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Foreword

Within the general framework of ensuring equity and overall development, the current set of the District Human Development Reports (DHDRs) cover a sample of 12 Metropolitan, Municipal and District Assemblies (MMDAs) in the three Northern Regions. This part of the country was selected as part of the grand strategy and intervention for the North, which feeds into the Government's Better Ghana Agenda and Savannah Accelerated Development Authority (SADA) framework. The selection of the MMDAs, which was done in consultation with the Regional Coordinating Councils, was based on equity for regional distribution and district characteristics.

The DHRs over the years serve as a catalyst through which MMDAs interpret their development agenda and focus. The reports tell the story of key human development indicators and MDGs status at the local levels. The impact and relevance of the District HDRs are evident in the shaping of the Medium-Term Development Plan of the districts and providing the districts with reliable and useful data, as well as providing information for policy making and further research. These set of twelve reports are no exception.

The main thrust of the report is to identify the resource endowments and investment opportunities of the selected MMDAs, and assess respective MDGs gaps to serve as basis for the preparation of Community Action Plans, informing the District Planning Process, and to serve as a baseline information for the evaluation of the policies and programs for the attainment of human development and the MDGs at the local levels.

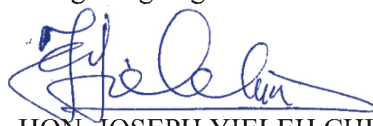
The Local Government and Rural Development Ministry sees the reports as a means to achieving equity and balanced growth in the country. It our hope and aspiration that UNDP would continue to

allocate more resources to the preparation of DHDRs, which to our minds and aspirations would be a rallying and/or focal point for MMDAs and the Central Government to focus development agendas.

Since resources are limited to cover all MMDAs at a go, with the support of UNDP, we cover very few selected MMDAs in the country. The likelihood is that we may not come back to the covered MMDAs. It is, therefore, imperative for the covered MMDAs to take it up from here and ensure continued data gathering and preparation of the reports on their own. It is in this direction that UNDP again provides equipment to support these twelve MMDAs including the Regional Economic Planning Units of the three Northern Regions to create the capacity to manage the process.

It is refreshing to also note that within the general framework, UNDP is to support the National Development Planning Commission (NDPC) to prepare training manuals for training in data management, planning and budgeting for all MMDAs in Ghana. I fully support this forward looking phenomenon because it hands over tools to our MMDAs to continuously use in addressing their development challenges and needs.

I recommend to all MMDAs to take a reading tour of the reports, to familiarize with it and on their own initiative, start working on how best to replicate this laudable idea of data collection and management to inform planning processes in their own domain. Evidence-based planning is the way to go. Let us do the useful by doing things right for a BETTER GHANA.



HON. JOSEPH YIELEH CHIREH (MP)

Hon. Minister, Ministry of Local Government and Rural Development

Preface

The UNDP Ghana Country Office, in collaboration with stakeholders and other partners, has been facilitating the production and dissemination of Human Development Reports (HDRs) in Ghana since 1997. These reports aim to enrich policy and provide analytical basis to the Government of Ghana (GoG) and a wide range of development stakeholders in the analysis of and response to key development issues. This cooperative effort has significantly enriched development dialogue and helped to shape policy action at all levels. The HDRs have so far been produced at two levels, national and district levels and currently a pilot regional report has been initiated.

The current set of the District HDRs cover 12 districts, namely, Karaga, Tamale Metro, Bole, East Mamprusi, Nankumbi North, Zabzugu Tatale (in the Northern Region); Bolgatanga, Bawku West, Lawra (in the Upper East Region); and Sissala East, Wa Municipal, Kasena Nankana (in the Upper West) on the theme “*Resource Endowment, Investment Opportunities and the Attainment of the MDGs*”. In the context of regional disparity, the choice of these districts is deliberate in order to analyze the human development situations and assess the progress of the district towards the realization of the MDGs. With barely five years to the deadline set to meet the MDG targets, the reports provide a unique opportunity to examine possible resource gaps that challenge local level efforts to meet and improve performance on the MDGs. The reports further discuss the resource endowments and investment opportunities in the districts and how these impinge on the attainment of MDGs and

improvement of human development at the local level.

The reports provide baseline district level data, information for policy making, and opportunity for further research for formulation and implementation of District Medium-Term Development Plans. It is the fervent aspiration and hope of UNDP that the findings of these reports would go a long way not only to inform the UNDP’s Local Economic Development Programme in some selected districts in Northern Ghana but also provide insight to Government and other partners in their support at the decentralized level in these districts. These Human Development Reports should therefore lead to building of synergies and further improve programming to serve the needs of the people.

It is my hope that the District Human Development Reports (DHDRs) would serve as entry points for policy dialogue by serving as analytical tools for the Government of Ghana and other development stakeholders including investors in their responses to key development issues and investment opportunities at the grassroots level.

These reports are clear reference points for the development agenda of the Metropolitan, Municipal, and District Assemblies (MMDAs) covered and serve as building blocks as they formulate strategies of intervention to make an improvement in people’s lives.



RUBY SANDHU-ROJON
UNDP Resident Representative

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This is the third set of the District Human Development Reports but a maiden one for Bolgatanga Municipality initiated and funded by the United Nations Development Programme. Many people contributed to the realization of this report. We acknowledge the efforts of Dr. Daniel B. Sarpong who guided the overall project and Rev Dr. Asuming Brempong the consultant for the field work and the writing of this report.

Secondary and Field Research: We appreciate the enormous contribution (information and validation) from the leadership of the Bolgatanga Municipal Assembly especially officers-in-charge of the following departments and services: Coordinating Directorate, Planning, Agriculture, Cooperatives, Works, National Disaster Management Organization (NADMO), Ghana Education Service and Ghana Health Service. We also appreciate the contributions of the following personnel of the Upper East Regional Administration: Mr. Sagito Isaka — Regional Economic Planning Officer, and Mr. Thomas Azure — Regional Statistician. We are very grateful to CERSGIS for the production and analysis of the maps. They are very insightful and useful maps.

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(former Resident Coordinator of the UN System and Resident Representative of UNDP of Ghana Country Office), Prof. Amoah Baah-Nuakoh (former Senior Policy Advisor); Paul Derigubaa (former Programme Specialist — Strategy and Policy Unit). The reports continued to receive leadership and technical direction from Ruby Sandhu-Rojon (the Resident Coordinator of the UN System and Resident Representative of UNDP of Ghana Country Office); K. K. Kamaluddeen (Country Director, UNDP); Pa Lamin Beyai (Economic Advisor, UNDP); Shigeki Komatsubara (Deputy Country Director — Programmes, UNDP); Kordzo Sedegah (Economics Specialist and the Project Officer/Coordinator — Strategy and Policy Unit); Coretta Jonah (Economic Analyst — Strategy and Policy Unit); as well as Magnus Ebo Duncan (Head, Economic and Industry Statistics Division, Ghana Statistical Service).

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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
APR	African Peer Review
ASIP	Agricultural Sector Improvement Project
BDA	Bole District Assembly
BECE	Basic Education Certificate Examination
BMA	Bolgatanga Municipal Assembly
CBO	Community Based Organizations
CBRDP	Community Based Rural Development Programme
CERSGIS	Centre for Remote Sensing and Geographic Information Services
CHPS	Community-Based Health Planning and Services
CIFS	Community-Driven Initiatives on Food Security
CWIQ	Core Welfare Indicators Questionnaire
DA	District Assembly
DACF	District Assembly Common Fund
DDHS	District Director of Health Services
DHDR	District Human Development Report
EA	Enumeration Area
GAC	Ghana AIDs Commission
GDHS	Ghana Demographic and Health Survey
GPI	Gender Parity Index
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GIS	Geographic Information System
GLSS	Ghana Living Standards Survey
GMH	Ghana Macroeconomics Health
GPRS	Ghana Poverty Reduction Strategy
GPS	Global Positioning System
GSS	Ghana Statistical Service
HDI	Human Development Index
HIV	Human Immune Virus
HPI-G	Human Poverty Index
ISSER	Institute of Statistical, Social and Economic Research
ITN	Insecticide Treated Nets
JHS	Junior High School
KVIL	Kumasi Ventilated Improved Latrine
KVIP	Kumasi Ventilated Improved Pit
LUT	Land Utilization Types
MDA	Ministries, Departments and Agencies
MDGs	Millennium Development Goals
MOFA	Ministry of Food and Agriculture
MTDP	Medium Term Development Plan

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NA	Not Applicable
NCCE	National Commission for Civic Education
NNDA	Nanumba North District Assembly
NDPC	National Development Planning Commission
NEPAD	New Partnership for African Development
NER	Net Enrolment Ratio
NGO	Non-Governmental Organization
NHIS	National Health Insurance Scheme
NORPREP	Northern Region Poverty Reduction Programme
ORS	Oral Rehydration Salt
PPP	Purchasing Power Parity
SHEP	Self Help Electrification Project
SHS	Senior High School
SSI	Small-scale Industry
STME	Science Technology and Mathematics Education
TBA	Traditional Birth Attendants
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and Pacific
UNICEF	United Nations Children's Fund
VIP	Village Infrastructure Project
ZTDA	Zabzugu Tatale District Assembly

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Executive Summary

Introduction

The traditional conceptualization of well-being in Ghana does not focus only on the income of a person, but also on what a person is capable of doing as well as on the physical appearance of the person. Indeed, an increase in body weight is looked upon with favour and seen as an indication of improvement in one's situation in life. The concept of human development is, therefore, well-suited to the average Ghanaian's concept of welfare and standard of living. This is because the UNDP's concept of human development aims to extend the measure of living standards or well-being beyond income to incorporate other important dimensions of living or being. Although income is an important determinant of a person's access to food, clothing and the other basics of life, the correlation between well-being and the income level of a person is not perfect. This is because poor people in assessing their circumstances in life do not focus only on the purchasing power of their incomes. It is within this conceptual framework that the UNDP defines human development as a process of enlarging people's choices. The most critical of these choices are: the option to lead a long and healthy life, to be knowledgeable and to enjoy a decent standard of living.

UNDP has since 1990 provided a quantitative measure of human development. The measure focuses on the three dimensions identified as critical to enlarging people's choices. Longevity is measured by life expectancy at birth. Knowledge is a composite of adult literacy and gross primary, secondary and tertiary enrolment rates. Standard of living is measured by income per capita in purchasing power parity

dollars. The Human Development Index (HDI) is, therefore, a composite of these three variables. In 2006/2007, the HDI for Ghana is estimated at 0.553, which gives the country a rank of 135th out of 177 countries with data (*Human Development Report — Going Beyond Income, 2007/2008* — UNDP).

Since 1997, the Ghana Country Office of the UNDP in collaboration with stakeholders and other partners has facilitated the production of Ghana's National Human Development Reports (NHDRs) to enrich policy. A total of five NHDRs have been produced and launched: the first report, the Ghana Human Development Report, 1997, focused on "Poverty and Human Development in Ghana"; the second, in 1998, examined "Public-Private Partnership in Human Development"; the third, 2000 Report was on "Science, Technology and Human Development"; the fourth, 2004/5 Report was on the theme "Breaking the HIV/AIDS Chains — A Human Development Challenge" and the fifth, in 2007, with the theme "Towards a more Inclusive Society".

Building on the success of the national reports and to respond to the growing development management needs at the decentralized level, the Human Development Report approach has been taken to the district level to capture more development issues from the grassroots. Two sets of three District Human Development Reports (DHDRs) have been produced and launched. The first sets of DHDRs for three districts — Atwima, Builsa and Tema in Ashanti, Upper East and Greater Accra Regions respectively were based on the theme: "Vulnerability", whilst the second set of another three DHDRs on the theme "Vulnerability and the

Attainment of the MDGs at the Local Level” were prepared on the Districts of Ahanta West, Ofinso and West Gonja in Western, Ashanti and Northern Regions respectively.

This third set of district human development reports has also been prepared for 12 districts: Bolgatanga Municipal, Kassena Nankana and Bawku West in the Upper East Region; Tamale Metropolitan, Bole, Karaga, Nanumba North, Zabzugu/Tatale and East Mamprusi in the Northern Region; and Wa, Lawra and Sissala East in the Upper West Region. The theme for the third set of reports reflects on resource endowments, investment opportunities and attainment of MDGs at the local level. The reports are intended to serve as basis for the preparation of Community Action Plans, informing the District Planning Process.

It is important to note that there is some overlap between the human development, human poverty and gender development indices on one hand and the MDGs on the other.

Methodology

The team applied both quantitative and qualitative methods to gather data from three different sources for the preparation of this report. We obtained secondary data from various censuses conducted in Ghana, and extracted data from the district-based Core Welfare Indicators Questionnaire survey that was conducted in 2003. The team also conducted a socio-economic survey in the district in December 2008 and consulted various stakeholders to ensure that their interests were addressed and technical omissions minimized. Some aspects of the district’s profile were obtained from documents including the Medium-Term District Development Plan prepared for the implementation of the Ghana’s Medium-Term Development Plans. In addition, various departments of the district assembly provided information on their activities over the last five years. This gave the team

insights into the economic and social conditions in the district and the strategies that have been adopted and implemented regarding issues of human development.

Data from the 2000 Population and Housing Census was extensively used to obtain district level information on population dynamics, housing characteristics, employment and education.

Interviews conducted in the district involved qualitative and quantitative techniques, principally to gather information on various dimensions of the MDGs and also for the assessment of the resource endowment and investment opportunities component of the report. Two main questionnaires were used for this purpose; community (a check list of services and infrastructure available in addition to detail discussion on development issues) and household questionnaires. The community questionnaire was completed during group discussions with traditional leaders of the communities, members of the district assembly, resident in a community and opinion leaders. The objective of the questionnaire was to obtain information about the socio-economic development of the communities we visited, land tenure arrangements, resources and investments within communities.

The household questionnaire is separated into different modules but is answered by the head of household or his/her representative. The questionnaire covered information on the structure of the household, employment, assets of the household, health, and education among other variables. The different types of resources available within the districts, investments opportunities and how these variables are impacting on the well-being of households, political participation and natural hazards were all covered.

In order to ensure comparability with the CWIQ 2003 data, a two stage sampling procedure was employed with the objective of generating results that are representative

enough. The approach was multi-stage probability sampling, clustered, and stratified with probability proportional to the size of the district's population.

We randomly selected well-defined enumeration areas (EAs) from the Ghana Statistical Service (GSS) database for district. The enumeration areas were properly described by the cartography section of GSS and had well-defined boundaries, identified on maps, and were relatively of small sizes with a cluster of households. These clusters were demarcated along the lines of the proven process used by the GSS in its implementation of Ghana Living Standard Surveys (especially III, IV and V) and Core Welfare Indicators Questionnaire I and II. The selected EAs or communities were listed to know the total number of households that served as sampling frame from which an appropriate sample size was selected systematically for each stratum in a district.

The technique of stratification was employed in the sample design to enhance precision and reliability of the estimates. The stratification of the frame for the survey was based on the size of the locality the enumeration area was chosen from: i.e. whether the locality is urban, semi-urban or rural. Sampling within each stratum was done independent of others and the approach of picking the number of enumeration areas in each stratum was proportional to the population size in each stratum. This was followed by systematic sample selection within each stratum. In all, a minimum of 239 households were chosen from 15 EAs in the district.

In addition to the administration of the household survey, focus group discussions were conducted in six communities to reflect the stratification.

Findings

The Bolgatanga Municipal Assembly report analyzes the human development situation

and assesses the progress of the district towards the realization of the MDGs. It also discusses the resource endowments and investment opportunities in the district and the possible effects on the attainment of MDGs and improvement in human development. The following are the key findings.

1. In education, the municipality has witnessed improvements in the enrolment of school children in the primary and JHS levels. The gender dimension of enrolment shows that female enrolment outnumbers that of male at the kindergarten and primary levels of education, but this seems to reverse at the JHS level. Also a high rate of female dropout is observed at all the levels of education, raising concerns about gender disparity in education in the municipality.
2. There is considerable improvement in both the gross and net enrolment rates at all levels of education owing to the increase in the number of public schools at all levels from kindergarten to the Junior High School (JHS), while private schools either remained the same or slightly increased as well. The kindergarten enrolment increased 4.6 per cent 2005/2006, in 2007 and 2008, while the primary and JHS enrolments increased 5 per cent and 2.4 per cent respectively for the same period. These increases reflect the kind of positive attention that both parents and the municipality have given to improve human resource development.
3. The number of teachers attending to the schools in the municipality also shows increases at all levels between 2005/2006 and 2007/2008 academic years, with untrained teachers constituting a substantial proportion of the total at all levels, particularly the kindergarten schools. The ratio of untrained to trained teachers improved

- slightly at the kindergarten level from 3.4 in 2005/2006 to 2.1 in 2007/2008; while that for trained teachers to untrained teachers declined at both the primary and JHS levels from 2.2 in 2005/2006 to 1.8 in 2007/2008 at the primary level, and from 4.6 in 2005/2006 to 2.6 in 2007/2008 at the JHS level.
4. There has been improvement in the health sector with indications of improvement towards achieving the MDGs 4, 5 and 6. Access to medical facilities is relatively high in the municipality. The attendance of pregnant women at pre-natal clinics is relatively high compared with post-natal attendance. Hence the performance of the municipality in sustaining a decline in the area of maternal mortality needs attention for the realization of that MDG. Most of the population in the urban areas of the municipality visit either a public hospital/clinic (48.2%) or private hospital/clinic (45.8%) when sick, compared to those in the rural areas (27.7% and 27.5% visit public hospital/clinic and private hospital/clinic respectively). As expected, more of those living in the rural areas use community health centres (23.1%) and pharmacies/chemical shops (13.1%) than those living in the urban areas. Incidentally, fewer people and almost equal proportions of both urban and rural dwellers use the services of traditional healers when sick.
 5. The health system has emphasized preventive healthcare, and encouraged both urban and rural dwellers to use various methods particularly for malaria prevention. The use of treated bed nets, regular weeding of compound and use of mosquito coil are among the key strategies households in the municipality adopt against malaria.
 6. Malaria is among the most reported diseases in the municipality and the high incidence is a threat to improving the life expectancy of the population. Increased awareness creation and the adoption of malaria-preventive strategies such as insecticide treated bed nets for children, clearing of weeds and maintaining sanitation around houses are important.
 7. In terms of drinking water in the municipality, our survey indicates that, the majority of urban dwellers get their water from pipe-borne water sources (either individual or public stand water taps). This represents about 79 per cent of the urban population. On the other hand, most of the rural population in the municipality obtain water from boreholes (about 72%), implying that tap water and boreholes are the main sources of safe water. Also, it takes less than 15 minutes for both urban and rural dwellers in the municipality to reach water sources, indicating that accessibility to water is generally easy. However, progress must be speed up to sustain the rising trends in the provision of safe drinking water. Overall the percentage of the population enjoying safe drinking water increased from 64 per cent in 2005 to 73 per cent in 2007.
 8. Some improvements were also recorded in sanitation. The percentage of the population in the municipality using safe excreta disposal facility increased from 33 per cent in 2005 to 45 per cent in 2007; and those using KVIL facilities increased from 11 per cent to 17 per cent during the same period. However, more, need to be done to effectively check the indiscriminate disposal of garbage by sections of the population in the municipality, particularly in the rural areas.
 9. The Bolgatanga township, itself, is faced with daunting challenges in the

- management of both solid and liquid wastes. In solid waste, there are huge gaps in the amount of refuse that could be collected per day and the refuse generated. This results in rampant littering of streets and drains, posing health and other hazards to residents.
10. The unemployment rates among the youth have been on the increase in the municipality and have been higher among males than females. In general, there is a disparity in rural-urban unemployment. Underemployment is also high. Both variables seem to be serious issues in the municipality. For example, it was observed that over 68 per cent of the respondents in our 2008 survey did not do any type of work that brought in income either in cash or in kind. Only about 31 per cent of the respondents indicated that they were gainfully employed. Similarly, only 13.5 per cent were either looking for work or ready for work, while 83.5 per cent said no to looking for work or being ready for work.
 11. Perception of poverty based on the value judgment of respondents in the 2003 CWIQ Survey, indicates that most households considered themselves poor (57.0%), and this is higher compared to those who considered themselves poor in both the Upper East Region (54.2%) and Ghana (37.1%) as a whole. Using the level of happiness of households to capture their perception of poverty reveals that, although about 68.9 per cent of households in 2003 considered themselves to be either poor or very poor, poverty did not adversely affect the happiness of most of the population since over 54.2 per cent claimed to be very happy or quite happy.
 12. The impact of economic activity on poverty indicators shows that over all, the municipality performs better relative to the national situation in terms of adult literacy (knowledge) and access to safe water. In terms of food insecurity, it is relatively more difficult to satisfy food needs in the urban municipal compared to the rural municipal and more pronounced among men than women.
 13. A major challenge to achieving the health, education, water and sanitation targets of the MDGs in the municipality is the relatively high level of illiteracy and poverty which have combined to expose many people to health hazards and account for the relative low standard of living of the people. It is therefore very important to intensify education, water and sanitation and preventive health strategies, particularly malaria prevention strategies, to make all households aware of the need to adopt some measures to prevent the illness and minimize the incidence of malaria-related deaths through proper sanitation control.
 14. As regards child mortality, considerable progress has been made in reducing malnutrition, stunting, wasting and the number of underweight.

The Way Forward

There are critical areas of concern, challenges and opportunities that need serious policy considerations in order to enable the municipality to utilize sustainably and efficiently the natural resources it is endowed with to improve human development as well as put the municipality on track to meet the MDGs. The outcomes of the economic situation of the households in the communities and the progress made so far towards the achievement of MDGs suggest that the municipality has not fully exploited the numerous resource endowments at its disposal to generate more employment, enhance literacy, reduce poverty as well as

increase access to safe drinking water and improve sanitation. The natural resource endowments exploitation for livelihood emanates from the interaction of the quality of the human resource skills, agriculture and related activities and a need to efficiently enhance investment opportunities to provide employment to the youth. The following suggestions are critical for the way forward:

1. The potential of the municipality to contribute to its economic development rests on the exploitation of the abundant natural resources. Access to and the use of the resource endowments by households is complementary to the other forms of capital and is particularly an important mechanism for escaping poverty through strengthening the capabilities of the household.
2. The institution-resource access relationship that highlights the participation of individuals in accessing governance in the municipality needs to be enhanced for broader community participation. Most communities indicated that they interact more with their local assembly member than with the MP or MCE, which is expected as the assembly member resides with the local community. Communities therefore relay their problems and grievances through their assembly member to the Municipal Assembly. Their participation in community development programmes is, therefore, through their assembly members. The municipality needs to strengthen the assembly member-community linkage to enhance effective community participation in governance.
3. Human resource development and utilization concerning education, training, employment opportunities and the building of incentives for useful and productive activities are important in harnessing the resource endowments.

The municipality has to continue to focus on improving not only the quantity of educational facilities but also pay particular attention to the skill-training institutes and the quality of the educational sector. This will require cooperation between the BMA and other stakeholders (including development partners and NGOs) in ensuring that the human resource development agenda is prioritized.

4. Investment opportunities in the municipality face several challenges. To promote investments and sustain them, land tenure security combined with improvements in infrastructure, financial support, markets and appropriate technology and enhanced security, are vital. Investment incentive packages need to be developed by the Bolgatanga Municipal Assembly (BMA), along with technical support from other governmental and non-governmental organizations to facilitate the exploitation of natural resource endowments in the municipality to generate income to reduce poverty and help make progress on the MDGs.
5. In addition to incentives to attract investments, strengthening institutions to secure the natural resource base to sustain investments are also important. Securing the resource base depends on credit provision, generating appropriate revenues from the existing use of the resources and safeguarding the resources. There are several institutions providing credit facilities in the municipality that could enhance not only the investment opportunities, but also foster the efficient exploitation and utilization of the natural resource endowments in the municipality.
6. Revenue mobilization is critical in the municipality, and the IRS must expand its operations and get closer to the

- people by giving them tax education and helping to ease the several logistical problems it faces.
7. The water and sanitation plans of the municipality to increase access to water and sanitation must be pursued vigorously to meet targets of the Millennium Development Goals.
 8. In addition, the efforts of the municipality in the area of environmental sustainability can be stepped up by high level community participation in communal work to reverse the degradation and the need to recover degraded lands, protect those under threat, and enhance their ecological dysfunction that has arisen through human interference in the form of periodic bushfires and unsustainable land management practices.
 9. The Ghana National Fire Service and the Agricultural Extension Services need support in safeguarding the natural resources in the municipality and to develop agriculture beyond subsisting standards and to enhance the agricultural sector to be competitive, respectively. Halving the number of people whose income is less than one dollar and the proportion who suffer from hunger in the municipality will greatly depend on agricultural resource exploitation and protection.
 10. The municipality and other stakeholders should encourage, support and help sustain the formation of various Farmer Based Organizations (FBOs) preferably along commodity/agro-business lines. Training of FBOs should be targeted to address specific issues that will enhance women capacity to perform their roles in the farm-to-market-chain-links. Encouraging the involvement of NGOs in the municipality to sustain the natural resource endowments is imperative.
 11. Finally, communities should be supported with programmes to mitigate emergency situations including provision of food aid, and community driven infrastructure needs such as schools and markets. Provision of inputs — (seeds, animal breeds, tools, etc.) is a critical area for intervention by NGOs. The BMA support given to NGOs must further be strengthened to enhance the public-private sector partnerships.

Introduction

Human Development

The traditional conceptualization of well-being in Ghana does not focus only on the income of a person, but also on what a person is capable of doing as well as on the physical appearance of the person. Indeed, an increase in body weight is looked upon with favour and seen as an indication of improvement in one's situation in life. The concept of human development, therefore, may be considered as being well-suited to the average Ghanaian's concept of welfare and standard of living. This is because UNDP's concept of human development aims to extend the measure of living standards or well-being beyond income to incorporate other important dimensions of living or being. Although income is an important determinant of a person's access to food, clothing and the other basics of life, the correlation between well-being and the income level of a person is not perfect. This is because poor people in assessing their circumstances in life do not focus only on the purchasing power of their incomes.

According to Sen (2000), "income may be the most prominent means for a good life without deprivation, but it is not the only influence on the lives we can lead. If our paramount interest is in the lives that people can lead — the freedom they have to lead minimally decent lives, then it cannot but be a mistake to concentrate exclusively only on one or the other of the means to such

freedom."¹ Building on Sen's analysis of poverty and capability, UNDP defines human development as a process of enlarging people's choices. The most critical of these choices are: the option to lead a long and healthy life, to be knowledgeable and to enjoy a decent standard of living.

UNDP has since 1990 provided a quantitative measure of human development. The measure focuses on the three dimensions identified as critical to enlarging people's choices. Longevity is measured by life expectancy at birth. Knowledge is a composite of adult literacy and gross primary, secondary and tertiary enrolment rates. Standard of living is measured by income per capita in purchasing power parity dollars. The Human Development Index (HDI) is a composite of these three variables (Box 1.1). Ghana's HDI is estimated to have risen from 0.515 in 1990 to 0.537 in 1995. It rose to 0.560 and 0.568 in 2000 and 2002 respectively and declined to 0.532 in 2004. In 2006/2007, the HDI for Ghana is estimated at 0.553, which gives the country a rank of 135th out of 177 countries with data (*Human Development Report — Going Beyond Income, 2007/2008*, UNDP). Life expectancy at birth is 59.1 years (and Ghana is at 137th), adult literacy rate is 57.9 percent (of ages 15 years and older, and Ghana is 117th), combined primary, secondary and tertiary gross enrollment rate is 50.7 percent (and

Ghana is at 146th), while GDP per capita (PPP US\$) is 2,480 (and Ghana is at 126th).

Box 1.1: Calculating the Human Development Index

The Human Development Index (HDI) is a summary measure of human development. It measures the average achievements in a country in three basic dimensions of human development:

- A long and healthy life, as measured by life expectancy at birth.
- Knowledge as measured by the adult literacy rate (two-thirds weight) and the combined primary, secondary and tertiary gross enrolment ratio (one-third weight).
- A decent standard of living as measured by GDP per capita (PPP US\$).

Before the HDI is calculated, an index needs to be created for each of the dimensions. To calculate these dimension indices, minimum and maximum values (goalposts) are chosen for each underlying indicator.

Performance in each dimension is expressed as a value between 0 and 1, applying the following general formula:

$$\text{Dimension} = \frac{\text{actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}}$$

The HDI is calculated as a simple average of the dimension indices

Goal Posts for calculating the HDI

Indicator	Maximum Value	Minimum Value
Life Expectancy at Birth	85	25
Adult Literacy Rate (%)	100	0
Combined Gross Enrolment Ratio (%)	100	0
Gross Domestic Product per capita (PPP US\$)	40,000	100

Source: UNDP Human Development Report, 2004, New York.

These national aggregate figures mask critical information on regional and district level disparities. They do not provide information on progress made or the lack of it, by different groups in the country. The gender-related development index also produced by UNDP, aims to reveal the gender dimensions of the three components of human development (Box 1.1).²

Since 1997, the Ghana Country Office of the UNDP in collaboration with stakeholders and other partners has facilitated the production of Ghana's National Human Development Reports (NHDRs) to enrich policy. A total of five NHDRs have been produced and launched: the first report, the Ghana Human Development Report, 1997, focused on Poverty and Human Development

in Ghana; the second, in 1998, examined Public-Private Partnership in Human Development; the third, 2000 Report was on the Science, Technology and Human Development; the fourth, 2004/5 Report was on the theme "Breaking the HIV/AIDS Chains —A Human Development Challenge; and the fifth, in 2007, with the theme "Towards a more Inclusive Society".

Building on the success of the national reports and to respond to the growing development management needs at the decentralized level, the Human Development Report approach has been taken to the district level to capture more development issues from the grassroots. Two sets of three Districts Human Development Reports (DHDRs) have been produced and launched. The first set of DHDRs for three districts — Atwima, Builsa and Tepa in Ashanti, Upper East and Greater Accra Regions respectively were based on the theme: "Vulnerability",

² This is a composite index that adjusts the average achievement of each country in life expectancy, educational attainment and income to take into account the disparity in achievement between women and men.

whilst the second set of another three DHDRs on the theme “Vulnerability and the Attainment of the MDGs at the Local Level” were prepared on the Districts of Ahanta West, Offinso and West Gonja in Western, Ashanti and Northern Regions respectively.

This third set of district human development reports has also been prepared for 12 districts: Bole, Nanumba North, Zabzugu Tatale, Tamale, Karaga and East Mamprusi all in the Northern region; Bolgatanga, Bawku West and Kasena-Nankana in the Upper East region; and Wa, Lawra and Sissala East in the Upper West region. The theme for the third set of reports reflects on resource endowments, investment opportunities and an assessment of MDGs gaps to serve as a basis for the preparation of Community Action Plans, informing the District Planning Process.

Millennium Development Goals (MDGs)

The adoption of the Millennium Declaration by Heads of State in September 2000 formally introduced the MDGs onto the development agenda. The MDGs were the results of the thinking that began in the mid-1990s on strategies to improve aid effectiveness. The MDGs consist of 8 goals, 21 targets and 60 indicators (Refer to Table 1.1 for details), and have become an integral part of Ghana’s development strategy.

Ghana’s successive Medium-Term Development Plans (MTDPs) “...seek to operationalize various international agreements which are relevant to the poverty reduction objectives and of which Ghana is signatory. Principal among these is the millennium Development Goals (MGDs)...” A synergy has been created between the Heavily Indebted Poor Countries (HIPC) initiative and the MDGs by the transformation of the latter “into the mandatory framework of domestic economic policy in return for the grant of debt relief” (Republic of Ghana 2005). As a result, MTDP and the district development plans,

each has a matrix indicating the linkage between identified priorities and the MDGs.

There is some overlap between the human development, human poverty and gender development indices on one hand and the MDGs on the other.

Resource Endowments and Investment Opportunities

Resource endowments provide for the needs and wants of the people in a location. These resources — natural and man-made, renewable and non-renewable — including land, water, minerals, human, physical infrastructure, training and education resources, access to transportation and communication networks, and the political and regulatory environment, are the fundamentals that determine the pace of innovation and economic growth in that location and has implications for the attainment of the MDGs and improvement in human development. Resource endowments and its economic, social and political utilization are ultimately what distinguish one area’s economic development from another.

In particular, because natural resource endowment remains relatively constant or declines under environmental pressure, the size of the human population that can be sustainably supported based on the current consumption patterns and prevailing technologies is decreasing. Hence the ability of a location’s natural resource base to sustain human activity is determined by two factors: its natural resource endowment and the pressure placed on it by human activity. Resource endowments are, therefore, not static. They vary according to levels of technology, market conditions and consumer preferences.

A location rich in natural resource would attract entrepreneurs who would employ the resource in production and thereby creating jobs. Support industries would follow and the cycle of growth would be perpetuated. Through this process, natural resource abundance can be associated with the positive aspects of economic growth.

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Thus the utilization of today's resource endowments in a location reflects the past course of private investment decisions and public policies. Ensuring adequate and appropriate resources to promote future innovation and growth is the task of today's decision-makers.

Table 1.1: Official list of MDG indicators (Effective 15 January 2008)

Goals and Targets ³	Indicators for monitoring progress
Goal 1: Eradicate extreme poverty and hunger	
Target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	1.1 Proportion of population below \$1 (PPP) per day
	1.2 Poverty gap ratio
	1.3 Share of poorest quintile in national consumption
Target 1.B: Achieve full and productive employment and decent work for all, including women and young people	1.4 Growth rate of GDP per person employed
	1.5 Employment-to-population ratio
	1.6 Proportion of employed people living below \$1 (PPP) per day
Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	1.7 Proportion of own-account and contributing family workers in total employment
	1.8 Prevalence of underweight children under-five years of age
	1.9 Proportion of population below minimum level of dietary energy consumption
Goal 2: Achieve universal primary education	
Target 2.A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	2.1 Net enrolment ratio in primary education
	2.2 Proportion of pupils starting grade 1 who reach last grade of primary
	2.3 Literacy rate of 15-24 year-olds, women and men
Goal 3: Promote gender equality and empower women	
Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	3.1 Ratios of girls to boys in primary, secondary and tertiary education
	3.2 Share of women in wage employment in the non-agricultural sector
	3.3 Proportion of seats held by women in national parliament
Goal 4: Reduce child mortality	
Target 4.A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	4.1 Under-five mortality rate
	4.2 Infant mortality rate
	4.3 Proportion of 1 year-old children immunised against measles
Goal 5: Improve maternal health	
Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	5.1 Maternal mortality ratio
	5.2 Proportion of births attended by skilled health personnel
Target 5.B: Achieve, by 2015, universal access to reproductive health	5.3 Contraceptive prevalence rate
	5.4 Adolescent birth rate
	5.5 Antenatal care coverage (at least one visit and at least four visits)
	5.6 Unmet need for family planning
Goal 6: Combat HIV/AIDS, malaria and other diseases	
Target 6.A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	6.1 HIV prevalence among population aged 15-24 years
	6.2 Condom use at last high-risk sex
	6.3 Proportion of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS
	6.4 Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years
Target 6.B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it	6.5 Proportion of population with advanced HIV infection with access to antiretroviral drugs
Target 6.C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	6.6 Incidence and death rates associated with malaria
	6.7 Proportion of children under 5 sleeping under insecticide-treated bednets
	6.8 Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs
	6.9 Incidence, prevalence and death rates associated with tuberculosis

³ All indicators should be disaggregated by sex and urban/rural as far as possible.

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	6.10 Proportion of tuberculosis cases detected and cured under directly observed treatment short course
Goal 7: Ensure environmental sustainability	
Target 7.A: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	7.1 Proportion of land area covered by forest
	7.2 CO2 emissions, total, per capita and per \$1 GDP (PPP)
	7.3 Consumption of ozone-depleting substances
Target 7.B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	7.4 Proportion of fish stocks within safe biological limits
	7.5 Proportion of total water resources used
	7.6 Proportion of terrestrial and marine areas protected
	7.7 Proportion of species threatened with extinction
Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	7.8 Proportion of population using an improved drinking water source
	7.9 Proportion of population using an improved sanitation facility
Target 7.D: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	7.10 Proportion of urban population living in slums ⁱⁱ
Goal 8: Develop a global partnership for development	
Target 8.A: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system	<i>Some of the indicators listed below are monitored separately for the least developed countries (LDCs), Africa, landlocked developing countries and small island developing States.</i>
	Official development assistance (ODA)
Includes a commitment to good governance, development and poverty reduction – both nationally and internationally	8.1 Net ODA, total and to the least developed countries, as percentage of OECD/DAC donors' gross national income
	8.2 Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation)
Target 8.B: Address the special needs of the least developed countries.	8.3 Proportion of bilateral official development assistance of OECD/DAC donors that is untied
Includes tariff and quota free access for the least developed countries' exports; enhanced programme of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction	8.4 ODA received in landlocked developing countries as a proportion of their gross national incomes
	8.5 ODA received in small island developing States as a proportion of their gross national incomes
	Market access
Target 8.C: Address the special needs of landlocked developing countries and small island developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly)	8.6 Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty
	8.7 Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries
	8.8 Agricultural support estimate for OECD countries as a percentage of their gross domestic product
	8.9 Proportion of ODA provided to help build trade capacity
	Debt sustainability
Target 8.D: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term	8.10 Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative)
	8.11 Debt relief committed under HIPC and MDRI Initiatives
	8.12 Debt service as a percentage of exports of goods and services
Target 8.E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	8.13 Proportion of population with access to affordable essential drugs on a sustainable basis
Target 8.F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	8.14 Telephone lines per 100 population
	8.15 Cellular subscribers per 100 population
	8.16 Internet users per 100 population

A location rich in natural resource would attract entrepreneurs who would employ the resource in production and thereby creating jobs. Support industries would follow and the cycle of growth would be perpetuated. Through this process, natural resource abundance can be associated with the positive aspects of economic growth. Thus the utilization of today's resource endowments in a location reflects the past course of private investment decisions and public policies. Ensuring adequate and appropriate resources to promote future innovation and growth is the task of today's decision-makers.

Crowley and Appendini,⁴ however, notes the changing institution-resource access relationships in Africa that highlights the resource endowments and problems associated with the participation of individuals. Participation in land, labour, and agricultural markets can determine the types and quantities of resources with which a household is endowed and exploited. In addition, markets can provide an alternative means of access to land and other resources for households with enough capital, for instance, to rent or buy land in other areas. Others could seek off-farm employment; participate in local, national, and trans-national labour markets, in order to substitute cash for land resources in their endowment portfolio.

Thus, participation in institutions not only affects access to resources; the contrary is also true: access to resources affects participation in institutions. When there is absolute local scarcity of a resource, this can often be overcome through institutional interactions.

Increased participation of households in resource exploitation for livelihoods depends,

however, on the human resource capabilities within the household. Human resources — the availability of adequate supplies of labour with the requisite skills and abilities — is essential to a thriving local economy. Thus the failure of a locality or household to improve on its human resource capabilities could lead to the failure to attain the MDGs. For instance, in today's increasingly knowledge-based economy, cognitive skills are increasingly important, and completion of at least some basic type of education has become an essential prerequisite for many types of jobs and to effectively participate in institutions and access the local resource endowments.

The Report

The Bolgatanga Municipal Assembly Human Development report is one of the six human development reports prepared to assess endowment, investment opportunities and attainment of MDGs in 12 selected districts in the Northern Region. The report analyzes the human development situation and assesses the progress of the district towards the realization of the MDGs. It also discusses the resource endowments and investment opportunities in the district and the possible effects on the attainment of MDGs and improvement in human development. The report also examines how the findings could influence the district in Community Action Plans, inform the District Planning Process, and serve as baseline information for the evaluation of the programme and policies of the attainment of the MDGs. The report also inputs into UNDP's proposed support for the development of the Long-Term National Development Plan and reinforces the capacity of the district and community institutions for MDG-based assessment, planning, monitoring and evaluation.

Methodology and Data

⁴ Crowley, E. and Appendini, K. (2006). Rural Poverty, Population Dynamics, Local Institutions and Access to Resources. *SD. Special: Population, Poverty and Environment*. FAO.

Both quantitative and qualitative methods were applied to gather data from different sources for the preparation of this report. Information was obtained from official documents such as various censuses conducted in Ghana, and the district-based Core Welfare Indicators Questionnaire (CWIQ) survey that was conducted in 2003. The DAEA, in close collaboration with the Bolgatanga Municipality also conducted a socio-economic survey (including focus group discussions) in the district in November–December 2008 and consulted various stakeholders to ensure that their interests were addressed and technical omissions minimized.

Secondary Data Sources

Some aspects of the district's profile were obtained from documents that had been prepared by the Bolgatanga Municipality for their programmes, particularly the Medium-Term District Development Plan (2006–2009) prepared for the implementation of the Growth and Poverty Reduction Strategy. In addition, various departments of the Bolgatanga Municipality provided information on their activities over the last five years. This provided insights into the economic and social conditions in the municipality and the strategies adopted and implemented, including those in relation to issues of human development.

An important source of additional secondary data was the census. Data from the 2000 Population and Housing Census were used extensively to obtain district-level information on population dynamics, housing characteristics, employment and education.

Primary Data Collection

Interviews were conducted in the Bolgatanga Municipality using qualitative and quantitative techniques, principally to gather

information on various dimensions of the MDGs and human development indicators and also for the assessment of the resource endowments and investment opportunities component of the report. Two main questionnaires were used for this purpose: the community questionnaires and household questionnaires. The community questionnaire was completed during focal group discussions with leaders of the communities, members of the town committees resident in the community and opinion leaders. The objective of the questionnaire was to obtain information about the socio-economic development of the communities visited, resources available and utilized and investment opportunities, among others.

The household questionnaire was separated into different modules but is answered by the head of household or his/her representative. The questionnaire covered information on the structure of the household, employment, assets of the household, health (maternal and child), education, household consumption patterns and expenditures, resource endowments and utilization including agriculture, non-farm investments; access to services, political participation, migration (scope and reason) and natural hazards and environmental impacts.

Sampling Techniques

In order to ensure comparability with the CWIQ 2003 data, a two-stage sampling procedure was employed with the objective of generating results that are representative of the district. The approach was multi-stage probability sampling, clustered, and stratified with probability proportional to the size of the district.

The sampling design was prepared by personnel of Ghana Statistical Service (GSS) who randomly selected well defined enumeration areas (EAs) from the GSS database of the district. The enumeration areas were properly described by the GSS

and had well-defined boundaries, identified on maps, and were relatively of small sizes having clusters of households. These enumeration areas are demarcated along the lines of the proven process used by the GSS in its implementation of Ghana Living Standard Surveys (especially III, IV and V) and Core Welfare Indicators Questionnaires I and II. The selected EAs or communities were listed fully to know the total number of households that served as sampling frame from which an appropriate sample size was selected systematically for each stratum in the district. This was done to facilitate manageable interviewer workload within each sample area and also reduce the effects of intra-class correlation within a sample area on the variance of the survey estimates.

An enumeration team listed all households in each of the chosen enumeration areas. This was important because some of the enumeration areas had changed in size since the 2000 Population and Housing Census and the sampling approach at this stage did not consider their sizes before the selection. An equal number of households in each Enumeration Area (EA) were also selected. The listing information was needed to compute the appropriate weights for proper estimation at the analysis stage.

Stratification

The technique of stratification was employed in the sample design to enhance precision and reliability of the estimates. The stratification of the frame for the survey was based on the size of the locality the enumeration area was chosen from, that is, whether the locality is urban, semi-urban or rural. Sampling within each stratum was done independently and the approach of picking the number of enumeration areas in each stratum was proportional to the population size in each stratum. This was followed by systematic

sample selection within each stratum. In all, 239 households were chosen from 15 selected EAs in the municipality. The EAs from which the households were selected are shown in Table 1.2. In the report, the rural and semi-rural households were grouped in the rural category to ensure harmonization with CWIQ 2003 and 2000 census.

Focus group discussions were carried out in six of the communities to reflect the stratification. In addition, interviews were conducted with institutional leaders in the district (see Picture 1.1).

Outline of the Report

The Report has nine chapters. After the introductory chapter, the profile of Bolgatanga Municipal is outlined in Chapter 2 and covers physical features, demographic characteristics, socio-economic infrastructure and housing characteristics, human security in the district, governance (traditional and state) and status of MDGs. Economic activity and poverty including employment, unemployment and under-employment, child labour and objective and subjective assessments of poverty in the district are discussed in Chapter 3. Chapter 4 focuses on education and literacy by analyzing quality of school infrastructure, school attendance as well as education attainment and adult literacy. In chapter 5, the report assesses the health, water and sanitation situation in the district in relation to the MDGs and resource endowments and investment opportunities. The chapter examines the trends in infant, child and maternal mortality rates and the incidence of HIV/AIDS, malaria and other major diseases as well as household access to safe drinking water and basic sanitation. Chapter 6 discusses resource endowments with respect to the human, infrastructure and natural resources in the district. It also discusses the institutions and governance, hazards and their

attendant environmental impacts. The usage and constraints of these resources and the effects on the MDGs are examined in Chapter 7. Chapter 8 discusses the investment opportunities and risk factors contingent on the resource endowments. The last chapter then provides a summary and policy recommendations.

Profile of the District

Table 1.2: Enumeration Areas (EAs) and Localities covered by the Household Survey

Locality	Name of EA	Category	Sample Size	Average Household Size
Sherigu	Sherigu Ataasobila	Rural	16	3
Sumbrugu	Sumbrugu Kologo	Rural	16	6
Yikene	Yikene Adaamabisi	Rural	16	6
Bolgatanga	Sandgarden Annex	Urban	16	5
Yorogo	Yorogo	Rural	16	7
Bolgatanga	Soe	Urban	16	5
Bolgatanga	Bolgatanga	Urban	16	5
Tindonsobulugu	Tindonsobulugu	Rural	16	4
Bolgatanga	Vag Hall	Urban	16	3
Kumbosigo	Kumbosigo	Rural	16	7
Zuarungu	Zuarungu Nyokoko	Rural	16	9
Bolgatanga	Soe Maclean Dam	Urban	16	3
Bolgatanga	Hotel Oasis	Urban	16	5
Bolgatanga	Assemblies of God Area	Urban	16	5
Kalbeo	Kalbeo Awure Zeb	Rural	15	7
Total Sample Size / Average H/h size			239	5.33

Source: 2008 DAEA Household Survey.



Picture 1.1: A Community Discussion Session at Yikene in the Bolgatanga Municipality.

Profile of the District

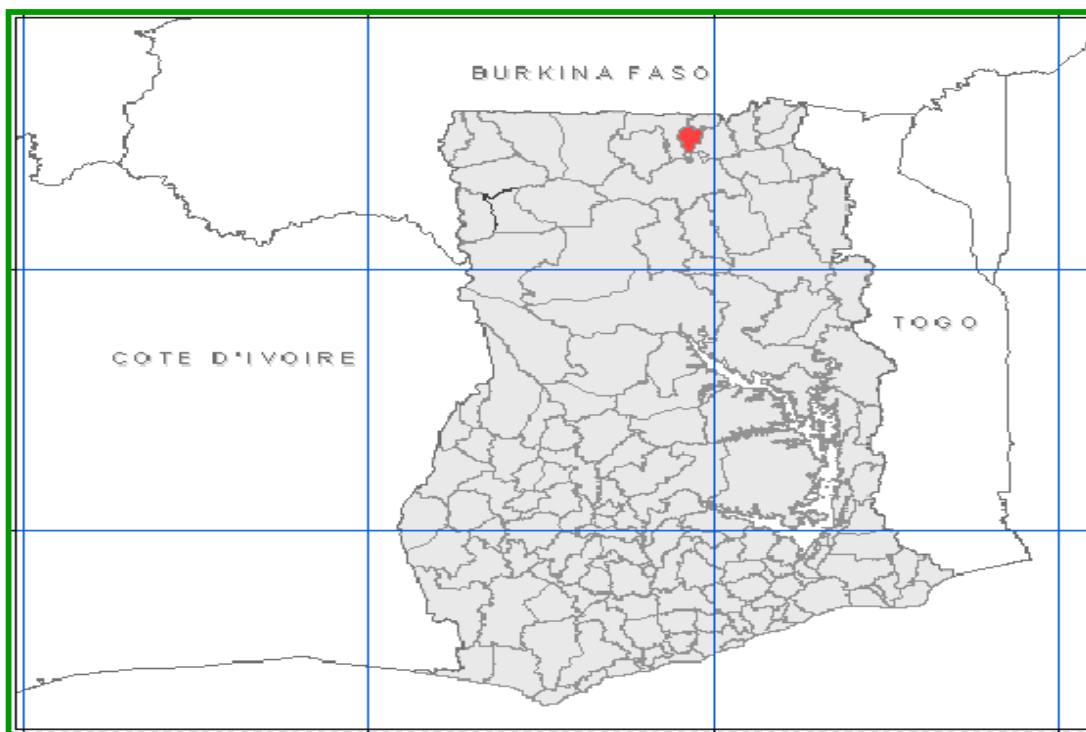
Physical Features

The Bolgatanga Municipality was established in 2004 by Legislative Instrument (LI) 1797 (2004). Located in the centre of the Upper East Region, approximately, between latitudes 10°30' and 10°50' North and longitudes 0°30' and 1°00' West (Map 2.1), it is also the regional capital. Bolgatanga Municipality is bordered to the north by the Bongo District, south and east by Talensi-Nabdam District, and to the West by Kassena-Nankana District. It covers a total land area of 729 km². It is one of two municipalities (the other being Bawku

Municipal) which together with six other districts constitute the Upper East Region of Ghana.

A major irrigation project, the Vea Project covering 850 hectares, is located in the municipality. The municipality falls within the Birimian Tarkwaian and Voltaian rocks of Ghana; and there is ample evidence of the presence of minerals particularly gold in the area. The main rivers are the White and Red Volta, and their tributaries. The landscape has gentle slopes ranging from 1 per cent to 5 per cent with some isolated rock outcrops and some uplands which have slopes of over 10 per cent.

Map 2.1: Ghana: Showing Location of Bolgatanga Municipality



Vegetation and Climate

The guinea savannah woodland consisting of short deciduous trees widely spaced and a ground flora dominates the natural vegetation of the municipality, and it is usually scorched by the sun or gets burnt during the long dry season (see Picture 2.1 and Map 2.2).



Picture 2.1: The Typical Dry Season Vegetation of the Bolgatanga Municipality.

The most common economic trees are the sheanut, *dawadawa*, baobab and acacia. There is also a forest reserve in the municipality, which primarily protects most of the water bodies in the area. The climate is classified as tropical and has two distinct seasons — a wet season that runs from May to October and a long dry season that stretches from October to April; with hardly any rains. Mean annual rainfall is 950 mm while maximum temperature is 45°C in March and April with a minimum of 12°C in December.

Demographic Characteristics

Population Size, Growth Rate and Density

The population of the municipality is 147,729 with a growth rate of 1.7 per cent. This is lower than the national rate of 2.7 per cent. The population density is 141.2 persons per sq. km. This is far greater than the national density of 79.3 persons per sq. km.

The distribution of the population in terms of age shows a slightly higher percentage of adults (50.8%) than children (47.7%) as indicated in Table 2.1. Also, more of the inhabitants were born in the municipality, particularly in the rural sections (93.6%) of the municipality as compared to those born in the urban areas (69.1%) of the municipality. This implies that most of the migrants to the municipality have come to live in the urban sections.

Bolgatanga Township covers a radius of about 3 kilometres and consists of suburbs such as Yikene, Dulugu, Kumbosogo, Tindonmo-ligo which are all peri-urban in nature.

Ethnic Composition

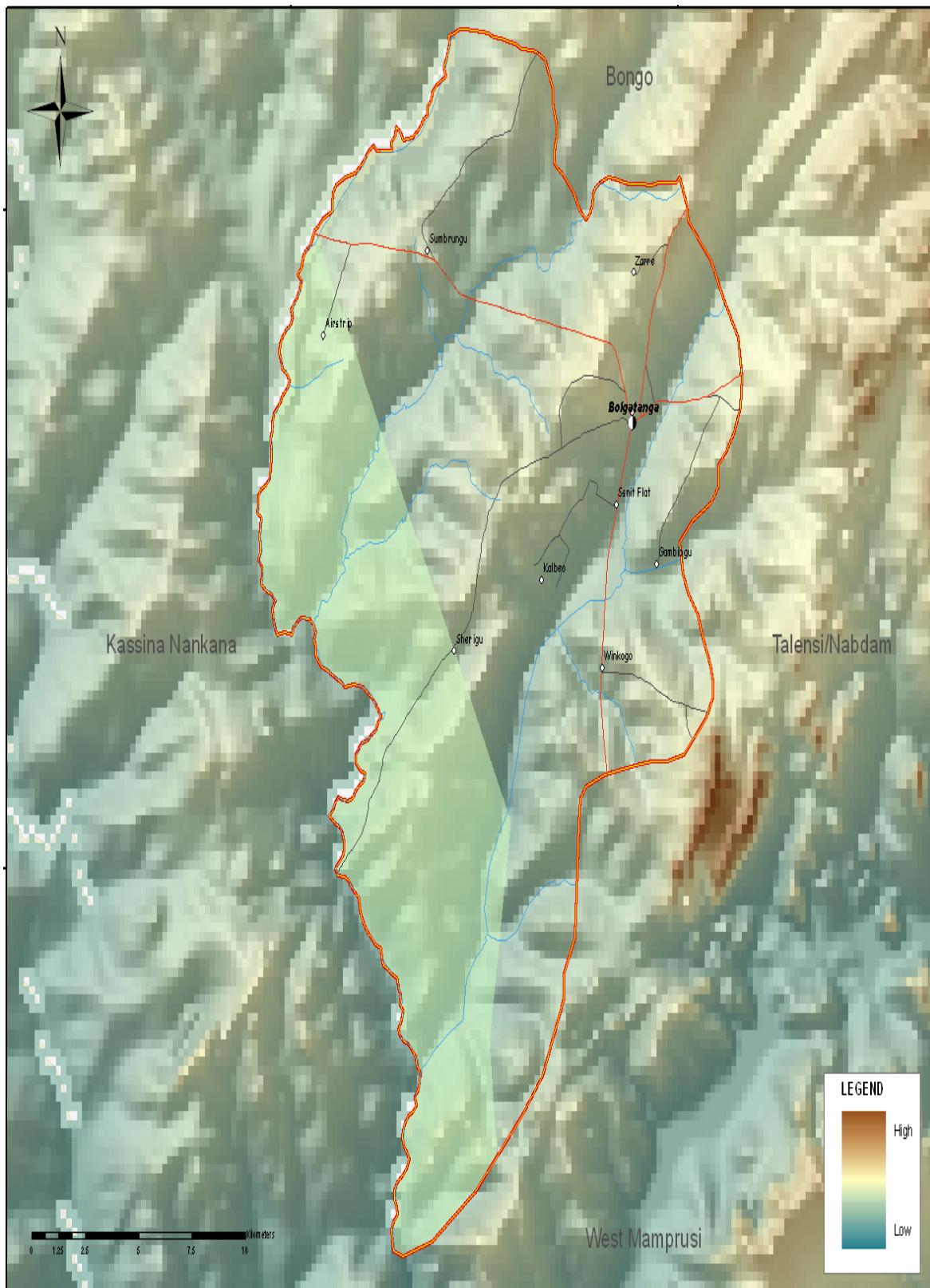
Bolgatanga Township has a cosmopolitan population, which is about 72,768 (MHA-Bolga). Although majority of the inhabitants are from northern ethnic origins, there have been a huge influx of the major ethnic groupings of Ghana including the Akans, Ewes, Ga-Dangme into the town because of its regional capital status. Most of these ethnic groupings are organized around chiefs and leaders, while others come together as social groupings. There are about 213 communities in the municipality.

Table 2.1: Population Size of Bolgatanga Municipality

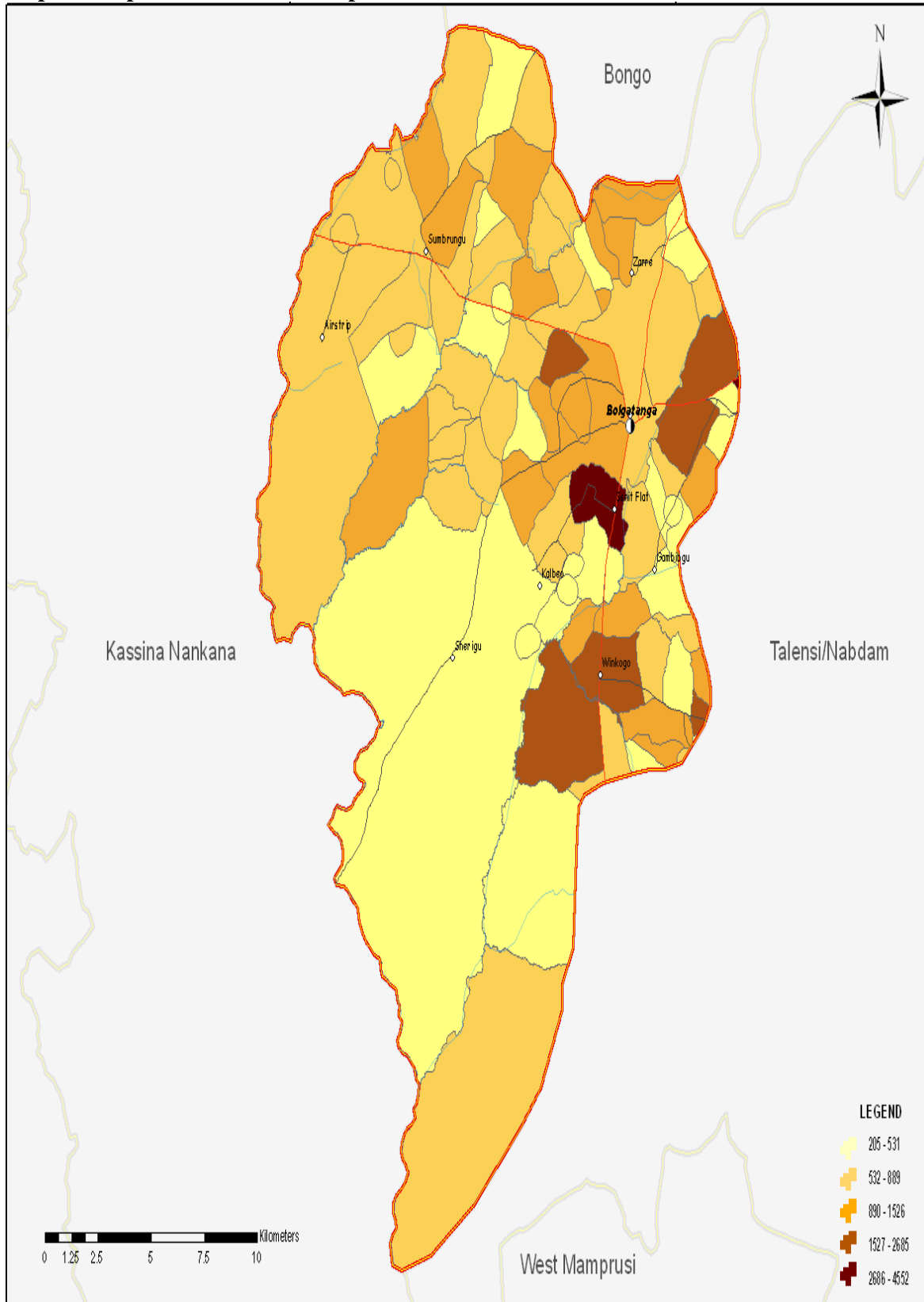
Age range	Percent	Size
0-15 years;	47.7	70,467
15-65 years	50.8	75,046
65+ years	1.5	2,216
Sex distribution		
Male	49.0	72,387
Female	51.0	75,342
Born in the Municipality		
Urban	69.1	
Rural	93.6	

Source: MHA, Bolgatanga.

Map 2.2: Topography and Drainage of Bolgatanga Municipality



Map 2.3: Population Distribution per Enumeration Area



Based on the 2008 survey results, the dominant ethnic group in the municipality is the Grussi and Frafra communities which together constitute about four-fifths (79.5%) of the population. Other ethnic groups include the Dagarba (3.6%), the Ewes (2.7%), the Akans (2.4%), Guan/Gonja (2.1%), and many others which together also constitute about 20 per cent of the population (Table 2.2).

Table 2.2: Ethnic Composition of the Bolgatanga Municipality

Ethnicity	Percent
Grussi/Frafra	79.5
Dagarba	3.6
Ewe	2.7
Akans	2.4
Guan/Gonja	2.1
Bemoba	1.8
Dagomba	1.8
Mamprusi	1.6
Kusasi	1.2
Kassena-Nankani	1.2
Builsa	0.8
Sissala	0.5
Ga Dangme	0.3
Wala	0.1
Other	0.3
Total	100.0

The Religious Affiliation of Inhabitants of the Municipality

The DAEA 2008 survey confirmed that the three main religious groupings in the municipality remain Christianity, Islam and Traditional religion, similar to the groupings recorded by the Ghana Statistical Service (GSS) during the 2000 population census. Figures from Table 2.3 show that Christians form the largest religious grouping in the municipality (49.7%), followed by traditional religion (35.0%) and Islam (13.2%). But whereas traditional religion has been predominant in the Upper East Region as a whole, it is

Christianity which is predominant in the Bolgatanga Municipality.

Table 2.3: Religious Affiliation of the Inhabitants of Bolgatanga Municipality

Religion	Upper East Region (%)	Bolgatanga Muni. (%)
Christian	28.3	49.7
Muslim	22.6	13.2
Traditional	46.4	35.0
No religion & Others	2.7	2.1
Total	100.0	100.0

Source: 2000 Population and Housing Census, GSS, and DAEA Survey, 2008.

Migration of Household Members

In terms of migration out of the municipality, there has been more out-migration from the rural areas of the municipality than from the urban sections during year 2008. Households were asked during interviews in December 2008 whether any of their members had migrated elsewhere during the last twelve months. The responses (Table 2.4) show that more males (75.9%) migrated from rural areas than females (24.1%); and the overall out-migration picture for both urban and rural areas of the municipality shows more males leaving home (71.7%) than females (28.3%) during the past year.

In the case of in-migration to the municipality, responses from the household

Table 2.4: Population of Migrants by Sex

	Urban		Rural		Total	
	Number	%	Number	%	Number	%
Male	10	52.6	66	75.9	76	71.7
Female	9	47.4	21	24.1	30	28.3
Total	19	100.0	87	100.0	106	100.0

Source: DAEA Survey, 2008.

survey indicate that only a few migrants entered the municipality each year until the last two decades (Table 2.5 and Figure 2.1). In the decades of 1961–1970, more people moved into the rural areas of the municipality mainly to pursue farming activities; while in 1981–1990 there were

more in-migration into the urban sections of the municipality after Bolgatanga became a regional capital. Since the 1990s, however, in-migration to the municipality has been relatively high with most respondents who are migrants indicating that they entered the municipality during the last two decades (1990–2008). This is significant since it suggests that more opportunities are probably being created in the municipality in recent years.

Table 2.5: Distribution of People Who Moved into the Bolgatanga Municipality

Period	Urban	Rural	Total
1930-1940	0	1.5	0.5
1941-1950	0.7	0	0.5
1951-1960	1.4	0	0.9
1961-1970	2.1	11.6	5.1
1971-1980	3.4	4.3	3.7
1981-1990	12.3	7.2	10.7
1991-2000	40.4	40.6	40.5
2001-2008	39.7	34.8	38.1

Source: DAEA Survey, 2008.

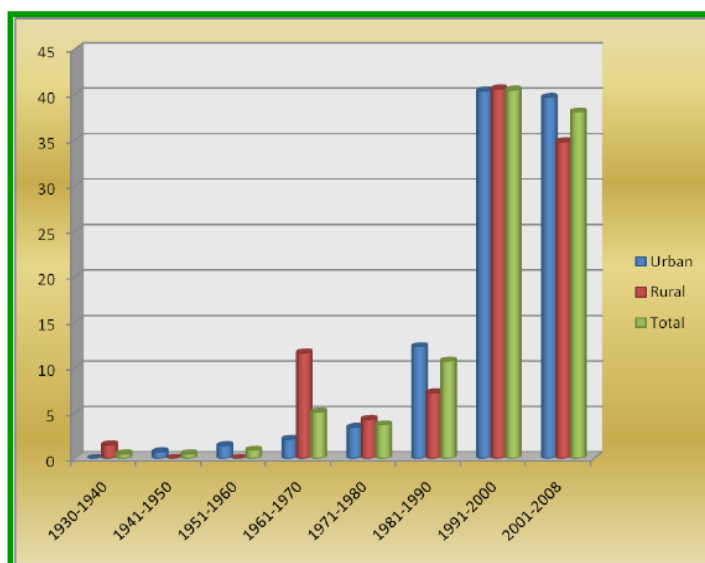


Figure 2.1: Distribution of People who Moved into the Bolgatanga Municipality.

From Table 2.6, it is noted that the four main reasons respondents gave for migrating

into the municipality include to work or to farm, to attend school, arrived with a parent and accompanied a spouse. But whereas more people came into the urban areas of the municipality because they accompanied a parent or to work/farm or to attend school or came with a spouse, most migrants into the rural parts of the municipality came mainly because they accompanied either a spouse or a parent.

Table 2.6: Reasons Why People Move into the Municipality

Reasons for moving	Urban	Rural	Total
To work/farm	25.1	9.5	22.0
To attend school	18.0	4.8	15.3
Came with spouse	17.4	40.5	22.0
Came with parent	35.3	40.5	36.4
Other	4.2	4.7	4.3
Total	100.0	100.0	100.0

Source: DAEA Survey, 2008.

Human Settlement

With its population of 72,768 Bolgatanga township is the 18th biggest human settlement in the country. There are 3,932, houses in the township with 10,081 households, with an average household size of 4.5.

Spatial Distribution of Settlement

Bolgatanga Township covers a radius of about 3 kilometres, and consists of suburbs such as Yikene, Dulugu, Kumbosogo, and Tindonmoligo which are all peri-urban in nature. The municipality has about 182 towns and villages, and the settlement pattern is predominantly rural (about 95%) with dispersed buildings, which render

service location extremely difficult. Bolgatanga is the only urban settlement in the Upper East region with a population of more than 72,000 people.

Physical Development of Settlements

The core area of Bolgatanga and a few peri-urban locations like Kumbosogo, Yikene, Tindonsolbgo Zorbisi and Zuarungu have layout schemes to guide their physical growth. However, peripheral sectors like Yorogo, Zaare, and Damweo which have been caught up with physical development due to factors such as suitable terrain, accessibility by roads and proximity to water and electricity points have no layout schemes to steer their growth.

In general, the control of physical development has been poor in the Bolgatanga township. This could be attributed to a number of factors, which include:

1. Inherent weaknesses in the procedure of obtaining a permit for development,
2. Unco-operative attitude of landowners and developers to observe existing rules and regulations, and
3. General ignorance on the development procedures in the township.

This has resulted in an increase in unauthorized development in some areas, such as building across water courses and in various low lying areas, as well as encroachment on road reservations, school sites, spaces reserved for community facilities and public utilities etc. Such activities have contributed significantly to the deterioration of the physical environment. There has also been a proliferation of unauthorized temporary structures, particularly in the central area of Bolgatanga township where kiosks abound. Some of the

underlying reasons for the poor approach to development in the township are:

1. Lack of awareness on the part of developers and the general public of land acquisition and permitting procedures to cover physical developments;
2. Poor landscaping in Bolgatanga Township especially along the main arterial roads, namely: Bolgatanga-Tamale and Bolgatanga-Navrongo dual carriageways which are the main ceremonial roads in the township, and
3. Inadequate staffing situation of the Physical Planning Department in the municipality.

Housing Conditions and Selected Household Characteristics

The housing situation in the municipality is generally poor, and shows a mix of modern and traditional structures. Most of the modern buildings found in Bolgatanga township are either public or private office accommodation, and few of these are for commercial purposes. Most buildings in the urban sections of the municipality are made of sandcrete and have plastered walls, which are well maintained and roofed with corrugated aluminum sheets. However, several sections of downtown Bolgatanga have developed into slum areas, usually referred to as *zongos* where most of the vulnerable people live. These *zongos* lack drainage systems and toilet facilities, a situation that has serious implications for sanitation and health conditions of the municipality, particularly the breeding of mosquitoes and the incidence of malaria among community members. In the rural sectors of the municipality, most houses are of the traditional type, some roofed with reinforced grass and others with corrugated aluminum sheets.

Table 2.7: Household Characteristics of the Bolgatanga Municipality

Characteristics	Urban	Rural
Solid waste		
Collected by refuse agency	16.4	–
Burned by household	23.0	34.8
Public provided dump	40.2	–
Dumped elsewhere	15.6	52.2
Buried by household	4.9	10.4
Other	–	2.6
Toilet Facility		
None/bush	23.8	83.2
Flush toilet	23.8	7.1
Covered pit latrine	6.6	1.8
Uncovered pit latrine	1.6	0.9
KVIP	44.3	–
Other	–	7.1
Fuel for cooking		
Fuelwood	12.3	84.2
Charcoal	68.9	14.0
Electricity	0.8	–
Crop residue/saw dust	2.5	0.9
Gas	13.9	0.9
Other	1.6	–
Fuel for lighting		
Kerosene/oil/sheabutter	16.4	84.3
Gas	1.6	1.7
Electricity	79.5	11.3
Battery	1.6	–
Candle	–	1.7
Other	0.8	0.9
Source of drinking water		
Inside taps in dwelling or compound	33.6	1.7
Public outdoor tap	34.4	2.6
Borehole	19.7	74.1
Protected/Covered well	4.9	7.8
Uncovered well	0.8	12.9
River/pond/lake	–	0.9
Purchased treated water - tanker, bucket, barrels, sachet	6.6	–

Source: DAEA Household Survey, 2008.

Household characteristics differ across urban and rural sectors in the municipality, particularly in terms of how solid waste is handled, availability of toilet facilities, fuel

for cooking and lighting, and sources of drinking water (Table 2.7). Many households (about a quarter to a third) in the Bolgatanga Municipality burn their household waste; but whereas about 40 per cent of those in the urban sections of the municipality use public provided dumps, more than 50 per cent of those in the rural areas of the municipality dump their solid waste elsewhere in the locality.

Such individual dumping could pose serious sanitation problems for the municipality. Also, most people living in the rural areas of the municipality have no toilet facilities (83.2%) and tend to use the surrounding bush for such purposes; and even in the urban communities only 23.8 per cent of the households have flush toilets because many of them use KVIP toilets (44.3%).

The use of fuelwood predominates in the rural sections of the municipality (84.2%), while most of the people in the urban sections (68.9%) use charcoal. Similarly, most dwellers in the rural areas of the municipality (74.1%) depend on boreholes for potable water (Picture 2.2), while most urban dwellers (68%) use pipe-borne water either in their homes or from public stand taps. Particularly in the case of potable water, it should be noted that most of the existing water bodies dry up during the dry season; and bore holes and wells virtually become non-functional as the water table usually falls beyond sustainable levels. These differences underscore the levels of development across the urban and rural sectors of the municipality.



Picture 2.2: A Borehole Constructed in the Municipality.

Road Infrastructure and Access to Public Services in the Municipality

The Bolgatanga municipality has a network of roads made up of all-weather good roads (see Picture 2.3) and untarred and dusty roads, especially those that lead into the suburbs. The Bolgatanga township itself has about 17.4 kms of roads, which include sections of the Bolgatanga-Tamale and Bolgatanga-Bawku roads. Most of the commercial and other roads and streets in the town centre and suburbs have no proper drains or the drains are choked, where they exist, are rather narrow, and also lack parking spaces and road signs.



Picture 2.3: A Section of a Good Road Leading to the Municipality.

Roads in the suburbs such as Pobaga, Estates, SSNIT Workers' Flats and parts of the Soe residential area are in bad condition most of the year. The need for continual maintenance of sections of the road network in the municipality should engage the attention of the municipal authorities all the time. Tables 2.8, 2.9 and 2.10 provide information on the types and conditions of roads in the municipality.

Table 2.8: Trunk Roads in the Bolgatanga Municipality

No.	Stretch 'A'	Kms	Surface	Condition
1	Bolgatanga-BOST	2	Asphalted	Good
2	Bolgatanga-Red Volta	29	Tarred	Good
3	Bolgatanga-Tankwidi	15	Asphalted	Good

4	Bolga-Yorogo	5	Tarred	Good
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Source: GHA/MPCU.

Access to key public services in the Bolgatanga Municipality such as food markets, transportation facilities, police stations, post offices, telecommunication facilities, financial institutions and hospital/clinic are generally relatively easier and quicker for the urban dwellers than for those living in the rural sections (Table 2.11). For

Table 2.10: Non-engineered Roads in the Bolgatanga Municipality

Road Name	Length (km)	Condition
Sherigu-Naga	21.5	Fair
Moshie-Dubila	5.0	Good
Sumbrugu-Arizobisi	4.5	Good
Zuarungu-Nyonkoko	8.4	Poor
Kebisi-Yebongo	7.2	Poor
Boglingo-Sapio	3.2	Poor
Sherigu-Akudoni	3.2	Poor
Sherigu Mkt-Kunkua	5.6	Poor
Kunkua-Kologu	12.6	Poor
Zorbisi-Yikine	6.8	Poor
Akundoni-Nyonkoko	10.0	Poor
Agrobisi-Akundoni	1.8	Poor
Sherigu-Yebongo	6.7	Poor

Source: Department of Feeder Roads, Bolgatanga.

example, whereas it takes an average of 30 minutes or less for more than 50 per cent of those in the urban areas of the municipality to reach a food market or a police station or have access to a telecommunication facility, the equivalent time for more than 50 per cent of those in the rural areas of the municipality to reach such facilities is in excess of 45 minutes and sometimes one hour or more.

Table 2.9: Engineered Roads in the Bolgatanga Municipality

Name	Length	Condition
Bolgatanga-Sherigu	10.0	Good
Airstrip unction—Airstrip	3.3	Good
Sumbrugu—Zokko	14.0	Good
Zuarungu—Dakeo	13.2	Good
Zuarungu-Kantia	2.0	Good
Nyariga-Zokko	11.0	Good
Sokabisi-Nyokor	7.0	Fair
Zuarungu-Kpatia	6.0	Good
Zuarungu-Moshie	7.9	Good
Zuarungu-Kazanga	4.4	Good
Sumbrugu-Yebongo	6.0	Good
Kulbia junction-Kulbia	5.0	Good
Kulbia-Dazongo	3.5	Good
Sumbrugu-Nyariga	6.1	Fair

Nyariga junction-Nyariga	4.0	Good
Nyariga-Donne	3.5	Good
Kalbeo market-Forest reserve	10.0	Good
Benkute-Katanga-Azitua	5.0	Good

Source: Department of Feeder Roads, Bolgatanga.

Table 2.11: Access to Public Services in Bolgatanga Municipality

Facility	Urban	Rural	Total
Food market			
0–14 minutes	32.2	2.2	14.7
15–29 minutes	27.1	22.2	24.1
30–44 minutes	28.1	16.2	21.1
45–59 minutes	7.3	18.4	13.8
60+ minutes	5.2	41.2	26.3
Public transport			
0–14 minutes	33.0	23.0	25.6
15–29 minutes	36.2	19.3	24.7
30–44 minutes	20.2	27.4	17.2
45–59 minutes	6.4	14.8	12.3
60+ minutes	4.3	15.6	20.3
Post office			
0–14 minutes	17.2	1.5	8.0
15–29 minutes	31.2	7.5	17.3
30–44 minutes	30.1	25.6	27.4
45–59 minutes	15.1	15.8	15.5
60+ minutes	6.5	49.7	31.8
Police station			
0–14 minutes	18.3	3.0	9.2
15–29 minutes	41.9	8.9	22.4
30–44 minutes	24.7	33.3	29.8
45–59 minutes	11.8	17.0	14.9
60+ minutes	3.2	37.7	23.6
Telecommunication facility			
0–14 minutes	33.0	7.8	18.0
15–29 minutes	30.7	6.2	16.1
30–44 minutes	17.0	27.1	23.0
45–59 minutes	15.9	20.9	18.9
60+ minutes	3.4	38.0	24.0
Financial institution			
0–14 minutes	22.2	3.7	11.2
15–29 minutes	35.6	6.0	17.9
30–44 minutes	22.2	25.4	24.1
45–59 minutes	14.4	17.9	16.5
60+ minutes	5.6	47.0	30.4
Clinic or hospital			
0–14 minutes	12.9	4.3	7.8
15–29 minutes	30.1	10.1	18.2
30–44 minutes	23.7	26.8	25.5
45–59 minutes	18.3	26.8	23.4
60+ minutes	15.1	31.9	25.1

Source: DAEA Survey, 2008.

Governance — State and Traditional

The Bolgatanga Municipality has both state and traditional systems of administration – the state governance system consists of the Municipal Assembly and other public institutions such as the police, the Ghana Education Service (GES), etc, while the traditional system is made up of chiefs and their skins mainly, and other allied leadership structures such as the *Tindana* (or land owner).

State Authority

The Municipal Assembly, which constitutes the administrative arm of the municipality, was established by the same legal instrument that established the municipality. Membership of the Assembly includes both elected and appointed members such as the Municipal Chief Executive and one member of Parliament who has no voting rights. It is the highest political and administrative authority in the municipality.

The State's Administrative Structure

The Municipal Assembly has an Executive Committee which consists of twenty-seven (27) members, with the Municipal Chief Executive (MCE) as the head of administration. The Executive Committee has the following sub-committees, the first five being statutory and the rest created by the Municipal Assembly itself.

1. Finance and Administration Sub-Committee
2. Works Sub-Committee
3. Development Planning Sub-Committee
4. Justice and Security Sub-Committee
5. Social Services Sub-Committee
6. Agriculture Sub-Committee

7. Environmental, Water and Sanitation Sub-Committee
8. Health Sub-Committee
9. Education Sub-Committee
10. Women and Children Sub-Committee

There is also the Public Relation and Complaints Committee chaired by the Presiding Member of the Municipal Assembly and answerable directly to the Assembly. The Assembly also has sub-structures, namely: one Urban Council at Bolgatanga and two zonal councils — the Zuarungu and Sumbrungu-Sherigu zonal councils. These substructures are, however, yet to have their full complement of staff, a situation which is seriously affecting effective decentralization in the municipality. The development and implementation of development plans for the municipality are the responsibility of the assembly, and require the active involvement and full co-operation of all the institutions in the municipality, among which are the Decentralized Departments, parastatals, Regional and Line Agencies, Non-Government Organizations (NGOs), private individuals and the communities.

The Bolgatanga Municipal Assembly (BMA)

The BMA is the main facilitator of development, as well as the main actor in the implementation of the plans of the Municipality. The key facilitating roles played by the Assembly include:

1. Creating a conducive atmosphere in terms of administrative strengthening and capacity building for effective implementation of the plans;
2. Initiating (through the communities), coordinating (through its Municipal

Planning and coordinating units) and integrating the implementation of development plans, as well as make appropriate terms of reference for projects;

3. Showing firm commitment to the implementation of projects that require funding from the Assembly's coffers through monitoring and evaluation;
4. Soliciting for funding from sources (both local or external) for the implementation of projects;
5. Carrying out monitoring and timely evaluation of the impact of the plans and projects.

The three traditional sources of income for the municipality include:

1. Internally generated/local income sources,
2. Central government support, mainly through the District Assembly Common Fund (DACF), and
3. Support from development partners (i.e. donor support).

The internally generated/local income sources mainly come from basic rates, lands fees and fines, licenses/permits, rents from Assembly properties, and investment income.

The expenditure analysis of the Bolgatanga Municipal Assembly over the recent past indicates that the bulk of its resources (over 60%) were spent on social services between 2005 and 2007, followed by administrative expenses (over 25%), and economic services (between 8 and 15%) as shown in Figure 2.2. Market stalls recently constructed in the municipality is shown in Picture 2.4.

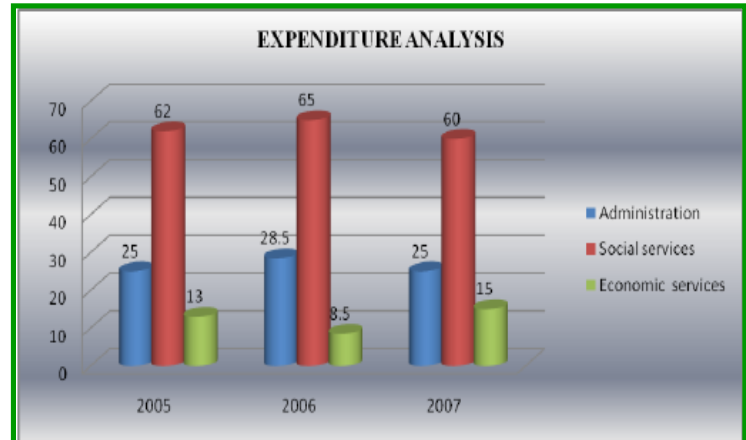


Figure 2.2: Expenditure Analysis of Bolgatanga Municipal Assembly (2005–2007).



Picture 2.4: New Market Stalls in Bolgatanga.

The beneficiary communities of the development projects play an important role in project implementation. They may contribute financially, or in kind such as in the form of labour or materials for project implementation. Individuals, even though most often disregarded, sometimes contribute to development as private sector operatives. They can take up projects particularly those related to income generation, social services and distribution of goods and services. For example, a market has recently been developed for the Handicraft sub-sector in the township (the Bolgatanga Craft Village) which is mainly private sector operated (see Picture 2.5).



Picture 2.5: The Bolgatanga Craft Village.

Communities in the municipality generally participate in decision making both at the national and municipal levels, including general national elections and municipal level elections. However, several individuals are unable to participate in such elections for various reasons both in the urban and rural sections of the municipality (Table 2.12). For both the urban and rural dwellers in the municipality, ineligibility to vote was the most important reason why community members did not participate in both the national and municipal elections, followed by either the respondent's failure to register or indifference to the voting process. Much effort is therefore required on the part of the municipal authorities in terms of civic education and awareness creation to ensure that more community members get involved in the decision making processes in the municipality.

Table 2.12: Reasons for not Voting in the Municipality and National Elections

Municipality Election: Reasons	Urban	Rural	Total
Not registered to vote	15.9	16.0	15.9
Not eligible to vote	43.9	52.0	48.4
Not in the country	3.7	5.0	4.4
Do not care to vote	22.0	15.0	18.1

Ill or injured	3.7	12.0	7.7
Other	10.8	-	5.5
Total	100.0	100.0	100.0
National Election: Reasons	Urban	Rural	Total
Not registered to vote	15.8	13.3	14.4
Not eligible to vote	71.9	69.3	70.5
Not in the country	1.8	-	0.8
Do not care to vote	3.5	10.7	7.6
Ill or injured	1.8	6.7	4.5
Other	5.2	-	2.2
Total	100.0	100.0	100.0

Source: DAEA Household Survey, 2008.

Traditional Authority

The municipality has one main paramouncy, the Bolgatanga Paramount Chief and one Traditional Council, the Frafra Traditional Council. Each village or town also has a chief who wields traditional authority. In addition to the chief in the village or town, there is the Tindana who is the custodian of the sacred traditions as well as the administrator of the ancestral lands, which he holds in trust for the people.

Economic Activity and Poverty

Introduction

The three regions in northern Ghana, namely: Northern Region, Upper East Region and Upper West Region, together with Central Region in the south, are generally regarded as the poorest in the country. Issues concerning economic activities and poverty are, therefore, important for the Bolgatanga Municipality in terms of assessing how it has fared over time in trying to improve its economy and reduce poverty. However, there is general lack of information at the municipal level which makes direct assessment of the progress made by the municipality towards poverty reduction difficult. This report, therefore, analyzes the general changes in the structure of economic activities and changes in other indirect indicators of poverty using information mainly drawn from the 2000 Population and Housing Census and the household survey conducted by DAEA in the municipality in 2008 to examine the issues of poverty. This is useful to provide some basis of discussing progress towards the first of the Millennium Development Goals (MDGs), which is to eradicate poverty and hunger by reducing by one-half the proportion of people whose income is less than one dollar a day and also to reduce by one-half the proportion of people who suffer from hunger, within the period 1990 and 2015.

Major Economic Activities

The economy of the Bolgatanga Municipality is predominantly agrarian, with agriculture (including forestry) accounting for more than 30 per cent of the economic activities in which the working population in the municipality are engaged. The GSS Population and Housing Census of 2000 (Figure 3.1) indicates that the major types of industry in the municipality include agriculture/hunting/forestry (51.6%), followed by manufacturing (18%), and wholesale and retail trade (10.8%). All other economic activities accounted for about 19.6 per cent of all the economic activities in the municipality. The pattern in which economic activities have been organized in the municipality seemed to have changed significantly between 2000 and 2008, based on the results obtained from the DAEA household survey. The major industry of employment in the municipality in 2008 include agriculture (31%), wholesale/retail trade (24%), community/social services (14%), finance/ insurance/services (13%), construction (6%) and manufacturing (5%).

All other economic activities including transport/storage/communications, mining and quarrying, etc, accounted for about 7 per cent of the major sectors in which the economically active population in the municipality are engaged. The dominant role of agriculture has declined from over 50 per cent of the economic activities to a little over 30 per cent between 2000 and 2008 (Figure 3.2). Manufacturing also as a major

Economic Activity and Poverty

economic activity declined from 18 per cent to only 5 per cent during the period, while wholesale and retail trade increased from a

little over 10 per cent in 2000 to 24 per cent in 2008.

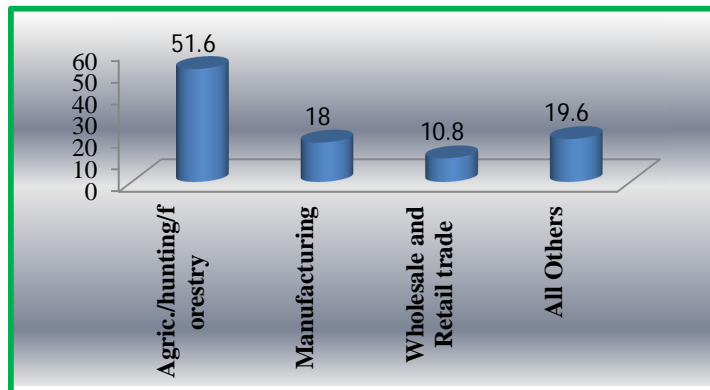


Figure 3.1: Major types of industry of the economically active population (aged 15 years and over).

Source: GSS, Population and Housing Census, 2000.

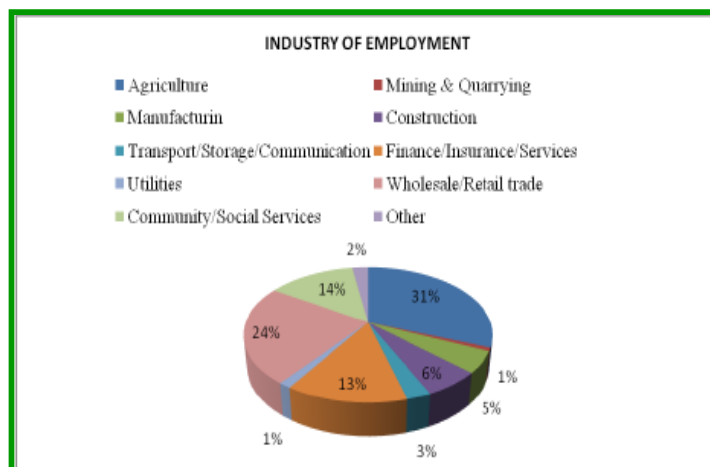


Figure 3.2: Major Industry of Employment for Population 15 Years and Above in 2008.

Source: DAEA Household Survey, 2008.

This implies that many of the manufacturing activities in the municipality have been lost during the period, while more people have entered into whole-sale and retail trade. In addition, more economic activities have become very important in the municipality, such as community/social services and finance/insurance/services, which suggest that the municipality has become more commercialized between 2000 and 2008.

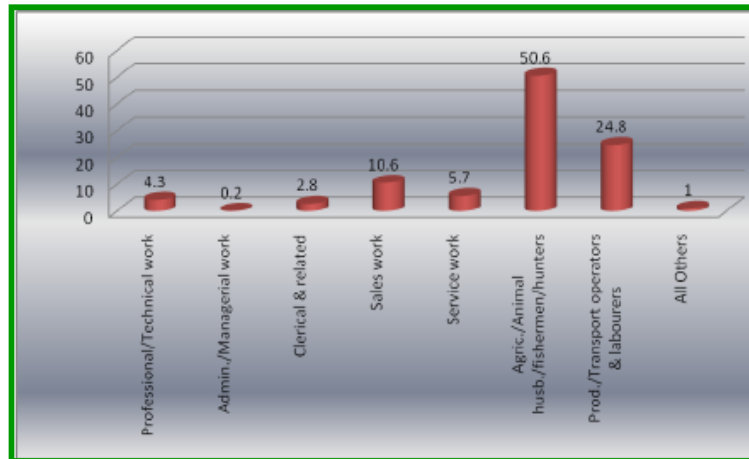


Figure 3.3: Main occupation (%) of the economically active population (aged 15 years and older).

Source: GSS Population and Housing Census, 2000.

From Figure 3.3, it is observed that the main occupation of about half of the economically active population 15 years and older in 2000 was in agriculture (including crops, animals, fishing and hunting). This was followed by those engaged in other types of production besides agriculture/ transport operators and labourers (24.8%), those engaged in sales work (10.6%), those in services (5.7%), professional/technical work (4.3%), etc. In 2008, private informal occupation (including agriculture) accounted for about 59 per cent of all the economic activities in which the economically active population aged 15 years and older are engaged (Figure 3.4). Public service activities represented 29 per cent of all economic activities; while private formal economic activities accounted for 11 per cent of economic activities.

International organizations and NGOs accounted for only one per cent of the main economic activities in the municipality in 2008. Even though the re-classi-fication of the main economic

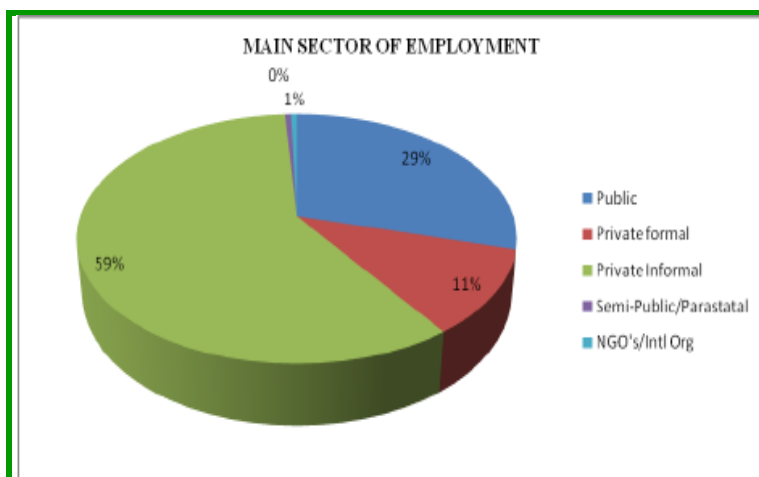


Figure 3.4: Main Sector of Employment for Population 15 Years and Above in 2008.

Source: DAEA Household Survey, 2008.

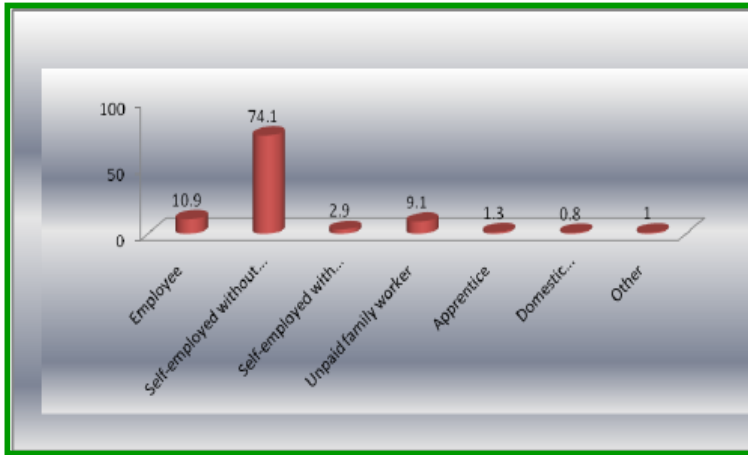


Figure 3.5: Economically Active Population (aged 15 years and above) by Employment Status (%).

Source: GSS Population and Housing Census, 2000.

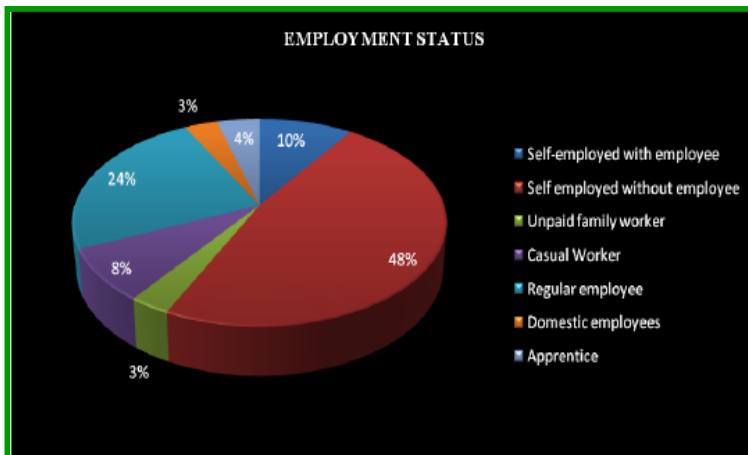


Figure 3.6: Employment Status for Population 15 Years and Above in 2008.

Source: DAEA Household Survey, 2008.

family workers declined from 9.1 per cent in 2000 to 3 per cent in 2008. Thus, over the period, more and more people in the municipality have entered the formal economy of the municipality. Also, those in apprenticeship increased from only 1.3 per cent of the economically active population in 2000 to 4 per cent in 2008, indicating that more avenues have been opened for human resource development in the informal sector of the municipality.

activities in the municipality between 2000 and 2008 makes it difficult to compare the two periods directly, it can be inferred from the available data that agriculture and related activities continue to dominate economic activities in the municipality.

In terms of the employment status of the economically active population 15 years and above, who are self-employed without employees continue to dominate economic activities. The share of this category of economic operators in the municipality was 74.1 per cent in 2000, but declined to 48 per cent in 2008 (see Figures 3.5 and 3.6). Regular employees represented 10.9 per cent in 2000, but this more than doubled to 24 per cent in 2008. Similarly, people who were self-employed with employees were only 2.9 per cent in 2000, but increased about three-fold to 10 per cent in 2008. On the other hand, the proportion of unpaid

Table 3.1: A Summary of the Key Economic Activities in the Bolgatanga Municipality Between 2003 and 2008

Year	Economic Activities	Level	Employment Opportunities
2003-2008	Agric (crop)	Subsistence	69% of total population (79,719 (2000 pop census))
	Agric (Livestock)	Free range	All farmers
	Industries(Factories, metal fabrication, welders sprayers electricians vulcanizes auto-Mobile Handicrafts etc) Hairdressing, dressmaking, etc.	Formal/informal	12% of labour force — 14,717 (2000 pop census)
	Agro-processing <ul style="list-style-type: none"> Oil extraction Dawadawa Riceparboiling Rice milling Pito brewing, etc. 	Small-scale	Employs mainly women
	Trading <ul style="list-style-type: none"> Imported goods Finished domestic goods Petroleum products Handicrafts including straw Building materials Foodstuff Animals, birds, etc. 	Wholesale/Retail Petty trading-3-day cycle market	19% of labour force — 23,303 (2000 pop census)
	Transport services	Commercial	Employs quite a small number of citizens and non-citizens
	Tourism (Hospitality)	Small-scale	Employs a good number of citizens in the district
	Banking/Financial services	Small-scale	Employs quite a good number of people in the municipality

Source: Bolgatanga Municipal Assembly.

In addition, there was an increase in the domestic worker population in the municipality, from less than 1 per cent in 2000 to 4 per cent in 2008, reflecting increased economic activity of households which, therefore, required more domestic

hands. These developments seem to suggest that the municipality is gradually becoming more commercialized, a situation which also reflects the municipal status of the area as both the Upper East regional capital and a municipality. Table 3.1 presents a summary of the key economic activities in the Bolgatanga Municipality between 2003 and 2008.

Employment Opportunities

At the national level, the country's MTDPs have emphasized employment as one of the key developmental targets, and seek to pursue employment-centred development strategy. This focus on employment has also been one

of the areas the municipality has emphasized. Since agriculture and its related activities constitute the largest sector of the economy, a review of its performance in the recent past provides some indication of the employment opportunities available in the municipality.

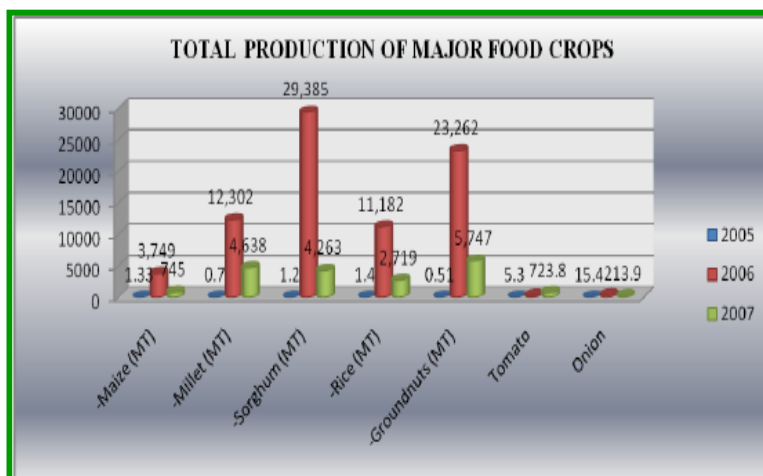


Figure 3.7: Production of Major Food Crops in the Bolgatanga Municipality.

Source: MoFA, Bolgatanga Municipality.

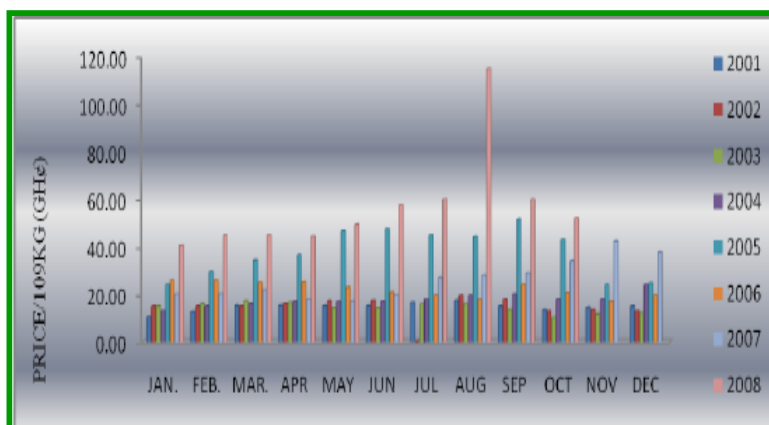


Figure 3.8: Price of Sorghum in the Bolgatanga Municipality (2001–2008).

Source: MoFA, Bolgatanga Municipality.

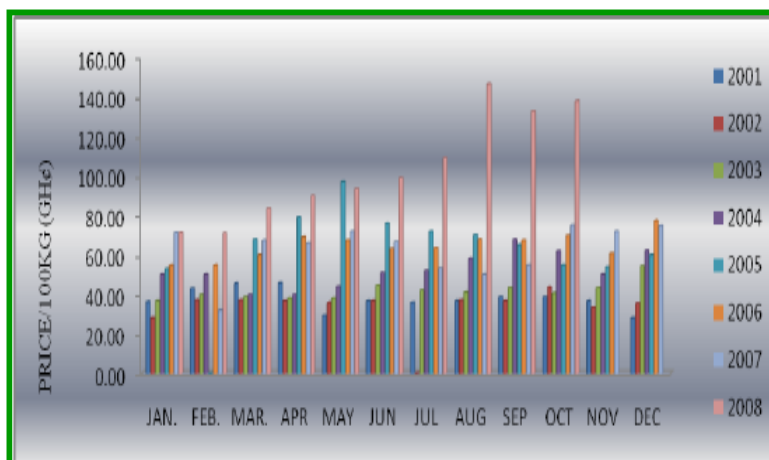


Figure 3.9: Price of Rice (local) in the Bolgatanga Municipality (2001–2008).

Source: MoFA, Bolgatanga Municipality.

The Agricultural Sector

As already noted, agriculture and its related activities (e.g. agro-processing) are the mainstay of the economy of the Bolgatanga Municipality. The municipality has a total land area of 729 km² of which 70 per cent (about 51,030 ha) is under cultivation. Rain-fed agriculture is the most predominant activity, making agricultural output erratic and following the incidence of rainfall from year to year. It is estimated that eight per cent of the population are peasant farmers who have average land holdings of between 1.0 and 3.0 ha; and there are about 14,145 agricultural households in the municipality. There are also a few dams and dugouts including the Veia dam which support dry season farming. Figure 3.7 presents the major crops produced in the municipality, which include sorghum, groundnuts, millet, rice, maize, tomato and onion. The outputs of all these crops have followed the rainfall pattern such that all the crops recorded low outputs in year 2005 as a result of poor rainfall, and high outputs the following year 2006 when there was good rainfall.

Prices of food commodities in the municipality have generally followed the pattern of output from year

to year, so that years of good rainfall generally show lower food prices as compared with years of bad rainfall and, therefore, bad harvests when food prices generally rise. Figures 3.8 to 3.10 present prices for sorghum, rice (local) and groundnuts for the period 2001 to 2008, which demonstrate that high food prices follow low output of food in the municipality. For example, the food prices were highest for all food crops in 2008 (output figures not available) when rainfall was bad, and for 2005 which also experienced low rainfall and, therefore, low harvests of food crops. The stability of food production and food prices in the municipality, therefore, requires a shift away from rain-fed agriculture.

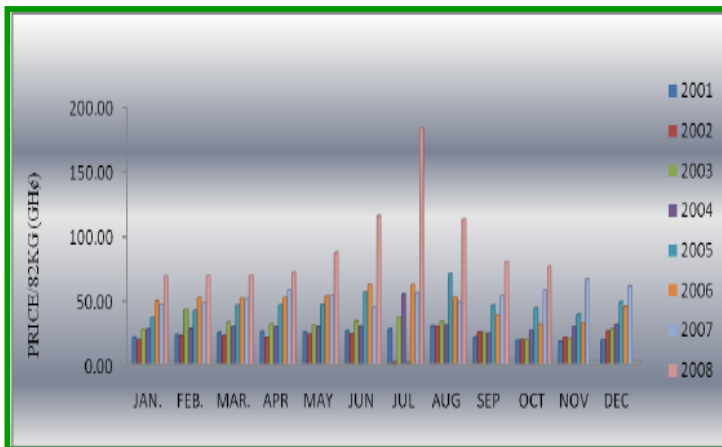


Figure 3.10: Price of Groundnuts in the Bolgatanga Municipality (2001–2008).

Source: MoFA, Bolgatanga Municipality

Dry Season Farming

Dry season farming plays a significant role in the agricultural production activities of the municipality. As already indicated, the Vea Irrigation Project and a number of small dams and dugouts located in the municipality facilitate dry season farming. For example, the irrigation dams provide a total of about 815.5 ha for irrigated farming during the dry periods; the Vea project

alone contributes about 637.5 ha of land for irrigated farming, while the other seven small-scale dams provide a total irrigable area of about 78 ha. In addition, there exists potential of about 500 ha for water pump irrigation along the banks of the White Volta from which many farmers are already benefiting.

Livestock, Poultry and Fisheries

Livestock (including poultry) production is the second most important agricultural activity in the Bolgatanga municipality. Almost all farmers are engaged in the rearing of at least one type of livestock and poultry. Livestock constitutes a major asset for the farmers, and apart from supplying their protein needs, it is also a very important

source of income for farmers and also serves as insurance for the farmers against crop failure. Most farmers normally keep their livestock and poultry on free range, which implies that they follow a low-input system which makes their productivity very low. However, in the case of pigs a number of farmers engaged in rearing them practice small-scale intensive system, particularly in the Bolgatanga Township. As shown in Figure 3.11, poultry, small ruminants (sheep and goats), cattle and pigs are the

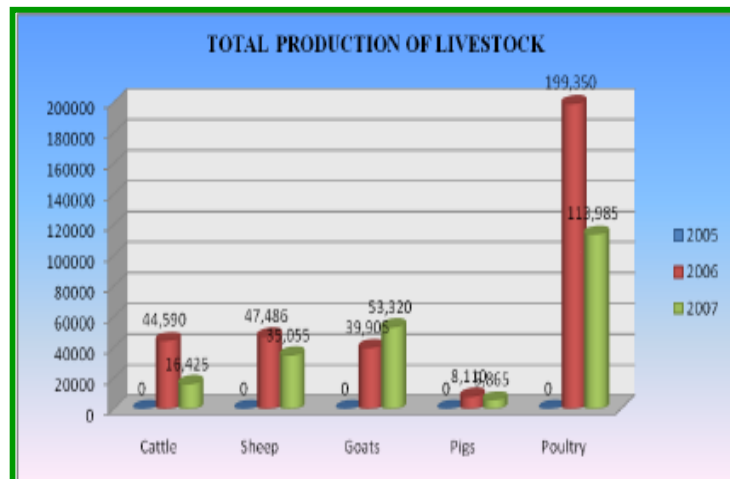


Figure 3.11: Livestock Production in the Bolgatanga Municipality. Source: MoFA, Bolgatanga Municipality (Note: 2005 data not available)

most important livestock in the municipality; and similar to the crops, their production is also greatly influenced by the rainfall pattern since they are reared on free range.

The most common activity in the case of fishing in the municipality is fish hunting, which is carried out in the few water bodies scattered throughout the municipality. Aquaculture is not very common. In general, women mostly do fish processing and sell in the market.

Several constraints face the agricultural sector in the municipality, which have been identified by the Municipal Assembly as follows:

- Short and erratic rainfall pattern marred by dry spells and peak seasonal floods;
- Inadequate feed and water for the animals during the long dry season which cause loss of weight and poor reproductive performance of females;
- Prevalence of pests and diseases of both crops and livestock;
- No improved housing and inadequacy of improved breeding stock of livestock;
- Livestock rearing is not seen as a business;
- Declining low soil fertility levels of the existing nutrient-deficient soils;
- Fish farming is a new concept to farmers;
- Inadequate water bodies in the municipality. Most of the existing water bodies dry up during the long dry season;
- Bush burning and indiscriminate cutting of trees;
- The seasonal migration of the youth from the rural areas to the urban areas;
- Unfavourable market

conditions; and

- Underdeveloped access roads to food producing areas.

Unemployment and Under-employment

Unemployment and under-employment seem to be serious issues in the Bolgatanga Municipality. From Figure 3.12, it is observed that over 68 per cent of the respondents did not do any type of work that brought in income either cash or in kind. Only about 32 per cent of the respondents indicated that they were gainfully employed. Similarly, only 13.5 per cent were either looking for work or ready for work during the period of the DAEA Household Survey in 2008 in the municipality (Figure 3.13), while 86.5 per cent said no to looking for

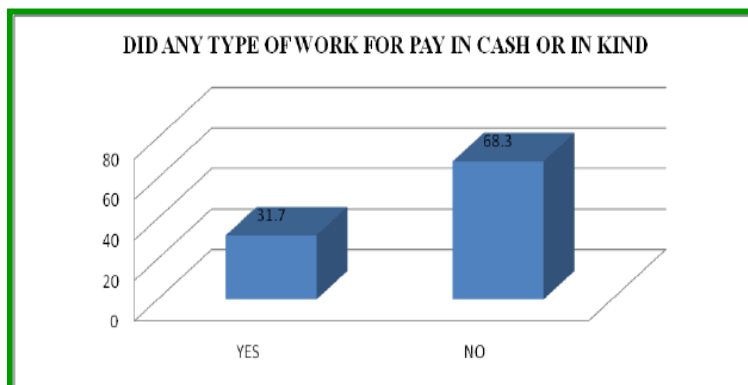


Figure 3.12: Rates of Under-employment and Unemployment.

Source: DAEA Household Survey, 2008.

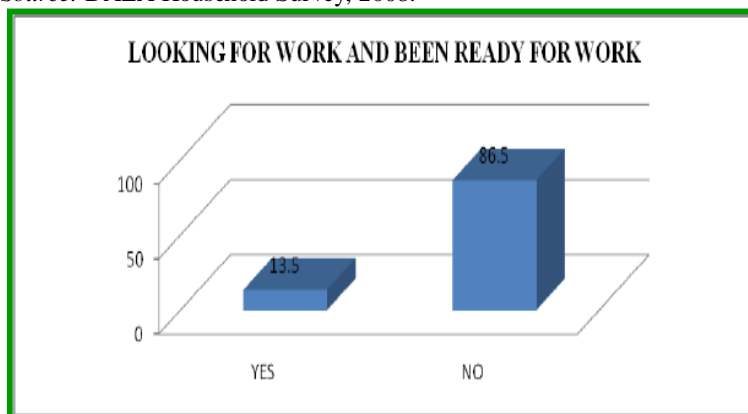


Figure 3.13: People Looking for Work and those Ready for Work in the Bolgatanga Municipality.

Source: DAEA Household Survey, 2008.

work or being ready for work.

In terms of children aged 7 to 14 years engaged in normal routine work, the evidence from the DAEA Household survey of 2008 in the Bolgatanga Municipality suggests that the incidence is very low or non-existent. As indicated in Figure 3.14,

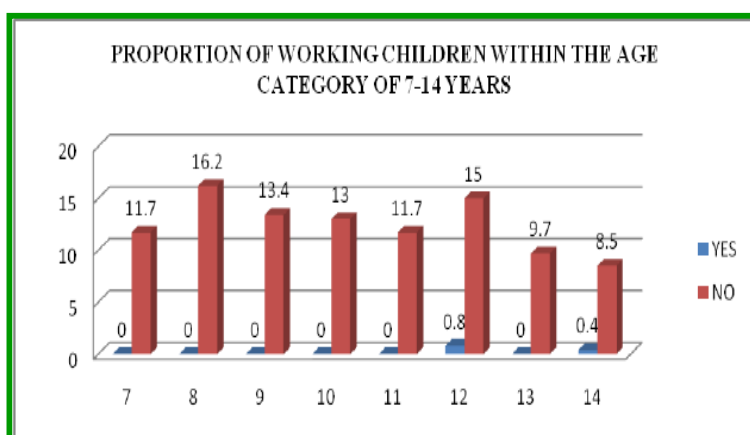


Figure 3.14: Proportion of Working Children within the Age Category 7–14 years.

Source: DAEA Household Survey, 2008.

only a very small proportion of the children aged 12 years (0.8%) and 14 years (0.4%) indicated that they were engaged in any form of child work in the municipality. This is a good development for the municipality since children are not expected to be working at that age but rather be in school, and every effort should be made to completely eradicate even the small incidence that has been observed among these relatively older children in that category. The DAEA Household Survey, 2008 also revealed a number of problems faced by the working population in the municipality (Table 3.2).

Table 3.2: Problems Faced by Working Population with Regards to Work, 2008

Sector	Finance	Difficult to access land	Erratic weather conditions	Uncertain demand for output	Poor health	High cost of inputs (e.g. fuel)	Difficulty in marketing products	Other
Agriculture	22.3	1.2	3.0	0.6	1.2	0.6	1.2	–
Mining & Quarrying	0.3	–	–	0.6	–	–	–	–
Manufacturing	4.9	–	–	0.3	–	–	0.3	–
Construction	3.4	–	1.8	–	–	–	–	0.3
Transport/Storage/Communication	2.1	–	–	–	0.6	–	–	0.3
Finance/Insurance/Services	7.9	0.3	0.6	0.6	0.9	0.6	0.3	1.8
Utilities	1.5	–	–	–	–	–	–	–
Wholesale/Retail trade	22.3	0.3	–	–	–	0.9	1.8	–
Community/Social Services	8.8	–	0.6	0.6	0.3	1.5	–	0.6
Other	1.5	–	–	–	–	–	–	0.9

Source: DAEA Household Survey, 2008.

Lack of finance or inadequate finance seems to be the most important challenge that most workers face in the municipality, which was identified by all categories of workers including those in agriculture, wholesale/retailing, finance/insurance, manu-

facturing, etc. This suggests that resourcing workers in the municipality by making more credit available can help improve the activities of all categories of workers in the municipality.

Poverty

The first Millennium Development Goal (MDG) is to eradicate extreme poverty and hunger by 2015. The poverty situation in the Bolgatanga Municipality is described by some human poverty index (HPI) dimensions in Table 3.3, together with other graphs based on the Ghana Core Welfare Indicators Questionnaire (CWIQ) used in the 2003 survey by the Ghana Statistical Service (GSS).

Table 3.3: Poverty Indicators, 2003: National versus Bolgatanga Municipality

Indicators	National	Bolgatanga Municipality
<i>Human Poverty Index</i>		
All	41.8	
Rural	–	
Urban	–	
<i>% Adult Literacy</i>		
All	53.7	28.8
Male	66.2	36.1
Female	42.5	21.6
<i>% Without access to health services</i>		
All	42.4	
Rural	57.7	
Urban	21.5	
<i>% without access to safe water</i>		
All	25.9	18.9
Rural	37.0	
Urban	12.7	

Source: CWIQ 2003

Adult literacy in the municipality, for example, is only about half of the national average, but the proportion of the population without safe water is lower for the municipality than for the country as a whole.

Subjectively, poverty (based on the value judgment on the part of respondents in 2003) is summarized in Tables 3.4 and 3.5. In Table 3.4 for example, most households considered themselves poor (57.0%), and this

is higher compared to those who considered themselves as poor in both the Upper East Region (54.2%) and Ghana (37.1%) as a whole. We used the level of happiness of households to capture their perception of poverty (as captured in Table 3.5). The empirical evidence reveals that although about 68.9 per cent of households in 2003 considered themselves to be either poor or very poor, poverty did not adversely affect the happiness of most of the population since over 54.2 per cent claimed to be very happy or quite happy.

Table 3.4: Household Perception about Poverty of Household (%), 2003

	Ghana	U East Region	Bolgatanga Muni.
Non-Poor	2.9	1.2	1.5
Somewhat non-poor	7.0	7.7	5.2
Neither poor nor non-poor	43.2	19.4	24.4
Poor	37.1	54.2	57.0
Very Poor	9.7	17.3	11.9

Source: 2003 CWIQ (GSS).

Besides, several households both in the urban and rural parts of the Bolgatanga Municipality report that they experience food shortages during certain periods of the year, particularly in the dry season. (For details refer to Figure 3.15). For example, based on the DAEA Household Survey, 2008, over 60 per cent of the population in the municipality report that they suffer food shortages during

certain periods of the year, both in the urban and rural sections. Whereas a little less than

40 per cent says they do not suffer from food shortages during the year.

However, the key reasons for such food shortages differ for the urban and rural sectors of the municipality. For details refer to Table 3.6. For example, whereas most urban dwellers blame the food shortages they experience on high food prices (73.9%), most

rural households in the municipality blame the food shortages on rainfall failure leading to poor harvest (67.5%). This dichotomy between the urban and rural populations reflects their main sources of food. Whereas most urban dwellers purchase the food they

Table 3.5: Household Perception of their Economic Situation, 2003 (%)

Variable	Response	Location		
		Ghana	Upper East	Bolga Muni.
Household perception of wellbeing (Level of happiness)	Very happy	15.2	23.5	28.6
	Quite happy	44.6	33.9	25.6
	Not very happy	30.7	34.9	36.7
	Not at all happy	9.4	7.8	6.8
Financial situation of Household	Very satisfied	1.7	1.1	0.9
	Satisfied	12.4	8.7	9.7
	Somewhat satisfied	27.2	21.4	20.5
	Somewhat dissatisfied	35.9	39.6	50.6
Overall economic situation of household against previous year	Very dissatisfied	22.9	29.2	18.3
	Much worse now	18.2	15.8	10.3
	A little worse now	33.3	30.1	34.6
	Same	21.2	27.9	30.1
	A little better now	25.0	24.2	19.1
	Much Better now	2.0	1.9	5.4
	Don't know	0.4	0.2	0.4
Overall economic situation of community against previous year	Much worse now	15.6	13.1	7.7
	A little worse now	27.9	23.9	32.3
	Same	24.9	34.6	31.1
	A little better now	18.5	19.7	16.4
	Much better now	1.7	1.5	4.2
	Don't know	11.5	7.1	8.3

Source: 2003 CWIQ (GSS).

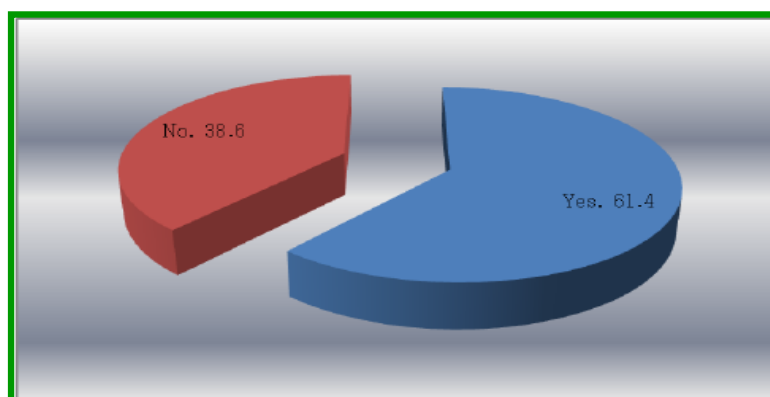


Figure 3.15: Households that Suffer from Severe Food Shortages During the Year.

Source: DAEA Household Survey, 2008.

consume, most rural people grow their own food. The level of food shortages during some periods of the year is also an indication of the level of vulnerability of some sections of the municipality.

Table 3.6: Reasons for Food Shortage by Household

Reasons	Urban	Rural	Total
An Income earning member of the household died	4.3	2.4	2.9
Additional member joined the household	–	1.6	1.2
An Income earning member of household lost job	2.2	1.6	1.7
An income earning member of household no longer working	4.3	–	1.2
Remittances no longer received	2.2	1.6	1.7
Reduction in remittances received	–	3.2	2.3
Poor harvest (pest/disease)	–	11.1	8.1
Poor harvest (climatic conditions, e.g. drought)	13.1	67.5	52.9
Food prices became too high	73.9	10.3	27.3
Other	–	0.7	0.7
Total	100.0	100.0	100.0

Source: DAEA Household Survey, 2008.

Education and Literacy

Introduction

Education of the population to ensure the development of the human resource of the municipality has been high on the agenda. This is in part to respond to some of the expectations of the Millennium Development Goals (MDGs), of which two out of the eight are education-specific. For example, the second MDG is the attainment of universal primary education; while the third goal is the promotion of gender equality and the empowerment of women. The targets under these goals are the elimination of gender disparity in primary and secondary education by 2005, and at all levels no later than 2015. Also, two of the indicators to monitor progress made towards attaining the third MDG are education-specific and thus highlight the importance of education as a means of empowering women.

The Bolgatanga Municipality has taken far-reaching measures to ensure that education, both the process and infrastructure, are greatly improved. One way to achieve this is to ensure that both effective administration and supervision become the cornerstone of the educational system. The municipality has, therefore, been divided into eight (8) circuits, namely: Bolga Central, Bolga North-East, Bolga North-West, Bolga South-West, Bolga

South-East, Bolga West, Zuarungu East, and Zuarungu West, each of which is administered by a well-trained supervisor. Also, there exists at the municipal directorate and school levels, several educational structures to assist in the management, teaching, supervision and sensitization of communities, including:

1. Municipal Education Oversight Committee (MEOC)
2. School Management Committee (SMC)
3. Parent-Teacher Associations (PTAs)
4. Municipal Teacher Support Team (DTST)
5. Municipal Education Planning Team



Picture 4.1: A Basic School Facility Recently Constructed in the Municipality.

- (DEPT)
6. Information, Education and Communication (IEC) Team.

The Municipal Education Oversight Committee (MEOC) is the highest

administrative and policy-making body, which is chaired by the Municipal Chief Executive. Picture 4.1 depicts some of the basic school facilities that exist in the municipality: Even though some schools are well endowed with both facilities and staff (see Picture 4.2), in general most basic schools are poorly staffed and there exists a number of untrained teachers especially in the rural areas. As a result, quality and effective teaching are adversely affected by a high pupil-teacher ratio (PTR). Also, the infrastructure and

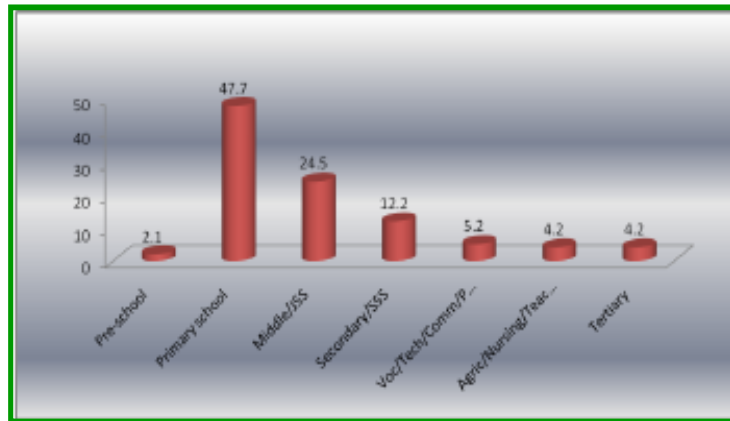


Figure 4.1: Educational Attainment of Population Aged 6 years and Older (%) — 2000.

Source: GSS Population and Housing Census 2000.

with greater knowledge and use of sound health practices and family planning methods.

Successive governments in Ghana, therefore, introduced various policies aimed at reducing illiteracy among the population to the barest minimum. For example, the current programme of Free Compulsory Universal Basic Education (FCUBE) is being implemented with the aim of guaranteeing free education to all children of school going age, irrespective of sex, religion or ethnicity.



Picture 4.2: Modern Girls Dormitory at the Bolgatanga Senior High School.

facilities in the schools are of varied types, ranging from sandcrete block buildings to sheds; while in a few cases classes are held under trees.

Educational Attainment

The high correlation between levels of education and positive health and other social indicators has been generally acknowledged, and makes education a very important variable in any development planning at the municipal or district level. Higher education, especially of women, is usually associated

Based on the GSS Population and Housing Census of 2000, almost half of the population of the municipality (47.7%) had attained only primary school education in 2000 (Figure 4.1), and those who had attained JSS or middle school education were about a quarter of the population (24.5%). About 2 per cent of the population was in pre-school, about a fifth (21.6%) had attained secondary school education and some education from a training institution, and only 4.2 per cent of the population had attained any tertiary education. This picture seemed to have changed somewhat in 2008

(see Table 4.1) when only half a percentage point (0.5%) of the population was in pre-school, and the rest of the population more evenly spread over the other levels of educational attainment.

The proportion of those with tertiary education, for instance, had risen to more than 12 per cent of the population, and those who have attended vocational or other training institutions had risen to over 11 per cent of the population. This development in the municipality suggests that the dependency ratio in the municipality was likely to decline significantly between 2000 and 2008.

Table 4.1: Educational Attainment of Population Aged 6 years and above (%) – 2008

Highest grade completed	Percent (%)
Pre-school	0.5
Primary	20.3
JHS	21.6
Middle School	15.2
SHS	13.6
Secondary School	3.7
Voc/Tech	6.1
Teacher training	4.3
Nursing training	0.8
Tertiary	12.8
Special School	1.1
Total	100.0

Source: DAEA Household Survey 2008.

The enrolment figures from the Bolgatanga Municipal Education Directorate

presented in Tables 4.2 to 4.4 provide an important overview of the situation of the educational system in the municipality (see also Figures 4.2 and 4.3). It is to be noted, however, that the figures from 2005/2006 to

2007/2008 (in the tables) are those that directly refer to the municipality since prior to this period, the municipality was a district which had more communities than after it was re-zoned as a municipality. During the three academic years under consideration, the number of public schools at all levels from kindergarten to the Junior High School (JHS) increased while private schools either remained the same or slightly increased as well. For example, kindergartens increased from 60 in 2005/2006 to 66 in 2007/2008 while primary schools increased from 59 to 65 and junior high schools from 33 to 40.

The number of private schools also increased marginally at all levels during the period. This is reflected in increases in the school enrolment at all levels in the municipality from 2005/2006 academic year to 2007/2008 academic year (Table 4.3). The kindergarten enrolment increased 4.6 per cent between 2005/2006 and 2007 and 2008, while the primary and JHS enrolments increased 5 per cent and 2.4 per cent respectively for the same period. These increases reflect the kind of positive attention that both parents and the municipality have given to improve human resource development in the municipality.

Table 4.2: Bolgatanga Municipality — Number of Basic Schools, 2003–2008

Kindergarten										
Year	2003–2004		2004–2005		2005–2006		2006–2007		2007–2008	
Type	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Number	76	19	87	29	60	18	64	18	66	18
Primary										
Year	2003–2004		2004–2005		2005–2006		2006–2007		2007–2008	
Type	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Number	91	13	91	14	59	17	63	18	65	18

Education and Literacy

JHS										
Year	2003–2004		2004–2005		2005–2006		2006–2007		2007–2008	
Type	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Number	58	1	59	2	33	4	36	5	40	6

Source: Bolgatanga Municipal Education Directorate.

Table 4.3: Bolgatanga Municipality – Enrolment in Basic Schools, 2003–2008

Kindergarten										
Year	2003–2004		2004–2005		2005–2006		2006–2007		2007–2008	
Gender	M	F	M	F	M	F	M	F	M	F
Number	3208	3476	3771	4126	3409	3415	3579	3682	4605	4626
Primary										
Year	2003–2004		2004–2005		2005–2006		2006–2007		2007–2008	
Gender	M	F	M	F	M	F	M	F	M	F
Number	17400	16849	18560	17560	12563	12934	12751	12913	13353	13404
JHS										
Year	2003–2004		2004–2005		2005–2006		2006–2007		2007–2008	
Gender	M	F	M	F	M	F	M	F	M	F
Number	5068	4765	5801	5613	3421	3791	3740	4228	4204	4734

Source: Bolgatanga Municipal Education Directorate.

Table 4.4: Bolgatanga Municipality — Number of Teachers in Basic Schools, 2003–2008

Kindergarten										
Year	2003–2004		2004–2005		2005–2006		2006–2007		2007–2008	
Trained? (Y/N)	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Number	55	169	55	219	54	184	60	209	110	230
Primary										
Year	2003–2004		2004–2005		2005–2006		2006–2007		2007–2008	
Trained? (Y/N)	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Number	513	147	497	165	368	165	390	249	355	258
JHS										
Year	2003–2004		2004–2005		2005–2006		2006–2007		2007–2008	
Trained? (Y/N)	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Number	331	101	371	102	279	61	314	86	338	128

Source: Bolgatanga Municipal Education Directorate.

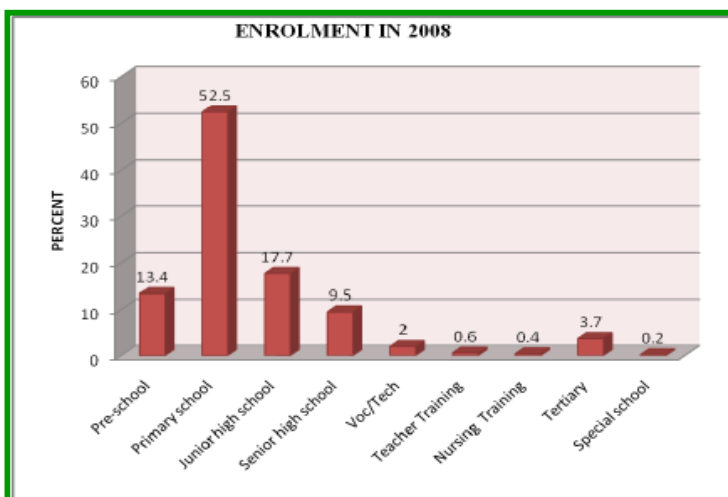


Figure 4.2: School Enrolment in Bolgatanga Municipality in 2008.

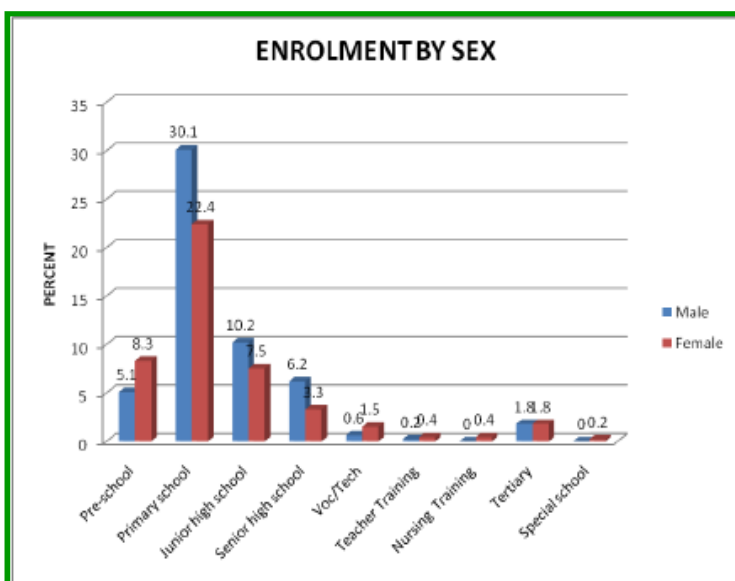


Figure 4.3: School Enrolment by Sex in Bolgatanga Municipality in 2008.

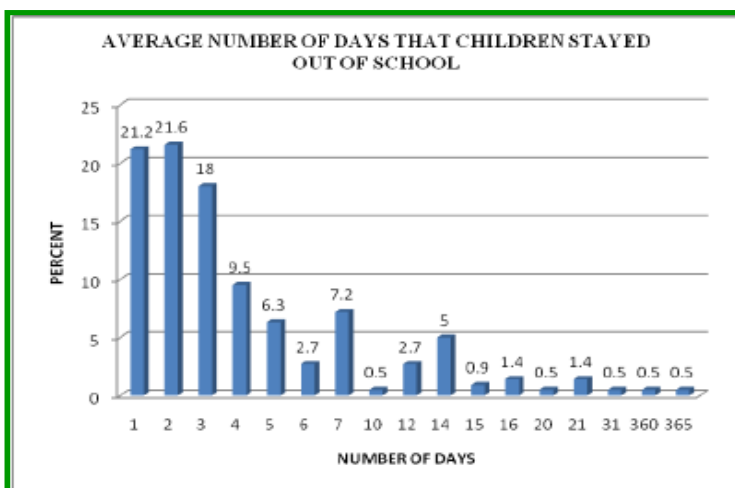


Figure 4.4: School Attendance in the Bolgatanga Municipality — 2008
 Bolgatanga Municipality
 Source: DAEA Household Survey, 2008.

The figures for the number of teachers attending to the schools in the municipality also show increases at all levels between 2005/2006 and 2007/2008 academic years, with untrained teachers constituting a substantial proportion of the total at all levels, particularly the kindergarten schools (Table 4.4). The ratio of untrained to trained teachers improved slightly at the kindergarten level from 3.4 in 2005/2006 to 2.1 in 2007/2008; while that for trained teachers to untrained teachers declined at both the primary and JHS levels from 2.2 in 2005/2006 to 1.8 in 2007/2008 at the primary level, and from 4.6 in 2005/2006 to 2.6 in 2007/2008 at the JHS level.

This means that whereas in 2005/2006 academic year there were 2.2 trained teachers for every untrained teacher at the primary level, by 2007/2008 academic this has declined to almost one trained teacher for one untrained teacher (almost a 1:1 ratio). The implication is that while school enrolment has increased within the municipality between 2005 and 2008, the number of trained teachers has not increased enough to match the number of school children, making it necessary to employ more untrained teachers at all levels of basic education in the municipality. This is not a

pleasant development for the municipality because the quality of education can seriously be compromised, and the Municipal Assembly should take urgent steps to address it.

School Attendance

School children in the municipality have absented themselves from school for periods ranging from one to fourteen days mainly (Figure 4.4), but most school pupils have exempted themselves for one to two days (21.6%) and up to 4 days (9.5%) during the academic year. A few, however, have been absent from school for over 20 days (1.4%) while some dropped out of school completely during the year (1%). Pupil's absenteeism by age is presented in Table 4.5. More pupils absented themselves from school due to sickness in the urban areas (82.1%) than in the rural sections (63.3%) of the municipality (Table 4.6). Other key reasons for absenteeism in the municipality include when the child is needed to assist in the shop or on the farm, or that they have no money to pay their fees or that they are not interested in schooling. A lot of support (including counseling) is needed to help keep these children in school.

Besides missing the opportunity for good education because they are unable to attend classes regularly, several children in the Bolgatanga Municipality are also quite vulnerable, based on information obtained from the Municipal Assembly (Table 4.7). Some key indicators of vulnerability show that the numbers for some of these vulnerable children have been on the increase in the municipality since 2005, even though the numbers for some categories have been declining. While street children declined slightly between 2005 and 2007, children engaged in child labour and PWDs have been on the increase in the municipality, and in all cases there are more vulnerable females than males.

Table 4.5: Number of Days Missed in School

Indicators	Once	Twice	Thrice	Several times
Sex				
Boys	20.2	19.3	18.4	42.1
Girls	22.6	24.5	17.9	35.0
Age				
3-5 years	19.1	19.1	23.4	38.4
6-8 years	31.8	15.9	15.9	36.4
9-11 years	14.6	24.4	22.0	39.0
12-14 years	17.6	23.5	8.8	50.1
15-17 years	15.4	23.1	15.4	46.1
18-20 years	29.4	41.2	5.9	23.5
21-24 years	40.0	–	60.0	–
Location				
Urban	20.5	25.3	18.1	36.1
Rural	21.6	19.4	18.0	41.0

Source: DAEA Household Survey, 2008.

Table 4.6: Reasons for Missing Classes and those that Returned (%)

Reasons	Urban	Rural	Total
Sickness	82.1	63.3	69.8
Needed on farm/shop/home	10.7	6.3	7.9
No money to pay fees and other expenses	2.4	13.3	9.5
Child not interested	2.4	11.4	8.3
Marriage/Pregnancy	2.4	–	0.8
Bad weather	–	2.5	1.7
Other	–	3.2	2.1
% that returned	93.8	89.0	90.8

Source: DAEA Household Survey 2008.

Adult Literacy Rates

Based on the GSS Population and Housing Census of 2000, it is observed that only 23.5 per cent of the Upper East Region's population (15 years and older) were literate in either English or a known Ghanaian language while 7.0 per cent were literate in both languages. For the region as a whole and for each district, illiteracy was higher for females than for males. This meant that the level of effective literacy (literate in English only or literate in English and a Ghanaian language) was only 21.4 per cent in the region. Among the districts, Bolgatanga (27.7%) had the highest effective literacy level with 34.2 per cent for males and 22.0

per cent for females. For females, the level of illiteracy was below 80 per cent in the municipality (76.3%).

Table 4.7: Vulnerability of Children in the Municipality

Indicator	2005	2006	2007
Child Out-Migration	95	110	125
Male	40	50	55
Female	45	60	70
Street Children	113	82	91
Male	43	25	43
Female	70	57	61
PWDs	8,031	9,519	9,758
Male	3,542	3,653	3,787
Female	4,489	5,866	5,971
Child Labour	1,883	2,280	2,366
Male	901	1,009	1,102
Female	982	1,271	1,264
Child Protection Teams	32	42	52

The results from the DAEA Household Survey in 2008 indicate that adult literacy level has improved in the municipality between 2000 and 2008. The survey shows that those who can both read and write English constitute 55.7 per cent of the population of the municipality (see Table 4.8). Those who are not literate at all represent about 38.7 per cent. In Figures 4.5 and 4.6, the literacy levels by age in the municipality are presented. Those who could read and write English were the highest (20.1%) in the age group 18–24 years; those who had none (10.5%) were 60 years and above. On the other hand, literacy in local language indicated that 14.8 per cent had none in the age group 18–24 years, while 11.5 per cent were 60 years and above.

Table 4.8: Adults (18 Years and Over) Literacy Rates (%)

Language	English	Local
Read and Write	55.7	22.5
Read only	5.6	10.7
None	38.7	66.8
Total	100.0	100.0

Source: DAEA Household Survey, 2008.

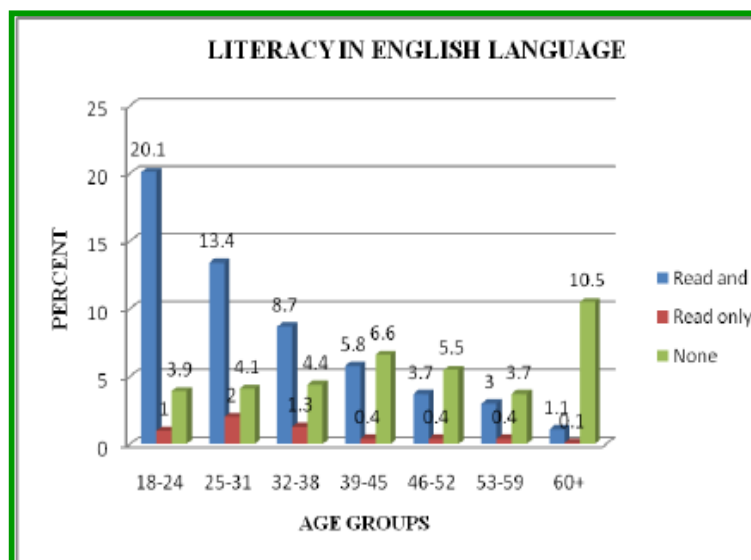


Figure 4.5: Adult Literacy in English in Bolgatanga Municipality — 2008.

Source: DAEA Household Survey, 2008.

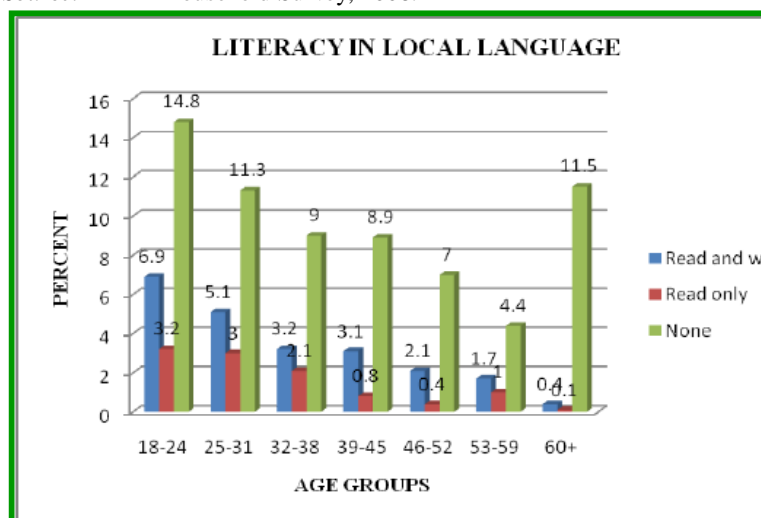


Figure 4.6: Adult Literacy in Local Language in Bolgatanga Municipality — 2008.

Source: DAEA Household Survey, 2008.

Health, Water and Sanitation

Introduction

The general goal of the health sector in Ghana has been to improve the quality of life of the people. Policy emphasis for the existing programme of work is to expand coverage of the National Health Insurance Scheme (NHIS); produce, retain and distribute health personnel equitably; improve the delivery of high-impact health interventions; and broaden access to emergency and ambulance services. These objectives, when achieved, would improve the country's chances of meeting a number of the targets under the health MDGs. In the case of the Bolgatanga Municipality, similar to what pertains in other municipalities and districts, health sector activities include programmes to improve access to quality health care, and intensification of health education on the control of preventable diseases such as malaria, guinea worm, TB and HIV/AIDS. As part of the general countrywide plan, the municipality has also earmarked activities to control population growth, improve health care infrastructure and facilities, sustain improvements in the provision of safe water, and beef up activities to improve environmental sanitation. Health services provided in the municipality are both curative and preven-

tive; and are mainly orthodox and traditional.

Health Care Infrastructure

The number of health facilities in the municipality can be considered as generally satisfactory. The Bolgatanga Regional Hospital and Odoi-Agyarko's Clinic are the only well equipped facilities (see Picture 5.1). The rest that are in most of the deprived parts of the municipality are poorly equipped. There are mobile clinics run by the Catholic and Presbyterian Churches. Some newly created Community Health Planning Services (CHPS) centres have been established at Sherigu, Zuarungu-Moshie, Aguusi and Gambibgo to provide community based health services. The service providers comprise of the public and private sectors that include Non-governmental organizations (NGOs) and traditional practitioners. The major health facilities in the municipality are listed in Table 5.1; and the type of health facilities,



Picture 5.1: A Modern Housing Facility for Doctors at the Bolgatanga Regional Hospital.

their locations and the populations they serve are presented in Table 5.2.

Table 5.1: List of Health Facilities in the Bolgatanga Municipality

Regional Hospital
1. Health Centre
2. Bolgatanga Health Centre
3. Zuarungu Health Centre
Clinics
1. Sumbrungu Clinic
2. Sherigu Clinic
3. Plaza Clinic
4. Nyariga Clinic
5. Sokabisi Clinic
6. Zuarungu Clinic
7. Gambibgo Clinic
8. Rural Help Integrated (Private)
9. Asakunde Clinic (Private)
10. Police Clinic (Quasi)
Functional CHPS Centres
1. Aguusi CHPS
2. Kalbeo CHPS
3. Katanga CHPS
4. Yorogo Medina CHPS
5. Yarigabisi CHPS
6. Nyokorkor CHPS

The municipality is served by two main pharmacies which are located in the Bolgatanga township. Only eight (8) out of twenty-seven (27) licensed chemical stores are located outside the Bolgatanga township even though efforts have been made to improve access to such facilities. In general, patronage of these facilities has been low as a result of poverty, illiteracy and ignorance in the rural communities. Similarly, the distribution of medical staff is considered unfavorable in the municipality particularly the rural areas. The doctor-patient ratio in the municipality is about 1 to 28,000 while the nurse-patient ratio is about 1: 5000.

Table 5.2: Health Care Facilities and the Populations they Serve in the Municipality

Sub-District	Health Facilities	Population
Bolga Central	Bolga Health Centre, Kalboe Clinic, Police Clinic	32,966
Plaza	Coronation Clinic, Rural Help Integrated, Asankude Memorial Clinic, Regional Hospital	28,802
Sumbrugu	Sumbrugu Clinic, Aguusi CHPS Centre	19,265
Sherigu	Sherigu Clinic	17,016
Gambibgo	Gambibgo Clinic	8,827
Zuarungu Moshie	Zuarungu Moshie Clinic	6,426
Zuarungu	Zuarungu Health Centre	13,088
Bolga North	Nyariga Clinic	10,331
Bolga South	Sokabisi M.CH Unit	11,008
Total		147,720

Source: MHA, Bolgatanga.

Most of the population in the urban areas of the municipality visit either a public hospital/clinic (48.2%) or private hospital/clinic (45.8%) when sick (Table 5.3) compared to those in the rural areas (27.7% and 27.5% visit public hospital/clinic and private hospital/clinic respectively). As expected, more of those living in the rural areas use community health centres (23.1%) and pharmacies/chemical shops (13.1%) than those living in the urban areas. Incidentally, fewer people and almost equal proportions of both urban and rural dwellers use the services of traditional healers when sick.

The most common diseases patients report at the hospitals/clinics and other health-care centres in the municipality include fever/malaria (42%), eye/trachoma (41%), diarrhoea (6%), coughing (4%), etc. (Figure 5.1). It is to be noted that guinea worm infestation (2%) is still prevalent in the municipality.

The Bolgatanga Municipality health system has emphasized preventive health-care, and encouraged both urban and rural dwellers to use various methods particularly for malaria prevention (Figure 5.2). The use of treated bednets, regular weeding of compound and use of mosquito coil are among the key strategies households in the municipality adopt against malaria.

Attendance at Ante-Natal and Post-Natal Clinics

The Ante-natal service coverage in the Bolgatanga

Table 5.3: Type of Health Facility/Provider Visited when Ill/Sick (%)

Health Facility/Provider	Urban	Rural	Total
Private hospital/clinic	45.8	27.5	34.0
Public hospital/clinic	48.2	27.7	35.0
Community health centre	0.8	23.1	15.2
Traditional healer	1.2	1.3	1.3
Pharmacist/chemical shop	2.4	13.1	9.3
Other	–	0.2	0.1
None	1.6	7.1	5.1
Total	100.0	100.0	100.0

Source: DAEA Household Survey, 2008.

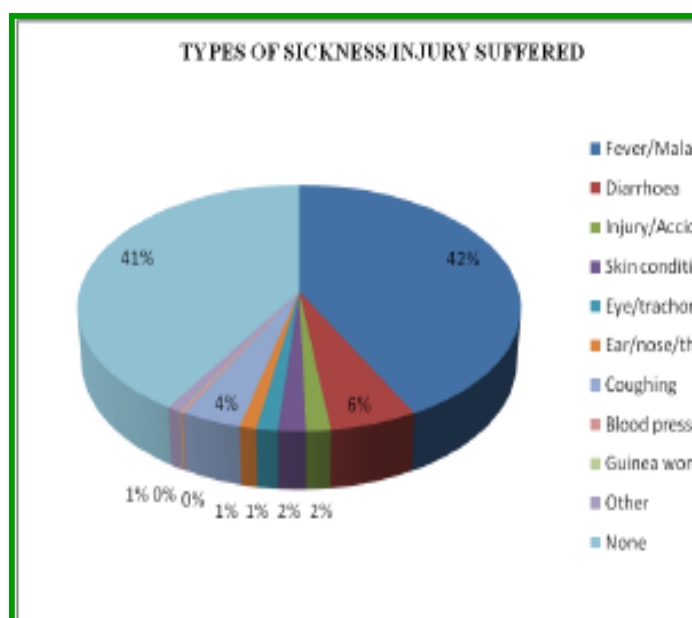


Figure 5.1: Type of Sickness/Injury Reported at the Health Facilities in the Municipality.

Source: DAEA Household Survey, 2008.

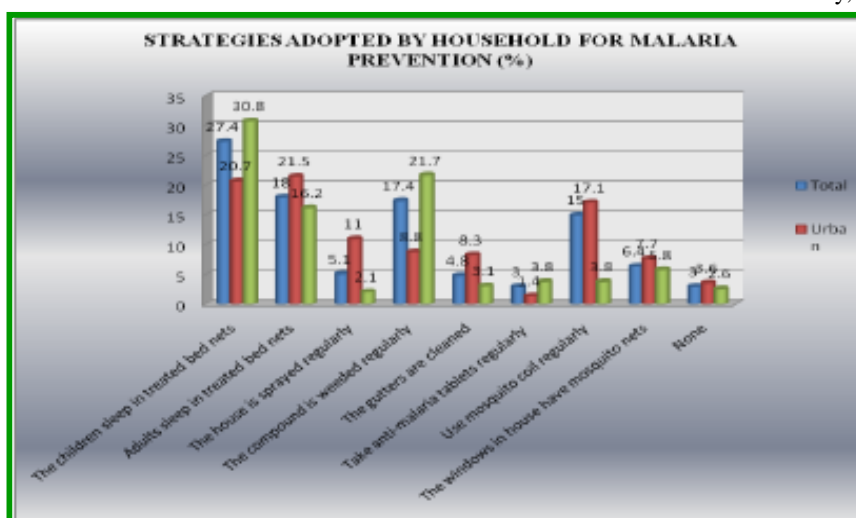


Figure 5.2: Strategies Adopted by Households for Malaria Prevention in the Municipality (%). Source: DAEA Household Survey, 2008.

Municipality has been generally high. Among the key challenges have been the number of visits, inadequate and poor quality of equipment (particularly at the peripheral service delivery points), and teenage pregnancy, among others. Most pregnant women report at the pre-natal delivery points during the 2nd and

3rd trimesters, which need to be improved through more education.

The results from the DAEA Household Survey, 2008 indicate that both the pre-natal and the post-natal attendance have been high in the municipality. Higher pre-natal attendance rate was recorded in the urban areas (89.1%) than the rural areas (81.4%); and the reverse was the case in the case of post-natal attendance, 78.9 per cent in the urban areas and 82.9 per cent in the rural areas (Table 5.4).

Table 5.4: Pre-natal and Post-natal Care in the Bolgatanga Municipality — 2008

Cares	Urban	Rural	Total
Pre-natal			
Yes	89.1	81.4	83.7
No	10.9	18.6	16.3
Post-natal			
Yes	78.9	82.9	81.7
No	21.1	17.1	18.3
Live birth			
Yes	93.5	89.2	87.9
Still pregnancy	3.3	4.5	6.1
Lost pregnancy	2.2	2.2	6.1
Still birth	1.1	4.0	—

Source: DAEA Household Survey, 2008.

The DAEA House-hold Survey 2008 also shows that mid-wives and traditional birth attendants (TBAs) perform most of the deliveries in the municipality (Figure 5.3). Mid-wives deliver more babies in the urban areas (70.5%) of the municipality, while TBAs deliver more of them in the rural areas (40.7%). Delivery by doctors in the municipality represents between 12 per cent (urban) and 17 per cent (rural) of the deliveries.

Health Status of Children

Available statistics from the municipal health directorate indicate that serious problems confront the municipality about the health of children, including malnutrition, stunting, wasting, and children who are underweight. However, it should be noted that the percentage of children suffering from these ailments has been declining in the municipality since 2005 (Figure 5.4). Malnutrition was highest in the municipality during 2005 and 2006, affecting more than 50 per cent of children each year; but this declined to about 21 per cent in 2007. Similarly, stunting in children in the municipality declined from over 20 per cent in 2005 and 2006 to just a little over 5 per cent in 2007.

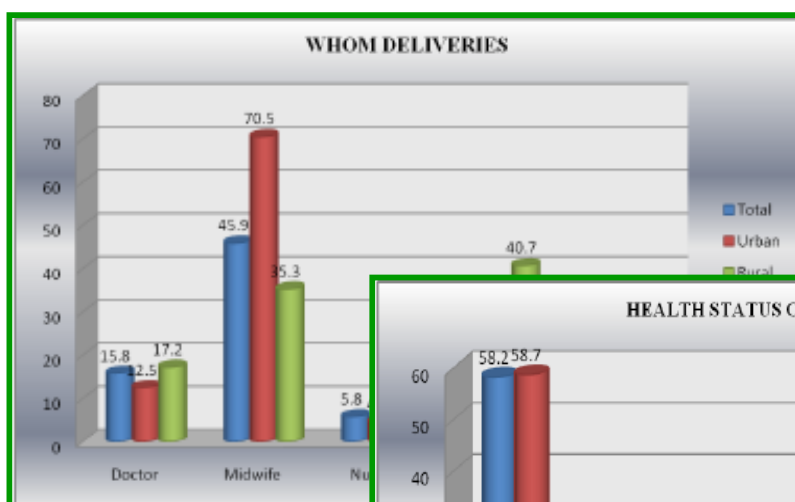


Figure 5.3: Personnel who Deliver Babies in the Municipality (%)
Source: DAEA Household Survey, 2008.

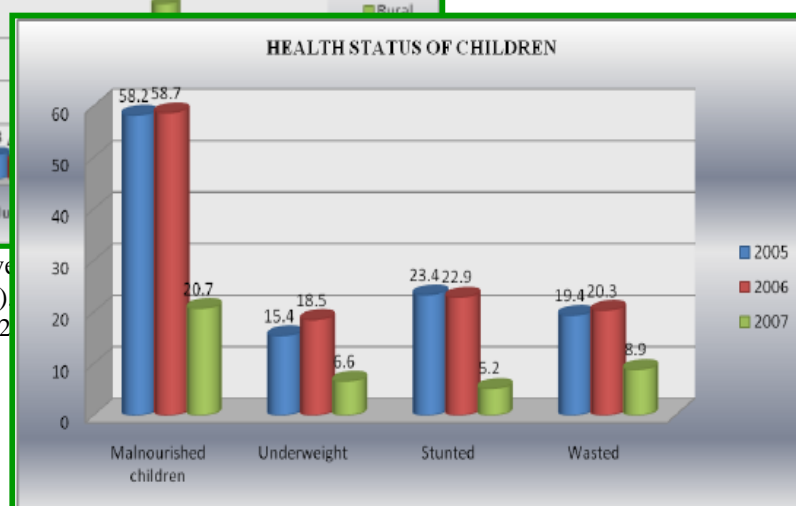


Figure 5.4: Health Status of Children in the Municipality (%)
Source: DAEA Household Survey, 2008.

Table 5.5: NHIS Registration in the Bolgatanga Municipality

Status	Registered	Covered	Not registered/ covered
Sex			
Male	44.5	34.3	21.2
Female	48.4	33.8	17.8
Location			
Urban	51.7	37.3	11.0
Rural	43.7	32.6	23.7
Age			
Under 18 years	4.5	79.7	15.8
18-69 years	75.9	2.1	22.0
70+	72.3	2.1	25.6
Type of work			
Agriculture	22.0	0.8	7.0
Mining & Quarrying	0.8	-	-
Manufacturing	4.5	-	0.8
Construction	3.9	-	2.5
Transport/Storage/Communication	1.9	-	0.8
Finance/Insurance/Services	11.4	-	1.9
Utilities	0.8	-	0.6
Wholesale/Retail trade	21.4	0.6	1.9
Community/Social Services	10.9	0.6	2.2
Other	2.2	-	0.3
Total	46.3	34.2	19.5

Health Insurance

The Bolgatanga Municipal Health Insurance Scheme (BMHIS) has registered 116,762 subscribers since it started operations in November 2005. It registered 14,601 as of August 2008 for the formal sector mainly civil and public servants and 27,074 for the informal sector. The scheme registered 51,568 being children below 18 years, 9,500 for the aged which captures women and men above 70 years, pensioners 3,521 and 10,496 for indigents which comprises people who cannot afford the cost of subscription. This means that the scheme is invariably offering its services on gratis to a large section of the municipality as about 75,085 subscribers belong to the exempted group, which also constitutes a majority of the scheme's subscribers. The registration status

of NHIS in the community is shown in Table 5.5.

Figures from Table 5.5 indicate that more women (48.4%) than men (44.5%) have registered under the NHIS in the municipality, and that more urban dwellers (51.7%) than rural dwellers (43.7%) have

also registered with the scheme. Over 75 per cent of the population 18 years to 69 years have registered, while more than 72 per cent of the older people who are 70 years and above have also registered. This shows that communities in the municipality have responded positively to the scheme.

However, some people in the municipality have not registered with the scheme, especially among the rural communities. The major reason people give in both the urban and rural areas for not registering with the scheme is that the premium is too high (about 88%), even though a few people indicate that they have no knowledge about the scheme (about 7%). It should be noted that several people have already benefitted from the NHIS in the municipality, some people more than twice or trice (Table 5.6).

Water and Sanitation

The municipality seems vulnerable in terms of adequate water supply because during the dry season, most of the existing water bodies dry up whilst bore holes and wells virtually become non-functional due to drops in the water table. The water supply system in the municipality can be classified into rural and urban, based on the location of the facilities and the technology of delivery. The rural water supply system consists of boreholes, hand-dug wells and other natural water sources such as rivers, dams, ponds and dugouts, rain water etc. Even though the other water sources are not hygienic, about

40 per cent of the rural populations still depend on them.

Table 5.6: Number of Times Respondents Benefited from the Health Insurance Scheme

	Sex		Location		Total
	Male	Female	Urban	Rural	
Once	24.5	19.3	15.9	25.7	21.7
Twice	27.6	24.2	24.8	26.3	25.7
Thrice	12.4	14.7	8.6	17.1	13.6
4+	6.1	10.3	7.6	8.4	8.1
Cannot Remember	29.4	31.5	43.1	22.5	30.9
Total	100.0	100.0	100.0	100.0	100.0

Boreholes provide for a very large chunk of the potable water needs of the rural communities in the municipality. There are about 210 of them in good working condition out of a total of more than 366 dotted all over the municipality. Hand-dug wells also form a very significant source of potable water supply to rural communities. (Most of the wells were sunk by NGO's notably, Rural Aid, Red Cross, ADRA, and African Muslim Agency etc). Most of these are fitted with hand pumps. A number of traditional wells sunk by landlords for the consumption of their households also exist.

The urban water supply system consists mainly of a network of piped system that provides water to consumers. This is limited to central Bolgatanga township and parts of Zuarungu. The major source of water supply to the town is from the water treatment plant at Gowrie in the Bongo District. This system is supplemented by mechanized boreholes at Zuarungu and the Bolgatanga Secondary School that pump

water into overhead tanks for distribution to residents of these areas. More communities in the municipality are now served with pipe-borne water, including: Tindonsobligo/Social Security and National Insurance Trust/ Upper West Regional Agricultural Development Project (SSNIT/URADEP) Village, Tindonsobligo/Estates, Zongo, Dameo/Sawaba, Atulbabisi/Town centre, Daportindongo, Bukere, Soe/Soe Residential, Zaare/Hospital, Zorbisi, Yikene, Tanzui, Yarigabisi, Dulugu, Kum-bosco, and Zuarungu.

The supply of safe water to communities in the municipality as well as sanitation seemed to have improved slightly over the situation in the recent past. Whereas less than 20 per cent of the population were served with boreholes, and less than 3 per cent used hand dug wells fitted with pumps in 2000 (Table 5.7), by 2007, the proportion of the population served with boreholes had increased to about 32 per cent (Table 5.8), and those using covered hand dug wells (i.e. those fitted with pumps) had increased to 7 per cent. Overall the percentage of the population enjoying safe drinking water increased from 64 per cent in 2005 to 73 per cent in 2007.

Some improvements were also observed in the municipality in terms of sanitation. As shown in Table 5.8, the percentage of the population in the municipality using safe excreta disposal

Table 5.7: Number and Type of Sources of Drinking Water (Rural Water Supply — 2000)

Indicators	Number	Population served	% of Population served	Provider	Quality
1. Boreholes	112	37,261	19.15%	CWSA/World Bank/ DA/ Communities	Good
2. Hand dug wells fitted with pumps	39	5,696	2.11%	Rural aid, Red Cross/ ADRA/ African Muslim Agency	Good
Total	249	57,386	21.30%		

Source: Community Water and Sanitation Agency, Bolgatanga/DWST. Bolga Municipal.

facility increased from 33 per cent in 2005

to 45 per cent in 2007; and those using KVIL facilities increased from 11 per cent to 17 per cent during the same period. However, more need to be done to effectively check the indiscriminate disposal of garbage by sections of the population in the municipality, particularly in the rural areas.

Table 5.8: Percentage of the Population Served with Safe Water in the Municipality

Indicator	2005	2006	2007
% Population served with safe water	64.0	68.0	73.0
% Population served boreholes	32.0	29.0	32.0
% Population served pipe borne water	25.0	29.0	34.0
% Population served with covered wells	7.0	10.0	7.0
% Population using safe excreta disposal facility	33.0	35.0	45.0
% Population with KVIP	11.0	—	17.0

In terms of the main sources of drinking water, results from the DAEA Household Survey, 2008 indicate that a majority of urban dwellers get their water from pipe borne water sources (either individual or public stand water taps). This represents about 79 per cent of the urban population (Figure 5.5). On the other hand, most of the rural population in the municipality obtain water from boreholes (about 72%), implying that tap water and boreholes are the main sources of safe water in the municipality. Also, it takes less than 15 minutes for both urban and rural dwellers in the municipality to reach water sources (Figure 5.6), indicating that accessibility to water is generally easy in the municipality.

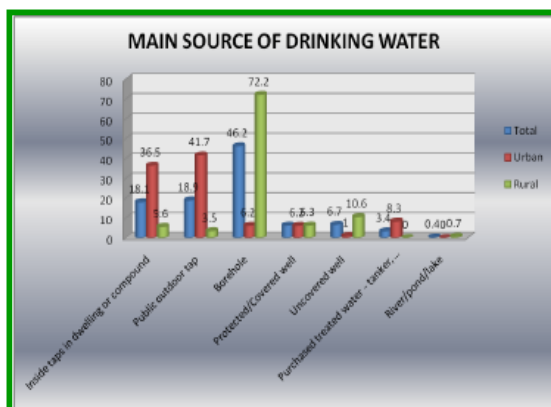


Figure 5.5: Main Sources of Drinking Water in the Municipality (%).

Source: DAEA Household Survey, 2008.

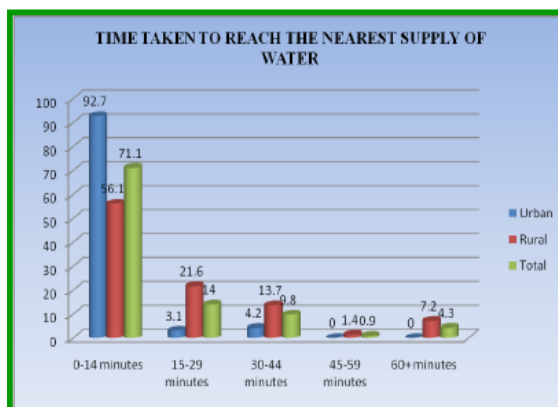


Figure 5.6: Accessibility of Water Supply in the Municipality (%).

Source: DAEA Household Survey, 2008.

Resource Endowment

Introduction

Human and material resource endowment at the national, regional and municipal/district levels of nations and economies, to a large extent, determine the type of opportunities available to achieve the developmental goals of these nations and economies. The Bolgatanga Municipality is endowed with several resources which are briefly reviewed and discussed in this chapter. The investment opportunities that result from these endowments and how they have been utilized are highlighted.

Natural/Environmental Resources

Geology

The Municipality is largely underlain by Granite with an estimated coverage of 77.30 per cent, followed by Quartz-Sericite Schists with area coverage of 11.28 per cent, and Alluvium 5.21 per cent. Also found in the district is Birimian and mixed (Quartzites, Sandst) constituting 0.61 per cent and 0.41 per cent respectively. These distributions are shown in a tabular form in Table 6.1 and graphically on the map in Map 6.1.

Table 6.1: Matrix of Geology Distribution in the Municipality

Geology Type	% Area (Hectares)
Alluvium	10.41
Birimian	0.61
Granite	77.30
Mixed (Quartzites, Sandst.)	0.41
Quartz-Sericite Schists	11.27
Total	100.00

Source: CERSGIS.

Soils

The soils in the municipality are mainly Ferric Lixisols with approximately 44.65 per cent area coverage. These include Gleyic Lixisols 22.41 per cent, Haplic Lixisols 11.28 per cent, Eutric Fluvisols 10.41 per cent and other minor soils like, Eutric Leptosols, Lithic Leptosols, Dystric Leptosols, Haplic Luvisols and Eutric Gleysols. The Lixisols are soils with sub-surface accumulation of low activity clays formed under intensive weathering conditions. They are not very pronounced for crop production. Leptosols are very shallow soils over hard rock or highly calcareous material or a deeper soil that is extremely gravelly and/or stony. Just like Lixisols, Leptosols are unattractive soils for agriculture. However, they could have some potential for tree crops or extensive grazing. Gleysols are used for extensive grazing. Artificially drained Gleysols are used for arable cropping, dairy farming and horticulture. The proportions of areas covered by each of these soil types are shown in detail in Table 6.2 with an accompanying graphical representation in Map 6.2.

Resource Endowment

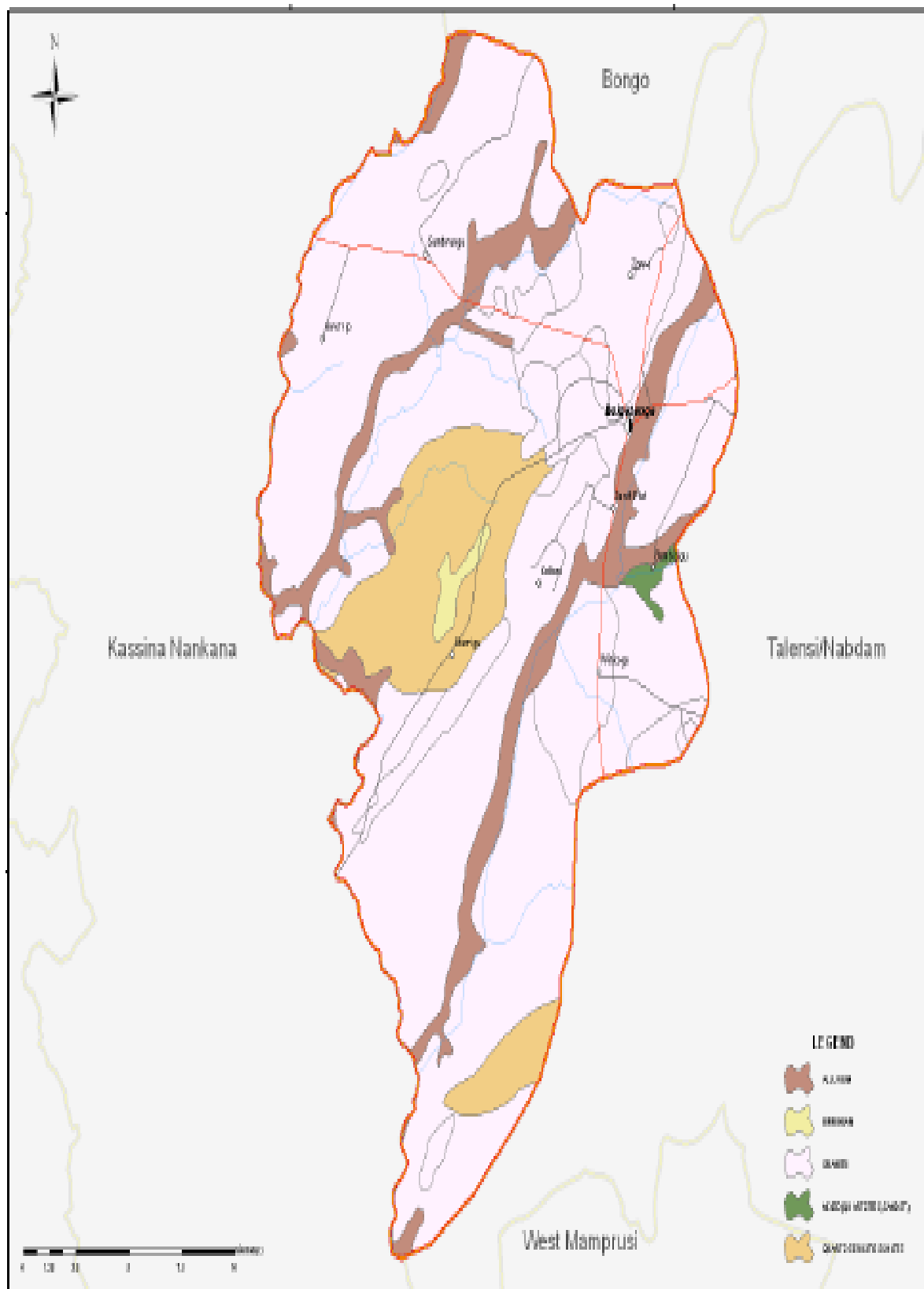
Table 6.2: Matrix of Soil Distribution in the District

Soil Name	% Area (Hectares)
Dystic Leptosols	0.85
Eutric Gleysols	0.41
Eutric Leptosols	6.51
Eutric Fluvisols	10.41

Ferric Lixisols	44.65
Gleyic Lixisols	22.41
Haplic Lixisols	11.28
Haplic Luvisols	0.61
Lithic Leptosols	2.87
Total	100.0

Source: CERSGIS.

Map 6.1: Geology Distribution in the Municipality



Land Use and Land Cover

A number of land cover types exist in the Bolgatanga Municipality. These land cover types have over the years been harnessed into varying land use activities. Derived from current satellite imagery and ground information, six cover types with two dominant ones and their associated land use types were found in the municipality. The spatial distribution is presented in Map 6.3 while Table 6.3 shows the tabular distribution. Grassland was found to occupy about 42.5 per cent, of the landscape. Shrubland, the second dominant cover,

occupies approximately 34.89 per cent, whilst croplands (agriculture), woodland (semi-natural vegetation), built-up surfaces (settlement/degraded areas) and water bodies occupied 11.35 per cent, 9.17 per cent, 1.84 per cent and 0.21 per cent respectively.

Table 6.3: Matrix of Land Use/Land Cover Distribution in the Municipality

Land Use Class	Area (Hectare)	Percent
Cropland-Cereals	5,017.50	11.4
Grassland	18,798.72	42.5
Settlement/Degraded	813.75	1.8
Shrubland	15,417.83	34.9
Water Bodies (Dams)	93.21	0.2
Woodland	4,053.39	9.2
Total	44,194.39	100.0

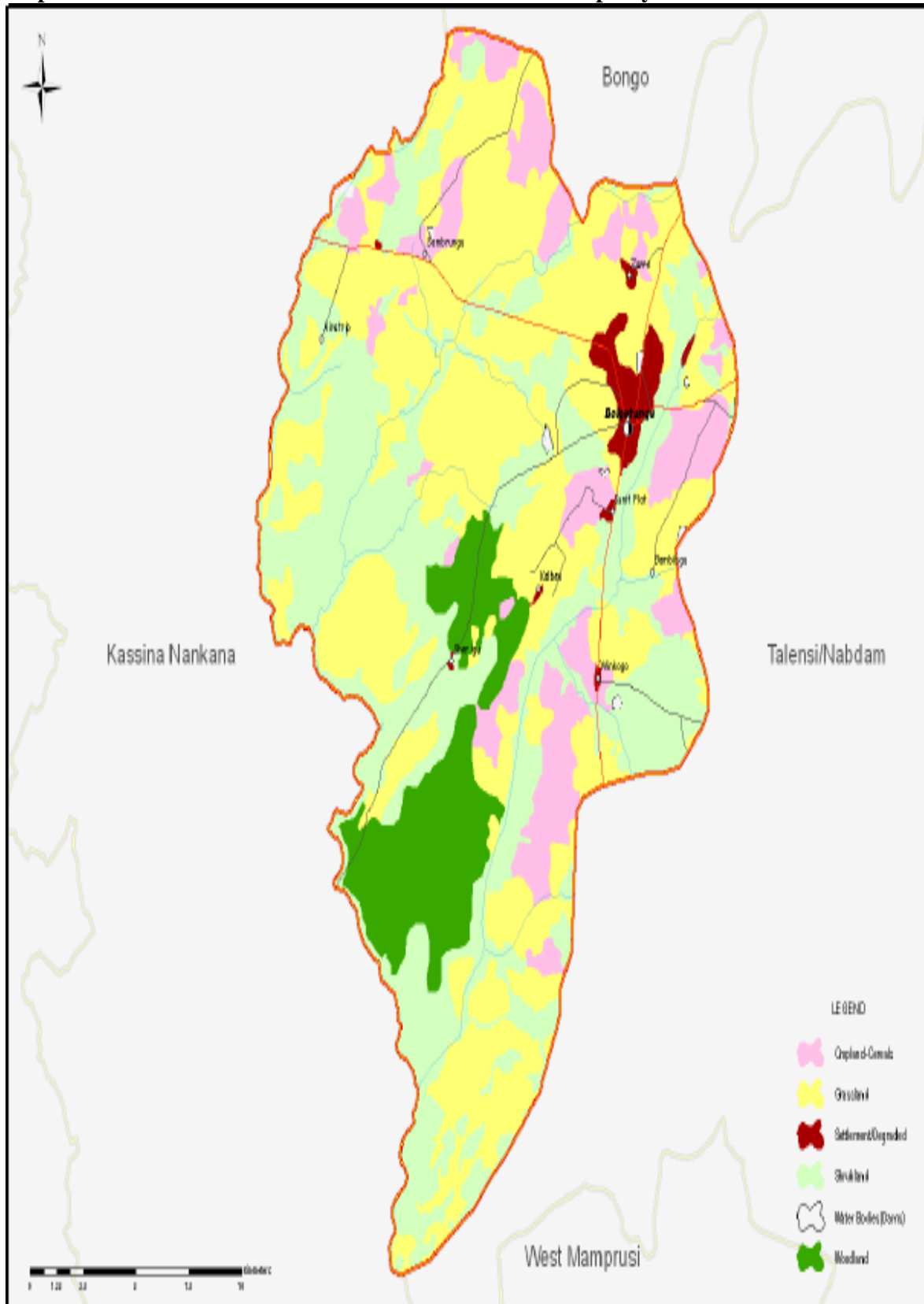
Table 6.4: Attributes of Land Utilization Types in the Municipality

Attributes	Low Inputs	Intermediate Inputs	High Inputs
Produce and production	<i>Rainfed cultivation</i> of maize, pearl millet, wetland rice, sorghum, cowpea, green gram, groundnut, phaseolus bean, pigeon pea, soybean, cassava, sweet potato, cocoyam, white yam, greater yam, yellow yam, cotton, tobacco, avocado, cashew, banana, citrus (sweet orange), cocoa, coconut, robusta coffee, mango, oil palm, pineapple, plantain, rubber, shea butter, sugarcane, rangeland (natural pasture) and forage legumes. Sole cropping, according to general crop calendars.		
Market Orientation	Subsistence production	Subsistence production plus commercial sale of surplus	Commercial production
Capital Intensity	Low	Intermediate with credit on accessible terms	High
Labour Intensity	High including uncosted family labour	Medium including uncosted family labour	Low family labour costed if used
Power Source	Manual labour with hand tools	Manual labour with hand tools and/or animal traction with improved implements; some mechanization	Complete mechanization including harvesting (where applicable)
Technology	Traditional cultivars. No fertilizer or chemical pest, disease and weed control. Fallow periods. Minimum conservation measures	Improved cultivars as available; appropriate extension packages. Including some fertilizer application and some chemical pest, disease and weed control. Adequate fallow periods and some conservation measures	High yielding cultivars including hybrids. Optimum fertilizer application. Chemical pest, disease and weed control. Full conservation measures
Infrastructure	Market accessibility not necessary. Inadequate advisory services.	Some market accessibility necessary. Access to demonstration plots and advisory services.	Market accessibility essential. High level of advisory services and application of research findings
Land Holding	Small, fragmented	Small, sometimes fragmented	Large consolidated
Income Level	Low	Moderate	High

Note: No production involving irrigation or other techniques using additional water.

Source: Soil Research Institute, CSIR, Accra, Ghana.

Map 6.3: Land Use/Land Cover Distribution in the Municipality



Land Suitability for Selected Crops (Major Crops)

The land suitability tables and maps depict suitability classes for crop production circumstances relevant to a set of agricultural and socio-economic conditions prevailing in the municipality, which were defined in terms of Land Utilization Types based on rainfall, cropping at three levels of inputs and farm operations — *low*, *intermediate* and *high*, shown in Table 6.4.

As already indicated, the municipality has a total land area of 729 square kilometres and 70 per cent of this (51,030 ha) is cultivated. Eight per cent (8%) of the population are peasant farmers. There are 14,145 agricultural households with an average of six persons per household and average land holdings of between 1.0 and 3.0 ha. Even though there are few dams and dugouts, the municipality is basically dependent on rain fed agriculture.

Crop Production

The crops mostly cultivated by farmers during the rainy season are categorized as follows:

- Cereals — Millet, sorghum, rice and maize
- Legumes — Groundnuts, cowpea, soybean and bambara
- Vegetable — Tomato, pepper, okro, onion, garden eggs and leafy vegetables, beans

The main farming system in the district is rain fed mixed cropping. Crop mixture is mostly cereal-cereal but occasionally a cereal — legume mixture. The common types of crop mixtures include:

1. Early millet/Sorghum
2. Early millet/late millet
3. Early millet/Sorghum/local beans

Leguminous crops are normally exclusively sown. Land preparation is mostly done by bullocks and the hoe. However, tractor is also used. The major staple crops grown are: millet, sorghum and Frafra potatoes and the cash crops are maize, rice, groundnuts and sweet potatoes.

Dry Season Farming

As discussed elsewhere in this report, the Vea Irrigation Project makes available about 637.5ha of land for irrigated farming. In addition to this, there exist about seven small-scale dams having a total irrigable area of 78ha. Apart from the irrigable land area provided by the Vea and the small-scale dams, there exist a potential for water pump irrigation along the banks of the White Volta. Maps 6.4 to 6.6 show land suitability for some of the important crops in the municipality, namely: cowpea, groundnuts and maize respectively.

Physical Resources

Transportation and communication infrastructure are available in the municipality, though not completely adequate. The municipality depends solely on road transport to link up with the other parts of the country (Map 6.7). Bolgatanga town, the capital of the Upper East Region is the pivot of road transportation with all the three major roads to the other districts radiating from it.

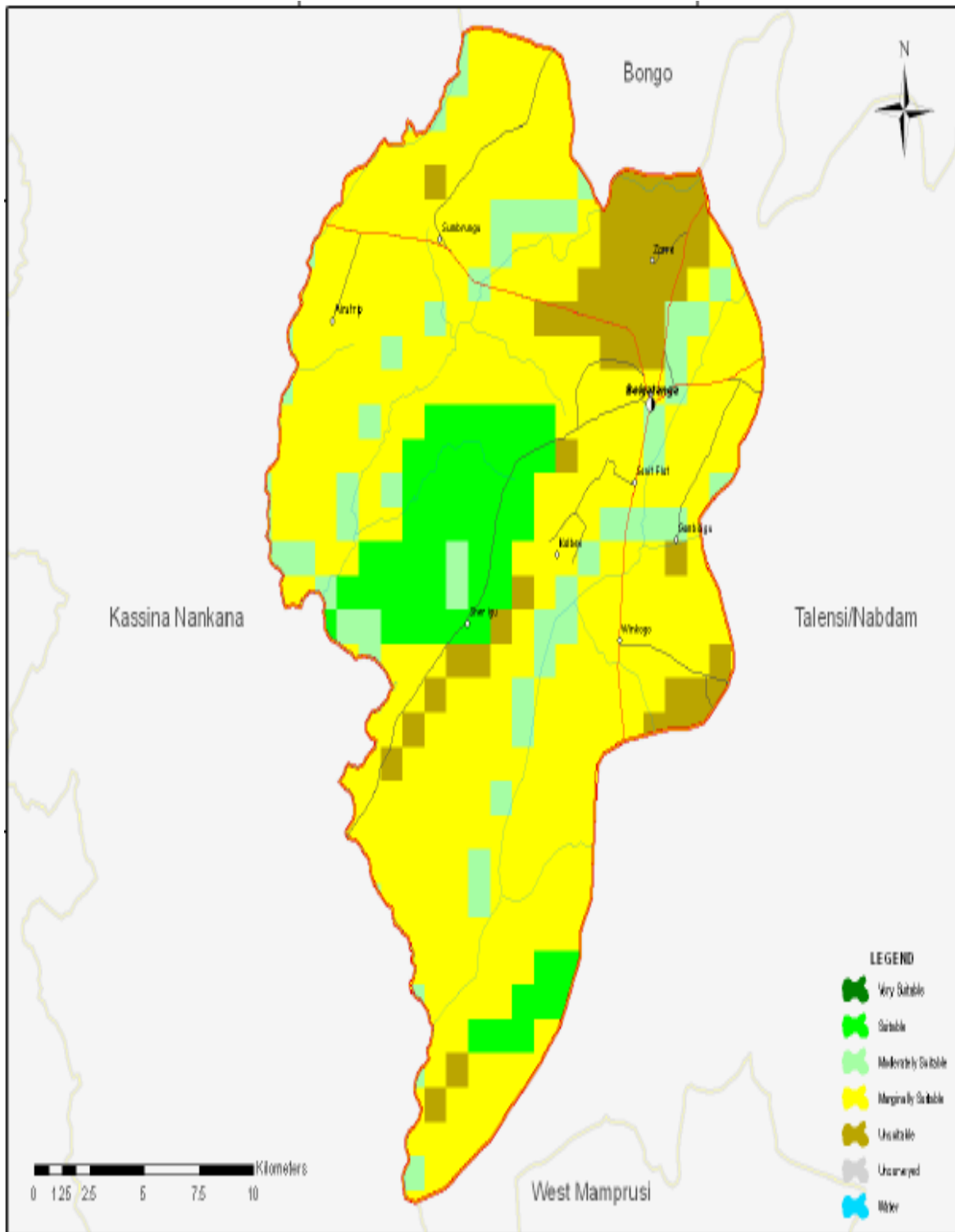
Socio-economic Resources

These include health, education, water and sanitation, markets and tourism resources in the municipality.

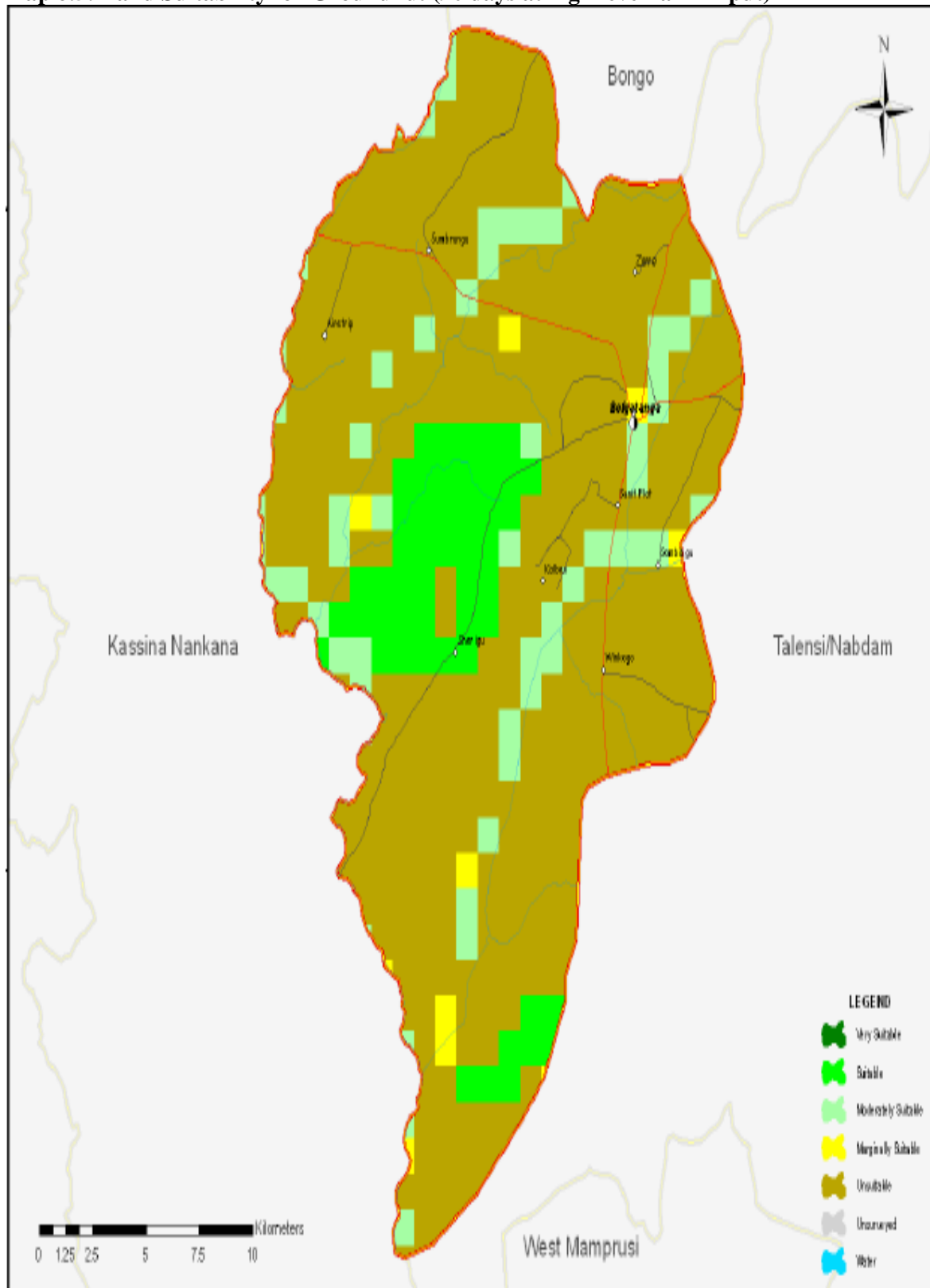
Health Facilities

There are a number of health institutions providing variety of health services. These facilities are made up of hospitals, clinics and

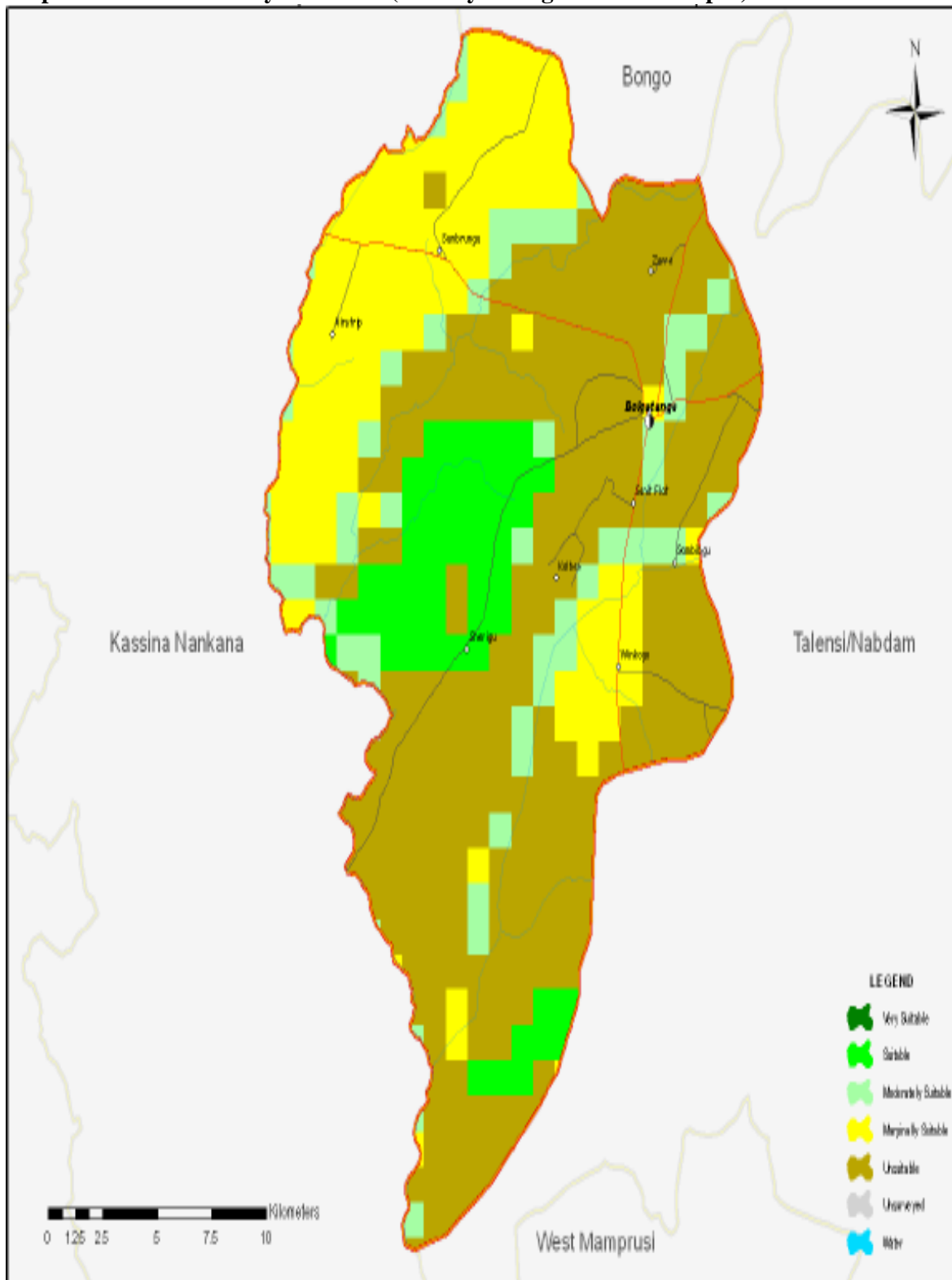
Map 6.4: Land Suitability for Cowpea (60 days at high level farm input)



Map 6.5: Land Suitability for Groundnut (90 days at high level farm input)



Map 6.6: Land Suitability for Maize (120 days at high level farm input)



primary health centres which are mostly concentrated in the highly populated areas with accessible feeder roads. Health services provided in the municipality are both curative and preventive. The services provided are mainly orthodox and traditional.

The number of health facilities in the municipality is satisfactory. The Bolgatanga Regional Hospital and Odoi-Agyarko's Clinic are the only well equipped facilities. The rest that are in most of the deprived parts of the municipality are poorly equipped.

There are mobile clinics run by the Catholic and Presbyterian Churches. There are Community Health Planning Services (CHPS) centres established at Sherigu, Zuarungu-Moshie, Aguusi and Gambibgo to provide community based health services. The service providers comprise of the public and private sectors that include Non-governmental organizations (NGOs) and traditional practitioners. Information on the type of health facilities and their locations in the municipality has been provided in Chapter 5.

Again, as already indicated, the municipality is served by two pharmacies, which are located in the Bolgatanga township. Only eight (8) out of twenty-seven (27) licensed chemical stores are located outside the Bolgatanga township. Though efforts have been made to improve access to health service delivery, patronage of these facilities has been low as a result of poverty, illiteracy and ignorance in the rural communities.

Table 6.5: Matrix of Education Facility Distribution in the Municipality

Type of Facility	No. of Facilities
KG/Creche/Nursery	116
Primary	78
Junior High School	45
Senior High School	6
Total	245

Source: Ministry of Education Science and Sports (Erstwhile) Basic District Profile — 2007/2008 School Year Data.

Educational Infrastructure

The municipality currently has 116 pre-schools, (78) primary schools, forty-five (45) Junior High Schools and six (6) Second Cycle Institutions including an all-girls Senior High School and a Technical Institute (Table 6.5).

Water and Sanitation

The municipality is vulnerable in terms of adequate water supply. During the dry season, most of the existing water bodies dry up while bore-holes and wells virtually become non-functional as noted earlier. The rural water supply system in the municipality consists of boreholes, hand-dug wells and other natural water sources such as rivers, dams, ponds and dugouts, rainwater etc. Even though the other water sources are not hygienic, about 40 per cent of the rural populations still depend on them.

As already indicated elsewhere, bore-holes provide for a very large chunk of the potable water needs of the rural communities in the municipality. There are about 210 of them in good working condition out of a total of more than 366 dotted all over the municipality. Hand-dug wells also form a very significant source of potable water supply to rural communities. Most of these are fitted with hand pumps. A number of

traditional wells sunk by landlords for the consumption of their households also exist.

Urban water supply system consists mainly of a network of piped system that provides water to consumers. This is limited to central Bolgatanga and parts of Zuarungu. The major source of water supply to the town is from the water treatment plant at Gowrie in the Bongo District. This system is supplemented by mechanized boreholes at Zuarungu and the Bolgatanga Secondary School that pump water into overhead tanks for distribution to residents of these areas.

Markets

Local markets, which vary in size and importance, are located in major communities in the municipality.

Tourism

There is a lot of tourism potential in the municipality. The Bolga Craft Village, museum and the Centre for National Culture (CNC) and many festivals such as Dua, and Adakoya offer a lot of interest to tourists. With adequate investment, tourism could open up opportunities for the people to find alternative sources of employment.

Human Resources

The population of the municipality is 147,729 with a growth rate of 1.7 per cent. This is lower than the national rate of 2.7 per cent. The population density of 141.2 persons per sq. km, is far greater than the national density of 79.3 persons per sq. km, indicating that the municipality is more densely populated than many areas of the Upper East Region and of the country as a whole.

Adequate Supply of Quality Labour

The occupational distribution of the municipality has changed considerably over

time, and the municipality has managed to attract some more professionals and better qualified personnel. According to a census publication from Ghana Statistical Service dated November 1994, Agriculture accounts for as much as 57 per cent of the labour force, trade and commerce 19 per cent, manufacturing (mainly handicrafts) 11.92 per cent, community/social services 7.4 per cent and others like mining, construction, utility service. This had changed significantly by 2008 when agriculture represents about 31 per cent and other sectors becoming more significant (see chapter two of this report).

Utilization and Constraints in Resource Endowment

Introduction

In this section, the report describes how the municipality has utilized the resources it is endowed with, the constraints associated with the effective utilization of these resources and how the utilization has influenced the attainment of the MDGs in the municipality.

The resource endowments' utilization is key to determining the range of livelihood opportunities available to all individuals and households in the municipality. The larger the resource base, the less constrained the choices available to households, and the greater the ease of substituting one form of capital for another in creating wealth. The more limited the resource base, the more constrained the choice set. The household's asset base, including access to natural resources, thus fundamentally conditions the production and exchange decisions it makes. The outcomes of household decisions based on household's resource endowments — represented by levels of household income, assets and capabilities — influence the consumption and investment decisions of households. The consumption and investment trade-offs made by these households influence, in turn, the portfolio of natural and other resources to which households have access and the decisions

they make in future periods (Maxwell and Wiebe 1998).⁵

Access to natural resources may not be enough to assure livelihood security (de Janvry, *et al.* 2001). Access to and the use of natural capital by households is complementary with the other forms of capital and it is this asset complementarities or “asset bundling” — increasing access to natural assets along with simultaneously enhancing access to physical, financial or human capital — that is particularly an important mechanism for escaping poverty by strengthening the capabilities of the household. Access is a central criterion to assuring utilization of resource endowments and in sustaining livelihoods. Natural resources become natural “assets” when access is assured, either through asset ownership or other forms of securing access and control. Rural poor people who lack access to natural capital and other forms of capital are challenged on many fronts: obtaining food, accumulating assets and responding to shocks and misfortune (Baumann 2002).

Natural resources vary widely in the rules that govern access to them. Individuals primarily hold access to some resources, while access to other resources may be

⁵ Maxwell, D., and K. Wiebe. “Land Tenure and Food Security: Exploring Dynamic Linkages” *Development and Change* 30 (1998): 825–849.

shared across larger groups, including the state, and some resources are effectively not held by anyone. Such open access resources, including many forests and fisheries, are among those facing the greatest current pressures due to growing populations, accompanying resource demands, and the common lack of effective institutions that govern access. Because access entails rights, it is also fundamentally affected by social and political processes reflecting the distribution of power in communities and societies (including dimensions such as gender and conflict), by market forces reflecting the distribution of wealth, and by environmental forces, which are often influenced by human activity.

Utilization of the Resource Endowments in the Municipality

Human Resources Utilization in the Municipality

Human resource development and utilization concerns education, training, employment opportunities and the building of incentives for useful and productive activity. Human resource utilization is also closely related to the strategy of economic, social as well as political growth of the locality. Thus human resource development and its utilization bears in mind the potentials and aspirations of individuals and the prospective ability of the society.

The medium term development plan of the Bolgatanga municipality is to, among other things, improve the quality of life of the people through education and training. This objective also reinforces the GPRS II goal on human resource development programme that emphasizes, among others, education, training and skills development.

The accumulation of capital and the exploitation of natural resources rest upon the development of people and the effective commitments of their energies and talents.

Utilization of human resources has both quantitative (number of jobs secured) and qualitative aspects (skills, competencies as well as the health and well-being of the people). Quantitatively, providing and securing jobs that enable the individual to do what they have become capable of doing is important. Qualitatively, individuals must do work that enables them to fully employ the capacities that they have developed to effectively sustain their livelihoods. The utilization of the human resources available in the municipality in the local economy is one of wide contrasts. At one extreme is a small proportion of the human resource (workforce) in a relatively small sector of high productivity and relative high income (the modern sector). At the other extreme is also a very large sector of low productivity and relative low income (the subsistence agricultural sector) employing the largest portion of the human resource. Between these is the intermediate sector (informal sector), which is of a moderate size.

The modern sector includes the more productive enterprises such as the newly emerging service centres (ICT), government employment establishments such as health, education and administration and the formal private industrial (manufacturing) sector. Table 7.1 provides a snapshot of the distribution of the human resource in the participation of the local economy of the municipality. The public and the formal private sector employ about 39 per cent of the active population. On the other hand, the informal and agricultural sector participation of the human resource of the active population constitutes 60 per cent.

Table 7.1: Distribution of Economically Active Population Aged 15+ by Industry, Status and Type (%)

Main Employer	2008
Public	28.8
Private formal	10.6
Private Informal	59.6
Semi-Public/Parastatal	0.5
NGO's/Intl Org	0.5
Total	100.0

Source: DAEA Household Survey, 2008.

There are, however, large proportions of the human resource that are not employed. Table 7.2 presents the unemployment rates for the Bolgatanga Municipality based on the DAEA 2008 Household Survey results. The unemployment rate for the population 15+ years has been high in the municipality, higher among both the urban male youth (36.8%) and adult male (18.5%) than the rural male youth (28.9%) and adult male (16.1%). On the other hand, joblessness are higher among both the rural female youth and adults in the municipality than the urban females, indicating that relatively more males in the urban areas and more females in the rural areas find it difficult to secure jobs.

Table 7.2: Estimates of Unemployment Rates (%) for Bolgatanga Municipality

Age Group	Youth(15-24 years)	Adult(15-60 years)
	2008	2008
Rural	-	-
Male	28.9	16.1
Female	15.0	20.6
Total	22.4	18.3
Urban	-	-
Male	36.8	18.5
Female	11.5	13.9
Total	22.2	16.1
All	-	-
Male	30.8	16.8
Female	13.6	18.4
Total	33.2	17.6

Source: DAEA Household Survey, 2008.

The overall unemployment rates in the municipality are 33 per cent for the youth and 18 per cent for the adults. The incidence of underemployment among the adults in the metropolis is an indication that the human resource is not being utilized to its maximum capacity.

Similarly, the percentage of adult literacy in the municipality in early 2000s were only about half of the overall national adult literacy rate (Table 7.3), even though that for the municipality (28.8%) was better than the rate for the Upper East Region as a whole (23.3%). Moreover, the adult literacy rate among males in the municipality was more (36.1%) than for females (21.6%). The implication is that, the municipal authorities

need to do a lot more to promote schooling and learning in order to equip the available human resource to be able to play its role in the local economy.

Infrastructure Utilization in the Metropolis

It is widely recognized that cost-effective, reliable, and affordable infrastructure services are critical for sustainable development, and a necessary condition for reaching economic, social, and environmental goals. The importance of infrastructure in poverty reduction has been recognized in the Millennium Development Goals (MDGs), which single out access to water supply and sanitation service targets to be achieved by 2015. Although not explicitly stated as goals, access to other infrastructure services such as electricity, transport, and telecommunications is indispensable for achieving the health, education, gender, and income poverty goals. The Bolgatanga Municipality is endowed with a fair share of infrastructure including communication facilities, road network, etc which can be used effectively to promote its development.

Postal Services

The Bolgatanga Post Office houses the regional offices of Ghana Post. It offers all postal services — sale of stamps, postal and money orders, EMS, rental box and private mailbag services. The number of rental boxes now has increased significantly over time with increases in economic activities in the municipality.

Formal Financial Services

Some major banks such as Barclays Bank (Picture 7.1), Ghana Commercial Bank Ltd, SG-SSB Bank Ltd, National Investment

Bank Ltd, Agricultural Development Bank Ltd and APEX Bank have branches in the Bolgatanga township.

Table 7.3: Percentage Adult Literacy, 2003: National versus Bolgatanga Municipality

% Adult Literacy	National	Upper East Region	Bolgatanga Municipality
All	53.7	23.3	28.8
Male	66.2	29.8	36.1
Female	42.5	17.0	21.6

Source: 2003 CWIQ



Picture 7.1: Barclays Bank, Bolgatanga Branch.

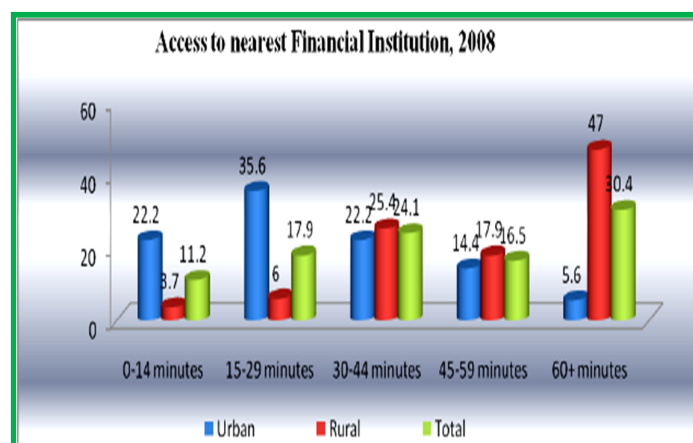


Figure 7.1: Access to nearest Financial Institution in the Municipality, 2008.

Source: DAEA Household Survey, 2008.

Their services are mainly concentrated in the Bolgatanga township to the neglect of the rural communities. Non-banking financial

institutions operating in the municipality include the State Insurance Company Ltd, Social Security and National Insurance Trust, Quality Insurance, Star Assurance, Susu collectors and Credit Unions. An agency of the NARA Rural Bank also operates in the municipality.

Among other things, these banks are strategically positioning themselves to take advantage of the increase in economic activities in the municipality and its general economic performance. The Bolgatanga township also serves as the last major link to the Sahelian region, and the services of these banks could be critical in the development of inter-regional trade in the northern part of the country. In general, banks are more accessible to the urban population than the rural people in the municipality as shown in Figure 7.1.

Road and other Transport Infrastructure

The central road axis in the municipality is the Tamale-Bolgatanga-Paga road, which is asphalted. The Tamale-Bawku road which passes through the central street of the Bolgatanga township is also motorable throughout the year and, therefore, a major influence on the economic life of the populace. Within the Bolgatanga township itself, accessibility is being improved as the road network is currently being renovated. Access to transport facilities is generally easy in the municipality as shown in Table 7.4.

Table 7.4: Access to Public Transport in the Municipality

Time Spent	Urban	Rural	Total
0–14 minutes	33.0	23.0	25.6
15–29 minutes	36.2	19.3	24.7
30–44 minutes	20.2	27.4	17.2
45–59 minutes	6.4	14.8	12.3
60+ minutes	4.3	15.6	20.3

Source: DAEA Household Survey 2008.

Information Communication Telecommunication (ICT) Infrastructure

Vodafone (Ghana) has its regional headquarters in the Bolgatanga Post office block. The company offers telephone, telegram, and mobile, fax and telex services both at the domestic and international levels. The other mobile service providers include, MTN and Tigo. Apart from these mobile phone service providers, there are 63 private communication centres, which offer telephone services with a few of them having fax services. Some NGOs and private companies offer e-mail and Internet services as well.

Table 7.5: Access to Nearest Telecommunication Facility

Time Spent	Urban	Rural	Total
0–14 minutes	33.0	7.8	18.0
15–29 minutes	30.7	6.2	16.1
30–44 minutes	17.0	27.1	23.0
45–59 minutes	15.9	20.9	18.9
60+ minutes	3.4	38.0	24.0

Source: DAEA Household Survey, 2008.

The world over, telecommunication is acknowledged to be a critical infrastructure sector. The growth and development of telecom services has a direct and significant impact on the efficiency, competitiveness and growth of the economy. Within the telecom sector, it is the mobile infrastructure that has demonstrated itself to be the most conducive medium to rapidly and economically deliver the benefits of communication and connectivity in the municipality. Cellular mobile telephony has brought modern telecommunication services to the municipality. Thus the mobile telephony has become an effective tool, not only to bridge the urban-rural digital divide, but has also led to a catch-up with the rest of the country. Table 7.5 depicts the ease of access to telecommunication facilities by a

majority of the population in the municipality.

Housing, Water and Sanitation

Housing delivery in the municipality has increased but developments have been more in the private sector. Relatively, the housing situation has improved but the quality and services are still problematic. The old parts of the municipality have seen the housing conditions deteriorate. Thus service distribution relatively has been bad although most of these houses are connected to electricity. The expanding areas are more in the government/residential areas and see better services with better housing quality. The regularity of water supply, however, is not smooth. The Municipal Assembly plans that with the support of development partners, more boreholes and protected wells will be sunk to make potable water accessible to more of the population. The procurement of more sanitary tools and equipment will lead to a great improvement in waste management.

Health Infrastructure

The health infrastructure provided services in pre-and post-natal care and child immunization, among several others. Maternal and child mortality has also declined in the municipality due to improvements in health facilities (Figure 7.2).

Maternal Mortality Ratio in Bolgatanga Regional Hospital (670.4/100,000 Live Births) was above the regional average. Haemorrhage and sepsis account for almost 50 per cent of all the maternal deaths. The two major direct causes of deaths are sepsis, 45 per cent, and haemorrhage (APH and PPH) 36 per cent. The two account for about 81 per cent of all the maternal deaths. The introduction of the national health insurance scheme (NHIS) has also partly contributed to

higher health attendance, especially at public health institutions and particularly for the period 2006.

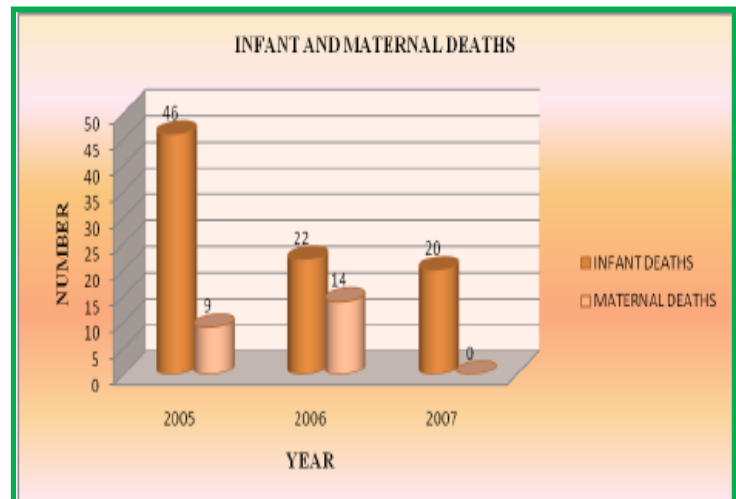


Figure 7.2: Infants and Maternal Deaths in the Municipality.

Life expectancy in the municipality is only 50 years; compared to the national figure of 55 years. The high level of illiteracy and poverty as well as the limited access to safe drinking water and the existence of poor sanitation and unhygienic practices have exposed many people to health hazards which contribute to the lowering of the living standards of the people. The prevalence of diseases like malaria, diarrhoea, anaemia, acute respiratory infections and gynaecological disorders as well as the outbreak of epidemics such as cholera, anthrax and CSM can be traced to the above factors. Other conditions such as malnutrition and micro nutrient deficiency (mostly among children) are also prevalent in the municipality. Malaria and eye/trachoma continue to be diseases of major public health concern. Malaria is the number one cause of morbidity and accounts for 46 per cent of OPD attendance and 11 per cent of all institutional deaths in the municipality.

Electricity/Energy

Until 2001, only Bolgatanga township, and parts of Zuarungu, and Sumbrungu, enjoyed electricity from the national grid. Through the Self-Help Electrification Project (SHEP III) and the Support Towards Providing Electrification in the Upper East Region funded by a Spanish Government loan facility, the total number of towns/villages enjoying electricity has increased. In spite of the extension of electricity to the rural areas, most households still use the kerosene-fuelled hurricane lamp. This is due to the fact that they cannot afford the payment of the tariff. Bolgatanga township has a number of filling stations, which retail fuel and lubricants. The Bulk Oil supply and Transport Company (BOST), has a depot at Bolgatanga, which serves as the main source of fuel and LPG for the municipality and the region.

Institutions and Governance Utilization in the Municipality

The changing institution-resource access relationships that highlights the resource endowments and problems associated with the participation of individuals has already been noted. Participation in land, labour, and agricultural markets can determine the types and quantities of resources with which a household is endowed and exploited. In addition, markets can provide an alternative means of access to land and other resources for households with enough capital, for instance, to rent or buy land in other areas. Thus, participation in institutions not only affects access to resources, the contrary is also true: access to resources affects participation in institutions.

The institutions in the governance structure in the municipality consist of the traditional leadership system and the central government structures, including the Municipal Assembly and services provided, the security and judicial systems, and the role

played by the various NGOs in resource access and mobilization.

At the national level, the participation of adults in the municipality in exercising their franchise in national elections has been relatively high (Table 7.6). Participation in the 2004 national elections was about 81.8 per cent. This proportion, however, declined two years later during the district level elections to about 74 per cent. The proportion of people consulted on projects initiated in their communities is, however, low (about 29.2%).

Table 7.6: Participation in Political Events in the Municipality

Political Event	Location		Total
	Rural	Urban	
2006 District Elections	79.1	63.7	74.0
2004 National Elections	84.5	76.2	81.8
Consulted on projects	39.5	7.7	29.2
Member of Unit Committee	4.0	0.8	2.9

The Level of Participation in Community Development Programmes

The participation in community development programmes depends, among others, on the effectiveness of the political leadership at the local level and interactions of the communities with their leaders. In addition, belonging to an association and participating in its activities provide opportunities to community members to individually or collectively contribute to community initiatives and development. At the community level, several groupings/ associations including CBO, FBO and other organizations have been formed with the assistance of NGOs and the Municipal Assembly with the pursuit of more economic interests like securing credit and market access. More people in the rural communities (over 50%) than in the urban communities (about 25%) actively participated in community develop-

ment meetings in the municipality (See Figure 7.3).

Source: DAEA Household Survey, 2008.

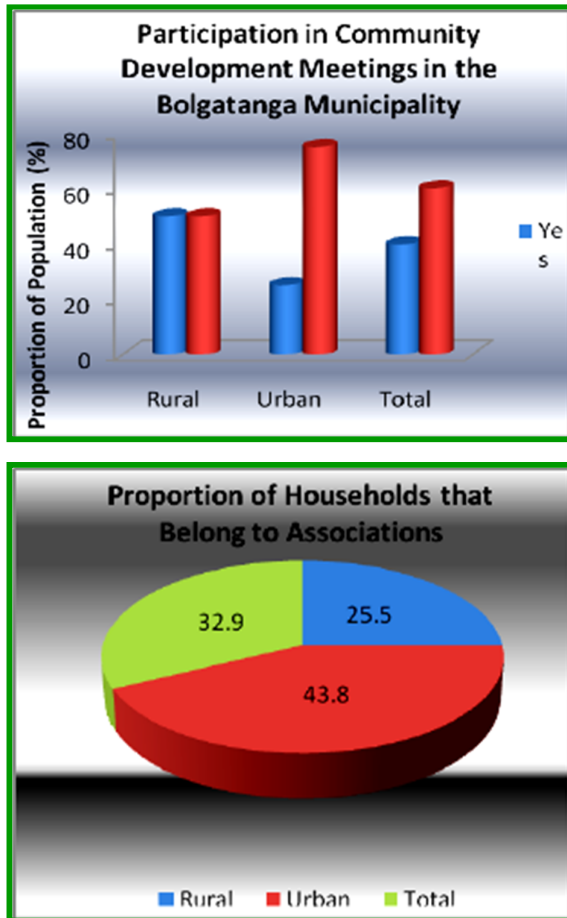


Figure 7.3: Participation in Community Meetings and Associations in the Municipality.

On the other hand, more households in the urban communities (43.8%) than the rural areas (25.5%) belonged to associations. Also, most of the population in the rural areas belongs to community based organizations (CBOs) while most people in the urban areas belong to other organizations (Figure 7.4). Only a few of the people belong to farmer based organizations (FBOs).

Membership of associations also implies making contributions in cash and kind to such associations to promote development in the municipality. Most members of the associations make contributions to those associations both in the rural and urban areas (Figure 7.5); and most of such contributions are in the form of cash (Figure 7.6).

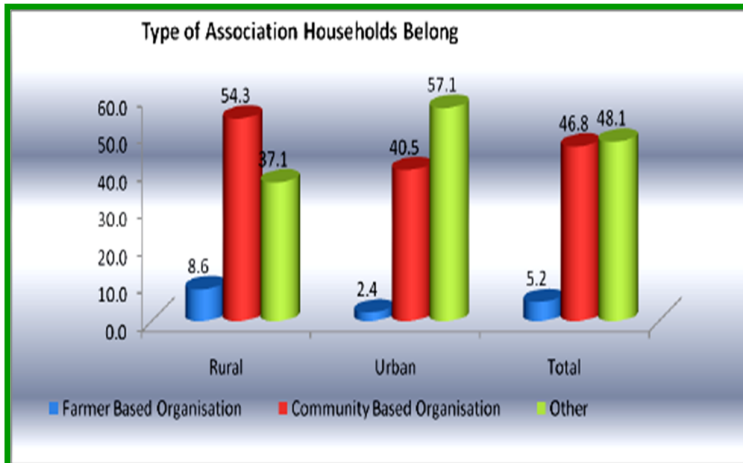


Figure 7.4: Type of Association Households Belong in the Municipality (%).

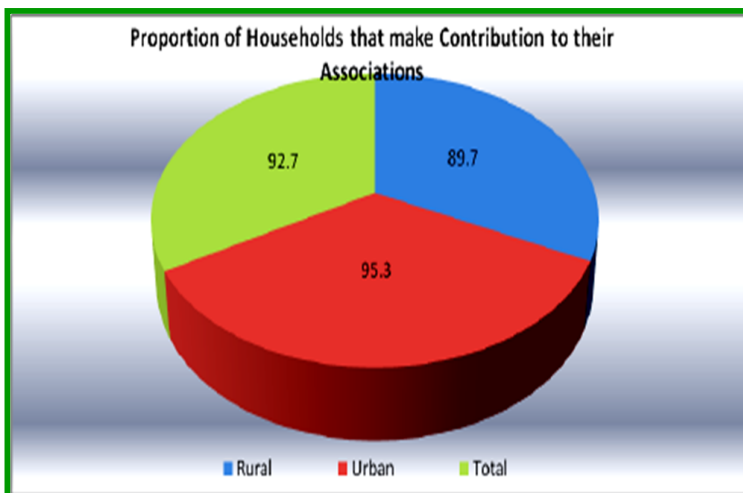


Figure 7.5: Proportion of Households that make Contribution to Associations (%).

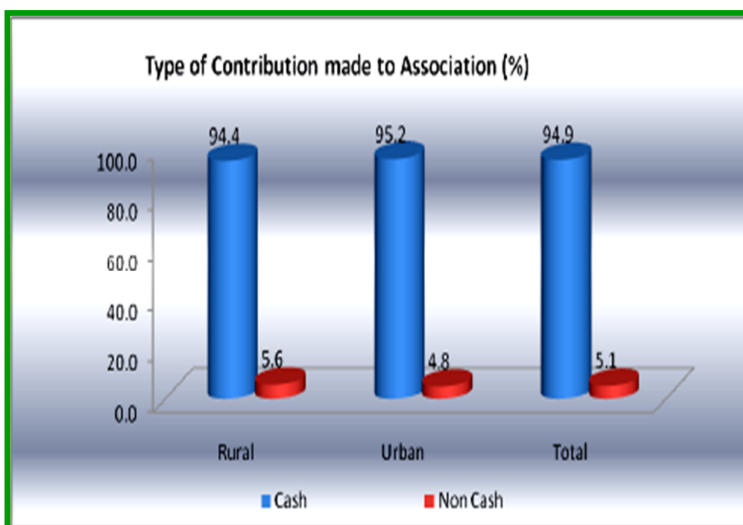


Figure 7.6: Type of Contribution made to Associations in the Municipality (%).

In the focus group discussions, it came to light that although most of the respondents (over 60%) know the MCE and the MP for their locality (Figure 7.7). The interaction of the communities with their MCE and the Member of Parliament was difficult (Figure 7.8). This implies that both the MCE and MP need to do more to promote interaction with the various communities in the municipality.

Most communities indicated that they interact more with their local assembly member than with the MP or MCE. Communities therefore relay their problems and grievances through their assemblymen/women to the Municipal assembly. Their participation in community development programmes is therefore mainly through their assemblymen/women. Given that communities are not consulted on projects in their communities, direct participation in community development meetings in the municipality is rather low.

Satisfaction with Quality of Service Provision in the Metropolis

As discussed elsewhere in this report, access to public services in the municipality is generally easy. When households were asked during the DAEA Household Survey 2008 whether they have been satisfied with the quality of services provided by the

Municipality, more than 40 per cent in both the rural and urban areas indicated they were dissatisfied (Figure 7.9), but more urban than rural dwellers indicated they were satisfied (about 38% in the urban area compared to less than 5% in the rural area). In the area of legal services, the proportion of households that have used legal services of the municipal

assembly in the last 12 months, according to the DAEA Household Survey, 2008, has been generally low (11%). The perception on satisfaction of legal service provision in the communities and by the municipal assembly among the households is more of satisfaction at one end and indifference at the other (Figure 7.10).

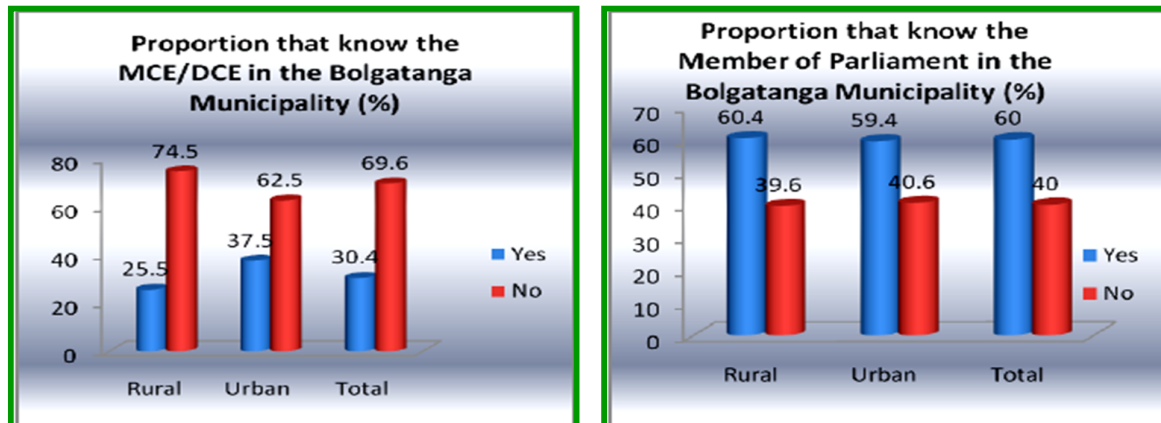


Figure 7.7: Proportion of Respondents that Know the MCE and MP in the Municipality (%).
Source: DAEA Household Survey, 2008.

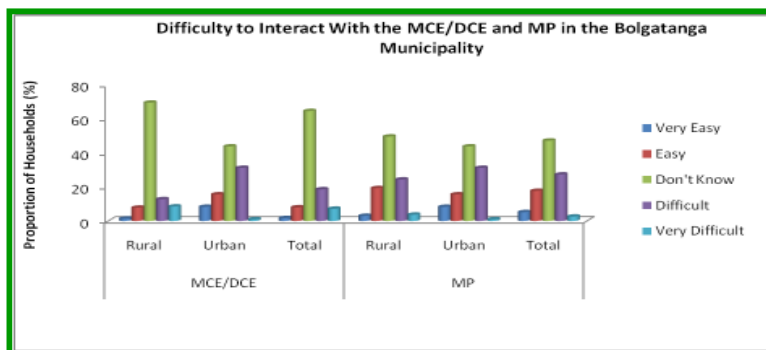


Figure 7.8: Proportion of Households Indicating Difficulty in Interaction (%).
Source: DAEA Household Survey, 2008.

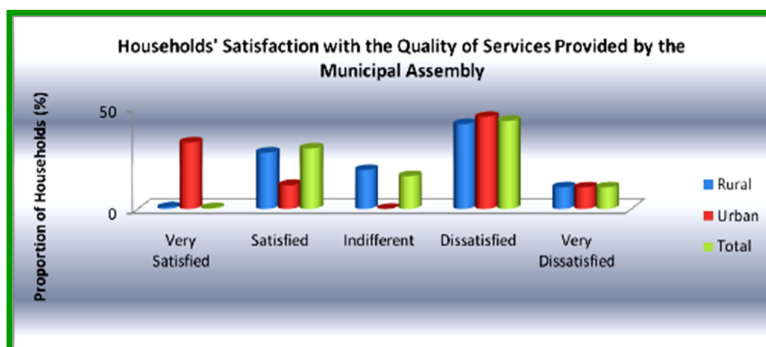


Figure 7.9: Households' Satisfaction with the Quality of Services Provided by the Municipal Assembly. Source: DAEA Household Survey, 2008.

Assessment of Governance in the Municipality over the Past 12 months

The UNESCAP defines governance as the process of decision-making and the process by which decisions are implemented. An analysis of governance focuses on the formal and informal actors involved in decision-making and implementing the decisions made and the formal and informal structures that have been set in place to arrive at and implement the decision. Government is one of the actors in governance. Other actors involved in gover-

nance vary depending on the level of

government that is under discussion.

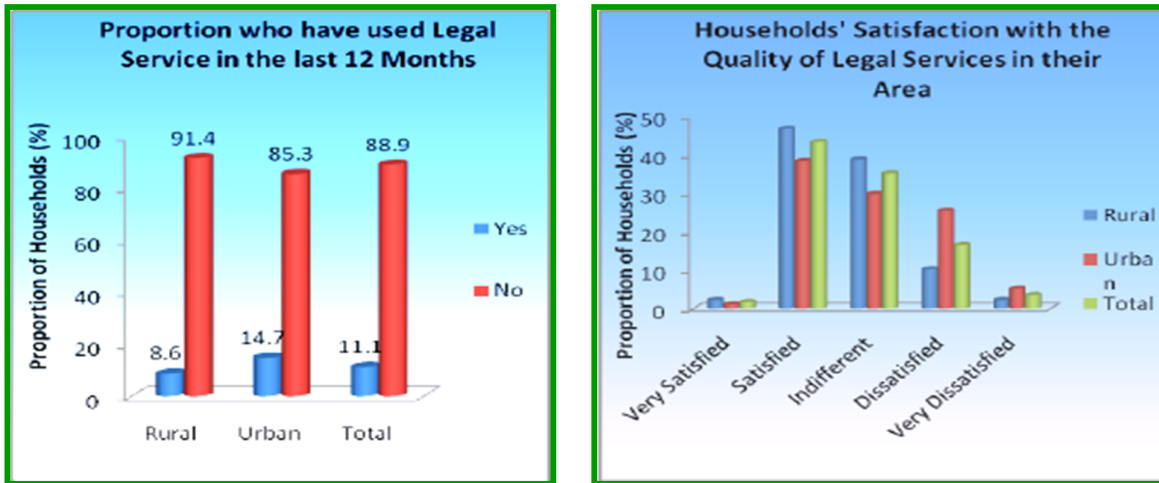


Figure 7.10: Proportion of Population in Municipality who used Legal Services and their Level of Satisfaction (%).

Source: DAEA Household Survey, 2008.

In rural areas, for example, other actors may include influential landlords, associations of peasant farmers, cooperatives, NGOs, research institutes, religious leaders, finance institutions, political parties, and the military, among others.

Good governance is said to have eight major characteristics. It is participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law. It assures that corruption is minimized, the views of minorities are taken into account

and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society.

In the MTDPs, some pillars in the protection of rights under the rule of law and the public safety and security is the increase in the capacity of the legal sector to enhance speedy and affordable access to justice, promoting the provision of legal aid to the poor and improving internal security, among others.

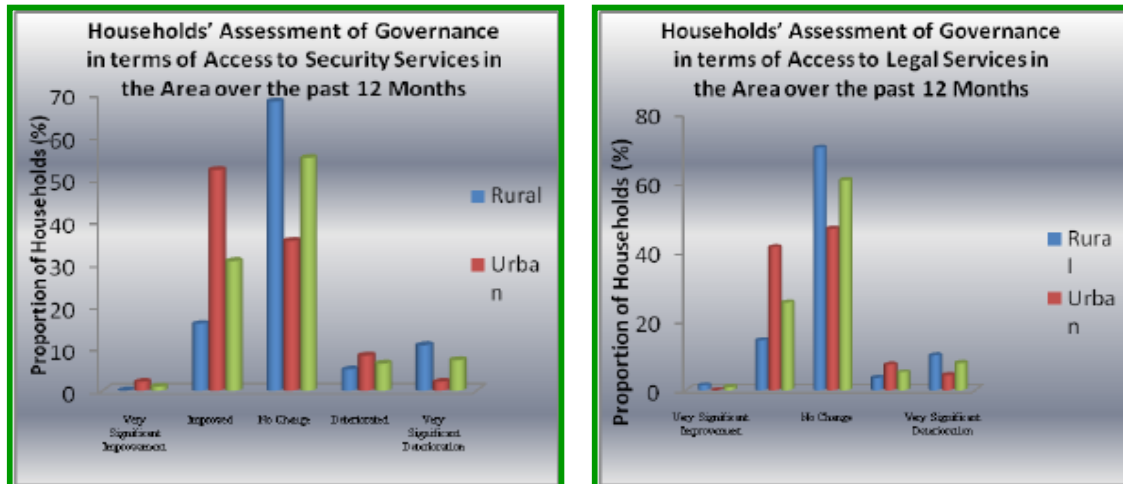


Figure 7.11: Households' Assessment of Governance in terms of Access to Security, Legal Services and Access to the Municipal Assembly in the Past 12 Months.

Source: DAEA Household Survey, 2008.

Through the focus group discussions, participants allude to relative security in their communities. They attribute this to the control that the chiefs, opinion leaders and the assembly members in the community have over the people in the communities. All the communities indicate that their traditional authority system works and it is effective. The participants indicated that they do not relate much with the police, as they do not have problem with them.

Figures 7.11 and 7.12 present the self assessment of households in the Municipality, according to the DAEA Household Survey, 2008, on governance in terms of access to Security, Legal Services and access to the Municipal Assembly in the past 12 Months. The proportion of households in the

municipality who have seen improvement in governance in terms of access to security services was higher in the urban (over 30%) than the rural areas (about 25%). But more people saw no change in both the urban (35%) and rural (about 70%) parts of the municipality.

Similarly, more people in the urban areas than the rural areas saw improvements in legal services. Those who have seen no change or deterioration in access to the assembly and its performance in terms of the delivery of these services were more than 50 per cent of the population in both the urban and rural areas. Thus majority of the population in the municipality have seen no change and/or deterioration in governance particularly in the rural areas.

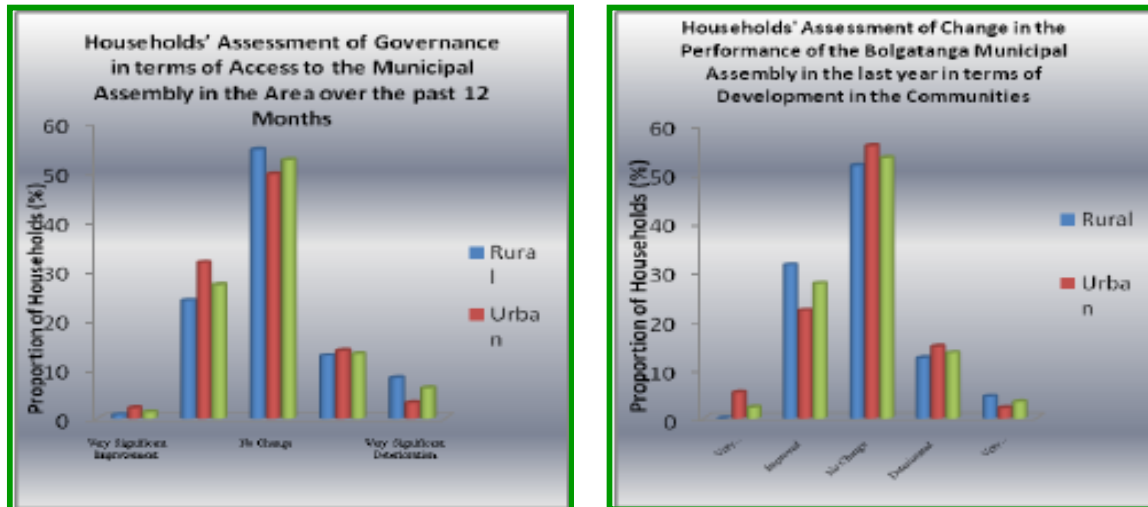


Figure 7.12: Households' Assessment of Governance in terms of Access to Municipal Assembly, and Performance of the Municipal Assembly in the Past 12 Months.

Source: DAEA Household Survey, 2008.

Constraints in Resource Endowment Utilization

There are several constraints that limit the utilization of the numerous resource endowments in the municipality. Some of the main constraints are the vicious cycle of poverty (that low productivity leads to low income, low income leads to low savings, and low savings leads to low investment and low investment to low productivity), low levels of production technology, high illiteracy rates and the under developed rural infrastructure.

Constraints in Human Resources Utilization

One key constraint in having a large proportion of the human resource in the municipality in low productivity agricultural and informal sector production is the low educational attainment of the population aged 6 years and above (see Chapter 4). It is common knowledge that the illiterate are more likely to remain poor, and the poor are more likely to be illiterate (or uneducated and unskilled). It is a vicious cycle. The poor

cannot afford education, and the illiterate cannot hope to earn enough to overcome poverty. Those with no education also lack job placements in the more productive sectors of the economy.

Constraints in Natural Resources Utilization

In the natural resources utilization, backward technology, rising population on marginal lands, desertification, conflicts, slash/burn method of cultivation and fragile soils, flood/erosion among others are the major causes in the low utilization rates and the degradation of the natural resources of land, forests and water bodies. In the municipality, it is generally acknowledged that several hundreds of hectares of land per annum are made unproductive through bush fires and other human activities.

Agriculture Impact on Lands and Soil

The farming systems in the municipality (compound farms) and those farther away in the bush (bush farms) have adjusted to external factors and exhibits either mixed cropping, mixed farming, inter-cropping and

mono cropping. The crops cultivated in the compound farms include cereals (maize and sorghum), tobacco and vegetables, whereas those cultivated in the bush farms include cowpea, groundnuts, maize, sorghum, millet and tomato. These farms are based on the bush fallow system in which cropping and fallow periods are alternated. The land resources in the agricultural areas of the municipality are under threat of degradation due to increased demand for agricultural products from the rapid human population growth and lack of appropriate farm technologies. This has caused the land fallow period to be reduced with attendant declines in soil fertility. Farmers within the urban areas complain of land scarcity, hence have to travel long distances outside the municipality in search of land to farm. Those farmlands that are within the urban areas of the municipality are intensively farmed.

Forest Product Exploitation

Charcoal and fuelwood are income earners for some members of communities, particularly in the rural areas of the municipality.

These products have become significantly commercialized since demand for these items has risen sharply with the increase in the urban population. The harvesting of these resources (forest products gathering) is usually made in relatively less sustainable ways. Some cut the trees and shrubs without replacing them. Therefore, the municipality experiences levels of forest product resource utilization that far exceeds the productive capacities of the exploited species to sustain exploitation. In addition, economic trees, shrubs and grasses are lost to bushfires every year due to human activities. This leads to environmental degradation and loss of genetic resources.

Hazards and Environmental Impact on Utilization of Resource Endowments

Figures 7.13 to 7.15 show the proportion of households in the municipality that have been affected by hazards and environmental effects of flood, windstorm, drought and bush fires, and the strategies adopted to cope with these calamities.

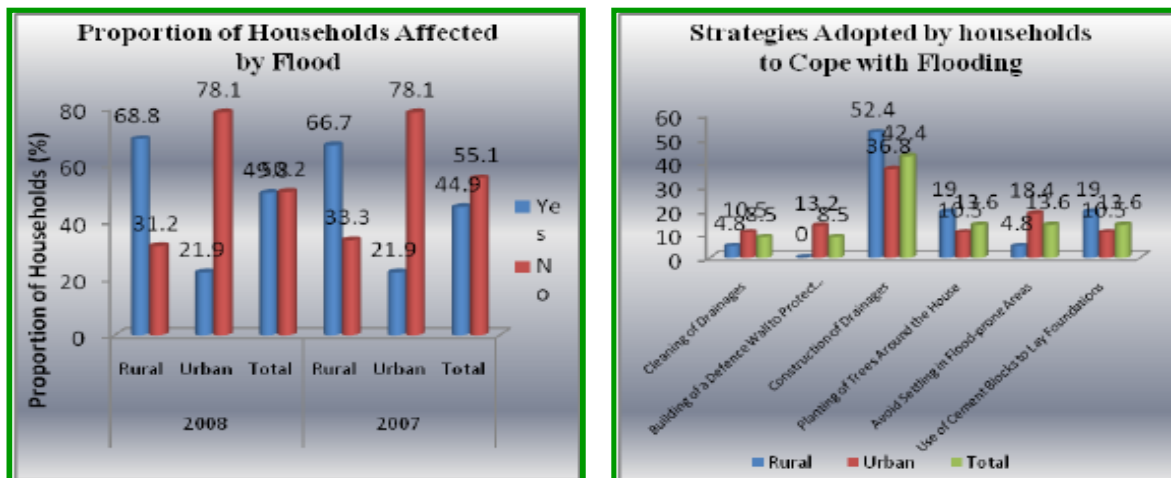


Figure 7.13: The Proportion of Households Affected by Floods in the Municipality and Strategies Adopted to Cope with such Disasters.

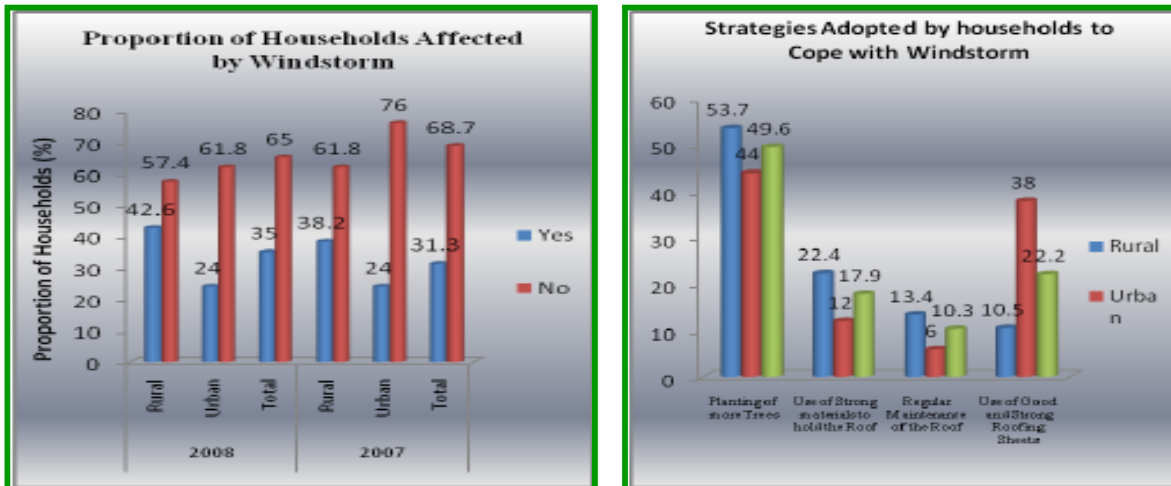


Figure 7.14: The Proportion of Households Affected by Windstorms in the Municipality and Strategies Adopted to Cope with such Disasters.

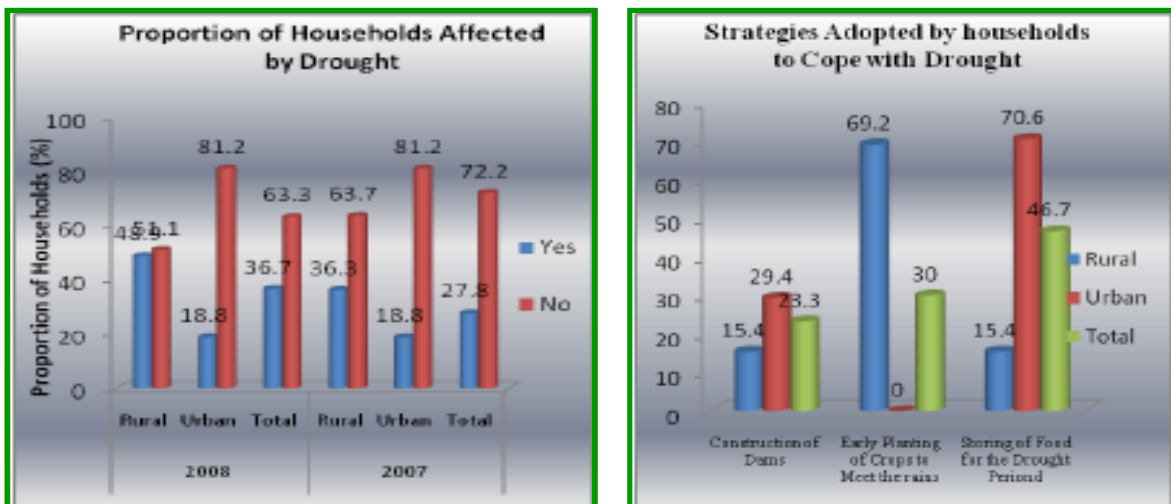


Figure 7.15: The Proportion of Households Affected by Droughts in the Municipality and Strategies Adopted to Cope with such Disasters.

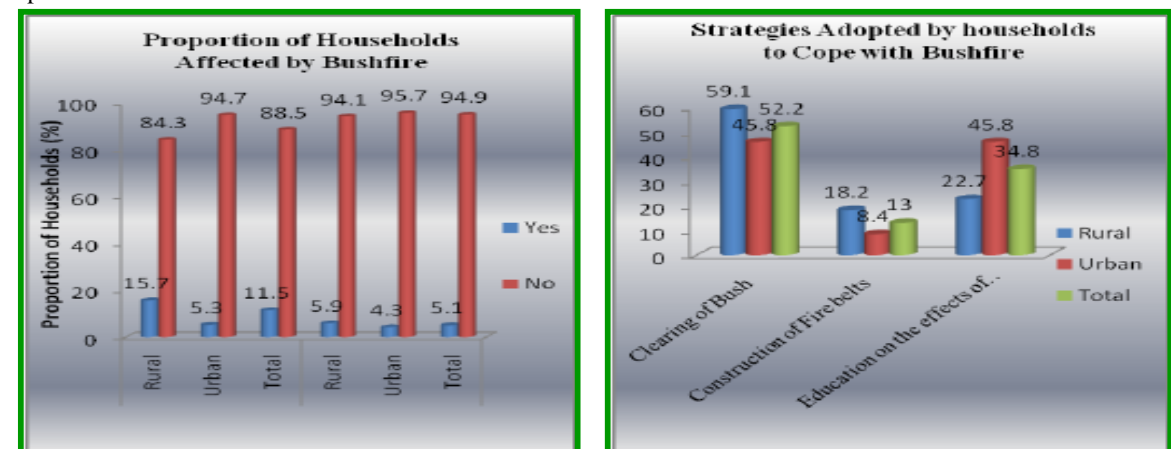


Figure 7.16: The Proportion of Households Affected by Bushfires in the Municipality and Strategies Adopted to Cope with such Disasters.

The proportion of all households in the municipality who have been affected by floods increased marginally from 44 per cent in 2007 to 49 per cent in 2008. Strategies that are adopted by households to cope with flooding include construction of drainage, planting trees around the house, moving away from flood prone areas and desilting of the drainage. The construction of drainage was cited by 42 per cent of all households in the 2008 survey, but are cited by 52 per cent of households in the rural areas of the municipality and 37 per cent of urban dwellers in the municipality.

With windstorm, the proportion of all households in the metropolis who have been affected increased from 31 per cent in 2007 to 35 per cent in 2008. Strategies that are adopted by households to cope with windstorm include planting of more trees around the house, use of good and strong roofing sheets, and using strong materials like blocks to hold the roof firm. Planting of more trees around the house was cited by 49.6 per cent of all households in the 2008 survey, but are cited by 53.4 per cent of households in the rural areas of the municipality and 44 per cent of urban dwellers.

The proportion of all households in the municipality who have been affected by drought increased from 27 per cent in 2007 to 36 per cent in 2008. Adopted strategies by households to cope with drought include construction of dams, adoption of early planting techniques to meet the rains, and storing of food to take care of the drought period. The most cited coping strategy for drought is the adoption of early planting techniques to meet the rains cited by over 69.2 per cent of households in the rural parts of the municipality, while urban dwellers (over 70%) cited storing of food to meet drought periods as the most important strategy.

Bushfires also created problems for the municipality, but this affected a relatively smaller proportion of the population. Those affected by bushfires increased from about 5 per cent in 2007 to about 11 per cent in 2008. Clearing of bush was cited as the most important strategy (52%) to fight bushfires, followed by education (35%) of members of the municipality (Figure 7.16).

Enhancing Utilization of Resource Endowments in the Municipality

The nature of the property rights governing resource endowment use (the institution-resource access relationships) is a key determinant of how well producers and consumers use the resources to enhance livelihoods. When property-rights-systems are universal, exclusive, transferable, and enforceable, the owner of a resource has a powerful incentive to use that resource efficiently because failing to do so results in a personal loss.

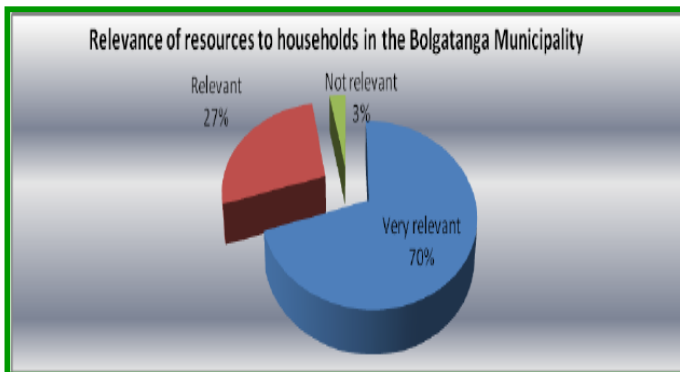


Figure 7.17: Relevance of Resources to Households in the Municipality.
Source: DAEA Household Survey, 2008.

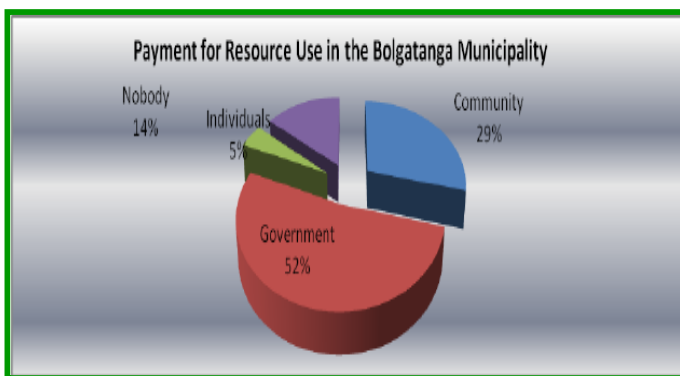


Figure 7.18: Payment for Resource Use by Households in the Municipality.
Source: DAEA Household Survey, 2008.

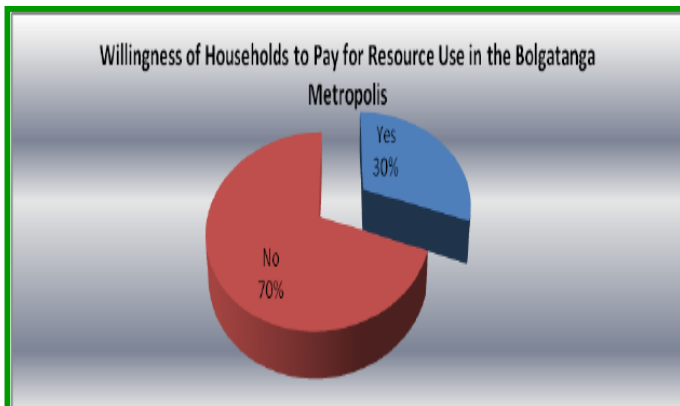


Figure 7.19: Willingness of Households to Pay for Resource use in the Municipality.
Source: DAEA Household Survey, 2008.

For scarce natural resources, the owners derive a scarcity rent. In properly specified property right systems, this rent is not dissipated by competition. It serves the social purpose of allowing owners to efficiently

balance their extraction and conservation decisions.

The DAEA Household Survey, 2008 asked households the relevance of resources available to them, the payments for, and the willingness to pay for the use of these resources. These are presented in Figures 7.17 to 7.19.

In Figure 7.17, 97 per cent of households see the resource endowments as very relevant or relevant to the socio-economic development of their communities. However, Figure 7.18 indicates that whilst 14 per cent of households indicate that nobody pays for the use of these resources, 52 per cent indicates that payment for the use of the resources are borne by the government. Also, 34 per cent of the household respondents indicate that individuals and the community pay for the use of the resources.

In Figure 7.19, only 30 per cent of households interviewed indicate that they are willing to pay for resource use in the municipality. That is, a larger proportion of households would like to see somebody else pay for their use of resource endowments in the municipality.

Utilization of Resource Endowments and Links to MDGs in the Municipality

The utilization of resource endowments in the municipality and its impacts on the livelihoods of the

people, conditioned on the constraints associated with the resource endowment utilization, impacts on the living conditions of the households and the poverty outcomes of the citizenry. These are conditioned by the institution-resource access relationships.

Goal 7 of the MDG is to ensure environmental sustainability which is hinged on three targets: (a) integrating the principles of sustainable development into country policies and programmes and reversing the loss of environmental resources; (b) halving by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation, and (c) by 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers. Thus the institutional-resource access relationship must deliver safe drinking water, basic sanitation and decent housing for the citizenry.

Resource Endowments and Poverty Indicator Outcomes in the Municipality

The poverty situation in the Bolgatanga municipality has been described by some human poverty index (HPI) dimensions, particularly based on data from the CWIQ Survey of 2003 (see Chapter 3). Achieving the first of the Millennium Development Goal (MDGs) which is to eradicate extreme poverty and hunger by year 2015 in the municipality is an important challenge.

Overall, the municipality is observed to have a greater proportion of the population

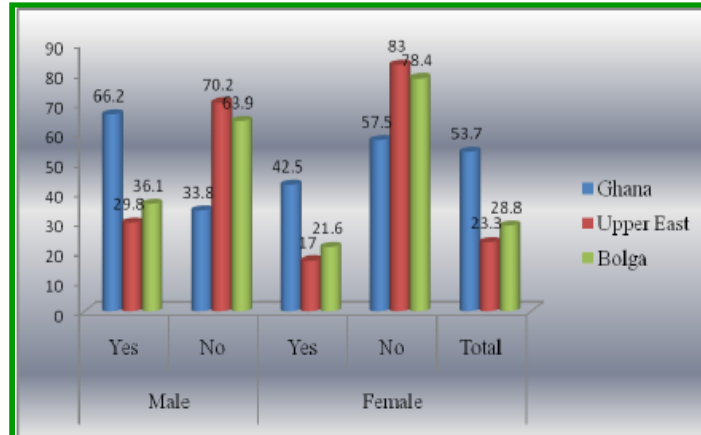


Figure 7.20: Adult Literacy in the Municipality (15 years and older) by Sex.

Source: CWIQ Survey, 2003.

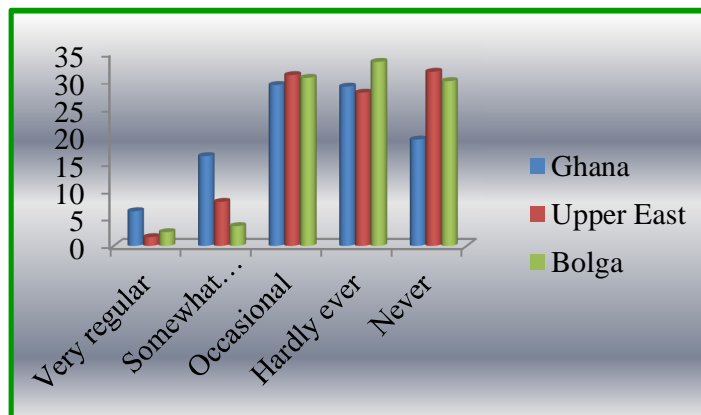


Figure 7.21: Percentage Receiving Financial and In-kind Support.

Source: CWIQ Survey, 2003.

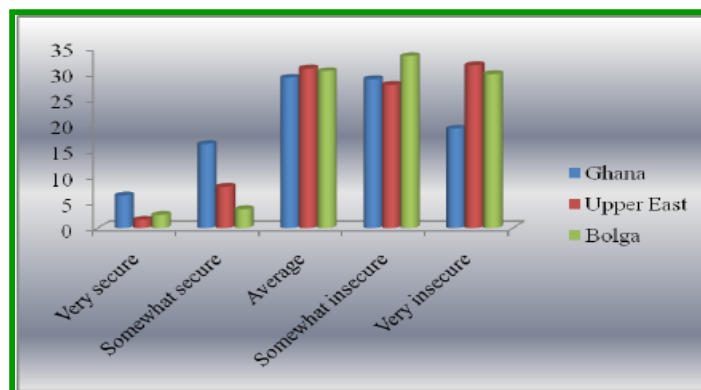


Figure 7.22: Percentage of Household able to Survive Crisis.

Source: CWIQ Survey, 2003.

worse of relative to the national situation in terms of adult literacy (knowledge) and access to safe water. The rapidly growing population poses the question of food security in the municipality. Protein Energy

Malnutrition (PEM) is the most widespread and serious nutritional disorder in Ghana, especially among children. It is manifested in mild to severe stunting, wasting, and underweight condition among children (see Chapter 5). The estimated HPI components and the other poverty indicators suggest that

the incidence of poverty and the level of deprivation are higher among rural households than their urban counterparts in the municipality.

The CWIQ Survey of 2003 throws more light on the level of adult literacy in the municipality compared to the regional and national averages (Figure 7.20). The low level of adult literacy is an indicator of poverty level among the communities in the municipality. Also, even though relatively fewer households in the municipality received support compared to the national average (Figure 7.21), more households indicated that they felt insecure in the time of crisis (Figure 7.22). Moreover, more people in the municipality compared to the national average indicated they have no safe sanitation (Figure 7.23).

Resource Endowments and Food Security

The eradication of hunger is one of the main goals of the MDG. The proportion of households that faced difficulties in meeting food needs is used to capture the progress made in eradicating extreme hunger in the municipality. The hunger situation in the past

12 months prior to the DAEA Household Survey of 2008 is indicated by the percentage of households which suffered food shortages during some period of the year. Overall, over 61 per cent of households in the municipality indicated it was not

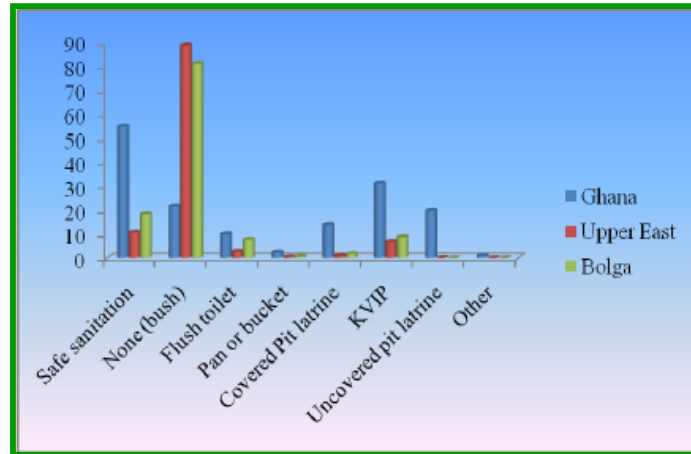


Figure 7.23: Household with Safe Sanitation (main type of toilet).
Source: CWIQ Survey, 2003.

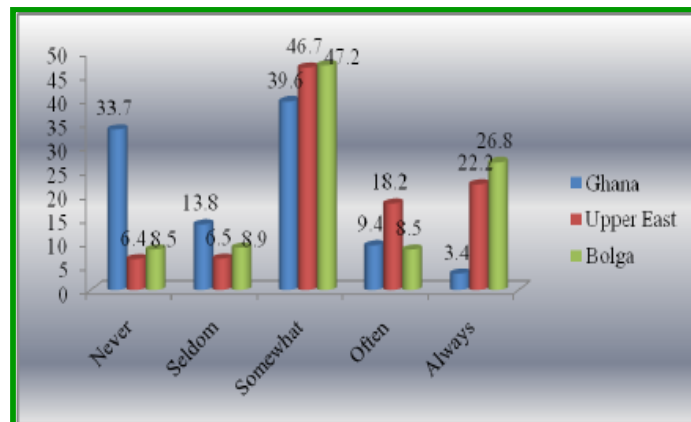


Figure 7.24: Percentage of Household with difficulty in Satisfying Food Needs Compared to a Year Ago.
Source: DAEA Household Survey, 2008.

difficult to satisfy household food needs in the municipality. There are, however, gender and location differences.

It is relatively more difficult to satisfy food needs in the urban areas than the rural and more difficult among men than women. Figure 7.24 shows that a greater proportion of the population in the municipality had

difficulty satisfying food needs (somewhat, often or always had difficulty).

Conclusion: Utilization of Infrastructure Resource to Meet MDGs

The overall assessment of the outcomes of the economic situation of the municipality suggests that communities have not fully exploited the numerous resource endowments. Access to and the use of the resources by households is complementary with the other forms of capital, and it is this asset complementarities or “asset bundling” — increasing access to natural assets along with simultaneously enhancing access to physical, financial or human capital — that is particularly an important mechanism for

escaping poverty by strengthening the capabilities of the household.

Human resource development and utilization concerning education, training, employment opportunities and the building of incentives for useful and productive activities are important in harnessing the resource endowments some human resource utilization is closely related to the strategy of economic, social as well as political growth of the municipality. The changing institution-resource access relationships that highlight the resource endowments and problems associated with the participation of individuals in the municipality needs to be enhanced for broader community participation in governance.

Investment Opportunities, Constraints and Challenges in the Bolgatanga Municipality

Introduction

The Bolgatanga Municipality was created recently to facilitate the economic development of the communities, and promote local level initiatives as well as rapid emancipation of the population. The Municipal Assembly in recent years has focused more on improving and sustaining revenue generation and mobilization to promote a strong vibrant economy whose agriculture, industry and commerce are well coordinated and integrated. The construction of dams, promotion of the tourism sector, and the upgrading of village markets are some of the activities facilitated by the Assembly to provide employment for the people. Agriculture is the main economic activity in the municipality. The main produce include millet, sorghum (or guinea-corn), maize, groundnut, beans, and dry season tomatoes and onions. Livestock and poultry production are also important in the municipality.

The municipality is also positioned to produce capital (intermediate) goods. Vehicle repairs, fabrication of spare parts and the manufacture of farm implements such as cutlasses, bullock ploughs and trailers are all potential investment-deepening opportunities assured of strong market demand. Leather works, pottery and carpentry are sectors

potential investors would do well to explore as they also offer opportunities for profit. There are also major opportunities in real estate development and construction. The Waste Management Department also has the potential, with collaborative partners, to turn the waste generated in the city in establishing a plant that could process methane from solid waste to provide alternative energy source for the communities.

Northern Ghana is said to have growth potential in several areas including agriculture, mining and tourism. SADA sets out a comprehensive development strategy and action plan for consideration by government, private sector and development partners in hastening development in Northern Ghana⁶ including the Bolgatanga Municipality. Envisioned on a *Forested North* — where food crops and vegetables are intercropped with economic trees that are resilient to weather changes, sustain a stable environment, and creating a permanent stake in land for poor — the strategy contains seven main components that include stimulating the modernization of agriculture development and the competitiveness of small holders, initiating actions that would stimulate investment and business

⁶ Strategic Directions for Sustainable Development of Northern Ghana, p.1.

development, enhancing investments in strategically-targeted economic and social infrastructure, and focusing on actions on environmental renewal, improved water resource management and disaster preparedness.

The outcomes of these strategy thrusts on the people in the municipality must lead to significant gains in poverty reduction under improved entrepreneurial opportunities, have potential to create jobs and wealth for both the entrepreneur and employees, and be environmentally friendly both on-farm and off-farm and have relatively great potential for increasing female employment.

Investment Opportunities in the Municipality

Modernizing Agriculture and Associated Investment Opportunities

Agricultural modernization strategy relies on market-based value-chain process that allows smallholder farmers to build assets, improve productivity and adopt improved production methods through innovations and technologies that enhance changes in the product mix. This modernization process must ensure the end product finds market, domestic or foreign through exports. Needs assessments in investments in agriculture and related activities were solicited from the focus group discussions (FGDs) held with the communities and also with other stakeholders. The need for support for agricultural inputs in terms of combine harvesters, fertilizers, and jobs for their artisans, as they are under-utilized for their skills were emphasized. Employment opportunities for women were also a major focus. The overwhelming agreement is that financial support can help expand businesses in petty trading, fish trading, livestock

rearing and processing of local produce as the natural and human resources in the municipality are less exploited.

In the FGDs (Picture 8.1), the modernization of the food/natural resource extraction activities of agriculture and related activities in the municipality was emphasized. Some of the main needs were in the modernization of the extraction of shea butter; opening up cold stores for fresh fish sales and improving on livestock rearing. Opinion leaders and major stakeholders lamented about the defunct Bolgatanga Meat Factory and indicated that together with opening a cold storage facility in the municipality could be a big investment opportunity. Bolgatanga can be a hub for cold storage of slaughtered animals from the north (including Burkina Faso) to the south.



Picture 8.1: A Focus Group Discussion (FGD) Session in the Municipality.

Source: DAEA Household Survey, 2008.

During some FGD sessions, enhancing investments in the handicraft sub-sector for both local and foreign markets, and to boost tourism in the municipality were raised. The communities, however, indicated that the straw resource is under pressure as it is becoming more and more difficult to obtain straw from local sources due to farming

activities, bushfires, and the lands being sold for housing and other projects. Asked if the communities would advise their children to invest in agriculture, the response was yes but only when the children have good education. They admit that the Bolgatanga township is rapidly expanding and very soon they may not be able to do some of the things they are doing now and the way they do them. For instance, poultry and pig farming used to be concentrated in the city centre but with expansion, poultry and pig farming have moved to the outskirts. Hence some of the opportunities will continue to exist at the outskirts of the city.

The agricultural sector in the municipality has many investment opportunities. With arable land and available manpower the conditions are favourable for investment in direct production, processing, transport, the provision of agricultural inputs and their marketing. There are also numerous opportunities in cattle and poultry farming, particularly for guinea fowl production.

Enhancing marketing opportunities of the agricultural products in the municipality must target the domestic and international markets. The focus on the value-added chain with more emphasis on products processed can increase the marketing opportunities. In general, technology for value-added processing is available. For most value-added technology, the critical issue is developing that technology so that it is appropriate to the producers and is economically feasible. With globalization, however, consumers are becoming more aware of food product characteristics. Increasingly, among others (a) food safety and quality control has become driving forces in the food (including livestock) sector, and (b) farm production is becoming more dependent on precise information to manage production driven by biological and environmental factors including integrated pest management. Therefore to increase competitiveness, both

at the domestic and international levels communities/individuals must adopt mechanisms to offer agricultural products with improved consumer-driven attributes. The focus of the production sector must be encouraged to move away from just growing the agricultural products towards value-addition.

Non-farm and Business Development Opportunities

The Waste Management Department has the potential, with collaborative partners, to turn the waste generated in the city in establishing a plant that could process methane from solid waste to provide biogas energy. Biogas technology, which converts biological waste into energy, is considered by many experts to be an excellent tool for improving life, livelihoods, and health in the developing world. The municipality has abundant raw materials for producing biogas. Waste and polluted water from industry — including slaughterhouse remnants, animal dung and sewage — can be converted into carbon dioxide and methane through anaerobic digestion. The biogas can be used as fuel for cooking, and the waste product as fertilizer. Biogas investment opportunities therefore exist in the municipality. Properly designed and used, a biogas digester mitigates a wide spectrum of environmental undesirables including improving sanitation, reducing greenhouse gas emissions, reducing demand for wood and charcoal for cooking, and, therefore, helps preserve forested areas and natural vegetation. Biogas generated can be bottled for home use as well. The Abattoir's opportunity to generate biogas from its waste for use can enhance its activities. Abattoir waste carries high levels of microorganisms that cause disease in humans and animals but are excellent source of material for generating biogas.

Leather works, pottery and carpentry are sectors potential investors would do well to explore as they also offer opportunities for profit (Picture 8.2). The artisanal sector in the metropolis fabricates fuel tanks, water tanks, containers, bullock ploughs and tractor trailers, among others. Financing the work of artisans in the municipality generally poses a major problem as most of the artisans lack collateral to meet formal bank loan demands. The opportunities, however, exist through the small scale funding arrangements by financial institutions to enhance the productivity of these artisans to create employments for the youth.



Picture 8.2: A Typical Artisanal Carpentry Shop in the Northern Part of Ghana.

Handicrafts

The handicraft industry in straw baskets and hats, leather tanning, leather bags and hats, smock weaving etc. has probably done more than any other economic activity to put Bolgatanga's name on the world tourist map. The handicraft industry is arguably the most important single source of cash earnings for the people of the settlements near Bolgatanga, such as Zaare, Dulugu, Sumbrungu, Zorbisi, Zuarungu, Kalbeo and Nyariga. Most of the straw and leather

products are either exported to other parts of the country or abroad, particularly, Western Europe. Productivity in the straw and leather works appears to be higher than in compound farming, but most people tend to engage in the straw and leather business only during the dry season when farming activities are at their minimum. As already noted, another problem that hinders the industry is the ever-dwindling supply of local straw, which can be traced mainly to farming activities, bushfires, and long dry seasons. Consequently straw has to be imported from the south making the cost of production higher.

There have been several interventions in the form of micro-credit financing in the handicraft industry by Non-Governmental Organizations (NGOs) in the municipality during the past five years, such as the Star of Hope International of Sweden. Tolls and fees from the export of straw and leather products contribute significantly to the internally generated revenue of the Municipal Assembly. Other handicraft products are hoes, knives, and pots, most of which are used locally. The hoe in particular

serves as the most important tool for peasant farmers in the municipality.

Quarrying and Sand Winning

There are numerous stone crackers near Bongo. They contribute in no small way to the local small-scale construction industry. Sand minning is found in some parts of the municipality but the main source is the Kula riverbed near Bolgatanga. Quarrying and sand winning pose a number of challenges to the Municipal Assembly as far as environmental degradation is concerned.

Agro-Processing

The agro-processing industry in the municipality employs mainly women who employ traditional methods. These women are engaged in the extraction of groundnut oil, *dawadawa* processing, and the parboiling and milling of locally grown rice. Agro-processing has a potential of improving the lot of women in the district since the value added to the product is very high. More interventions by government, NGOs, bilateral, multi-lateral, and religious organizations can lead to a more positive change in the economic situation of the rural folks. Pito brewing is also a major agro-processing activity for women in the municipality, and accounts for a very significant proportion of the alcoholic beverage and intake.

Investments in Human Resource Development

There are several formal education centres (both public and private) in the municipality and opportunities exist to enhance investments in infrastructure improvement through private-public partnerships. By improving the municipality's human resource through better educational facilities, infrastructure, institutions, and general amenities, among others, the municipality could attract potential investors and create more opportunities for employment and businesses.

ICT and Internet Expansion

Opportunities in ICT to enhance entrepreneurship and employment in the municipality are enormous. Using ICT for accelerated economic development, opportunities exist to bridge the digital gap by increasing human capacity building in ICT through training workshops, seminars and courses in collaboration with local and international institutions in the municipality.

Almost all government ministries and agencies are hooked up to the internet. However, in the private sector only few shops and businesses are on the internet. It is hoped that with the growth in competition costs will be reduced and the small and up-coming businesses will patronize the internet and its services. Thus, the opportunity to intensify and extend internet investments in the municipality exists. Also, there is a high potential in the municipality to use rural radio to provide information to enhance the modernization process of the agricultural sector.

Water Reservoir Systems

The rapid expansion of the municipality requires additional water supplies for domestic, industrial and agricultural purposes. Investment opportunities exist in rainwater harvesting by homes and schools to cut down on daily water transport, strengthening water reservoirs for dry season irrigation and livestock watering and strengthening private participation through water users associations in managing water dams and reservoirs. In the dry season, water rationing for vegetable production, livestock watering and domestic use could be enhanced through the judicious use of drip systems for agriculture. In this regard, opportunities to invest in drip irrigation systems exist. NGOs are investing in providing water points to ensure that children could save time accessing water for domestic use, to go to school, and use of overhead tanks to ensure vegetable production.

Role of Non-Governmental Organizations (NGOs)

The vision of every local authority is to provide its people with the best quality of life through accelerated and sustained socio-economic development. In an attempt to increase the developmental status of the

municipality the Municipal Assembly collaborates with a number of NGOs, which are actively involved in the developmental processes in the municipality. The Municipal Assembly has an NGO desk officer who, working through the Consortium of NGOs in the municipality, coordinates the activities of these NGOs, so as to avoid the problem of over concentration of facilities in one sector as some NGOs are engaged in similar activities. The active NGOs in the municipality are shown in Box 8.1.

Box 8.1: The Active NGOs in Bolgatanga Municipality.

- ✓ Catholic Relief services
- ✓ ADRA
- ✓ Star of Hope International
- ✓ CENSUDI
- ✓ Action Aid Ghana
- ✓ Rural Aid
- ✓ Single Mothers Association
- ✓ Red Cross Society
- ✓ Catholic Diocesan Development Office
- ✓ Presbyterian Primary Health Care
- ✓ TRAX
- ✓ Technoserve
- ✓ Rural Help Integrated
- ✓ Link Community Development
- ✓ Sight Savers
- ✓ VSO
- ✓ Widows and Orphans Ministries
- ✓ Trade Aid

These NGOs and CBOs are mostly into poverty alleviation among the rural communities in the municipality. However, some of them such as Rural Aid, are into provision of water; Rural Health Integrated, into reproductive health; and Link Community Development which is operating in the educational sector.

Constraints and Challenges to Investment Opportunities in the Municipality

The potential of the municipality to contribute to the economic development of the Upper East Region rests on the exploitation of the abundant natural resources. Investment opportunities in the municipality, however, face several challenges. To promote investments and sustain these investments, land tenure security combined with improvements in infrastructure, financial support, markets and appropriate technology and enhanced security, are germane. The decision to invest and the choice of investment type depend on the perceived level of risks, security of capital, rate of return to capital and the costs and problems involved in the transfer and management of the investment. Investment incentive packages need to be developed by the BMA along with technical support from other governmental and non-governmental organizations to facilitate the exploitation and development of the natural resources in the municipality.

In addition to incentives to attract investments, strengthening institutions to secure the natural resource base to sustain investments are also important. Securing the resource base depends on credit provision, generating appropriate revenues from the existing use of the resources and safeguarding the resources.

There are several institutions that provide some credit facilities in the communities, such as the NGOs and MASLOC. MASLOC provides micro-credit to groups while small loans are given to both individuals and groups. Credit provision in the municipality could enhance not only the investment opportunities; it could foster the efficient exploitation and utilization of the natural resource endowments in the municipality.

Revenue mobilization has increased over the years in the municipality, but mostly from withholding taxes, fees and fines. The

IRS is also gradually cutting into the informal sector. This is because BMA is expanding its operations and the IRS is getting closer to the people by giving them tax education and insisting on the submission of returns promptly, paying regular visits to withholding tax agents and periodic withholding auditing. There are more rooms for improvement if the IRS were to operate at full capacity. There are certain areas that potentially the IRS can cover, particularly in the informal sector, but cannot do so now because of several logistical problems (lack of office accommodation, lack of finance, lack of vehicles). There are staffing problems, compounded by the conflict in the region.

The Ghana National Fire Service also plays an important role in safeguarding the natural resources in the municipality. Besides rescuing victims in accidents at homes and in fires, they intensively educate the community about precautions of fires; educate farmers on bush fires and their consequences particularly on the degradation of lands, more importantly during the harmattan period, among others. Although the Service is attractive to the youth, there is apathy on the part of the community. Because of several false calls when there is a fire call, numerous interruptions emanate from the community when fires are to be fought.

Agricultural Extension Services within MoFA need more support to develop agriculture beyond subsisting standards and to enhance the agricultural sector to be competitive. The capacity of SARI to conduct basic research and to effectively disseminate the findings to farmers in the entire northern sector after adapting findings to local soil conditions is imperative. At present, some NGOs are involved in extension delivery and some donors are providing logistical support to MoFA extension services but these may have to be better coordinated to ensure proper

monitoring and effectiveness of extension delivery.

The Municipal Assembly and other stakeholders should encourage, support and help sustain the formation of various Farmer Based Organizations (FBOs) preferably along commodity/agro-business lines. This will enable members to benefit from various training programmes to upgrade and update their skills in production, processing and marketing of their produce. Training of FBOs should be targeted to address specific issues that will enhance women capacity to perform their roles in the farm-to-market-chain-links.

Encouraging the involvement of NGOs in the municipality to sustain the natural resource endowments is imperative. Several NGOs play specific and broad roles in the areas of agriculture, construction and water and sanitation. Communities are supported with programmes to mitigate emergency situations including provision of food aid, and community driven infrastructure needs such as schools and markets. Agricultural interventions, including training in agricultural production and agro-enterprise management, provision of inputs (seeds, animal breeds, tools, etc.) are undertaken by NGOs. The BMA support given to NGOs in the municipality must further be strengthened to enhance the public-private sector partnerships.

Safety and Security Issues in the Municipality

Due to the numerous conflict areas in the entire northern sector of Ghana, one of the key challenges to the development of the area including the Bolgatanga Municipality, in recent years, has been the peace/safety and security of people and property which are key requirements for sustainable development. Particularly in the very recent past, ethnic and other conflicts in the Bawku area of the Upper East Region have adversely

affected development initiatives both at the local and national levels. Even though the Bolgatanga Municipality itself has not experienced any major conflicts, the spill-over effects from nearby areas such as

Based on the 2003 CWIQ survey conducted by GSS, insights into the safety and security situation of the municipality at that time were obtained. In general, most of the population (both urban and rural) had no

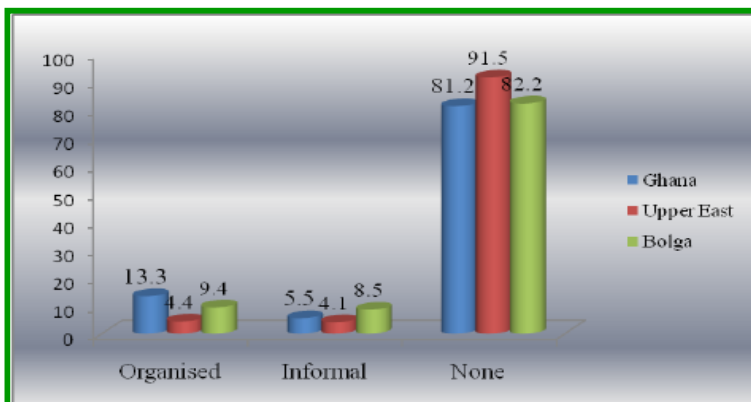


Figure 8.1: Neighbourhood Watch Systems in the Municipality Compared with Regional and National Systems.

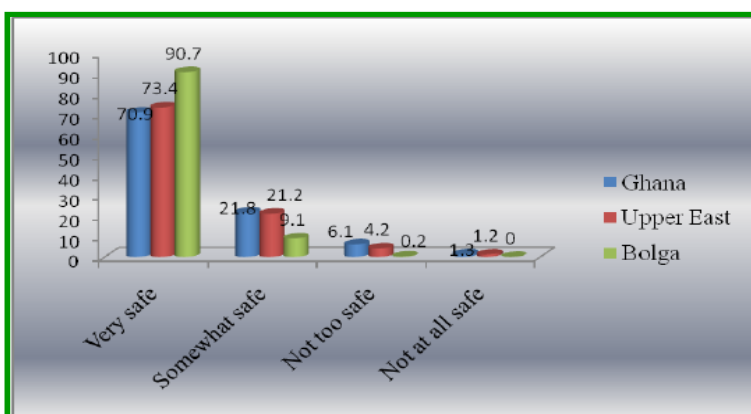


Figure 8.2: Percentage of Households that Feel Safe from Violence and Crime.

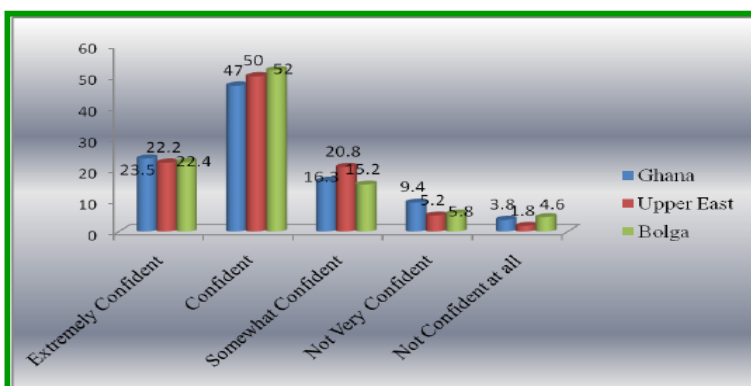


Figure 8.3: Percentage of Household Confident about State Protection. Source: CWIQ Survey, 2003.

Bawku East and Bawku West districts could be significant.

neighborhood watch systems (over 80%), which is comparable to the situation in other parts of the country (Figure 8.1). Never-theless, they generally felt very safe in their communities (Figure 8.2). More than 90 per cent of the population in the Bolgatanga Municipality indicated they felt very safe, which was more than both the regional (73.4%) and national (70.5%) averages. Moreover, a good majority of the population in the municipality expressed confidence in the effectiveness of state protection (Figure 8.3). This implies that there is general peace and safety in the municipality to support investments and developmental activities, which also is important to ensure that both local and international NGOs as well as development partners have the confidence needed to promote developmental activities.

Summary, Conclusion and the Way Forward

Summary and Conclusion

Progress towards meeting the MDGs in the Municipality

The Bolgatanga Municipal Assembly has made progress in trying to meet the health, education and water and sanitation components of the MDGs. In education, the Bolgatanga Municipality has witnessed improvements in the enrolment of school children in the primary and JHS levels. The sex dimension of enrolment in the municipality shows that the numbers of female enrolment outnumber that of male at the kindergarten and primary levels of education, but this seems to reverse at the JHS level. Also a high rate of female dropout is observed at all the levels of education, raising concerns about gender disparity in education in the municipality.

The municipality has seen an improvement in both the gross and net enrolment rates at all levels of education. The number of public schools at all levels from kindergarten to the Junior High School (JHS) increased while private schools either remained the same or slightly increased as well. For example, kindergartens increased from 60 in 2005/2006 to 66 in 2008 while primary schools increased from 59 to 65 and junior high schools from 33 to 40. The

number of private schools also increased marginally at all levels during the period. This is reflected in increases in the school enrolment at all levels in the municipality from 2005/2006 academic year to 2007/2008 academic year. The kindergarten enrolment increased 4.6 per cent between 2005/2006 and 2007 and 2008, while the primary and JHS enrolments increased 5 per cent and 2.4 per cent respectively for the same period. These increases reflect the kind of positive attention that both parents and the municipality have given to improve human resource development in the municipality.

The figures for the number of teachers attending to the schools in the municipality also show increases at all levels between 2005/2006 and 2007/2008 academic years, with untrained teachers constituting a substantial proportion of the total at all levels, particularly the kindergarten schools. The ratio of untrained to trained teachers improved slightly at the kindergarten level from 3.4 in 2005/2006 to 2.1 in 2007/2008; while that for trained teachers to untrained teachers declined at both the primary and JHS levels from 2.2 in 2005/2006 to 1.8 in 2007/2008 at the primary level, and from 4.6 in 2005/2006 to 2.6 in 2007/2008 at the JHS level.

There has been improvement in the health sector with indications of improvement towards achieving the MDG 4, 5 and 6. Access to medical facilities is relatively high

in the municipality. The attendance of pregnant women at pre-natal clinics is relatively high compared with post-natal attendance. Hence the performance of the municipality in sustaining a decline in the area of maternal mortality needs attention for the realization of that MDG. Most of the population in the urban areas of the municipality visit either a public hospital/clinic (48.2%) or private hospital/clinic (45.8%) when sick, compared to those in the rural areas (27.7% and 27.5% visit public hospital/clinic and private hospital/clinic respectively). As expected, more of those living in the rural areas use community health centres (23.1%) and pharmacies/chemical shops (13.1%) than those living in the urban areas. Incidentally, fewer people and almost equal proportions of both urban and rural dwellers use the services of traditional healers when sick. The Bolgatanga Municipality health system has emphasized preventive healthcare, and encouraged both urban and rural dwellers to use various methods particularly for malaria prevention. The use of treated bednets, regular weeding of compound and use of mosquito coil are among the key strategies households in the municipality adopt against malaria.

Malaria is among the most reported diseases in the municipality and the high incidence is a threat to improving the life expectancy of the population. Increased awareness creation and the adoption of malaria-preventive strategies such as insecticide treated bednets for children, clearing of weeds and maintaining sanitation around houses are important.

In terms of the main sources of drinking water in the municipality, results from the DAEA Household Survey, 2008 indicate that a majority of urban dwellers get their water from pipe-borne water sources (either individual or public stand water taps). This represents about 79 per cent of the urban

population. On the other hand, most of the rural population in the municipality obtain water from boreholes (about 72%), implying that tap water and boreholes are the main sources of safe water in the municipality. Also, it takes less than 15 minutes for both urban and rural dwellers in the municipality to reach water sources, indicating that accessibility to water is generally easy in the municipality. However, progress must be speeded up to sustain the rising trends in the provision of safe drinking water. Overall the percentage of the population enjoying safe drinking water increased from 64 per cent in 2005 to 73 per cent in 2007.

Some improvements were also observed in the municipality in terms of sanitation. The percentage of the population in the municipality using safe excreta disposal facility increased from 33 per cent in 2005 to 45 per cent in 2007; and those using KVIL facilities increased from 11 per cent to 17 per cent during the same period. More, however, need to be done to effectively check the indiscriminate disposal of garbage by sections of the population in the municipality, particularly in the rural areas.

The Bolgatanga township, however, is faced with daunting challenges in the management of both solid and liquid wastes. In solid waste, there are huge gaps in the amount of refuse that could be collected per day and the refuse generated. This results in rampant littering of streets and drains, posing health and other hazards. Therefore the water and sanitation plans of the municipality to increase access to water and sanitation must be pursued vigorously to meet targets of the Millennium Development Goal. In addition, the efforts of the municipality in the area of environmental sustainability can be stepped up by high level of community participation in community work to reverse the degradation and the need to recover degraded lands, protect those under threat, and enhance

their ecological dysfunction that has arisen through human interference in the form of periodic bushfires in many localities and unsustainable land management practices.

The unemployment rate among the youth has been on the increase in the municipality and by gender unemployment rates have been higher among men than women. In general, there is a disparity in rural-urban unemployment, and underemployment is high. Unemployment and underemployment seem to be serious issues in the Bolgatanga Municipality. For example, it was observed that over 68 per cent of the respondents during the period of the DAEA Household Survey in 2008 did not do any type of work that brought in income either cash or in kind. Only about 31 per cent of the respondents indicated that they were gainfully employed. Similarly, only 13.5 per cent were either looking for work or ready for work, while 83.5 per cent said no to looking for work or being ready for work.

Perception of poverty based on the value judgment of respondents in the 2003 CWIQ Survey, indicates that most households considered themselves poor (57.0%), and this is higher compared to those who considered themselves poor in both the Upper East Region (54.2%) and Ghana (37.1%) as a whole. Using the level of happiness of households to capture their perception of poverty (Table 3.5) reveals that although about 68.9 per cent of households in 2003 considered themselves to be either poor or very poor, poverty did not adversely affect the happiness of most of the population since over 54.2 per cent claimed to be very happy or quite happy.

The impact of economic activity on poverty indicators shows that overall, the municipality performs better relative to the national situation in terms of adult literacy (knowledge) and access to safe water. In

terms of food insecurity, it is relatively more difficult to satisfy food needs in the urban municipal compared to the rural municipal and more pronounced among men not to satisfy household food needs than women.

A major challenge to achieving the health, education, water and sanitation targets of the MDGs in the municipality is the relatively high level of illiteracy and poverty as well as limited access to safe drinking water and poor sanitation, which have combined to expose many people to health hazards and accounts for the relative low standard of living of the people. It is therefore very important to intensify education, water and sanitation and health preventive strategies, particularly malaria prevention strategies, to make all households aware of the need to adopt some measures to prevent the illness and minimize the incidence of malaria-related deaths through proper sanitation control.

The Way Forward: Utilization of Natural Resources to Meet MDGs in the Municipality

There are critical areas of concern, challenges and opportunities that need serious policy considerations in order to enable the municipality to utilize sustainably and efficiently the natural resources it is endowed with to improve human development as well as put the municipality on track to meet the MDGs. The outcomes of the economic situation of the communities in the household and the progress made so far towards the MDGs suggest that the municipality has not fully exploited the numerous resource endowments at its disposal to generate more employment to enhance the literacy and reduce poverty as well as increase access to safe drinking water and improve sanitation. The natural resource endowments exploitation for livelihood

emanates from the interaction of the quality of the human resource skills, agriculture and related activities and a need to efficiently enhance investment opportunities to provide employment to the youth.

The potential of the municipality to contribute to its economic development rests on the exploitation of the abundant natural resources. Access to and the use of the resource endowments by households is complementary to the other forms of capital and is particularly an important mechanism for escaping poverty through strengthening the capabilities of the household. The institution-resource access relationship that highlights resource endowments of the

participation of individuals in accessing governance in the municipality needs to be enhanced for broader community participation. Most communities indicated that they interact more with their local assembly member than with the MP or MCE, which is expected as the assembly member resides with the local community. Communities therefore relay their problems and grievances through their assembly members to the Municipal Assembly. Their participation in community development programmes is therefore through their assembly member. The municipality needs to strengthen the assembly member-community linkage to enhance effective community participation in governance.

Table 9.1: Summary of MDGs and the Situation in the Bolgatanga Municipality

Millennium Development Goal	Targets	Situation in The Bolgatanga Municipality
Goal 1: Eradicate extreme poverty and hunger	Target 1: Halve between 1990 and 2015, the proportion of people whose income is less than one dollar a day	Unemployment high among the population. About 68 percent do no type of work
	Target 2: Halve between 1990-2015, the proportion of people who suffer from hunger	As at 2008, about two-thirds of residents suffer food shortages during the year
Goal 2: Achieve universal primary education	Target 3: Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary education	Slow growth in gross and net enrolment rates. Increases in numbers and relative quality of education. Relatively high school absentee rates in the municipality
Goal 3: Promote gender equality and empower women	Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	Gender gaps in terms of enrolment from one educational level to the other in the Municipality relatively absent. Progress made in this direction
Goal 4: Reduce child mortality	Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	Progress made in reduction of malnutrition, stunting, wasting and children underweight since 2005
Goal 5: Improve maternal health	Target 6: Reduce by three-quarters, between 1990 and 2015 the maternal mortality ratio	
Goal 6: Combat HIV/AIDS, malaria and other diseases	Target 7: Have halted by 2015, and begun to reverse the spread of HIV/AIDS	Malaria cases still the highest in the municipality. More progress required as various strategies are being applied
	Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	

Summary, Conclusion and the Way Forward

Goal 7: Ensure environmental sustainability	Target 9: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	Municipal Assembly has plans to develop programmes to tackle and reverse environmental degradation
	Target 10: Halve by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	
	Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	Increases in the population in the Municipality that have access to good drinking water, 2005-2007. There are challenges in the provision of solid and liquid waste facilities
Goal 8: Develop a Global Partnership for Development	Target 16: In cooperation with developing countries, develop and implement strategies for decent work and productive work for youth	Several NGOs engaged in developing and implementing strategies for decent/productive work in collaboration with the Municipality
	Target 17: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	
	Target 18: In cooperation with private sector, make available the benefits of new technologies, especially information and communications	Several NGOs also engaged in promoting affordable technologies in energy-saving techniques and ICT in the Municipality

Human resource development and utilization concerning education, training, employment opportunities and the building of incentives for useful and productive activities are important in harnessing the resource endowments. The municipality has to continue to focus on improving not only the quantity of educational facilities but also pay particular attention to the skill-training institutes and the quality of the educational sector. This will require cooperation between the BMA and other stakeholders (including development partners and NGOs) in ensuring that the human resource development agenda is prioritized.

Investment opportunities in the municipality face several challenges. To promote investments and sustain these investments, land tenure security combined with improvements in infrastructure, financial support, markets and appropriate technology and enhanced security, are vital.

Investment incentive packages need to be developed by the BMA, along with technical support from other governmental and non-governmental organizations to facilitate the exploitation of natural resource endowments in the municipality to generate income to reduce poverty and help make progress on the MDGs in the municipality.

In addition to incentives to attract investments, strengthening institutions to secure the natural resource base to sustain investments are also important. Securing the resource base depends on credit provision, generating appropriate revenues from the existing use of the resources and safeguarding the resources. There are several institutions providing credit facilities in the municipality that could enhance not only the investment opportunities, but also foster the efficient exploitation and utilization of the

natural resource endowments in the municipality.

Revenue mobilization is critical in the municipality, and the IRS must expand its operations and get closer to the people by giving them tax education and helping to ease the several logistical problems it faces.

The Ghana National Fire Service and the Agricultural Extension Services need support in safeguarding the natural resources in the municipality, and develop agriculture beyond subsisting standards and enhance the agricultural sector to be competitive, respectively. Halving the number of people whose income is less than one dollar and the proportion who suffer from hunger in the municipality will greatly depend on agricultural resource exploitation and protection.

The municipality and other stakeholders should encourage, support and help sustain the formation of various Farmer Based Organizations (FBOs) preferably along commodity/agro-business lines. Training of FBOs should be targeted to address specific issues that will enhance women capacity to perform their roles in the farm-to-market-chain-links. Encouraging the involvement of NGOs in the municipality to sustain the natural resource endowments is imperative.

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