimate decision-makers in accepting or rejecting a new practice or a new technology. This is particularly so when the ethnic groups concerned have different cultures in terms of religion and behaviour. However, though different cultures, the behaviour or attitude about sanitation appears to be the same for all identified ethnic groups (they all practice open defecation).
31. Women natural leaders tend to be less visible than their male counterparts in latrine construction but more active and responsible in their maintenance, establishing usage norms, and sustaining hygienic behaviour change. Women natural leaders often take over the toilets.
32. The role of authorities into strengthening control and safeguarding the environment cannot be over emphasised. There is the need to work with such authorities (e.g., Ministry of Health, Ministry of Local Government and Rural development, District Assemblies, etc) into strengthening control and safeguarding environment.

Replicability of factors of success and proposition of a strategy to be adopted to total sanitation

Poverty should not be an inhibiting factor in eliminating open defecation. Attitude or behaviour is the bottom line of the matter and the adoption of any single factor should be considered based on the extent to which it can bring about change in behaviour. The change in behaviour is necessary because man can never benefit by acting against nature but he can benefit only by co-operating with nature (Korem, 1973). Total elimination of open defecation should be targeted in two phases. Phase one must concentrate on changing peoples' behaviour and attitude whereas the second Phase must consider facilitating the provision of sanitation facilities (household toilets, soakaways, etc) to beneficiary communities. During the first Phase of the Project emphasis should be placed on:

- ♣ Conducting a Baseline Study
- ♣ Carrying out education and sensitisation. This can be achieved through first community meetings and workshops. Chiefs, Assembly persons, men and women leaders, youth leaders should be part and must be seen as key players in the education and sensitisation process. Minority ethnic groups should also be involved in the planning of the education and sensitisation activities through implementation and evaluation.
- ♣ Capacity building
- ♣ Partnership/collaboration

- ♣ Advocacy
- ♣ Participatory approach and households
- ♣ Participatory development
- ♣ Mainstreaming gender
- ♣ Rights-based approach
- ♣ Establish dissuasive elements for bad behaviours
- ♣ Ensuring sustainability
- ♣ During the second phase, WaterAid should facilitate the provision of physical sanitation facilities such as household toilets, soakaways to communities as well as the documentation and dissemination of project implementation experiences (films, reports, publications, etc).

Proposition of a communication approach to support a social convention for the total and collective abandonment of open defecation

Communication should be targeted at circulation of information to the local actors. The project should initiate an information sharing and communication plans at district level. It is important to provide periodic (e.g., monthly, annual) reports to local people as well as having documentary films on the project activities allowing the popularization of the approach and developed actions and good practices registered with the program. Though awareness raising and training are both relevant approaches to ending open air defecation the involvement must go beyond training and information and sharing to the various stakeholders identified. It would be relevant to build a representative and influential group such as the WATSAN Committee which must be well prepared (sensitised and trained) to stand as champion of the process and gradually sensitise their peers. The project could build on existing WATSAN Committees, Parent Teacher Association (PTA) and School Management Committees (SMCs) in the various communities or establish new ones in communities where these committees do not exist. The Assembly person is the most influential person in the community and should therefore be part of the WATSAN committee system.

Acronyms

APDO	Kwahu North Development Organisation
BFM	Bushfire Management
BURN	Bushfire and Rural Livelihoods in Northern Ghana
CBFM	Community Bushfire Management
CBOs	Community based organizations
CLIP	Community Life Improvement Programme
CLTS	Community Led Total Sanitation
CSIR	Council for Scientific and Industrial Research
CSOS	Civil Society Organization
CWSA	Community Water and Sanitation Agency
DAs	District Assemblies
DCD	District Coordinating Director
DCE	District Chief Executive
DRA	Demand Response Approach
DWD	District Assembly level, the District Works Department
EDUGs	Enterprise Development User Groups
EHSD	Environmental Health and Sanitation Directorate
EPA	Environmental Protection Agency
GDCA	Ghana Developing Communities Association
GDHS	Ghana Demographic Health Survey
GPRS	Ghana Poverty Reduction Strategy
GSS	Ghana Statistical Service
GYAMGhana	Young Artisans Movement
HDWs	Hang Dug Wells
ITI	International Trachoma Initiatives
JSS	Junior Secondary School
KVIP	Kumasi Ventilated Improved Pit
LNGO	Local Non-Governmental Organization
MDGS	Millennium Development Goals
MMDAs	Metropolitan, Municipal and District Assemblies
MoFEP	Ministry of Finance and Economic Planning
MoH	Ministry of Health
MOWAC	Ministry of Women and Children
MP	Member of Parliament
MWRWH	Ministry of Water Resource, Works and Housing
NCWSP	National Community on Water and Sanitation Programme
NESPoCC	National Environmental and Sanitation Policy Coordinating Council

INTRODUCTION

Sanitation is a basic condition for development. Sanitation covers the control of public water supplies, excreta and wastewater disposal, refuse disposal, control of vectors of disease, housing conditions, food supplies and handling, atmospheric conditions, and the safety of the working environment. Sanitation is a way of life and a quality of living that can be expressed in a clean home, office, industries, etc. Also, sanitation may specifically be looking at food hygiene, control of straying animals, cleaning of market and public places and the collection and sanitary disposal of waste. Improved sanitation is important because it makes human health better, promotes economic and social development and also helps the environment (Eade and Williams, 1995).

The identification of waste management as integral to sustainable urban development is increasingly recognized by the international aid and development community (Ali and Saywell, 1996). This is because total sanitation in Africa faces lots of challenges which are related to the behaviour of the populations both in rural environments as well as deprived urban settings (peri-urban areas). Examples of the challenges are lack of infrastructure, indiscriminate disposal of waste water in public places, lack of control for the collection and treatment of waste and more importantly open defecation. The effects of open defecation are many. It does not only affect the ground water but remains one of the essential causes of diseases like bilharzias, tuberculosis and other respiratory diseases.

Pathak (1999) observed that modern civilization has increased rather than lessened the problem of scavenging and open defecation. The implication is that bringing about effective and sustainable changes in sanitation practices involves much more than good engineering. It often requires changes in human behaviour. The explanation is that if sanitation is to be effective and sustainable it must come from the *people* and must be nourished by *knowledge*. More importantly, hygienic disposal of wastes, particularly human excreta should be the underlying objective of all sanitation programmes (Pathak, 1999).

CONTEXT

Improving environmental sanitation is an important consideration in Ghana's Poverty Reduction Strategy (GPRS II)⁵. In over all terms, the aim of the government is to ensure that all Ghanaians irrespective of their socio-economic status or where they reside have access to basic social services such as health care, quality education, potable water, decent housing, security from crime and violence, and the ability to participate in decisions that affect their own lives. Environmental sanitation is aimed at developing and maintaining a clean, safe and pleasant physical and natural environment in all human settlements, promoting the socio-cultural, economic and physical well-being of all sections of the population. It comprises a number of complementary activities, including the provision and maintenance of sanitary

⁵ The GPRS II represents comprehensive policies, strategies, programmes and projects to support growth and poverty reduction in Ghana. The aim is to consolidate GPRS I and putting Ghana on a middle income status by 2015.

facilities, the provision of services, public education, community and individual action, regulation and legislation supported by clearly mandated institutions, adequate funding and research and development.

Environmental sanitation is among the powerful drivers of human development as it affects quality of life – improving health and rising wealth. It cuts across all sectors of the economy including those that concern health, environmental protection, improvement of human settlements and services, tourism, and general economic productivity (Ministry of Health, 2007). Sanitation analysts believe that as Ghana aspires to middle-income status by 2015, a healthier and wealthier population will tend to generate more of all waste types (domestic, commercial, institutional, industrial and hazardous). There is, therefore the need for urgent action based on a clear national strategy (policies, plans and programmes) to manage this trend, supported by sustainable financing. Addressing poor behaviour and attitude towards environmental sanitation is critical to achieving any meaningful progress. Considering the emerging challenges of locating treatment and disposal sites and based on experiences of developed economies, a desired long term outcome of improving environmental sanitation would be to take steps that will lead to incremental reduction of the proportion of the waste stream that ends up in final disposal, beginning with waste prevention and reduction from all sources, especially at household level.

It is estimated that twenty percent (20%) of households in Ghana do not have access to any form of toilet facility and may resort to free ranging whereas about 31% of households rely on public toilets. Only 22% have access to pit latrines. Seven percent (7%) of households use KVIPs and 9% have access to water closets. Despite its risk (health-threatening), about 4% of households still use pan latrines. At the household level, poor hygienic practices by individuals and communities are compounded by insufficient and ineffective hygiene education. These factors have a serious health impact (more than half of all reported diseases are related to poor environmental sanitation), with attendant social and economic costs. Pollution of water resources increases the technical difficulty and cost of providing water supplies. In addition, the sight and smell of inadequately managed wastes constitute a major discomfort to citizens and visitors to Ghana.

The experience of poor countries shows that the upsurge of urban population has far outpaced urban sanitation infrastructure. About 2.4 billion people in the developing world lack access to basic sanitation and about two-thirds of the population in developing world have no hygienic means of disposing of excreta with even a greater number lacking adequate means of disposing of wastewater (UNDP, 2002; Niemczynowicz, 1996). The UNDP reported in 2002 that 85% of wastewater generated from urban centres worldwide ends up in the environment in its untreated form.

Access to safe water and proper environmental sanitation are important determinants of healthy living. This is because the pattern in environmental sanitation indicators reflects the level of development in every society. Thus, underdevelopment is characterised by unhygienic or poor sanitation condition.

Defecation practices in every society are surrounded by cultural taboos and beliefs, which must be well understood before any sanitation programme can hope to be effective. The reason is that defecation is a private matter, which adults are unwilling to discuss. Contact with faeces, for transport to a treatment or disposal site, or in cleaning of latrines, is often limited to the lowest class or caste in society (Annand 1999). In most cultures, and most households, it is women rather than men who deal with their children's excreta. In public services, it is nurses – most of whom are women – who are expected to deal with the defecation processes of patients under their care. Gender differences and constraints, such as the requirement in some societies for women to defecate under cover of darkness, are important contributory factors to open defecation.

The Government of Ghana is committed to the principles of the MDGs, particularly with respect to MDG 7, which seeks to ensure environmental sustainability. The aim is therefore to work towards improving access to safe water supply and sanitation and to reduce the proportion of population without access to basic water supply and sanitation by 50% by 2015 and 75% by 2025. In adherence to the requirements of GPRS II Strategic Environmental Assessment (SEA) principles have been applied with due consideration to participatory engagement of stakeholders from all key sectors and ensuring sustainability of policy interventions.

OBJECTIVES OF THE STUDY

Water Aid Ghana, as part of its contribution to attaining total sanitation in West Africa in general and Ghana in particular, commissioned the present study in order to identify key strategies and actions that can be adapted for complete and collective abandonment of open defecation. The study is part of a bigger study covering four nations: Burkina, Ghana, Mali and Nigeria. The specific objectives of the study are:

1. To understand the nature of social dynamics in urban environment
2. To identify the factors of social change of the various ethno linguistics groups
3. To investigate the means of promotion for a collective abandonment of open defecation
4. To examine the ways and means of promoting hygiene in rural and peri-urban areas, and,
5. To identify the actions required for the development of communities.

METHODOLOGY

The approach was participatory in nature involving the combination of several techniques to achieve the above varied objectives. The study was conducted in three regions (Eastern, Northern and Upper West) of Ghana. Four districts were sampled: Two districts, Tamale Metropolitan Assembly and Gushegu Districts in the Northern Region, Kwahu North District in the Eastern Region and Wa East District in the Upper West Region. Data collection was facilitated by the client at the community level. The approach involved the use of four supervisors whose work ensured that data collectors did their work well. Thirty people were trained to collect the data. The field assistants were given training on the objectives of the study as well as the techniques involved in collecting data. Emphasis was placed on effective ways of community entry, self introduction and explanation of study objectives to respondents, interview techniques, note taking, observation and how to effectively organise and control focus group discussions.

Specifically, data were collected through interviews and focus group discussions. In all, a total of 2,864 households were interviewed across all four districts. A total of 1,278 respondents were visited in Tamale followed by 689, 351 and 546 in Gushegu, Wa East and Kwahu North, respectively. Twenty five communities were visited in Tamale Metropolis whereas 17 were covered in Gushegu district. The rest are 19 and 17 in Wa Est and Kwahu North, respectively. The allocation of sample sizes to each community was influenced by the population of each community for purposes of achieving representation. In addition, focus group discussions were held in all sampled communities. The target respondents were household heads, members of community based organisations (CBOs), opinion leaders⁶, NGOs operating in the communities and members of community project implementation groups or committees (e.g., Water and sanitation committees). The focus group discussions provided the opportunity to confirm responses obtained by way of interviews. It also enabled in-depth discussions of social change values. The selection of respondents was based on both purposive and simple random sampling. Purposive sampling specifically targeted the community project implementation groups or committees, opinion leaders and members of CBOs. The selection of households was random implying that all households had equal chance of being selected. Data were collected on the following:

- i. *Household heads*: socio-demographic features, household assets, good governance and organisational dynamics, water, hygiene and sanitation, recurrent illness and problems and sources of information about health.
- ii. *Members of CBOs*: Programme/project identification, organisation, good governance, communication network, health and hygiene, community features, infrastructure (school and health) and gender and marginal groups in the communities.
- iii. *Opinion leaders*: Programme/project identification, community involvement, strategies, impact assessment, challenges and lessons.
- iv. *Community Project Implementation Group*: Programme/project identification, participation, capacity building, dialogue sessions, communication, impact and challenges and lessons.
- v. *NGOs*: Programme/project identification, participation, capacity building, dialogue sessions, communication, impact, strategies, challenges and lessons.

The specific techniques employed for data collection are:

- v. Interviews involving the administration of questionnaires to sampled household respondents
- vi. Desk studies: This involved a review of relevant literature on open defecation
- vii. Observation of household and school environment with emphasis on sanitary practices
- viii. Focus group discussions with opinion leaders, members of CBOs and community project implementation groups.

⁶ The inclusion of opinion leaders was to enable the capitalisation of good practices.

The data were edited. This involved checking the total number of questionnaires allocated to each community and with respect to the number of households and gender. The editing enabled the team to check the accuracy and consistency of information on each questionnaire in relation to the research objectives. The data were also edited in order to ensure that all interview schedules or sections were completed as planned. Data entry followed data editing. A coding manual (data entry manual) was prepared to guide the data entry. All questions on the questionnaires (open and close ended) were coded.

The data analysis approach combined both qualitative and quantitative (statistical) data analysis techniques. The techniques took cognizance of the wider issues relating to project impact and sustainability and health, sanitation and water strategy. Analysis of data was done by the use of Statistical Package for Social Scientist (SPSS) computer software which involved a careful matching of study objectives and expected outcome. The information is presented in a descriptive manner using tables, percentages and pie charts together with findings from an earlier literature review report on the study.

PART ONE: NATIONAL AND LOCAL SANITATION STRATEGY

1. National sanitation policy

The national sanitation goal has been to improve access to safe water supply and sanitation and to reduce the proportion of population without access to basic water supply and sanitation by 50% by 2015 and 75% by 2025 (MLGRDE, 2007). Emphasis is placed on the need to ensure systematic collection of data on wastes from all sectors of the economy to support relevant research and development to meet the challenges of managing wastes associated with our growing economy and rapidly changing lifestyles. The policy supports building partnership with the private sector within an expanded network of actors through effective public sector facilitation and coordination.

The experience of poor nations such as Ghana shows that the physical provision of services (toilets, KVIPs, refuse disposal containers, etc) alone is not a sufficient pre-condition for sustainability or improvement of health and well being of people. Greater attention needs to be focused on elements of behavioral change of users and sustainability through user participation in planning, implementation, management and cost sharing. The need for a change within the conventional programmes is recognized by the Government and all stakeholders in the sector. The aim is to bring about changes that will ensure a transition from traditional service delivery arrangement to the one that builds on the tradition of target beneficiaries. Also, the institutionalization of strategic partnership process between the central and local Government in coordination with other organizations within the civil society is an important way of achieving a tradition-based change.

The Government is encouraging and supporting the involvement of other partners, such as non-governmental organizations (NGOs), market-oriented business organizations and similar private organizations in water and sanitation development. Strategies for improving environmental sanitation include promoting physical planning in both rural and urban areas, acquisition of land for final treatment and disposal in major towns and cities, supporting public-private partnerships in waste management and building capacity of MMDAs to better manage environmental sanitation. Further strategies to improve environmental sanitation include restricting the formation of new slums, ensuring efficient, effective management of flood control and drainage systems and promoting private sector participation in flood control and coastal protection.

The national sanitation policy provides a long-term framework for adoption and implementation of action plans of the Government. The national sanitation policy encompasses a vision for the future in the light of which programmes can be undertaken in a systematic manner (MLGRDE, 2007). The National Drinking Water Supply and Sanitation Policy has been formulated with the objective of making water and sanitation services accessible to all within the shortest possible time at a price affordable to all. The objectives of the “National Policy for Safe Water Supply and Sanitation” are to improve the standard of public health and to ensure improved environment.

For achieving these objectives, steps will be taken for facilitating access of all citizens to basic level of services in water supply and sanitation as well as *bringing*

about behavioral changes regarding use of water and sanitation. Other strategies include reducing the incidence of water borne diseases, building capacity in local Governments and communities to deal more effectively with problems relating to water supply and sanitation, promoting sustainable water and sanitation services, ensuring proper storage, management and use of surface water and preventing its contamination and taking necessary measures for storage and use of rain water ensuring storm-water drainage in urban areas.

In terms of promoting rural sanitation local government and communities have been identified as the focus of all activities relating to sanitation. All other stakeholders including the private sector and NGOs are expected to provide inputs into the development of the sector within the purview of overall government policy with District Assemblies ensuring coordination. The users shall be responsible for operation and maintenance of sanitation facilities and will bear its total cost. It is intended to make users bear increased cost of sanitation services. However, in case of hard core poor communities, educational institutions, mosques and other places of worship, the government intends to subsidize the costs partially or fully. In public toilets separate provisions shall be made for women users. Behavioral development and changes in user communities shall be brought about through social mobilization and hygiene education in coordination with the Ministries of Health, Education, Social Welfare, Information, Women & Children Affairs and NGOs, CBOs, local government bodies and other related agencies. Women shall be encouraged and supported to actively participate in decision making during planning, implementation, operation and maintenance. Alongside legislation, the national sanitation ministry plans to crack down on sanitation offenders. Working with the justice ministry, government officials plan to employ sanitation watchdogs to punish people who defecate in public spaces, who litter, or who do not maintain sanitary conditions at home by fining or arresting them.

Environmental sanitation is a public good (MLGRDE, 2007). Improper waste disposal by one individual affects all community members; mosquitoes that breed in one place may bite people in another; contamination of foodstuffs will affect all who consume them, not just the seller. Ensuring good sanitation is therefore the responsibility of all citizens, communities, private sector enterprises, NGOs and institutions of Government. All these actors have an essential part to play in maintaining a high standard of environmental sanitation, so that domestic and commercial activities have no prejudicial effect on the health or the living and working environment of others. The sanitation policy of Ghana therefore operates around the following themes:

- ♣ Capacity development
- ♣ Information, Education and Communication
- ♣ Legislation and regulation
- ♣ Levels of service
- ♣ Sustainable financing and cost recovery
- ♣ Research and development
- ♣ Monitoring and Evaluation

2. State Structures intervening in sanitation

The institutions concerned with implementing environmental sanitation policy have been divided into the “principal sector agencies” with direct responsibility for aspects of environmental sanitation, and the “allied sector agencies” which play a supporting role. The MLGRDE is the lead sector agency. Its functions include co-ordination and formulation of environmental sanitation policy including monitoring and evaluation, developing and issuing technical guidelines on environmental sanitation services and their management, promulgation of national legislation and model bye-laws, direction and supervision of the National Environmental Sanitation Policy Coordination Council (NESPoCC) and facilitating the mobilization of funds for sector plans and programmes.

The NESPoCC includes representatives from relevant Government agencies, NGOs and private sector groups. NESPoCC is also responsible for coordinating policy and ensuring effective communication and co-operation between the many different agencies involved in environmental sanitation, within the context of a coherent national programme, expediting implementation of the national environmental sanitation policy and overseeing the preparation of a national strategy and its related financing plan.

Within MLGRDE, the Environmental Health and Sanitation Directorate (EHSD) and the Regional Environmental Health Offices (REHOs) play leading roles in supporting environmental sanitation. The Assemblies also carry out five distinct functions with respect to environmental sanitation. These functions include:

Waste Management

Waste management (covering collection and sanitary disposal of wastes, including solid wastes, liquid wastes, excreta, industrial wastes, health-care and other hazardous wastes; stormwater drainage, cleansing of thoroughfares, markets and other public spaces) shall be carried out by Waste Management Departments, within Metropolitan and Municipal Assemblies, or by District Environmental Health and Management Departments of District Assemblies. They may provide the services either directly or indirectly through private contractors or franchisees. The Assemblies shall in all cases maintain an in-house capacity to provide at least twenty (20) per cent of the services directly.

Public Health Management

All other environmental sanitation tasks within Metropolitan, Municipal and District Assemblies, comprising the public health management functions (covering control of pests and vectors of disease, food hygiene, environmental sanitation education, inspection and enforcement of sanitary regulations, disposal of the dead, control of rearing and straying of animals and port-health services), shall be carried out by Environmental Health and Management Departments of Metropolitan, Municipal and District Assemblies, with private sector inputs where appropriate.

Environmental Monitoring

Within the Environmental Health and Management Department, an Environmental Protection

and Standards Enforcement Division shall, in collaboration with the EPA, be responsible for monitoring and enforcing environmental standards and regulations set by the EPA and other national regulatory agencies, and for organised and continuous public education on safeguarding the environment. This includes responsibility for monitoring the environmental impact of Assemblies' own waste management activities. Where the Waste Management Department/Division contracts, franchises or licenses private sector service providers, it shall be responsible for imposing sanctions on and correcting any infractions against environmental standards by such service providers according to the provisions of the relevant agreement or license.

Provision of Works related to Environmental Sanitation Facilities

At the District Assembly level, the District Works Department (DWD) is responsible for the provision of infrastructure facilities. The District Environmental Health and Management Departments will liaise with DWDs in preparing plans and costs for environmental sanitation facilities. District Assemblies shall regulate technologies for domestic toilets by legislation and application of the building code. Assemblies shall arrange for the provision of public facilities in central business districts, major commercial and light industrial areas, local markets and public transport terminals (lorry/bus stations). District Assemblies shall promote the construction and use of household toilets, including the conversion of pan latrines to approved types. District Assemblies shall transfer management and maintenance of all public toilets to the private sector, either by franchising existing facilities or granting concessions for the construction and operation of new ones.

Planning, Monitoring and Public Relations

As well as providing environmental sanitation services, the Assemblies shall also monitor their effectiveness, take action to resolve any problems identified, make short term and strategic environmental sanitation plans to respond to community needs and wider environmental considerations, and ensure good public relations. In smaller Assemblies, these functions may be undertaken by the head of the Environmental Health and Management Department, whilst in larger Assemblies, a small specialised unit may be established under the Waste Management Department/Division.

Functions of District Assembly Sub-Divisions

Some aspects of environmental sanitation services are supposed to be provided and managed at the local level, within the Assembly's subdivisions. For instance Sub-Metro/Zonal/Urban Councils are assigned responsibility for selected common services best rendered from the sub-district office, such as food hygiene and other inspection work, environmental sanitation education, cleansing, supervision of contractors and co-ordination, support and supervision of services within the sub-district. The Town/Area Councils provide services for the towns and adjoining villages, including:

- (a) Supervision of Assembly workers;
- (b) Supervision of the performance of contractors and franchisees;
- (c) Operation of facilities not franchised or contracted to the private sector;

- (d) Community mobilisation and fee collection;
- (e) Promoting clean-up and self-help programmes.

Roles of the Private Sector

The bulk of environmental sanitation services shall be provided by the private sector, including NGOs and community based organisations under the supervision of the Public Sector, especially the Metropolitan, Municipal and District Assemblies. The private sector shall operate within policies, regulations, supervisory and licensing arrangements set up by the public sector to promote efficiency and competitiveness.

Allied Sector Institutions and Functions

According to the Ministry of Local Government, Rural Development and Environment, the role of the following allied institutions are relevant for environmental sanitation promotion.

- a) The Ministry of Health (MoH) and the Ghana Health Service are responsible for health. They are responsible for managing and providing health data, supporting health education activities, and contributing to regulation and standard-setting for health services. They use environmental sanitation information to contribute to disease prevention and control.
- b) The Ministry of Education, Science and Sports and tertiary education institutions are responsible for hygiene education. The School Health Education Programme (SHEP) supports nation-wide education and provides Training and Learning Materials.
- c) The Ministry of Water Resources, Works and Housing (MWRWH) is the principal water sector ministry responsible for overall water policy formulation, planning, coordination, collaboration, monitoring and evaluation of programmes for water supply. The Water Directorate is the focal point for coordination of the water sector, while the Housing Directorate is the focal point for housing.
- d) The Ministry of Finance and Economic Planning (MOFEP) administers all public investments in environmental sanitation including negotiating for grants and loans.
- e) The Ministry of Trade and Industry, Private Sector Development and President's Special Initiatives (MOTI, PSD/PSI) is responsible for broad issues of trade, industries and the private sector. The ministry has oversight responsibility for the National Plastic Waste Task Force.
- f) The Ministry of Women and Children (MOWAC) is the lead agency responsible for implementing the National Gender and Children's policy. Policy issues on environmental sanitation that affect the wellbeing of women and children is within the mandate of MOWAC.
- g) The Ministry of Transportation is responsible for road-sector agencies in charge of constructing roads and associated structures such as road-side drains, bridges, culverts etc. Affiliates like the Ghana Road Transport Coordinating Council coordinates private road transport organizations.
- h) The Ministry of Harbours and Railways is responsible for water transport and navigation and regulates activities within both in-land and the coastal territory of Ghana. The Ghana Maritime Authority is responsible for regulating both in-land and marine transport and related activities.

- i) The Ministry of Energy is responsible for regulating all energy sources including renewables and waste-to-energy and its distribution.
- j) Ministry of Information and National Orientation is responsible disseminating national policies.
- k) Ministry of Food and Agriculture has responsibility for policies related to food and agriculture and farmer organizations including provision of inputs. Through its extension services it supports farmers in the application of inputs including fertilizer and compost. Revised Environmental Sanitation Policy May 2007 - 30 -
- l) Ministry of Tourism is responsible for tourism development and promotion. The ministry regulates the hospitality industry including the quality of services provided. Improved environmental amenities enhance tourism.
- m) The Environmental Protection Agency (EPA) is the regulatory agency for the protection of the environment. The functions of EPA are set out in the Environmental Protection Agency (EPA) Act, 1994 (Act 490).
- n) The Town and Country Planning Department is responsible for all land-use planning in the country. It supports DAs in physical planning of towns and provides layouts of towns that give land-use and directs development of services like roads, drainage and sewerage networks, disposal sites and water supply distribution lines.
- o) The Ghana Statistical Services (GSS) is the statutory institution responsible for demographic data and official government statistics. GSS provides coverage data on environmental sanitation services.
- p) The Hydrological Services Department (HSD) is responsible for managing information on hydrology as well as planning and design of primary drains throughout the country.
- q) The Community Water and Sanitation Agency (CWSA) of the MWRWH the lead facilitator of the rural water supply and water-related sanitation (in rural communities and small towns), and is responsible for external liaison and co-ordination of the National Community Water and Sanitation Programme (NCWSP). The key functions of CWSA are set out in the Community Water and Sanitation Agency (CWSA) Act, 1998 (Act 564).
- r) The Council for Scientific and Industrial Research (CSIR) and its member institutions support and undertake research and development activities related to environmental sanitation.
- s) The Ghana Standards Board is responsible for developing and setting quality standards for machinery and equipment.
- t) The Food and Drugs Board regulates quality of food and drugs including food hygiene.
- u) The Wildlife Division of the Forestry Commission is responsible for the regulation and management of all wetlands.
- v) The Parliamentary Committee on Local Government, Rural Development provides legislative oversight over the environmental sanitation sector.

3. NGOs intervening in sanitation

NGOs and other civil society organizations (CSOs) help to increase understanding on the framework for the measurement and monitoring of outputs towards water and sanitation. Importantly, NGOs/CSOs in sanitation sector act to strengthen collaboration with similar civil society initiatives at the international level, especially in

Africa and within the Commonwealth. The value addition is not only their wide coverage but adoption of innovative and cost effective interventions in providing sanitation, especially for rural communities. Prominent among these are the group of NGOs in water and Sanitation (CONIWAS). These NGOs/CSOs include PRONET, APDO, NewEnergy, Church of Christ Rural Water Project. Others are Community Life Improvement Project (CLIP) and Ghana Young Artisans Movement.

PRONET

PRONET-North is a national NGO with vast experience in water and sanitation in Greater Accra and Upper West Region. One innovation that PRONET-North adopted in the past has been the use of Micro-credit schemes as a means to get communities embrace latrine facilities. This was piloted in 2 DAs in Sissala and Wa in the Upper West Region. Involving no upfront payment, it involved pre-financing, mainly with support from UNICEF, International Trachoma Initiative (ITI), WaterAid. The demand for sanitation facilities rose by 500% between 2002-2005. Collection rate of 100% was achieved in many communities. In addition, no interest/Subsidy was provided for poorest households. PRONET-North in particular has provided over 350 household and institutional toilets which are benefiting thousands of poor people in the Upper West Region. The provision of these services go with the formation and training of artisans which are all part of the sustainability measures.

APDO⁷

APDO is actively involved in the promotion water and hygiene and sanitation. The vision is working in partnership with the poor and vulnerable communities to realize their full potentials towards poverty reduction. APDO assists vulnerable communities to access water. Other objectives are to promote hygiene and sanitation, to mainstream gender in terms of water and sanitation, to enhance girl child education and to building the capacity of CBOs and identifiable groups and how to initiate their development. The organisation has provided over 500 boreholes and constructed about 1000 toilet facilities in the Eastern and Northern Regions. In terms of capacity building, APDO has trained over 350 artisan to assist implement these projects in their communities as well as 50 community based hygiene volunteers. More importantly, 400 WATSAN committees have been set up and trained and are working effectively in the communities. The findings show that the organization utilizes the following strategies to achieve its objectives.

- ♣ Participatory baseline surveys carried out to know the ground truth
- ♣ Participatory data management and analysis with the community so as to tap their indigenous knowledge
- ♣ Participatory learning and action approach (PLA)

The organization faces some challenges. Examples include the difficulty in measuring change in relationship to behavior, limited resources and inaccessibility of some communities during the raining season. Despite the challenges APDO has made an impact in the communities. For instance, the organization has reported a 60% improvement in hygiene in its operational area and a 70% achievement in sanitation promotion. Over 85% of beneficiaries have also had their capacity built.

⁷ Formerly known as Kwahu North Water and Sanitation Programme.

Two valuable lessons have been learnt from the experience of APDO. One of the lessons is that baseline information is necessary for measuring project or programme impact. Another lesson is that when people have similar ethnic background the use of participatory approach becomes more effective. By the use of participatory learning and action approach with community members people begin to realize their own mistakes and so begin to change in the positive direction.

NewEnergy

NewEnergy is a local non-governmental organization (NGO) founded in 1994. The Organization's vision is *An environment of Socio-economic Prosperity where all people live in dignity*. NewEnergy works in partnership with local communities and other stakeholders to increase and improve access to social services, infrastructure and other development opportunities to the underserved in Ghana. The organization is people-focused and operates in three thematic programme areas, namely, Water & Sanitation, Energy & Environment and Micro-Enterprise Development.

An important strategy used by NewEnergy is partnership and collaboration. Communities serve as the most treasured partners of the organisation. Currently, the organisation focuses on 6 districts (Tamale Metropolis, Tolon/Kumbungu, Gushegu, Karaga and West Mamprusi) and does on-and-off activities in Zabzugu/Tatale, Yendi, Nanumba, Saboba/Chereponi, West Gonja districts. Others are Wateraid, DANIDA, UNICEF, GEF/SGP (UNDP), Oxfam GB, British High Commission (BHC) and Raleigh International. The organization also utilizes capacity building and micro enterprise development as a major strategy.

NewEnergy has made significant achievements. It has had an effective collaboration with the Tamale Metropolitan Assembly thus ensuring participation and ownership of the Project together with an effective sanitation promotion through the establishment of Sanitation Centres/Teams within the Metropolis, using a variety of latrine options. Through technical assessment, reconstruction and mechanization low-level water systems have been upgraded. This has been followed by the establishment of Enterprise Development User Groups (EDUGs) to act as Community-based Water Boards to manage the water systems. This has received recognition by the Metropolitan Assembly. Two wells have been upgraded into Small Town Water Systems in Tamale Metropolis to benefit urban status and constructed 342 household toilets. Specifically, NewEnergy has succeeded in mechanising 22 Water Systems, constructing 240 Hand dug wells, 10 Rain Harvesting tanks, 3,209 household toilets and 12 Institutional toilets. Two hundred and ten WATSANs and 11 CORPs have been trained.

Ghana Young Artisans Movement (GYAM)

The Ghana Young Artisans Movement (GYAM) is a local NGO based in Karaga district of the Northern Region of Ghana. The main aim is empowering communities for safe water and sanitation delivery. The immediate objectives are:

- ♣ To assist schools and communities to establish about 7 water points in the schools and communities in the Karaga district.
- ♣ To provide artisan and water management training to communities and schools in proper management and maintenance of the water and toilets facilities.

- ♣ To assist schools to adopt and practice proper sanitation and hygiene systems.
- ♣ To promote education and sensitisation on basic hygiene practices.

The project strategies are defined to include the provision of physical facilities (hand dug wells, water barrels or jars and toilets and soakaways⁸) to communities and their respective schools, capacity building training to target beneficiaries regarding the use and maintenance of those facilities and community education and sensitization. Another strategy exchange/learning visits by beneficiary member communities. The organisation achieved the following:

- ♣ Increased patronage because the facilities are clean and convenient for use.
- ♣ Improved living standards due to a reduction in cost of repairs
- ♣ Increased skills and knowledge in water and sanitation and environmental cleanliness
- ♣ Increased discipline leading less damages and reduced cost of repairs
- ♣ Improved community ownership of project
- ♣ Increased project sustainability
- ♣ Improved health due to reduction in disease and health expenditure
- ♣ Improved health due to reduction in disease and health expenditure
- ♣ High sense of motivation to keep the environment cleaner because of recognition by Environmental Inspectors
- ♣ Spill over effects as a result of neighbouring communities (e.g., Kupali) adopting and using environmental sanitation strategies by target communities.

Valuable lessons learnt (Best practices) in relation to open air defecation

Despite the above challenges/limitations the following important lessons are derived from the exercise.

1. The existence of WATSAN committees is useful for social mobilization and for the promotion of sanitation and personal hygiene in rural communities and schools.
2. Involvement of women in water and sanitation project increases the chances of maximum community participation as well as project sustainability. Women can also be empowered through such participation because they will be working with their male counterparts on the same platform.
3. The formulation of rules and regulations at both the community and school levels is very central for ensuring effective utilization and maintenance of basic health, education, water and sanitation facilities.
4. Schools are integral parts of communities whose roles must be seen to be having direct impact on the overall development of the communities. Thus, the involvement of say teachers in community development programmes in a way touch parents and guardians through the pupils and school level institutions

⁸ A Soakaway is a simple drainage system which involves digging of sizeable pit near bathhouses and filling (burring) them with stones which can easily absorb water. The main aim is to prevent the breeding grounds of mosquitoes and children from playing in the filths in order to reduce sicknesses.

- such as WATSAN committees, Parent Teacher Association (PTA), School Management Committees (SMCs), environmental clubs, etc.
5. The combination of direct service delivery (the provision of hand dug wells, pit latrines, water jars, etc) and community sensitisation are very potent for health promotion. The lesson is that a single strategy may not bring about the desired goal.
 6. Indeed, the outcome of every project highly depends on the strategies employed. What is equally important is the relationship that exists between the target beneficiaries and the project staff. That is, a good beneficiary-staff relationship is fundamental for the success of any project.

Community Life Improvement Programme (CLIP)

The overall development objective of CLIP is increased self-help capacity and improved livelihood for approximately 32,200 (Water Sector) and 23,000 (Micro-Credit Sector) poor and vulnerable people in Yendi, Gushegu and Karaga districts by the end of 2009. The immediate or specific objectives are stated to include:

- a. Improved water supply and water facility management, as well as improved sanitary facilities and hygiene and sanitation awareness in CLIP beneficiary communities by the end of 2009.
- b. Increased capacity of micro-credit beneficiaries with focus on women and young men to improve their socio-economic and thus political position by the end of 2009

As an integrated programme CLIP builds the capacity of all parties involved for improved livelihood of the poor and vulnerable rural people in Yendi, Gushegu and Karaga districts through self-help processes. As such, CLIP is based on a two-string strategy implementing service delivery of water and sanitary facilities and micro-credit as a platform for empowerment through training, and through the building of organisational capacity. Also, CLIP indirectly engages in and supports advocacy activities for the development of the programme area.

Water, sanitation and hygiene strategy

The CLIP Water, Hygiene and Sanitation Sector follows the National Policy on Water Supply and Sanitation. The major technology being provided consists of improved Hand Dug Wells (HDWs) fitted with hand pumps, which according to CLIP's experience has proven to be successful in relation to the geological conditions of the programme area. Also, rainwater is harvested at schools and health centres with corrugated roofs to meet water needs of the public institutions in the programme area.

For effective and efficient management of water facilities, CLIP employs Demand Response Approach (DRA) where communities apply for CLIP water facilities through the DAs. Pre-selection of beneficiary communities is done in collaboration with the DAs and according to the CLIP Systems and procedures. Hygiene and sanitation is an integral part of CLIP's water sector so as to improve the overall health status of the beneficiary communities. Interested households in CLIP water beneficiary communities are offered two **low cost** household toilets. The two toilets for each household are intended to accommodate the gender and cultural norms. School toilets are also offered to CLIP water beneficiary communities.

Participation, Capacity building and Advocacy Strategy

Participation

CLIP uses a participatory approach to development which aims at mobilising individuals and communities to take action and establish groups capable of setting priorities, implementing and assessing their own projects and activities, using their own resources. In this way CLIP uses participatory development as an educational and empowering process to assist women and men in the communities in identifying, analysing and understanding their problems, related causes and potential solutions.

For every facility provided by CLIP a local committee is set up. As regards the water, hygiene and sanitation components of the programme, the members of each beneficiary community will appoint and democratically elect preferably 4 women and 3 men to form a WATSAN committee (2 pump mechanics, 2 hygiene educators, a treasurer, a chairman and an organizer). The responsibility of the committee is to support the maintenance of the well, to ensure education on sanitation and hygiene practices and to assume responsibility for working for actual change of practices related to water and sanitation of the community members so as to improve the overall health situation of the community.

Capacity building

The capacity building at primary target group level is primarily in the form of training and takes as its point of departure the service delivery components and the participatory group approach. CLIP in cooperation with the DWST of the DAs train the WATSAN Committee members in how to ensure the contribution of the community in cash and kind for the wells and toilets, in maintenance of the wells and toilets, in how to change sanitation practices and in knowledge of health issues related to the use and handling of water, toilets and soak-aways. This training ensures that the beneficiaries can participate actively in planning and implementation of activities and ultimately take over the operation, maintenance and financial management of the facilities provided.

Lessons of CLIP Water and Sanitation Activities

1. The promotion of hygiene and sanitation practices has been the first adapter by communities in the project area for community development
2. Beneficiaries have vast knowledge in hygiene and sanitation issues
3. CLIP builds on the already existing knowledge of beneficiaries in Water and sanitation
4. Participation by providing matching fund is not fully successful as households are not able to meet their part of the fund due to poverty
5. Beliefs of beneficiaries with regards to the use of toilets vary across age and tribes. Age wise, there is the belief that younger people do not share a latrine with the older people. In terms of gender men and women do not share toilets. These beliefs of sharing a latrine is mostly found in Dagomba communities but Konkombas do not care much about this.
6. There is a good cooperation from DAs where CLIP has always been part of the district planning activities. CLIP is therefore able to make inputs into

district assembly annual plans as well as take part in reviews sessions of the districts.

7. Distribution of services has always been done with the participation of the DAs. The Assemblies provide a list of needy communities and CLIP then supply the facilities required.

PART TWO: DIAGNOSIS OF ETHNO LINGUISTIC GROUPS AND ANALYSIS OF SOCIO CULTURAL FACTORS LINKED TO THE PRACTICE OF OPEN DEFECACTION

1. Mapping of ethno linguistic groups (localisation, physical location, particularities)

Figure 1:

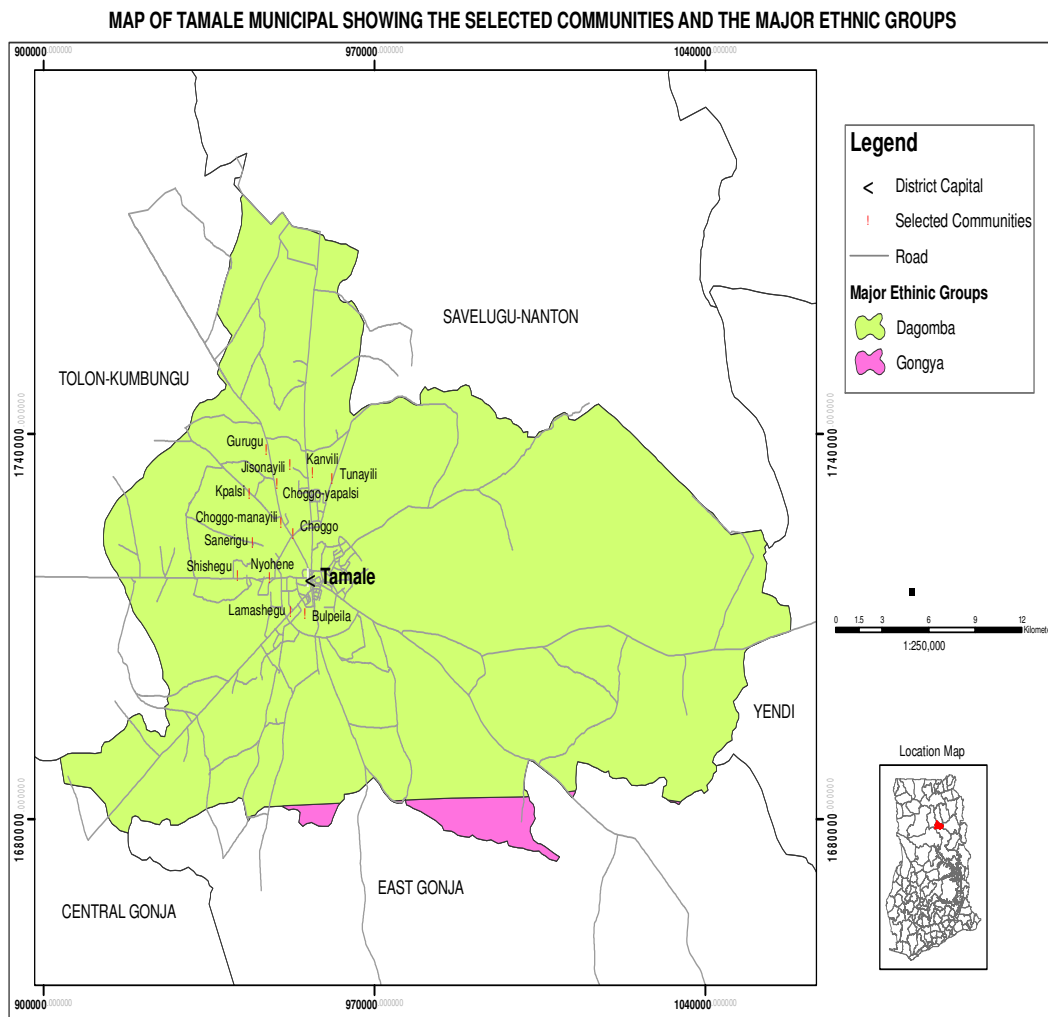


Figure 2:

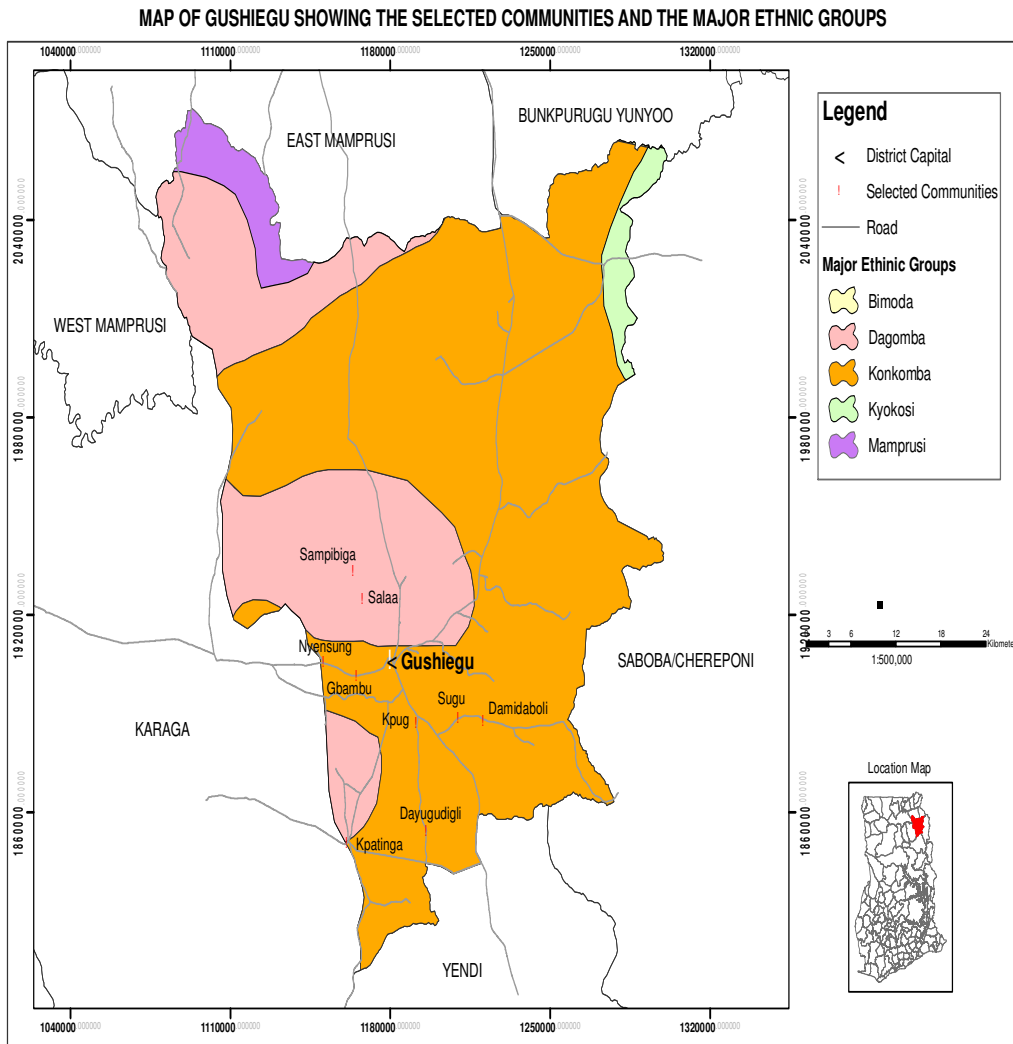


Figure 3:

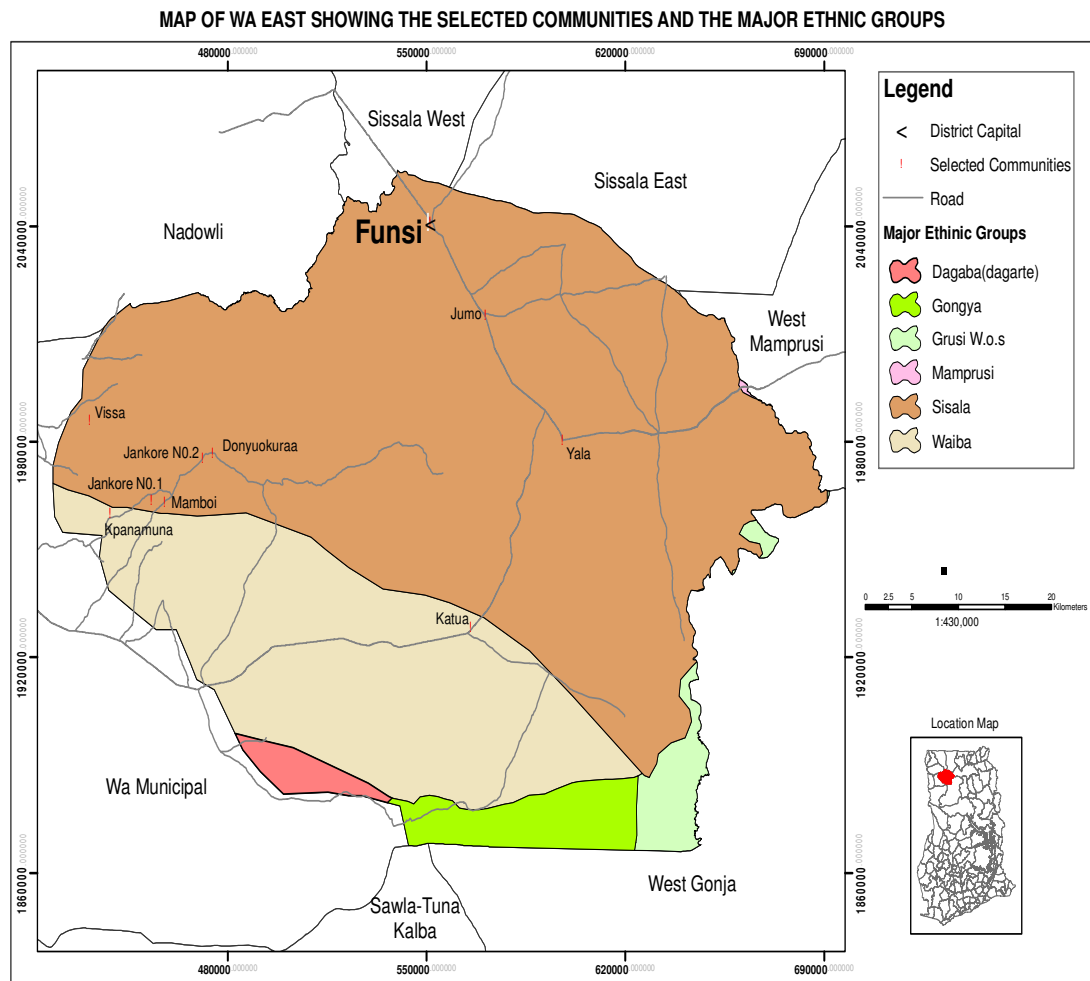
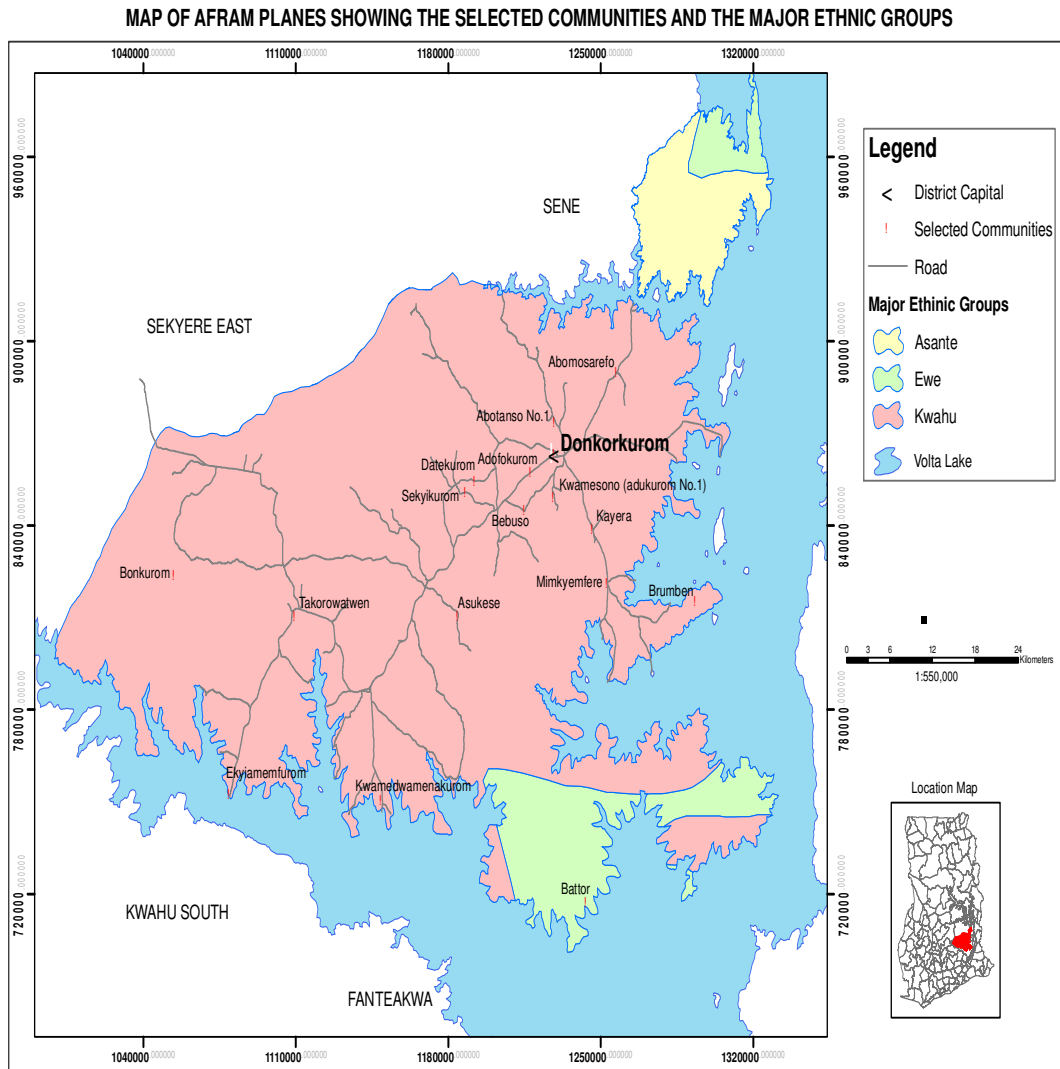


Figure 4:



2. Demography and human resources

2.1 Size and Distribution of Population

Table 1 summarizes the age distribution of sampled respondents. The figures on the table show that over 70% of the respondents age between 31 and 60 in all districts. The three age groups 31-40, 41-50 and 51-60 altogether constituted about 77% in the case of Tamale Metropolis, 70% for Gushegu, 74.4% for Wa and 78.5% for Kwahu North .

Table 1: Age Distribution of Respondents

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
20-30	82	6.4	117	17.0	52	14.8	111	20.3
31-40	207	16.2	242	35.1	168	47.9	185	33.9
41-50	442	34.6	150	21.8	42	12.0	112	20.5
51-60	336	26.3	104	15.1	51	14.5	77	14.1
60+	211	16.5	76	11.0	38	10.8	61	11.2
Total	1278	100	689	100	351	100	546	100

Source: Field survey, 2008.

Table 2: Occupation of Respondents

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Farming/Fishing	176	13.8	258	37.4	152	43.3	214	39.2
Petty Trading	334	26.1	180	26.1	114	32.5	137	25.1
Teacher	191	14.9	96	13.9	46	13.1	74	13.6
Doctor/Nurse	161	12.6	-	-	-	-	-	-
Driver/Mechanic	200	15.6	76	11.0	7	2.0	65	11.9
Other	216	16.9	79	11.5	32	9.1	56	10.3
Total	1278	100	689	100	351	100	546	100

Source: Field survey, 2008.

The occupational characteristics of the sampled respondents are presented in Table 2. The economic activities in the sampled districts fall within the traditional three main sectors (agriculture, industry and services) of the Ghanaian economy. With the exception of Tamale Metropolis farming and fishing is the mainstay of the sampled districts employing about 40% of sampled respondents. Petty trade is highly practiced in urban areas such as Tamale Metropolis. This can be partly explained by land scarcity in urban Tamale. About 13% of the respondents practice as doctors or nurses and are all in urban Tamale (Table 2).

Table 3: Ethnicity of Respondents

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Dagomba	924	72.3	370	53.7	-	-	-	-
Mamprusi	116	9.1	76	9.7	-	-	-	-
Gonja	80	6.3	-	-	-	-	-	-
Ashanti/Akan	80	6.3	-	-	-	-	150	27.5
Hausa	45	3.5	-	-	-	-	-	-
Konkomba	-	-	189	27.4	-	-	-	-
Ewe	-	-	-	-	-	-	287	52.6
Fante	-	-	-	-	-	-	55	10.1
Chakala	-	-	-	-	74	21.1	-	-
Sissala	-	-	-	-	73	20.8	-	-
Wala	-	-	-	-	98	27.9	-	-
Dagaati	-	-	-	-	56	16.0	-	-
Lobi	-	-	-	-	27	7.7	-	-
Other	33	2.6	63	9.1	23	6.6	54	9.9
Total	1278	100	689	100	351	100	546	100

Source: Field survey, 2008.

2.2 Ethnic and Religious Affiliation

Table 4: Religion by District

Religion	Northern	Upper West	Eastern	National
Catholic	11.7	71.7	9.5	16
Anglican	-	-	1.3	2.1
Presbyterian	3.6	-	26	11.3
Methodist	0.3	-	6.1	9.8
Pentecostal	3.3	-	16	13.3
Spiritualist	0.8	-	5.7	4.8
Other Christian	3.9	-	17.9	15.5
Muslim	57.8	2.5	5.7	11.8
Traditional	13.1	12.5	1.5	7.8
No religion	5.6	13.3	10	7.6
Sample size	360	120	820	5998

Source: GSS, 2000.

The results revealed thirteen (13) major ethnic groups across the four districts. The figures in Table 3 below indicate that Tamale Metropolis harbours Dagombas (72.3%), Mamprusi (9.1%), Gonja (6.3%), Ashanti/Akan (6.3%) and Hausa (3.5%). In Gushegu District, about 54% of the respondents are Dagombas followed by

Konkombas (27.4%) and Mamprusis (9.7%). The population in the Wa East district has a close distribution among the major ethnic groups in the district (Chakala (21.1%), Sissala (20.8%), Wala (27.9%), Dagarti (16%) and Lobi (7.7%)). The Ewe ethnic group is the majority of the population of the Kwahu North district contributing to over 50% of the district's total population. Other significant ethnic groups in the district are the Ashanti (27.5%) and Fante (10.1%). The main religion in Northern Region is Islam (Table 4) whereas Catholics dominate in the Upper West region.

2.3 Level of Education

Table 5 provides a summary of the findings about the educational qualification of respondents in the Tamale Metropolis, Gushegu, Wa and Kwahu North districts. The educational levels of respondents as presented in Table 5 shows that the sampled respondents were largely drawn from literate population in each of the four districts. Majority of those who have had at least a diploma qualification live in urban Tamale.

Table 5: Educational Qualification of Respondents (%)

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
University Degree	416	32.6	41	6.0	84	23.9	25	4.6
Diploma	223	17.4	49	7.1	40	11.4	47	8.6
Post SSS	151	11.8	83	12.0	46	13.1	102	18.7
SSS	131	10.3	138	20.0	102	29.1	106	19.4
Standard Six	79	6.2	235	34.1	10	2.8	177	32.4
Other	156	12.2	95	13.8	47	13.4	84	15.4
Not Applicable	122	9.5	48	7.0	22	6.3	5	0.9
Total	1,278	100	689	100	351	100	546	100

Source: Field survey, 2008.

Table 6: Adult Literacy and Gross School Enrolment (%)

Description	District (%)							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Male	Female	Male	Female	Male	Female	Male	Female
Adult Literacy	55.0	35.2	18.5	10.2	7.6	25.0	50.0	34.1
Prim. Sch. Enrolment	111.0	89.3	58.6	33.2	64.8	57.4	60.7	63.4
JSS Enrolment	07.5	74.9	20.7	10.3	53.3	41.0	32.6	33.9

Source: National Population Council (2005).

Information regarding the adult literacy rates and gross school enrolments in primary and Junior Secondary schools for the sampled districts are contained in Table 6. The

results show a 55% and 35% adult literacy rates for males and females, respectively, in the Tamale Metropolis. Another 18.5% male adults and 7.6% female adults in the Gushegu district are literate compared with 25% (males) and 50% (females) in the Wa district. Adult literacy stands at 50% and 34.1%, respectively for males and females in the Kwahu North district. Thus, adult literacy rate for male is relatively high in all districts except in Wa East district. In terms of gender, enrolment for boys is also high in Tamale Metropolis, Gushegu and Wa East districts compared with Kwahu North district. Female enrolment at JSS in Kwahu North district is also relatively high compared to their male counterparts whereas the rest of the districts record high JSS enrolment for boys.

2.4 Resources and Expenditure

With the exception of Tamale Matropolis, land is said to be abundant in sampled districts which can be used for farming and housing industries. Other resources include markets, clinics, schools, health centres, electricity (mostly in the district capitals), rivers and forests. The Ghana Statistical Service (2000) estimated that about 45% of all Ghanaians spend their annual income on food and beverage (Table 7). This is followed by alcohol and tobacco and then clothing.

Table 7: Distribution of mean annual household expenditure by expenditure group by region

Expenditure group	Northern	Upper West	Eastern	National
Food and beverage	47.4	44.8	45.7	45.6
Alcohol and tobacco	14.9	23	9.7	10.3
Clothing and footwear	10.2	8.1	10.4	10
Housing and utility	5.3	6.8	4.9	6.4
Household goods, operation and services	7	5.9	6.4	6
Medical care and health expenses	3.6	2.8	5.1	4.6
Transport and communication	3.3	2.2	6.1	5.6
Recreation and education	5.5	3.9	7.6	7.6
Miscellaneous goods and services	2.8	2.3	4	3.9

Source: GSS (2002).

2.5 Level of Household Assets/Equipment

Bicycle is owned largely by people living in rural areas (Gushegu, Wa East and Kwahu North). The ownership of household assets that are electricity dependent (refrigerator, fan, video player, TV, tape recorder, etc) is common in urban Tamale (Table 8). This might be attributed to the availability of power. Tractor ownership is low in all districts. This may be explained by the fact that it is costly to own one.

Table 8: Household Assets

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Refrigerator	902	9.1	125	2.9	159	6.7	65	2.1
Fan	1,058	10.7	261	6.1	200	8.4	69	2.2
Gas Stove	228	2.3	39	0.9	38	1.6	29	0.9
Car	307	3.1	95	2.2	49	2.1	57	1.8
Motor bike	927	9.3	277	6.5	191	8.0	218	7.0
Television	985	9.9	351	8.2	224	9.4	214	6.9
Tape Recorder	824	8.3	448	10.4	254	10.7	324	10.5
Radio Set	871	8.8	494	11.5	213	8.9	378	12.2
Ploughing Machine	28	0.3	33	0.8	45	1.9	27	0.9
Tractor	234	2.4	88	2.0	116	4.9	68	2.2
Bicycle	860	8.7	547	12.7	289	12.1	444	14.3
Generator	406	4.1	82	1.9	28	1.2	58	1.9
Threshing Machine	104	1.0	31	0.7	24	1.0	28	0.9
Hoe	864	8.7	655	15.3	250	10.5	516	16.7
Indoor Game (Lodu)	437	4.4	261	6.1	125	5.2	184	5.9
Video Player	804	8.1	392	9.1	153	6.4	329	10.6
Other	84	0.8	115	2.7	24	1.0	91	2.9
Total⁹	9,923	100.0	4,294	100.0	2,382	100.0	3,099	100.0

Source: Field survey, 2008.

3. Economic activities, Organizational Dynamics and Good Governance

Details of economic activities have been presented in sub-section 2.

3.1 Communication Network and Decision Making Process

On the appropriate medium through which information on health related issues could get to target audience, respondents were presented with a variety of sources listed on Table 9. The results indicate that radio broadcast is the major source of information about health. About 73% of respondents in Tamale Metropolis, 29% in Gushegu, 47% in Wa and 29% in Kwahu North said they got information of health issues on the radio. The implication of this result is that radio broadcasts and

⁹ Responses are multiple.

announcements could be very effective in information dissemination on health issues. Next health providers in Tamale Metropolis (11.0%), Gushegu (19.5%), Wa (29.6%) and Kwahu North (21.7%). Other sources of health related information are through community opinion leaders (e.g., teachers), CBOs members, women group members and community committee members.

Table 9: Sources of Health Information in the Community

Description	District							
	Tamale Metropolis		Gushegu		Wa		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Radio	1,202	72.8	566	28.6	328	47.3	444	28.5
Health providers	182	11.0	387	19.5	205	29.6	338	21.7
Community Leaders	41	2.5	221	11.2	62	8.9	171	11.0
CBOs	54	3.3	187	9.4	26	3.8	137	8.8
Women groups	58	3.5	198	10.0	29	4.2	151	9.7
Community Committees	52	3.1	207	10.4	25	3.6	154	9.9
Other	63	3.8	215	10.9	18	2.6	162	10.4
Total	1,652	100	1,981	100	693	100	1,557	100

Source: Field survey, 2008.

Out of the number of identifiable personalities, the Assembly person was identified as the most influential person in the community in all four study districts (Table 10). The possible explanation is that the Assembly persons represent important links between their communities and the rest of the world. The Constitution of the Republic of Ghana requires that all Assembly persons be elected thereby empowering them to play key roles such as social mobilizers, leaders and supervisors. The next are chiefs and elders comprising the head of traditional authority in every community. Chiefs, elders together with Assembly persons are critical change agents in the communities and any intervention that involves them in all aspects of project cycle (identification, implementation and monitoring and evaluation) has hope to become successful. The role of chiefs and elders is more of advisory in nature. Other influential persons are unit committee members, teachers and women leaders (Table 10).

Table 10: The Most influential Person in the Community

Description	District							
	Tamale Metropolis		Gushegu		Wa		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Chiefs/Elders	731	29.6	452	28.6	172	15.5	359	28.8

Ass. Man/Unit committee	1046	42.4	479	30.3	267	24.0	387	31.0
Teachers	280	11.3	212	13.4	236	21.2	160	12.8
Women leaders	277	11.2	361	22.8	234	21.1	279	22.4
Other	133	5.4	76	4.8	202	18.2	63	5.0
Total	2,467	100	1,580	100	1,111	100	1,248	100

Source: Field survey, 2008.

4. Water, hygiene and sanitation

4.1 Sanitation infrastructure

The use of public toilet dominates in all four districts (Table 11). The use of water closet (WC) is high in urban Tamale because water is relatively available compared with other districts which are of rural nature. About 47% of respondents in Kwahu North rely on pit latrines as a sanitation infrastructure. Majority (42%) of respondents who use public toilets live in Tamale Metropolis. Those without any toilet facility constitute about 36% in Tamale Metropolis, 90% in Gushegu, 64% in Wa East and 29% in Kwahu North. The results show that less than 10% of the sampled population use improved toilet facilities in Ghana. This is low compared to the national estimate of 20%. There is also an uneven distribution of improved toilet facilities between urban and rural districts across the country. Nearly all respondents without a toilet facility resort to indiscriminate disposal of wastes, particularly human excreta.

Indiscriminate disposal of liquid waste together with poor drainage in the districts result in water logging and stagnant pools thereby posing health threats in to lives of the communities. At the national level, the Ghana Statistical Service (2000) reported that almost 95% of households dispose of liquid waste onto streets, gutters or compounds and only 5% utilize sewerage system. And that the pattern is the same in all the ten regions except in Brong Ahafo and the three northern regions where gutters do not feature significantly. Streets, compounds, bush, etc are therefore the major recipients of liquid waste in these regions implying open defecation. Non-availability of toilet facilities may be the major factor limiting accessibility to improved toilet facilities (e.g., WCs). However, in the urban areas such as Tamale Metropolis non-availability of water is the main reason restricting the use of this type of toilet facility.

Table 11: Household Access to Toilet Facility by Type

District	Type of Facility (%)							
	Water Closet	Pit Latrine	KVIP	Bucket/Pan	Facility in another House	Public Toilet	No Facility	Other

Tamale Metropolis	8.3	1.4	5.3	6.2	1.4	41.6	35.6	0.2
Gushegu	1.6	0.5	0.8	0.2	0.6	6.3	90.0	0.1
Wa East	3.7	2.0	3.9	1.9	9.0	15.1	63.8	0.6
Kwahu North	0.8	47.0	4.3	0.5	3.5	15.2	28.6	0.1

Source: National Population Council, 2006.

4.2 Level of satisfaction in water supply needs

Table 12: Household Main Source of Drinking Water by District

District	Main Source of Drinking Water (%)								
	Pipe Borne Inside	Pipe Borne Outside	Tanker Supply	Well	Bore Hole	Spring / Rain Water	River/ Stream	Dug Out	Other
Tamale Metropolis	33.2	45.6	3.9	1.7	0.6	0.2	2.5	12	0.6
Gushegu	1.1	1.2	0.3	9.2	26	11.0	16	35	0.3
Wa East	6.2	16.1	1.0	34.9	13	11	9.3	7.8	0.2
Kwahu North	2.7	2.2	0.5	4.9	27	15	37	11.0	0.3

Source: National Population Council, 2006.

Pipe borne water is the main source of drinking water in Tamale Metropolis. The supply of pipe borne water in the rest of the districts is low (Table 12). For instance only 22.3%, 4.9% and 2.3% of the respondents drink pipe borne water in Wa East, Kwahu North and Gushegu, respectively. Thus, with the exception of Tamale Metropolis, majority of the respondents in the remaining three districts rely on wells, bore holes, springs, rivers and dug outs as their sources of drinking water. Generally, water from these sources has less quality due to lack of treatment as is the case for pipe borne water. And because majority of the respondents practice indiscriminate waste disposal and for that matter open defecation the quality of most water sources (wells, rivers, dug outs, etc) are threatened. The implication is that the people of Gushegu, Wa East and Kwahu North are more prone to diseases emanating from contamination as a result of open defecation.

Water is scarce in the study area and is serving as a major hindrance to improved sanitation accessibility. Respondents were asked to state 'YES' or 'NO' to the

question 'Do you have enough water for all needs?'. Eighty two percent said no in the Tamale Metropolis followed by 81%, 79% and 77% in Wa East, Gushegu and Kwahu North , respectively. Less than half of the sampled respondents (Tamale Metropolis = 44%, Gushegu = 46%, Wa East = 16% and Kwahu North = 47%) said they have access to safe drinking water. Thus, water is not only scarce but also it is not safe for many users in the study area. The scarcity of water in the area suggests that total sanitation cannot be attained by the provision of sanitation facilities that are water dependent (e.g., WCs). Poverty, irregular flow of boreholes and dams drying out during the dry season were identified as factors limiting water availability in the sampled communities.

4.3 Hygiene Behaviour

Charity begins at home as the old adage goes. Respondents were asked to state their home-based hygienic practices. Table 13 contains information regarding the hygiene behaviour of the respondents. In general, personal hygiene was described as a basic necessity for everybody. The argument is that good hygienic practices promote sound health which is essential for productivity. At the personal level, the results show that majority of the respondents in Tamale Metropolis, Gushegu and Kwahu North clean their mouths with tooth paste and/or chewing stick. This is a common practice in early mornings and evenings (before going to bed). For instance, twenty eight percent (28%) of respondents in Tamale Metropolis use tooth paste and chewing stick. This is followed by 27%, 21% and 26% in Gushegu, Wa East and Kwahu North districts, respectively. Another important hygiene practice is washing of the hands after toilet with soap or before eating. On average, about 25% of all respondents said they practice this hygiene behaviour. Respondents also clean around their environments but this is common in the Wa East district (Table 13).

The results show that some respondents have also created specified sites for disposal of household wastes. In urban Tamale, the specified sites were identified to include sites earmarked by the Tamale Metropolitan Assembly whereas in the rest of the districts sites were provided by individual households or a group of households (usually 2). The National Population Council (2006) reported that household solid wastes are collected, burnt, dumped at public sites, dumped elsewhere or buried (Table 14). Generally, burning or burying of wastes is minimally practiced with indiscriminate disposal accounting for 27%, 76%, 56% and 49%, respectively in Tamale Metropolis, Gushegu, Wa East and Kwahu North districts. Thus, the analysis indicates that about half of the respondents practice uncontrolled solid waste disposal. Other forms of waste disposal behaviours include throwing wastes into the bush, gutter or behind the house, abandonment of waste on the compound and uncompleted building. On average, 40% and 47% of all respondents resort to the bush or gutter (and behind the house) as ways of disposing of solid wastes (Table 15). The results suggest poor hygiene behaviour in the sampled districts. Researchers have argued that bad sanitary behaviour is a national problem. This problem is attributable to the lack of awareness about, and understanding of, linkages between unsafe excreta disposal and its health impact leading to diarrhoea, cholera, malaria and other diseases. Intensive community sensitisation and education is therefore required in order to fight against this plague.

Table 13: Kinds of Hygienic Practices at the home

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Washing the hands with soap and clean water	1028	27.6	551	26.6	197	19.3	426	25.3
Cleaning the mouth with tooth paste and chewing stick	1041	28.0	562	27.1	214	21.0	441	26.2
General cleaning	780	21.0	362	17.5	234	23.0	282	16.7
Using latrine	284	7.6	102	4.9	44	4.3	89	5.3
Specified site for disposal of household waste	473	12.7	274	13.2	180	17.7	252	14.9
Other	112	3.0	220	10.6	150	14.7	196	11.6
Total	3718	100	2071	100	1019	100	1686	100

Source: Field survey, 2008.

Table 14: Household Solid Waste Disposal by Method

District	Disposal Method (%)					
	Collected	Burned	Public Dump	Dumped Elsewhere	Buried	Other
Tamale Metropolis	2.0	18.8	49.3	26.9	2.9	0.2
Gushegu	0.4	7.1	14.8	75.5	2.0	0.3
Wa East	2.4	5.7	30.1	56.0	5.6	0.1
Kwahu North	3.4	12.3	29.2	48.9	5.5	0.8

Source: National Population Council, 2006.

Table 15: Alternatives in the Absence of Toilets

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
In the Bush	349	42.9	284	41.2	122	34.8	222	40.7
Gutter/behind the house	359	44.2	334	48.5	175	49.9	257	47.1
Abandoned/ Uncompleted Building	105	12.9	71	10.3	54	15.4	67	12.3
Total	813	100	689	100	351	100	546	100

Source: Field survey, 2008.

4.4 Recurrent illnesses

Uncollected or improperly disposed of wastes can serve as breeding grounds for disease vectors, especially vermin, flies and their associated pathogens. Poor management of wastes presents serious health hazards to all urban inhabitants, but most especially those in low income communities (who suffer mostly from poor infrastructure provision) and the young (who play on streets or ground earmarked for dumping). An end to open defecation suggests improvements to the environment, to community health and to the quality of life, thus raising people's productivity. Indeed, many health experts say that poor environmental conditions arising from unhygienic disposal of excreta and accumulation of solid wastes encourages the breeding of vermin and insect and this leads to the spread of diseases including cholera, typhoid, diarrhoea, malaria, hepatitis, intestinal worms etc. According to the Ministry of Health more than 400,000 out-patient cases of sanitation related diseases leads to about 65,000 deaths in Ghana. Also, more than 15,000 children die in the country annually of sanitation related diseases before attaining the age of five (UNDP, 2002).

The major health concern has specifically been with microbiological pathogens from domestic sources (Drechsel et al, 2006a). This means that for those living unhygienic conditions, the lack of access to water and sanitation means a constant battle against sickness and diseases because their lives are permanently at risk. Improper human excreta and wastewater disposal is a prominent health hazard encountered.

Table 16: Recurrent illness

DISEASE	Northern Reg.		Upper West Reg.		Eastern Reg.	
	Freq.	%	Freq.	%	Freq.	%
Malaria	382,990	53.55	312,620	46.33	802,940	35.20
Upper Respiratory tract infection	52,113	7.29	45,516	6.75	153,452	6.73
Skin Diseases and Ulcers	25,212	3.52	34,684	5.14	85,727	3.76
Hypertension	13,781	1.93	12,663	1.88	157,189	6.89
Diarrhoea Diseases	39,980	5.59	16,223	2.40	69,066	3.03
Acute Eye Infection	7,646	1.07	19,959	2.96	81,722	3.58
Rheumatism and Joint Diseases	8,368	1.17	10,233	1.52	52,822	2.32
Intestinal Worms	10,043	1.40	5,305	0.79	27,856	1.22
Home/Occupational Accidents	4,576	0.64	6,335	0.94	46,626	2.04
Pregnancy and Related complication	3,182	0.44	3,578	0.53	25,381	1.11
Anaemia						

	11,002	1.54	5,471	0.81	21,502	0.94
Gynaecological Conditions	3,816	0.53	4,227	0.63	47,191	2.07
Acute Ear Infection	4,417	0.62	6,895	1.02	53,401	2.34
Pneumonia	15,638	2.19	11,391	1.69	19,845	0.87
Malaria in Pregnancy	9,436	1.32	6,866	1.02	11,125	0.49
Diabetes Mellitus	459	0.06	540	0.08	38,953	1.71
Other Oral Conditions	2,331	0.33	1,847	0.27	31,448	1.38
Typhoid/Enteric Fevers	5,765	0.81	2,522	0.37	11,833	0.52
Road traffic Accidents	5,838	0.82	8,068	1.20	12,551	0.55
TUI	7,019	0.98	4,160	0.62	12,884	0.56
Dental Caries	642	0.09	3,547	0.53	24,236	1.06
Vaginal Discharge	2,540	0.36	1,643	0.24	8,810	0.39
Asthma	1,726	0.24	1,262	0.19	9,258	0.41
Chicken Pox	2,285	0.32	2,518	0.37	6,537	0.29
PUO	1,960	0.27	12,758	1.89	3,253	0.14
All other Diseases	92,477	12.93	133,964	19.85	465,373	20.40
Total	715,242	100	674,795	100	2,280,981	100

Source: Ministry of Health, 2008.

Poor access to adequate sanitation resulting from the practice of widespread open defecation has negative health and social impacts on communities. The findings show that the sampled districts have their own problems in terms of diseases. The most recurrent diseases are malaria, upper respiratory tract infection, hypertension and diarrhoea. The figures in Table 16 show that malaria tops the list of recurrent illness. Malaria is widespread and persistent in Ghana and accounts for about 42% of all recurrent diseases in the country (MoH, 2008). This was explained to be linked to poor sanitation leading to high breed of mosquitoes. The results revealed that poor sanitary conditions account for most of the diseases (e.g. malaria, diarrhoea, skin disease, etc). Malaria is said to be killing nearly one million children in sub-Saharan Africa each year, with several million more in their prime working age unable to perform to their potential due to regular bouts of malaria. According to Fosu and Mwabu (2007) malaria has severely retarded economic development in

many countries in sub-Saharan Africa, with poverty and isolation being some of its most visible consequences. There is a strong association between malaria and poverty. Respondents explained that because it is the major reason for outpatient visits and admissions in the communities, households spend large sums of money on its treatment and prevention.

Results of focus group discussions also revealed that most people want toilets reasons of convenience, privacy and status, rather than ensuring good sanitation or prevention of diseases leading to death. Studies (GYAM, 2008 and Fosu and Mwabu, 2007) have shown that improved sanitation habits lead to reduction in sickness, enhance personal hygiene and a reduction in health expenditure. For instance, GYAM (2008) provided evidence to show that 47% of beneficiaries experienced a reduction in sickness as a result of improved sanitation habit whereas 30% each said they had an improvement in their personal hygiene and a reduction in health expenditure (Table 17).

Table 17: In which way has your sanitation habit improved?

Types	Frequency	Percentage
Reduction in sickness	47	36
Improved personal hygiene	30	23
Reduction in health expenditure	30	23
Others	24	18
Total	131	100

Source: Ghana Young Artisans Movement, 2008.

4.4.1 Most Recurrent Community Problem

Indeed, every community experiences one problem or the other. Respondents complained of several problems affecting the development of their communities. The main problems confronting communities in the sampled districts include pollution of both air and water, poor state of health facilities, frequent outbreak of communicable diseases, lack of educational facilities, lack of infrastructure for sanitation, unemployment among others (Table 18). The main problem in urban Tamale is pollution of air and water followed by inadequate infrastructure for sanitation. The finding is not surprising because air and water pollution and scarcity of sanitary infrastructure have remained major problems in fast growing cities like Tamale Metropolis. This might be attributed to the huge household liquid and solid wastes disposed of indiscriminately as well as industrial activities involving the emission of smoke. The findings show that lack of educational infrastructure (schools, libraries, etc) remains a rural problem affecting Gushegu, Wa East and Kwahu North districts. The availability of relatively sufficient educational facilities in Tamale Metropolis may account for the high adult literacy and enrolment rates. All the districts suffer equally in terms of frequent illness. Over 90% blamed this problem on the physical lack of health facilities and negative attitudes of people with respect to sanitation. Constant illness lowers productivity of labour and compels governments to spend moneys on buying drugs. For instance, Fosu and Mwabu (2007) estimated that the economic toll of malaria in Africa amounts to at least 10% of gross domestic product (GDP) per annum. On average, 16% of the respondents complained that they have no jobs (Table 18). Unemployment is a peculiar problem in developing countries. Figures in

the table show that unemployment is high in the rural districts. The explanation is that majority of the people practice rain-fed agriculture and become idle in the dry season. Aside unemployment, results of the discussions show that some (about 6%) of the respondents also suffer from underemployment. It is important to state that when people have no jobs they have less control over their environment including how they dispose of wastes (liquid and solid). Unemployment also suggests high poverty rate, the inability to invest in improved sanitation mechanisms.

Table 18: The Most Recurrent Problems in the Community

Description	District								Ave.
	Tamale Metropolis		Gushegu		Wa East		Kwahu North		All
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	%
Pollution	908	28.5	446	14.9	265	21.4	349	14.9	20
Health infrastructure	387	12.2	564	18.8	193	15.6	443	18.9	16
Frequent illness	464	14.6	369	12.3	178	14.4	285	12.2	13
Absence of educational infrastructure	123	3.9	562	18.8	153	12.4	441	18.8	14
Infrastructure for Sanitation	724	22.8	127	4.2	264	21.3	104	4.4	13
Unemployment	479	15.1	562	18.8	127	10.3	441	18.8	16
Other	97	3.0	363	12.1	58	4.7	281	12.0	8
Total	3182	100	2993	100	1238	100	2344	100	100

Source: Field survey, 2008.

4.5 Household Standard of Living and Management of Solid and Liquid Waste

Developing countries in general are generally characterised by poor living standards. Per capita income has often been the yardstick for measuring living standards. However, recent studies have shown that the living standard of a society is highly dependent on the proportion of the population who are healthy. Health first is a common wise saying. Generally, agriculture is the backbone of the Ghanaian economy. Apart from offering jobs to about 60% of the labour force, agriculture contributes to about 35.5% of household income in the country. Over 50% of the respondents in Northern and Eastern regions derive their incomes from agriculture (Table 19). As a result of high unemployment in the four districts, earnings from wage income is low in the Northern region (11.4%), Upper West region (16.5%) and Eastern region (14.9%) compared to national average of 22%. The recent report on the poverty situation in Ghana by the Ghana Statistical Service indicates that poverty in the Upper West and Eastern regions. According to Sowa (2006) the three northern regions consistently and persistently pick the bottom rankings on any development league table in Ghana: *below national average levels of income and consumption expenditures; weak education and literacy levels; poor health and sanitary conditions and absence of basic social amenities*. Indeed, in almost everywhere in the three Northern regions there is clear evidence of people living in penury (Sowa, 2006). Poverty continues to be more prevalent and serious in rural areas. Recent estimates

by the government's statistician indicate that inflation is highest (16%) for the Upper Regions compared to 8% and 11% for the Ashanti and Greater Accra Regions, respectively. The road network and infrastructural development are poor. Food insecurity still prevails in most parts of the country together with high rates of illiteracy and unemployment.

Table 19: Distribution of household income by components, locality and quintile – (percent)

locality quintile	Wage income from employment	Household agricultural income	Non-farm self employment income	Rental income	Income from remittances	Other income
Northern	11.4	58.6	23.2	3	3	0.8
Upper West	16.5	46.4	26.4	4	1.8	4.8
Eastern	14.9	50.7	21.9	3.1	6.8	2.6
National	21.9	35.5	30	1.9	8.5	2.1

Source: GSS, 2000.

ISSER (2006) argues that the relatively high growth rates in GDP over the last few years have not been translated into real per capita output growth. The reason is that whereas poverty analysts document that poverty is reducing, inequality has been increasing significantly, particularly since 1998/99 (GSS, 2007). ISSER in 2006 provided evidence to show that the relatively high average growth rate of about 5.1% from 2001 to about 6% in 2005 falls short of what the country needs to attain a middle-income status and to achieve the MDGs by 2015. The implication is that the country's efforts at meeting MDG 7 which relates to environmental cleanliness may not be attained. The cumulative effect of the above problems is low socio-economic development with its concomitant low standards of living.

5. Practice of Open Defecation and Dynamics for Social Change

5.1 Open Air Defecation: a Social Practice

An important open air defecation practice that characterises Ghana is that people defecate in plastic bags which are disposed off in the nature. This is more prevalent in urban areas such as Tamale metropolitan Assembly. This form of air defecation has a double negative impact on environment: pollution by plastic bags and human waste. The findings reveal that the major ethnic groups that practice open defecation in Northern region are the Dagombas, Mamprusis, Konkombas and Gonjas whereas the Akans and Ewe do the same in the Eastern region. In the Upper West region, the results indicate Chakala, Sissala, Wala, Dagaati and Lobi as the main ethnic groups involved in open defecation. Generally, open defecation is practiced widely in societies because it is costless. There is also lack of regulatory policies as well as incentives for self discipline. Writing on the experiences of less developed countries Kar (2007) concluded that open defecation constitutes the lowest part of any

sanitation ladder. The proportion of people practicing open defecation in developing regions stood at 23 per cent in 2006. Open defecation is most widely practiced in Southern Asia and sub-Saharan Africa. Whereas access to improved sanitation facilities is increasing steadily around the globe, the rate of growth still falls short of MDG targets. The rate of growth is particularly slow in sub-Saharan Africa, where between 1990 and 2006 the percentage of people who gained access to improved sanitation facilities only increased from 26 to 31 per cent. Twenty-eight per cent of the population (or 221 million people) practice open defecation, and another 23 per cent rely on unimproved sanitation facilities, such as open pit or bucket latrines.

Concepts of hygiene, cleanliness, purity and beliefs about sanitation and disease vary widely, but are often deeply ingrained through religious practice or culture. There are many different, traditional beliefs about the sources of disease, including spiritual concepts. Even when people associate excreta with the spread of disease, faeces of small children are often considered harmless, yet they are a frequent cause of dangerous contamination of the household, its water supply, and the food chain.

Women are mostly directly concerned with water and sanitation matters at the household level (Bwengye-Kahororo (1999)). The argument is that women possess more managerial skills and experience in services at a neighbourhood level related to health and food. Women play a leading role in carrying out household tasks in relation to domestic water and sanitation as acceptors of technologies such as safe water points and improved pit latrines, users of improved facilities, managers of water and sanitation interventions in households, agents of positive behavior modification in use of improved facilities. With appropriate training, support and equipment, women can bring about changes in basic hygiene behaviour in daily activities (Bwengye-Kahororo, 1999).

Hygiene practices such as hand washing, better food handling, cleaning the living and cooking areas, personal and domestic hygiene and making water safe can be effective interventions to prevent humans from ingesting pathogens. The literature shows that communities have been fairly consistent in their selection of hygiene behaviours and the most popular have been hand washing particularly before cooking and after latrine use or cleaning a baby's bottom; washing dishes immediately after eating; and disposing of children's faeces in the latrine regularly (Annand, 1999). This conclusion has been confirmed by the results of the present study (See Table 19).

On the effectiveness of participatory techniques, Eade and Williams (1995) argue that the techniques are distinct improvement on the traditional methods previously employed and give a practical focus for training which makes it much easier to train people to be more participatory in their approach to communities.

5.2 Analysis of Socio-Economic and Cultural Factors that Promote Open Defecation

5.2.1 Socio-Economic Factors that Promote Open Defecation

Literature has shown that the technical feasibility of a particular sanitation system depends on several factors. These factors include cost and affordability, communal or household facilities, ground conditions, population density, upgrading potential, reuse of waste, anal cleansing materials, timing and maintenance. In general, low-income groups do not spend more than 2-5 percent of their income on excreta disposal (Annand, 1999). The experience of poor countries show that waste disposal habits or behavior are determined by climate, housing conditions, existing levels of service, effectiveness regulations and cultural and other factors. When primary waste collection services are not reliable, the incentive is to explore other options and when regulation is either absent or the majority is non-compliant, the incentive is to dump wastes in open access spaces such as streets and public spaces. In hot and humid climates, there are disincentives for accumulation or storing of wastes and positive incentives for disposing of wastes as and when they arise. Waste management in any city requires understanding and realigning of these incentives in institutional arrangements.

In Ghana, only a minor share of wastewater is treated and less than 5% of the population has sewerage connections. The percentage of the population using adequate sanitation facilities in the urban is 27% compared to 11% in the rural areas (GSS, 2000). The bottom line is that improved toilet facilities are limited and hence open defecation is the most popular option under the circumstances. Available evidence shows that public toilets are either full or overflowing. By this situation, the people have no choice but to defecate in open areas near their homes. In other cases, it is common for people to ease into black polythene bags and throw these out from their windows usually at night. Data from the GLSS V point to the fact that 19.6 percent of households in Ghana do not have access to toilet facilities. About 10 percent of households use flush toilets and 1.3 percent use KVIP, whereas most households still use the pit latrine (31.5%) and pan/bucket (37.4%). In the rural areas less than 1.5 percent have access to flush toilets compared to 33.4 percent in Accra and about 30% in urban coastal areas.

In terms of regions, about 80% of households dispose of liquid wastes (urine, dirty water, etc) on the streets, in gutters and in compounds in Eastern, Northern and Upper West Regions. About 8 percent of households in urban areas have access to a sewerage system compared to 1.3 percent in rural households. The Greater Accra Region has the highest proportion of households with a sewerage system, due to its urban influence. Thus, in terms of liquid waste disposal, no region or geographical area can be said to be better off.

Further, the 2003 Ghana Demographic Health Survey (GDHS) indicated that more than half of mothers (55%) reported that their children's stool is disposed of in the toilet or buried in the yard. Another 36 percent of mothers reported that their children's stool was uncontained, that is, it was thrown outside the dwelling or yard, rinsed away or not disposed of. Aside the lack of access to toilets in most parts of

the country, the existence of some cultural practices and behaviours significantly contribute to the problem of open defecation.

In the Upper East Region where people seem to be very concerned about privacy during bathing privacy for toilet facilities seems not to be an important issue, even though this has more serious implications (GSS, 2000). The environmental health problems arising out of indiscriminate disposal of human waste, most often mixed with animal droppings, need urgent attention and redress. Open defecation is prevalent in all ten regions of Ghana but most widespread in the Upper East Region where about 82% of respondents do not own any form of latrine. Those who do not own any form latrine in the Upper West Region stands at 79% followed by 73% in the Northern Region.

In the Upper West Region, there are households which have no toilet facility of any kind available for use. The household members mostly use the bush or the field or small receptacles that are disposed of indiscriminately in drains, open gutters or in the bush. The picture with regards to toilet facilities is far from satisfactory. Like the Upper East Region, the people in the Upper West Region seem to be very much concerned about their privacy during bathing and privacy during cooking and privacy for toilet facilities.

In the Northern Region, the Ghana Statistical Service revealed that 90% and 35.6% of the people dwelling in the Gushiegu-Karaga District and Tamale Metropolis, respectively, have no toilet facilities. Consequently, members of households with no toilet facilities are compelled to rely on alternatives such as the bush, farms, etc for defecation. This has significant implications for the transmission of infection, and consequently, for the health and well-being of communities, which, in turn, may impact productivity negatively.

In terms of countries with worst progress in sanitation, Ghana is ranked 48th out of 51 African countries and 14th out of 15 countries in West Africa. Open defecation reduced marginally from 24 per cent in 1990 to 20 per cent in 2006, indicating that four million people were still practicing it. This means that the country is off track in achieving the Millennium Development Goals (MDGS) on sanitation, targeting the reduction by half the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015. The MOH (200) reports that the country can only achieve about 15 per cent reduction by 2015, instead of 53 per cent, should the trend continue. Thus, the evidence point out to the fact that Ghana cannot advance to a middle-income status with the present level of deplorable sanitation. Majority of Ghanaians believe that Ghana's environment especially in the cities clearly indicates an unbearable stench that pervades the air as green fluid seeps from the refuse on to the road and even the homes. For instance, green may be due to the presence of algae and suspended materials emanating from unsanitary environment. Every year, the health ministry reports more than 400,000 out-patient cases of sanitation-related diseases, including diarrhoea, typhoid, cholera and hepatitis, which lead to about 65,000 deaths. Dirty streets, beaches or the environment can repulse tourist. Objectionable colours may be experienced in water and the degree of the colouration may depend upon the causing agent.

The socio-economic determinants of open defecation in the study are many. The first is indiscipline. Indiscipline is attitudinal involving carelessness, disrespect for traditional authority and community norms. It is important because it is one of the measures of levels of socio-economic development because high rates of indiscipline suggest ineffectiveness of law and order. Thirty nine percent (39%), 43%, 34% and 43% of the respondents in Tamale Metropolis, Gushegu, Wa East and Kwahu North , respectively said that open defecation is as a result of indiscipline (Table 20). Politicians in Ghana have overtly and covertly fought indiscipline but it appears the impact has been less significant. On average, as high as 40% of open defecation is as a result of lack of discipline. An important finding is that indiscipline is neither a rural nor urban issue. It occurs across all four districts confirming its criticalness in the country.

The next is poverty. It has already been established that poverty in Ghana is high (about one third of the population). It is even high in the Northern region (70%), Upper West region (80%) and Upper East region (90%). All over the globe the link between poverty and open defecation is negative and strong. The results show that majority of the respondents cannot afford to construct improved ways of waste disposal because they are poor. Results of focus group discussions indicate that poor people live as sick people because they live in poor environments.

Table 20: Socio-Economic Reasons for Open Defecation

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Indiscipline	256	38.9	298	43.3	120	34.2	235	43.0
Poverty (No money to pay)	231	35.1	90	13.1	122	34.8	40	7.3
Inadequate public and Household Toilets	98	14.9	193	28.0	47	13.4	153	28.0
Poor Maintenance of Toilets	73	11.1	108	15.7	62	17.7	118	21.6
Total	658	100	689	100	351	100	546	100

Further, open defecation in the study area is as a result of inability of state structures responsible for maintaining sanitation to provide the requisite facilities or maintaining the existing ones. In the urban areas such as Tamale Metropolis, it is easy to spot huge heaps of solid waste attracting open defecation in the city. As already stated in the report, sanitation infrastructure are lacking in the rural areas of Ghana. Situations where people are poor coupled with lack of sanitary facilities, open defecation becomes the only option.

The need for a national campaign for attitudinal change and strict enforcement of bye-laws by local authorities to address the problem cannot be over emphasised.

5.2.2 Socio-Cultural Factors Responsible for Open Defecation

Karl (2007) documented that open defecation is stimulated by four social conditions. These are: i) conditions where people are very healthy with little diarrhoea, ii) where there is socially divided community with low cohesion, iii) where there is a weak tradition of joint action, and, iv) where women have little voice.

The study results do not confirm the conclusions of Kar (2007). Rather, people indulge in open defecation because of the belief that visiting a public toilet or so will cause one to be possessed by demons or lose your magical powers. Others said they engage in it because they want to protect their bodies from bad odour or smell (after using toilets). Of the three factors, the belief of being possessed by demons is the major reason accounting for open defecation in all four districts (Table 21). The explanation is that public toilets are surrounded by demons and must be avoided. This explanation was more pronounced in Tamale Metropolis (49%) followed by Gushegu (42%), Wa East (40%) and Kwahu North (39%). Another 9% of the respondents in Tamale Metropolis said that public toilets can make one to lose his magical powers. The idea that one can lose his magical powers while using a public toilet is also more pronounced in the rural areas. For example, 44% of the respondents in Wa East district said they defecate openly because they want to avoid losing their magical powers. Others resort to open defecation because they want to avoid bad odour from public toilets (Table 21).

Table 21: Socio-Cultural Reasons for Open Defecation

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
The belief of being possessed by demons	353	49.3	290	42.1	141	40.2	210	38.5
Loss of magical powers for using toilets	67	9.4	150	21.8	56	43.9	74	13.6
The body is free from smell	296	41.3	249	36.1	154	16.0	262	48.0
Total	716	100	689	100	351	100	546	100

Source: Field survey, 2008.

5.2.3 Advantages of Open Defecation

The question of whether or not open defecation has advantages was highly debated during the group discussions. Majority expressed resentment about it. The interview results confirmed this finding. Respondents were asked to state 'YES' or 'NO' whether or not open defecation has advantages. The results are provided in Figure

1. Over 70% of the respondents disagreed. The remaining percentage argued that open defecation has some advantages. Details of the perceived advantages of open defecation are contained Table 22. For example, forty two percent and 21% of the respondents in Tamale Metropolis and Wa East respectively said that open defecation largely enables them to avoid infectious disease that characterises public toilets. Another 30% opined that open defecation is costless (one does not pay any price for it). This confirms the earlier finding that poverty largely accounts for the reasons for open defecation. Others said that they do it because it helps them to maintain their magical powers, free them from smelling bad and contributes to improving soil fertility (Table 22).

Table 22: Advantages/Merits of the practice of Open Defecation

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Infectious diseases can be avoided	316	42.8	-	-	72	20.5	-	-
Open Def. does not require payment	246	33.3	236	34.1	122	34.8	234	42.9
It serves as manure to fertilize the soil	91	12.3	-	-	-	-	-	-
One's magical powers are not spoilt	-	-	156	22.6	47	13.4	87	15.9
The body is free from smell after using OD	86	11.6	298	43.3	110	31.3	225	41.2
Total	739	100	689	100	351	100	546	100

Source: Field survey, 2008.

Figure 4: Participants' Stance on the Advantages of Open Defecation

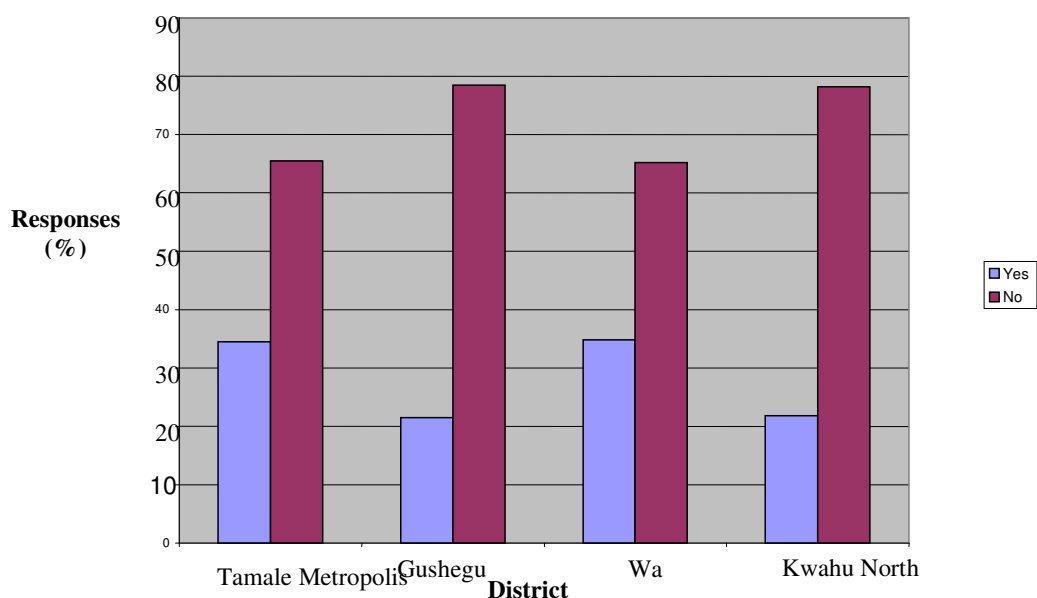


Table 23: Disadvantages/Demerits of the practice of Open Defecation

Description	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
It poses health hazards and can lead to the outbreak of diseases	990	48.0	605	43.62	315	44.9	480	44.0
It is dangerous in the bush and one is exposed to harmful reptiles	393	19.0	271	19.54	124	17.7	165	15.1
It's dehumanizing and exposure of privacy to others	423	20.5	194	13.99	122	17.4	124	11.4
It creates air pollution and serves as breeding grounds for insects	257	12.5	308	22.21	141	20.1	323	29.6
Total	2063	100	1378	100	702	100	1092	100

Source: Field survey, 2008.

5.2.4 Disadvantages of Open Defecation

Those who do not agree that open defecation has any advantage (the antagonists) argue that such behaviour poses health hazards and can lead to an outbreak of diseases. Again, that it is dangerous in the bush and one is exposed to harmful reptiles. The antagonists criticised open defecation on the grounds that it is dehumanizing because one's privacy can be exposed. This thinking might be partly influenced by religious teachings that it is sacrilegious to see the privacy of a fellow. Further, open defecation pollutes the air and serves as breeding grounds for harmful insects. On average, 46% of all respondents who resent it stated that the main disadvantage of open defecation is that it poses health hazards and can lead to the outbreak of diseases (Table 23). Results of focus group discussions show that women and young girls suffer most from the lack of privacy in open defecation because it compels them having to do it only before dawn or after dark.

5.2.5 Views on the Ways to Stop Open Defecation in the Community

Respondents' views were sought on how open defecation could be stopped. Majority think that the provision of toilets to every household is a major step for attaining total sanitation. This is in line with the current policies of Town and Country Planning and the District Assemblies at encouraging people to include toilet facilities in building of houses. The construction of public toilets is the least preferred option (Table 24). This may be attributed to the conspicuous nature of public toilets in exposing dirt in towns and cities under situations of poor management. Instances where they are even well managed the unpleasant odour emanating from such toilets are not controlled. Thus, the provision of more toilet facilities, enacting laws and bye laws and the education of the general public by sanitary officers are key strategies for stopping open defecation.

Table 24: Ways to stop communities from Open Defecation

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Provide more Toilet Facilities	773	67.8	291	42.2	105	29.9	-	-
Free spaces should be developed quickly	254	19.9	-	-	-	-	-	-
Enact laws to punish culprits	112	8.8	103	14.9	105	29.9	-	-
Sanitary officers to organize campaign against the practice	1	0.1	293	42.8	141	40.2	-	-
Total	1140	100	689	100	351	100	-	-

Source: Field survey, 2008

Table 25: Personal Attitudes towards Open Defecation

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
It is bad and should be stopped	273	58.8	435	63.1	151	43.0	339	62.1
I hate the practice and there should be education against it	314	29.5	96	13.9	155	44.2	82	15.0
I detest it	110	11.7	158	22.9	45	12.8	125	22.9
Total	1278	100	689	100	351	100	546	100

Source: Field survey, 2008.

5.2.6 Personal Attitudes towards Open Defecation

Sentiments of respondents on the practice of open defecation were sampled and the results are summarized in Table 25. The results show that majority will like to see an end to it because it is a bad practice (unhygienic). For example, 63% and 62% of the respondents in Gushegu and Kwahu North districts resent the practice and recommends an intensive education to stop it.

5.2.7 Proposed Strategies for dealing with Open Defecation

The results show that some specific strategies are useful for stopping open defecation. These strategies include education and advocacy involving the use of radio and television. Religious bodies also have roles to play because about 38%, 18%, 8% and 18% of the respondents in Tamale Metropolis, Gushegu, Wa East and Kwahu North, respectively, said religious bodies are helpful in that direction. The reason is that the practice is largely perceived as attitudinal and the role of Imams and Pastors who form part of opinion leaders in the communities cannot be over emphasised. They have close contact with the people and therefore command great respect, an ingredient required for influencing social change. Members of community based organisations (CBOs) are also seen as key change agents. The reason is that the membership of CBOs has generally included men, women and the youth living in the same community. This makes community mobilisation simple. Again, GDCA (2008) has shown that a well empowered CBO is capable of engaging relevant authorities or power bearers in the provision of services. In short, CBOs play key role in ensuring rights-based approach to development. Another strategy is to have regular delivery of sanitation message to the people. This can be achieved by approving the use of *gong gong* beating to mobilise people to discuss sanitation issues.

Table 26: Proposed Strategies to be used to stop Open Defecation

Description	District							
	Tamale Metropolis		Gushegu		Wa East		Kwahu North	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Education through radio and television	637	51.0	218	31.6	139	39.6	171	31.4
Religious Bodies should be used	471	37.7	125	18.1	31	8.8	100	18.3
CBOs should be created to educate communities	82	6.6	105	15.2	63	17.9	82	15.0
Gong-gong beating	59	4.7	241	35.0	118	33.6	193	35.3
Total	1249	100	689	100	351	100	546	100

Source: Field survey, 2008.

6 Detailed description of a success story or experience in the area of solving a problem at the level of the community

This sub-section deals with success stories in relationship with how problems can be solved at the community level. The experience of CARE International in collaboration with the University for Development Studies (UDS) is presented. It is important to add that the study has not come across any organisation that has specifically designed and implemented open defecation related projects. However, the problem identification technique, community entry and mobilisation skills, strategies, challenges and achievements of the Bushfire and Rural Livelihoods in Northern Ghana (BURN) Project of CARE International offer great insight into solving problems at the level of the community.

Bushfire is more pronounced in the northern part of the country and is mostly caused by indiscriminate burning. Indiscriminate burning negatively affects the lives of over 80% of the people who depend on agriculture for their livelihood. This is because bushfires destroy the bush, grass, crop residues on the farms and other organic materials. After burning, ashes are usually blown away by wind or washed by running water and very little or nothing is returned to the soil. Consequently, the soil becomes poor whereas the growth of crops is retarded. Also, vegetation on uncultivated lands is crippled.

The project was set up to address indiscriminate bush burning in the savannah zone of Ghana as a way of promoting sustainable livelihood. The project aimed at three things: deepening the understanding of academia, NGOs and communities of Indigenous Knowledge and systems on bushfire management and development, facilitating selected indigenous institutions and communities to pilot improved bushfire management and control systems, and, increasing awareness and engagement of policy makers in order to enhance community participation and ownership of bushfire control and management systems.

Project Immediate Objectives

- ♣ Gender sensitive, sustainable and equitable community bushfire management systems operational in at least 20 communities and 4 Traditional Areas in 4 Districts in 3 Regions of Northern Ghana.
- ♣ Wildfire policy implementation strategies agreed and operationalised in 5 Districts of the 3 Regions of Northern Ghana.
- ♣ Community bushfire management systems shared, accessible and promoted by concerned stakeholders nationwide in context of the wildfire policy.

Project strategies:

- Facilitation and support to selected communities and their traditional and local authority systems to be the main drivers in bush fire management (BFM)
- Rights based and gender mainstreamed approach
- Civil society participation in local and national policy dialogue
- Documentation, dissemination and education towards institutionalisation of community bushfire management (CBFM) nationwide
- Partnering with District Assemblies. The project developed an innovative approach to working with District Assemblies speeding up the process of byelaw formulation at the district level by working through the sub-committees to reach out to and engage with the D.C.E and D.C.D, other members of the Assemblies and the entire Assembly about the proceedings and outcome of the byelaw review process. The project realized that it was increasingly becoming difficult to pass the process through the D.C.E and D.C.D because they are very busy, therefore after initial contacts with the D.C.E and D.C.E emphasis were placed on working through the sub-committees through to the top and ensuring that the process is well documented. At the community level, the project built the capacity of communities to engage with the district assemblies and demand for services. This approach is yielding positive results, for instance the East Mamprusi District Assembly has pledged 20 million cedis to the communities and the Mamprugu Traditional Council for bushfire management.

Impact

1. Community members' knowledge of the relationship between their livelihood sustenance and the environment deepened.
2. Intra and inter community unity improved as a result of constant meetings, discussions and brainstorming on byelaws.
3. Land productivity regenerated and farmers are increased the production of major food crops like maize, yam, cassava and plantain, and export crops such as palm trees, cashew and cocoa.
4. Shea trees in Northern and Upper East regions became well protected because of reduced burning and as such the trees are fruiting well. Incomes earned from the above activities were used to improve livelihood conditions regarding food, health and shelter.
5. Increased land fertility as a result of anti-bushfire management strategies brought about increased employment for the youth.
6. Community members and partner organizations well empowered. Community capable of approaching local NGOs, the District Assemblies, individuals and

- donors for support. Decision-making at the community and household levels became participatory.
7. Beneficiaries' ability to organize self-help projects such as cleaning around their environment and water resources (dams and rivers) increased. Group dynamics improved leading to unity and group savings.
 8. The youth acquired assets such as radios, bicycles, etc and to pay their school fees. Others use farm income to marry and to help their family relatives.
 9. Marginalized groups or minority ethnic groups recognised in community mobilisation process.

Valuable lessons (best practices) in relation to open air defecation

Communities will have the motivation and interest to prevent open air defecation if they see a link between some tangible benefits and total sanitation. The meaning is that development, particularly community development should go with reward (material support and information). The use of community byelaws alone cannot solve a problem like open air defecation. It requires the concerted efforts of community members as well as collaboration from neighbouring communities (no community is an island). Another lesson derived from the above is that sanitation projects that are supply driven are unlikely to be sustained because such projects do not win community ownership and initiative. More so, weak community initiative over burdens partner organizations.

Further, when given the necessary encouragement and support traditional authorities (chiefs and elders) as well as opinion leaders (Imams, Pastors, Assembly persons, women leaders, etc) are capable of mobilizing their constituents for self-help projects in relation to open air defecation. It is important to remind ourselves that project management is a process and needs to be implemented gradually but with a lot of commitment on the part of stakeholders, particularly the beneficiaries. One single approach cannot yield the required results for achieving project objectives. Several approaches need to be combined to be able to reap the advantages of each. Similarly, the role of each community member is required in order to ensure sustainable open air defecation project management.

PART THREE: CAPITALISATION OF GOOD PRACTICES

Capitalisation of a good practice is based on the type and quality of the practice. Good practices can be largely derived from the experiences of community opinion leaders, NGOs, members of community based organisations (CBOs) and members of community project implementation groups. Details of practices of a community based project, Bulenga, in the Wa East district is attached in Appendix 1.

Opinion Leaders

Opinion leaders (OLs) or traditional leaders are people who command authority in the communities. Results of focus group discussions indicate that chiefs, elders, the youth, women leaders (magazia) and religious leaders (Imams and pastors) have often played the role of opinion leaders. Others are teachers residing in the communities and other development workers or change agents. The Assemblyman also plays a role in leading communities. The findings show that opinion leaders constitute the entry points of community projects or programmes. The Assembly person works in collaboration with the community chief and elders as well as the community development chairmen. Although each opinion leader plays a specialised role in executing projects in the communities they are supposed to be part of the project right from the planning stage, through implementation to evaluation. This is to ensure good governance. Specifically, chiefs and elders play more of advisory role whereas the youth do the herculean tasks (e.g., lifting of building blocks, digging of trenches, carrying cement). Women invariably clean the surroundings and fetch water for preparing food for workers during communal labour.

The role played by traditional leaders can be interpreted to mean that they are 'gate keepers'. And as gate keepers in rural societies they have largely been relied upon to address issues concerning community development in general. The influence, experience and expertise of chiefs are key to mobilizing community members for massive participation. The involvement of chiefs in community development issues was found to have a positive impact on not only uniting the people but also serving as motivating factor for communalism and self-initiativeness. As such, traditional authorities have been involved in the discussion of CBO and NGO activities. They have also been included in sensitization workshops which have helped them to deepen their understanding about the concept of participatory and for that matter citizen-driving development in the community. The results indicate that over 40% of opinion leaders in the sampled communities have attended CBO and NGO or District Assembly training programmes relating to gender, conflict, youth, democracy and other issues that appear to challenge their hegemony.

Recent local economic development has involved unit committee members as stakeholders in community development. They are supposed to be formed based on voluntarism and to work closely with other stakeholders in the community.

Communication strategies are similar in all sampled communities. The mechanisms of communication include radio, chiefs/elders, community leaders (Village Development Chair persons, Assembly persons, etc), members of CBOs, women leaders, community committees, etc). The use of 'gong-gong' is the commonest means of communication. Others are the organisation of community durbars, meetings (mostly in the evenings) and festivals. Education, religion, punishment and

reward for good behaviours were identified as major ways of bringing about behavioural change.

The results show that the social change in the communities is influenced by a number of external factors. For instance at Bulenga in the Wa East District it was mentioned that the Member of Parliament in the area contributed zinc towards the construction of a teacher's accommodation. Community development is also influenced by the District Assemblies who are mandated to plan and coordinate rural development. Other influencing bodies are NGOs. The study found community infrastructure schools (Elementary, Junior High School, Senior High School and Day Care Centres), health posts, PHC Center, Private clinics and maternity homes.

The Community Led Total Sanitation (CLTS)

In so far as behaviour change is concerned, a powerful entry point to initiate a community led process is Community Led Total Sanitation (CLTS) that focuses on igniting a change in sanitation behaviour rather than constructing toilets. It does this through a process of social awakening that is stimulated by facilitators from within or outside the community. It concentrates on the whole community rather than on individual behaviours. People decide together how they will create a clean and hygienic environment that benefits everyone. Social solidarity, help and cooperation among the households in the community are a common and vital element in CLTS. Other important characteristics are the spontaneous emergence of natural leaders. In its fullest sense, total sanitation includes a range of behaviours such as: stopping all open defecation; ensuring that everyone uses a hygienic toilet; washing hands with soap before preparing food and eating, after using the toilet, and after contact with babies' faeces, or birds and animals; handling food and water in a hygienic manner; and safe disposal of animal and domestic waste to create a clean and safe environment (Kar, 2007).

CLTS concentrates on ending open defecation as a first step and entry point in changing behaviour. It starts by enabling people to do their own sanitation profile through appraisal, observation and analysis of their practices of open defecation and the effects these have. This kindles feelings of shame and disgust, and often a desire to stop open defecation and clean up their neighbourhood. It is an activity that engages the entire community in sanitation work and has the potential to benefit a large number of households. Total sanitation – open defecation free communities and hygienic practices – considerably reduces the incidence of cholera, dysentery, and diarrhoea, enabling communities to save precious and scarce household resources, leading to relatively quick and lasting economic returns (Kar and Chambers, 2007). Further, CLTS leads to new forms of public engagement. The approach can create a platform, so to speak, to build solidarity, encourage forms of collective action, and ultimately engage communities in development processes that lead to broader social change. CLTS can contribute to crucial changes in the overall hamlet environment.

Generally, the village atmosphere is anti-poor, with elites and the better off marginalizing the poorest households during social events and important decision making processes. There is little belief that the poorest can meaningfully contribute to any activity, let alone the development process and the transformation of local society. This attitude has resulted in a general despondency amongst the poorest

households, who feel unwelcome, disrespected, and isolated. CLTS has the potential to break this cycle, as the poorest households take the lead in sanitation work and through 100 percent sanitation gain respect and social standing for their efforts and hard work within and beyond the community (Kar and Chambers, 2007). More so, children can be used as key change agents in CLTS because of their role of easily reporting people who are not well-behaved.

At the heart of community led approach lies the notion that the disadvantaged are not in need of hands-out, ideas and technologies, but that dialogue, analysis, and social action can lead to personal and collective transformations. Using locally available resources, tapping the skills and creativity of people, and taking advantage of opportunities to change the world around them as they see necessary, enables the poorest women and men to gain confidence, (self)-respect and pride (Kar and Chambers, 2007). Establishing an open-defecation free environment, where there are less diseases and a visibly cleaner hamlet, creates a momentum that can be drawn upon to engage people in livelihood activities that initially work to reduce the most extreme form of poverty: hunger. Abolishing hunger and creating a more healthy and clean environment, not only has physical implications, but fundamentally transforms peoples' mindset about their own capacities to be agents of change and meaningfully participate in the public realm.

It is important to add that the CLTS has worked elsewhere and should work in Ghana too. For example, the overwhelming success of the CLTS approach in Bangladesh left a deep impression on the Pakistan delegates that poverty was not an inhibiting factor in eliminating open defecation. The experience of also Kenya shows that CLTS which worked well in Jaribuni village has been scaled up to all other villages in the sub-location. The motivation was that other villages were polluting Jaribuni's water supply. Further, Kar and Chambers (2007) wrote that Jalagari, a poor village in Gaibandha District in Bangladesh moved out of food insecurity as a result of elimination of open defecation.

PART FOUR: PROPOSITION OF A STRATEGY FOR TOTAL SANITATION

1. *Comparison of dynamics and forces of change of socio linguistic groups to the factors of success of programmes evaluated*

Governance is involvement of local populations and all actors in the management of territory with the goal to optimize the chances of success of local development programs. So, it is necessary to integrate a maximum of actors and to increase partnerships.

A demand for improved sanitation can be translated into an effective technical intervention only through a careful study and by dialogue and the exchange of information between promoters and potential users. Individual users are the ultimate decision-makers in accepting or rejecting a new practice and a new technology such as ending open air defecation. This is particularly so when the ethnic groups concerned have different cultures in terms of religion and behaviour. However, though different cultures, the behaviour or attitude about sanitation appears to be the same for all groups. Members belonging to the various groups admit that open defecation will not offer them any advantage and should be stopped. It is therefore important for a community awakening campaign towards total sanitation.

First, there is the need for the project to build on the good practices such as regular clean up exercise, solid waste burning/burial and active the influential role of Assembly persons in community mobilisation. Other good practices are the high awareness of risks associated with open air defecation and the existence of WATSAN committees in the communities as well as effective tools of communication (use of *gong gong*).

Next, triggering is important and should be based on stimulating a collective sense of disgust and shame among community members as they confront the crude facts about mass open air defecation and its negative impacts on the entire community. The basic assumption is that no human being can stay unmoved once they have learned that they are ingesting other peoples' shit.

Finally, women natural leaders tend to be less visible than their male counterparts in latrine construction but more active and responsible in their maintenance, establishing usage norms, and sustaining hygienic behaviour change. Women natural leaders often take over the toilets as soon as they are constructed. They train children to use the toilets hygienically. Thus, it is important to consciously involve women in the campaign process to ending open air defecation.

2. *Replicability of factors of success and proposition of a strategy to be adopted to total sanitation*

As mentioned earlier in the report, poverty should not be an inhibiting factor in eliminating open defecation. The meaning is that factors of success as explained under various organisations can be replicated. Attitude or behaviour is the bottom line of the matter and the adoption of any single factor should be considered based on the extent to which it can bring about change in behaviour of men, women, youth and children. The change in behaviour is necessary because man can never benefit by acting against nature but he can benefit only by co-operating with nature (Korem,

1973). Cooperation with nature entails changing certain behaviours that affect total sanitation. Total elimination of open defecation should be targeted in two phases. Phase one must concentrate on changing peoples' behaviour and attitude whereas the second Phase must consider facilitating the provision of sanitation facilities (household toilets, soakaways, etc) to beneficiary communities.

During the first Phase of the project emphasis should be placed on the following:

- a. *Baseline Study*: Knowledge is needed about the situation of and strategies adopted by poor households, in relation to both their characteristics and external opportunities and constraints. The methodological approach in such data collection and analysis must first, be contextual and, secondly, participatory. Methods that are contextual are those that attempt to capture a social phenomenon within its social, economic and cultural context (Booth et al, 1998). They are likely to generate qualitative and in-depth data. Rather than being purely extractive, such methods aim to link into better programme and project design by ensuring that respondents are (at least joint) owners of the knowledge and data generated, enabling them to participate in policy debate and project planning.
- b. *Education and sensitisation*: Education is a great redeemer: it is only through education that the final solution can be found to any social problem, especially when it comes to abolishing of attitudinal prejudices. High illiteracy rate in the communities suggests the need for an intensive community sensitisation. The education and sensitisation must guide people to know the dangers of open defecation and how to avoid it. The rights and responsibilities of various stakeholders must be part of the education and sensitisation process. This can be achieved through first community meetings and workshops. Chiefs, Assembly persons, men and women leaders, youth leaders should be part and must be seen as key players in the education and sensitisation process. Minority ethnic groups should also be involved in the planning of the education and sensitisation activities through implementation and evaluation.
- c. *Capacity building*: Capacity building is the main approach to the overall strategy of empowerment. Tackling the issue of total sanitation would require a significant enhancement of the capacity of sector actors at all levels – individuals, households, communities, institutions, commercial and industrial entities and service-providers including the private sector. Specifically, the capacity of women, men and the youth needs to be built.
- d. *Partnership/collaboration*: Partnership or collaboration is required to ensure not only pooling of resources together but also to ensure that total sanitation ideas (best practices) are well shared and utilised. Thus, Water Aid Ghana should strengthen its existing partnership with organisations like NewEnergy as well as inviting new ones. The experience of GYAM, CLIP and APDO can be very relevant to the social transformation project. It is important to also work closely with the District Assemblies because the District Assemblies have the constitutional mandate to coordinate development projects at the grass root level.

- e. *Advocacy*: Advocacy is meant to bring into public attention, issues of policies, procedures and services that, by commission or omission by power bearers, are affecting the lives of rural people negatively, to seek change in the desired direction. Opinion leaders, members of CBOs and community project implementation groups should be empowered to advocate for total sanitation in the rural areas. The practice where health inspectors went round to ensure hygienic environment needs to be revitalized. Their services are needed to ensure the upkeep of good and clean environment. Improving advocacy, increasing information and education, promoting better enforcement management will all lead to better compliance and foster greater civic responsibility towards the environment.

- f. *Participatory approach and households*: The project must make conscious efforts to involve all stakeholders in the process of stopping open defecation. As stated in the report, major stakeholders in the sampled communities include chiefs, elders, Assembly persons, women leaders, the youth and unit committee members. Social transformation approaches have often placed households and their members at the centre of analysis and decision making, with the implication that household-centred methods of analysis must play a central role in developing an understanding of livelihood strategies and in programme and project planning and evaluation. Thus, it will be helpful to tackle the problem of open air defecation by focusing on the household as the centre of change.

- g. All development action that should be undertaken in a community should fall within the development priorities defined by the local authorities in charge of coordinating development actions. The local authorities must be informed and actively involved in the implementation of development actions. Their collaboration is of paramount importance. More so, a community reference group (e.g. WATSAN Committee) that should carry out the project should be well represented at the level of the community. It should be well experienced in community development and recognized for its dynamism and social cohesion. Once chosen, this group should be conscientised and trained so as to be equipped with the necessary skills to carry out the project. Training in relationships between different parties (the project, the community reference group, and other actors who are involved) will help define areas of responsibility and clarity in roles of each party and the relationship between the actors.

- h. *Gender mainstreaming*: Women and men must be first be convinced of the benefits of improved sanitation and of changes in their own behavior. This essential process of two-way learning and promotion requires careful planning, proper resourcing, and adequate time. The recommendation is that ending open air defecation should be gender sensitive because the role of the man and the woman is paramount. All efforts should be made to bring out clearly what men and women can do either at the household level or community level to ending open air defecation.

- i. *Rights-based approach*: Environmental sanitation is regarded as a public good. This means that people must know that they have the right to protect

their environment from wastes from others, particularly, human defecation. Thus, the project should aim at pushing the social change phenomenon within the context of rights-based approach. When people see sanitation as a right they will be each other's dog.

- j. *Establish dissuasive elements for bad behaviours:* The project must guide members of the communities to identify those *bad behaviours*. When that happens it enables follow up on people who have failed to comply with open defecation rules. The community members must be allowed to come out with the dissuasive elements. Akin to this is to ensure that individuals are rewarded for their good sanitation practices.
- k. *Sustainability:* The tools for sustainability of actions to be undertaken should be developed during the conception of the project, during its implementation and should be evaluated throughout the project. The first step in sustainability starts from giving responsibility progressively to the beneficiaries during the implementation of activities, involvement of different actors concerned by the problem. Establishment of continuous dialogue between the parties involved is of equal importance. The use of management and evaluation tools for keeping track of implemented activities is a necessity.
- l. Sanitation status in Ghana is such that it must be a priority to the government and development partners who must seriously consider this sector and find appropriate solutions enabling people to change their behaviour. The role of authorities into strengthening control and safeguarding the environment cannot be over emphasised. There is the need to work with such authorities (e.g., Ministry of Health, Ministry of Local Government and Rural development, District Assemblies, etc) into strengthening control and safeguarding environment.

Possible future Phase

The following recommendations are with respect to a possible second phase of the project.

- a. WaterAid should facilitate the provision of physical sanitation facilities such as household toilets, soakaways to communities.
- b. WaterAid should facilitate the documentation and dissemination of project experiences (films, reports, publications, etc) because such experiences can form the basis for learning and teaching in the future.

3. Proposition of a communication approach to support a social convention for the total and collective abandonment of open defecation

Communication is essential for the total and collective abandonment of open defecation. It is recommended that the project must build on the traditional method of using 'gong-gong' as an effective channel of communication. The approach is highly respected and has been found to be effective in all sampled communities. It is also

imported to put in place activities involving community exchange learning visits or tours. This should be targeted at communities where local people have successfully managed their own problems in terms of behavioural change.

Circulation of information to the local actors is important. The project should initiate an information sharing and communication plans at district level. It is important to provide periodic (e.g., monthly, annual) reports to the local people as well as having documentary films on the project activities allowing the popularization of the approach and developed actions and good practices registered with the program.

Further, though awareness raising and training are both relevant approaches to ending open air defecation the involvement must go beyond training and information and sharing to the various stakeholders identified. It would be relevant to build a representative and influential group which must well be prepared (sensitised and trained) to stand as champion of the process and gradually sensitise their peers. Indeed, there is need to establish a well prepared local core group to support the project in community sensitisation. Based on the analysis of the most influential stakeholders, it is recommended that the project could build on existing WATSAN Committees, Parent Teacher Association (PTA) and School Management Committees (SMCs) in the various communities. Communities where these committees do not exist the project should make efforts to establish them. The Assembly person is the most influential person in the community and should therefore be part of the WATSAN committee system.

Nevertheless, a communication approach to reach a collective abandonment of open air defecation is the one which involves community members for them to gradually convince the other members to join in. In other words, beyond the project's communication plan, sensitisation of communities by their peers (members of WATSAN Committees) must be integrated in the process. The organization of reflection workshop is also useful. This is important for a participative decision making process and the reinforcement of activities of open defecation project. Finally, if sanitation, particularly open air defecation is to be eliminated it must come from the *people* and must be nourished by *indigenous knowledge*.

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Annexes:

Annex 1: COUNTRY BASED PROGRAMME FOR THE CAPITALIZATION OF GOOD PRACTICES

Programme/project identification

Country: *Ghana*

State: *Not applicable*

Local government: *Bulenga*

District: *Wa East*

City/Rural community: *Rural*

Village: *Bulenga*

Programme/project name: *Sustainable livelihoods project (SLP)*

Duration of the programme: *Six months from November, 2007- June-2008*

Objectives and domains of intervention: *To restore the livelihoods of people who were affected by the northern Ghana floods/dry season gardening and micro-enterprise training*

Name of the person in charge: *Catherine Amisah (Zakaria Yunus)*

Contact:

List of field contact resource persons involved in the programme

No	Surname Name	Positions	Contacts
1	Catherine Amisah	Project Coordinator	0243949640
2	Zakaria Yunus	Project Assistant	0244148323

1. What was the scope of the phenomenon before the intervention of the programme/project? *Selected communities in the district*
2. Did you identify some socio-cultural factors at the origin of the practice?
Yes No
3. If yes, what are those factors? *Concentrating all farming activities in the rainy season crop farming to the detriment of animal farming*
4. What were the challenges linked to that practice? *Lack of other jobs during the dry season; lack of capital to invest in cash crops*
5. For every factor or obstacle/challenge what is (are) the strategy (ies) used to address it/them? *Dry season gardening was introduced; farmers trained in micro enterprises management*
6. Did you identify within the ethno linguistic group some socio-cultural values favorable to the abandonment of this practice?
Yes No
7. If yes, what are those factors? *No respond*
8. Did you rely on those values for the abandonment of that practice?
Yes No
9. If yes, how? *No respond*
10. Who led the dialogue at the grassroots level? *Community members*
11. How did you get in touch with this 'constituted group', did you use some mediators?
Yes No
12. If yes, what are the direct or indirect ties which bind these mediators to

- the 'constituted group'? *Mutual trust*
13. What strategy was applied to bring this 'group' to adopt the Programme? *Community durbars were held and the ideas sold to them*
 14. Who else participated as actors in the dialogue process? *Chiefs and elders of the communities ministry of agriculture (MoFA)*
 15. Did they participate in the planning, organization and follow-up activities of the community dialogue?
Yes No
 16. If yes, what role did they play in the planning, organization and follow up activities of the community dialogue? *Chiefs and elders help in the organization and settling of disputes; MoFA helped in the training activities*
 17. What type of training or support did the dialogue facilitators/constituted group receive? *Micro enterprise training technical support for gardeners; disaster management training*
 18. What is the impact of this training on the actions undertaken by the population at grassroots level? *Community members able to make money during the dry season; women able to make profit on trading*
 19. Were separate sessions organized for the different actors (men/women/youth, leaders...)?
Yes No
 20. If yes, what were the reasons for such a choice? *No respond*
 21. How long did the dialogue last within the community? *Between 1 and 4 hours depending on the activity*
 22. What was the frequency of the dialogue sessions? *Weekly*
 23. How long did each dialogue session last? *1-4 hours*
 24. Does the initiated community dialogue differ from the 'usual dialogue' for the activities within the community?
Yes No
 25. If yes, specify the difference. *Every member is encouraged to contribute to the sessions*
 26. What are the mechanisms used by the group to inform the community members? *Organizing whole community meetings*
 27. Is there a group of people or the authoritative figures whose agreement would have influenced a change in position of a larger number of people? *Change in group members was obvious and then affected uninitiated members*
 28. Were there some resistances from the community members to get involved in the change they practice?
Yes No
 29. If yes, how was that resistance overcome? *The profit earned by participants drew the attention of many*
 30. Did the participants come only from the community in which the Program/project was operational or was the involvement extended to other communities? And how were they involved? *Though on community basis, the project started in 8 communities at the same time*
 31. At what stage of the process did you start noticing change from the community members? *When the community members realized there was support to dry season gardening*
 32. What stage of the process would you describe as climax to behavioral

- Change? *Most community members climaxed at the end of harvest*
33. What were the external factors that influence positively or negatively this change? *The positive was the donor support to the group*
34. Were musicians, poets, sports persons and social activists invited to participate in the dialogue?
Yes No
35. specify.....
36. Have the Medias been used?
Yes No
37. If yes which medias and how? *No respond*
38. Were public announcements and /or declaration methods used?
Yes No
39. If yes, how were the public announcements and /or declarations initiated and by whom? (community or project?) *No respond*
40. What were the content of the public announcement and/or declaration and their obtained results? *No respond*
41. Who among the community members participated in the public announcement and/or declaration and how? *No respond*
42. How were they chosen? *No respond*
43. How or by which means were the public announcements and/or declarations carried outside? *No respond*
44. What actions were undertaken at the LGAs, state and national levels to accelerate the process of social change initiated with the communities?
No respond
45. Did the LGAs, state and national authorities visit the communities?
Yes No
46. Can you trace the evolution of the information diffusion stages, starting from a small group of people and then extending to influence a larger public?
No respond
47. After the program do these practices still exist? If yes what is the Frequency? *No respond*
48. Did the program/project carry out actions in support of the community simultaneously? Yes No
49. If yes which ones? *Both the dry season gardening and the micro enterprise training*
50. What were impact and targeted goal of those actions? *Restoring livelihoods and reducing poverty*
51. What was the domain of expertise of the agents who carried out the program with the populations? *Community development experts; Agricultural Extension Officers*
52. Were those agents' expertise determinant in the conduct and achievement of the objectives? Yes No
53. Did you intervene in rural and urban environment?
Yes No
54. If yes did you adopt different strategies in rural and urban environment? Yes
55. If yes, what did these consist in? *projects with community participation in urban areas come in cash; those in the rural setting come in kind or labor*
56. If yes, what are the factors that led to a choice of different strategies?
Level of social cohesion
Ethno linguistic group's diversity

Existence or lack of dynamic state-controlled institution or dynamic community based organizations
 Occupation and activities types
 Others

Please specify *No respond*

57. What difficulties/constraints were encountered during the program? *Lack of funds to satisfy all the community needs; inability of community members to respond to meeting the rainy season*
58. How did you try to overcome them? *Identified those who were really needy; attending community meetings on group approved time*
59. What were the lessons learned from those experiences? *There should not be overlapping of activities during the rainy seasons*
60. If that strategy was to be adapted to sanitation (open defecation in particular), what must be done, and what must not be? *The whole community should be targeted; communities should be guided to determine their choice and not decided for.*

Annex 2: List of Communities visited

Tamale Metropolis	Gushegu	Wa East	Kwahu North
Choggu	Nyensung	Yaala	Bonkro
Sabonjida	Gbambu	Wa East	Baator
Choggu hilltop	Kpatinga	Jumo	Dortorpong/sikasu
Gurugu	Kakpagyili	Viaha	Abotanso
Nyohini south	Tuutingli	Jankori No 1	Abomasarefo
Jisonayili	Katariga	Jankori No2	Bebuso
Nyohini north	Changli	Goripie	Kwame dwamena
Kanvili	Damandung	Mamboi	Zone A memchefre
Gurugu-yapalsi	Lamalim	Danyoukura	Bruben Akate
Zogbeli	Kpugi	Kpanamuna	Bruben Fiafeme
Bulpiela	Kanimo	Mamwe	Asukesi NO 2
Choggu manayili	Dagudigli	Nokor	Takoratwene
Gbambaga	Yawumgu	Sagbalong	Koyera
Choggu yapalsi	Sampibga	Pole	Ekye-Awanfron
Worizehi electoral area	Salaa	Bichuu-yiri	Nyuinyui
Salamba	Damdaboli	Tanina	Datekrom
Lameshegu	Sugu	Katua	Adofo
Gbalo kpalsi		Boola	Adukrom/Kwame sono
Dakpema-fong		Dolindaoyiri	Kwasi krobo
Lamakara		Jolera-yiri	Belthle
Tunayili		Guonuo	Sakikrom
Bayawire		Kampeni	Foso
Sheshigu		Viise	
Sagnerigu		Nasah	
Wurishe			



WaterAid transforms lives by improving access to safe water hygiene and sanitation in the world's poorest communities. We work with partners and decision makers to maximise our impact.

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