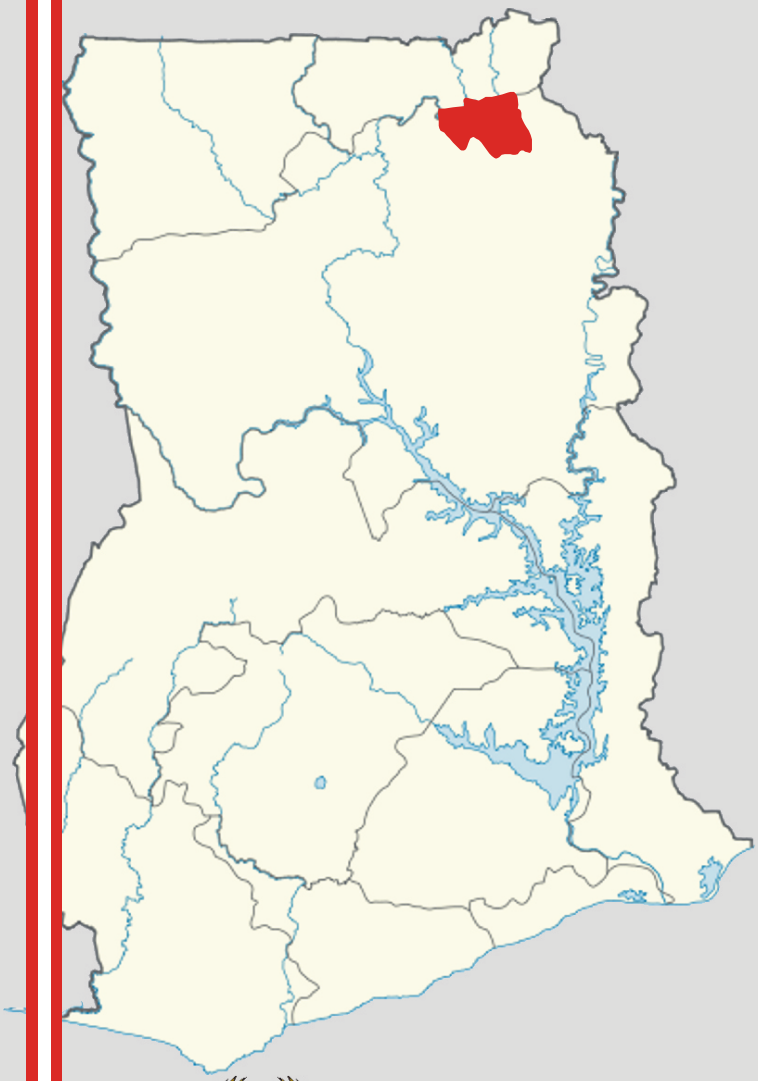
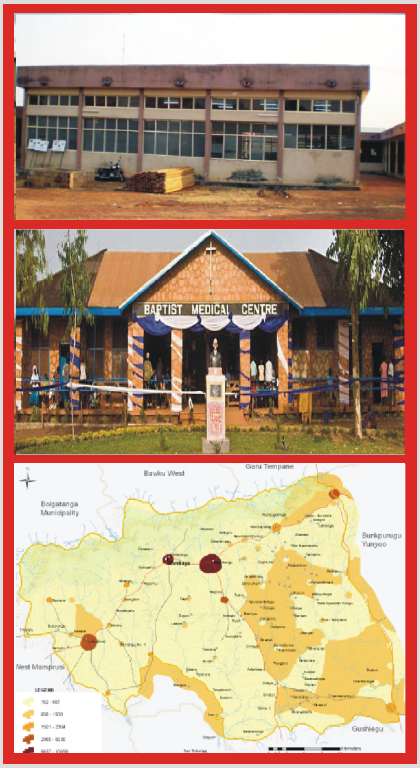
EAST MAMPRUSI DISTRICT

HUMAN DEVELOPMENT REPORT 2011

Resource Endowment, Investment Opportunities and the Attainment of MDGs





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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, Nanumba 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

Acknowledgements

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To all the respondents we say *thank you*.

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Abbreviations

ACE	Alliance for Change in Education
BECE	Basic Education Certificate Examination
CBO	Community Based Organization
CBRDP	Community Based Rural Development Project
CBS	Community Based Surveillance
CHPS	Community-Based Health Planning Services
CIFS	Community Initiative for Food Security
CSIR	Centre for Scientific and Industrial Research
CWIQ	Core-Welfare Indicators Questionnaire
DADU	District Agricultural Development Unit
DAEA	Department of Agricultural Economics and Agribusiness
DCE	District Chief Executives
DOC	District Oversight Committee
DEPT	District Education Planning Team
DFID	Department for International Development
DHDR	District Human Development Report
DWAP	District Wide Assistance Projects
ECOWAS	Economic Community of West African States
FBO	Farmer Based Organization
FCUBE	Free Compulsory Universal Basic Education
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GES	Ghana Education Service
GHAMFIN	Ghana Microfinance Network
GPRS	Growth and Poverty Reduction Strategy
GRATTIS	Ghana Regional Appropriate Technology Industrial Research
GSS	Ghana Statistical Service
HDI	Human Development Index
HDR	Human Development Report
HIPC	Heavily Indebted Poor Countries
HIV/AIDS	Human Imuno Virus/Acquired Immune Deficiency Syndrome
ICT	Information and Communication Technology
IGF	Internally Generated Funds
ILO	International Labour Organization
IRS	Internal Revenue Service
ISSER	Institute of Statistical, Social and Economic Research
ITTU	Intermediate Technology Transfer Unit
JHS	Junior High School
KDA	Karaga District Assemblies
KVIP	Kumasi Ventilated Improved Pit
LPG	Liquefied Petroleum Gas
MCE	Municipal Chief Executive
MCH	Maternal and Child Health
MDG	Millennium Development Goal

MiDA	Millennium Development Authority
MP	Member of Parliament
NARC	National Agriculture Research Centre
NADMO	National Disaster Management Organization
NBSSI	National Board for Small Scale Industries
NCCE	National Commission on Civic Education
NCHS	National Centre for Health Statistics
NDI	Northern Development Initiative
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization
NHDR	National Human Development Report
NHIS	National Health Insurance Scheme
NTFP	Non-Timber Forest Products
OIC	Opportunities Industrialization Centres
PEM	Protein Energy Malnutrition
PPP	Purchasing Power Parity
PTA	Parents Teachers Association
PTR	Pupil Teacher Ratio
SARI	Savannah Agricultural Research Institute
SHS	Senior High School
SMC	School Management Committee
SSNIT	Social Security and National Insurance Trust
TBA	Traditional Birth Attendant
TIDA	Tisongmitaba Development Association
UDS	University for Development Studies
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and Pacific
UNICEF	United Nations Children Fund
VRA	Volta River Authority

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Introductory Overview

The report prepared by Department of Agricultural Economics and Agribusiness (DAEA) of the University of Ghana, 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 the MDGs, improvement in human development and community and district action planning, monitoring and evaluation. The argument is that the three dimensions of human development, namely, longevity, knowledge and standard of living, as well as the eight MDGs are all dependent on effective resource development and utilization. The question is whether the East Mamprusi District has recorded some progress in all the components of the human development index in recent times.

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 (including year 2000) conducted in Ghana, and the district-based Core Welfare Indicators Questionnaire (CWIQ) survey that was conducted in 2003. In close collaboration with the East Mamprusi District a socio-economic survey was conducted in the district in November–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 that had been prepared by the East Mamprusi District for their programmes, particularly the Medium-Term District Development Plan (2006–2009) prepared for the implementation of the Growth and Poverty Reduction Strategy II.

Research Methods Adopted

Interviews were conducted in the East Mamprusi District 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: the community questionnaire and household questionnaire were used for this purpose. The community questionnaire was completed during focal group discussions in 8 out of the 16 selected communities 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 was 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 their environmental impacts.

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 the Ghana Statistical Service (GSS) who randomly selected well defined Enumeration Areas (EAs) from the GSS database of the district. A fifteen member enumeration team (with two supervisors) selected from the community listed and selected an equal number of households in each Enumeration Areas (EA). In all, a minimum of 240 households was chosen from 15 out of the 171 EAs in the district. Rural and semi-rural households were grouped in the rural category to ensure harmonization with CWIQ 2003 and 2000 Population census.

The Main Findings of the Study

The study unearthed myriad of findings. The key ones are follows:

1. Labour intensive, small-scale agriculture (and its related activities) is the main economic activity in the East Mamprusi District. Females hold only 2 per cent of all acreage under cultivation but are often engaged in planting and harvesting as well as post-harvest activities. However, high cost of farm inputs, inadequate dams for off-season farming, inadequate credit facilities to farmers, inadequate agricultural extension services, poor livestock breeding, lack of improved storage facilities, declining soil fertility, poor and erratic rainfall, and removal of subsidies on agricultural inputs militate against food production in the district.
2. The eradication of hunger is one of the primary concerns of the MDGs. Most households are not food secured during the months of April to July. This period generally marks the onset of the rainy season and cultivation of crop fields in the north and therefore poses a great challenge for food supply from intra-regional sources. Severity of food supply situation during this period is a persistent occurrence as 63 per cent of the population surveyed experience the problem yearly.
3. The East Mamprusi District is struggling to make a dent on the health, education and water and sanitation components in meeting the MDGs. In education, the district has witnessed improvements in the enrolment of school children in the primary and JHS levels. However, gross enrolment rates at all levels of education has remained lower than the regional and national rates over the years of 2003/2007. Male enrolment outnumber that of female and also there is a high rate of female dropout at all levels of education
4. Quality of education depends on the availability of textbooks and furniture, availability of sanitary and water facilities, conditions of school structures and the availability of quality (trained) teachers and the pupil-teacher ratio, among others. The district is behind in attaining the set target of three textbooks per pupil. There is inadequate furniture for both teachers and pupils and several school buildings in the district require some form of rehabilitation while others require total demolition and re-construction. The number of untrained teachers in the East Mamprusi District is quite alarming and measures should be instituted to reverse the trend. The cumulative effect is that, the performance of the children in the

district in the Basic Education Certificate Examinations (BECE) has been relatively lower than the national average. The proportion of people without education is very high and increasing and adult literacy rate is also low.

5. There has been improvement in the health sector with indications of improvement in MDG 4, 5 and 6. Access to medical facilities is relatively high in the district. The proportion of children immunized against all the childhood killer diseases improved over the 2006–2008 period. The wide coverage of child immunization has accounted for the improved child health and child mortality indicators. The number of supervised deliveries in the district is rising steadily due to a sustained public health education. Attendance of pregnant women at pre-natal clinics is higher than post-natal attendance. However, maternal mortality ratio is high and needs attention for the realization of the fifth goal of the MDG.

6. Malaria is the most reported disease in the district 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. The District Health Directorate must also review its strategy to increase the usage of insecticide-treated bed nets in the district. Working with the environmental agency and sanitary inspectors, incentives and sanctions must be developed to encourage communities to maintain healthy environs to reduce the risk of disease. This study has revealed that more information must be provided about the components of the National Health Insurance Scheme to ensure that all inhabitants of the district are able to fully participate in it.

7. Water quality is particularly very poor during the dry season when natural sources tend to dry up. Women, therefore, spend huge amounts of their labour time during the dry season fetching water. This affects their potential access to employment and income-generating opportunities particular in areas where water supply is problematic. Progress must, therefore, be speeded up to sustain the rising trends in the provision of safe drinking water.

8. With respect to sanitation East Mamprusi District is faced with daunting challenges in the management of both solid and liquid wastes. There is a huge gap in the amount of solid waste that could be collected per day and the refuse generated resulting in rampant littering of streets and drains which pose health and other hazards. Therefore the water and sanitation plans of the district to increase access to water and sanitation must be pursued as outlined in its 2009 action plan to meet targets of the Millennium Development Goal. In addition, the efforts of the district in the area of environmental sustainability can be achieved based on the 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 functions that has arisen through human interference that includes the periodic bushfires in many localities and unsustainable land management practices.

9. Another challenge for the district is to make significant progress in improving its indicators of environmental sustainability under the seventh MDG. Global climate change is increasing the incidence of desertification. Tree planting has been adopted by urban dwellers to check the effect of wind storms. However, there has been no significant decline in the use of wood fuels for cooking. The growing urbanization and the relatively slower expansion in utilities, drainage systems and safe sanitation, pose risks that can compromise not only the attainment of the seventh goal, but also the attainment of goals 4 and 6
10. The focus of the eighth MDG is on developing a global partnership for development. The increased presence of NGOs and Aid agencies in the district are helping to address food security and health issues. Also in cooperation with the private sector, benefits of new technologies especially information and communications has improved; a number of households in town have one member with a mobile phone. However, access to affordable essential drugs in the district, which is a target of the goal, is yet to be realized. With respect to employment target, under-employment rate among the youth has worsened in that opportunities in non-agriculture related work are hardly available for them. Many young school leavers would like to engage in wage employment but these are limited in the district.

The Way Forward

The way forward for utilization of natural resources to meet MDGs in the district lies in the following:

1. There are critical areas of concern, challenges and opportunities that need serious policy considerations in order to enable the district to utilize sustainably and efficiently the natural resources it is endowed with to improve human development and put the district on track to meet the MDGs. The natural resource endowments exploitation for livelihood emanates from the interaction of quality human resource skills, agriculture and related activities and a need to efficiently enhance investment opportunities to provide employment to the youth.
2. The Medium-Term Development Plan for 2006-2009 and the Northern Development Initiative contain strategies which should be implemented to increase the speed with which the district moves towards the MDGs and improves human development outcomes.
3. Agriculture is the main sector of employment for more than three-quarters of working adults in the district. However, agriculture is rain-fed and there are few supporting infrastructure such as irrigation facilities and markets. This is a major source of threat to exploring the wide range of businesses that agriculture and its services can provide. The District Assembly should assess the possibility and feasibility of partnerships with the private sector, institutions and communities to

develop water harvesting, conservation and irrigation projects.

4. Formal schooling is the key determinant of intellectual ability, analytical and managerial skills needed to exploit opportunities for investment or supporting businesses as employable skills. Thus, more effort should be made to improve learning and teaching methods, particularly in rural schools. The monitoring and supervision system in the education sector must be strengthened to ensure that teachers are performing as they should. This will help to increase the likelihood of achieving universal primary education by 2015.

5. Human resource development and utilization concerning education, training, employment opportunities and the building of incentives for useful and productive activity are important in harnessing the resource endowments. The district should continue to focus on improving not only the quantity of education facilities but also pay particular attention to the skill-training institutes and the quality of the educational sector. This will require cooperation between the East Mamprusi District Assembly and other stakeholders in ensuring that human resource development agenda is prioritized.

6. 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.

7. The participation of individuals in community development programmes is through their assemblymen who live with them. The district therefore needs to strengthen the assemblyman-community linkages to enhance effective community participation in governance.

8. Investment opportunities in the district 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. Investment incentive packages needs to be developed by the East Mamprusi District Assembly, along with technical support from other governmental and non-governmental organizations to facilitate the exploitation of natural resource endowments in the District to generate income to reduce poverty and help make progress on the MDGs in the district.

11. 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. Providing credit facilities in the district that could enhance not only the investment opportunities, it could foster the efficient exploitation and utilization of the natural resource endowments in the district.

12. Revenue mobilization is critical in the district and the Internal Revenue Service (IRS) in the district must expand its operations and get more closer to the people by given them tax education by helping to ease the several logistical problems it faces.

13. The Ghana National Fire Service and the Agricultural Extension Services need support in safeguarding the natural resources in the district and to develop agriculture beyond subsisting standards and to enhance the agricultural sector to be competitive, respectively. The capacity of Savannah Agricultural Research Institute (SARI) to conduct basic research and to effectively disseminate the findings to farmers after adapting findings to local soils conditions is imperative.
14. Halving the number of people whose income is less than one dollar and the proportion who suffer from hunger in the district will greatly depend on agricultural resource exploitation and protection.
15. The district 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 programs 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.
16. Encouraging the involvement of NGOs in the district 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 programs to mitigate emergency situations including provision of food aid, and community driven infrastructure needs such as schools and markets.
17. Agricultural interventions including training agricultural production and agro-enterprise management, provision of inputs (seeds, animal breeds, tools, etc.) are undertaken by NGOs. The East Mamprusi District Assembly's support given to NGOs in the district must further be strengthened to enhance the public-private sector partnerships.

CHAPTER 1

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 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. 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 2007, the HDI for Ghana rose to 0.553.

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.

[1] Sen, A. (2000), pp. 3.

The gender-related development index also produced by UNDP, aims to reveal the gender dimensions of the three components of human development.[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 2007 with the theme Towards a more Inclusive Society.

[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.

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:

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

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.

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 sets of DHDRs for three districts — Atwima, Bulsa 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, Offinso and West Gonja in Western, Ashanti and Northern Regions respectively.

The 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 Metro, Karaga, East Mamprusi, Bole, Nanumba and Zabzugu Talale in the Northern Region, Lawra, Sissala East and Wa Municipal in 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 basis for the preparation of Community Action Plans, informing the District Planning Process for the attainment of the MDGs.

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 (Table 1.1) and have become an integral part of Ghana's development strategy. The various Ghana's Medium-Term Development Plans (MTDP) "…seek to operationalise 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 of this, in both the MTDP and the district development plans, there is a matrix indicating the link 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 hand.

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 their 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, 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.

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
	1.7 Proportion of own-account and contributing family workers in total employment
Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	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
	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	7.1 Proportion of land area covered by forest
	7.2 CO2 emissions, total, per capita and per $1 GDP (PPP)

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

programmes and reverse the loss of environmental resources	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	*Some of the indicators listed below are monitored separately for the least developed countries (LDCs), Africa, landlocked developing countries and small island developing States.*
	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
	8.6 Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty
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)	8.7 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

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 the adequate supplies of labour with the requisite skills and abilities — is essential to a thriving local economy. The failure of a locality or household to improve on its human resource capabilities could, therefore, 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.

[4] Crowley, E. and Appendini, K. (2006).

The Report

The East Mamprusi District is one of the human development reports prepared to assess resource endowment and attainment of MDGs in 12 selected district in Northern Ghana. The report analyses 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, and inform the District Planning Process for the attainment of the MDGs. The report also reinforces the capacity of the district and community institutions for MDG-based assessment, planning, monitoring and evaluation.

Methodology and Data

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 East Mamprusi District also conducted a socio-economic survey (including focus group discussions) in the district in November–December 2008 and in consultation with 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 East Mamprusi District 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 East Mamprusi District provided information on their activities over the last five years. This provided insights into the economic and social conditions in the East Mamprusi District 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 East Mamprusi District 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 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 (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 (consisting of the Lead Researcher, two supervisors, and fifteen interviewers selected, trained and hired from the district) 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 was conducted 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 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 240 households was chosen from 15 out of 171 EAs in the district. 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.

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

Locality	Name of EA	Category	Sample Size	Average Household Size
Bowku (Boko)	Bowku (Boko)	Rural	16	6.3
Kachina	Kachina	Rural	16	5.6
Kpalivaka	Kpalivaka	Rural	16	4.9
Nakpayariga	Nakpayariga	Rural	16	6.2
New Namenboaka (Achina)	New Namenboaka (Achina)	Rural	16	7.8
Tichiregitaba	Tichiregitaba	Rural	16	7.8
Dagbiriboari	L/A Prim. School	Semi-Urban	16	9.1
Dindane	Adam Apoko' House	Semi-Urban	16	7.6
Nagbo	Central Mosque	Semi-Urban	16	5.9
Wundua	Cotton office	Semi-Urban	16	8.3
Gambaga	Chief's Palace	Urban	16	6.2
Langbensi	Agric Station	Urban	16	9.8
Langbensi	Asariah Eng-Arabic Sch.	Urban	16	8.1
Nalerigu	Co-op Distilleries Society	Urban	16	5.7
Nalerigu	Seidu Natoma's House	Urban	16	6.1

Source: 2008 DAEA Household Survey.

Focal group discussions were carried out in three of the communities to reflect the stratification. In addition, interviews were conducted with institutional leaders in the district.

Outline of the Report

The Report contains nine chapters. After the introductory chapter, the profile of East Mamprusi District is outlined in chapter two 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 underemployment, child labour and objective and subjective assessments of poverty in the district are discussed in chapter three. Chapter four focuses on education and literacy by analyzing quality of school infrastructure, school attendance as well as education attainment and adult literacy. In chapter five, 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. The sixth chapter discusses resource endowments with respect to the human, infrastructure and natural resources in the district. It also discusses the institutions and governance, hazards and its attendant environmental impacts. The usage and constraints of these resources and the effects on the MDGs are examined in chapter seven. Chapter eight discusses the investment opportunities and risk factors contingent on the resource endowments. The last chapter then provides a summary of the key finding and advance policy recommendations for consideration.

CHAPTER 2

Profile of East Mamprusi District

Introduction

This chapter provides baseline information on East Mamprusi district, namely, physical features, population characteristics, socio-economic infrastructure and housing, and human security issues among others.

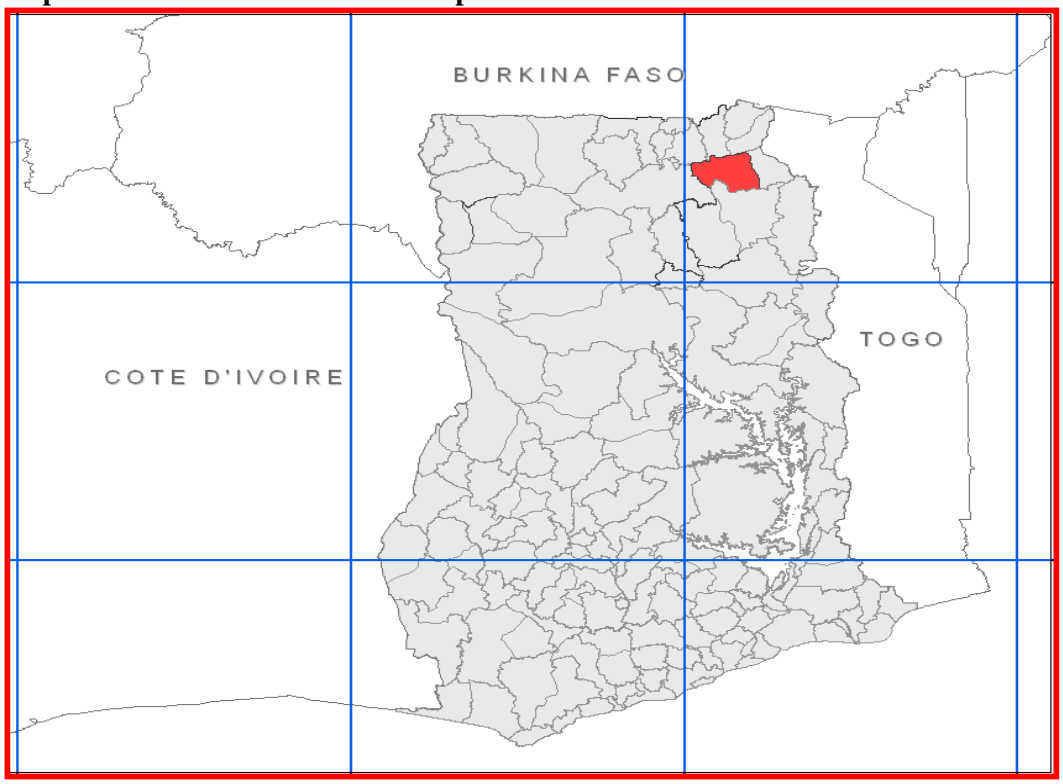
Physical Features

Location and Size

East Mamprusi District Assembly is one of the 20 Metropolitan/Municipal/Districts of the Northern Region and has its capital at Gambaga. It is located in the north-eastern part of the region (see Map 2.1 for the details).

As can be seen in the Map, to the north, it shares boundaries with Bolgatanga Municipal, Bawku West and Garu-Tempane districts, all in the Upper East Region. To the east is the Bunkpurugu-Yunyoo District. It is bordered to the west by the West Mamprusi District and to the south by Gusheigu District. The district covers an area of 1660 sq. km, which is about 2.2 per cent of the total area of the Northern region.

Map 2.1: Location of the East Mamprusi District



Source: CERSGIS, 2009.

Picture 2.1: The East Mamprusi District Assembly Office Block.

Topography and Drainage

The district is characterized by a gently rolling topography with the Gambaga escarpment, which marks the northern limits of the Voltain sandstone basin. Apart from the mountainous areas adjoining the escarpment there is little runoff when it rains. Important drainage features in the district include the White Volta, which enters the district in the northeast and is joined by the Red Volta near Gambaga, with the Nawonga and Moba rivers also draining the south-western part.

Climate and Vegetation

Climate

The district experiences a single rainfall regime with a mean rainfall of about 1000 to 1115 mm from around April to October. The annual average temperature is at 27.4°C. The average high temperatures (about 35°C) are experienced in March while the average lows (about 27°C) occurring in August. The annual range of temperature is high about 11°C, compared to 7°C for the middle belt and 6°C along the coast. In years in which the rains are heavy, access to outlying settlements is difficult. The highest peak is the Gambaga scarp which is 136.9 m above sea level. Temperatures are generally high throughout the year. Low temperatures, how-ever, are experienced between November and February during the Harmattan period.

Vegetation

The district lies in the Tropical Continental Belt Western Margin and is characterized by interior woodland savannah, and some grass vegetation with trees such as Baobab, Acacia and Sheanuts. Grasses grow in tussocks and can reach heights of three metres or more.

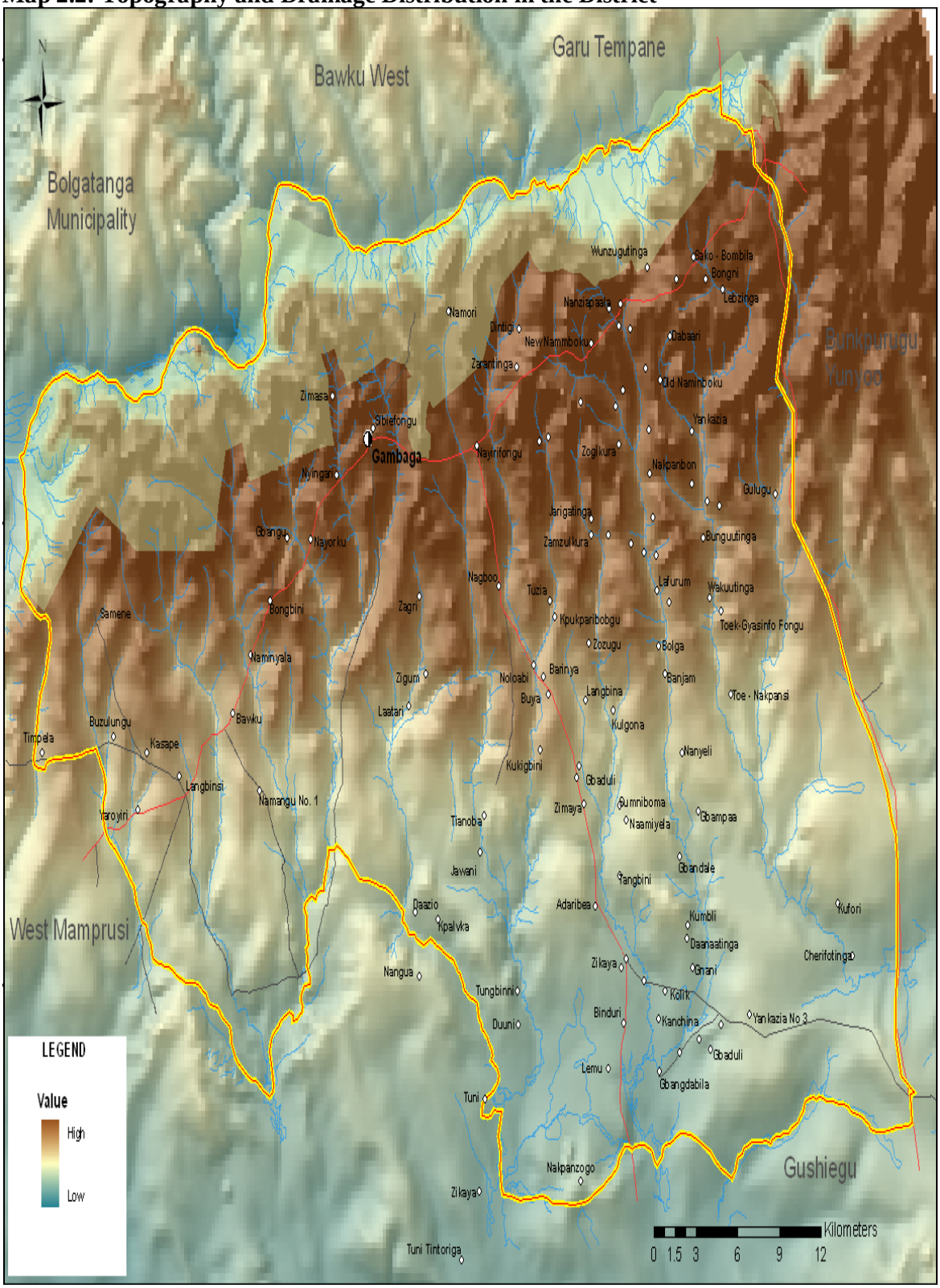
Human Settlement

There are three urban settlements with population of 5,000 and above. They are Nalerigu, Gambaga, and Langbinsi. The people in these urban settlements constitute about 30 per cent of the total population of the District. Seventy per cent of the people are thus rural dwellers. Since all the major social and economic infrastructure and services are located in the urban areas majority of the people are either deprived totally of utilizing these facilities or have limited access to them. Any programme aimed at alleviating poverty of the needy and vulnerable should best target the rural communities.

The DAEA 2008 Household Survey shows that the major ethnic group in the District is the Mamprusi (58.8%) who speak Mampruli. Other ethnic groups found in the District are the Konkombas (12.5%), Grussi/Frafra (4.2%), Kussasi (2.2%) and Builsa (1.7%). These are the dominant ethnic

groups. Minority groups found include Moshi, Talensi, Hausa, Fulani and Chokosi, Bimoba, Wangara, Dagomba, Guan/Gonja, and Akans.

Map 2.2: Topography and Drainage Distribution in the District



Throughout the district, settlement patterns are largely dispersed. This is more so with the rural communities. A number of compounds made up of usually round huts roofed with thatch and owned by a number of households are scattered over large farmlands. This pattern in the rural areas sometimes poses a problem of distinguishing one community from another in some cases.

Housing

A house defined by the United Nations as "structurally separate and independent place of abode such that a person or group of persons can isolate themselves from a hazard of climate, such as storms and the sun". Thus, any type of shelter used as living quarters, such flats, apartments, huts, kiosks, cargo containers and tents is considered a house. The housing stock according to the 2000 population and housing census is 17,622. Rooms in compound houses are the predominant type of dwelling for households in the district (56.7%), followed by semi-detached houses (18.1%) with separate houses accounting for 9 per cent.

Table 2.1: Main Construction Material of the Outer Wall in the District (Per cent)

Year / Location	2000	2008		
	All	All	Rural	Urban
Mud/mud brick/earth	94.3	99.1	99.4	98.7
Cement Block or Concrete	2.2	10	–	1.3
Wood	1.3	–	–	–
Burnt Bricks	0.2	–	–	–
All Others	3.5	–	–	–

Source:2000 Population & Housing Census. Ghana Statistical Service; 2008 DAEA Household Survey

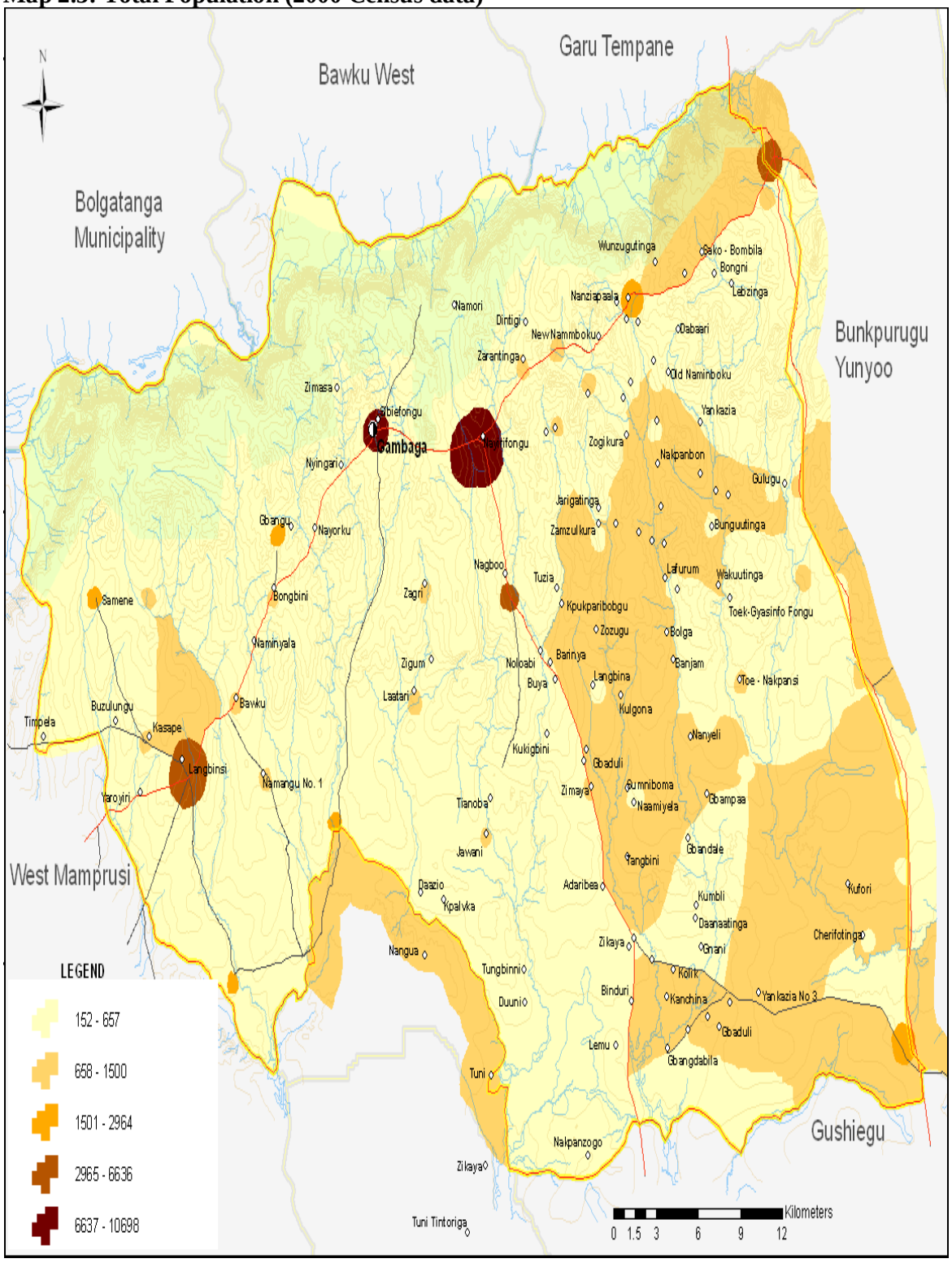
Mud/mud brick/earth (94.3%) and cement or concrete (2.2%) are the two main materials used for construction of the outer walls in 2000. The two materials accounted for about 97 per cent of materials used in the district (Table 2.1). The 2008 DAEA Household Survey shows that these two materials continue to be the main materials used for construction in the district with only 1.3 per cent of houses in urban areas made of cement or concrete block materials.

Most of the people, especially in the rural areas, live in circular structures roofed with thatch. They are mostly owned by the households (83.6 %) and those who do not own them live in without paying rent. Rental accommodation is only found in the urban areas (3.1 %). These are usually built in circular groups to form a compound. Compound houses in most rural communities found in the western part of the District are mostly nucleated while scattered compounds are associated with the Konkombas and other communities in the eastern part of the District. The scattered nature of settlement patterns in the eastern part of the District makes accessibility to communities quite difficult. Most of the roads linking such places are only footpaths or roads in very bad conditions. The major road across the District from the East to the west is however motorable throughout the year. The scattered nature of the settlements especially in the eastern part of the District implies that there should be greater investments in the provision of socio-economic infrastructure like roads and boreholes. Another implication of the scattered nature of settlements on the provision of water facilities for instance is that boreholes with pump for separate settlements are more feasible and cost effective than small towns mechanized boreholes.

Based on these socio-economic services, and also the size of the population

of the settlements, the following emerged as the major settlements in the district, Gambaga, Nalerigu, and Langbinsi. Other settlements that follow are Gbintiri, Nagbo, Nasuan and Jimbale. Socio economic infrastructure and services are concentrated in the Northern half of the District.

Map 2.3: Total Population (2000 Census data)



Settlement in the south and central parts do not have easy access to these facilities and in some cases have very limited access to the major service centres. The urban population that constitutes only about 30 per cent of the total population has easy access to socio-economic infrastructure and services concentrated mainly in the major service centres.

Demographic Characteristics

Population Size and Density

According to the 2000 Population and Housing Census the district has a population of 142,897. The distribution shows that females account for 72,332 with 70,102 males, representing 51 per cent and 49 per cent respectively. Compared to the 1984 population of 122,000 the population increased by 58,877. This indicates an inter-censal growth of 32.6 per cent over the sixteen-year period. The projected population of the district in 2008 is 218,094 with 106,974 males and 111,121 females. The average population density is 59 persons per square kilometre, which is lower than the national density of 79.7 persons per sq km but about twice the regional density of 26 persons per sq. km. The low population density may be due to the interaction between a harsh climate and ecology, migration and poverty. This may constitute a significant constraint on the setting up of feasible and sustainable community facility such as schools, health infrastructure potable water supply, etc. There are 143 communities in the district with 8,656 houses and 11,281 households. The average household size is 7.7. Majority of the people are Moslems (66.5%). There are, however, a number of Christians and Traditional Religion worshipers (Table 2.2).

Table 2.2: Religious Affiliation of Inhabitants

Religion	Per cent
Muslim	66.5
Christian	14.0
Traditional	18.3
No religion	1.2

Source: DAEA Household Survey, 2008.

Sex and Age Distribution

Figure 2.1 shows a triangular-shaped population pyramid by sex and age. The sex ratio looks balanced. The age structure is typically that of a high fertility and high mortality which has a broad base but gradually tapers off with increasing age. At birth there are more boys than girls but they seem to even out after 16 years. This might be due to differential mortality or emigration. Majority of the population are between the ages of 15 and 40. The population structure of the East Mamprusi District can be said to be young. The implication of such a young population age structure for the provision of social and community facility is enormous. This raises the issues of youth mobilization, employment creation and proper grooming with skills for development of the East Mamprusi District.

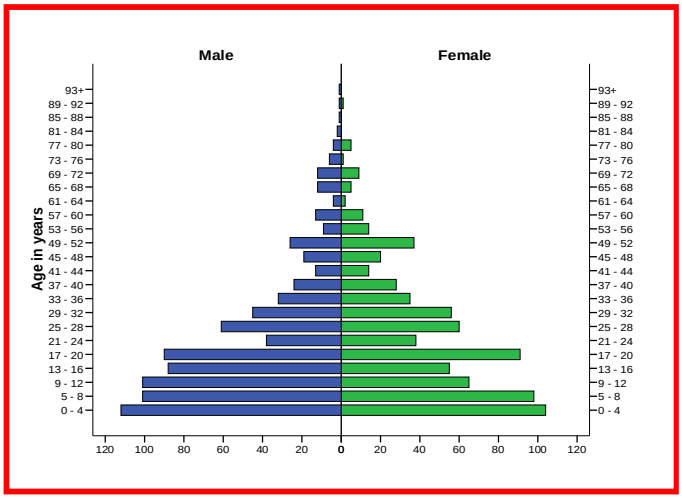


Figure 2.1: Population Pyramid by Sex and Age, East Mamprusi District.

Source: DAEA Household Survey 2008.

Constraints of High Population Growth

Since women constitute 51 per cent of the total population, more focus on gender mainstreaming and women empowerment to have a greater say in decisions that affects their well-being is identified as a factor that will enhance development in the district. The current growth rate of the population is 3 per cent per annum. The high growth rate is due to high fertility rate of women in the district. This is evident from the large number of pregnant women and women with children and the large number of children below the age of fifteen years seen at public gatherings in the rural areas.

The high rate of growth has created a high dependency ratio and has escalated the poverty situation of parents. Another effect of the high growth rate and high fertility rates of population in the district is that infra-structure facilities and services lag behind demand and there is considerable strain on the existing services and facilities and this has negative implications for the district's economy and development.

The above problem also has deep-rooted negative impact on the general well being and development of the people. Parent's inability to control births or cater for the education of their children over the years has resulted in out migration of the youth into the cities in search of jobs. Due to the low educational background and lack of employable skills, many migrant youth end up with menial jobs and others out of frustration indulge in anti social practices like drunkenness, prostitution and its attendant spread of HIV/AIDS and other Sexually Transmitted Diseases (STD), forced labour and child labour.

Intervention aimed at reducing poverty and enhancing development of the people of the East Mamprusi District should adopt fertility management and strategies through an aggressive programme to sensitise the people on Family Planning and reproductive health issues.

The major population-related issues identified for redress by the District Population Advisory Committee are the following: Inadequate knowledge of reproductive health issues, High birth rates, High fertility rates, Prevalence of HIV/AIDS and STDS. Migration of the youth to the urban centres, teenage pregnancy, inadequate access to family planning services, low acceptance of family planning, conservative attitude towards contraceptive usage among others

For most of the above problems, social and cultural as well as religious beliefs, norms, and practices of the people over the years has made members of society to accept them and disregard all negative impacts of such practices. These religious and socio-cultural practices not only hinder change of attitude for the better but in some cases also perpetuate its ill effects.

Approaches to overcoming the challenges should be handled tactfully and professionally through education, dialogue, consensus building and where necessary adopting and modifying existing practices. Outright condemnation, disrespect for existing perceptions that are considered to be negative will not be the right approach to solve population related issues in the District.

Governance (Traditional and State)

Good Governance involves the efficient processes and system through which administrative functions are carried out. It ensures that both the governor and the governed abide by the rules of the law. Institutional and administrative set-ups, both

state and traditional, exist to perpetrate the rule in the district.

Traditional Setup

The Mamprugu Traditional Council runs the affairs of the Mamprugu traditional area. The seat of the Nayiri — Paramount Chief of Mamprugu is at Nalerigu, 8 kilometres east of Gambaga, the district capital.

State Authority: The District Assembly

The East Mamprusi District Assembly was established by the Legislative Instrument (LI) 1776. It is the highest administrative and political body in the district that is charged with the responsibility of formulating and implementing development plans, programmes and projects. There is a General Assembly which comprises of twenty-six elected members, twelve Government appointees, one Member of Parliament (who has no voting rights) and the District Chief Executive (DCE). From among the members of the District Assembly at least two-thirds approval is needed to appoint a Presiding Member, who chairs meetings and committees of the Assembly. The District Assembly is administered by the DCE as the political head. He is assisted by the District Coordinating Director who supervises and monitors the activities of all the decentralized Government departments.

The East Mamprusi District has two Town Councils (Gambaga and Nalerigu,) and three Area Councils (Langbensi, Sakogu and Gbintiri). There are thirty-four unit committees. The district is also home to one parliamentary constituency namely Nalerigu-Gambaga.

There is an Executive Committee which operates through sub-committees that are statutory or instituted by the Assembly itself. These include:

1. Finance and Administration Sub-committee
2. Works Sub-committee
3. Development Planning Sub-committee
4. Agriculture Sub-committee
5. Justice and Security Sub-committee
6. Health Sub-committee
7. Women and Children Sub-committee
8. Environmental Protection Sub-committee
9. Complaints Sub-committee

There are decentralized departments that also help with the governance in the district, though they have not been fully integrated into the planned district departments. Relationship among the decentralized departments is generally a loose one, as they still take instructions from their regional and national heads of department. The district central administration and the decentralized departments do cooperate and have information flow among them. It holds meetings with decentralized departments where their concerns and challenges are discussed. Some departments submit quarterly reports to the district assembly through which the assembly is informed about the activities of the departments. Representatives of departments serve as secretaries to sub-committees of the district assembly and these help to enhance information flow. A bottleneck of decentralization hindering effective collaboration of the departments with the District Assembly is the vertical reporting relationship to their mother-departments. The decentralized departments established in the district include:

1. Ghana Education Service
2. Ghana Library Board
3. Ghana Health service
4. Environmental Health of MLRD
5. Central Administration

6. District Planning and Coordinating Unit
7. Birth and Death Registry
8. Information Services Dept.
9. Ministry of Food & Agriculture
10. Department of Social Welfare
11. Community Development
12. Public Works Department
13. Department of Feeder Roads
14. National Disaster Management Organization
15. Department of Co-operatives
16. Comptroller and Accountant General's Department

Other institutions like the Police, National Commission of Civic Education (NCCE), National Electoral Commission (NEC), Commission on Human Rights and Administrative Justice (CHRAJ), Non-Formal Education Division, Prison Service are present in the district and also work effectively to ensure security, justice and good governance.

The Role of NGOs in the District

There are several NGOs in the district that play important socio-economic roles in the district's development process. The district collaborates with such development partners to increase the standard of living of the people. Some of the NGOs in the district include:

- Catholic Relief Services (CRS)
- CIDA
- DANIDA
- EQUALL
- ActionAid
- PAS-L
- PARED
- OIC
- CIFS/CARE
- Christian Aid

These NGOs provide support in several socio-economic areas as agriculture, water and sanitation, health, education, etc. in collaboration with the District Assembly. While some provide funds for such activities others directly provide services e.g. distribution of emergency food aid and relief materials, training and development of community groups, provision of extension services and farm inputs, among others.

CHAPTER 3

Economic Activity and Poverty

Introduction

Employment is an important route out of poverty and can be instrumental in the improvement of well-being. GPRS II envisages that employment creation ensures the benefits of accelerated growth and impact positively on increased job opportunities for all. The attainment of this objective will significantly contribute to reducing poverty among the rural and urban poor. Within this framework the East Mamprusi District Assembly pursues policies that benefit its population.

Box 3.1: Human Development and MDGs on Poverty and Hunger

Millennium Development Goals (MDGs)

- Eradicate Extreme Poverty and Hunger
- Reduce by 50 per cent of the 1990 level the proportion of people whose income is less than one dollar a day by 2015
- Reduce the proportion of people who suffer from hunger by 50 per cent between 1990 and 2015

Human Development

- Ensure a decent standard of living for all.

Major Economic Activities

Agriculture

Agriculture and its related activities is the main economic activity in the East Mamprusi District (Figure 3.1). Generally, agricultural production activities in the district are labour intensive carried out by both males and females, although females are known to hold only 2 per cent of all acreage under cultivation. It is estimated that agricultural population by gender is 2:1 (male: female). Most often female farmers basically engaged in planting and harvesting as well as post-harvest activities. Most crop farmers (82%) are small-scale holder (cultivating up to 4 acres) while only 3 per cent of farmers have large scale holdings (Figure 3.1).

Agriculture employs the largest proportion of the population aged 15 years and above in their main job (Figure 3.2). The district experienced an increase in proportion of labour force in agriculture at the expense of manufacturing and other industrial activities (Table 3.1).The proportion of the working population aged 15 years and above employed in agriculture in their main job has increased from 78.3 per cent in 2000 to 90.5 per cent in 2008 while the share of especially manufacturing and social services declined from 5.5 and 5.7 per cent to 0.9 and 1.3 per cent, respectively.

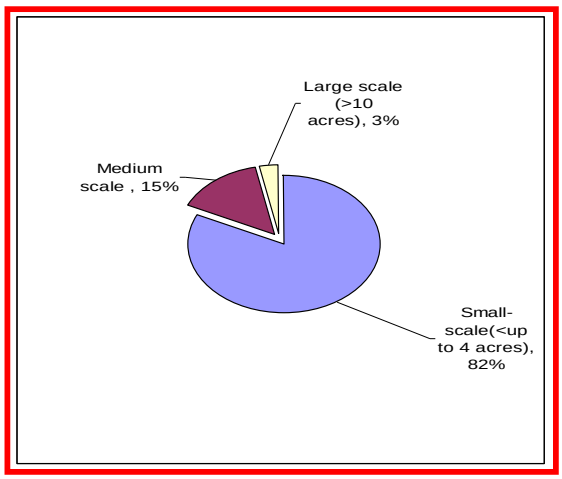


Figure 3.1: Distribution of farm size holdings in the East Mamprusi District.

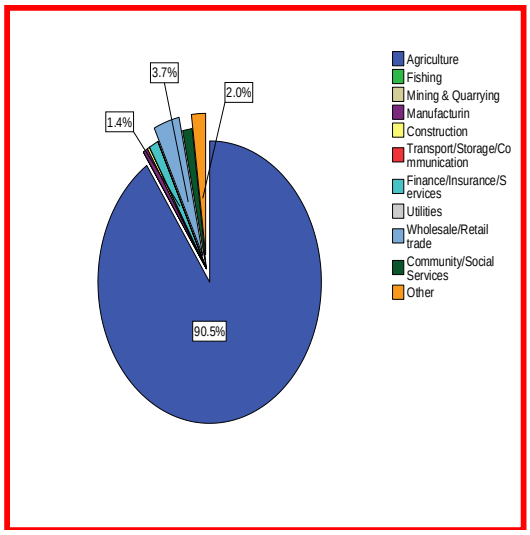


Figure 3.2: Classification of Economically Active Population 15+ by industry.

Agriculture employs the largest proportion of the population aged 15 years and above in their main job (Figure 3.2). The district experienced an increase in proportion of labour force in agriculture at the expense of manufacturing and other industrial activities (Table 3.1). The propor-tion of the working population aged 15 years and above employed in agriculture in their main job has increased from 78.3 per cent in 2000 to 90.5 per cent in 2008 while the share of especially manufacturing and social services declined from 5.5 and 5.7 per cent to 0.9 and 1.3 per cent, respectively.

Most of the people are either self-employed or worked for their family, a trend which has remained largely un-changed from 2000 (Table 3.1).

Given the complaints of impediments in engaging in agriculture in the district that emerged during focus group discussions, it is interesting this trend persists. Perhaps there

Table 3.1: Distribution of Economically Active Population Aged 15+ by Industry, Status and Type (%)

Years		2000	2003	2008
Industry	Agriculture/fishing/forestry	78.3	52.3	90.5
	Manufacturing	5.7	0.6	0.9
	Construction	0.4	1.5	0.4
	Finance/Insurance/Services	–	0.4	1.7
	Wholesale/Retail trade	4.1	33.7	3.9
	Community/Social Services	5.5	10.1	1.3
	Others	11.6	1.3	1.3
Status	Self-employed with employee	–	0.4	10.1
	Self employed without employee	67.5	79.4	44.3
	Unpaid family worker	22.9	6.2	38.6
	Casual Worker	–	2.0	0.9
	Regular employee	4.2	8.9	2.6
	Domestic employees	–	0.4	2.2
	Others	4.0	2.8	1.3
Main Employer	Public	3.5	7.7	1.8
	Private formal	21.8	1.3	6.2
	Private Informal	73.7	89.7	91.2
	NGO's/Intl Org	–	0.9	0.9
	Others	1.0	0.4	–

Source: Ghana Statistical Service, 2000 & 2003; 2008 DAEA Household Survey.

is a serious lack of wage-earning opportunities in the district or dearth of appropriate employable skills for the economically active population. The main employer in the district is the private informal sector, which employed 73.7, 89.7 and 91.2 per cent of the economically active population in 2000, 2003 and 2008, respectively.

The major crops produced in the district are millet, maize, sorghum rice, cowpea and groundnut. Apart from rice, most of the other major crops saw

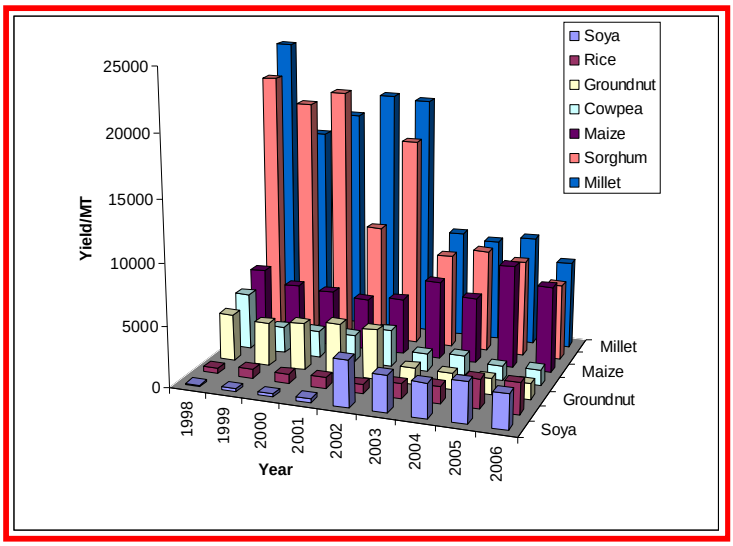


Figure 3.3: Yield of Major Food Crops in the East Mamprusi (Mt).
Source: East Mamprusi District Directorate of Food and Agriculture.

Table 3.2: Production of selected food crops in the East Mamprusi District (Metric Tonnes)

Crop	1998	1999	2000	2001	2002	2003	2004	2005	2006
Soya	150	250	250	300	3800	3000	2800	3300	2800
Rice	400	750	750	880	720	1200	1400	2400	2500
Groundnut	3850	3500	3850	4200	4080	1360	1320	1280	1300
Cowpea	4620	2140	2200	2200	3000	1400	1650	1200	1300
Maize	5760	4752	4550	4230	4615	6400	5400	8400	7200
Sorghum	21450	19500	20640	9500	17000	7700	8400	7840	6200
Millet	23840	16380	18150	20020	19800	8800	8400	8960	7200

Source: East Mamprusi District Directorate of Food and Agriculture.

decrease in the area under cultivation. This reflected in the yields obtained for these crops between 2003 and 2006 (Figure 3.3). However, yield of soya increased from 150 metric tonnes in 1998 to 2,800 metric tonnes in 2006 (Table 3.2). The production of food in the district has not been very consistent over the years. Some of the problems identified to be responsible include high cost of farm inputs, inadequate dams for off-season farming, inadequate credit facilities to farmers, inadequate agricultural extension services, poor livestock breeding, lack of improved storage facilities, declining soil fertility, poor and erratic rainfall, removal of subsidies on agricultural inputs, rapid population growth.

Livestock reared in the district include cattle, sheep, goats and pigs and poultry such as fowls and ducks. Poultry accounts for the largest livestock reared in the district. Figure 3.4 shows the distribution of livestock production in the district. The number of poultry produced in the district steadily declined by staggering 86.5 per cent from almost 200,000 birds in 2000 to 27,800 birds in 2003 and 20 04, then production picked up to about 75000 birds in 2005. However, the numbers of cattle, sheep, goats and pigs reared in the district have been consistently low over the years.

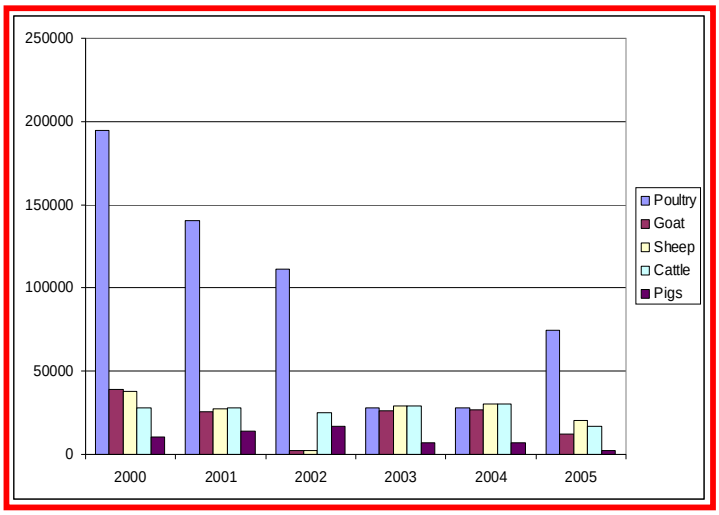


Figure 3.4: Distribution of Livestock Produced in the District.

Industrial Activities

Industry in East Mamprusi District is at a basic stage. The sector is dominated by small-scale activities using mostly indigenous technology. Potentials exist in the industrial sector especially in the processing of agricultural produce such as groundnuts, shea butter and tobacco. Shea butter and groundnut oil extraction is dominated by adult women while tobacco processing is the preserve of adult men. Processing of *dawadawa*, fish, and carving and weaving of traditional textile and baskets is carried out on a small-scale.

Mineral Deposits

The District is one of the three areas in the region where limestone deposits occur. The East Mamprusi deposits consist of both limestone and dolomite suitable for the production of cement and quick lime. It is located ten kilometres north east of the village of Gbangdaa on the Gbangdaa-Yunyoo road. It is estimated that there are about fifteen million metric tonnes of good quality limestone which can further be upgraded by screening and washing. The estimated quantity of dolomite is twenty to thirty thousand metric tonnes.

The Working Population

The working population in the district faces a number of challenges in their economic

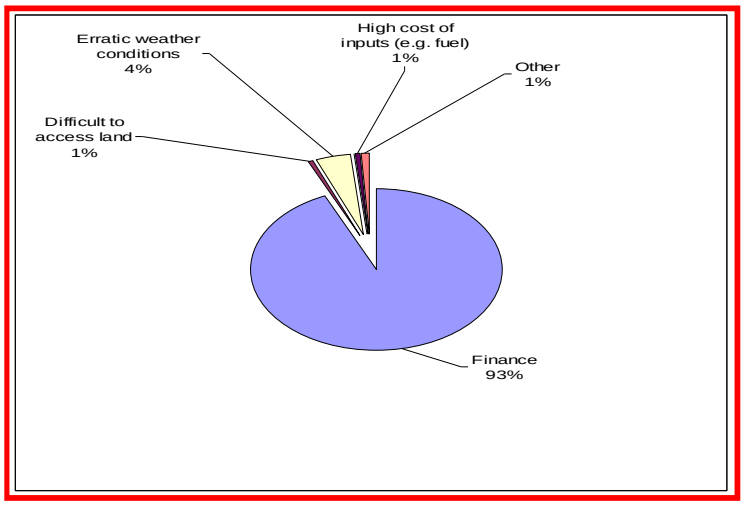


Figure 3.5: Problems faced by the Working Population with Regards to Work.

activities and these were mainly finance (93%), erratic weather (4%), high costs of inputs (1%), difficulty in marketing products, low price received for products and other reasons constitute about 1 per cent (Figure 3.5). Problems of finance to the working population in agriculture were mainly with regard to lack, inadequacy and timeliness of release, in cases where they are found. These require the establishment of more micro-financing schemes for the agricultural sector. Also, the construction of more small-scale dams and the rehabilitation of the existing ones are important for increasing crop production in the district.

Unemployment and Under-employment

The incidence of joblessness is one of the critical indicators for assessing the state of economic and social development in any community or country. According to the International Labour Organization (ILO), a person is said to be "unemployed" if he/she is available but does not have a job and is actively looking for work. The rate is measured by the proportion of the economically active population who are unemployed.

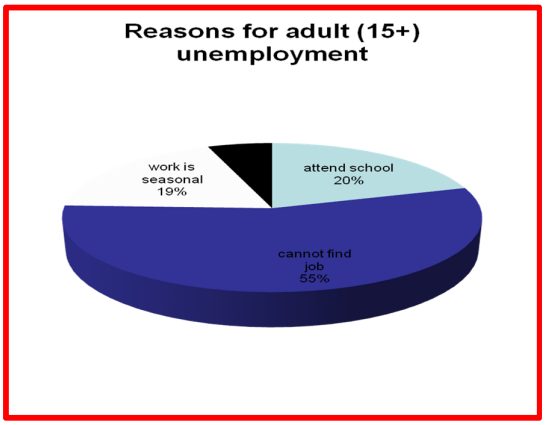
Table 3.3 presents estimates of unemployment rates for different periods for the East Mamprusi District in relation to the whole country. Based on data obtained from the 2000 Census, 2003 CWIQ and the DAEA 2008 Household Survey data, adult unemployment rate has been on the increase in the district. From being lower than the national average in 2000, the rate rose sharply above the national level in 2003, suggesting that on the average, more people were finding it difficult to secure jobs in the district than in the entire country. The rate rose further in 2008, from the household survey. The rate of unemployment is relatively higher among the youth, particularly female, than the rest of the adult economically active population. Figure 3.6 shows reasons for both adult and youth unemployment in the East Mamprusi District.

Table 3.3 Estimates of Unemployment Rates (%) for East Mamprusi District

Age	Adult (15+)			Youth (15–24)	
Year	2000	2003	2008	2003	2008
Ghana	10.4	5.5	–	–	–
Men	10.1	49.0	–	15.1	–
Women	10.7	49.6		16.4	–
East Mamprusi		3.0	–	–	–
Men	–	–	32.0	–	27.7
Women	–	–	33.0	–	36.5
All	–	–	32.5	–	32.1

Source: 2000 Census, 2003 CWIQ and 2008 DAEA Household Survey.

One of the goals of the district development plan is increased employment opportunities for unemployed youth. The eighth MDG has as one of its targets cooperation between developed and developing countries to develop and implement strategies for decent and productive work for the youth. An indicator to measure progress towards achieving this goal is the unemployment rate of persons aged 15–24 years, which appears to be on the increase.



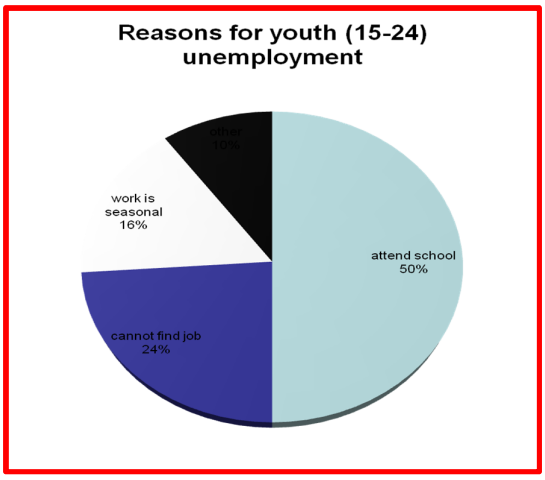


Figure 3.6: Reasons for Adult and Youth Unemployment.
Source: DAEA Household Survey, 2008.

The incidence of underemployment in the district in 2008 was high. The underemployed are those persons who are working and who were ready to take on additional work in the last seven days. The rate of underemployment is measured as the proportion of the labour force that is underemployed.

Extreme Poverty and Hunger in East Mamprusi District

The first Millennium Development Goal is the eradication of extreme poverty and hunger. The first target aims at halving the proportion of the population whose income is less than a dollar a day between 1990 and 2015. The second target aims at halving the proportion of the people living in hunger over the same period. Neither GPRS II nor the district Medium-Term Development Plan contains specific targets for the reduction of poverty or the elimination of hunger. However, since both the GPRS and the district development plans adopt the MDGs as an important framework, it may be assumed that the MDG targets are the relevant targets.

The Human Poverty Index

Poverty is multi-dimensional. A poverty assessment that focuses solely on the extent to which consumption expenditure or income may lie below a poverty line will not capture the different dimensions of poverty. The UNDP Human Poverty Index is one attempt to capture the multi-dimensionality of poverty in a single index. The index focuses on three aspects of deprivation, the proportion of the population that will die before the age of 40 years, the proportion of the adult population that is illiterate and ability to have a decent standard of living. Ability to have a decent standard of living is measured using three variables. The first is the proportion of the population without access to safe or improved drinking water, the proportion of underweight children aged 5 years or less and the proportion of the population without access to health services. In estimating the Human Poverty Index (HPI), this study substitutes the regional under-5 mortality rate for the proportion of the population that will die before 40 years of age.

The HPI for East Mamprusi District in 2003 is not significantly different from the

national average (Table 3.4). However, an examination reveals that the district performs worse than the national average in two of the components of the human poverty index — the adult illiteracy rate and the proportion of underweight children were higher than the national average.

Table 3.4: Poverty Indicators: National vrs. East Mamprusi District (2003)

Location	National	E. Mamprusi
Human Poverty Index		
All	41.8	
Rural	–	
Urban	–	
% Adult Literacy		
All	53.7	15.3
Male	66.2	16.6
Female	42.5	17.1
% Without Access to Health Services		
All	42.4	40.4
Rural	57.7	22.1
Urban	21.5	7.2
% Without Access to Safe Water		
All	25.9	49.1
Rural	37.0	72.0
Urban	12.7	40.0
% Underweight Children		
All	25.8*	
Boys	27.8*	
Girls	23.8*	

Source: 2003 CWIQ.
* Refers to children whose weight is 2 standard deviations below the National Centre for Health Statistics (NCHS) weight for age.

Subjective Poverty

Perceptions of poverty by households in the district are lower in 2008 than they were in 2003. In 2003, none of the households considered themselves to be non-poor. In 2008, however, 8 per cent of households classified themselves as non-poor. Rural households were much more optimistic, with a higher proportion classifying themselves as non-poor compared to urban households. Whereas 70 per cent of households in 2003 considered themselves to be poor or very poor, in 2008 the proportion declined to 49 per cent.

The Incidence of Extreme Poverty and Hunger

Unfortunately data are not available for directly measuring the proportion of the population in East Mamprusi District that lives in extreme poverty. The indicators to measure progress made in reducing the incidence of hunger are the prevalence of underweight children and the proportion of the population below the minimum level of dietary energy consumption.

Child Nutrition

More than half the children in East Mamprusi District in 2003 were underweight. The proportion of underweight children in the district is twice the national average. The incidence of underweight children was lower among girls, particularly in rural households. About 60 per cent of boys in rural households were underweight compared to 46 per cent of girls.

Food Security

The eradication of hunger is one of the primary concerns of the MDGs. The periods that households experience severe food shortages are used to assess the progress made in eradication of hunger from the District. The households' experience of severe food shortages with respect to time periods are presented in Figure 3.7. Most households are not food secured during the months of April to July. This period generally marks the onset of the rainy season and cultivation of crop fields in the north and, therefore it poses a great challenge for

food supply from intra-regional sources. Figure 3.8 shows that the severity of food supply situation during this period is a persistent occurrence as 63 per cent of the population surveyed experiences the problem yearly.

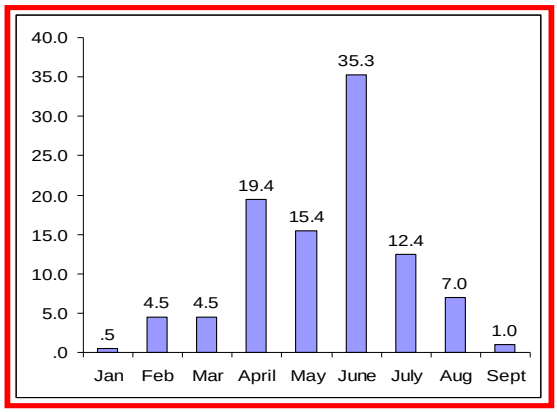


*Figure 3.7:*Month Households Experiences Severe Food Shortage.

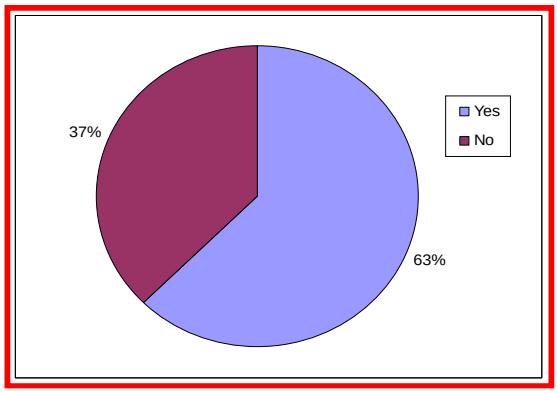


Figure 3.8: Distribution of Households that Experience Food Shortage Every Year

CHAPTER 4

Education and Literacy

Introduction

Picture 4.1: A School Block in the East Mamprusi District.

In Ghana, the fundamental goal of the education sector is to provide quality and relevant education for all inhabitants to make them functionally literate and enable them to acquire employable skills and be productive in the economy. Education is one of the major pillars of the Millennium Development Goals (MDGs). The MDG on education is to ensure universal primary education, and equal enrolment for boys and girls at primary and secondary school levels. Human development has as its indicators on education the adult literacy rate and the gross primary, secondary and tertiary enrolment rates. The Growth and Poverty Reduction Strategy (GPRS II) also seeks to ensure increased access of all children and youth to a defined minimum basic education regardless of the particular economic circumstances of their parents or guardians. This chapter assesses the progress made by East Mamprusi District in the knowledge component of human development and in realizing the educational objectives of the MDGs and GPRS II.

The education system in Ghana has undergone restructuring and reform since independence. A major education reform occurred in 1987 that sought to introduce vocational and technical training at the basic level and also shorten the number of years spent in school. The system of formal education born out of the 1987 reform is based on a three-tier system: six years of primary education, followed by three years of Junior Secondary School (JSS), and a further three years of Senior Secondary School (SSS) before admission into tertiary institutions (including university, polytechnic and other professional educational institutions). After twenty years of practising this system, another reform commenced in September 2007. The new reform makes compulsory two years of pre-school for all children before entering primary one and puts more emphasis on science, mathematics and information technology (IT) in the basic school curriculum. It also seeks to promote technical and vocational education and increases the number of years at senior secondary school (now, senior high school) from 3 to 4 years.

Educational Infrastructure

Number of Schools in the District

One of the fundamental inputs towards the attainment of the MDG for education is the number of schools available. The district has a number of basic schools (Table 4.1). Currently, there are 89 basic schools made up of 80 public schools and 9 private schools. The number of basic schools increased just slightly by 8.6 per cent from 81 schools in 2005. The district has just two public Senior High schools and no private senior high schools. Recently, a health assistance training school has opened in Nalerigu, which is post-basic education in nature.

Table 4.1: **Number of Schools in the East Mamprusi District**

School	2005	2006	2007	2008
Public Basic	79	76	76	80
Private Basic	2	2	8	9
Public Secondary	1	1	1	2
Private Secondary	–	–	–	–

Source: East Mamprusi District Education Directorate.

Number of Teachers

The number of teachers available at the schools constitutes an important component of the human resource base of the district educational infrastructure. Figure 4.1 presents the number of teachers in the five educational circuits of the district, both trained and untrained teachers, available to the basic schools as at 2008. Gambaga circuit has the largest number of teachers (160). However, 53 per cent of them are untrained.

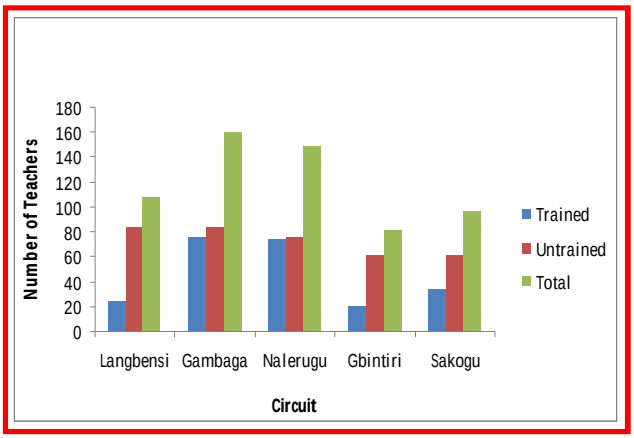


Figure 4.1: Distribution of Number of Teachers in the East Mamprusi District, 2008.

The largest proportion of untrained teachers, 78 per cent, is found in the Langbinsi circuit (Table 4.2). Most teachers in the basic schools in the district are untrained. Paucity of data has prevented trend and adequacy analyses on the strength and quality of teaching staff of the basic schools in the district to be properly made. Nevertheless, the higher proportion of untrained teachers than trained teachers at the basic school level should be of concern to the district. Models could be developed for the untrained teachers who desire to remain in the teaching profession to acquire training.

Table 4.2: Proportion of Teaching Staff in the East Mamprusi District, 2008

Circuit	Trained		Untrained		Total (No.)
	Number	%	Number	%	
Gambaga	76	48	84	53	160
Gbintiri	20	25	61	75	81
Langbensi	24	22	84	78	108
Nalerugu	74	50	75	50	149
Sakogu	34	35	62	65	96

Source: Source: East Mamprusi District Education Directorate.

Gross Enrolment Rate

The ratio of all students who are in a prescribed age group to the population of all children in the prescribed age group expressed as a percentage is the Gross enrolment rate (GER). It is particularly

useful in assessing the ability of the education system to accommodate those interested in education. Both high (over 100%) and low gross enrolment rates are undesirable. High gross enrolment levels in primary school, for instance, indicate large numbers of over-age children in primary school, indicating poor academic progress and a high level of repetition in the school system. Low gross enrolment rates reflect low net enrolment rates from lack of school attendance either because children have poor access to schools or are kept away by their parents.

The Gross Enrolment Rate (GER) in the district witnessed improvement in the number of children enrolled in basic schools during the period 2005–2008 (Table 4.3). The total enrolment in the pre-school and primary school increased by 23.9 and 15.1 per cent respectively between 2005 and 2008, while enrolment in JHS increased by 12.4 per cent during the period. The GER in SHS increased by paltry 1.7 per cent during the 2005–2008 period. Using data from the EMIS project of the Ministry of Education, Science and Sports, the GER in primary and JHS in the East Mamprusi District were lower than the regional and national averages for 2005/2006 and 2006/2007 academic years (Table 4.3).

Table 4.3: Gross Enrolment Rates in East Mamprusi District

Level	Year	Boys	Girls	East Mamprusi	Northern Region	Ghana
Pre School	2005	33.2	28	30.6	–	–
	2006	32.6	31.3	32.0	–	–
	2007	50.5	48.5	49.5	–	–
	2008	58.2	50.7	54.5	–	–
Primary	2005	55.2	47.3	51.3	83.6	86.4
	2006	63.6	55.2	59.4	87.4	90.8
	2007	68.8	58.9	63.9	–	–
	2008	72.3	60.5	66.4	–	–
JHS	2005	35.6	28.6	32.1	57.5	70.4
	2006	41.3	32.4	36.9	59	70.8
	2007	36.8	46.1	41.5	–	–
	2008	51	38	44.5	–	–
SHS	2005	20.9	10	15.5	–	–
	2006	19.4	8.5	14.0	–	–
	2007	18.7	9	13.9	–	–
	2008	21.5	12.8	17.2	–	–

Source: East Mamprusi District Education Directorate, EMIS Project, Ministry of Education, Science and Sports.

The sex dimension of enrolment in the district shows that the numbers of male enrolment consistently outnumber that of female at all levels of education from 2005 to 2008. Clearly, more effort is required of the district if the district is to attain the goal of universal primary education as contained in the MDGs. During focus group discussions, community members cited the inability of parents to fund children's education as a major reason why some children in the community do not attend primary school. Other reasons include lack of interest in schooling by some parents and children.

Educational Attainment

At the household level, income or more broadly, financial wealth is related to parental occupation, which in turn depends to some degree on level of education. Improved education is a prerequisite for wider development and contributes significantly to better health. It enhances people's capacity to care for themselves, their families, and to use

community services more effectively. Therefore, educational attainment of the adult population is a major determinant of the distribution of economic activity of the labour force and for that matter income distribution and poverty incidence in a community.

Table 4.4 shows the distribution of the population aged 6 years and above by highest level of education completed. From the 2000 population census, 73.4 per cent of the people in the district have had no education, while the 2008 DAEA household survey indicates that about 81.6 per cent of the people have no education. The results suggest that the number of people without education has increased by about 8.2 per cent, during the period. About 6 per cent have completed basic education while 3.2 per cent have completed secondary type education with 9.2 per cent having completed a post-secondary education. The low educational attainment has serious implications for level of human development and the attainment of the MDG for education in the district.

Table 4.4 Educational Attainment (6+ Years), 2008

Level	2008
No education	81.6
Pre-school	–
Primary	2.1
Junior High	3.5
Middle school	0.2
Senior High	1.9
Vocational/Technical/ Commercial	1.3
Agriculture/Nursing/ Teacher training	9.2
Tertiary	0.1
Special School	–

Source: DAEA 2008 Household Survey.

Adult Literacy

Literacy is an important indicator of the effectiveness by which a society could transmit its culture from generation to generation in written form. The ability to read and write is an essential component of developing intellectual, moral and practical capacities in which the family, the community and the media are influential agents. Literacy is profoundly influenced by socio-economic and cultural factors, and plays a role in determining the capacity of the individual to profit from the planned activities of formal and non-formal education.[5]

The adult literacy rate in English and/or a local language in 2008, indicate some disparity in the education component of human development (Table 4.5) between urban and rural areas. A higher proportion of the people in urban areas are literate in English and the local language (33.9% and 31.5%, respectively) than people in the rural areas (7.9% and 7.6%, respectively). The literacy rate is generally higher in English (19.8%) than in the local languages (15.9%). Few others can read only in English (3.3%) and in a local language (5.0%).

Table 4.5: Adult (15+ Years) Literacy Rates (2008) (%)

Type	All	Male	Female	Rural	Urban
Literate in English					
Read and Write	19.8	17.1	16.6	7.9	33.9
Read only	3.3	3.3	3.2	1.9	4.7
None	78.9	78.6	80.3	90.2	61.1
Literate in Local Language					
Read and Write	15.5	16.4	15.3	7.6	31.5
Read only	5.0	5.5	4.4	3.7	3.7
None	79.6	78.1	80.4	88.8	64.8

Source: DAEA Household Survey, 2008.

Also, relatively more males are literate than females in both English and the local languages. The generally low literacy rate

[5] University of Linkoping (1990).

has the potential of undermining the realization of the third MDG, which seeks to promote gender equality and empower women.

Improving Education and Literacy and Attaining the MDGs

Generally, the East Mamprusi District has seen an improvement in both the gross enrolment rates at all levels of education, implying that progress is being made towards universal primary education by 2015. This coupled with increasing adult education and educationall attainment also suggests an improvement in human development in the district. There are gender gaps in terms of enrolment from one educational level to the other. In the Medium-Term Development Plan of the East Mamprusi District, adult education is expected to be speeded up while all children of school-going age in the district must be in school by 2009. The plan also seeks to promote gender equality and reduce disparity in basic and secondary schools. While these plans are laudable, it is important to ensure quality of education.

There are many factors that impede access to basic education in the East Mamprusi District. Some of the factors come from the community and others also come from households. At the community level, the factors include very poor condition of school buildings (rural communities) and disincentive to continuing education due to lack of more Senior High School facilities in the district as the cost of boarding fees puts secondary education way beyond the reach of the children of the poor. At the household level, lack of resources to purchase equipment and school fees is a major factor impeding access to basic education. A main perceived cost of education was the opportunity costs of losing the child's labour for domestic and productive purposes. Many children also do pieces of work to earn a living and others help their parents on farms leaving them exhausted and with no time for their homework.

Conclusion

Universal primary education for all children and the promotion of equality and empowerment of women through the elimination of gender disparity in primary and secondary education at all levels are major elements of the Millennium Development Goals (MDGs). The Growth and Poverty Reduction Strategy (GPRS II) also seeks to ensure increased access of all children and youth to a defined minimum basic education regardless of the particular economic circumstances of their parents or guardians.

One fundamental input into the achievement of the MDG goals on education depends on the child's access to good quality education embodied in the number of schools as well as on the quality of teachers available, among other things. The contribution of the private sector to education in the East Mamprusi District is most evident in pre-schools and primary schools. The number of public schools in all the various levels of education is far higher than that of the private schools but the contribution of the private sector to the educational sector of the district has been quite impressive over the years.

The quality of education, however, depends on the availability of textbooks and furniture, availability of sanitary and water facilities, conditions of school structures and the availability of quality (trained) teachers and the pupil-teacher ratio, among others. In this area the East Mamprusi District has a long way to go in meeting the good quality education MDG goals seek to achieve. The district, however, has seen an improvement in the gross enrolment rates at all levels of education but the rates are below the regional

and national averages. In terms of educational attainment, a very high proportion of the population (about 86%) aged 6 years and above has not had any education. The trend seems to be increasing and could hamper the efforts of the East Mamprusi District to meet the MDG target on education for all.

CHAPTER 4

Education and Literacy

Introduction

Picture 4.1: A School Block in the East Mamprusi District.

In Ghana, the fundamental goal of the education sector is to provide quality and relevant education for all inhabitants to make them functionally literate and enable them to acquire employable skills and be productive in the economy. Education is one of the major pillars of the Millennium Development Goals (MDGs). The MDG on education is to ensure universal primary education, and equal enrolment for boys and girls at primary and secondary school levels. Human development has as its indicators on education the adult literacy rate and the gross primary, secondary and tertiary enrolment rates. The Growth and Poverty Reduction Strategy (GPRS II) also seeks to ensure increased access of all children and youth to a defined minimum basic education regardless of the particular economic circumstances of their parents or guardians. This chapter assesses the progress made by East Mamprusi District in the knowledge component of human development and in realizing the educational objectives of the MDGs and GPRS II.

The education system in Ghana has undergone restructuring and reform since independence. A major education reform occurred in 1987 that sought to introduce vocational and technical training at the basic level and also shorten the number of years spent in school. The system of formal education born out of the 1987 reform is based on a three-tier system: six years of primary education, followed by three years of Junior Secondary School (JSS), and a further three years of Senior Secondary School (SSS) before admission into tertiary institutions (including university, polytechnic and other professional educational institutions). After twenty years of practising this system, another reform commenced in September 2007. The new reform makes compulsory two years of pre-school for all children before entering primary one and puts more emphasis on science, mathematics and information technology (IT) in the basic school curriculum. It also seeks to promote technical and vocational education and increases the number of years at senior secondary school (now, senior high school) from 3 to 4 years.

Educational Infrastructure

Number of Schools in the District

One of the fundamental inputs towards the attainment of the MDG for education is the number of schools available. The district has a number of basic schools (Table 4.1). Currently, there are 89 basic schools made up of 80 public schools and 9 private schools. The number of basic schools increased just slightly by 8.6 per cent from 81 schools in 2005. The district has just two public Senior High schools and no private senior high schools. Recently, a health assistance training school has opened in Nalerigu, which is post-basic education in nature.

Table 4.1: **Number of Schools in the East Mamprusi District**

School	2005	2006	2007	2008
Public Basic	79	76	76	80
Private Basic	2	2	8	9
Public Secondary	1	1	1	2
Private Secondary	–	–	–	–

Source: East Mamprusi District Education Directorate.

Number of Teachers

The number of teachers available at the schools constitutes an important component of the human resource base of the district educational infrastructure. Figure 4.1 presents the number of teachers in the five educational circuits of the district, both trained and untrained teachers, available to the basic schools as at 2008. Gambaga circuit has the largest number of teachers (160). However, 53 per cent of them are untrained.

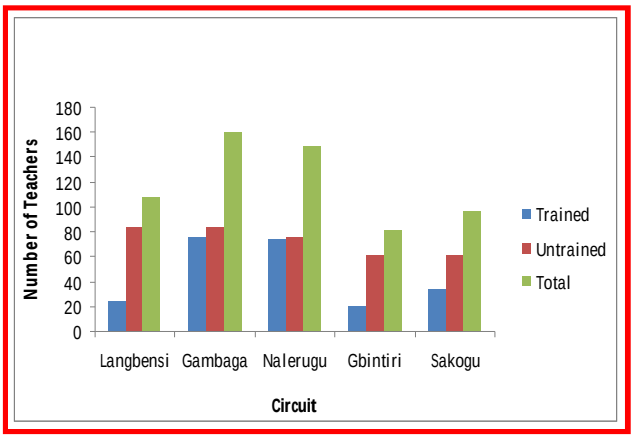


Figure 4.1: Distribution of Number of Teachers in the East Mamprusi District, 2008.

The largest proportion of untrained teachers, 78 per cent, is found in the Langbinsi circuit (Table 4.2). Most teachers in the basic schools in the district are untrained. Paucity of data has prevented trend and adequacy analyses on the strength and quality of teaching staff of the basic schools in the district to be properly made. Nevertheless, the higher proportion of untrained teachers than trained teachers at the basic school level should be of concern to the district. Models could be developed for the untrained teachers who desire to remain in the teaching profession to acquire training.

Table 4.2: Proportion of Teaching Staff in the East Mamprusi District, 2008

Circuit	Trained		Untrained		Total (No.)
	Number	%	Number	%	
Gambaga	76	48	84	53	160
Gbintiri	20	25	61	75	81
Langbensi	24	22	84	78	108
Nalerugu	74	50	75	50	149
Sakogu	34	35	62	65	96

Source: Source: East Mamprusi District Education Directorate.

Gross Enrolment Rate

The ratio of all students who are in a prescribed age group to the population of all children in the prescribed age group expressed as a percentage is the Gross enrolment rate (GER). It is particularly

useful in assessing the ability of the education system to accommodate those interested in education. Both high (over 100%) and low gross enrolment rates are undesirable. High gross enrolment levels in primary school, for instance, indicate large numbers of over-age children in primary school, indicating poor academic progress and a high level of repetition in the school system. Low gross enrolment rates reflect low net enrolment rates from lack of school attendance either because children have poor access to schools or are kept away by their parents.

The Gross Enrolment Rate (GER) in the district witnessed improvement in the number of children enrolled in basic schools during the period 2005–2008 (Table 4.3). The total enrolment in the pre-school and primary school increased by 23.9 and 15.1 per cent respectively between 2005 and 2008, while enrolment in JHS increased by 12.4 per cent during the period. The GER in SHS increased by paltry 1.7 per cent during the 2005–2008 period. Using data from the EMIS project of the Ministry of Education, Science and Sports, the GER in primary and JHS in the East Mamprusi District were lower than the regional and national averages for 2005/2006 and 2006/2007 academic years (Table 4.3).

Table 4.3: Gross Enrolment Rates in East Mamprusi District

Level	Year	Boys	Girls	East Mamprusi	Northern Region	Ghana
Pre School	2005	33.2	28	30.6	–	–
	2006	32.6	31.3	32.0	–	–
	2007	50.5	48.5	49.5	–	–
	2008	58.2	50.7	54.5	–	–
Primary	2005	55.2	47.3	51.3	83.6	86.4
	2006	63.6	55.2	59.4	87.4	90.8
	2007	68.8	58.9	63.9	–	–
	2008	72.3	60.5	66.4	–	–
JHS	2005	35.6	28.6	32.1	57.5	70.4
	2006	41.3	32.4	36.9	59	70.8
	2007	36.8	46.1	41.5	–	–
	2008	51	38	44.5	–	–
SHS	2005	20.9	10	15.5	–	–
	2006	19.4	8.5	14.0	–	–
	2007	18.7	9	13.9	–	–
	2008	21.5	12.8	17.2	–	–

Source: East Mamprusi District Education Directorate, EMIS Project, Ministry of Education, Science and Sports.

The sex dimension of enrolment in the district shows that the numbers of male enrolment consistently outnumber that of female at all levels of education from 2005 to 2008. Clearly, more effort is required of the district if the district is to attain the goal of universal primary education as contained in the MDGs. During focus group discussions, community members cited the inability of parents to fund children's education as a major reason why some children in the community do not attend primary school. Other reasons include lack of interest in schooling by some parents and children.

Educational Attainment

At the household level, income or more broadly, financial wealth is related to parental occupation, which in turn depends to some degree on level of education. Improved education is a prerequisite for wider development and contributes significantly to better health. It enhances people's capacity to care for themselves, their families, and to use

community services more effectively. Therefore, educational attainment of the adult population is a major determinant of the distribution of economic activity of the labour force and for that matter income distribution and poverty incidence in a community.

Table 4.4 shows the distribution of the population aged 6 years and above by highest level of education completed. From the 2000 population census, 73.4 per cent of the people in the district have had no education, while the 2008 DAEA household survey indicates that about 81.6 per cent of the people have no education. The results suggest that the number of people without education has increased by about 8.2 per cent, during the period. About 6 per cent have completed basic education while 3.2 per cent have completed secondary type education with 9.2 per cent having completed a post-secondary education. The low educational attainment has serious implications for level of human development and the attainment of the MDG for education in the district.

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Special School	–

Source: DAEA 2008 Household Survey.

Adult Literacy

Literacy is an important indicator of the effectiveness by which a society could transmit its culture from generation to generation in written form. The ability to read and write is an essential component of developing intellectual, moral and practical capacities in which the family, the community and the media are influential agents. Literacy is profoundly influenced by socio-economic and cultural factors, and plays a role in determining the capacity of the individual to profit from the planned activities of formal and non-formal education.[6]

The adult literacy rate in English and/or a local language in 2008, indicate some disparity in the education component of human development (Table 4.5) between urban and rural areas. A higher proportion of the people in urban areas are literate in English and the local language (33.9% and 31.5%, respectively) than people in the rural areas (7.9% and 7.6%, respectively). The literacy rate is generally higher in English (19.8%) than in the local languages (15.9%). Few others can read only in English (3.3%) and in a local language (5.0%).

Table 4.5: Adult (15+ Years) Literacy Rates (2008) (%)

Type	All	Male	Female	Rural	Urban
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Read only	3.3	3.3	3.2	1.9	4.7
None	78.9	78.6	80.3	90.2	61.1
Literate in Local Language					
Read and Write	15.5	16.4	15.3	7.6	31.5
Read only	5.0	5.5	4.4	3.7	3.7
None	79.6	78.1	80.4	88.8	64.8

Source: DAEA Household Survey, 2008.

Also, relatively more males are literate than females in both English and the local languages. The generally low literacy rate

[6] University of Linkoping (1990).

has the potential of undermining the realization of the third MDG, which seeks to promote gender equality and empower women.

Improving Education and Literacy and Attaining the MDGs

Generally, the East Mamprusi District has seen an improvement in both the gross enrolment rates at all levels of education, implying that progress is being made towards universal primary education by 2015. This coupled with increasing adult education and educationall attainment also suggests an improvement in human development in the district. There are gender gaps in terms of enrolment from one educational level to the other. In the Medium-Term Development Plan of the East Mamprusi District, adult education is expected to be speeded up while all children of school-going age in the district must be in school by 2009. The plan also seeks to promote gender equality and reduce disparity in basic and secondary schools. While these plans are laudable, it is important to ensure quality of education.

There are many factors that impede access to basic education in the East Mamprusi District. Some of the factors come from the community and others also come from households. At the community level, the factors include very poor condition of school buildings (rural communities) and disincentive to continuing education due to lack of more Senior High School facilities in the district as the cost of boarding fees puts secondary education way beyond the reach of the children of the poor. At the household level, lack of resources to purchase equipment and school fees is a major factor impeding access to basic education. A main perceived cost of education was the opportunity costs of losing the child's labour for domestic and productive purposes. Many children also do pieces of work to earn a living and others help their parents on farms leaving them exhausted and with no time for their homework.

Conclusion

Universal primary education for all children and the promotion of equality and empowerment of women through the elimination of gender disparity in primary and secondary education at all levels are major elements of the Millennium Development Goals (MDGs). The Growth and Poverty Reduction Strategy (GPRS II) also seeks to ensure increased access of all children and youth to a defined minimum basic education regardless of the particular economic circumstances of their parents or guardians.

One fundamental input into the achievement of the MDG goals on education depends on the child's access to good quality education embodied in the number of schools as well as on the quality of teachers available, among other things. The contribution of the private sector to education in the East Mamprusi District is most evident in pre-schools and primary schools. The number of public schools in all the various levels of education is far higher than that of the private schools but the contribution of the private sector to the educational sector of the district has been quite impressive over the years.

The quality of education, however, depends on the availability of textbooks and furniture, availability of sanitary and water facilities, conditions of school structures and the availability of quality (trained) teachers and the pupil-teacher ratio, among others. In this area the East Mamprusi District has a long way to go in meeting the good quality education MDG goals seek to achieve. The district, however, has seen an improvement in the gross enrolment rates at all levels of education but the rates are below the regional

and national averages. In terms of educational attainment, a very high proportion of the population (about 86%) aged 6 years and above has not had any education. The trend seems to be increasing and could hamper the efforts of the East Mamprusi District to meet the MDG target on education for all.

CHAPTER 5

Health, Water and Sanitation

Introduction

The main thrust of Ghana's health sector has been on attaining the goals of the five-year health sector programme of work which include, among other things, improvement of the quality of life of the people. Policy emphasis for the current programme of work is on expanding coverage of the National Health Insurance Scheme (NHIS); producing, retaining and distributing health personnel equitably; improving on the delivery of high-impact health interventions; and broadening access to emergency and ambulance services.

The focus of the EMDA dovetails into the national policy framework and places more emphasis on improved access to health-care, malaria prevention and control, HIV/AIDS prevention, and expanding the coverage of potable water and improvement on the capacity to implement environmental projects. Achievement of these objectives would improve the country's chances of meeting a number of the targets under the health MDGs. Indeed, health issues feature in the MDGs to the extent that almost half of the goals focus on health: improve maternal mortality rates, reduce child mortality rate, combat HIV/AIDS and other diseases (Box 5.1). The seventh MDG of ensuring environmental sustainability that seeks to halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation also relates to health.

Box 5.1: Health Component of MDGs and Human Development

Millennium Development Goals

- Reduce child mortality by two-thirds between 1990 and 2015.
- Improve maternal mortality.
- Combat HIV/AIDS, malaria and other major diseases.

Human Development

- Longevity — improving upon the life expectancy at birth.

Health Care Infrastructure and Personnel

Health services in the district are provided by both the public and private sectors. As at 2008, the district has seven health institutions made up of one hospital (Baptist Medical Centre) located at Nalerigu (Picture 5.1), four health centres and two Community Health Planning Services (CHPS) Compounds (Table 5.1). Two Voluntary Counselling centres have also been established in the district at the Baptist Medical Centre and the Department of Social Welfare to cater for HIV/AIDS and 12 Nutrition and feeding centres to cater for malnourished children. During discussions with the community members they indicated the general lack of physical access and shortage of health personnel in the district as their major problems with health delivery in the district.

There is no pharmacy or private clinic in the district. Although current figures were not readily available, as at 2006 there were 15 chemical shops, 131 trained traditional birth attendants (TBAs), 60 untrained TBAs and 129 community based surveillance volunteers in the district.

In 2005, the number of health institutions per 1000 persons reached 0.049 (about one health institution to 20,000 persons) from 0.024 (about one health institution to 42,000 persons) the previous year. Although this is lower than the national average, it has been decreasing steadily through 0.047, 0.042 to 0.041 for 2006, 2007 and 2008 respectively. There are a number of private drug stores that are patronized by the community.

Picture 5.1: The Hospital in the East Mamprusi District.

Table 5.1: Number of Health Facilities in East Mamprusi District, 2003–2008

Facility/ Institution	2003	2005	2008
Hospital	–	–	1
Health Centre	–	–	4
Clinic	–	–	0
CHPS	–	–	2
Number of Health Centres per 1000 persons	0.025	0.049	0.041

Source: East Mamprusi District Health Directorate.

100,000 persons, for the past two years the trend has been decreasing (Table 5.2). The brain drain that has characterized the health sector of the country over the years may be making it difficult to supply all health facilities with health professional.

Table 5.2: Doctor- and Nurse-patient Ratio in East Mamprusi District

Indicator	2004	2005	2006	2007	2008
Doctors per 100000 patients	1.98	1.9	1.9	1.7	1.65
Nurses per 100000 patients	12.8	27.3	29.4	27.2	24.8

Source: East Mamprusi District Health Directorate.

In 2004, there were about 2 medical doctors for a population of 100,000. However, this has gradually decreased such that in 2008, the doctor-patient ratio stood at 1.65 to a population of 100,000. Although, the nurse-patient ratio in the district has improved from 12.8 per every 100,000 persons in 2003 and 2004 to 29.4 in 2006 per

Access to Health Services

The location of health infrastructure in the district is an important factor in determining physical access. Physical access, defined as the ability of an individual to reach a health facility in less than 30 minutes, is quite high compared to other districts in the region. This

definition of access, however, does not consider the range of quality of health services provided and affordability to the patient as well as the time it takes to obtain transport to reach the health facility.

There are a number of factors that influence the decision to patronize health facilities. These include the income of the person or household relative to the cost of consultation and drugs as well as the cost of travelling to the health facility, the nature of the health need, and the level of education of the person. Table 5.3 presents different kinds of health facilities or health providers visited by inhabitants in times of sickness. In 2008, about 91 per cent of those who fell sick sought medical attention. The most heavily patronized health facility is the public clinic or hospital, which accounted for 41 per cent. About 20 per cent of those who were ill visited a private clinic or hospital while at least 10 per cent sought medical attention at the Traditional herbalists. Only 9 per cent of the sampled population in 2008 who fell ill within the three months prior to the survey bought drugs from a pharmacy or drug store.

Table 5.3: Healthcare Facilities Visited when Last Ill (%), 2008

Health Facility/Provider	All	Urban	Rural
Private hospital/clinic	20.6	7.7	15.5
Public hospital/clinic	41.1	17.3	28.6
Community health centre	8.0	0.5	2.9
Traditional healer	10.9	1.7	9.2
Religious Healing Centre	0.8	0.2	0.7
Chemical shop	9.0	4.3	6.7
None	9.7	1.0	5.5

Source: East Mamprusi District Health Directorate.

Picture 5.2: Outpatients waiting to be Served at the Hospital.

Although, most people who fell ill in 2008 sought medical attention, about 9 per cent who did not seek any medical attention provided varied reasons for their action. Most of them (66%) felt no need to do so while for 32 per cent, it was too expensive to seek medical attention (Figure 5.1).

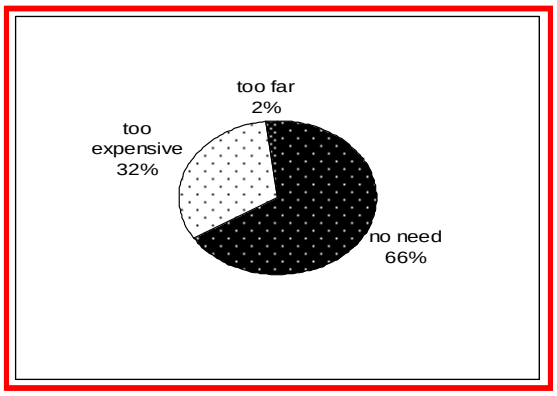


Figure 5.1: Reasons for not Seeking Medical Attention.

Table 5.4: Distance covered to Access a Healthcare Facility

Locality	Urban	Rural	All
Less than 1 km	28	13.6	41.6
1–3 km	9.2	19.2	28.4
4–5 km	0	14	14
More than 5 km	0.4	15.6	16
Total	37.6	62.4	100

Source: DAEA Household Survey, 2008.

Estimates for access to health facilities measured by distance covered to reach the nearest health facility show that health care facilities in the district are not adequate and they are unevenly distributed. One of the important reasons for low physical access is the highly dispersed population of the district increases the economic cost of accessing the facility. Although 70 per cent of all households travel up to 3 km to gain physical access to a health-care facility, rural households are disadvantaged. While about 98 per cent of urban dwellers travel up 3 km to reach a health facility, almost half (47.5%) of rural dwellers cover more than 4 km to access a health care facility (Table 5.4).

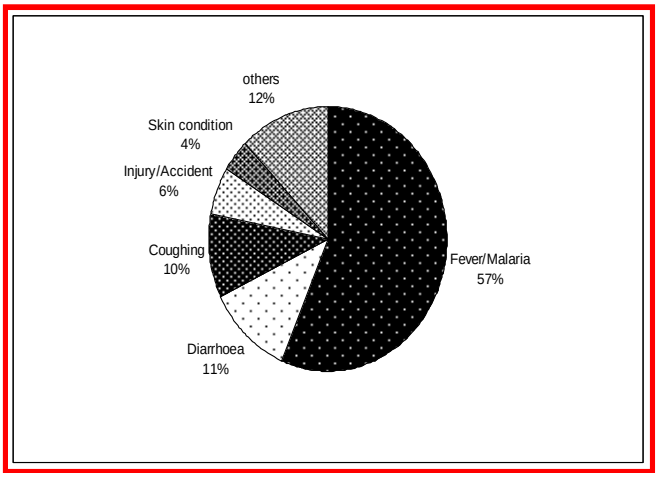


Figure 5.2: Type of disease/injury suffered, 2008.

Source: DAEA Household Survey, 2008.

Morbidity

The sixth MDG is concerned with combating HIV/AIDS, malaria and other diseases such as tuberculosis. The main target is to halt and reverse the spread of HIV/AIDS and the incidence of malaria and other major diseases. Malaria remains the leading cause of morbidity in the district, followed by pneumonia and anaemia (Table 5.5). From 2005, malaria cases were reported at the hospital and clinics and this figure far exceeds the total number of reported cases of the other three leading causes of morbidity. The results of the DAEA household survey confirm that 57 per cent of those who fell sick 3 months prior to the survey suffered from malaria (Figure 5.2.)

Measures which have been taken by households to prevent malaria attack are presented in Figure 5.3. The use of treated bednets by both adullt and children together constitute the most common measure adopted by households to prevent malaria attack. Though, it is not clear how the nets were obtained, whether they were purchased or distributed free, the use of the bednets seem to have been gaining grounds from recent promotion of the nets for controlling mosquito invasion at nights. Regular weeding of compound, spraying of houses and use of mosquito coil are the other important strategies that have been adopted by households to prevent malaria infection. Since malaria continues to lead mobidity in the East Mamprusi District more effort is required to reduce the prevalence of the disease in order to achieve the targets of the MDGs.

Table 5.5: Leading diseases in East Mamprusi District

Rank	2005	2006	2007	2008
1	Malaria	Malaria	Malaria	Malaria
2	Pneumonia	Pneumonia	Pneumonia	Pneumonia
3	Malnutrition	Typhoid fever	Gastroenteritis	Anaemia
4	Congestive heart failure	Anaemia	Anaemia	Malnutrition

Source: East Mamprusi District Health Directorate.

Health Status of Mothers and Children

Infant and Child Mortality

Child and infant mortality are critical determinants of life expectancy at birth. The fourth MDG also seeks to reduce child mortality by two-thirds between 1990 and 2015. There were inadequate data with respect to child mortality rate to track the progress being made towards this goal. The available data suggests that most of the deaths that occur among children are among infants, namely children less than a year old. The reported mortality situation has improved considerably since 2003, as shown in Table 5.6. In 2003, the district recorded 23.5 infant deaths per 1000 live births. Remarkably, this has decreased drastically to 2.6 infant deaths per 1000 live births in 2008. The household survey conducted in 2008 reveals a similar pattern. Of about 280 deliveries that were reported in the district in the 12 months preceding the survey, only four infant deaths occurred.

Besides mortality rates, one other indicator used to track progress towards reducing child mortality is the proportion of 1 year-old children immunized against measles. Immunization coverage improved between 2003 and 2006 in the East Mamprusi District (Table 5.6). However, in 2008, about 30 per cent of the children did not receive their Penta 3 and Polio 3 shots. The reduction in immunization coverage, if not addressed may pose a latent threat to child survival in the future.

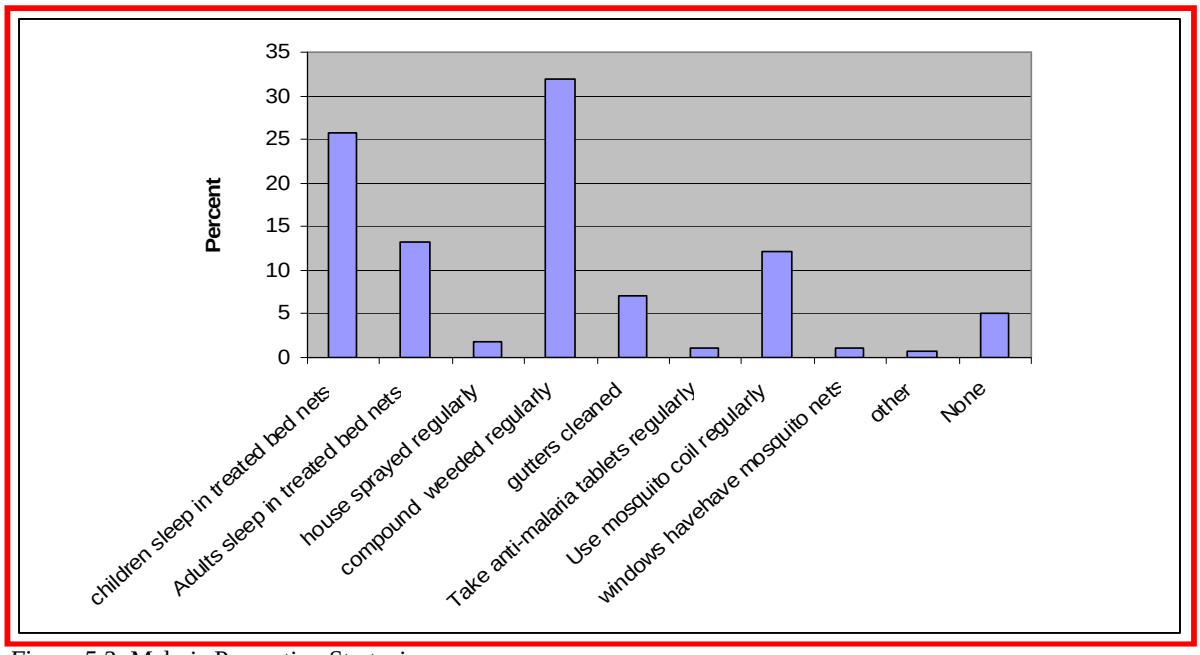


Figure 5.3: Malaria Prevention Strategies.

Table 5.6: Immunization Coverage and Infant Mortality Rate of Children in the East Mamprusi District

Coverage/Mortality Rate	Year	2003	2004	2005	2006	2007	2008
Vaccination coverage of Children	Penta 3	7707	7960	5161	4905	6276	4798
		(98.8%)	(98.13%)	(126%)	(116.5%)	(98.8%)	(73.46%)
	Polio 3	7460	7716	5081	4822	5853	4821
		(95.6%)	(95.12%)	(124.1%)	(114.5%)	(92.2%)	(73.82%)
No. and proportion of children immunized against childhood killer diseases		7707	7960	5161	4905	6276	4798
		(98.8%)	(98.13%)	(126%)	(116.5%)	(98.8%)	(73.46%)
Infant mortality rate per 1000 live birth		23.5	26.2	5.5	5.2	4.0	2.6

Source: East Mamprusi District Health Directorate.

Maternal Health, Etc.

Maternal deaths also reduced from 503.9 per 100,000 live births in 2003 to 42.1 per 100,000 live births in 2006. However, it has increased in recent years to 107 per 100,000 live births in 2008 (Table 5.7). The 2008 DAEA Household Survey results reported two child deaths which occurred before or during childbirth among 38 live births which occurred during the 12 months preceding the survey. The number of in-and out-patients in hospitals and clinics has increased considerably since 2003. The number of out-patients rose by 49 per cent of the 2003 value to a peak of a little over 100,000 in 2007 and eased off by about 9 per cent in 2008 (Figure 5.4). At the same time, the number of in-patients has gradually decreased by about 33 per cent between 2004 and 2008.

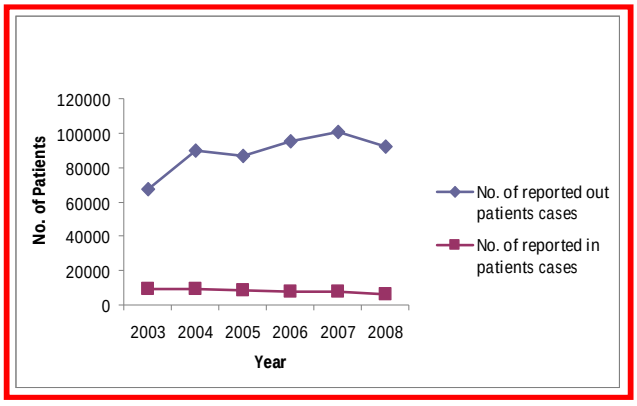


Figure 5.4: Hospital attendance in East Mamprusi District, 2003–2008.
Source: East Mamprusi District Health Directorate.

Table 5.7: Maternal Mortality Rate and Use of Natal Facilities in the East Mamprusi District

Year	2003	2004	2005	2006	2007	2008
Maternal Mortality rate per 100,000 life birth	503.9	302.4	347.4	42.1	102.2	107
Use of ante-natal facilities	10686	10937	7275	7621	6219	5195
Use of Post-natal facilities	5470	5815	4702	5629	4061	3356

Source: East Mamprusi District Health Directorate.

Picture 5.3: Beneficiaries Assessing NHIS in the East Mamprusi District.

Box 5.2: Health Exemption Programme

Exemption for diseases of public health importance (should include all 24 conditions in L.I 1313). This includes meningitis, cholera, malnutrition, typhoid, venereal disease, rabies, leprosy, and tuberculosis.

Exemption for ante-natal services (first four ante-natal clinic visits).

Exemption for children under 5 years (immunization services at child welfare clinics, malaria, measles, diarrhoea, and upper respiratory infection).

Exemption for the elderly, defined as people above 70 years (malaria, diarrhoea, degenerative joint pain, upper respiratory infection, and urinary tract infection).

Exemption for paupers and indigents.

Exemption for snake bites and bites by dogs suspected or confirmed to be rabid.

Source: January 1997 Presidential Announcement and November 1997 Ministry of Health Guidelines

National Health Insurance Scheme

The National Health Insurance Scheme (NHIS) was introduced to replace the cash and carry system of payment for medical care and it has been designed to improve access to health services. Table 5.8 shows an increasing number of people getting enrolled on the scheme with the highest proportion being dependants of contributors. Between the 2005 and 2008 the number of registered/covered members increased by about 279 per cent. As at June 2008, dependants constituted about 60 per cent of all beneficiaries of the NHIS in the East Mamprusi District. However, a lot of people are still not on the scheme and the predominant reason for non-registration or not being covered is the high premium charged by the scheme (Figure 5.5). Using the 2008 projected population estimate of 218,094, the East Mamprusi District Mutual Health Insurance cover 30.2 per cent of the population.

HIV/AIDS

There are reported cases of HIV/AIDS in the district (Figure 5.6). The incidence of the disease assumed an increasing trend since 2004. The highest HIV/AIDS cases recorded in the district occured in 2007, when about 180 persons were diagnosed to be infected. The number of cases in 2008 was, however, lower (about 160). The HIV/AIDS campaign should be intensified in the district to educate the population on the menace of the infection, while encouraging the people to undertake the voluntary counselling and test.

Table 5.8: National Health Insurance Status

Category	2005	2006	2007	2008*
SSNIT Contributor/ Pensioner	1286	2431	2522	2655
Informal sector	2101	6071	8908	10581
Aged (70+)	4230	8311	9992	11229
Dependants	9089	19202	34992	39366
Indigents	720	1560	1876	2067
Total	17426	37631	58269	65967

Source: East Mamprusi District Health Directorate.
*2008 data are up to June.

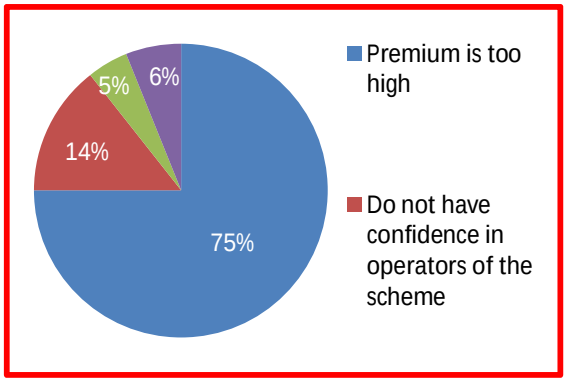


Figure 5.5: Reason for Non-Registration, 2008.
Source: DAEA Household Survey, 2008.

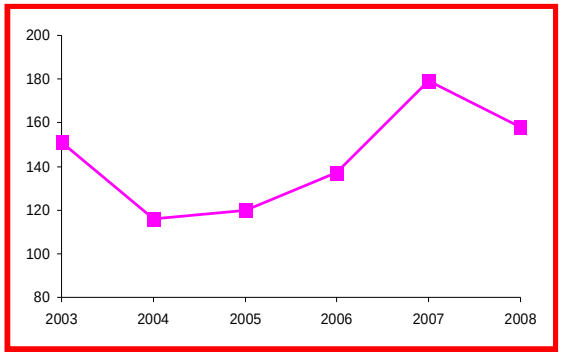


Figure 5.6: HIV/AIDS incidence in the East Mamprusi District.

Water and Sanitation

One of the targets of the seventh MDG is access to safe drinking water and basic sanitation. The goal is to reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015. Improved access to safe drinking water and basic sanitation will help to enhance the resource endowment of the people for greater investment.

Water Supply and Access to Safe Drinking Water

Access to safe drinking water in this District is limited. The nature of the sources of water in the East Mamprusi District is such that during the dry season, most of the water bodies dry up while the water table (of already poor underground water level) falls reducing aquifer yields of boreholes and wells. This persistently make water supply in the district very challenging. The people of the East Mamprusi District access water from a variety of sources, as presented in Table 5.9. These include public outdoor taps, boreholes, protected/covered wells, uncovered wells, rivers, and ponds (see Picture 5.4 for example). Only two communities, Nalerigu and Gambaga, have access to potable water supply from the mechanized pipe systems. The proportion of households depending on improved water sources has not substantially improved since 2003 (only 1.4% increase) (Table 5.9). More households in the rural areas depend on improved waster sources (35.9%) than those in the urban areas.


Picture 5.4: A Mechanized Borehole and River Water Supply in the East Mamprusi District

Table 5.9: Sources of Water and Proportion of Household that Depended on Them

Source of Drinking Water	2003	2008		
		Urban	Rural	All
Improved water source	49.4	14.9	35.9	50.8
Inside taps in dwelling or compound	0.9	1.3	0.4	1.8
Public outdoor tap	3.8	10.1	1.3	11.4
Borehole	44.3	11.0	25.0	35.8
Protected/Covered well	0.4	1.3	0.4	1.7
Rain water	0.4	–	–	–
Uncovered well	29.8	14.9	12.7	27.6
River/pond/lake	20.3	2.6	18.9	21.5

Sources: 2003 CWIQ Survey, DAEA Household Survey, 2008.

Problems of the Water Sector

Insufficient potable water facilities in the District were identified as the core challenge. The existing water facilities cater for 48.4 per cent of the population. 59 communities out of the total number of 143 in the District are without potable water. A good number of facilities are non-functional. The effect of inadequate access to potable water is that people drink from unprotected sources. This has the effect of increasing the incidence of water borne diseases like guinea worm diarrhoea, bilharzia, dysentery and cholera. There is low productivity as a result of ill health and loss of man-hours in the search for water. Low productivity results in mass poverty experienced in the District. The Most vulnerable groups are women and children. Three main causes identified for inadequate access to potable water are as follows: lack of maintenance of existing facilities, high cost of water facilities (high cost of bore-hole parts), low water table and inadequate District Assembly funds to support water and sanitation projects.

Sanitation

Sanitary facilities for both liquid and solid waste remain largely non-existent in most homes. As a result, most households (58.4%) dispose of their human waste around their environments (i.e. nearby bushes). Only 11.8 per cent have access to safe sanitation (Table 5.10). The disposal of human waste onto the nearby environment may have adverse environmental consequences. The use of KVIP and uncovered pit latrines for disposing

human waste is more common. The availability and, therefore, the use of KVIP improved between 2003 and 2008 by 4.7 per cent (Table 5.10).

Table 5.10: Toilet Facility in the East Mamprusi District and Proportion of Households with Access (%)

Toilet Facility	2003	2008
Safe sanitation	7.8	11.8
None/bush	91.7	58.4
Flush toilet	1.6	1.8
Pan or bucket	0.5	–
Covered pit latrine	0.8	2.7
Uncovered pit latrine	–	7.8
KVIP	5.3	10
Others	–	19.2

Source: 2003 CWIQ Survey, DAEA Household Survey, 2008.

Solid waste is usually dumped by households at elsewhere (47.2% in 2008) away from their individual homes (Table 5.6). The proportion of households engaged in this activity decreased drastically from 83.7 per cent in 2003 as more households use public dumping sites (18.8%). Some households also resort to burning or burry the refuse and this is more common now (2008). This suggests many households (81.8%) do not use improved solid waste disposal methods and this may expose the people to health risks.

Table 5.11: Solid Waste Disposal in the East Mamprusi District

Refuse Disposal	2003	2008
Improved waste disposal	3.5	19.2
Collected by refuse agency	–	0.4
Burned by household	12.2	28.8
Public provided dump	3.5	18.8
Dumped elsewhere	83.7	47.2
Buried by household	0.6	4.8
Other	–	–

Source: 2003 CWIQ survey, DAEA Household Survey, 2008.

Summary and Conclusion

MDGs targets on health are to improve maternal mortality rates, reduce child mortality rate, combat HIV/AIDS and other diseases. These are a major focus of the Medium-Term Development Plan of the East Mamprusi District which seeks to improve access to health services by providing more health infrastructure especially in rural communities. Health issues also focus fundamentally on longevity that is, improving the life expectancy at birth in the district.

Access to medical facilities are relatively high in the district as about 91 per cent of those who had fallen sick sought medical attention (visited either the private or public clinic/hospital, community health center or the chemical shop), as reported by the household survey in 2008. The most patronized health facilities in the district include the public and private clinic or hospital, traditional healer and chemical shops. The East Mamprusi District Mutual Health Insurance Scheme is estimated to have 30.2 per cent of the population as registered members.

Malaria continues to be the commonest diseases in the district and several strategies are adopted to prevent malaria attack. Most communities adopt the insecticide treated bednets for adults and children relative. Clearing of weeds in the compound and the use of mosquito coils are some of the other malaria prevention measures. However, some households are ignorant of malaria prevention and so do nothing to prevent the disease.

Maternal and infant mortality in the district have decreased compared to 2003 levels but at 107 per 100,000 live births, maternal mortality rate is still very high. The attendance of pregnant women at pre-natal clinics is relatively high compared with post-natal attendance although both are reducing compared to earlier years. The proportion of children immunized against all the childhood killer diseases has also declined from the 2006 levels.

Although relatively more households in the East Mamprusi District use improved water sources, about 50 per cent of the population depend on unsafe water sources, such as uncovered wells, rivers and ponds for drinking water. There is a perennial water shortage during the dry season as most of the water bodies dry up and underground water levels fall rendering boreholes and wells useless. Water quality is particularly very poor during the dry season when natural sources tend to dry up. Women, therefore, spend huge amounts of their labour time during the dry season fetching water. This affects women's potential access to employment and income-generating opportunities particular in areas where water supply is problematic.

Sanitation facilities needs to be improved in the district as most households use unsafe and environmentally degrading methods of liquid and solid waste disposal. This results in rampant littering of streets and drains, posing health and other hazards such as breeding of mosquitoes amidst perennial flooding. In order to meet the health, water and sanitation targets of the Millennium Development Goals (MDGs), the East Mamprusi District should strategize to combine provision of health, water and sanitation facilities with education and enforcement of district assembly's bye-laws on sanitation. This will help to reduce health hazards that reduce households' productivity and accentuate poverty and low life expectancy in the district.

CHAPTER 6

Resource Endowment of the East Mamprusi District

Introduction

Resource is considered as anything which can contribute to economic activity. They are categorized simply as land, labour and capital or as natural, human, physical, financial and social. The latter typology is attributed to DfID which considers resources as livelihood assets. The natural assets include nature made resources located on land and in or under water (sea, rivers and lakes); the human asset is the labour resources which includes various skills and qualifications; the physical asset include the man-made infrastructure; the financial asset are the funds in terms of money saving and credit needed to purchase other resources and social asset is the ability of individuals or communities to network and link up with one another and external community for sharing and support. It is argued that if the livelihood assets of individuals and communities are adequate then any strategy that is selected to achieve livelihood outcomes such as income, food security and environmental soundness will be effective. However, it is recognized that there is a vulnerability context that introduces shocks, trends and seasonalities, calling for structures and processes that are necessary to transform communities and ensure improved livelihoods. The shocks and trends may follow from political, macroeconomic and globalization; seasonal variation also follow natural climatic conditions. The structures are government and private sector interventions and the processes are the laws, policies, culture and institutions applied to enhance transformation.

Thus, what resources are available and how they are exploited in the East Mamprusi district is critical to the achievement of all the MDGs.

Natural/Environmental Resources

Geology

The geology of the District is largely characterized by the Voltaian Sandstone which covers about 74.22 per cent of the district area. This is followed by the Voltaian Shale, Alluvium, with coverages of 15.82 per cent and 4.98 per cent respectively. Also found in the district are Sandstone and Shale (4.76%) and granite which occurs least with a coverage of 0.22 per cent. The combination of these geological make up is a vital source of ornamental rocks for buildings, monuments, grave stones, bookends, beverage coasters, and tiles. These distributions are shown in the Table 6.1 and graphically in Map 6.1.[7]

Table 6.1: Matrix of Geology Distribution in the District (%)

Geology Type	Area (Hectares)
Alluvium	4.98
Granite	0.22
Sandstone and Shale	4.76
Voltaian Shales	15.82
Voltaian Sandstone	74.22

[7] Data for this chapter is contributed by CERSGIS, University of Ghana, Legon.

Total	100.00

Map 6.4: Geology Distribution in the District

Soil

The Ferric Lixisols and Dystric Leptosols are the dominant types of soils found in the district covering almost 73.59 per cent followed by Eutric Plinthosols, Dystric Planosols, Lithic Leptosols, Dystric Plinthosols, Eutric Leptosols which make up 23.61 per cent while four (4) others with coverages less than 1.00 per cent each made up the remaining 2.8 per cent of the district land area. 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, the second dominant soil type, are very shallow soils over hard rock or highly calcareous material or a deeper soil that is extremely grave and/or stony. Just like Lixisols, Leptosols are unattractive soils for agriculture. However, they could have some potential for tree crops or extensive grazing. Planosols — soils with light-coloured, coarse-textured, surface horizon that shows signs of periodic water stagnation and abruptly overlies dense, slowly permeable subsoil with significantly more clay than the surface horizon. Planosols, in their natural state, support sparse grass vegetation, often with scattered shrubs and trees that have shallow root systems that can cope with temporary water logging. Details of the distributions are shown in the map in Map 6.2 and in Table 6.2.

Table 6.2: Matrix of Soil Distribution in the District (%)

Soil Type	Area (Hectares)
Dystric Leptosols	31.78
Dystric Planosols	4.47
Dystric Plinthosols	2.73
Eutric Gleysols	0.70
Eutric Leptosols	1.59
Eutric Plinthosols	11.80
Eutric Fluvisols	0.51
Ferric Lixisols	41.81
Gleyic Lixisols	0.95
Lithic Leptosols	3.02
Plinthic Lixisols	0.64
Total	100.00

Land Cover and Land Use

Different land cover types exist in the East Mamprusi District. These land cover types have over the years been harnessed into varying land use activities. Using the current satellite imagery and ground information, six cover types with two dominant ones and their associated land use types were found in the district. Map 6.3 presents the spatial distribution while, the tabular distribution is displayed in Table 6.3. Shrubland was found to occupy about 49.77 per cent, of the landscape. Grassland the second dominant cover occupies approximately 38.01 per cent, whilst Woodland (semi-natural vegetation), croplands (Agriculture), Water bodies and Built-up surfaces (settlement/degraded areas) occupied 5.74 per cent, 5.29 per cent, 0.75% and 0.44 respectively.

Table 6.3: Matrix of Land Cover/ Land Use Distribution in the District (%)

Land Cover / Land Use Type	Area (Hectares)
Cropland-Cereals	5.29
Grassland	38.01
Settlement/Degraded	0.44
Shrubland	49.77
Water Bodies(Dams)	0.75
Woodland	5.74
Total	100.00

Land Suitability for Selected Crops (Major Crops)

The major traditional crops cultivated in the district include maize, sorghum, millet, soya, groundnuts, cowpeas, sweet potatoes and rice. Maps depicting soil suitability for selected major crops using a set of agricultural and socio-economic conditions

prevailing in the district (defined in terms of Land Utilization Types based on rainfall cropping) at various farm input levels are presented in Table 6.4 and Maps 6.4 to 6.6.

Map 6.5: Soil Distribution in the District

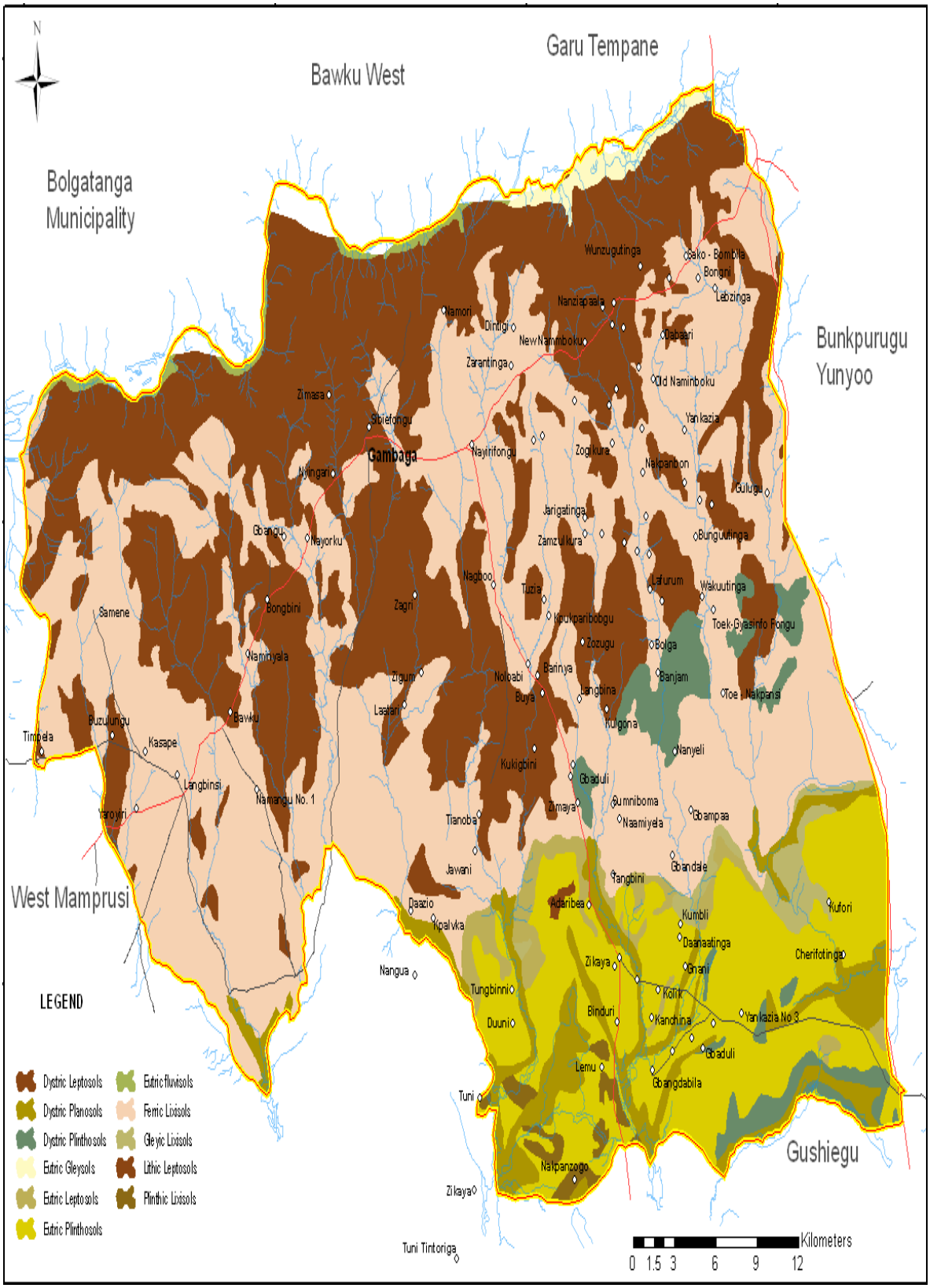

N
Garu Tempane
Bawku West
Bolgatanga Municipality
Bunkpurugu Yunyoo
Gushiegu
West Mamprusi
Gambaga
Wunzugutinga
Sako - Bombila
Bongini
Lebzinga
Namori
Dintigi
Nanziapsala
New Naminboku
Dabaari
Zarantinga
Old Naminboku
Zimasa
Sibiefongu
Yankazia
Nayirifongu
Zogikura
Nyingari
Nakpanboon
Gulugu
Jarigatinga
Gbangu
Nayorku
Zamzukura
Bunguutinga
Nagboo
Tuzia
Lafurum
Wakuutinga
Samene
Zagri
Bongbini
Kpukparibobgu
Toek-Gyasinfo Pongu
Zozugu
Bolga
Naminyala
Barnya
Zigum
Nolobabi
Banjam
Buya
Langbina
Toe Nakpansi
Lastari
Bawku
Buzulungu
Timpela
Kasape
Kulgona
Nanyeli
Kukigbini
Langbinsi
Namandgu No. 1
Gbaduli
Yaroyiri
Zimaya
Sumniboma
Tianoba
Naamiyela
Gbampaa
Jawani
Gbandale
Yangbini
Daazio
Adaribea
Kufori
Kpalvka
Kumbli
Daanaatinga
Cherifotinga
Zikaya
Nangua
Gnani
Tungbinni
Kolit
Blinduri
Duuni
Kanchina
Yankazia No 3
Gbaduli
Lemu
Gbangdabila
Tuni
Nakpanzogo
Zikaya
Tuni Tintoriga
LEGEND
Dystric Leptosols
Dystric Planosols
Dystric Plinthosols
Eutric Gleysols
Eutric Leptosols
Eutric Plinthosols
Eutric fluvisols
Ferric Lixisols
Gleyic Lixisols
Lithic Leptosols
Plinthic Lixisols
Kilometers
0 1.5 3 6 9 12

Table 6.4: Attributes of Land Utilization Types

Attributes	Low Inputs	Intermediate Inputs	High Inputs
Produce and production	***Rain-fed cultivation*** 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.

Physical Resources

Transportation and Communication Infrastructures

Access roads are available to some communities. The district has about 222.03 km length of trunk roads, with about 1770 km of the road being Feeder roads. Accessibility becomes difficult, especially during rainy season as a result of the unpaved nature of some of the roads. Gambaga and Nalerigu have telephone facilities but have limited lines which need to be expanded.

Socio-economic Resources

Socio-economic facilities and infrastructure are the physical and service inputs that facilitate the production and exchange process in any economy. Existing socio-economic facilities in the district include health facilities, schools, water and sanitation facilities, and markets. Some of these facilities are inadequate, and most are in deplorable conditions.

Health Infrastructure

There are a number of health institutions providing variety of health services. The distribution of these facilities in the East Mamprusi District is as shown in Table 6.5. From the Table 6.5, it can be seen that the district has one hospital and 13 clinics making a total of 14 health facilities out of 113 communities within the entire district. The hospital is located at Zambulgu. Generally shortage of qualified personnel and access to health facilities by remote communities pose a great danger to inhabitants of the district.

Table 6.5: Matrix of Health Facility Distribution in the District

Type of Facility	No. of Settlement	No. of Facilities
Hospital	1	1
Clinic	13	13
Health Centre	0	0
Total	14 communities out of 113	14

Educational Infrastructure

The distribution of schools in this district is shown in Table 6.6. Of the 113 communities within the East Mamprusi district, only 37 (32.74%) of them have at least one (1) educational facility, i.e., a KG/Creche/ Nursery, Primary, Junior or Senior High School. There are 19 KGs/Creches/Nurserys in 16 communities, 42 Primary schools can be found in 36 communities, 19 Junior High Schools in 18 communities and 12 Senior High Schools (SHS) located in exactly 12 communities.

Table 6.6: Matrix of Education Facility Distribution in the District

Type of Facility	No. of Settlement	No. of Facilities
KG/Creche/Nursery	16	19
Primary	36	42
Junior High School	18	19
Senior High School	12	12
Total	37 communities out of 113	92

From the above, it can be deduced that, each of the 12 communities has one SHS, whereas, at least one JHS is accessible in each of 18 communities within the same district. The total number of schools is 92.

Gross enrolment rate for girls of school-going age is 44.7 per cent, or 7,992 girls out of a total of 17,883 of children of school-going age actually attend school. The people/teacher ratio (PTR) within the district is 53 to 1.

Water and Sanitation

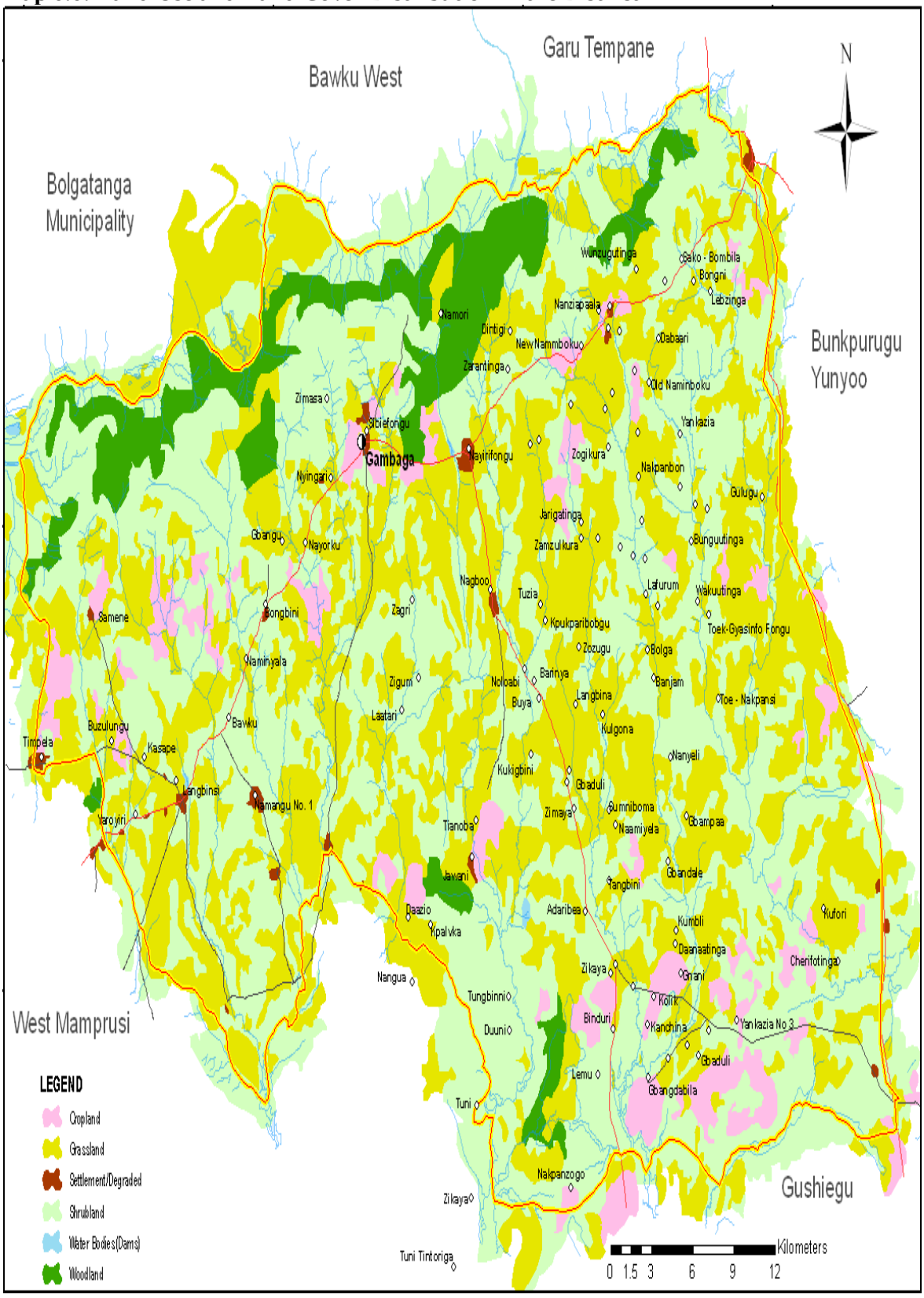
Access to safe drinking water in this District is limited. Of a total 113 settlements in the district, 84 (amounting to 51.2%) have access to potable water while 59 (48.8%) communities are without potable water. There are two standpipes, and 141 boreholes with hand pumps, serving less than half of a total population of 113,536 people. There are also one 161 Hand-Dug Wells (HDW) in the district bringing the total number of facilities to 305, but a good number of the facilities mentioned so far are non-functional. As a result, the inhabitants are dependent on the boreholes because they are relatively more reliable than the hand-dug wells which are not deep enough and thus, do not yield water all year round. The consequence of insufficient access to potable water is that, people drink from unprotected sources which leads to increases in the incidence of water borne diseases like diarrhoea, bilharzia, dysentery and cholera.

Table 6.7: Matrix of Water Facility Distribution in the District

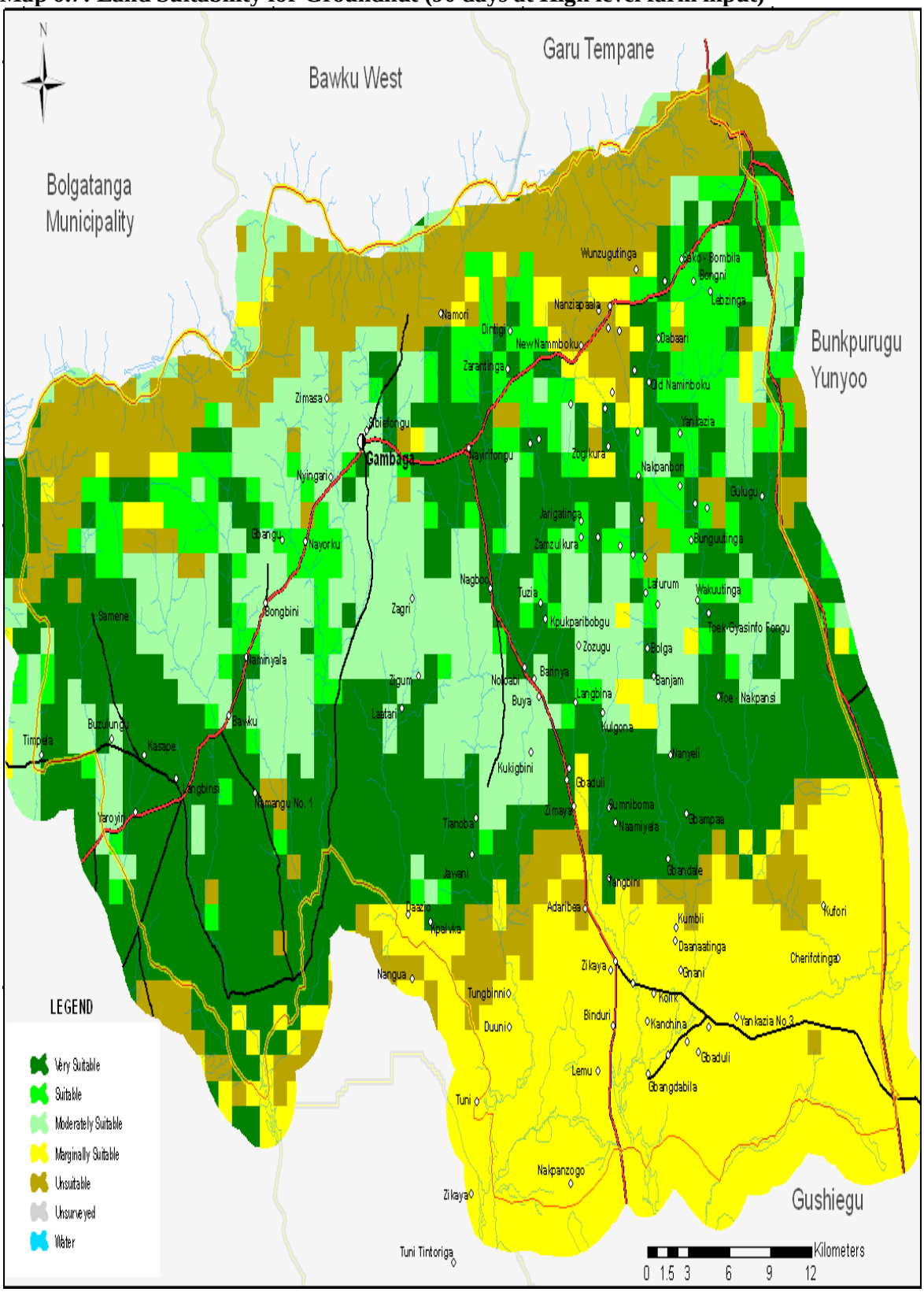
Type of Facility	No. of Settlement	No. of Facilities
Borehole	71	140
Hand-dug well	40	174
Stand Pipe	1	4
Total	77 communities out of 113	305

There are 362 sanitation facilities in use in the District made up of 331 pit latrine and 31 Kumasi Ventilated Improved pit latrine (KVIP).

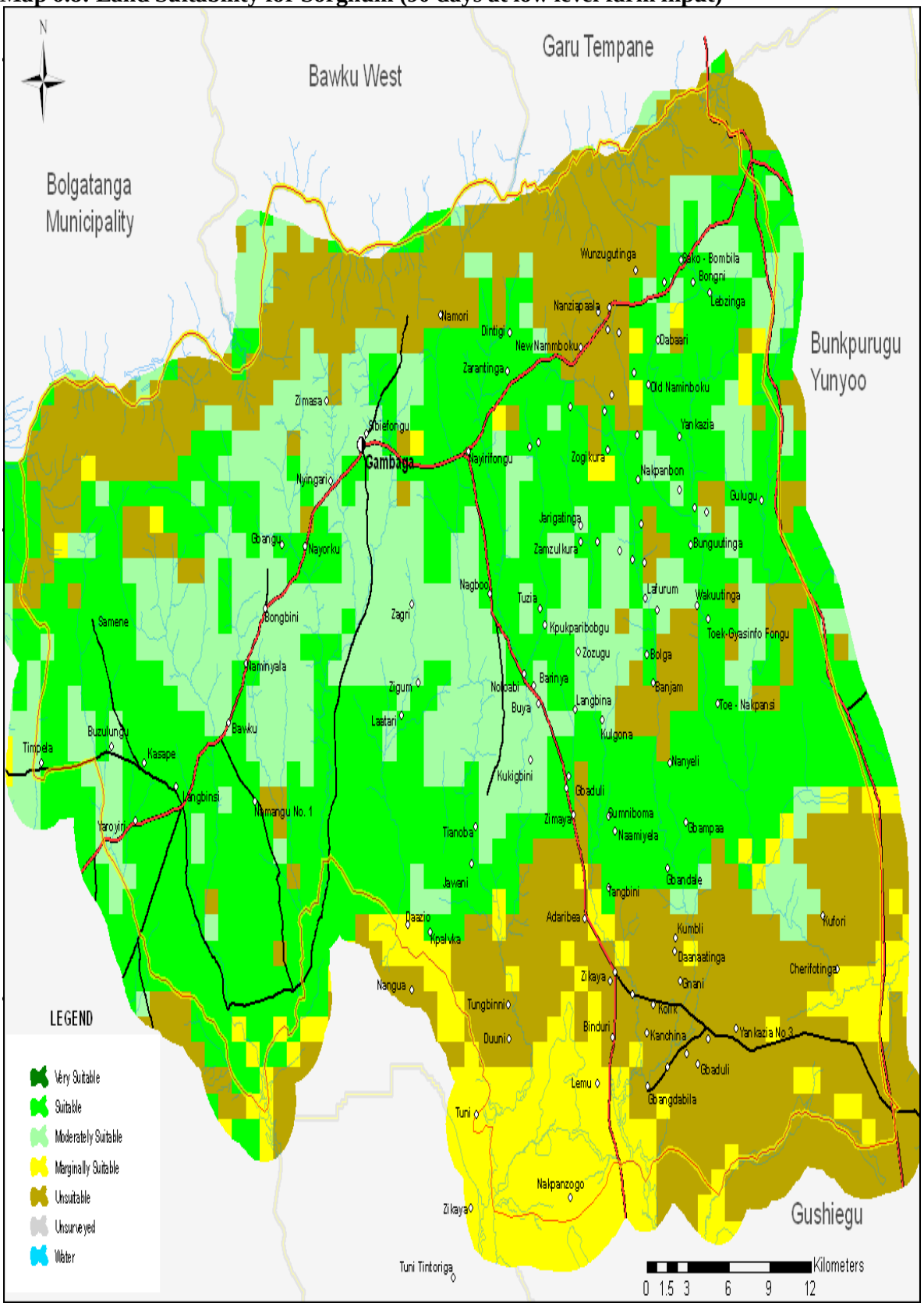
Map 6.6: Land Use and Land Cover Distribution in the District



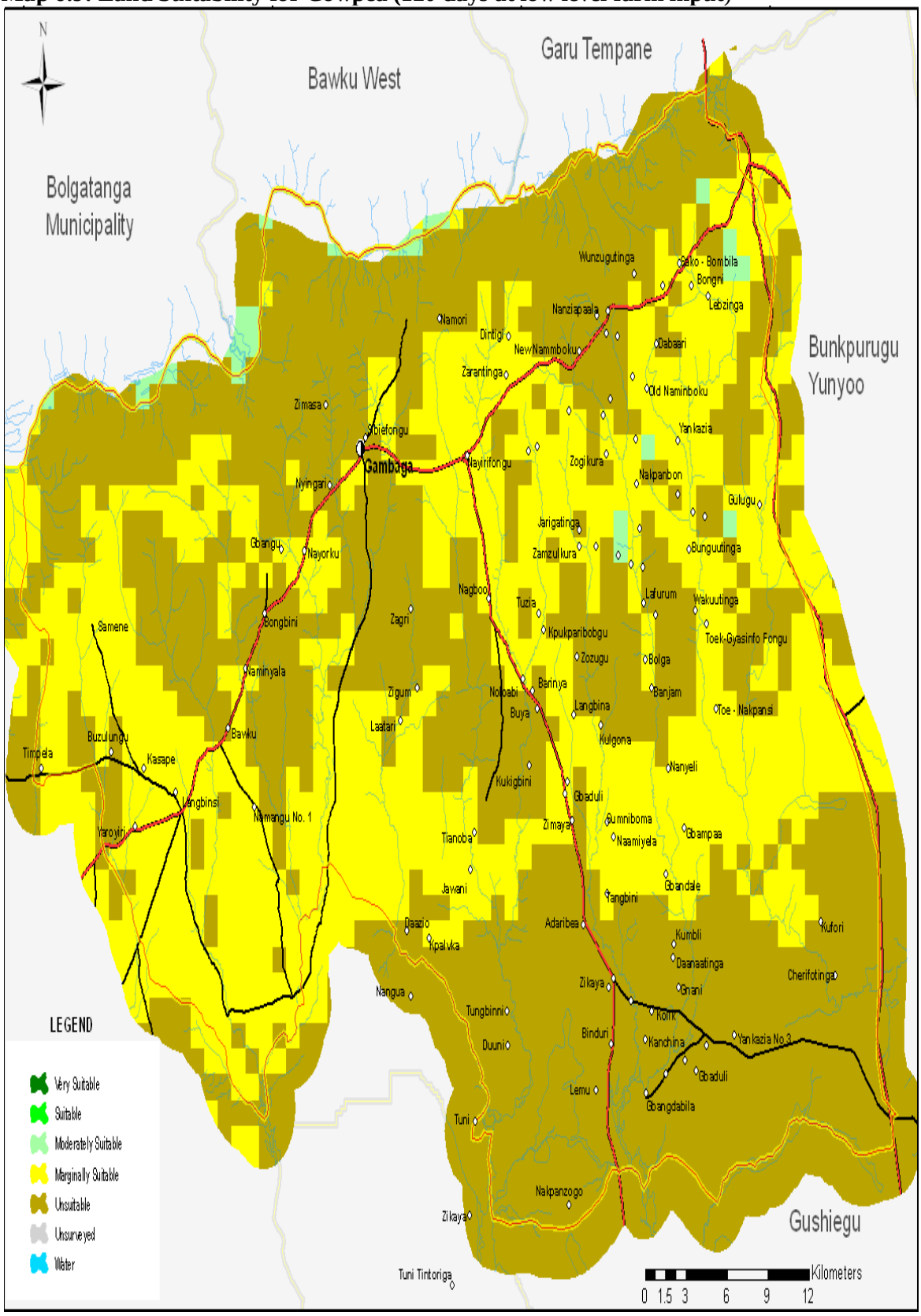
Map 6.7: Land Suitability for Groundnut (90 days at High level farm input)



Map 6.8: Land Suitability for Sorghum (90 days at low level farm input)



Map 6.9: Land Suitability for Cowpea (120 days at low level farm input)



Map 6.10: Transportation Network

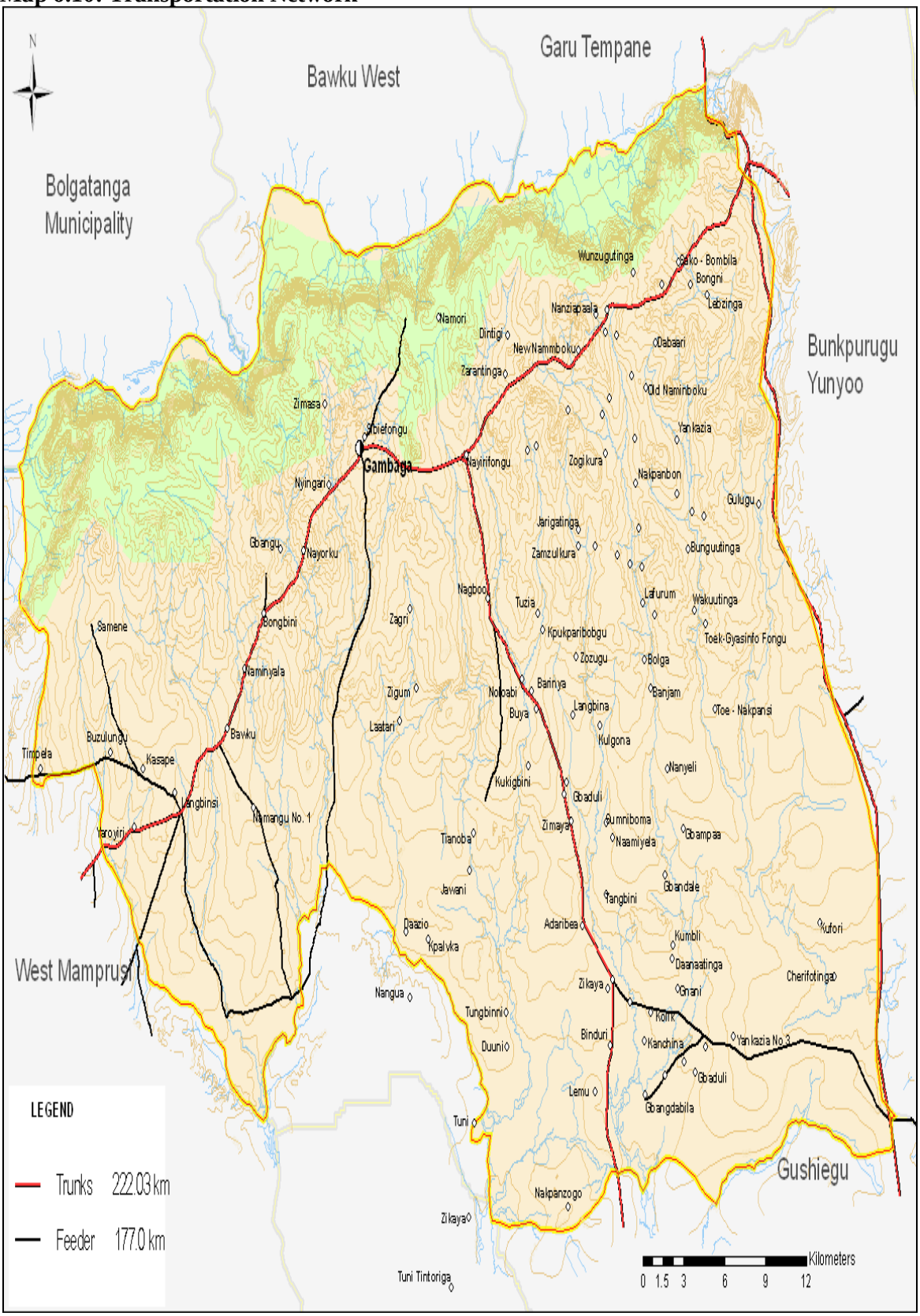


Table 6.8: Matrix of Sanitation Facility Distribution in the District

Type of Facility	No. of Settlement	No. of Facilities
Pit Latrine	1	331
KVIP	5	31
Total	6 communities out of 113	362

Markets

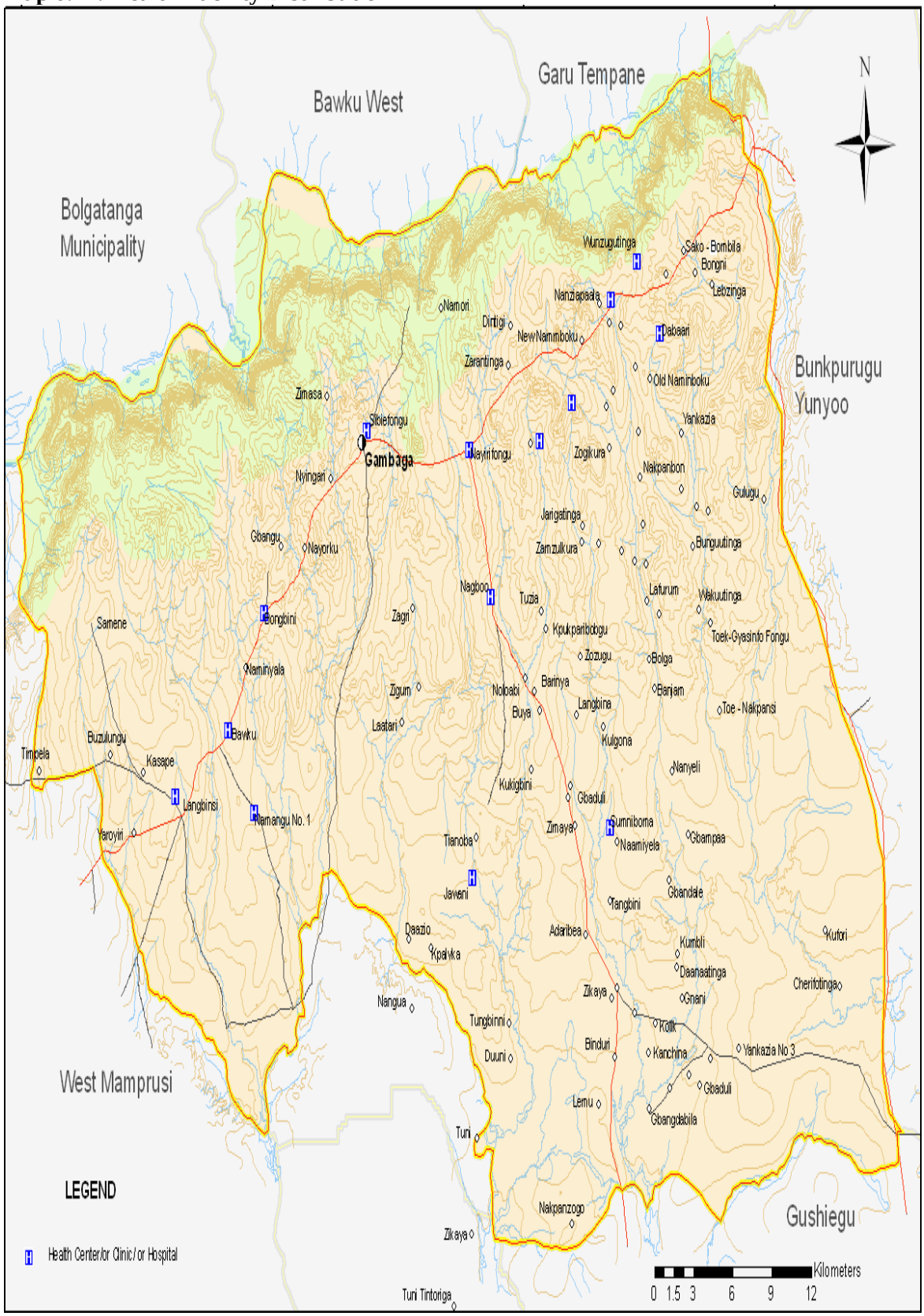
Local markets, which vary in size and importance, are located in major settled communities. Markets in the area are classified into two categories, namely: Daily markets and Periodic markets. The major market centres are Nalerigu, Gbintiri, Sakogu, Langbinsi and Nagboo. The markets at Langbinsi and Nalerigu have the required facilities for modern markets. The others are mostly opened spaces with sheds made of mainly local materials. These are the brisk commercial and business centres in the district, which attract a lot of people.

Human Resources

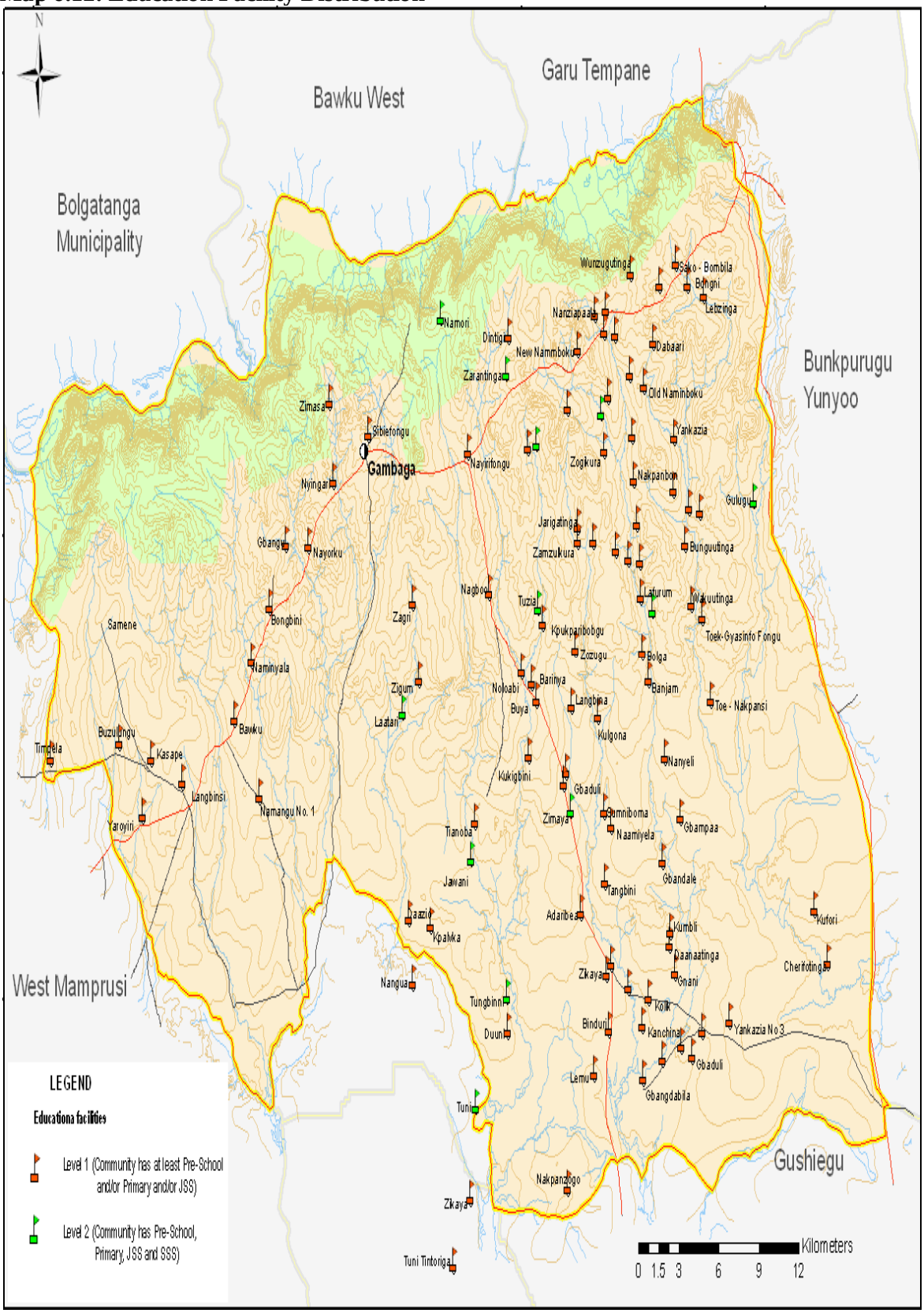
Population

According to the 2000 Population and Housing Census, the population of the district is 180,877 of which 92,332 (51%) are female while 88,545 (49%) are male with an average population density of 59 persons per square kilometre. The average household size is 7.7. The dominant ethnic groups in the District are the Mamprusi, Bimobas and the Konkombas while the Moshis, Talensis, Hausa, Fulanis and Chokosis form the minority. Of these ethnic groupings, majority of the people are Moslems. There are, however, a number of Christians and Traditional Religion worshipers in the District.

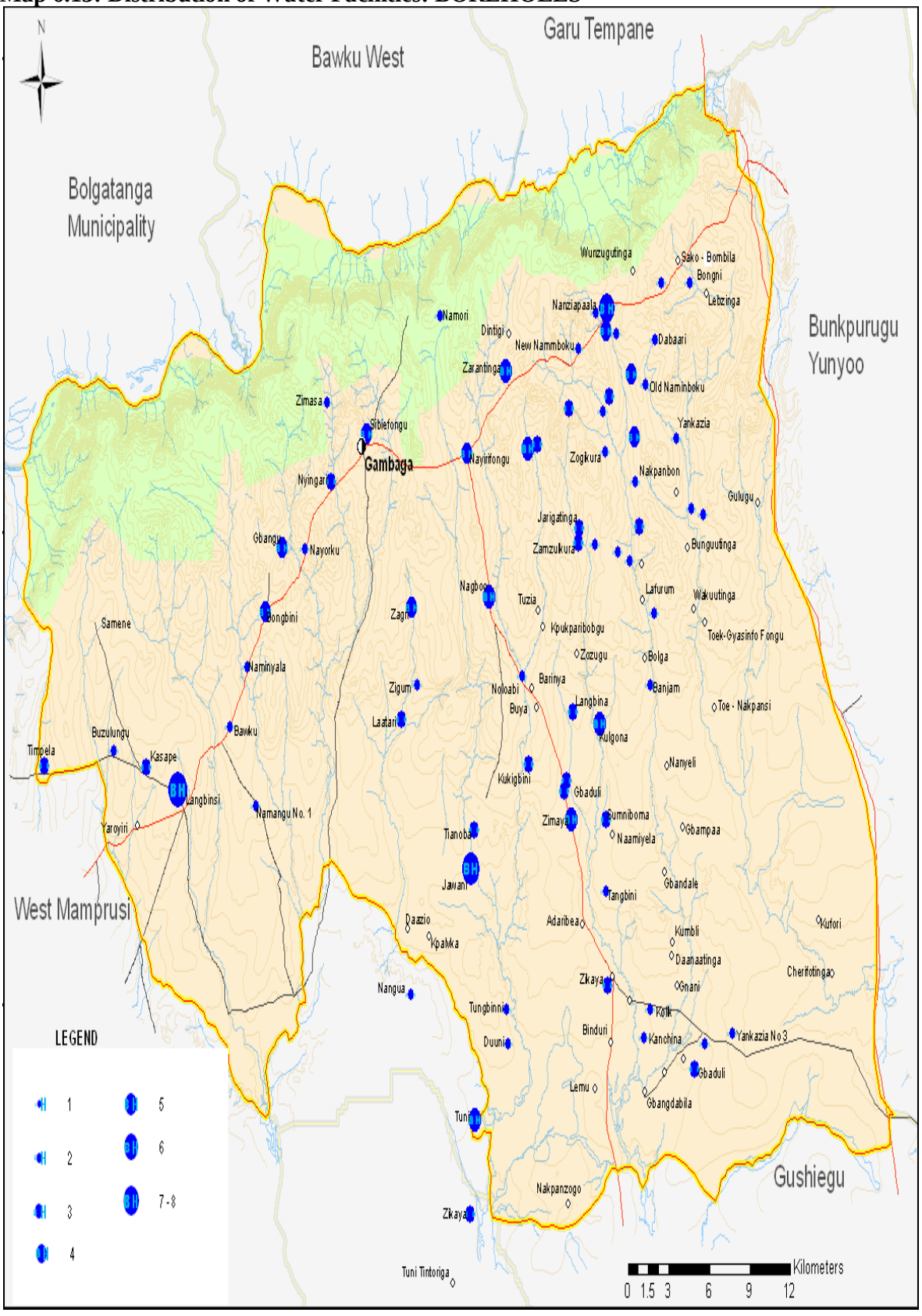
Map 6.11: Health Facility Distribution



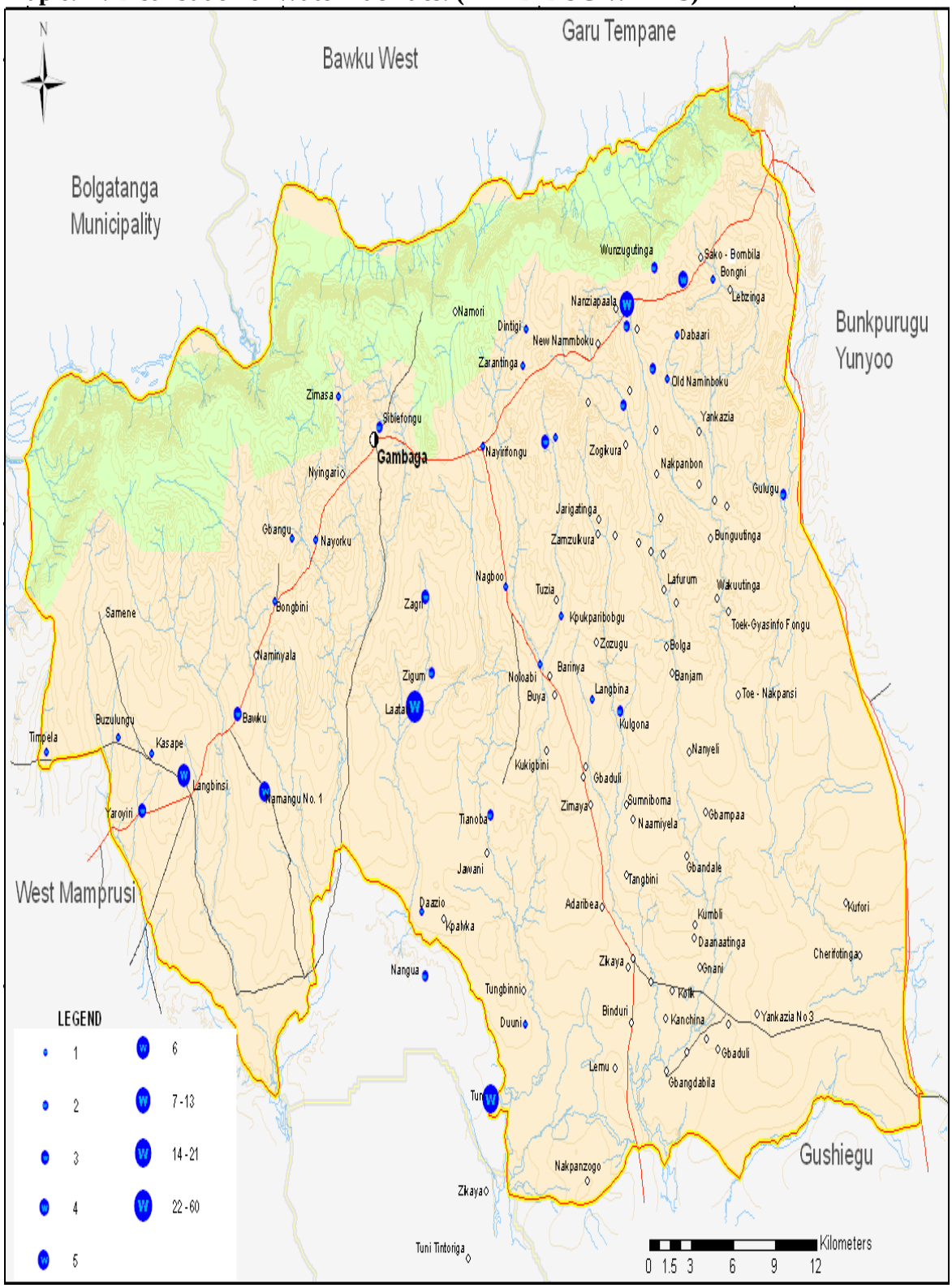
Map 6.12: Education Facility Distribution



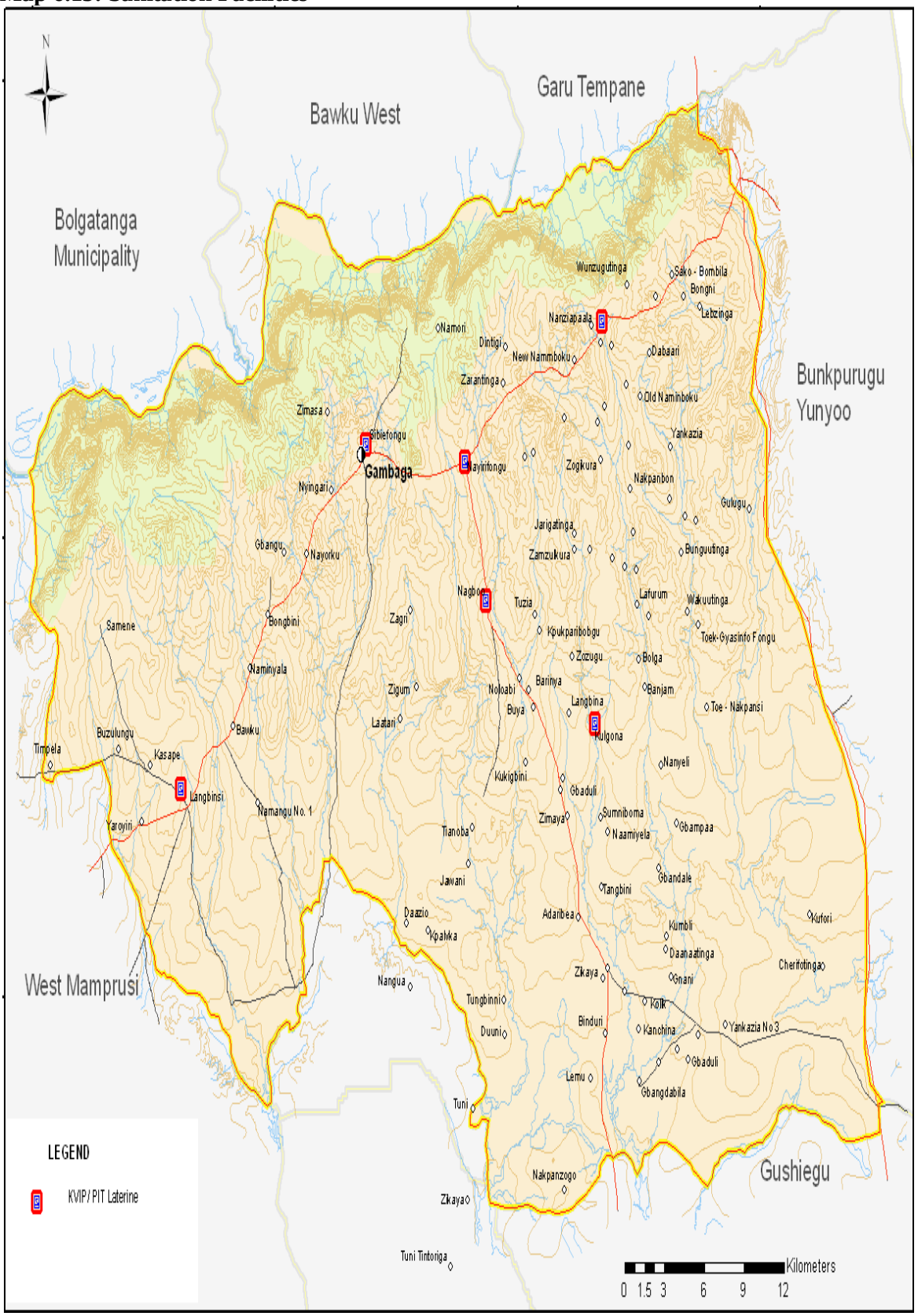
Map 6.13: Distribution of Water Facilities: BOREHOLES



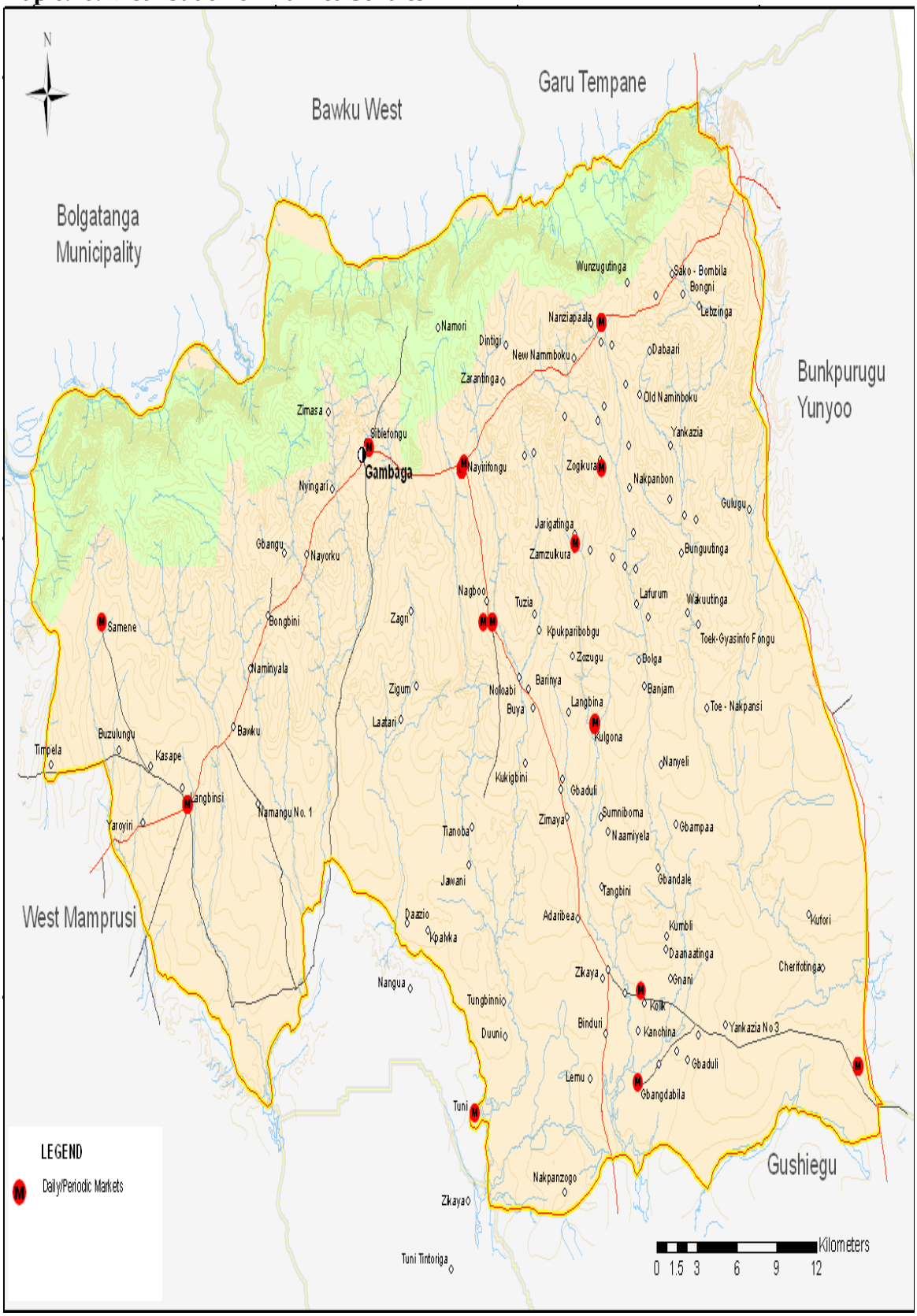
Map 6.14: Distribution of Water Facilities: (HAND-DUG WELLS)



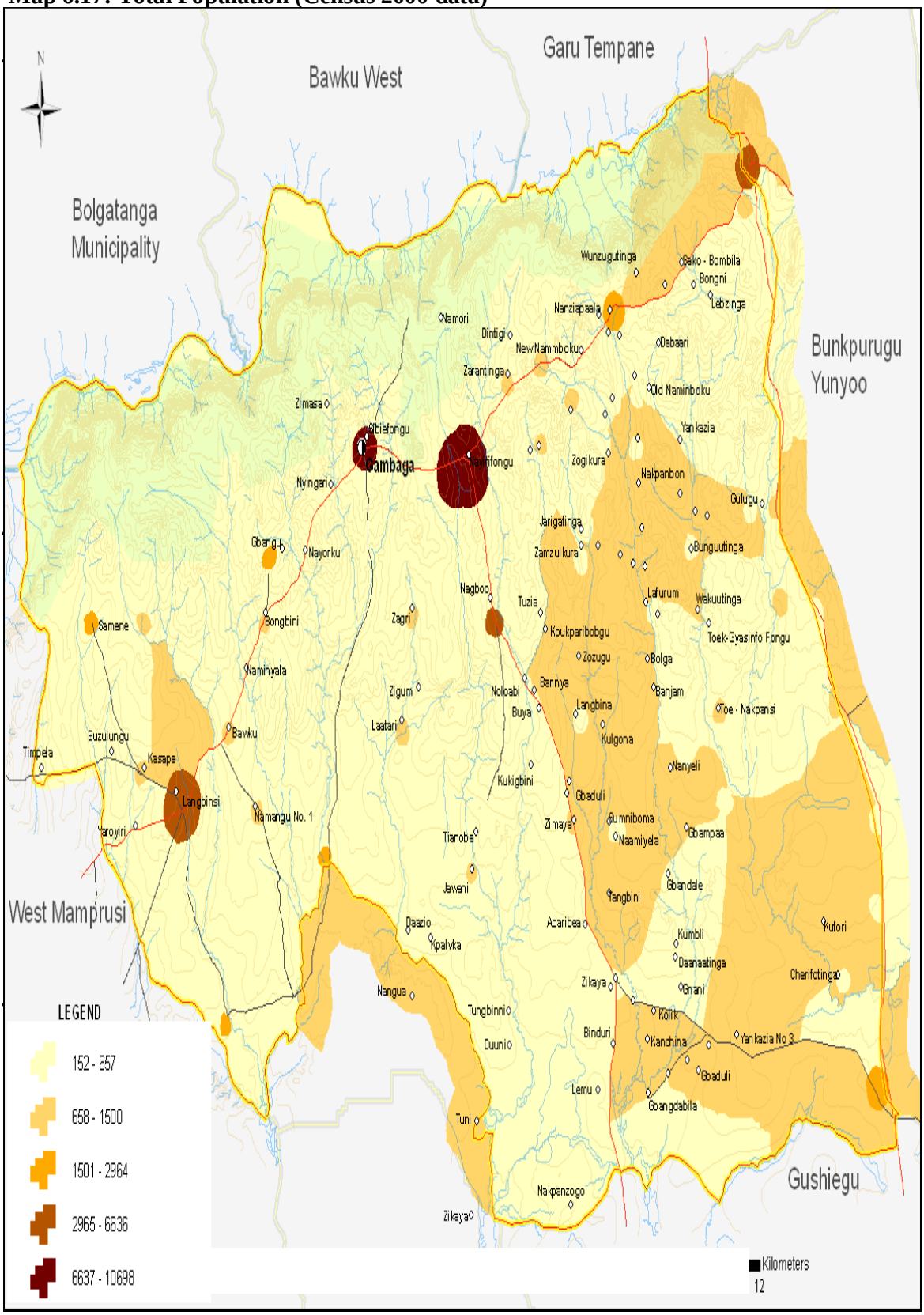
Map 6.15: Sanitation Facilities



Map 6.16: Distribution of Market Centres



Map 6.17: Total Population (Census 2000 data)



Utilization and Constraints in Resource Endowment

Introduction

In this chapter we report on how the district 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 East Mamprusi District.

The resource endowments' utilization is key to determining the range of livelihood opportunities available to all individuals and households in the District. 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– influences the consumption and investment decisions of households. The consumption and investment tradeoffs 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).

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 secure 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 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 East Mamprusi District

Human Resources Utilization

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 bear in mind the potentials and aspirations of individuals and the prospective ability of the society.

The medium term development plan of the East Mamprusi District Assembly is *to improve the quality of life of the people through education.* This objective also reinforces the GPRS II goal on human resource development programme that emphasizes, among others, on 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 District 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 a very large sector of low productivity and relative low income (the subsistence agricultural sector) also employing the largest sector 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 that include 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 district. The public and the formal private sector employ about 14 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 85 per cent.

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

Main Employer	2000	2003	2008	Avg. (2000–2008)
Public	3.5	7.7	1.8	4.3
Private Formal	21.8	1.3	6.2	9.8
Private Informal	73.7	89.7	91.2	84.9
Others	1.0	1.3	0.9	1.1

Source: Ghana Statistical Service, 2000 Population and Housing Census; CWIQ 2003 and 2008 Household Survey.

There are, however, large proportions of the human resource that are not employed. Table 7.2 presents the unemployment rates for different periods for the East Mamprusi District in relation to the whole country. Based on the 2000 census, 2003 CWIQ and the DAEA 2008 Household survey data, the unemployment rate (15+) has been on the increase in the district. Joblessness increases are high among the rural areas of the district than the urban, indicating that relatively more

people in the rural District find it difficult finding to secure jobs in the District.

Table 7.2: Estimates of Unemployment Rates (%) for East Mamprusi District

Age Group Year	Adult (15+)			Youth (15–24 years)	
	2000	2003	2008	2003	2008
Ghana	10.4	5.5	–	–	–
Men	10.1	49.0	–	15.1	–
Women	10.7	49.6		16.4	–
East Mamprusi		3.0	–	–	–
Men	–	–	32.0	–	27.7
Women	–	–	33.0	–	36.5
All	–	–	32.5	–	32.1

Source: 2000 Census, 2003 CWIQ and DAEA Household Survey, 2008.

Table 7.3: Under-employed Persons by Industry, Status and Sector (%)

Industry	*%*
Agriculture & Related Activities	86.2
Manufacturing	0.4
Construction	0.8
Finance	0.8
Wholesale & Retail Trade	7.5
Community/Social Services	1.2
Employment Status	***%***
Self-Employed	6.0
Self-Employed, no employees	44.0
Casual Employee	0.4
Regular Employee	2.0
Domestic Employee	2.8
Unpaid Family Employee	44.0
Economic Sector	***%***
Public	2.0
Private Formal	3.6
Private Informal	84.4
NGO's/International Organizations	0.0
Other	0.0

Source: 2003 CWIQ Survey, GSS.

The incidence of underemployment among the adults in the District is an indication of the fact that the human resource in the District is not being utilized to its maximum capacity. Table 7.3 presents the 2003 CWIQ survey results of the extent of underemployment in the East Mamprusi District. Agriculture and related activities account for about 86.2 per cent of the underemployed, with most of the under-employed operating in the private informal sector (84.4%).

Infrastructure Utilization in the District

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.

Road and Other Transport Infrastructure

The district is physically accessible by road and footpath. The principal modes of transport throughout the district's roads and footpaths are vehicles, motor-cycles, bicycles, donkey carts and walking. The use of motor-cycles and bicycles is becoming increasingly widespread in both the towns and the rural settlements.

The general development of roads in the District is concentrated within the core of the District. The Department of Urban Roads indicates that the district has only 10.7 km of paved or tarred surfaces (Nayork, 0.7 km, and Gambaga to Nalerigu 10.0 km) and 63 km of unpaved/untarred roads (Mimima to Sakogu, 41.0 km; Nalerigu to Gushiegu, 22.0 km). About 147 km engineered road, 38.4 partially engineered and 99.8 km non-engineered road. Due to the nature of the roads the major transport service providers, in terms of road

use for people travelling within and outside the District include the Ghana Private Road Transport Union (GPRTU) of the Trades Union Congress (TUC), who travel long distances whilst the Metro Mass Transit, individual/privately owned and/operated trucks, mini-buses serve, travellers. Various transport facilities of institutions also go a long way to augment transportation services within the District. The time taken by households included in the 2008 survey to reach where the public transport is accessible is shown in Table 7.4. Most of the rural dwellers (66.9%) use other means of transport, notably walk, for about 30 or more minutes before they could have access to public transport compared with about 28.8 per cent of the households in the case of the urban area and on the average about 54.5 per cent of the households for the district.

Table 7.4:Access to Public Transport in East Mamprusi District

Public Transport	Urban	Rural	All
< 14 minutes	34.2	17.4	23.0
15-29 minutes	37.0	15.4	22.5
30-44 minutes	17.8	18.1	18.0
45-59 minutes	9.6	14.6	13.1
> 60 minutes	1.4	34.2	23.4

Schools/Banks/Hotels

The rate at which education provision, especially private basic is expanding in the district is quite impressive such that between 2005 and 2008 the number of private schools at the basic level increased by about 350 per cent, while an additional senior high school was added. Both trained and untrained teachers are utilized in the delivery of basic education. The proportion of children/ adults in schools for formal education and training in the District, however, are comparable to national averages. In the district, gross enrollment rates are lower than the regional and the national averages for all levels of education. The quality of teachers available in the schools is crucial in delivery of quality education. Hence, efforts should be made to assist the untrained teacher to upgrade themselves, as the district looks for ways to attract trained teacher into the schools.

There are two commercial banking facilities in the district; one community bank in Gambaga (Picture 7.1) and a branch of the bank in Nalerigu. In addition, there is one rural bank, BESSFA Rural Bank in Nalerigu, with its headquarters in Garu. Due to inadequate numbers of financial institution in the district more rural dwellers (59.4%) trek for 60 minutes or more to access banks compared to 15.9 per cent of urban dwellers (Figure 7.1). About 50 per cent of all loan applications made to the community bank were approved and more loans were given to women than men (Figure 7.2). However, about 84.5 per cent of all loans disbursed were consumption loans and only 3.8 per cent went to agriculture or cottage industry. (Table 7.5)

Table 7.5: Number of Public and Private Schools in the East Mamprusi District

School	2005	2006	2007	2008
Public Basic	79	67	76	80
Private Basic	2	2	8	9
Public Secondary	1	1	1	2
Private Secondary	–	–	–	–

Source: East Mamprusi District Education Directorate.

Picture 7.1: Front View of the East Mamprusi Community Bank.

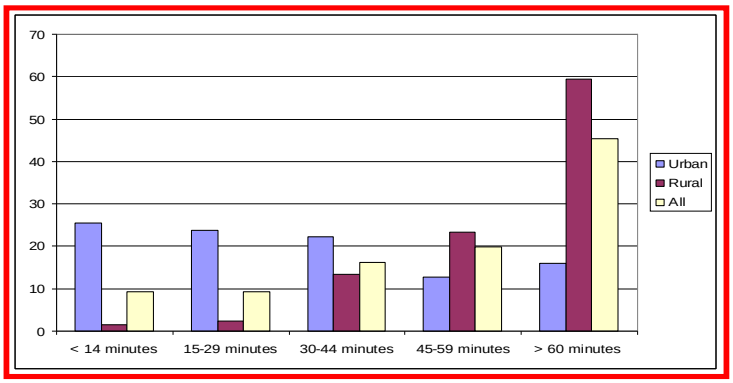


Figure 7.1: Access to Financial Institutions, 2008.

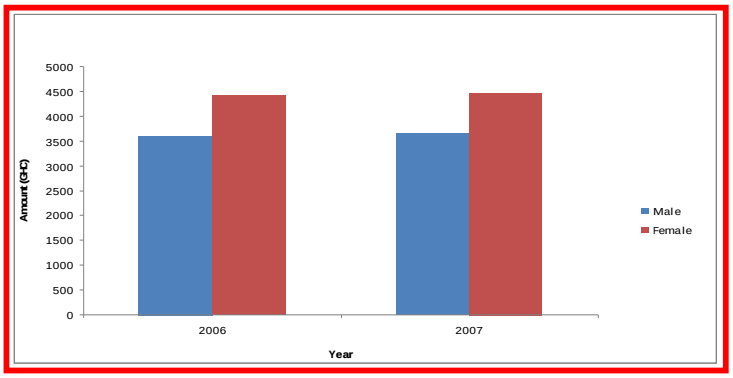


Figure 7.2: Loan Disbursed by East Mamprusi Community Bank in 2008 by Gender.

Table 7.6: Loan Disbursed by East Mamprusi Community Bank in 2008 by Industry

Sectors	Amount GH¢	Percent
Salary loans	330454.91	84.5
Commercial	27168.11	7.0
Cottage Industry	14687.19	3.8
Transport	794.30	0.2
Farming	14755.55	3.8
Corporate	1956.00	0.5
Construction	1070.00	0.3

Information (Radio, Television and ICT)

Telecommunication is acknowledged to be a critical infrastructure sector throughout the world. The growth and development of telecom services has a direct and significant impact on the efficiency, competitiveness and growth of an 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 district. Cellular mobile telephony continues to bring modern telecommunication services to the District. Thus the mobile telephony has become an effective tool, not only to bridge the urban-rural digital divide, but also has led to a catch-up with the rest of the country.

Over the past few years, the district has seen a phenomenal increase in the erection of masts for cellular mobile telephony delivery. Inhabitants of the East Mamprusi District can communi-cate on the telecommunication networks of Vodafone, MTN and Tigo. Other companies are installing their infrastructure to provide

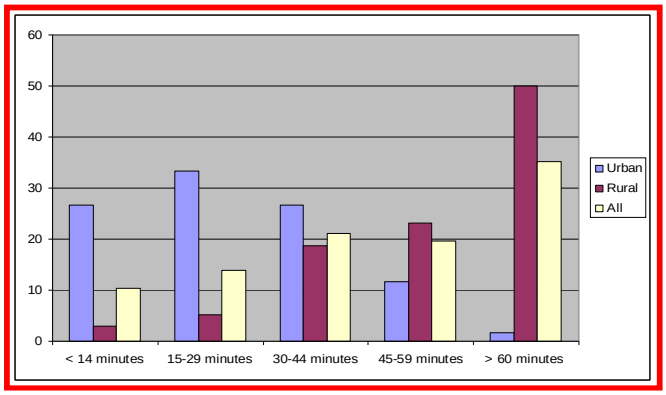


Figure 7.3: Access to Nearest Telecommunication Facility, 2008.

mobile services. It is unearthed that telecom services are more available to the urban dwellers than those in the rural areas of the district (Figure 7.3).

Picture 7.2: GBC Radio and Television transmitter station at Gambaga.

The electronic media landscape in the District has been growing at a gradual but steady pace. There is a Ghana Broadcasting Corporation (GBC) radio and television transmitter in the district that facilitates transmission of GBC's radio and television signals.

Housing, Water and Sanitation

Housing

According to the 2000 population and housing census, rooms in compound houses are the predominant type of dwelling for households in the East Mamprusi District (56.7%), followed by semi-detached houses (18.1%) and separate houses (9.0%). Mud/mud brick/earth and cement or concrete continue to be the main materials used for construction in the district, while thatch made from grass, corrugated metal and mud/mud bricks are the three main roofing materials in the district. A large majority of households in the district live in dwelling units owned by themselves (83.6%), while about 3.1 per cent of the households pay rent and 13.3 per cent live in rent-free accommodation, according to the 2008 household survey.

Water and Sanitation Facilities

Seasonal fluctuations of rainfall greatly influence access to safe drinking water in the East Mamprusi District. Sources of water reduce during the dry season, as most of the water bodies dry up while the water table of underground water sources falls reducing aquifer yields of boreholes and wells. Inhabitants of the district obtain water from several sources including public outdoor taps, boreholes, protected/covered wells, uncovered wells, rivers, and ponds. Two communities, Nalerigu and Gambaga, have access to potable water supply from the mechanized pipe systems. The proportion of households depending on improved water sources has not substantially improved since 2003 (1.4%). More households in the rural areas depend on improved water sources (35.9 %) than those in the urban areas.

Most households (58.4%) dispose of their human waste around their environments as sanitary facilities for both liquid and solid waste

remain largely non-existent in most homes. Only 11.8 per cent have access to safe sanitation. The disposal of human waste onto the nearby environment may have adverse environmental consequences. The use of KVIP and uncovered pit latrines for disposing human waste is more common. The availability and therefore the use of KVIP improved between 2003 and 2008 by 4.7 per cent.

Health Infrastructure: Hospitals/Clinics

As at 2008, the District had seven health institutions made up of one hospital located at Nalerigu, four health centres, and two community health-planning services (CHPS) (See Table 5.1). There are about 19 chemical shops and no pharmacy in the district. Generally shortage of qualified personnel and access to health facilities by remote communities pose a problem. The utilization of the existing facilities and the medical staff show a pattern that depicts a large reliance on the public health facilities. Very few of the population sampled in 2008 in the District normally seeks treatment from the traditional healers (10%) with relatively more people in the rural District who fell sick in the last three months prior to the survey visiting the traditional healer than the urban counterpart (*see* Table 5.3). A higher proportion of people in the rural areas of the District failed to seek medical attention during times of sickness compared with urban dwellers.

The health infrastructure provided services in pre-and post-natal care and child immunization, among several others. The introduction of the national health insurance scheme (NHIS) has also partly contributed to higher health attendance, especially at public health institutions.

Immunization coverage improved between 2003 and 2006 in the East Mamprusi District (see Table 5.6). However, in 2008, about 30 per cent of the children did not receive their Penta 3 and Polio 3 shots. The reduction in the coverage of immunization, if not addressed may pose a latent threat to child survival in the future.

Electricity/Energy

The electricity network covers only a few communities. The following towns are hooked to the national grid: Gambaga, Nalerigu. Langbinsi, Sakogu and Dindani (East Mamprusi District Assembly, 2006). Since electricity is expensive to transmit to all these areas, the most focus has been on the densely populated communities. The 2008 DAEA household survey indicates that the percentage of households using electricity in the district, as the main source of lighting is about 23.3 per cent in 2008.

Majority (64.6%) of households use kerosene lamps as a major source of lighting in 2008. The use of kerosene as a source of energy for lighting is still quite high in the district, particularly in the rural areas (72.2%). The most commonly use energy in the district for cooking is firewood (about 91.3% in 2008) and charcoal (5.7%). LPG gas and electricity constitute a paltry 0.8 per cent of fuel energy used for cooking in 2008

Alternative energy sources (especially solar and LPG) are being championed by NGOs (e.g. New Energy in collaboration with UNDP) in other districts in the Northern Region. In these districts Solar home systems have been installed in several homes and solar lamps for areas not on the VRA hydro-system. The East Mamprusi District Assembly should lead promotion of conversion to LPG use especially in the large kitchens (in Schools), establishment of woodlot in schools and communities and the establishment of partnerships between the District and Local Gas Distributors to sustain the supply of gas.

Natural Resource Utilization in the District

Water/rivers Bodies

Important rivers in the district include the White Volta, which enters the district in the northeast and is joined by the Red Volta near Gambaga, with the Nawonga and Moba rivers also draining the south-western part.

The District experiences a unimodal rainy season starting from April/May to September/October with a peak season in July/August. There are about 7–8 dry months when farmers have to resort to few perennial streams and dams for vegetable irrigation. Thus the District faces limited water resources and the water quality of most water bodies is poor. The dugouts also become the source of drinking water for the livestock in the dry season. The dugouts and streams utilization in both aquaculture and fishing in the District are limited. The use of irrigation technology is non-existent but considered of great importance in view of the seasonal and incidental occurrence of drought. The District has the potential for an irrigation scheme.

Forest/biodiversity

The District lies in the Guinea savanna woodland, composed of short trees, usually not forming a closed canopy and often very widely spaced interspersed with thick, tall grass. Through human interference, there are periodic bushfires in many localities, which sweep across the rural District during January to April. Many of the trees are fire resistant and have thick bark. Since the savanna zone is poor in indigenous timber resources for industrial use, and only a few species in this zone are of any commercial interest, the District lacks timber resources, relative to other areas in the forest zones of the country.

Picture 7.3: A Dam for Dry Season Vegetable Cultivation at Langbinsi.

There are two major forest reserves in the East Mamprusi District. They are the Morago East and the Gambaga Scarp East Forest Reserves. The Morago East falls within the watershed of the Morago River and it is under permanent protection. It covers an area of about 88.1 km2 the Forestry Services Division plans to improve the vegetation in this vital catchment area by enrichment planting, so as to increase the water holding capacity of the soil. The Gambaga Scarp East Forest Reserve covers an area of 127.53 km2 the scarp portion of the reserve (about 54.39 km2 is under complete protection). The Division plans to improve the vegetation cover by enrichment planting to enable it to perform its function of the watershed between the White Volta and the Morago Rivers. The remaining gentle undulating portion of about 72.52 km2 is under sustainable management to provide farming land and other minor forest products such as grass, poles, rafters and fuel-wood for the fringe communities and plantation establishment.

The economic value of the District forest resources lies in the revenues derived mainly

from exploitation of its wealth of commercial woods and other non-timber forest products (NTFPs). The main value of forests in the District is the supply of firewood, grazing and non-wood products such as thatch and fruits. People in the rural District also have access to the shea tree and hence usually have the right to fruits which is a cash source. Women exclusively process the fruits.

Land Utilization

The land use in East Mamprusi District has been changing from a predominantly agricultural (for cropping and animal husbandry) uses to non-agricultural uses such as the provision of residential and recreational space, educational facilities expansion, transportation facilities, waste disposal and industrial production as a result of expanded economic opportunities/activities and urbanization. The value of land in the District has therefore shifted from a consideration of its fertility and other favorable biophysical characteristics to that of its function8. The land resources in the agricultural areas of the District are under threat of degradation due to increased demand for agriculture products from the rapid human population growth. This has caused the land fallow period to be reduced with attendant declines in soil fertility. For greater ecosystem stability, enhanced food security and improved rural livelihoods, efforts have to be made to reverse the degradation. Sustainable land management practices also need to be applied to recover degraded lands, protect those under threat, and enhance their ecological functions.

Most households in the District undertake ridging (70.3%), no burning land clearing (55.4%) and manure application (74.3%) to maintain land fertility. In the urban area ploughing across the slopes is also prominent.

Institutions and Governance Utilization in the District

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 district consist of the traditional leadership system and the central government structures including the district assembly and services providers, the security and judicial systems and the role played by the various NGOs in resource access and mobilization. The ratio of policeman per station increased from 11.3 per cent in 2003 to 18 in 2008 (Table 7.7)

Table 7.7: Human Security Situation in the East Mamprusi District

Year	2003	2004*	2005	2006	2007	2008
No. of police Station	6.0	6.0	7.0	4.0	2.0	2.0
No. of Police Personnel	68.0	70.0	68.0	51.0	33.0	36.0
Policeman per Station	11.3	11.7	9.7	12.8	16.5	18.0
Reported Cases of Crime	70.0	75.0	86.0	82.0	94.0	73.0

Source: District Police Administration.
*The district was divided in 2004.

The participation of adults in the District in exercising their franchise in

[8] Amarchey, C. A (2005).

national elections has been relatively high (Table 7.8). Participation in the 2004 national elections saw a participation of about 88.9 per cent. This proportion, however, declined two years later during the district level elections to about 65.5 per cent. The proportion of people consulted on projects initiated in their communities is, however, low (about 25.8%).

Table 7.8: Participation in Political Events in the District

Political Event	Location		
	All	Rural	Urban
2006 District Elections	65.5	69.9	55.7
2004 National Elections	88.9	90.1	86.2
Consulted on projects	25.8	33.3	22.1
Member of Unit Committee	6.1	5.4	7.0

Source: 2008 DAEA Household Survey.

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 the focus group discussions, it came to light that, although most of the respondents (over 80%) know the DCE and the MP for their locality (Figure 7.4), the interaction of the communities with their DCE and the Member of Parliament was difficult.

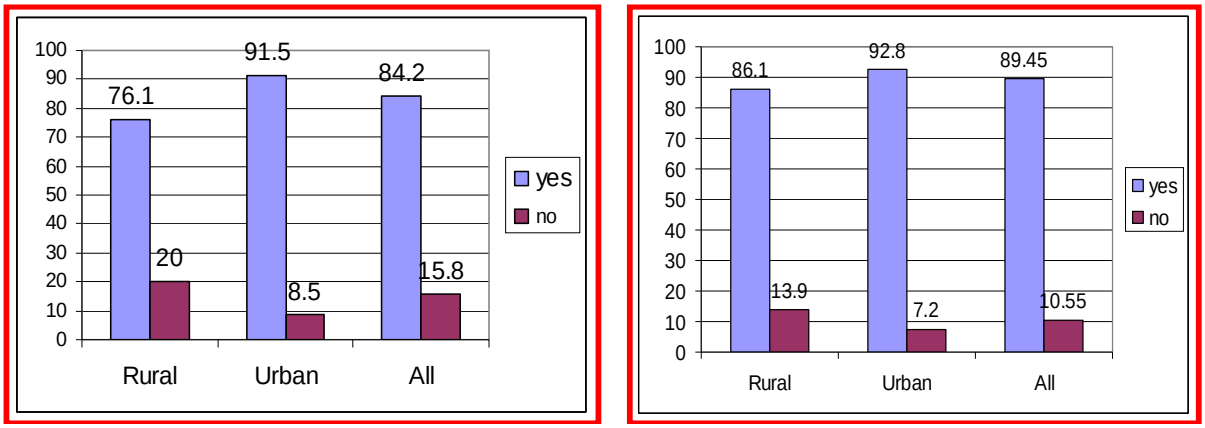


Figure 7.4: Proportion of respondents that know DCE and MP of the area (%).
Source: DAEA Household Survey, 2008.

Most communities indicated that they interact more with their local assemblyman than with the MP or DCE. Communities therefore relay their problems and grievances through their assemblymen to the District assembly. Their participation in community develop-ment programmes is, therefore, through their assemblymen. Given that communities are consulted on projects in their communities, the participation in community development meetings in the District is high particularly in the rural areas (Figure 7.5).

At the community level, several groupings/associations including CBO and FBO such as groundnut processing association and other organizations have been formed with the assistance of NGOs and the District assembly (department of cooperatives) with the pursuit of more economic interests like securing credit and market access. However,

participation in most of these associations is low.

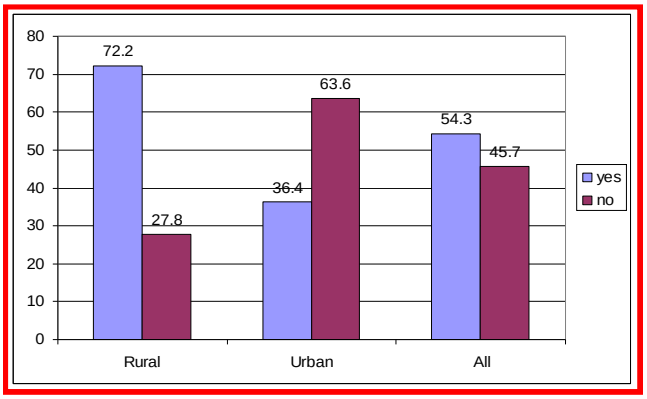


Figure 7.5: Participation of Community Development Meetings.

Satisfaction with Quality of Service Provision in the District

Access to public services in the District includes the food market, post office, the police station and legal services. In Table 7.9, it takes on the average 30 to 45 minutes to access public services in the District by about 50 per cent of respondents in the 2008 Household survey. Food markets are accessed in less than 14 minutes by about 21.8 per cent of households, compared to 8.2 per cent of households to post office access and 8.7 per cent of police station access within the same period of less than 14 minutes.

Table 7.9: Access to Public Services in East Mamprusi District

Food market	Urban	Rural	All
< 14 minutes	36.1	15	21.8
15–29 minutes	38.9	20.3	26.2
30–44 minutes	19.4	22.2	21.3
45–59 minutes	5.6	8.5	7.6
> 60 minutes	–	34.0	23.1
Post office			
< 14 minutes	23.8	0.8	8.2
15–29 minutes	23.8	4.5	10.8
30–44 minutes	15.9	12.1	13.3
45–59 minutes	9.5	24.2	19.5
> 60 minutes	27	58.3	48.2
Police station			
< 14 minutes	23.9	1.4	8.7
15–29 minutes	20.9	4.3	9.7
30–44 minutes	16.4	11.4	13.0
45–59 minutes	13.4	23.6	20.3
> 60 minutes	25.4	59.3	48.3

Source: DAEA Household Survey, 2008.

Assessment of Governance in the District Over the Past 12 months

The UNESCAP[9] 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 governance vary depending on the level of government that is under discussion. 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, 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.

[9] UN-ESCAP (2009).

In GPRS II, 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. 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 assemblymen 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.

Table 7.10 presents the self assessment of households in the District, according to the 2008 DAEA Household Survey, on Governance in terms of access to Security, Legal Services and access to the District Assembly in the past 12 months. The proportion of households in the District who have seen improvement in governance in terms of access to security services, legal services and in the change in the performance of District assembly in terms of development in their communities in the last 12 months, from the 2008 DAEA Household Survey, are 66.5 per cent, 56.5 per cent and 73.9 per cent respectively. Those who have seen no change or deterioration in the governance in terms of the delivery of these services are 33.5 per cent, 43.5 per cent and 26.1 per cent. Thus majority of the population in the District have seen change in governance in accessing these services.

Constraints in Resource Endowment Utilization

There are several constraints that limit the utilization of the numerous resource endowments in the District. 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.

Table 7.10: Households' Assessment of Governance in the Past 12 Months (%)

Assessment of Governance in Terms of Access to:	Urban	Rural	All
Security services			
Very significant improvement	17.8	6.2	10.1
Improved	57.5	55.9	56.4
No change	16.4	36.6	29.8
Deteriorated	8.2	0.7	3.2
Very significant deterioration	0.0	0.7	0.5
Legal services			
Very significant improvement	13.6	7.0	9.3
Improved	56.1	57.8	57.2
No change	27.3	32.0	30.4
Deteriorated	3.0	2.3	2.6
Very significant deterioration	0.0	0.8	0.5
District Assemblies			
Very significant improvement	18.1	8.0	11.3
Improved	55.6	66.0	62.6
No change	22.2	21.3	21.6
Deteriorated	4.2	4.0	4.1
Very significant deterioration	0.0	0.7	0.5

Source: 2008 DAEA Household Survey.

Constraints in Human Resources Utilization

One key constraint in having a large proportion of the human resource in the District in low productivity agricultural and informal sector production is the low educational attainment of the population aged 6 years and above. From the 2008 DAEA Household survey, more than three quarters of the respondents have no formal education. 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 economic sectors. Educating all children in the district presents a daunting challenge due to the large number of children who live in remote, rural areas of the district.

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Constraints in Natural Resources Utilization

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

Agriculture Impact on Lands and Soil

The farming systems in the District (compound farms and 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, yam and vegetable whereas those cultivated in bush farms include cowpea, groundnuts, bambara groundnuts, maize, sorghum, millet, yam and cassava. The bush 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 District are under threat of degradation due to increased demand for agriculture 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 of the district complain of land scarcity and hence will have to travel long distances outside the District in search of land to farm. Those farmlands that are within the urban District are intensively farmed.

Forest Product Exploitation

Charcoal and fuel-wood are major income earners for members of communities in the District. These products have become significantly commercialized in the Districts. The demand for these items has risen sharply with the increase in the urbanized population. The harvesting of these resources (forest product gathering) is usually made in

relatively less sustainable ways. Some cut the trees and shrubs without replacing them. Therefore, the District 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

Table 7.11 shows the proportion of households in the District that has been affected by hazards and environmental effects of flood, windstorm, drought and bush fires and the strategies adopted to cope with these calamities. The proportion of all households in the District who have been affected by floods in the District increased from 6 per cent in 2007 to 7.3 per cent in 2008. Strategies that are adopted by households to cope with flooding include creation of drainage, moving away from flood prone areas and desilting of the drainage. Moving away from flood prone areas were cited by 42 per cent of all households in the 2008 survey, but are cited by 60 per cent of households in the rural areas of the District and 40 per cent of urban District dwellers. The next most cited coping strategies for flooding is the creation of drainages, cited by 45 per cent of all households in the District but 46 per cent in the urban and 40 per cent in the rural District.

With windstorm, the proportion of all households in the District who have been affected increased from 7.3 per cent in 2007 to 8.6 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 were cited by 85 per cent of all households in the 2008 survey, but are cited by 77 per cent of households in the rural areas of the District and 86 per cent of urban District dwellers.

Table 7.11: Proportion of Households Affected by Disasters, 2008 and their Coping Strategy (%)

Disasters & Coping Strategies	Urban	Rural	All
Type of hazard suffered			
Flood	16.7	37.2	27.0
Wind storm	15.1	34.1	24.6
Drought	19.3	49.3	34.3
Bush Fire	3.8	16.5	10.2
Strategy for flood control			
Avoid areas liable to flood	20.8	5.4	13.1
Use of blocks and cement to build	9.1	1.2	5.1
Plough across slope	5.3	0	2.7
Creation of gutters	2.6	6	4.3
Others	38.6	74.9	56.8
No strategy	23.6	12.5	18.1
Strategy for reducing effect of wind storm			
Tree planting to serve as wind breaks	14.5	20.4	17.5
Use of more durable roofing materials	14.4	12.6	13.5
Use effective roofing methods	7.8	3.6	5.7
Use of wind breaks	6.5	4.8	5.7
Others	33.2	44.4	38.8
No strategy	23.6	8.7	16.2
Strategy for reducing effect of drought			
Early and late planting	27.3	27.3	27.3
Use of tolerant varieties	15.6	3	9.3
Others	17.4	47.6	32.5
No strategy	29.3	22.1	25.7
Strategy for control of bush fires			
Creation of fire belts around farms and homes	31.4	40.4	35.9
Clearing of bushes around houses	9.1	19.5	14.3
Education of members of households	23.9	0	12.0
and community	17.4	28.5	23.0
Others	13	5.7	9.4
No strategy	18.2	5.9	12.1

Source: DAEA Household Survey, 2008.

The next most cited coping strategies for windstorm is the use of good and strong roofing sheets, cited by 8 per cent of all households in the District but 7 per cent in the urban and 15 per cent in the rural District.

Most households were affected by drought (34.3%) in the 2007/2008 farming season compared to windstorm (27.0%), floods (24.6%) and bushfire (10.2%) (see Table 7.11). Adopted strategies by house-holds to cope with drought include adoption of early planting techniques to meet the rains and planting drought tolerant varieties. Other methods such as storing of food to take care of the drought period, and use of soil and water management techniques, and alter-native livelihood activities like petty trading, Shea nut picking and oil processing were also cited. Strategies that are adopted by households to cope with bush fires include creation of fire belts, education of members of households and community to avoid the bush burning and on the harmful effects of bush fires.

Utilization of Resource Endowments and Links to MDGs in the District

The utilization in the resource endowments in the District and its impacts on the livelihoods of the people in the District, 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

Resource Endowments and Household Service Provision

Goal 7 of the MDG is to ensure environ-mental sustainability which is hinged on three targets: (a) integrating the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources; (b) halve 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 institution-resource access relationship must deliver safe drinking water, basic sanitation and decent housing for the citizenry.

The availability of toilet facilities, particularly KVIP has seen increases in the District. As at 2008 31 public KVIPs were available (Table 7.12). In 2000, 5 per cent of households could access this facility. In 2003, the proportion increased to 51 per cent and further increased to 65 per cent in 2008. Households without toilet facilities have, therefore, seen a trend decline between 2000 and 2008. Waste disposal in the District, on the contrary, seem to be problematic. Households dumping solid waste elsewhere, other than at a public dump, burned or buried, increased from 15 per cent in 2000 to 50 per cent in 2003, before falling to 40 per cent in 2008. Liquid waste disposal in the District among the surveyed households is usually onto the street or outside (36%) or thrown into the gutter (31%).

Table 7.12: Number of Water and Sanitary Facilities in the District

Facilities	Number
KVIP (public)	31
Household Latrines	331
Wells (Working)	174
Well (Not Working)	63
Boreholes	179
Borehole Working	141
Boreholes not working	38

Source: East Mamprusi District CWSD.

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 District. Table 7.13 presents a picture of the hunger situation in the District in the past 12 months prior to the 2008 Household survey. Overall, 64 per cent of households in the District indicate it is not difficult in satisfying household food needs in the District. There are however gender and location differences. It is relatively more difficult to satisfy food needs in the urban District than the rural and more difficult among men than women.

Table 7.13: Difficulty in Satisfying Household Food Needs in the Past 12 Months (%)

Response	Rural	Urban	Men	Women	All
Difficult	25.0	44.4	88.2	11.8	36.2
Not difficult	75.0	55.6	80.0	20.0	63.8

Source: DAEA Household Survey, 2008.

Some of the major reasons given for difficulty in satisfying household food needs in the past 12 months include poor harvest as a result of climatic conditions, drought, pest and diseases, and high food prices as households sold most of their products right after harvest, thus exposing them to food shortages later.

Conclusion: Utilization of Infrastructure Resource to Meet MDGs

The overall assessment of the outcomes of the economic situation of the households suggests that communities in the District 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 activity are important in harnessing the resource endowments as human resource utilization is closely related to the strategy of economic, social as well as political growth of the locality. The changing institution-resource access relationships that highlights the resource endowments and problems associated with the participation of individuals in the East Mamprusi District needs to be enhanced for broader community participation in governance

CHAPTER 8

Investment Opportunities, Constraints and Challenges in the East Mamprusi District

Introduction

Northern Ghana is said to have growth potential in several areas including agriculture, mining and tourism. A Northern Ghana Development Strategy sets out a comprehensive development strategy and action plan for consideration by government, private sector and development partners in hastening development in Northern Ghana[10] including the East Mamprusi District. 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. These include stimulating the modernization of agriculture development and the competitiveness of small holders, initiating actions that would stimulate investment and business development, enhance 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 District must be to lead to significant gains in poverty reduction under improved entrepreneurial opportunities, have potential to create jobs and wealth for both the entrepreneur and employees, are environmentally friendly both on-farm and off-farm and have relatively great potential for increasing female employment.

[10] Document: *Strategic Directions for Sustainable Development of Northern Ghana*, p.1.

Investment Opportunities in the East Mamprusi District

Modernizing Agriculture and Associated Investment Opportunities

Modernizing agriculture 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 export. Needs assessments in investments in agriculture and related activities were solicited from the focus group discussions 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 focus. The overwhelming agreement is that financial support can help expand businesses in dry season gardening, petty trading,

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

Investments in human resource development

Due to the low number of post-basic education training centers ((both public and private) in the district, opportunities exist to enhance investments in infrastructure improvement through private-public partnerships. By improving the human infrastructure, academic and research institutions in the northern and upper regions such as the University of Development Studies, Bolgatanga and Tamale Polytechnics, SARI, the East Mamprusi District can rely on them to improve on its human resources to develop the district.

ICT and Internet Expansion

Opportunities in ICT to enhance entrepreneurship and employment in the district 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 district. Presently internet access is non-existent in the district. However, the three of the five major mobile communication networks (for example MTN, Vodafone and Tigo) are present in some parts of the district (Picture 8.1). In the private sector a few businesses operate communication centres that also provide secretarial services. It is hoped that with the growth in competition, costs will be reduced and the small and up-coming businesses will invest in internet services. Thus, opportunities to provide investments in internet and satellite pay-TV services in the district exist (Picture 8.2). Also, the linkage between agricultural research and rural radio in the District involve two types of partner organizations —the national agricultural research centres and radio stations conducting farm broadcasting in local language(s). The linkages can be expanded to provide information to enhance the modernization process in the agricultural sector.

Picture 8.1: A Transmission Antenna of a Communication Company.

Picture 8.2: A Mud House with a Satellite pay-TV Dish.

Afforestation in the District

The Northern Development Initiative (NDI) vision of a *forested north* is woven around afforestation using economic trees (perennials) that provide the opportunity for exporting and also that provide the basis for secondary and tertiary processing along the value chain. One niche of the afforestation strategy is for investments in fruit trees: organic mango, cashew and Shea nut trees. Not only do these *green* the environment, it also provides income and employment in the short to long-term for the people. In addition to the fruit trees, investment opportunities exist in the development and promotion of the establishment of woodlot in schools and communities. Teak is one important tree that thrives well in the District and has a high economic value. Several collaborative efforts between NGOs and development oriented programmes such as the UNDP sponsored projects in providing seedlings to community and schools to embark on afforestation projects. Planting trees could build the woodlot capacity for the future.

Picture 8.3: A water system in the district at Gambaga.

Water Reservoir Systems

The location of some large settlements in the district e.g. Gambaga, and Nalerigu, on the escarpment makes water a very vital commodity for the inhabitants, although the district is drained by some major rivers and streams. Water supply for domestic and industrial purposes are rationed in these large towns mainly because of low aquifer yield. Dams have been constructed at Langbensi and Nalerigu for agricultural and other uses. There is also a serious cyclic water shortage in March. Investment opportunities, therefore, 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. There are therefore opportunities to invest in drip irrigation systems. 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.

Tourism Attractions

The potential for tourism is very high in the district. The history of the district, its geographical location and the diverse ethnic composition of the people of the district enhance its potentials as a tourist destination. Historically, the township of Nalerigu is important because of the role the settlement played as the traditional capital of the Mamprusi Kindgom and Gambaga as the capital of the Northern Territory from 1902 to 1957.

The rich cultures of the ethnic groups, especially the music and dance of the

Konkombas, the Mamprusi and Bimobas as well as their festival and other ceremonies are unique and beautiful. There are specific tourist attractions as well, that combine an acute sense of history, with the sheer beauty of nature. The Naa Jeringa Wall (ancient wall of Nalerigu) is a remnant of the historical wall built by one of the past Kings of the Mamprugu State. These sites should be developed so visitors can have an insight into the history, cultural and traditional practices peculiar to the Mamprusi people.

Constraints and Challenges to Investment Opportunities in the District

The potential of the East Mamprusi District to contribute to the economic development of the northern region rests on the exploitation of the abundant natural resources. Investment opportunities in the District, 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 needs to be developed along with technical support from other governmental and non-governmental organizations to facilitate the natural resource endowments in the District development.

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 safe-guarding the resources.

There are several institutions providing credit facilities such as the NGOs and MASLOC that have coverage in about 18 administrative districts in the Northern Region. MASLOC provides micro-credit to groups where small loans are given to both individuals and groups. Credit provision in the District could enhance not only the investment opportunities; it could foster the efficient exploitation and utilization of the natural resource endowments in the District.

Income Levels are generally low. The District is considered as one of the areas in the country where mass poverty exists. Household real incomes are too low to satisfy basic needs. The situation is even worse among rural dwellers who are predominantly engaged in small-scale subsistence food production. Women are by far the more vulnerable group, a situation that negatively affects children as well. The low incomes and the general poverty situation coupled with absence of large-scale enterprises have affected revenue mobilization of the District in one way or the other. The District has identified a number of problems inhibiting revenue mobilization. These are inadequate data on all revenue items, negligence in the payment of fees, licences and other taxes, improper supervision of revenue collectors lack of means of transport for revenue mobilization, inadequate training for revenue collectors, and lack of education and sensitization on tax obligation. Effort should be made to raise internally generated fund by involving sub-District structures of the Assembly in revenue mobilization.

There is only one community bank (the East Mamprusi Community Bank) operating in the District currently with an agency at Langbinsi and Nalerigu. Banking services

need to be extended to the other large communities to boost rural micro financing.

Agricultural extension services needs supporting 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 after adapting findings to local soils conditions is imperative. Presently some Non-Governmental Organizations (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 District 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 District 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 agricultural production and agro-enterprise management, provision of inputs (seeds, animal breeds, tools, etc,) are undertaken by NGOs. These NGOs in the district must further be strengthened to enhance the public-private sector partnerships.

CHAPTER 9

Summary and Conclusion

Introduction

The summary and conclusion focus on progress towards meeting the MGDs and present the way forward in terms of the utilization of natural resources to meet MDGs in the District. The paper addresses key policy lessons that have to be adopted to enhance the chances of meeting the MDGs.

Progress Towards Meeting the MGDs

The East Mamprusi District is struggling to make a dent on the health, education and water and sanitation components in meeting several of the MDGs. In education, the district has witnessed improvements in the enrolment of school children in the primary and JHS levels of education. The sex dimension of enrolment in the district shows that the numbers of male enrolment outnumber that of female in all the three levels of education and also a high rate of female dropout rate in all the levels of education in the District, raising concerns about gender disparity in the District.

The District has seen an improvement in the gross enrolment rates at all levels of education. Gross enrolment rates at all levels of education has remained lower than the regional and national rates over the years of 2003/2007. School attendance in the District is relatively regular for most children. The rate of school attendance was marginally higher for boys than girls as a higher proportion of girls missed classes at least once. School attendance was also reported to be better among the urban school children compared with the rural schoolchildren. The quality of education, however, depends on the availability of textbooks and furniture, availability of sanitary and water facilities, conditions of school structures and the availability of quality (trained) teachers and the pupil-teacher ratio, among others. East Mamprusi District is behind in attaining the set target of three textbooks per pupil. Even though the textbook situation, reportedly, has improved over the last few years, there are still gaps in the supply of all the textbooks to schools in the District. The furniture situation for both teachers and pupils is inadequate although there is a gradual increase in the number of school furniture in the District. Several of the school buildings in the District require some form of rehabilitation while others require total demolition and re-construction. The number of untrained teachers in the East Mamprusi District is alarming and measures should be instituted to reverse the trend. Regarding educational attainment, the District recorded an increase in number of people without education between 2000 and 2008. About 6 per cent have completed basic education while 3.2 per cent have completed secondary type education with 9.2 per cent having completed a post-secondary education.

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 District as about 85 per cent of those who had fallen sick sought medical attention by visiting either the private or public clinic/hospital, community health center or the pharmacy shop. The proportion of 1 year-old children immunized against killer diseases such as measles and yellow fever has risen continuously from 2003 to 2006 before falling in 2007 and 2008. The proportion of children immunized against all the childhood killer diseases improved over the 2006–2008 period. The wide coverage of child immunization has accounted for the improved child health and child mortality indicators. The pattern of maternal mortality in the District has fluctuated over the years 2003–2007. The number of supervised deliveries in the District, however, is rising steadily with increased awareness due to a sustained public health education. The attendance of pregnant women at pre-natal clinics is relatively high compared with post-natal attendance. Hence the performance of the District in sustaining a decline in the area of maternal mortality needs attention for the realization of that MDG.

Malaria is the most reported disease in the District 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 the area of water provision, although the District has access to safe drinking water, a good number of the population still obtain water from such unsafe sources as rivers/streams and dugouts. This is particularly pronounced in the rural part of the District. Water quality is particularly very poor during the dry season when natural sources tend to dry up. Women therefore spend huge amounts of their labour time during the dry season fetching water. This affects women's potential access to employment and income-generating opportunities particular in areas where water supply is problematic. Progress must therefore be speeded up to sustain the rising trends in the provision of safe drinking water. In sanitation, as one of the fastest growing districts in the country, East Mamprusi 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 District to increase access to water and sanitation must be pursued as outlined in its 2009 action plan to meet targets of the Millennium Development Goal. In addition, the efforts of the District in the area of environmental sustainability can be sustained based on the 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 functions that has arisen through human interference that includes the periodic bushfires in many localities and unsustainable land management practices.

The unemployment rate among the youth has been on the increase in the District and by gender unemployment rates have been higher among men than women. In general, there is a disparity in rural-urban unemployment. Underemployment is high.

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

relative to the national in terms of proportion of underweight children. In terms of food insecurity, it is relatively more difficult to satisfy food needs in the urban District compared to the rural District and more prominent 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 Districts 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. It is also important, in the education sector, to raise the quality of education in the District.

Table 9.1: Summary of MDGs and the Situation in the East Mamprusi District

Millennium Development Goal	Targets	Situation in The East Mamprusi District
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 Target 2: Halve Between 1990-2015, the proportion of people who suffer from hunger	High proportion of households that encountered difficulty in satisfying food needs
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	Low gross school enrolment compared to regional and National averages Proportion of people without education very high and increasing Low adult literacy rate
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	Increase in the proportion of women in wage or regular employment in non-agricultural sector The district assembly proposes to increase the participation of women in decision-making Also increase their access to ownership and control of economic resources Low proportion of women in the decision making roles
Goal 4: Reduce child mortality	Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	Few households had loss of child (under 5) in 2008 Improvement in post-natal care of mothers; proportion of 1-year old children immunized against killer diseases increased.
Goal 5: Improve maternal health	Target 6: Reduce by three-quarters, between 1990 and 2015 the maternal mortality ratio	Maternal mortality ratio is high; it was 107/100,000 in 2008 Increase in proportion of births attended by skilled health personnel Improvement of women (12–49 years) that had live births
Goal 6: Combat HIV/AIDS,	Target 7: Have halted by 2015, and begun to reverse the spread	Number of reported HIV/AIDS cases high, 158 in 2008

malaria and other diseases	of HIV/AIDS Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	High proportion of adults and children use treated bet nets to prevent malaria
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 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	The principles of sustainable development is assembly's objective Slower decline in forest cover due to human activities such as farming, charcoal burning, and use of firewood for cooking High proportion of households using solid fuels Gradual increase in proportion of rural households with access to an improved water source Only slight increase in proportion of households with access to toilet facilities, safe sanitation and waste management
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 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	Increased presence of Aid agencies in the district is addressing food security and health issues Access to affordable essential drugs in the district is yet to be realized. In cooperation with private sector, benefits of new technologies, especially information and communications has improved; a number of households in town have one member with a mobile phone

The Way Forward: Utilization of Natural Resources to meet MDGs

There are critical areas of concern, challenges and opportunities that needs serious policy considerations in order to enable the District to utilize sustainably and efficiently the natural resources it is endowed with to improve human development as well as put the District 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 suggests that the District have 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 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 District 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 District needs to be enhanced for broader community participation. The District may need to strengthen the assemblyman-community linkage to enhance effective community participation in governance.

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

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

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. Revenue mobilization is critical in the District and the IRS in the District must expand its operations and get more closer to the people by given them tax education by 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 District and to develop agriculture beyond subsisting standards and to enhance the agricultural sector to be competitive, respectively. The capacity of SARI to conduct basic research and to effectively disseminate the findings to farmers after adapting findings to local soils conditions is imperative. Halving the number of people whose income is less than one dollar and the proportion who suffer from hunger in the District will greatly depend on agricultural resource exploitation and protection.

The District 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 programs 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 District to sustain the natural resource endowments is imperative. 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. Agricultural interventions including training agricultural production and agro-enterprise management,

provision of inputs (seeds, animal breeds, tools, etc.) are undertaken by NGOs. The EMDA support given to NGOs in the District must further be strengthened to enhance the public-private sector partnerships.

Appendix 1: Household Survey Questionnaire

Notes for Interviewers

1. Assign an identification number for each person in the household and maintain the ID number throughout. For each set of questions there are columns for the ID number and the name of the person from whom information is being collected.
2. ID numbers and names of members of households are needed to ensure that consistency is maintained. It is crucial that the characteristics of and information pertaining to individuals are not mixed up.
3. A person is a member of a household if he or she has been sharing food, i.e. "eating out of the same pot" with other members of the household for a period of at least three months. Thus a child of a member of the household who is now married and living away from home is **not a member of the household**, even though he or she may be a member of the family. On the other hand children in boarding school who return to the household during holidays are members of the household.
4. Before the start of the interview inform the members of the household that the information received from them is **confidential**. Information provided by any individual household or person will not be revealed either to any other households or to the District Administration etc.
5. For most of the sections it is expected that the head of the household will be able to provide the necessary information on all members of the household. However where it is clear that the head of the household is in doubt, as tactfully as possible please ask for information from the person whose information is being requested or another knowledgeable member of the household.
6. The questionnaire has fourteen modules-General Information, Structure of the household, Employment, Assets, Health, Maternal Health, Child Health, Education, Adult Literacy, Food availability, Resource Endowment, Household Amenities, Access to Services and a module on political participation.
7. At the start of each module or sub-module it will be indicated which category of household members should answer the question. Even though it is expected that the head of the household would have a fair amount of knowledge about the household members it is expected that for some questions it will be necessary to ask the person directly to ensure accuracy.
8. For some sections of the questionnaire privacy is required, i.e. the individual should respond to the questions separately and not in the presence of other persons. If this is not done the person may either not respond to the question or else give a false answer.
9. At relevant points of the questionnaire explanatory notes will be provided to assist the interviewer.

Thank you for collaborating with us in this important exercise.

Section 1: General Information

1. District Name ……
2. Enumeration area/code……
3. Locality ……..
4. Household Number.....
5. Household Address…….
6. Name/Code of Interviewer …….
7. Date of Interview ……
8. Time Interview Started ……
9. Time Interview Ended …….
10. Name of Supervisor ……

Notes: Locality: 1. Urban
2. Semi-urban
3. Rural

Questionnaire Number.....

District	Code
Bole	101
Nanumba North	102
Zabzugu/Tatale	103
Tamale	104
Karaga	105
East Mamprusi	106
Bolgatanga	201
Bawku West	202
Kasena-Nankana	203
Wa	301
Lawra	302
Sissala East	303

Section 2: Structure of Household

[Obtain information about all living members of the household]

I.D.	1. Name of person belonging to Household.	2. Sex	3. Age in years	4. Relationship to HH Head	5. What is your marital status?	6. Were you born in this town?
		1. Male 2. Female	(at last birthday); If less than 1 year, Code 0	1. Household Head 2. Spouse 3. Child 4. Adopted child 5. Sibling 6. Parent 7. In-law 8. Other Relative 9. Other (specify)	1. Never married 2. Loose/ informal union 3. Married (monogamous) 4. Married (polygamous) 5. Divorced 6. Separated 10. 7. Widowed	1. Yes 2. No

Section 2 (Cont'd): Structure of Household

[Obtain information about all living members of the household]

I.D.	7. If No, in what year did you move to this town?	8. Why did you move to this town/ village? 1. To work/farm 2. To attend school 3. Came with spouse 4. Came to retire 5. Other (specify)	9. What is your ethnic group? (see table below)	10. What is your religion? 1. Christian 2. Muslim 3. Traditional 4. Other (specify)

Codes for ethnic groups				
1. Asante	6. Krobo	11. Dagomba	16. Kusasi	21. Other *(specify)…*
2. Akwapim	7. Ewe	12. Mamprusi	17. Kassena-Nankani	
3. Fanti	8. Guan	13. Gonja	18. Konkomba	
4. Ga	9. Nzema	14. Grussi/Frafra	19. Nanumba	
5. Dangme	10. Hausa	15. Dagarti	20. Builsa	

Section 3: Employment

I.D.	Name of person belonging to Household	1. Did you do any type of work for pay in cash or in kind, in the last 7 days?	2. Have you been looking for work and been ready for work in the last 7 days?	3. If you are not working why?	4. If you are currently working what economic sector do you work in (main job)?
		1. Yes → q4 2. No	1. Yes 2. No	1. Attend school- ànext section 2. Too old to workàq9 3. Disabledàq9 4. Lost previous job. àq8 5. Cannot find a jobàq8 6. Work is Seasonalàq8 7. Other (specify) àq8	1. Agriculture 2. Fishing 3. Mining & Quarrying 4. Manufacturing 5. Construction 6. Transport/ Storage/ Communication 7. Finance/ Insurance/ Services 8. Utilities 9. Wholesale/Retail trade 10. Community/ Social Services 11. Other (Specify)

[Please administer to household members aged 7 years and over]

Section 3 (Cont'd): Employment

[Please administer to household members aged 7 years and over.]

I.D.	5. What are the problems you face with regard to your work?	6. What is your employment status in your main job?	7. For whom do you work in the main job?	8. If you are not working now, how long have you been without a job?	9. If you are not working how do you support yourself?
	1. Finance 2. Difficult to access land 3. Erratic weather conditions 4. Uncertain demand for output 5. Poor health 6. Inadequate fish catch 7. High cost of inputs (e.g. fuel) 8. Difficulty in marketing products 9. Low price of products 10. Other (specify)	1. Self-employed with employee 2. Self employed without employee 3. Unpaid family worker 4. Casual Worker 5. Regular employee 6. Domestic employees 7. Student/apprentice 8. Other (specify	1. Public 2. Private formal 3. Private Informal 4. Semi-Public/ Parastatal 5. NGO's/Intl Org 6. Other (specify)	(in weeks)	1. Own savings 2. Pension 3. Remittance from relatives 4. Borrow from family/friends 5. Gifts 6. Credit purchases 7. Depend on spouse 8. Other (specify)

Section 4: Assets of the Household

[Include items only if they are in working condition]

1. Does any member of the household currently own any of the following assets?	Check 1. Yes 2. No	3. Does a female member of the household own any of these assets? 1. Yes 2. No
1. Motor car		
2. Motor bike		
3. Bicycle		
4. Truck		
5. Tractor		
6. Furniture		
7. Sewing machine		
8. Refrigerator/Freezer		
9. Radio		
10. Radio cassette		
11. Television		
12. Video recorder		
13. Electric/Gas Stove		
14. Electric Iron		
15. Electric Fan		
16. Air conditioner		
17. Mobile Telephone		
18. Boat		
19. Canoe		
20. Outboard Motor		
21. House		
22. Land for farming		
23. Other land		
24. Account with financial institution		
25. Shares in a company		
26. Jewellery		
27. Cloth: Dumas, Lace etc		
28. Cattle		
29. Sheep/Goats		
30. Chickens		
31. Non-farm business enterprise		
32. Donkeys		
33. Treasury Bills		
34. GT Feed line		
35. Farm tools		

Section 5: Health

[All Members of the Household]

I.D.	Name of HH Member	1. During the last 3 months did … suffer from:	2. When ... was ill did … visit	3. Why did …. not seek medical attention?	4. Has … ever been vaccinated against measles?	5. Has … ever been vaccinated against polio?
		1. Fever/Malaria 2. Diarrhoea 3. Injury/Accident 4. Skin condition 5. Eye/trachoma 6. Ear/nose/throat 7. Coughing 8. Snake bite 9. Blood pressure 10. Stroke 11. Diabetes/Sugar 12. None (go to next section) 13. Other (specify)	1. Private hospital/clinic 2. Public hospital/clinic 3. Community health centre 4. Private doctor/dentist 5. Traditional healer 6. Religious Healing Centre 7. Missionary Hospital 8. Pharmacist/chemical shop 9. Other (specify) 10. None	1. No need 2. Too expensive 3. Too far 4. Other (specify)	1. Yes 2. No	1. Yes 2. No

Question 6: What measures does the household take to prevent malaria?
[Multiple responses allowed]

1. The children sleep in treated bed nets
2. Adults sleep in treated bed nets
3. The house is sprayed regularly
4. The compound is weeded regularly
5. The gutters are cleaned
6. Take anti-malaria tablets regularly
7. Use mosquito coil regularly
8. The windows in house have mosquito nets
9. Other (Specify) ……
10. Nothing

Section 5 (Cont'd): Health

[All Members of the Household]

I.D.	7. Has … ever been registered or covered with a health insurance scheme?	8. If … has never been registered, why?	9. Is … still registered, or covered?	10. If … is no longer a member, why?	11. If … is registered or covered, what type of scheme is he/she registered with now? [check membership card]
	1. Yes, registered→ q9 2. Yes, covered→ q9 3. No	1. Premium is too high 2. Do not have confidence in operators of the scheme 3. Covered by other avenues 4. No knowledge of any scheme 5. Other (specify)… ..	1. Yes, registered → q11 2. Yes, covered→ q11 3. No	1. Premium is too high 2. Do not have confidence in the operators of the scheme 3. Covered by other alternatives 4. Was not getting benefits 5. Other (specify)…	1. District mutual 2. Private mutual 3. Private company 4. Other (specify)…..

Section 5 (Cont'd): Health

[All Members of the Household]

I.D.	12. How many times has … registered with scheme since first registration?	13. What are the expected benefits from the scheme?	14. Does …… pay all/part of the premium?	15. How much premium has … paid or expected to pay for the current insurance year?		16. Has … ever benefited from the scheme?	17. How many times has … benefited from the scheme since first registration?
		1. Only OPD services 2. Only in-patient services 3. Both	1. All 2. Part 3. Exempted → q15 4. N/A→ q15	A. Paid [Cedis]	B. Expe-cted to Pay [Cedis]	1. Yes 2. No	[code 99 if cannot remember]

Section 6: Maternal Health

[This section should be answered by women aged 12-55 years]

I.D.	Name of HH Member	1. Has….. been pregnant in the last 12 months?	2. Did… receive pre-natal care during pregnancy?	3. Did … have a live birth in the last 12 months?	4. Did …. receive post-natal care after delivery?	5. Who delivered the child?
		1. Yes 2. No → go to q6	1. Yes 2. No	1. Yes 2. No - Still pregnant 3. No - Lost pregnancy 4. No - Still birth	1. Yes 2. No	1. Doctor 2. Nurse 3. TBA 4. Other

Question 6: How many members of the household died during childbirth in the last twelve months? **……**

Section 7: Child Health

1. In the last 12 months has the household lost any children through death?
   1. Yes 2. No

2. Age of Child	3. Number that passed away in the last 12 months	
	Male	Female
a) Before or during childbirth		
b) 0–12 months		
c) 13 months–2 years		
d) 25 months–3 years		
e) 37 months–5 years		

Section 8: Education

[Household Members aged 3 years and above]

I.D.	Name of person belonging to Household aged 3 years and above	1. Does ... currently attend school?	2.If.... currently does not attend school, has .... ever been to school?	3.If yes to q2 what is the highest grade completed?	4.What is the current grade?	5.What is ... mother's highest educational level?	6.What is ... father's highest educational level?
		1. Yes →q 4 2. No	1. Yes 2. No→ go to next section	01 Pre-school 20 M1 30 S4 11 Primary 1 21 M2 31 S5 12 Primary 2 22 M3 32 L6 13 Primary 3 23 M4 33 U6 14 Primary 4 24 SSS1 41 Voc/Tech 15 Primary 5 25 SSS2 42 Teacher T 16 Primary 6 26 SSS3 43 Nursing 17 JSS1 27 S1 51 Tertiary 18 JSS2 28 S2 52 Koranic 19 JSS3 29 S3 53 Special 54 Agric	01 Pre-school 24 SSS1 11 Primary 1 25 SSS2 12 Primary 2 26 SSS3 13 Primary 3 41 Voc/Tech 14 Primary 4 42 Teacher T 15 Primary 5 43 Nursing 16 Primary 6 51 Tertiary 17 JSS1 52 Koranic 18 JSS2 53 Special Sch 19 JSS3 54Agric College	**[See question 3 for codes]** 00 None 99 Don't know	**[See question 3 for codes]** 00 None 99 Don't know

Section 8 (Cont'd): Education

[Household Members aged 3 years and above]

I.D.	7. During the current academic year, has ..... missed some days at school?	8. How often was ..... not able to attend school?	9. The last time ..... did not go to school, what was the reason?	10. How long has ..... been out of school?	11. Is ..... back in school?	12. Has ..... ever repeated a class?	13. How old was ..... in Primary 1?
	1. Yes 2. No	1. Once 2. Twice 3. Thrice 4. Several times	1. Sickness 2. Needed on farm/shop/home 3. No money to pay fees and other expenses 4. Child not interested 5. Marriage 6. Bad weather 7. Other	(in days)	1. Yes 2. No	Yes 2. No	(in years)

Section 9: Adult Literacy Rates

[Ask of members aged 15 years and above]

I.D.	Name of household member	1. Can … read and write in English?	2. Can … read and write in a local language?
		1. Yes 2. No	1. Yes 2. No

Section 10: Availability of Food

[- will elicit information on hunger]

1. How often in the last year did this household have problems satisfying food needs?

1. Never → *go to next section* 2. Seldom 3. Sometimes 4. Often 5. Always

2. If interviewee suffered from the above, does this happen every year? 1. Yes…… 2. No……

3. Why was there difficulty in satisfying food needs? **[Multiple answers allowed]**

1. An Income earning member of the household died
2. An Income earning member of the household left
3. Additional member joined the household……..……..
4. An Income earning member of household lost job
5. An income earning member of household is no longer working because of illness.
6. Remittances no longer received
7. Reduction in remittances received
8. Poor harvest
9. Problem with storage
10. Sold most of product right after harvest and did not get a good price
11. Food prices became too high
12. Reduced access to land
13. Other

Household Agriculture

1. If farming is your principal occupation what type(s) of agricultural production unit(s) (farming) are you engaged in? Rank by importance where 1 equals most important

	Rank
Foodcrop	1
Cashcrop	2
Livestock	3
Fish rearing	4
Other (specify)	5

2. Which **Major Crops** do you cultivate? (Use Table 3 to List at most five (5) major crops cultivated)

3. For each of the major crops mentioned, please indicate the plot size, whether inter-planted with other crops and the output.

List of Major crops cultivated	Farm size cultivated (acres) and cropping type				Output (indicate units)	
	Current season (2008)		Last season (2007)		Current season (2008)	Last season (2007)
	Farm size (acres)	Sole stand or mixed crop	Farm size (acres)	Sole stand or mixed crop		

4. Please indicate the seed type used in planting each of your Major Crops, the source and the price.

List of Major crop	Current season (2008)				Last season (2007)			
	Seed type (see codes below)	Source of seed (see codes below)	Price (unit of measure)	Distance of respondent from source (km)	Seed type (see codes below)	Source of seed (see codes below)	Price (unit of measure)	Distance of respondent from source (km)

Seed Type

1. Traditional
2. Improved (include name)

Source of seed

1. Own seed
2. Market
3. NGO Development Project
4. MOFA (Govt) Development Project

5. Please indicate the types and sources of fertilizer you used on your major crops

List of Major Crop on which used	Current season (2008)					Last season (2007)				
	Type of fertilizer (***see codes below***)	Qty (# of 50 kg bags)	Price (GHC/ 50kg)	Source of fert. (***see code below***)	Distance to source (km)	Type of fertilizer (***see codes below***)	Qty (# of 50 kg bags)	Price (GHC/ 50kg)	Source of fert. (***see code below***)	Distance to source (km)

Type of Fertilizer Code:

1. NPK

2. SA

3. Urea

4. Organic

5. None

Source of Fertilizer

1. Market

2. NGO Development project

3. MoFA (Govt) Dev. project

4. From own animals

6. Please indicate the type of any other agrochemical you used on the crops (including field and storage) as well as the source.

List of Major Crop on which used	Current season (2008)					Last season (2007)				
	Type of agro-chemical (see codes below)	Qty (number)	Unit Price	Source of agrochemical (see code below)	Distance to source (km)	Type of agro-chemical (see codes below)	Qty (number)	Unit Price	Source of agrochemical (see code below)	Distance to source (km)

Type of agro-chemical

1. *Field pesticide*
2. *Weedicides*
3 *Storage pesticides*
4. *None*

Source of agro-chemical

1. *Market*
2. *NGO Dev. projects*
3. *MoFA Dev. project*
4. *Own Extract Prepared*
5. Other (Specify)

7. Please, for your Post Harvest Crops (Major crops), what proportion of your harvest do you store and where?

Type of crop	Current season (2008)		Last season (2007)	
	Proportion of Crop Stored (%)	Where do you store the produce (See Code below)	Proportion of Crop Stored (%)	Where do you store the produce (See Code below)

Where stored

1. On Farm barns
2. Off farm barns
3. Under ground
4. Other (Specify)

8. How many bags/sacks/calabashes, etc of Crop produce did you harvest last season (2008) and at what price did you sell a unit?

Major Crop	Current season (2008)					Last season (2007)				
	Qty Harvested (indicate unit)	Qty Sold (indicate unit)	Month most crop sold	Unit price	Value	Qty Harvested (indicate unit)	Qty Sold (indicate unit)	Month most crop sold	Unit price	Value

Indicate the land preparation technique(s) used by the household

Which of the following land and water management techniques do you practice?

Practice	Is farmer practicing? 1=Yes 2= No	Estimated area of land applied in acres	Number of years farmer has adopted practices
Earth Bonding			
Stone Bonding			
Ridging			
Mounding			
Mulching			
Cover Cropping			
No burn land clearing(cutlass/hoe)			
Zero-tillage(chemical)			
Plough-in vegetative cover			
Ploughing across slopes			
Ridging across slopes			
Apply manure (rate)			
Apply chemical fertilizers (rate)			

9. (a) Please indicate your Livestock size (numbers). (b) Which of the livestock did farmer start rearing within the last 10 years?

Livestock	Number 2008	Number 2007	Started rearing in last 10 years? 1 = YES 2 = NO
Cattle < 2year			
> 2 year			
Sheep < 1 year			
> 1 year			
Goat < 1 year			
> 1 year			
Donkey < 1year			
> 1 year			
Pigs < 1 year			
> 1 year			
Other(specify)			

10.Please indicate the size of your Poultry enterprise as well as those that the farmer started rearing within the last 10 years.

Poultry	Number 2008	Number 2007	Started rearing in last 10 years?
			1 = Yes 2 = No
Chicken			
Duck			
Turkey			
Guinea Fowl			
Pigeon			
Other(specify)			

13.Please provide information on the ownership of livestock in your household

Livestock type	Current season (2008)		Last season (2007)	
	Number owned by **MALE** HH members	Number owned by **FEMALE** HH members	Number owned by **MALE** HH members	Number owned by **FEMALE** HH members
Cattle				
Sheep				
Goats				
Guinea Fowl				
Chicken				
Pig				
Turkey				
Ducks				
Donkeys				
Other (specify)				

39. How does your household manage its livestock? Enter all codes that apply. *See code below*

Livestock type	Mode of feeding	Mode of watering	What type of housing	Disease management
1. Cattle				
2. Sheep				
3. Goats				
4. Guinea Fowls				
5. Chicken				
6. Pigs				
7. Turkey				
8. Ducks				
9. Donkeys				
10. Other (specify)				

FEEDING:	**WATERING:**	**HOUSING**	**DISEASE MGT.**
1. Free range	*1. At home*	*1. None*	*1. Self treatmen*
2. Cut and feed forage	*2. Ponds/dams*	*2. Kraal in house*	*2. Seek vet. advice*
3. Feed crop residue/ by-product	*3. Streams and rivers*	*3. Thatch hut*	*3. None*
4. None	*4. Other (specify)*	*4. Other (specify)*	*4. Other (specify)*
	5. Other (specify)		

13. How many animals (Livestock) did you sell?

Livestock	Units Sold	
	Current season (2008)	Last season (2007)
1. Cattle		
2. Sheep		
3. Goats		
4. Guinea Fowls		
5. Chicken		
6. Pigs		
7. Turkey		
8. Ducks		
9. Donkeys		
10. Other (specify)		

14. Do you do fish farming?1. YES……. 2. NO……..

15. What percentages of your farm labor use were from the following sources?

Source of labour	Percentage of total labour used	
	Current season (2008)	Last season (2007)
Family		
Hired		
Exchange		
Other (specify)		

16. Credit for farming

Season	Did you borrow money for farming (from any source)?(1) YES(2) NO	If YES, from which source? 1. Formal2. Informal
Current season (2008)		
Last season (2007)		

Does your household own a woodlot?1. Yes2. No

If Yes, indicate when it was established and size of the woodlot. When: ……..Size: …… acres

Does your household do a collection of sheanut? 1. Yes2. No

If yes, indicate the quantity and unit selling price for the following season

Season	Quantity collected (bags)	Quantity processed (bags)	Qty sold unprocessed (bags)	Unit selling price for the unprocessed
Current season (2008)				
Last season (2007)				

Welfare Indicators:

(a) *Food availability*

How long does the household's harvest of staple crops last? …… months

During which months does the household experience severe food shortages? Please tick

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

When do you harvest and how long does the following household food staples last in a year:

Household Food staples	Period food crop is harvested *(See code below)*	Food last till beginning of the Rainy Season	Food last till ending of the Rainy Season	Food last till beginning of the Dry Season	Food last till ending of the Dry Season
Maize					
Cassava					
Yam					
Sorghum					
Millet					
Rice					
Cowpea					
Other (specify)					

Food Harvest period code:

1. Beginning of the Rainy Season 2. Beginning of the Dry Season

Which part (s) of the year do your household consume most the following products?
(Tick all that apply).

	Beginning of the Rainy Season	Beginning of the Dry Season
beef		
mutton		
goat meat		
fresh fish		
smoked fish		
poultry meat		
bush meat		
Eggs		
Other (specify)		

Have made any investments in the last 3 to 5 years?

If yes, what type of investments did you make and how much (GH¢)?

Non-Farm

-Building of a house……
-Renovation……..
-Education……
-Training……..

Farm

-Seeds……
-Fertilizer……..
-Farm tools……
-Livestock……..

Name any association(s) you belong to.

Do you make any contributions to this association?

If yes, state the amount (GH¢)? ……..

Have you contributed towards any community projects?

If yes, name the project and state the amount (GH¢)?

……. ……..…..

Have you contributed towards the maintenance of any community projects?

If yes, name the project and state the amount (GH¢)?

…….

……..…..

Section 12: Household Amenities

1.What kind of toilet facility does the household use?
1. None/beach/bush
2. Flush toilet
3. Pan/bucket
4. Covered pit latrine
5. Uncovered pit latrine
6. KVIP
7. Other ……

2.How does your household dispose of refuse?
1. Collected by refuse agency
2. Burned by household
3. Public provided dump
4. Dumped elsewhere
5. Buried by household
6. Other (specify)……..

3.How does the household dispose of liquid waste?
1. Through the sewerage system
2. Thrown onto the street/outside
3. Thrown in the gutter
4. Thrown into the compound
5. Other……

4.What is the main source of drinking water for this household?

1. Inside taps in dwelling or compound
2. Public outdoor tap
3. Borehole
4. Protected/Covered well
5. Uncovered well
6. Purchased treated water — tanker, bucket, barrels, sachet
7. River/pond/lake
8. Other (specify)……

5. Does the household or a household member own the dwelling?
1. Owns the dwelling
2. Rents the dwelling
3. Use without paying rent

6. What is the material of the roof of the house?
1. Mud
2. Thatch
3. Wood
4. Metal sheets
5. Cement/concrete
6. Roofing tiles
7. Asbestos
8. Other (specify)…….

7.What is the material of the walls of the house?
1. Mud/mud bricks
2. Stone
3. Burnt bricks
4. Cement/sand crete
5. Wood/bamboo
6. Iron sheets
7. Cardboard
8. Other (specify)……..

8.What is the main fuel used for cooking?
1. Firewood
2. Charcoal
3. Kerosene oil
4. Electricity
5. Crop residue/saw dust
6. Animal waste
7. Gas
8. Other specify ……

9.What is the main fuel for lighting?
1. Kerosene/oil/sheabutter
2. Gas
3. Electricity
4. Generator
5. Battery
6. Candle
7. Other specify……

Section 13: Access to Services

[Please tick appropriate box]

1. How long does it take to reach the nearest facility 2. By what means does one travel?

	Time to reach facility in minutes						By what means?				
	0-14	15-29	30-44	45-59	60+		Vehicle	Motor-cycle	Foot	Animal	Canoe/ boat
a. Supply of drinking water											
b. Food market											
c. Public transportation											
d. Primary School											
e. Junior Secondary											
f. Senior Secondary School											
g. Health Clinic or Hospital											
h. Telecommunication facility											
i. Bank											
j. Post office											
k. Police Station											

Section 14a: Political Participation

[Ask of household members aged 18 and over]

I.D.	1. Name of Member of HH aged 18 years and over	2. Did you vote in the last district elections? 1.Yes→go to 4 2.No	3. If No, why did you not vote? 1.Was not registered to vote 2.Was not eligible to vote 3.Was not in the country 4.Do not care to vote because it will have no effect on policies 5.Religious beliefs 6.Ill or injured 7.Other (specify)	4. Did you vote in the last national elections? 1.Yes → go to 6 2.No	5. If No, why did you not vote in the last national elections? 1.Was not registered to vote 2.Was not eligible to vote 3.Was not in the country 4.Do not care to vote because it will have no effect on policy 5.Religious beliefs 6.Ill or injured 7.Other (specify)	6. Have you ever been consulted prior to the start of any community projects? 1. Yes 2. No

Section 14b (Cont'd): Political Participation

[Ask of household members aged 18 and over]

1. Has any member of this household benefited from a community level project 1.Yes 2.No	
2. Has any member of this household benefited from a project of the district assembly? 1.Yes 2.No	
3. Please name the project	
4. Is any member of this household a member of a unit committee? 1.yes 2.no	
5. Does any member of the household know how much money was allocated to the district through the District Assembly Common Fund last year? 1.Yes 2.No	

Appendix 2: Guidelines for Focus Group Discussions

1. Economic Activities

Questions

1a. What are the major economic activities in this community?

1b. Who are the major participants engaged in these activities? (Gender, youth, migrants, indigenes)

2. Governance/Institutions

2a. Level of security in the community? (Police protection, watchdog committees, fire volunteers, security of resources, rights of individuals/groups)

2b. Level of participation in the community development programmes? (youth, female, males, marginalized groups etc.)

2c. Contact with the elected and appointed govt representatives (e.g. district assemblies, MPs, DCEs etc)

2d. Access to legal services?

3. Resource Endowments

3a. What resources are available to the community? (natural and physical resources e.g.

- Roads,
- hospitals,
- schools,
- irrigation facilities/dams,
- rivers,
- land,
- forests,
- community wood lots,
- protected areas (sacred groves, shrines),
- reliable rainfall etc.)

3b. Who has access to these resources? (physical, financial etc.)

3c. How are the resources made available to the people? (timeliness, quality, effectiveness etc.)

3d. How are these resources managed?

3e. What rights do the traditional rulers/state authorities have over resources in the communities?

3f. What are the rules governing the usage of these resources? (e.g. land tenure arrangements, soil fertility regulations etc.)

3g. Why do you have these rules? (probe for sustainability)

3h. Are there any punitive actions for breaking rules?

4. Investment Opportunities

4a. What opportunities exist for investments in this community?

4b. Which opportunities are being exploited?

4c. Who is investing (e.g. indigenes, migrants, foreigner etc) and in which area(s)?

5. Constraints

5a. What are the constraints to the utilization of the resources?

5b. What development challenges face the community?

5c. What actions are being taken by the community to address them?

5d. What actions are taken by the district assembly to address them?

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