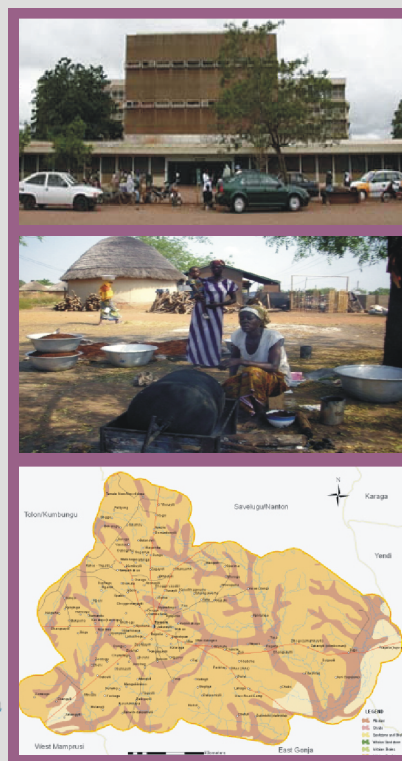


# TAMALE METROPOLITAN HUMAN DEVELOPMENT REPORT 2011

Resource Endowment, Investment Opportunities  
and the Attainment of MDGs



Government of Ghana



United Nations Development  
Programme Ghana Office  
Accra

January 2011

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## Foreword

Within the general framework of ensuring equity and overall development, the current District Human Development Reports (DHDR) cover a sample of twelve 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 agenda of Better Ghana 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 DHDRs over the years serve as 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 DHDRs 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.

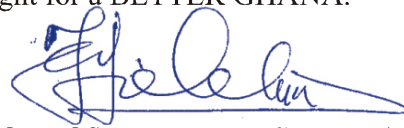
The main thrust of the report is to identify the resource endowments and investment opportunities of the selected MMDAs, and assess respective MDGs gaps to serve as basis for the preparation of Community Action Plans, to inform the district planning process, and to serve as a baseline information for the evaluation of the programmes and policies for the attainment of human development and the MDGs at the local levels. The Ministry for Local Government and Rural Development (MLGRD) sees the reports as a means to achieving equity and balanced growth in the country. It is our hope that UNDP would continue to allocate more

resources to the preparation of DHDRs, which, to our mind 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 once, with the support of UNDP, we cover very few selected MMDs in the country. The likelihood is that we may not come back to the MMDAs. It is, therefore, imperative for the 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 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 this 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 them and on their own initiative to 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 be useful by doing things right for a BETTER GHANA.



HON. JOSEPH YIELEH CHIREH (MP)

*Hon. Minister, Ministry of Local Government and Rural Development*





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## Preface

UNDP Ghana Country Office in collaboration with stakeholders and other partners has been facilitating the production and dissemination of Ghana Human Development Reports (HDRs) since 1997. These reports aim to enrich policy and provide analytical basis to the Government of Ghana (GoG) and offer development stakeholders an analysis 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 twelve (12) districts of: Karaga, Bolga, Tamale, Bole, East Mamprusi, Lawra, Nanumba North, Bawku West, Sissala East, Wa Municipal, Zabzugu and Kasena Nankana in the Northern, Upper West and Upper East Regions on the theme “Resource Endowment, Investment Opportunities and the Attainment of the MDGs”. The reports analyze the human development situations and assess the progress of the district towards the realization of the MDGs. With barely five years to go 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 discussed the resource endowments and investment opportunities in the district and how these impinge on the

attainment of MDGs and improvement of human development at the local level.

The reports have provided the opportunity to having reliable and useful data, as well as providing information for policy-making and further research for the formulation and implementation of the Medium-Term Development Plan of the districts. It is the fervent aspiration and hope of UNDP that these reports would be seen as development tools for local economic development. In fact, the reports go a long way to inform the UNDP’s Local Economic Development Programme in some seven selected districts in Northern Ghana. These Human Development Reports, and for that matter others should, therefore, lead us to build synergies and ensure shaping of programmes and projects in the communities to serve the needs of the people.

It is apparent that these DHDRs would enrich policy dialogue and serve as analytical tools for the Government of Ghana, development stakeholders and investors an analysis and response to key development issues and investment opportunities at the grassroots level.

These reports are a “MUST” reference point for the development agenda of the MMDAs covered. I look forward to further collaborations and support.



RUBY SANDHU-ROJON

*UNDP Resident Representative*

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# Acknowledgements

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To all the respondents we say *thank you*.

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(former Senior Policy Advisor — Strategy and Policy Unit); Paul Derigubaa (former Programme Specialist — Strategy and Policy Unit), Ruby Sandhu-Rojon (the Resident Coordinator of the UN System and Resident Representative of UNDP of Ghana Country Office); K. K. Kamaluddeen (Country Director, UNDP), Pa Lamin Beyai (Economic Advisor, UNDP); Shigeki Komatsubara (Deputy Country Director — Programmes, UNDP); Coretta Jonah (Economic Analyst — Policy and Strategy Unit, UNDP); Kordzo Sedegah (Economic Specialist and the Report Coordinator — Strategy and Policy Unit, UNDP); and Magnus Ebo Duncan (Head, Economic and Industry Statistics Division, Ghana Statistical Service).

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## Abbreviation

ACE	Alliance for Change in Education
AES	Agricultural Extension Service
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
CVA	Cardiovascular Accidents
DACF	District Assembly Common Fund
DADU	District Agricultural Development Unit
DAEA	Department of Agricultural Economics and Agribusiness
DCE	District Chief Executives
DEOC	District Oversight Committee
DEPT	District Education Planning Te
am	
DFID	Department for International Development
DHDR	District Human Development Report
DWAP	District Wide Assistance Projects
ECOWAS	Economic Community of West African States
EMIS	Education Management Information System
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
GNFS	Ghana National Fire Service
GPRS	Growth and Poverty Reduction Strategy
GRATTIS	Ghana Regional Appropriate Technology Industrial Research
GSS	Ghana Statistical Service
HDR	Human Development Report
HDI	Human Development Index
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
ITNs	Insecticide Treated Nets
ITTU	Intermediate Technology Transfer Unit

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JHS	Junior High School
KDA	Karaga District Assemblies
KVIP	Kumasi Ventilated Improved Pit
LPG	Liquefied Petroleum Gas
LUT	Land Utilization Types
MCE	Municipal Chief Executive
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MHMT	Municipal Health Management Team
MiDA	Millennium Development Authority
MP	Member of Parliament
NARC	National Agriculture Research Centre
NADMO	National Disaster Management Organization
NBSSI	National Board for Small Scale Initiatives
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 Index
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
RGR	Refuse Generation Rate
SARI	Savannah Agricultural Research Institute
-3SD	-3 Standard Deviation
SHS	Senior High School
SMC	School Management Committee
SSNIT	Social Security and National Insurance Trust
TBA	Traditional Birth Attendant
TIDA	Tisongmitaba Development Association
TMMHIS	Tamale Metropolitan Mutual Health Insurance Scheme
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 Education Fund
USAID	United States Agency for International Development
VRA	Volta River Authority



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# Executive Summary

## Overview

This Human Development Report (HDR) for the Tamale Metropolitan Assembly is one of the six human development reports prepared by the Department of Agricultural Economics and Agribusiness (DAEA) of the University of Ghana for the United Nations Development Programme (UNDP) in Ghana. The report analyzes the human development situation and assesses the progress of the assembly towards the realization of the MDGs. It also discusses the resource endowments and investment opportunities in the assembly and the possible effects on the attainment of MDGs and improvement in human development. The report also examines how the findings could influence the assembly in Community Action Plans, inform the Metropolitan Planning Process, and serve as baseline information for the evaluation of the programme and policies of the Long-Term Multi-Sectoral Northern Growth Strategy for the attainment of the MDGs. It also inputs into UNDP's support for the development of the Long Term National Development Plan and reinforces the capacity of the assembly and community institutions for MDG-based assessment, planning, monitoring and evaluation. The argument is that the three dimensions of human development, 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 Tamale Metropolitan Assembly 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 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 Tamale Metropolitan Assembly also conducted a socio-economic survey (including focus group discussions) in the metropolis 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 Tamale Metropolitan Assembly for their programmes, particularly the Medium-Term Metropolitan Development Plan (2006-2009) prepared for the implementation of the Growth and Poverty Reduction Strategy. In addition, information from the two sets of three District Human Development Reports (DHDRs) already produced and launched, was used extensively to obtain and inform the metropolitan-level information on population dynamics, housing characteristics, employment and education.

## Research Methods Adopted

Interviews were conducted in the Tamale Metropolitan Assembly 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.

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 metropolis. In all, a minimum of 220 households was chosen from 14 out of the number of EAs in the Metropolis. The special-urban and semi-urban households were grouped in the urban category to ensure harmonization with CWIQ 2003 and 2000 population census. Focal group discussions were carried out in four of the communities to reflect the stratification.

### **The Main Findings of the Study**

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

1. In education, the Tamale Metropolis has witnessed improvements in the enrolment of school children in the primary and JHS levels. However, several of the school buildings in the metropolis require some form of rehabilitation while others require total demolition and re-construction. The pupil-teacher ratio in the Tamale Metropolis has remained stable at 28:1 from 2003/04 to 2005/06 academic years.
2. There has been improvement in the health sector with indications of improvement towards achieving the MDGs 4, 5 and 6. Access to medical facilities are relatively high in the metropolis 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 centre or the pharmacy shop. However, malaria is the most reported disease in the Metropolis and the high incidence is a threat to improving the life expectancy of the population.
3. In the area of water provision, although the metropolis 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 metropolis. 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.
4. The unemployment rate among the youth has been on the increase in the metropolis 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.
5. The impact of economic activity on poverty indicators shows that over all, the metropolis performs better relative to the national situation in terms of adult literacy (knowledge) and access to safe water. However, the metropolis performed poorly relative to the national



- in respect of proportion of underweight children.
6. In terms of food insecurity, it is relatively more difficult to satisfy food needs in the urban metropolis compared to the rural metropolis and more prominent among men than women.
  7. The number of health facilities within the Metropolis is quite satisfactory. However, most of these are poorly equipped. The Tamale Regional Hospital and the West End Hospitals are the only well equipped facilities.
  8. As one of the fastest growing cities in the country, Tamale is faced with daunting challenges in the management of both solid and liquid wastes. Solid waste is managed through communal container system, door-to-door collection services, street litter bins systems and evacuation of heaps. There are about 95 public toilets within the Metropolis.
  9. The utilization of the human resources available in the metropolis 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.
  10. The general development of roads in the metropolis is concentrated within the core of the metropolis. The Department of Urban Roads indicates the metropolis has 42.9 km of asphalt surfaces, 313.3 km of bituminous surface dressed roads and 134.2 and 96.4 km of gravel roads and earth roads respectively. Approximately, each year about 25 per cent of the road budget is met. The Town and Country Planning Unit of the Metropolis estimates a backlog of over 16 km of roads within the urban metropolis.
  11. Within the telecom industry, 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 metropolis. Cellular mobile telephony has brought modern telecommunication services to the metropolis. 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.
  12. The electricity network covers 60 per cent of the population in the metropolis, particularly those in the dense core. The Metropolitan Town and Country Planning Department indicates that the metropolis can be divided into three: the dense core, the dispersed middle belt and the outline peri-urban communities. Since electricity is expensive to transmit to all these areas, the most focus has been on the dense core. Alternative energy sources are being championed by NGOs.
  13. The Metropolis is poorly endowed with water bodies. The only natural water systems, however, are a few seasonal streams, which have water during the rainy season and dry up during the dry season. Water use, therefore, depends largely on rainfall, dugouts and treated water.
  14. Most households in the metropolis use chemical fertilizers to maintain soil

fertility. Manure application is also prominent, as organic vegetable production has increased in response to the changing lifestyles of the urban metropolis dwellers and the growing market to produce more exotic vegetables.

15. Most communities indicated that they interact more with their local assemblyman than with the MP or MCE. Communities therefore relay their problems and grievances through their assemblymen to the Metropolitan Assembly. Their participation in community development programmes is, therefore, through their assemblymen. Given that communities are not consulted on projects in their communities, the participation in community development meetings in the metropolis is low.
16. The proportion of households in the metropolis who have seen improvement in governance in terms of access to security services, legal services and in the change in the performance of metropolitan assembly in terms of development in their communities in the last 12 months, are 48 per cent, 43 per cent and 40 per cent respectively. Those who have seen no change or observed deterioration in the delivery of these services are 52 per cent, 57 per cent and 60 per cent. Thus majority of the population in the metropolis have seen no change and/or seen deterioration in governance in accessing these services.

### **The Way Forward**

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

1. 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 participation of individuals in accessing governance in the metropolis needs to be enhanced for broader community participation. Communities relay their problems and grievances through their assemblymen to the Metropolitan assembly. Therefore, the metropolis may need to strengthen the assemblyman-community linkage to enhance effective community participation in governance.

17. 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 metropolis 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 TaMA and other stakeholders in ensuring that the human resource development agenda is prioritized.
2. Investment opportunities in the metropolis face several challenges. To promote investments and sustain these investments, land tenure security combined with improvements in infrastructure, financial support, markets, appropriate technology and enhanced security, are germane. Investment incentive packages needs to be developed by the TaMA, along with technical support from other governmental and non-governmental organizations to facilitate the exploitation of natural resource

endowments in the metropolis to generate income to reduce poverty and help make progress on the MDGs in the metropolis.

3. 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 metropolis will greatly depend on agricultural resource exploitation and protection.
4. The metropolis 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.

5. Agricultural interventions including training in agricultural production and agro-enterprise management, provision of inputs (seeds, animal breeds, tools, etc.) are undertaken by NGOs. The TaMA support given to NGOs in the metropolis 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 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."<sup>1</sup> 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. The gender-related development index, also produced by UNDP, aims to reveal the gender dimensions of the three components of human development.<sup>2</sup>

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<sup>1</sup> Sen, A. (2000), pp. 3.

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<sup>2</sup> 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.

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.”

### **Box 1.1: Calculating the Human Development Index**

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

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

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

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

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

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

#### **Goal Posts for calculating the HDI**

<i>Indicator</i>	<i>Maximum Value</i>	<i>Minimum Value</i>
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 set of DHDRs for three districts — Atwima, Builsa and Tema in Ashanti, Upper East and Greater Accra Regions respectively were based on the theme: “Vulnerability,” while the second set of another three DHDRs on the theme “Vulnerability and the Attainment of the MDGs at the Local Level” were prepared on the districts of Ahanta West, Ofinso and West Gonja in Western, Ashanti and Northern Regions, respectively.

The third set of district human development reports has also been prepared for six districts: Bolgatanga Municipal, Kassena Nankana and Bawku West in the Upper East Region, and Tamale Metropolitan, Karaga and East Mamprusi districts in the Northern Region, respectively. The theme for the third set of reports reflects on resource endowments, investment opportunities and the attainment of MDGs to serve as basis for the preparation of Community Action Plans, informing the District Planning Process.

### **Millennium Development Goals (MDGs)**

The adoption of the Millennium Declaration by Heads of State in September 2000 formally introduced the MDGs onto the development agenda. The MDGs were the results of the thinking that began in the mid-1990s on strategies to improve aid effectiveness. The MDGs consist of 8 goals, 21 targets and 60 indicators (Table 1.1) and have become an integral part of Ghana’s development strategy. Ghana’s successive Medium-Term Development Plan “...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 (MDGs)...” 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, the MTDP and the district development plans have matrix indicating the linkage between identified priorities and the MDGs.

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

## **Resource Endowments, Investment Opportunities and Attaining the MDGs**

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

In particular, because natural resource endowment remains relatively constant or declines under environmental pressure, the size of the human population that can be sustainably supported based on the current consumption patterns and prevailing technologies is decreasing. Hence the ability of a location's natural resource base to sustain human activity is determined by two factors: the 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 policies to promote future innovation and growth is the task of today's decision-makers.

Crowley and Appendini<sup>3</sup>, 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.

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<sup>3</sup> Crowley, E. and Appendini, K. (1999, 2006).



Table 1.1: Official List of MDG Indicators (Effective 15 January 2008)

Goals and Targets <sup>4</sup>	Indicators for monitoring progress
Goal 1: Eradicate extreme poverty and hunger	
<b>Target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day</b>	1.1 Proportion of population below \$1 (PPP) per day 1.2 Poverty gap ratio 1.3 Share of poorest quintile in national consumption
<b>Target 1.B: Achieve full and productive employment and decent work for all, including women and young people</b>	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
<b>Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger</b>	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	
<b>Target 2.A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling</b>	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	
<b>Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015</b>	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	
<b>Target 4.A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate</b>	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	
<b>Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio</b>	5.1 Maternal mortality ratio 5.2 Proportion of births attended by skilled health personnel

<sup>4</sup> All indicators should be disaggregated by sex and urban/rural as far as possible.

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<b>Target 5.B: Achieve, by 2015, universal access to reproductive health</b>	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	
<b>Target 6.A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS</b>	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
<b>Target 6.B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it</b>	6.5 Proportion of population with advanced HIV infection with access to antiretroviral drugs
<b>Target 6.C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases</b>	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	
<b>Target 7.A: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources</b>	7.1 Proportion of land area covered by forest
	7.2 CO2 emissions, total, per capita and per \$1 GDP (PPP)
	7.3 Consumption of ozone-depleting substances
<b>Target 7.B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss</b>	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
<b>Target 7.C: Halve, by 2015, the proportion of people without sustainable access to</b>	7.8 Proportion of population using an improved drinking water source
	7.9 Proportion of population using an improved sanitation facility

safe drinking water and basic sanitation	
<b>Target 7.D: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers</b>	7.10 Proportion of urban population living in slums <sup>ii</sup>
<b>Goal 8: Develop a global partnership for development</b>	
<b>Target 8.A: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system</b>	<p><i>Some of the indicators listed below are monitored separately for the least developed countries (LDCs), Africa, landlocked developing countries and small island developing States.</i></p> <p><b>Official development assistance (ODA)</b></p> <p>8.1 Net ODA, total and to the least developed countries, as percentage of OECD/DAC donors' gross national income</p> <p>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)</p> <p>8.3 Proportion of bilateral official development assistance of OECD/DAC donors that is untied</p> <p>8.4 ODA received in landlocked developing countries as a proportion of their gross national incomes</p> <p>8.5 ODA received in small island developing States as a proportion of their gross national incomes</p> <p><b>Market access</b></p> <p>8.6 Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty</p> <p>8.7 Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries</p> <p>8.8 Agricultural support estimate for OECD countries as a percentage of their gross domestic product</p> <p>8.9 Proportion of ODA provided to help build trade capacity</p> <p><b>Debt sustainability</b></p> <p>8.10 Total number of countries that have reached their HIPC decision</p>
<b>Includes a commitment to good governance, development and poverty reduction – both nationally and internationally</b>	
<b>Target 8.B: Address the special needs of the least developed countries.</b>	
<b>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</b>	
<b>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)</b>	
<b>Target 8.D: Deal comprehensively with the debt</b>	

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<b>problems of developing countries through national and international measures in order to make debt sustainable in the long term</b>	points and number that have reached their HIPC completion points (cumulative)
<b>Target 8.E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries</b>	8.11 Debt relief committed under HIPC and MDRI Initiatives 8.12 Debt service as a percentage of exports of goods and services 8.13 Proportion of population with access to affordable essential drugs on a sustainable basis
<b>Target 8.F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications</b>	8.14 Telephone lines per 100 population 8.15 Cellular subscribers per 100 population 8.16 Internet users per 100 population

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

The Tamale Metropolitan Assembly HDR is one of the human development reports prepared to assess endowment investment opportunities, and attainment of MDGs in 12 selected districts in Northern Ghana. The report analyzes the human development situation and assesses the progress of the assembly towards the realization of the MDGs. It also discusses the resource endowments and investment

opportunities in the assembly and the possible effects on the attainment of MDGs and improvement in human development. The report also examines how the findings could influence the assembly in Community Action Plans, inform the Metropolitan Planning Process, and serve as baseline information for the evaluation of the programme and policies for the attainment of the MDGs. It report also inputs into UNDP's support for the development of the Long Term National Development Plan and reinforces the capacity of the assembly 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 Tamale Metropolitan Assembly also conducted a socio-economic survey (including focus group discussions) in the metropolis in November-December 2008 and consulted various stakeholders to ensure that their interests were addressed and technical omissions minimized.

## **Secondary Data Sources**

Some aspects of the district's profile were obtained from documents that had been prepared by the Tamale Metropolitan Assembly for their programmes, particularly the Medium-Term Metropolitan Development Plan (2006–2009) prepared for the implementation of the Growth and Poverty Reduction Strategy. In addition, various departments of the Tamale Metropolitan Assembly provided information on their activities over the last five years. This provided insights into the economic and social conditions in the Tamale Metropolitan Assembly and the strategies adopted and implemented, including issues of human development. An important source of additional secondary data was the census. Data from the 2000 population and Housing Census and information from the two sets of three Districts Human Development Reports

(DHDRs) already produced and launched, were used extensively to obtain and inform the metropolitan-level information on population dynamics, housing characteristics, employment and education.

## **Primary Data Collection**

Interviews were conducted in the Tamale Metropolitan Assembly 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, 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, characteristics of households, educational attainment, among others.



*Picture 1.1. At focus group discussions during the 2008 Household Survey*

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 metropolis. 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 personnel of the Ghana Statistical Service in the Metropolis) 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.

## **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 (EA) 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 220 households was chosen from 14 out of the number of EAs in the metropolis. The EAs from which the households were selected are shown in Table 1.2. In the report, the special-urban and semi-urban households were grouped in the urban category to ensure harmonization with CWIQ 2003 and 2000 census. Focus group discussions were carried out in four of the communities to reflect the stratification. In addition, interviews were conducted with institutional leaders in the district.

school infrastructure, access to education as well as education attainment and school enrolment. In Chapter 5, the report assesses the health, water and sanitation situation in the district in relation to the MDGs. The chapter examines the trends in infant, child and maternal mortality rates and the incidence of HIV/AIDS, malaria and other major diseases as well as household access to safe drinking water and basic sanitation. Chapter 6 discusses resource endowments and investment opportunities with respect to the human, infrastructure and natural resources in the metropolis. 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 7. Chapter 8 discusses the investment opportunities and risk factors contingent on the resource endowments and their utilization. The last chapter then provides conclusions and the way forward in terms of future policies and strategies.

## **Outline of the Report**

The Report has nine chapters. After the introductory chapter, the profile of Tamale Metropolitan Assembly is outlined in Chapter 2 and covers physical features, demographic characteristics, socio-economic infrastructure and housing characteristics. Economic activity and poverty including major economic activities, employment opportunities and objective as well as subjective assessments of poverty in the metropolis are discussed in Chapter 3. Chapter 4 focuses on education and literacy by analyzing quality of





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

Locality	Name of EA	Category	Sample Size	Average Household Size
Kalpohini/Sakasaka/Gumani	Kalpohini SHS	Special Urban	16	3.18
Shishegu	AME Zion	Semi-Urban	15	3.80
Kukuo/Central/Aboabo	Sikafat Arabic/English School	Urban	16	3.87
Zogbeli/Lamashegu	Almakazia Primary	Urban	16	2.8
Nyesie	Nyesie	Rural	15	5.27
Dabokpa/Tutingli/Dol./Che	Changli Village	Urban	17	2.35
Zogbeli/Lamashegu	Deaha's Maternity Home	Urban	16	3.75
Nyohini/Sanerigy	Old Airport Control Tower	Urban	16	3.50
Bupiel/Nyani-Fong/S-Gida	Methodist Educ. Unit	Urban	16	3.50
Kalpohini/Sakasaka/Gumani	H/No. K. 101	Urban	16	2.06
Moshie Zongo/Tishigu	H/No. B44 (Happiest Community)	Urban	16	2.30
Gumbihini/Choggo-M/Ridge	Fulera Maternity Home	Urban	15	3.90
Moshie Zongo/Tishigu	Slaughter House	Urban	16	3.50
Vitin Dabogse	Vitin Dabogse	Rural	16	3.62
<b>Total</b>			222	

Source: DAEA Household Survey, 2008.

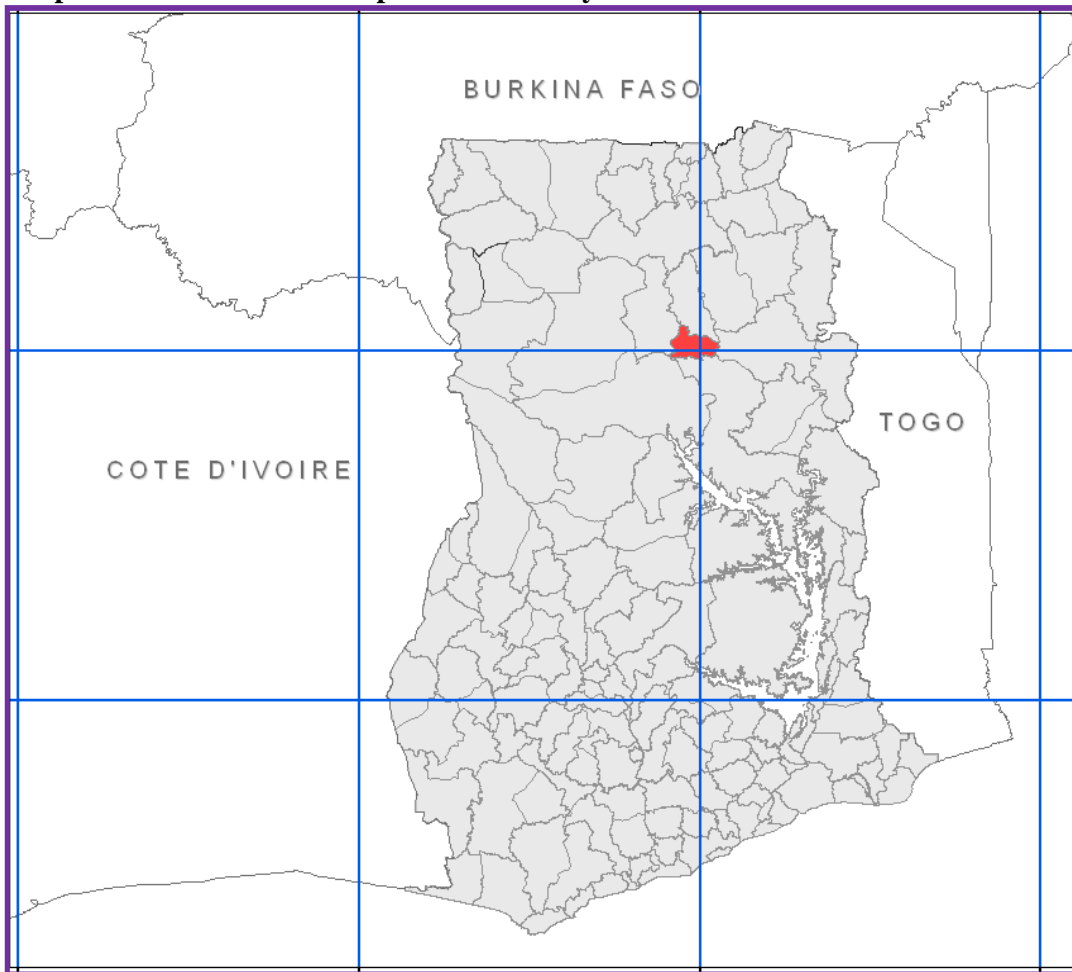
# Profile of Tamale Metropolitan Assembly

## Introduction

The Tamale Metropolitan Assembly is located at the centre of the Northern Region. It lies between latitude 9° 16' and 9° 34' North and longitudes 0° 36' and 0° 57' West. It shares common boundaries with

Savelugu/Nanton District to the north, Tolon/Kumbungu District to the west, Central Gonja District to the south-west, East Gonja District to the south and Yendi District to the east.\*

**Map 2.1: The Tamale Metropolitan Assembly**



\*/ Parts of this chapter is contributed by CERSGIS, University of Ghana.



### *Profile of Tamale Metropolitan Assembly*

The Tamale Metropolis occupies approximately 750 sq. km, which is 13 per cent of the total area of the Northern Region. Apart from urban Tamale, which occupies a total surface area of about 130 sq. km, the rest of the settlements are small villages. The rapid expansion of the metropolis has resulted in some settlements such as

Kanville, Kakpagyili, Gboto/Kpalsi, Gurugu, Kukuo, Jisonayili and Vittin being absorbed into urban Tamale. For effective administration and supervision, the metropolis is divided into 12 circuits. These are Education Ridge A & B, Bolga Road A & B, Hospital Road A & B Kamina, Mile 9, Lamashegu A & B and Zogbeli A & B.



Picture 2.1: Main administrative block of Tamale Metropolitan Assembly and the Metropolitan Coordinating Director.

## **Physical Features**

The MDG's seventh goal focuses on ensuring environmental sustainability and the integration of the principle of sustainable development into each country's development agenda and to stem and reverse the loss of environmental resources. Consequently, the metropolis which has a considerable proportion of her land area covered by savanna grassland is positioned critically in assessing the outcome of policies towards the realization of the goal of ensuring environmental sustainability and as incorporated into the Ghana Poverty Reduction Strategy II (GPRS II) and the Guidelines for the preparation of the Metropolitan Medium Term Development Plan.

The Tamale Metropolitan Assembly is located approximately 180 metres above sea

level with a topography, which is generally rolling, with some shallow valleys, which serve as stream courses. There are also a few isolated hills. The Tamale Metropolis is poorly endowed with water bodies. The only natural water systems are a few seasonal streams, which have water during the rainy season and dry up during the dry season. Notable among these streams are the Pasam, Dirm-Nyogni and Kwaha.

The streams mentioned above have their headwaters from Tamale, which is on a relatively higher ground. The metropolis can boast of some artificial dams such as the Builpela and Lamashegu dams and some dug-outs. Regardless of this poor drainage system, the potential for an irrigation scheme in the metropolis is foreseeable. The Pagazaa stream has the potential of being dammed for

irrigation purposes since it collects all the waters of the rivers mentioned earlier.

### **Climate and Vegetation**

The metropolis experiences one rainy season as well as one dry season in a year under the influence of moist south-westerly winds. The rainy season occurs from April/May to September/October, peaking in July/August, with a mean annual rainfall of 1100mm within 95 days of intense rainfall. Influenced by dry north-easterly (Harmattan) winds, the dry season usually occurs from November to March. The mean day and night temperatures range from 33°C to 39°C and 20°C to 22°C respectively while mean annual day sunshine is approximately 7.5 hours. The Tamale Metropolitan Area lies within the Guinea Savannah belt of Northern Ghana and her climatic characteristics are conditioned by this ecology. The area is underlain by sandstone, mudstone and shale, which over time, have been weathered to different degrees. The main soil types that have resulted from the above natural phenomenon include sand, clay and laterite ochrosols. These soil types are inadequately protected, resulting in serious erosion during the rains.

Apart from the preserved natural colonies of vegetation at fetish groves, forest reserves and community woodlots, the whole metropolis exhibits tall grass interspersed with drought resistant trees such as neem, sheanut, dawadawa and mahogany. (See Picture 2.2). During the rains the metropolis becomes green, making the vegetation more

luxuriant. In the dry season, however, due to poor vegetation cover, high levels of run-off and evapo-transpiration and leaching, water becomes scarce. Thus, the grasses dry up favouring bushfires which destroy soil nutrients and expose soils to erosion.



*Picture 2.2: Vegetation of Tamale Metropolitan Assembly — tall grass interspersed with drought resistant trees.*



*Picture 2.3: A dug-out in the Tamale Metropolitan Assembly.*

The metropolis has one major natural forest reserve located at Sinsab-gi-gbini. In addition to this, other man made plantations such as the Water Works Plantation, Kogni Fuelwood Plantation and MOFA Area Fuelwood Plantation exist.

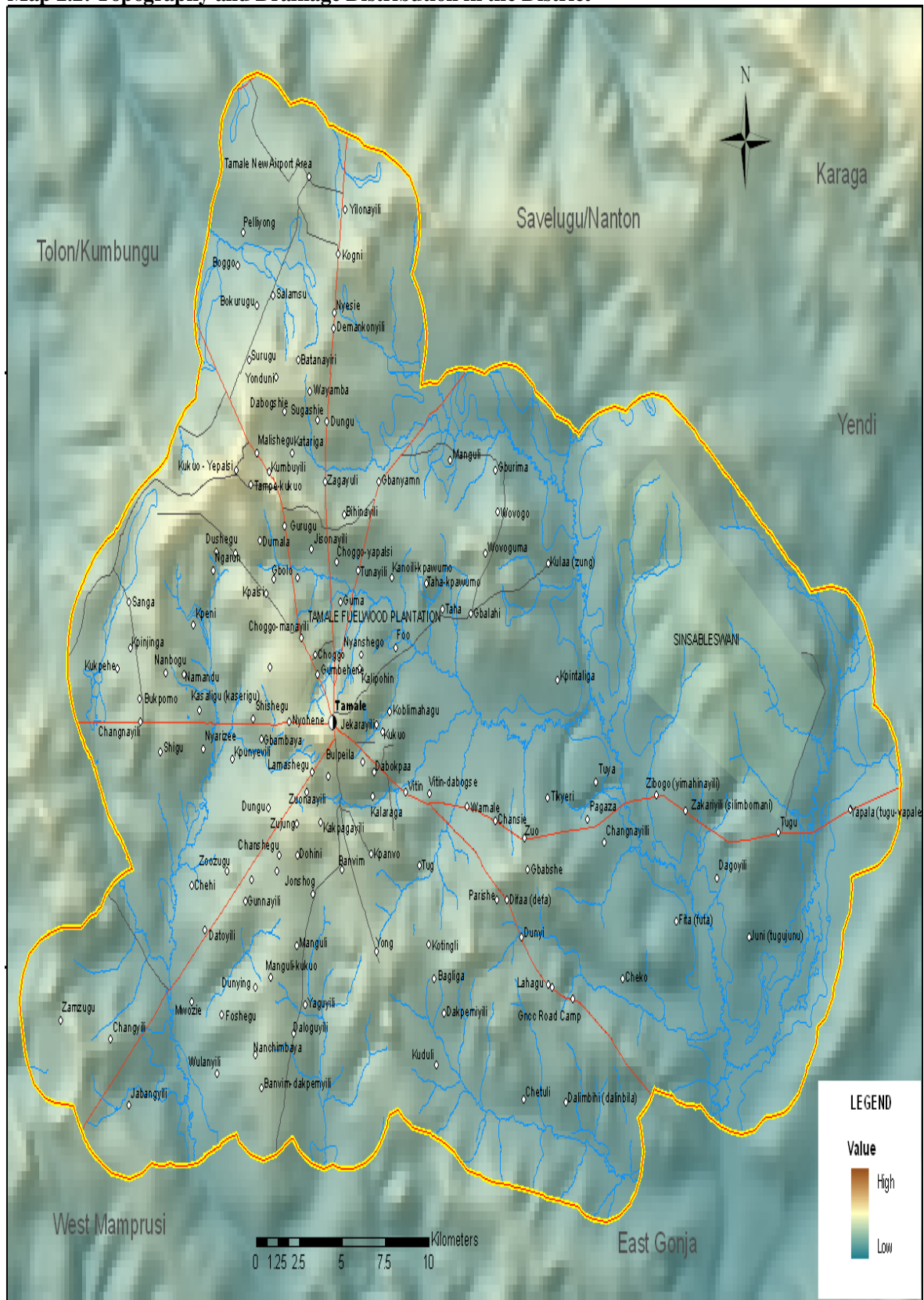
### **Relief and Drainage**

There are only a few natural water systems in the Tamale metropolis, consisting of seasonal streams drying up during the dry season.

Notable among these streams are the Pasam, Dirm-Nyogni and Kwaha. There are some artificial dams and dug-outs which have been created (Picture 2.3).



Map 2.2: Topography and Drainage Distribution in the District



There are about 91 of such dug-outs dotted around communities within the metropolis, some of which were provided by the communities themselves. These serve as watering points for animals as well as for domestic purposes. Some of the dug-outs broke down in 1989 and in 2007 as a result of heavy rains while others dry up during the dry season and both people and animals have to travel long distances for water. Despite this poor drainage system, the metropolis still has the potential for an irrigation scheme. The Pagazaa stream which collects all the waters of the rivers has the potential to be dammed for irrigation purposes.

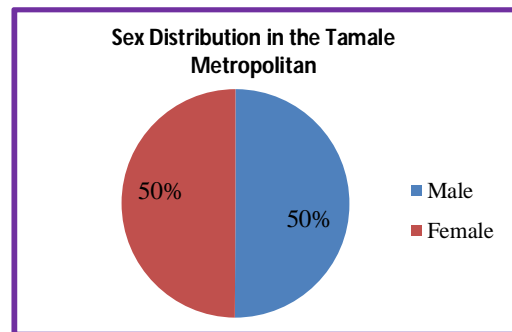
### **Demographic Characteristics**

According to the 2000 Population Census, the population of the Tamale Metropolitan stands at 293,881, with males and females counting for approximately 50 percent each. This figure represents a 75 per cent increase over the 1984 population of 167,778 and an intercensal growth rate of 3.5 per cent. This goes far beyond the national and regional rates of 2.7 per cent and 2.8 per cent respectively. The boundary change of the Metropolitan since 1984 could account for this vast difference. The metropolis has an urban population of 67.1 per cent, making it the only district in the region which is predominantly urban. The population density of the metropolis is 318.6 persons per square kilometres, which is about 12 times higher than the regional value of 25.9 persons per square kilometres. Meanwhile, there is a vast difference between the densities of the urban and rural areas. This reflects the influx of people to Urban Tamale, and gives credence to the assertion that facilities and opportunities for modern employment are concentrated in few central places.

### **Sex and Age Distribution**

As shown in Figure 2.1, the Tamale Metropolitan can be said to be sex balanced.

The age structure of the population indicates a broad base that gradually tapers off with increasing age due to death (Figure 2.2). The population aged 0–5 is slightly below that of 6–12 years while the majority of the population is between the ages of 15 and 64. The Tamale Metropolitan can be said to comprise more youth indicating the tremendous human resource potential underlying the strength and resilience of the area in pursuing social, economic and political development goals. The proportion of the elderly at 4 per cent is rather lower than the regional and national averages of 4.5 per cent and 5.3 per cent respectively, an indication of a comparably low life expectancy. In this regard pragmatic efforts would have to be made to make primary health care delivery more accessible and affordable to the aged.



*Figure 2.1: Sex distribution in the Tamale Metropolitan.*

*Source: TaMA.*

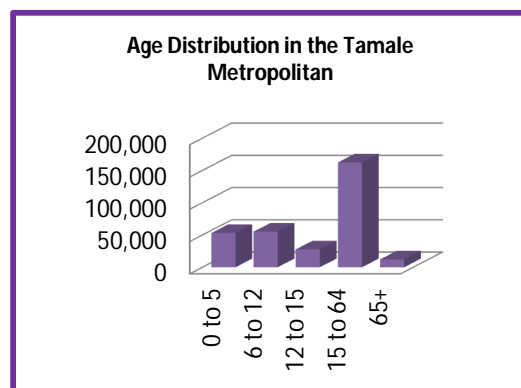




Figure 2.2: Age distribution in the Tamale Metropolitan.

Source: 2000 Population and Housing Census.

## Ethnic and Religious Composition

Apart from Metropolitan Tamale where there is ethnic diversity, almost all people in the surrounding villages are Dagomba. Even in the metropolis, the Dagomba constitute about 80 per cent of the total population. On the

religious front, the people are mostly Muslims and almost 90 per cent of the ethnic Dagomba are Muslims. In Table 2.1, about 85 per cent of the people of Tamale Metropolis are Muslims, 14 per cent are Christians and 2 per cent are traditionalists. People in “other religion” and those without any religion account for close to 1 per cent of the population.

Table 2.1: Religious Composition of Tamale Metropolis

Religion	Total	(%)	Male	(%)	Female	(%)
Catholic	17508	5.96	8564	48.91	8944	51.09
Protestant	6422	2.19	3276	51.01	3146	48.99
Pentecostal/Charismatic	9552	3.25	4470	46.80	4982	53.20
Other Christians	6645	2.26	3215	48.38	3430	51.62
Islam	246937	84.03	123815	50.14	123112	49.86
Traditional	4742	1.61	2497	52.66	2245	47.34
No Religion	1367	0.47	713	52.16	656	47.84
Other	806	0.27	429	53.23	377	46.77
<b>Total</b>	<b>293881</b>	<b>100.0</b>	<b>146979</b>		<b>146902</b>	

## Cultural Heritage, Customs and Tourism

Before the advent of both Western and Eastern religions, the Dagomba were mostly atheists. Their culture was deeply enshrined in their customs and beliefs. The result of this is manifested in the numerous traditional festivals still being practised. These practices are no longer pronounced in Tamale as a result of the ethnic diversity and the influence of both Eastern and Western cultures. Festivals, until recently, were largely enshrined in the custom of the Dagomba. This is, however, changing as a result of the practice of Islam. Festivals are not much celebrated especially in the urban areas as compared to the villages. These include the Fire, Damba and Yam Festivals. Their colour, pageantry and sheer excitement already attract flocks of tourists into Tamale. This therefore creates unexploited potential for investment in the hospitality industry, which would position the metropolis position as a major tourist destination. Tourism has

been identified as a crucial sub-sector deserving close attention in order to generate employment and revenues for both the Tamale Metropolitan Assembly and private investors in this sector. Cultural tourism has the highest potential, especially with the municipality’s festivals, the principal of which are:

### The Fire Festival

This festival commemorates the occasion when the beloved son of a powerful chief got missing and the chief ordered his subjects to search for the boy. Torches were consequently lit in the night and the child was found. This marks the beginning of the fire festival as practised today.

### The Damba Festival

This festival commemorate the birthday of the Holy Prophet of Islam, Muhammed

(SAW). Damba is celebrated after the fire festival.

### **The Yam Festival**

This festival is celebrated at the beginning of yam harvesting season to give thanks to God for the good harvest and asking for further and better yields in the coming years. Other festivals include Ed-dul-Fitr and Ed-dul-Adha, which are religious in nature.

Facilities that would attract strong patronage of these festivals as a tourist attraction include hotels, restaurants and parks. Indeed, a four- or five-star hotel in Tamale would not only attract lots of tourists but would also lucratively serve as a rest stop for people travelling by road between the south and Bolgatanga or neighbouring countries such as Burkina Faso, Mali and Niger. To ensure that investors make competitive returns on their investments, within a most conducive social and economic atmosphere, the Tamale Municipal Assembly is therefore creating the necessary operating environment, by playing the role of facilitator. Indeed the recent CAN 2008 boosted the hospitality industry with several hotels and attraction spots being built.

### **Migration**

Tamale is reputed to be one of the fastest growing cities in West Africa and it serves as a commercial capital of the three northern regions of Ghana. The metropolis has a population density of about 12 times higher than the regional value. Employment possibilities are concentrated in a few central places. For instance, during the dry season from November to April, there is little economic activity in the areas bordering the metropolis; as a result there is always an increase in migration, as most of the youth

migrate to the metropolis in search for “better” jobs.

## **Socio-Economic Infrastructure and Housing Conditions**

Socio-economic infrastructure such as electricity, pipe-borne water, roads and telecommunications infrastructure, education and health facilities and financial institutions are critical in facilitating economic activity in households. In addition access to safe drinking water and safe sanitation influence the health of the population.

### **Housing Conditions**

Majority of the household in the Tamale Metropolitan (70%) occupy rooms in compound houses, while 14 per cent live in separate houses. About 7 per cent live in huts and 6 per cent in semi-detached houses. A small fraction, 2 per cent, of the population dwell in hostels/hotels, and the rest live in kiosks/containers and tents (Table 2.2).

**Table 2.2: Types of Dwellings in the Metropolis**

Types of Dwellings	Number	(%)
Separate House	6,142	13.57
Semi-detached House	2,827	6.24
Flat/Apartment	946	2.09
Rooms (compound)	31,601	69.81
Hut/Building (Same compound)	3,305	7.30
Hotel/Hostel	133	0.29
Tents	31	0.07
Kiosk/Container	68	0.15
Living quarters attached to shop	64	0.14
Other	152	0.34
<b>Total</b>	<b>45,269</b>	<b>100.0</b>

### **Building Construction Material**

Forty-nine (49) per cent of households live in structures that have mud brick/earth as the main construction material (see Table 2.3) for the outer walls as compared to a regional

average of 87 per cent and a national of 50 per cent.

### Composition of Expenditure and Revenue

The metropolis depends heavily on the District Assemblies Common Fund to fund about 45.50 per cent of her development projects and programmes, 2.71 per cent from non-governmental organizations while 51.79 per cent by other project interventions e.g. European Union and the Village Infrastructure Project. The locally generated revenue, however, has improved over the past years. The metropolis has been recording a high growth rate of an average of 91.17 per cent achievement of the yearly budget. This was as a result of certain mechanism put in place by management to generate revenue. Though there is an improvement in revenue over the period, the amount realized is still low as compared to the development expenditure requirement of the Assembly from the communities. Owing to the low revenue generated there is over-dependence on external sources such as the District Assemblies Common Fund (DAFCF). The Assembly has not been able to explore and develop other revenue sources to improve the revenue situation. There is an increasing pressure from the communities on the development budget, which is funded by District Assembly Common Fund (DAFCF) such as Self-Help Projects, Energy, the local economy and Poverty Alleviation Fund in support of micro-economy. This situation always reduces the capacity of the budget for projects to be implemented.

**Table 2.3: Construction Materials of Houses in the Metropolis**

Construction Material	Number	%
Mud/mud brick/Earth	22,189	49.02
Wood	188	0.42
Metal sheet or slate/asbestos	143	0.32
Stone	182	0.40
Burnt bricks	431	0.95

Cement block/concrete	17,661	39.01
Sandcrete/landcrete	4,349	9.61
Packing cases/Bamboo	9	0.02
Palm leaves/Thatch	59	0.13
Other	58	0.13
<b>Total</b>	<b>45,269</b>	<b>100.0</b>

Some of the indicators of poor revenue performance include prevalence of high delinquency rate, large write-off of bad debts, low penalties for defaulters, late billing and delivering, inadequate controls to prevent over-payment and under-payment, and inadequate data base on revenue items. The local sources of revenue generation are grouped under Rate, Lands, Fees and Fines, License, Rents, Investment and Miscellaneous. Table 2.4 indicates that the metropolis depends heavily on rates and licenses for revenue, which together contributed about 73 per cent to revenue in 2002.

The Assembly spends her locally generated revenue on recurrent activities such as personal emoluments, maintenance, repairs and renewals as well as miscellaneous expenses. Most often the revenue generated is not enough to meet the expenditure.

**Table 2.4: Classification of Revenue and Expenditures by Head Item, 1999–2002**

Item	Share of Head Item (%)			
	1999	2000	2001	2002
<b>Revenue Items</b>				
Rates	23.2	16.4	13.4	61.3
Lands	6.9	5.6	9.2	2.1
Fees/Fines	16.3	26.5	28.0	11.7
Licenses	31.6	29.5	16.8	14.6
Rent	0.10	9.0	11.7	6.2
Grant in Aid	–	–	–	–
Investment	0.24	0.9	–	2.5
Miscellaneous	21.7	12.1	20.9	1.6
<b>Expenditure</b>				
Personal Emoluments	67.4			
T & T Expenditures	11.0			
Repairs and Renewals	1.6			
General Expenditure	7.6			
Miscellaneous	12.4			

Source: TaMA Medium Term Development Plan.

### The Role of NGOs in the Metropolis

There are numerous NGOs with headquarters offices in Tamale but who operate outside the metropolis. Some of the NGOs include:

- USAID
- Catholic Relief Services (CRS)
- Ghana Institute of Linguistics, Literacy, and Bible Translation (GILLBT)
- Northern Empowerment Association (NEA)
- New Energy
- Tamale Institute of Cross-Cultural Studies (TICCS)
- Youth Alive, Tamale
- Children In Need Organization (CINORG)

Indeed, Tamale is often described as the NGO capital of Ghana because it hosts most of the offices of local and international NGOs operating in the northern regions. There is, therefore, a proliferation of NGOs. Very often, their operations are uncoordinated. This usually results in duplication of effort and spillage of resources. There is, therefore, the compelling need to bring the activities of NGOs together and harmonize them for effective development.

Nonetheless, NGOs in the metropolis focus on several socio-economic areas including energy and environment, agriculture, construction and water and sanitation and builds the capacity of the community/ partners in collaboration with the TaMA by supporting groups with funds and enhancing the training and development of local artisans for self-employment opportunities. Communities are supported with programmes to mitigate emergency situations including the provision of food aid; and the supply of such general items as seeds, tools, various animal breeds and the establishment of community-driven infrastructure such as schools, markets and the training of personnel in agriculture and agro-enterprise management.



# Economic Activity and Poverty

## Introduction

Agriculture is the major economic occupation in the Tamale metropolis followed by wholesale/retail business. These two account for the main source of livelihood in the Tamale metropolis.

Fishing, which is also an agricultural-related activity, is minimally practised in the Tamale metropolis due to the fact that Tamale is not near the coast and also there are less number of rivers and lakes in the metropolis. This is evident in Figure 3.1 which shows the classification of economically active population of persons aged 7 years and above as reported in the 2000 Population and Housing Census by the Ghana Statistical Service.

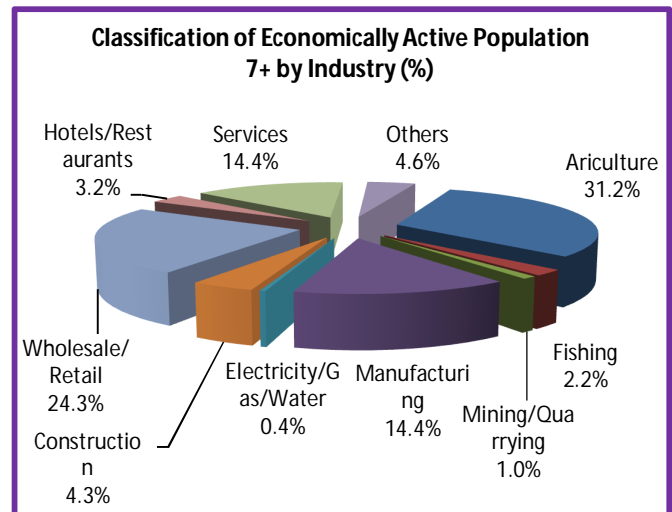


Figure 3.1: Classification of economically active population of persons aged 7+ years.

Source: 2000 Population and Housing Census, Ghana Statistical Service (GSS).

According to the census, agriculture accounted for about 31.2 per cent of the economically active population in the metropolis. The wholesale/retail sector also has a bulk of the economically active population. The 2003 CWIQ results also showed an increase in the number of people engaged in agriculture and its related activities to 44.3 per cent with the wholesale and retail industry experiencing a decline of 24.3 per cent in 2000 to 23.7 per cent in 2003. The manufacturing industry, however, experienced an increase of 14.4 per cent in 2000 to 21.9 per cent in 2003.

The informal sector is the main employer in the metropolis employing about

68.8, 80.2 and 58.7 per cent in 2000, 2003 and 2008 respectively according to the 2000 Population and Housing Census, the 2003 CWIQ and the 2008 Household Surveys (Table 3.1). The public sector provided about 20.8 per cent employment in 2008 as against 16.0 per cent in 2003 and 12 per cent in 2000.

In terms of status of employment, self-employment in the informal sector remains the most dominant type in the metropolis increasing from 62.8 in 2003 to 65.3 per cent in 2008 as shown in Table 3.1. Wage employment in the metropolis also increased from 18.6 per cent in 2003 to 19.2 per cent in 2008 although it declined initially from 70.2 per cent in 2000 to 62.8 per cent in 2003. The percentage of family workers also decreased from 9.8 per cent in 2003 to 6.3 per cent in 2008 (Table 3.1).

The 2008 household survey however showed the agricultural industry relatively declined in the number of economically active population (Table 3.1). Wholesale/Retail Industry rather increased significantly to 36.2 per cent. The number of people engaged in the manufacturing industry also declined drastically from 21.9 per cent to 2.9 per cent but rather community/social services activities witnessed upward increments in the number of economically active population.

**Table 3.1: Distribution of Economically Active Population Aged 15+ Years**

Industry/Status/Type	2000	2003	2008
<b>Industry</b>			
Agriculture	31.2	44.3*	15.2
Fishing	2.2	–	0.4
Manufacturing	<b>14.4</b>	<b>21.9</b>	<b>2.9</b>
Construction	4.3	3.5	3.3
Wholesale & Retail Trade	24.3	23.7	36.2
Other Service	14.4		6.9
Community/Social Services		4.3	14.9
Other Activity	4.6		20.2
<b>Status</b>			
Self-employment	70.2	62.8	65.3
Wage Employment	18.8	18.6	19.2
Family Worker	5.2	9.8	6.3
Apprentice		3.1**	3.2
Other	5.8	2.1	6.0
<b>Main Employer</b>			
Public	12.0	16.0	20.8
Private Formal	17.3	2.6	18.6
Private Informal	68.8	80.2	58.7
Others	1.9	0.8	1.9

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

\* includes fishing. \*\*includes students.

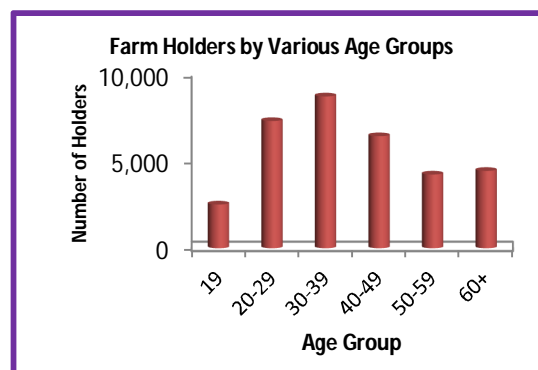


Figure 3.2: Distribution of Farm-holders by Age Group.

Source: MADU, Tamale.

About 98.1 per cent of male household heads are engaged in agriculture with only 1.5 per cent female household heads in agriculture. There are about 20,260 farm households and 33,614 number of farm holders in the metropolis out of which about 32,473 are owned by male members and 1,141 being female members. Figure 3.1 shows a breakdown of farm holders by age group. The figure reveals a greater proportion



of people within the ages of 30–39 owning farms followed by those within the ages of 20 and 29. Those within the age groups of 40 and 49, 50 and 59 and those who are 60 years and over occupy only 19.1 per cent, 12.6 per cent and 13.2 per cent respectively of the total number of farm-holders in the Tamale metropolis. This distribution shows that a greater proportion of the youth are engaged in farming.

The major food crops are maize, rice, yam, sorghum, millet, groundnut, cassava and cowpea. Food production in the metropolis is generally for both subsistence and commercial purposes. Farming systems that are practised by farmers in the metropolis is the traditional system of shifting cultivation. Agriculture as practised in the metropolis is mainly rain-fed since there are no irrigation facilities. The farmers therefore depend on the rains to irrigate their farms.

Production of the major food crops in the metropolis has not been on a consistent increase over the years. The district witnessed an increase in maize production from 13,200 metric tonnes in 1992 to 13,600 metric tonnes in 1993 representing about 3 per cent increment (Table 3.2). It, however, declined after the increment in 1993 and has

kept on declining until it was able to recover in 2003 where maize production shot up by 1.54 per cent from 2002 to 2003. It has since declined to 4,200 metric tonnes in 2007. The trend is quite similar to that of rice and sorghum produced in the metropolis. The production of millet has witnessed an increase over the years although the production is small compared to the other crops produced. The metropolis, however, witnessed a drastic increase in the production of millet from 650 metric tonnes in 2001 to 1,200 metric tonnes in 2002 representing about 84.6 per cent increase in production. There was, however, a drastic decrease between 2006 and 2007. The production of millet declined drastically from 4,937 metric tonnes to 880 metric tonnes. Cassava production in the metropolis has also not been consistent, although it has been witnessing continuous increases from 1992 to 2001. It has, however, witnessed a drastic decrease from 1,800 metric tonnes in 2002 to 882 metric tonnes by 2006. Yam production, although very large in terms of volume when compared to the other crops grown in the metropolis, has also not been experiencing a continuous increase over the years. The same is for cowpea production.

**Table 3.2: Production of Major Food Crops in the Tamale Metropolis (Mt)**

Year	Maize	Rice	Sorghum	Millet	Cassava	Yam	Groundnut	Cowpea
1992	13,200	5,000	13,800	200	1,000	5,000	2,600	2,600
1993	13,600	6,000	12,600	300	1,100	5,500	2,100	2,800
1994	12,800	6,400	12,500	350	1,400	3,900	2,200	2,800
1995	13,721	7,033	7,500	380	1,530	3,900	2,415	2,985
1996	12,340	2,000	12,585	385	1,530	3,931	2,536	3,045
1997	12,400	2,000	6,000	400	1,500	3,700	2,600	3,400
1998	10,000	2,000	6,000	400	1,500	3,700	2,600	3,400
1999	10,300	2,000	6,000	400	1,300	3,200	2,500	3,500
2000	10,000	2,000	6,500	600	3,000	4,500	4,000	2,900
2001	9,000	1,366	6,000	650	4,000	4,010	4,000	1,400
2002	6,500	1,950	6,500	1,200	1,800	1,786	4,400	1,800
2003	6,600	2,000	7,000	1,500	1,700	4,400	4,900	2,000
2004	6,000	2,000	1,000	7,000	1,000	4,000	5,000	2,000
2005	4,607	2,802	707	4,694	727	3,258	7,678	3,140
2006	4,925	2,910	946	4,937	882	3,692	8,185	2,880
2007	4,200	1,616	4,200	880	1,280	3,360	4,400	1,600

Source: District Directorate of Food and Agriculture.



The trends in outputs from the major crops mirror trends in acreage under cultivation. Figure 3.3 shows the distribution of cultivated area of major crops grown in the Tamale metropolis. As shown in the figure, a relatively larger area was under cultivation for maize from 1992 to 1995 but this began to decline continuously till 2000. Between 2001 and 2007, the acreage under maize cultivation reduced drastically. The trend is similar for the other crops cultivated in the metropolis.

The decline in the trend in area under cultivation of the major crops is attributed, among others, to the policy of farm input liberalization and the removal of subsidies on

these inputs. The introduction of subsidies on agricultural inputs raised production of both domestic and industrial crops. Significant among these were rice, maize, sorghum, groundnuts and beans. However the trend of growth started declining as a result of the removal of subsidies on agricultural inputs, rapid population growth, declining soil fertility and the gradual decrease in the land area as a result of the rapid expansion of Tamale. The high transportation cost and lack of storage facilities compel farmers to depend on middlemen for sale of the produce. Hence, in some cases the farmers are exploited. Small-scale farmers are thus mostly affected.

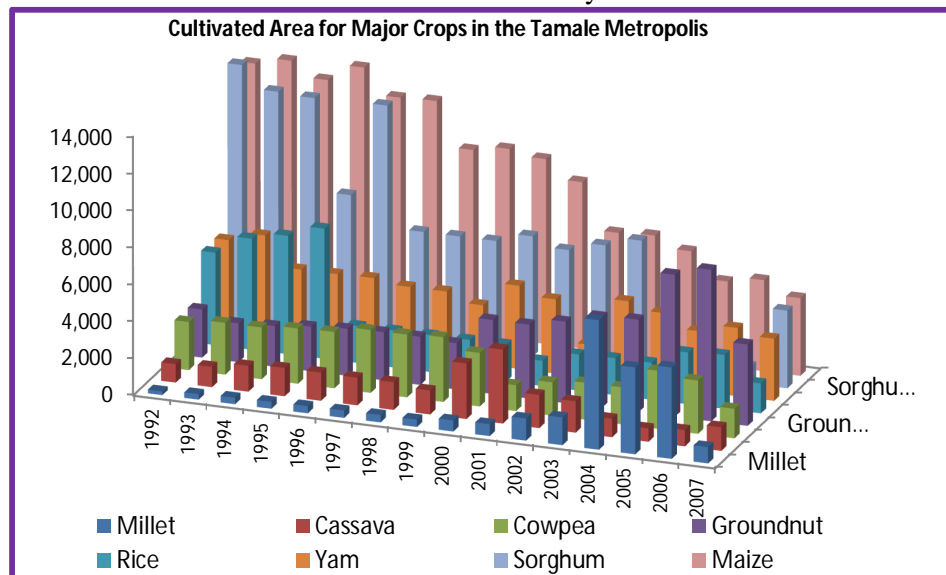


Figure 3.3: Distribution of cultivated area of major crops grown in the Tamale Metropolis.

Source: Tamale Metropolitan District Directorate of Food and Agriculture.

**Table 3.3: Problems Faced by Working Population with Regard to Work (Per cent of respondents)**

Industry	Lack of Finance	Marketing Problem	Low price of products	High cost of inputs	Uncertain demand for output	Erratic weather	Access to land	Poor Health
Agriculture	61.8	1.8	—	9.1	3.6	9.1	12.7	1.8
Manufacturing	100.0	—	—	—	—	—	—	—
Wholesale/Retail Trade	76.6	8.4	6.5	3.7	—	3.7	—	0.9
Finance/Insurance/Services	66.0	4.3	2.1	19.2	—	2.1	—	4.3
Community/Social Services	73.8	9.5	2.4	9.5	2.4	—	—	2.4

Source: 2008 Household Survey.



**Table 3.3 presents a number of challenges reported by the working population in the metropolis as confronting them. Top of the challenges is the lack of finance, mentioned by 62 per cent of those in agriculture, 100 per cent of those in manufacturing, 77 per cent of traders, 66 per cent of workers in the financial services and 74 per cent in the social services.**

Most of the population engaged in agriculture in the metropolis also rear livestock either on small or large scale. Poultry accounts for the largest livestock reared in the metropolis followed by sheep and goat and then cattle production. Most of the households practise the traditional systems of housing farm animals. Figure 3.4 shows the breakdown of the livestock production in the Tamale metropolis.

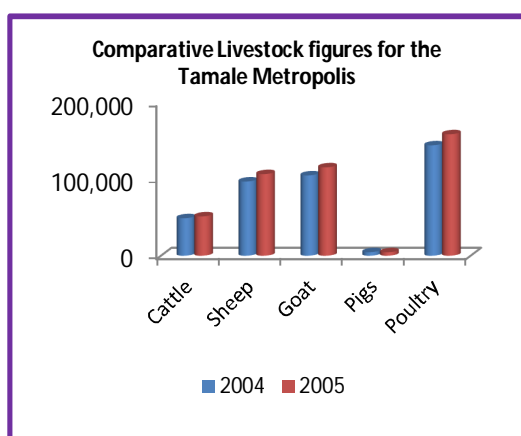


Figure 3.4: Comparative Livestock figures for the Tamale Metropolis (2004–2005).

Source: TaMA.

Figure 3.4 reveals an annual increase in the number of livestock reared with the

exception of pigs which recorded a decrease in the number reared from 4,700 in 2004 to 4,565 in 2005, representing a 2.9 per cent decrease. Poultry recorded the highest increase in the metropolis rising from 144,300 birds in 2004 to 158,730 birds in 2005, representing 10 per cent increase in the number of poultry birds reared. The percentage increase in the number of sheep and goats reared is 10 percent each, similar to the percentage increase in the number of poultry birds reared. However, cattle production although very familiar with the people of the north only witnessed a 4.9 per cent increase.

Farmers in the metropolis and rural Tamale in particular are small-scale holder subsistence food producers with meagre incomes earning opportunities due to a combination of low productivity, lack of off-farm employment and vulnerability to natural calamities such as unreliable rainfall and bush-fires. Many communities in rural Tamale are inaccessible during the rainy season. As a result, farmers find it difficult to transport their farm produce to the marketing centres. Only small head-loads of foodstuff are taken to markets since the use of motorized means is not possible. Another area of concern is the lack of storage facilities to cope with the brisk commercial activities going on in the metropolis. There are only 5 storage structures and one fumigation centre at Aboabo. Free range for both small ruminants and cattle housing is not adequate and in some cases not appropriate. Watering points are not adequate, especially during dry season and production systems used are mainly semi-intensive and in a few cases intensive.

## Investment and Business Potential

Until the 1980s, over 70 per cent of the indigenous people engaged in farming at subsistence level. Both retail and wholesale trading is now growing fast. Currently, the metropolis produces some industrial crops such as rice, cotton, groundnuts, sheanuts and beans, especially soya beans. Some of these crops are processed locally and the semi-finished products exported out of the region. These crops are produced in large quantities so Tamale plays host to some companies which process these agricultural goods into finished products for the market.

The industrial sector is an important growth sector in the Northern Region and has the potential to contribute efficiently to the economic development and growth. Tamale and the whole region, however, lags behind in industrial development. The potential of the metropolis to contribute to the economic development of the northern region rests on its natural resource abundance and its exploitation. The main industrial activities in the district revolve mainly on agro-processing activities such as rice milling, vegetable oil extraction, cotton ginning and textile or smock making. There are other small-scale industries involved in vehicle repairs, pre-fabrication of spare parts and manufacturing of farm implements. The rest are cloth and leather works, pottery and carpentry. However, most of these companies are distressed financially, as a result of operating during the past years in an economic environment that did not allow them to realize their full potential. Ghana's current economic environment is much improved — thanks to market pricing, lower corporate tax levels and a liberalized international trading regime.

The companies are seeking new share capital to revamp their operations and there is every indication that such capital injection will vastly improve their financial situation

and ensure very profitable operations. These companies include:

### **Nasia Rice Company**

This company has the capacity to mill all the rice produced in the north to meet international standards but has liquidity problems at the moment and is therefore producing below its installed capacity. Investors, both local and foreign, can therefore enter into partnership with the company to provide capital with which to raise capacity to its full installed level.

### **Bosbel Vegetable Oil Company**

This factory processes and extracts oil from groundnuts and soya beans. It also operates under installed capacity due to lack of working capital. Therefore, the company urgently needs investors to pump in the much-needed capital to revamp the company to operate at full capacity. Cottonseed from the cotton companies, which could be processed into edible oil, is presently left to go waste.

### **The Ghana Cotton Company and Nulux Cotton Company**

These companies gin all the cotton produced in the region into cotton lint for export and for sale to the textile factories in the country. There are therefore huge potentials for investors to invest in the textile industry in Tamale, to supply the vast market in the north and even neighbouring countries such as Burkina Faso, Mali and Niger. That apart, the cottonseeds can be processed into edible oil for sale as well. At the moment, seeds from the two companies are either left to rot or are burnt. The by-product, which is cotton seed cake, can be used for poultry and animal feed. This also applies to the groundnut and soya bean cake that come out as by-products during the processing of these oils.

Tamale Metropolitan is also positioned to serve as a base for sunflower, another export earning agricultural commodity that has been recently introduced into the north. Some estimates forecast that sunflower can overtake cocoa exports in less than 10 years if given the needed push. Demand is very high, with European Union countries consuming a large proportion of sunflower production in 1996/97.

A pilot sunflower farm undertaken in the metropolis has produced results showing that sunflower can be grown successfully and profitably in the district and provides the opportunity for both local and foreign investors. Demand from the agro-based sector is creating market opportunities for manufacturers ready to produce capital (intermediate) goods.

Vehicle repairs, fabrication of spare parts and the manufacture of farm implements such as cutlasses, bullock ploughs and trailers are all assured of strong market demand. Leather works, pottery and carpentry are sectors potential investors would do well to explore as they also offer opportunities for profit. There are also major opportunities in real estate development.

Since 1960, the stock of housing has increased by about 162 per cent, while the population of the Tamale metropolis has grown much faster, rising from 40,000 to about 400,000 currently. Demand for housing is not only higher than supply but demand is still growing rapidly. This high demand emanates largely from the proliferation of NGOs in the municipality coupled with the demand from civil servants and that from the growing private sector. Land is both relatively ample and cheap. This means that interested investors can exploit the situation to their advantage.

## Unemployment

Unemployment is a major economic problem facing many countries in the world, particularly the developing and under-developed nations. The rate at which economically active population in a country are unemployed seriously affects the growth of that country.

According to the 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 unemployment rate is measured by the proportion of the economically active population who are unemployed.

**Table 3.4: Estimates of Unemployment Rates (%) for Tamale Metropolis**

Location Year	Adult (15+)			Youth (15–24)	
	2000	2003	2008	2003	2008
<b>Ghana</b>	10.4				
Men	10.1	49.0		15.1	
Women	10.7	49.6		16.4	
<b>Tamale Metropolis</b>					
Men	7.1		16.1		40.9
Women	7.0		14.2		31.5
All	7.0		15.1		34.2
<b>Rural</b>					
Men			25.5		50.0
Women			20.0		42.9
All			22.8		45.8
<b>Urban</b>					
Men			14.7		58.3
Women			12.9		30.0
All			13.7		36.5

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

Table 3.4 presents the unemployment rates for different periods for the Tamale metropolis 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 metropolis. 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 metropolis than in the entire country. The rate rose further in 2008, based on the household survey.

By gender the magnitudes in the trends in the unemployment rates have been higher among men than women. In 2000, the adult unemployment rate in Ghana was 10.1 percent among men as against 10.7 per cent among women, while 7.1 per cent of men and 7.0 per cent of women in the metropolis were found to be unemployed. While trend in the unemployment rates is unfavorable to the men by 2008 according to the DAEA Household Survey, the gap between the sexes in terms of the unemployment rate increased by 1.9 percentage points.

In general, the rural parts of the metropolis see a higher unemployment rate than the urban, according to the 2008 Household Survey. Men and women in the rural metropolis are more likely to be unemployed than their urban counterparts. The rural unemployment rate was higher by 8.6 percentage points in 2008.

Unemployment rates among the youth aged 15–24 years (Table 3.4) are reported to be relatively higher than other age groups in the metropolis. Compared to the national levels in 2003, the rate of unemployment among the youth increased in 2008 (from the DAEA Household Survey). Unemployment rates among men in this category of the youth in the urban metropolis exceed the rural counterparts by 8.3 percentage points. Joblessness increases are high among the rural metropolis than the urban, indicating that relatively, more people in the rural metropolis finds it difficult finding to secure jobs.

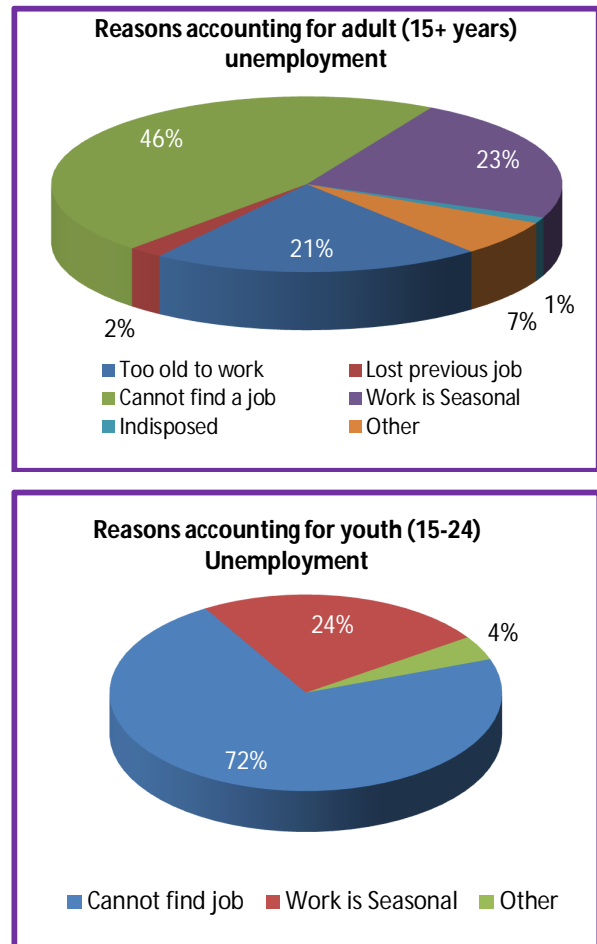


Figure 3.5: Reasons for being unemployed, 2008.

Source: DAEA Household Survey, 2008.

Lack of job opportunities in the metropolis has been observed as the main reason for the increasing incidence of unemployment. The DAEA Household survey reveals that about 46 per cent of unemployed adults (15+ years) claim they could not find jobs while 2 per cent were unemployed because they lost their jobs (Figure 3.5). Seasonality of jobs and too old to work rendered 44 per cent of adults unemployed. Lack of jobs was the main reason why 72 per cent of the youth (15–24 years) were unemployed. Seasonality of jobs rendered 24 per cent of the youth

unemployed with the remaining 4 per cent attributing their unemployment situation to other reasons.

## Under-employment

The incidence of under-employment among the adults in the metropolis is an indication of the fact that more people are working but are willing to take additional work. Table 3.5 presents the 2003 CWIQ survey results of the extent of under-employment in the metropolis.

**Table 3.5: Under-employment by Industry, Status and Sector**

Industry	%
Agriculture & Related Activities	44.3
Manufacturing	21.9
Construction	3.5
Wholesale & Retail Trade	23.7
Community/Social Services	4.3
Employment Status	%
Self-Employed, no employees	62.8
Casual Employee	1.7
Regular Employee	18.6
Domestic Employee	0.1
Unpaid Family Employee	9.8
Economic Sector	%
Public	16
Private Formal	2.6
Private Informal	80.2
NGO's/International Organizations	0.5
Other	0.8

Source: 2003 CWIQ, GSS.

Agriculture and related activities account for about 44 per cent of the underemployed, followed by the wholesale and retail trade and the manufacturing sector. Most of the under-employed operate in the private informal sector as self-employed without employees. Thus there is a relatively high perception of under-employment in the informal sector operators (80.2%) compared to the formal (public and private).

## Child Labour

Children between ages 7–14 who are engaged in paid work or profit in various kinds of jobs are classified as child labour in this report. Table 3.6 shows the distribution of child labour by industry for 2008. In 2008, the proportion of working children in agriculture was 37.5 per cent compared to the proportion of children in community and social services of 25 per cent. Working children engaged in wholesale and retail trade also stood at 13 per cent in 2008.

**Table 3.6: Distribution of Child Labour by Industry, 2008**

Industry	2008
Agriculture	37.5
Wholesale and Retail Trade	12.5
Utilities	12.5
Community/Social Services	25.0
Others	12.5

Source: DAEA Household Survey, 2008.

## Poverty

The first Millennium Development Goal (MDG) is to eradicate extreme poverty and hunger by 2015. In order to achieve this goal, a target was set to reduce by half the proportion of people living on less than a dollar a day. In Ghana, the percentage of population living below the poverty line has fallen significantly from 51.7 per cent in 1991/92 to 28.5 per cent in 2005/06 (GLSS 5). With this trend, the MDG 1, target 1 on poverty is likely to be achieved in just a few years. However, the reduction in poverty in the three northern regions is progressing slowly.

## Objective Poverty

The poverty situation in the Tamale metropolis can be described as very extreme due to the fact that most of the people are living below the poverty line. There are several indicators of poverty. One objective



measure is the Human Poverty Index (HPI) established by the United Nations Development Programme (UNDP). The HPI is used to measure deprivation in three different dimensions: a long and healthy life, as measured by life expectancy at birth, knowledge as measured by the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio and a decent standard of living.

Using the 2003 CWIQ statistics, the poverty situation in the metropolis is explained by the relevant indicators as presented in Table 3.7. There are no locally estimated HPI to compare to the national HDI. Where comparable, the metropolis is observed to have more proportion of the population to have done better relative to the national situation in terms of adult literacy (knowledge) and access to safe water. However, the metropolis performed poorly relative to the national situation in terms of proportion of underweight children.

**Table 3.7: Poverty Indicators, 2003: National vs Tamale Metropolis**

Indicators	National	Tamale Metropolitan
<b>Human Poverty Index</b>		
All	41.8	—
Rural	—	—
Urban	—	—
<b>% Adult Literacy</b>		
All	53.7	64.6
Male	66.2	71.7
Female	42.5	55.9
<b>% Without access to health services</b>		
All	42.4	—
Rural	57.7	—
Urban	21.5	—
<b>% without access to safe water</b>		
All	25.9	18.9
Rural	37.0	—
Urban	12.7	—
<b>% underweight children</b>		
All	25.8*	27.2*
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

Subjective poverty is an alternative means of assessing poverty based on the value judgment on the part of respondents. Tables 3.8 and 3.9 present the household's perception on their poverty status and on their economic situation, respectively. In Table 3.8, about 59 per cent of households in the metropolis in 2003 considered themselves as either poor or very poor.

**Table 3.8: Household Perception of Poverty (%)**

Perception by:	2003
Non-Poor	2.2
Somewhat non-poor	6.9
Neither poor nor non-poor	32.3
Poor	53.1
Very Poor	5.6

Source: 2003 CWIQ (GSS).

**Table 3.9: Household Perception of their Economic Situation, 2003 (%)**

Variable	Response	All
Level of happiness	Very happy	11.8
	Quite happy	67.0
	Not very happy	19.6
	Not at all happy	1.6
Financial situation of Household	Very satisfied	0.2
	Satisfied	23.0
	Somewhat satisfied	48.8
	Somewhat dissatisfied	26.4
	Very dissatisfied	1.6
Overall economic situation of household against previous year	Much worse now	4.8
	A little worse now	28.2
	Same	36.8
	A little better now	29.4
	Much Better now	0.8
	Don't know	0.0
Overall economic situation of community against previous year	Much worse now	0.0
	A little worse now	14.8
	Same	61.2
	A little better now	13.0
	Much better now	0.0
	Don't know	10.9

Source: 2003 CWIQ (GSS).

Using the level of happiness of households to capture their perception of poverty (Table 3.9) reveals that although about 59 per cent of households in 2003 considered themselves to be either poor or



very poor, poverty did not adversely affect their happiness since over 79 per cent claimed to be very or quite happy. On the contrary, majority of the households in the metropolis were quite dissatisfied with their financial situation in 2003. Specifically, about 75 per cent of households claimed to be somewhat satisfied or very dissatisfied with their financial situation as against 23 per cent who considered their financial situation to be satisfied. Over 33 per cent of households in 2003 felt that their overall economic situation was either a little or much worse than the previous year. This compares to 37 per cent of the households who report of seeing no change.

The overall assessment of the economic situation of the community by households suggests that communities in the metropolis have not seen any change in their situation compared to the previous year. The proportion who report that the situation is better now compared to the previous year do not differ in proportion to those who indicate that the economic conditions in the community has worsened compared to the previous year.

### **Food Insecurity**

The eradication of hunger is one of the main goals of the MDG. The proportion of households that faced difficulties in meeting food needs in the past 12 months is used to capture the extent of extreme hunger in the metropolis. Figure 3.6 presents a picture of the hunger situation in 2008 from the DAEA household survey. It appears it is relatively more difficult to satisfy food needs in the urban metropolis compared to the rural one and more prominent among men not to satisfy household food needs than women.

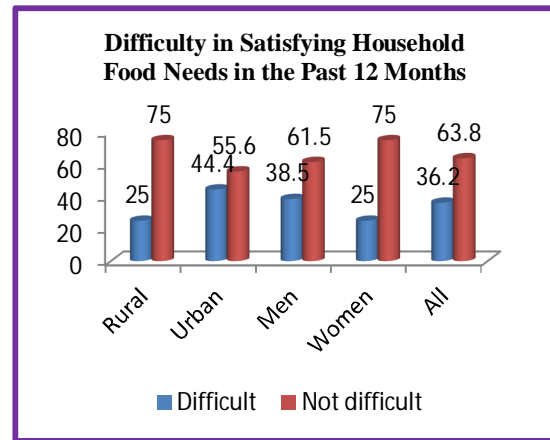


Figure 3.6: Difficulty in satisfying household food needs.

Table 3.10 presents a number of reasons given to account for the difficulty in meeting food needs. The major reason was poor harvest as a result of climatic conditions, drought and pest and diseases, according to 68 per cent and 28 per cent of rural and urban households respectively that experienced food difficulties. About 15 and 16 per cent of the rural and urban households blamed problems of storage. High food prices are reported by 18 per cent of the urban households, with an overall 10 per cent of all households reporting high food prices as the cause of food difficulties. About 8 per cent of all households sold most of their products right after harvest, thus exposing them to food shortages later.

**Table 3.10 Reasons for Food Shortage, by Household**

Reason	Rural	Urban	All
Death of income-earning member	–	4.7	2.6
Poor Harvest (climatic conditions and drought)	35.3	16.3	24.7
Poor harvest (pest and disease)	32.5	11.6	20.8
Additional member joined household	–	9.3	5.2
Income earning-member lost job	–	7.0	3.9
Income-earning member not working due to illness	–	4.7	2.6
Remittances no longer received	–	4.7	2.6
Reduction in remittances received	5.9	2.3	3.9
Problem with storage	14.7	16.3	15.6
Sold products right after harvest	11.8	4.7	7.8
High food prices	–	18.6	10.4

Source: 2008 Household Survey

## Conclusion

Economic activities in the metropolis are concentrated in agriculture followed by wholesale/retail business. These two account for the main source of livelihood in the Tamale metropolis. The main industrial activities, therefore, revolve mainly on agro-processing activities such as rice milling, vegetable oil extraction, cotton ginning and textile or smock making. The linkage of the agricultural sector to investment and business activities in the manufacturing sector are through such industrial crop production as rice, cotton, groundnuts, sheanuts and beans, especially soya beans. There are other small-scale industries involved in vehicle repairs, pre-fabrication of spare parts, manufacturing of farm implements. The rest are cloth and leather works, pottery and carpentry. However, most of these companies are distressed financially. The 2008 household survey showed that the agricultural industry relatively declined in the number of economically active population while wholesale/retail industry rather increased significantly. The number of people engaged in the manufacturing industry also declined as rather the community/social services activities witnessed upward increments in the number of economically active population.

The natural resource endowments exploitation for livelihood therefore falls

mostly on agriculture and related activities and a need to efficiently enhance these investment opportunities to provide employment opportunities to the youth.

The unemployment rate (15+) has been on the increase in the metropolis and by gender the magnitudes in the trends in the unemployment rates have been higher among men than women. In general, the rural parts of the Tamale Metropolitan area see a higher

unemployment rate than the urban, according to the 2008 Household Survey. Under-employment is high. Agriculture and related activities account for large percentages of the underemployed, followed by the wholesale and retail trade and the manufacturing sector. Most of the under-employed operate in the private informal sector as self-employed without employees. Thus there is a relatively high perception of under-employment in the informal sector operators compared to the formal (public and private).

The impact of economic activity on poverty indicators indicates that overall, the metropolis is observed to have more proportion of the population to have done better relative to the national situation in terms of adult literacy (knowledge) and access to safe water. However, the metropolis performed poorly relative to the national situation in terms of proportion of underweight children. In terms of food insecurity, it appears it is relatively more difficult to satisfy food needs in the urban metropolis compared to the rural one and more prominent among men not to satisfy household food needs than women. A number of reasons, including climatic conditions, drought and pest and diseases, problems of storage and high food prices have been given to account for the difficulty in meeting food needs.



# Education and Literacy

## Introduction

Goal Two, Target 3 and Goal Three, Target 4 of the MDGs emphasize 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. 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 the metropolis in the knowledge component of human development in realizing the educational objectives of the MDGs and GPRS II.

In Ghana, the educational system has undergone restructuring and reforms 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 borne out of the 1987 reform is based on a three-tier system of 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 (universities, polytechnics and other professional education institutions). After 20 years of 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 from 3 to 4 years.

**Table 4.1: Number of Public and Private Schools in the Tamale Metropolis**

Level		2003	2004	2005	2006	2007	2008
Kindergarten	Public	159	170	193	198	203	205
	Private	32	84	97	91	88	100
Primary	Public	235	237	236	239	242	245
	Private	33	44	52	54	58	58
Junior High	Public	73	75	80	82	84	88
	Private	3	5	7	12	16	16
Senior High	Public	9	9	9	10	10	10
	Private	7	7	7	8	8	8

### Number of Schools in the Metropolis

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 Tamale metropolis has a

good number of pre-schools, basic and second-cycle institutions. As at 2008, there are 305 pre-schools comprising 205 public and 100 private kindergartens, 303 primary schools comprising 245 public and 58 private, 104 Junior High Schools (JHS)

comprising 88 public and 16 private, 18 Senior High Schools (SHS) comprising 10 public and 8 private, 2 Technical/Vocational Institutions and a Polytechnic. The structure of the educational institutions in the Metropolis is shown in Figure 4.1.

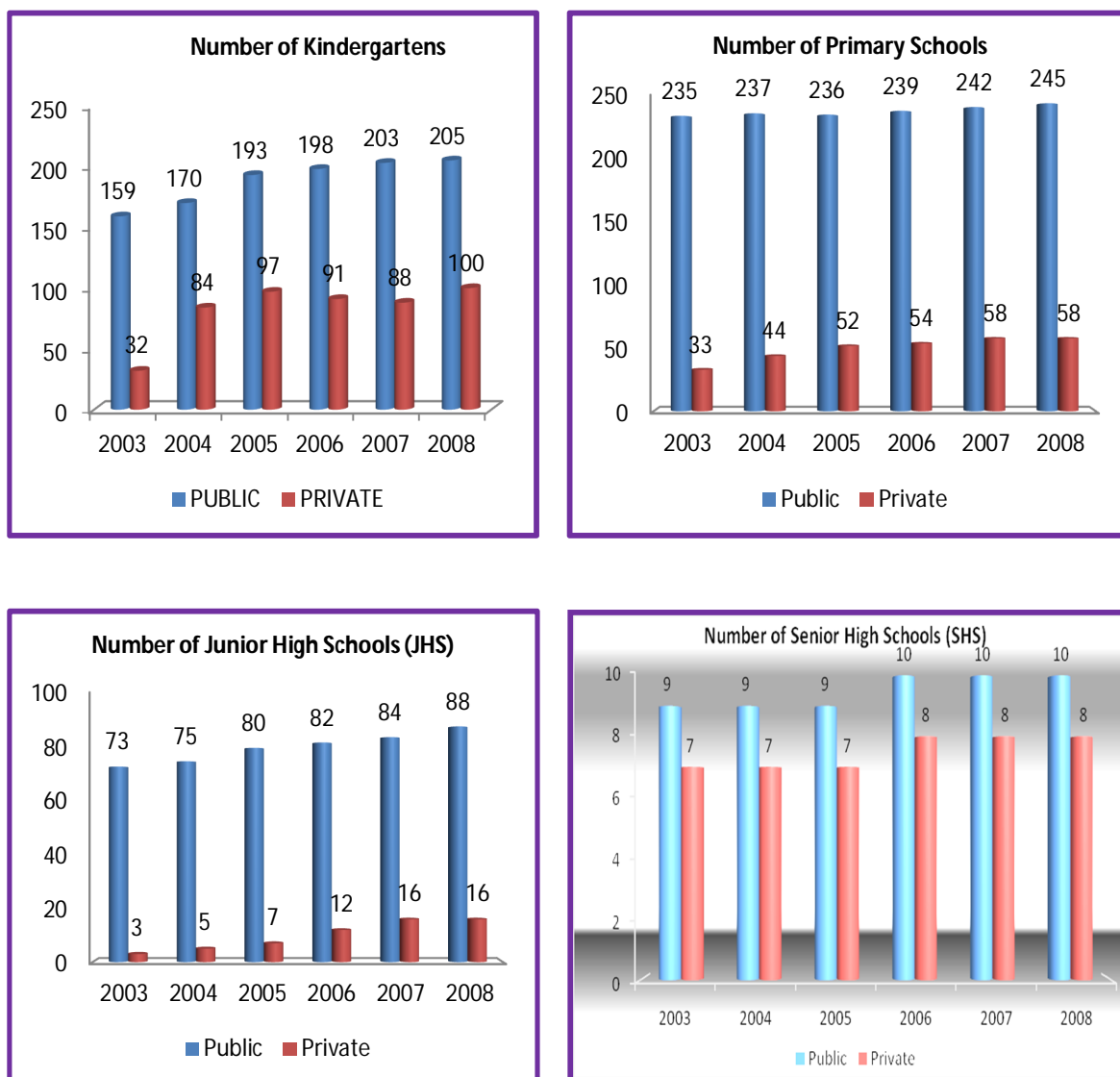


Figure 4.1: Number of Pre-Schools, Primary, JHS and SHS in the Tamale Metropolis.

Source: Metropolitan Education Directorate, Tamale.

The rate at which education provision is expanding in the metropolis is quite impressive due to the fact that the number of schools in all the levels of education has been

increasing annually. This is evident in Table 4.1 as it shows a general increase in the number of schools provided in the metropolis. For example, the number of

kindergartens increased from 159 in 2003 to 170 in 2004, indicating a 12.6 per cent increase in the number of kindergartens. The number continued to increase each year. However, the number of private kindergartens increased significantly from 32 in 2003 to 84 in 2004, indicating about 162.5 per cent increment. It then increased to 97 in 2005 and decreased to 91 in 2006. The number decreased again to 88 in 2007, representing about 9.3 per cent decrease in the number of private kindergartens. The number then experienced a marginal increase from 88 in 2007 to 100 in 2008, representing about 13.6 per cent increment.

Also, from 2003 to 2008, the number of public primary schools experienced an increase from 235 to 245, representing a 4.3 per cent increment. However, in the case of SHS in the metropolis, the number remained at 9 for public and 7 for private from 2003 to 2005. The trend was similar from 2006 to 2008, as it remained stable at 10 and 8 for public and private respectively.

The contribution of the private sector to education in the Metropolis cannot be overemphasized. This contribution is most evident in pre-schools and primary schools as numbers continue to increase although less than that of the public 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 metropolis has been quite impressive over the years. This is very evident in the high number of private kindergartens and primary schools established in the metropolis. Figure 4.1 shows trends in the number of schools in the Tamale metropolis.

### Quality of School

The quality of school depends mostly on the availability of books needed by the children as well as the basic infrastructure, which makes learning easier for the children. Infrastructure such as good learning environment, good seating and writing places are needed to make learning attractive to the children. They also need good sanitation and access to safe drinking water.

On the quality of education depending on the availability of textbooks, the GPRS II sets a target of three textbooks per pupil and Tamale metropolis lags behind in attaining that target (Table 4.4) although trends are slowly increasing with core textbooks per pupil increasing from 0.3 in 2002–2003 to 2.2 in 2005–2006. Though the textbook situation has improved dramatically over the last three years, there are still gaps in their supply to schools. This situation is having a negative impact on the overall performance of pupils in the performance monitoring test results. A trend in the provision of textbooks to the metropolis is shown in Tables 4.2 and 4.3 to Primary and JSS.

**Table 4.2: Textbooks supplied to primary schools in the Metropolis**

Year	Maths	English	General Science	Social Studies
2002/03	28,002	809	–	Nil
2003/04	–	–	–	Nil
2004/05	–	–	–	Nil
2005/06	56,066	56,066	26,724	Nil

**Table 4.3: Textbooks Supplied to JHS in the Metropolis**

Year	Maths	English	General Science	Social Studies
2002/03	–	1,344	–	10,486
2003/04	–	–	–	–
2004/05	–	–	–	–
2005/06	23,936	23,936	24,663	23,736

Source: Government of Ghana, GES.

In terms of toilet facilities and drinking water, there seems to be deterioration in trend in the proportion of schools (pre-school, primary and JHS) with toilet facilities (Table 4.4). The proportion of all schools, (pre-

school, primary and JHS), with toilet facilities decreased from 73 per cent to 44 per cent between 2002/2003 and 2005/2006 academic years.

**Table 4.4: Pedagogical Tools and Availability of Basic Textbooks**

Year	Proportion of Schools with								Core Textbooks	Chairs
	Toilet Facilities				Drinking Water				Per Pupil	Per Pupil
	Pre-school	Primary	JHS	All	Pre-school	Primary	JHS	All	All	All
2002/2003	74.9	74.2	62.8	72.7	38.2	28.8	41.0	34.2	0.3	0.5
2003/2004										
2004/2005	66.5	66.2	58.0	65.2	40.9	30.5	39.5	35.9	0.8	0.7
2005/2006	45.8	40.0	45.9	43.6	39.6	36.0	49.2	40.5	2.2	0.8

Source: Tamale Metropolitan Education Directorate.

There was, however, an increase in the proportion of these schools with drinking water, increasing from 34 per cent to 41 per cent over the same period. Again, the number of chairs per pupil is less than one, indicating that every pupil in the metropolis does not have a seating place as at the 2005/2006 academic years. The trend, however, is one of an increase as seen in the section below.

### School Furniture Provision

The furniture situation for both teachers and pupils although, inadequate, the trend points to a gradual increase in the number of school furniture in the metropolis. A breakdown of the provision of furniture, 2002/2003 to 2005/2006 is shown in Tables 4.5 and 4.6. The provision of dual desks (Picture 4.1) to the primary schools, in particular, increased from 3,600 in the 2002/2003 to 12,016 in the 2004/2005 academic years.

Several of the school buildings in the metropolis require either major or minor rehabilitation. Others also require total demolition and re-construction. In view of the acute classroom accommodation problem, some JSS share the same school block with their primary while others run shift with its adverse effect on instructional time. Table 4.7 shows the physical conditions of school buildings in the Tamale metropolis. Most of the nursery and primary schools need

**Table 4.5: Provision of Furniture to Primary Schools**

Year	Dual Desks	Teachers Tables	Teachers Chairs	Cupboards
2002/03	3,600	165	165	Nil
2003/04	3,624	577	577	Nil
2004/05	12,016	647	647	Nil
2005/06	–	347	347	Nil
<b>Total</b>	19,240	1,736	1,736	Nil

**Table 4.6: Provision of Furniture to JHS**

Year	Dual Desks	Teachers Tables	Teachers Chairs	Cupboards
2002/03	–			Nil
2003/04	–	Both primary and jhs use the same teacher's tables and chairs		Nil
2004/05	2,000			Nil
2005/06	–			Nil
<b>Total</b>	2,000			Nil

Source: Tamale Metropolitan Education Directorate.





rehabilitation. Out of 236 primary schools, about 100 schools need rehabilitation. Many nursery schools (79 out of 184) also need rehabilitation. The Government of Ghana under the HIPC initiative has funded the



Picture 4.2: HIPC Funded Bukpamo Primary School.

construction of some classroom blocks. Some of these projects include the construction of Bukpamo Primary School (Picture 4.2) and a school block at Pagazaa (Picture 4.3).



Picture 4.3: HIPC Funded School Block at Pagazaa.

**Table 4.7: Physical Conditions of School Structures**

Type of School	Number With Good Buildings	Number Without Building	Number that Need Rehabilitation	Total
Nursery	55	50	79	184
Primary	100	36	100	236
JHS	69	–	10	79

Source: MOESS/GES, Tamale.

**Table 4.8: Trained and Untrained Nursery Teachers**

Year	Number of Trained	Number of Untrained	Total	% of Trained	% of Untrained
2002/03	166	393	559	29.70	70.30
2003/04	189	413	602	31.14	68.86
2004/05	200	426	626	31.94	68.05
2005/06	215	456	671	32.04	67.96

Source: MOESS/GES, Tamale.

**Table 4.9: Trained and Untrained Primary School Teachers**

Year	Number of Trained	Number of Untrained	Total	% of Trained	% of Untrained
1999/00	1239	163	1402	88.4	11.6
2000/01	1147	243	1390	82.5	17.4
2001/02	1189	237	1426	83.4	16.6
2002/03	1189	237	1426	83.40	16.60
2003/04	1331	284	1615	82.41	17.59
2004/05	1221	305	1526	80.1	19.99
2005/06	1296	349	1645	78.78	21.22

Source: MOESS/GES, Tamale.

**Table 4.10: Trained and Untrained Junior High School (JHS) Teachers**

Year	Number of Trained	Number of Untrained	Total	% of Trained	% of Untrained
1999/00	546	46	592	92	8
2000/01	502	86	588	87.9	12.1
2001/02	603	102	705	85.5	14.5
2002/03	692	104	796	86.93	13.06
2003/04	796	125	921	86.43	13.57
2004/05	852	125	977	87.21	12.79

Source: MOESS/GES, Tamale.

## Number of Teachers

As at 2006, there were about 215 trained nursery teachers and 456 untrained nursery teachers making up a total of 671 nursery teachers in the metropolis. There were 1,645 primary teachers in the Tamale metropolis made up of 1,296 trained and 349 untrained teachers. Tables 4.8 to 4.10 show the distribution of the number of trained and untrained teachers in the various levels of education in the Tamale Metropolis.

The pupil-teacher ratio is also a key component in the assessment of school quality and the situation is reported in Table 4.11. Table 4.11 shows that the ratio dropped from 1:29 in 2002/03 to 1:28 in 2003/04 academic years for nursery schools. It has, however, remained stable from 2003/04 to 2005/06



years maintaining the 1:28 ratio. The ratio for primary and JHS however remained stable

**Table 4.11: Pupil-Teacher Ratio for the Various Levels of Education**

Year	Nursery	Primary	JHS
2002/03	1:29	1:32	1:21
2003/04	1:28	1:32	1:21
2004/05	1:28	1:32	1:21
2005/06	1:28	1:32	1:21

Source: MOESS/GES, Tamale.

**Table 4.12: Teachers and Pupil-Teacher Ratio in Tamale Metropolis**

Year	Level/Type	% Trained Teachers		Pupil-Teacher Ratio	
		Public	Private	Public	Private
2002/3	Pre-School	31.3	8.1	27:1	18:1
	Primary School	72.7	14.7	27:1	19:1
	Junior High School	84.0	25.8	21:1	12:1
2003/4	Pre-School	29.1	5.3	28:1	19:1
	Primary School	71.0	27.7	26:1	23:1
	Junior High School	87.7	63.4	21:1	13:1
2004/5	Pre-School	29.3	4.9	26:1	24:1
	Primary School	68.8	19.6	26:1	20:1
	Junior High School	86.1	58.6	21:1	9:1
2005/6	Pre-School	32.4	4.6	27:1	23:1
	Primary School	68.8	7.9	30:1	21:1
	Junior High School	86.6	43.4	21:1	10:1

Source: Metropolitan Education Directorate.

from 2003 to 2006. The ratio is higher in the primary than in the other levels of education.

Table 4.12 also shows the Teacher and Pupils-Teacher ratio and the percentage of trained teachers in the public and private schools in the metropolis, 2002/03 to 2005/06 academic years. In Table 4.12, the pupil-teacher ratio in public junior schools remained stable at 21:1 between 2002/2003 and 2005/2006, compared to a decline of 12:1 to 10:1 in private junior secondary schools. Generally, there are more trained teachers in public schools than private ones. The proportion of trained teachers in public pre-schools dropped from 31.2 per cent in the 2002/2003 academic years before increasing to 32.4 per cent in the 2005/2006 academic years. In the private pre-schools, the proportion of trained teachers has dropped consistently from 8.1 per cent in the 2002/2003 academic years to 4.6 per cent in the 2005/2006 academic years.

**Table 4.13: Number of Pupils Enrolled at Various Levels of Education by Sex**

Year	NURSERY			PRIMARY			JHS		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1998				23,994	17,912	41,906	9,177	5,408	14,585
1999				24,995	19,252	44,247	9,147	5,778	14,825
2000				26,789	20,200	46,989	8,626	5,927	14,553
2001				26,956	21,864	48,820	9,626	5,927	15,553
2002				27,387	21,903	49,290	9,712	6,593	16,305
2003	8,530	7,537	16,067	27,394	21,957	49,351	10,206	6,824	17,030
2004	9,143	7,790	16,933	27,145	22,771	49,916	10,515	6,851	17,366
2005	9,388	8,144	17,532	27,410	23,118	50,528	11,155	7,777	18,932
2006	9,616	8,874	18,490	29,303	24,586	53,889	11,851	8,798	20,649

Source: MOESS/GES, Tamale.

## School Enrolment

The Tamale metropolis has since 1998 witnessed a major improvement in the enrolment of school children in the primary and JHS levels of education. Table 4.13 gives

a representation of the enrolment status in the Tamale metropolis.

Total enrolment in the primary level increased remarkably from 41,906 pupils in 1998 to 53,889 pupils in 2006 and increased for the JHS over the same period from 14,585

to 20, 649 pupils. These increases are on the average 3.2 per cent and 4.6 per cent respectively per year for the primary and JSS enrolments, 1998–2006. The sex dimension of enrolment in the metropolis shows that the numbers of male enrolment outnumber that of female in all the three levels of education from 1998 to 2006.

However, the total number of enrolment by sex increases annually in all three levels of education. The total number of male enrolment in the primary schools increased from 23, 994 in 1998 to 29,303 by 2006 while that of female enrolment increased from 17,912 to 24,586 in the same period. This figure shows that there was a high rate of female enrolment (4.14% per year) in the primary level than male enrolment (2.5% per year).

**Table 4.14: Comparing Metropolis Enrolment Rates with Northern Region and National**

Year	Enrolment	Tamale Metropolitan	Northern Region	National
2002/3	<i>Gross Enrolment Rates</i>			
	Primary	78.6	65.6	75.7
	JHS	51.7	42.5	63.4
	<i>Net Enrolment Rates</i>			
	Primary	55.9	45.3	55.9
2003/4	<i>Gross Enrolment Rates</i>			
	Primary	75	76.8	78.4
	JHS	88.4	69.0	65.6
	<i>Net Enrolment Rates</i>			
	Primary	65.4	56.2	55.6
2004/5	<i>Gross Enrolment Rates</i>			
	Primary	93.4	71.5	83.3
	JHS	62.5	51.4	70.2
	<i>Net Enrolment Rates</i>			
	Primary	62.5	52.4	59.1
2005/6	<i>Gross Enrolment Rates</i>			
	Primary		83.6	86.4
	JHS		57.5	70.4
	<i>Net Enrolment Rates</i>			
	Primary		65.4	68.8
2006/7	<i>Gross Enrolment Rates</i>			
	Primary	110.0	87.4	90.8
	JHS	101.2	59.0	74.8
	<i>Net Enrolment Rates</i>			
	Primary	90.4	67.5	78.6
2006/7	<i>Gross Enrolment Rates</i>			
	Primary	110.0	87.4	90.8
	JHS	101.2	59.0	74.8
	<i>Net Enrolment Rates</i>			
	Primary	90.4	67.5	78.6
2006/7	<i>Gross Enrolment Rates</i>			
	Primary	110.0	87.4	90.8
	JHS	101.2	59.0	74.8
	<i>Net Enrolment Rates</i>			
	Primary	90.4	67.5	78.6
2006/7	<i>Gross Enrolment Rates</i>			
	Primary	110.0	87.4	90.8
	JHS	101.2	59.0	74.8
	<i>Net Enrolment Rates</i>			
	Primary	90.4	67.5	78.6

The table also reveals a high rate of female enrolment than that of male enrolment in the JHS. Over the period 1998–2006 female enrolment rates in the JHS average 7.0 per cent compared to male enrolment average of 3.2 per cent. On average, girls constitute 48 per cent of children in nursery schools against 45.6 per cent and 42.6 per cent in primary and JHS respectively. Boys also constitute 52 per cent in nursery against 54.4 per cent and 57.4 per cent in primary and JHS respectively. This figure shows a relatively high rate of female dropout rate in all the levels of education in the metropolis, thus raising concerns about gender disparity in the metropolis.

## Gross and Net Enrolment Rates

The metropolis has seen an improvement in both the gross and net enrolment rates at all levels of education. Generally, the gross enrolment rate (GER) is always higher than the net enrolment rate (NER) because there are quite a number of children enrolled in the various stages of education with ages outside the prescribed age group. By definition, the NER for a particular education level is the number of children enrolled in that level of education who are within the prescribed age group as a proportion of the population of children in the prescribed age group. Therefore, by definition the NER cannot exceed 100 per cent. In contrast, the GER may exceed 100 per cent, depending on the number of children enrolled at a particular level of education who are outside the prescribed age group for that stage of education because of starting school late or repeating a class for various reasons.

Using data from the EMIS project of the Ministry of Education, Science and Sports, the metropolis' gross and net primary enrolment rates were higher than or similar to the national average for 2002/2003 to 2006/2007 except the 2003/2004 academic year where the GER dropped below the national average (Table 4.14).

Gross enrolment rates at JSS level in the metropolis has remained higher than the regional and national rates over the years of 2003/2004 and 2006/2007. However, for the other years, the metropolis GER has failed to match the national average. The net enrolment rate at JSS in the metropolis was below the national rate in 2002/2003 and 2004/2005 academic year. Generally, the performance of the metropolis in terms of enrolment appears to be better than the national effort from the 2005/2006 academic years.

## School Attendance

**Table 4.16: Reasons for Missing Classes and Those That Returned (%)**

Reasons	Boys	Girls	Rural	Urban	All
Sickness	60.8	59.6	71.4	59.4	60.2
Needed on farm /shop/ home	–	1.8	–	1.0	0.9
Financial	19.6	17.5	14.3	18.8	18.5
Child not interested	–	3.5	14.3	1.0	1.9
Bad weather	17.6	15.8	–	17.8	16.7
Other	2.0	1.8	–	2.0	1.9
<b>% Returned</b>	<b>45.5</b>	<b>46.8</b>	<b>100.0</b>	<b>91.5</b>	<b>92.2</b>

Source: Household Survey.

School attendance, from Table 4.15, in the metropolis was relatively regular for most children. This is based on the 2008 DAEA Household Survey, which found 67.4 per cent of school children never missed classes in the 12 month prior to the survey. The rate of school attendance was marginally higher for boys than girls as a relatively higher proportion of girls missed classes at least once. School attendance was also reported to be better among the urban school children compared to the rural school children. Of those who missed some school days during the academic year, the frequency was highest among children aged 3–5 years followed by those aged 15–17 years. Those within the age group of 18–24 who were supposed to be pursuing tertiary education were relatively regular, followed by the 6–11 year olds.

**Table 4.15: School Attendance**

Age Group	% that missed	Once	Twice	Thrice	Several times
<b>Age</b>					
3–5	54.8	18.8	31.2	12.5	37.5
6–11	29.0	27.8	16.7	27.8	27.7
12–14	31.0	33.3	22.2	22.2	22.3
15–17	34.1	36.4	27.3	0.0	36.3
18–24	20.9	22.2	22.2	0.0	55.6
<b>Sex</b>					
Boys	15.2	10.1	11.6	7.2	18.9
Girls	17.4	14.5	13.0	7.2	17.0
<b>Location</b>					
Rural	37.5	0.0	0.0	16.7	83.3
Urban	32.2	27.0	27.0	14.3	31.7
All	32.6	24.6	24.6	15.5	35.3

Source: 2008 Household Survey.

A higher proportion of those who missed school did so several times compared with those who were absent once, twice or

thrice. The main reason given by the children to explain their absence from school is ill-health, which was cited by 60 per cent of children who missed school (Table 4.16). About 19 per cent missed classes due to financial problems while about 17 per cent missed a number of school days because of bad weather.

Other reasons given for missing schooldays are that the child was not interested in going to school (2%), the child was needed at home, farm or shop (0.9%) and other reasons that may include teenage pregnancy (2%). The child missing school as a result of he/she being needed on the farm, shop or home, was mainly cited by girls in the urban metropolis. Ill-health as an excuse for missing school was more prevalent among children (both boys and girls) in the rural part of the metropolis. A higher proportion of the children in the rural metropolis missed school days because they were not interested while financial constraints caused a relatively higher proportion of urban children to stay out of school compared to rural children.

Although, about 92 per cent of the children who missed days in school returned to school, the proportion of urban children was less than those in the rural metropolis, all of whom returned to school. Relatively more girls returned to school than boys.

### Performance of Pupils in Competitive Examinations

The performance of the children in the Tamale Metropolitan Assembly in the Basic Education Certificate Examinations (BECE) was relatively lower than the national average but improved remarkably in 2004 after falling in 2003 from 2002 (Figure 4.2).

The fall in the pass rate in Mathematics, Science, English and social studies follow similar patterns: the rate of pass improved in 2004 after a fall in 2003 from 2002. The pass rates in English language (Figure 4.4) and social studies are relatively higher than the pass rates in mathematics and science (Figure 4.3). Within the region, the Tamale Metropolis children's pass rate in Mathematics, science and social studies (Figure 4.5) are below the region's pass rate in these areas.

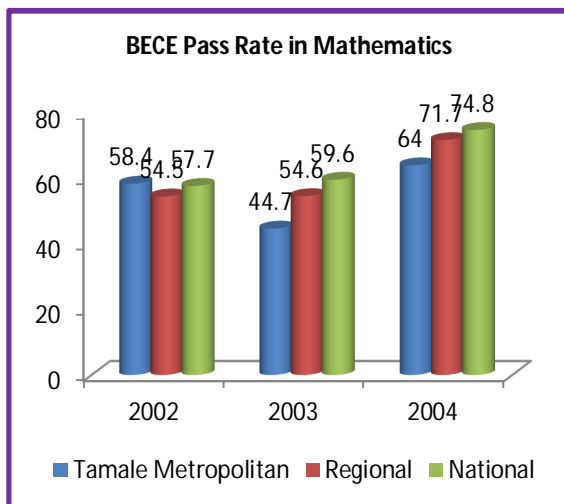


Figure 4.2: Performance of Pupils of Tamale

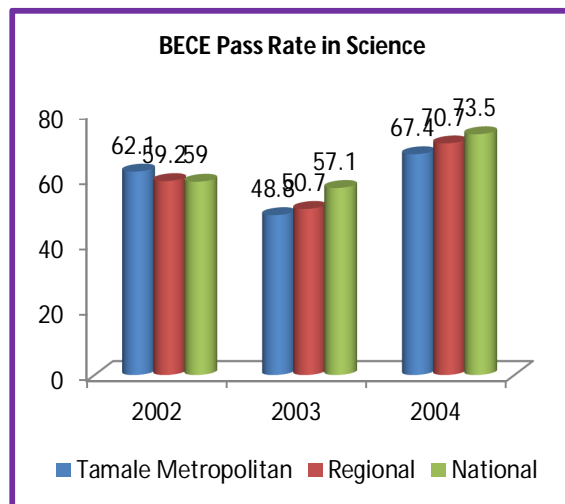


Figure 4.3: BECE Pass rates in Science of Tamale

Metropolitan Assembly in BECE, 2002–2004.

Metropolitan Assembly in BECE, 2002–2004.

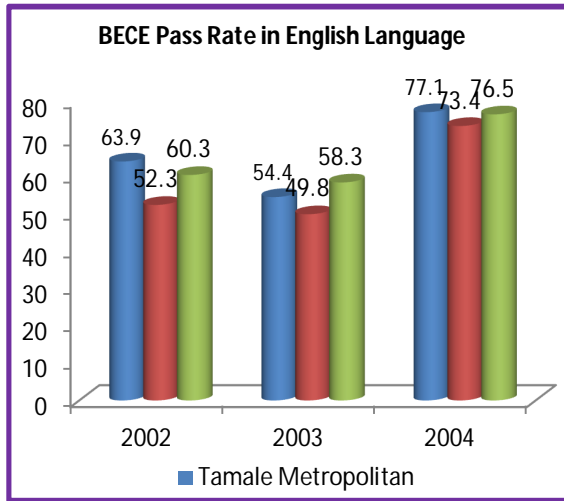


Figure 4.4: BECE Pass rates in English of Tamale Metropolitan Assembly in BECE, 2002–2004.

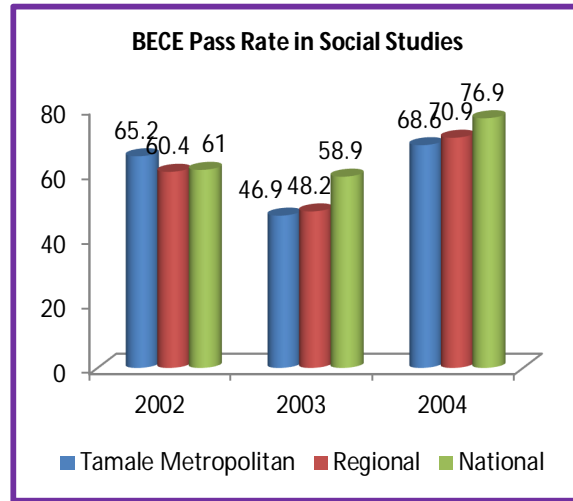


Figure 4.5: BECE pass rates in Social Studies in Comparison.

## Educational Attainment

One major determinant of the distribution of economic activity of the labour force and for that matter income distribution and poverty incidence is the educational attainment of the adult population. Table 4.17 shows the distribution of the population aged 6 years and above by highest level of education completed. From the 2008 DAEA Household Survey, about 52 per cent of the population aged 6 years and above have no education while 9 per cent has some or completed primary education. About 26 per cent have some or completed middle or JSS compared with 19 per cent and 21 per cent who completed or have some senior secondary and tertiary education respectively.

**Table 4.17: Educational Attainment of Population aged 6 Years and Above (%)**

Level	2000	2003	2008
No education			51.5
None		3.6	
Pre-school	1.8		1.6
Primary	37.8	35.9	8.9
Junior High	4.9*	19.1	19.6
Middle school	–	8.3	7.9
Senior High	16.4	18.5	19.0
Vocational/Technical/Commercial	6.5	5.6	6.3
Agriculture/Nursing/Teacher training			9.5
Tertiary	6.2	8.4	20.6
Special School			1.6

Source: 2000 Population and Housing Census & 2003 CWIQ (GSS) and 2008 Household Survey.

\*includes middle school.

**Table 4.18: Adult (15 + years) Literacy Rates (%), 2008**

Type	All	Male	Female	Rural	Urban
Literate in:					
English	25.8	21.5	14.3	51.8	
Local Language	37.4	21.9	15.5	14.3	40.6
English & Local Language					

Source: DAEA Household Survey, 2008.

In terms of educational attainment, the metropolis witnessed a marked decline in the proportion of the population aged 6 years and above who have completed primary school (from 38% in 2000, 36% in 2003 to 9% in 2008) compared to attainment of tertiary education from 6.2 per cent in 2000 to 21 per cent in 2008.

There are also indications of increases in the proportion of the population attaining senior high secondary and a constant proportion of the population with the vocational training. Indeed the declining proportion of the population at the lower level education and increasing proportion at the higher level of education suggests that more people are now striving for higher education than before, which could translate into improved literacy rates and productive skills of the population. However, the high proportion of the population without any education could hamper the metropolis' effort to meet the MDG target on education for all.

### **Adult Literacy**

The adult literacy rate in English, a local language or both in 2008, indicate some disparity in the education component of human development (Table 4.18) between male and female. The literacy rate is generally higher in English than in the local languages.

From the 2008 DAEA Household Survey, a higher proportion of the urban population adult is observed to be more literate than the rural population adult. In terms of gender, Table 4.18 shows that a greater proportion of men than women are literate in English, a local language or both in 2008. This 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 metropolis has seen an improvement in both the gross and net 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 school attainment also suggests an improvement in human development in the metropolis. There are gender gaps in terms of enrolment from one educational level to the other. In the Medium-Term Development Plan of the metropolis, adult education is expected to be speeded up while children of school going age in the metropolis 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 metropolis. Some of the factors come from the community as 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 Tamale metropolis 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 as 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 MDGs 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 Tamale metropolis has a good number of pre-schools, basic and second cycle institutions and the rate at which education provision is expanding in the metropolis is quite impressive. The contribution of the private sector to education 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 metropolis 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.

The Ghana Poverty Reduction Strategy (GPRS) II sets a target of three textbooks per

pupil and Tamale metropolis is behind in attaining that target although trends are slowly increasing with core textbooks per pupil increasing from 0.3 in 2002–2003 to 2.2 in 2005–2006. Even though the textbook situation has improved dramatically over the last three years, there are still gaps in the supply of all the textbooks to schools in the metropolis.

In terms of toilet facilities and drinking water, there seems to be deterioration in trend in the proportion of schools (pre-school, primary and JHS) with toilet facilities. There was, however, an increase in the proportion of these schools with drinking water.

The furniture situation for both teachers and pupils although is highly inadequate, the trend points to a gradual increase in the number of school furniture in the metropolis. Several of the school buildings require some form of rehabilitation while others require total demolition and re-construction. The pupil-teacher ratio in the Tamale metropolis has remained stable at 28:1 from 2003/04 to 2005/06 academic years.

The Tamale metropolis has, since 1998, witnessed a major improvement in the enrolment of school children in the primary and JHS levels of education. Total enrolment in the primary level increased remarkably. The sex dimension of enrolment shows that the numbers of male enrolment outnumber that of female in all the three levels of education from 1998 to 2006 and also a high rate of female dropout rate in all the levels of education, raising concerns about gender disparity in the metropolis.

The metropolis, however, has seen an improvement in both the gross and net enrolment rates at all levels of education. Gross enrolment rates at JSS level have remained higher than the regional and national rates over the years of 2003/2004 and 2006/2007.

School attendance in the metropolis was 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 ones.

The performance of the children of the Tamale Metropolitan Assembly in the Basic Education Certificate Examinations (BECE) was relatively lower than the national average but improved remarkably in 2004 after falling in 2003 and 2002. The pass rates in English language and social studies are relatively higher than the pass rates in mathematics and science. Within the region, the children's pass rate in mathematics, science and social studies is below the region's pass rate in these areas.

In terms of educational attainment, the metropolis witnessed a marked decline in the proportion of the population aged 6 years and above who have completed primary school (from 38% in 2000, 36% in 2003 to 9% in 2008) compared to attainment of tertiary education from 6.2 per cent in 2000 to 21 per cent in 2008. There are also indications of increases in the proportion of the population attaining Senior High Secondary but a constant proportion of the population with the vocational training. Indeed the declining proportion of the population with the lower level education and increasing proportion at the higher level of education suggests that more people are now striving for higher education than before, which could translate into improved literacy rates and productive skills of the population. However, the high proportion of the population without any education could hamper the metropolis' effort to meet the MDG target of education for all.





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# Health, Water and Sanitation

## Introduction

One major goal of the Tamale Metropolitan Assembly as contained in the Medium-Term Development Plan for the period 2006–2009 is to ensure improvement in the performance of the health system. The focus on the health system is also in line with the GPRS II, which seeks to ensure, among other things, improved access to health care, malaria control and HIV/AIDS prevention. Health issues also feature in the MDGs as most of the goals and targets focus on health: improve maternal mortality rates, reduce child mortality rate, combat HIV/AIDS and other diseases. The Human Development Index focuses fundamentally on longevity, that is, improving the life expectancy at birth in the Medium-Term Development Plan, the metropolis also seeks to improve access to health services by providing more health infrastructure, especially in rural communities. As contained in the metropolis' 2009 Action Plan, the metropolis seeks to promote coverage of safe motherhood activities (ANC, Delivery, PNC), promote immunization coverage awareness and promote awareness on common childhood illness through organized radio discussions and durbars on these issues. Other health targets in the metropolis' 2009 Action Plan include the reduction in the incidence of Malaria/HIV/AIDS and the reduction in the incidence of malnutrition in households and communities. Some of the strategies outlined in the plan to attain these targets include capacity building, skills upgrading of personnel, promoting the use of Insecticide

Treated Nets (ITNs), promoting micro-nutrient supplementation, promoting public-private partnership and organizing more immunization programmes.

Water and sanitation targets feature under environmental sustainability (Goal 7) of the Millennium Development Goals (MDGs). The wording calls on governments to “halve, by 2015, the proportion of people without sustainable access to safe drinking water and sanitation.” A source, which separates the delivery of drinking water from potential contamination, such as a piped supply or a protected well, or spring is deemed to be “safe.” Interpretation of “access” has varied between countries but generally refers to a household supply of 20 litres that can be fetched within a 30-minute round trip, a distance of about 1 km. In order to increase access to water and sanitation facilities, the Tamale Metropolitan Assembly has outlined some strategies in its 2009 Action Plan. Some of these strategies to help achieve this objective include the provision of water and sanitation facilities to every community, designate new refuse disposal sites, ensure proper management of public facilities and capacity building through activities such as organizing community durbars, enacting and promulgating bye-laws on sanitation, clearing of sites and demarcation and organizing training workshops for staff of MWST.

### Health Infrastructure and Personnel

Health services provided are both curative and preventive. The methods used are mainly orthodox and traditional. Both the public and

private sectors provide health services in the metropolis.

**Table 5.1: Number of Health Facilities (HIs) in Tamale Metropolitan, 2008**

Facility	Number
<b>Number of Public HIs</b>	
Hospital	5
Health Center	3
Clinic	6
CHPS	6
<b>Number of Private HIs</b>	
Clinic	8
Clinic (Mission)	3
<b>Total Number of HIs</b>	<b>31</b>

Source: Tamale Metropolitan Health Directorate.

Table 5.1 shows the number of health facilities. As at 2008, the metropolis had 31 health institutions made up of five public hospitals, three public health centres, seventeen clinics (six public, eight private and three mission) and six Community Health-Planning Services (CHPS).

The Tamale Regional Hospital and the West End Hospitals are the only well equipped facilities. Tables 5.2 and 5.3 show public and private health institutions and their locations in the Tamale Metropolitan.

**Table 5.2: Public Health Institutions and their Locations**

Sub-District	Health Facility	Location
1. Tamale Central	(a) Reproductive and child health unit	Tamale Town
	(b) Reproductive and child health unit	Community Health Nurses School
	(c) West End Hospital	Zogbeli
2. Sagnerigu	(a) Nyohini Health Post	Nyohini
	(b) Bagabaga Clinic	Bagabaga
	(c) Community Initiated Clinic	Gariziegu
3. Bilpeila	(a) Bilpeila Health Centre	Bilpeila
	(b) Industrial Area Clinic	Nyohini
	(c) Presby Mobile Rural Health Unit	
4. Vitting	(a) Reproductive and child health unit	Presby Lay training
	(b) Teaching Hospital	Institute, Vitting, Lahagu
5. Choggu		Dohinayili
	Reproductive and Health Unit	Holy Cross

**Table 5.3: Private Facilities and Their Location**

Sub-District	Health Facility	Location
1. Bilpeila	Deaha maternity Home/Clinic	Lamashegu South
2. Choggu	Fulera Maternity Home/Clinic	Choggu Manayili
3. Tamale Central Sub	Clinic (Haj Adams)	Legion
4. Tamale Central	Rabito Clinic (Skin specialist)	Revoli
5. Choggu Sub-District	Clinic Sheikinah	Gurugu
6. Vitting	Clinic Sheikinah	Wamali
7. Tamale Central	SDA Hospital	Hospital Road by District Assembly Stores

Source: MHMT, Tamale.



Picture 5.1. The Regional Hospital.



Picture 5.2. A new female ward for West End Hospital.

Apart from these health institutions, there are also a number of pharmacy shops that are highly patronized. The availability of these health institutions makes health delivery relatively effective. One major factor that also affects effective health delivery is the availability of health personnel. The staff strength of the health sector in the metropolis is 156. This is made up of 4 doctors. The staff-client ratio is 1:5901, 12 times higher than the national figure of 1:500. The distribution of medical staff is skewed in favour of urban Tamale. The number of doctors in the Metropolis remained stable at 4 from 2003 to 2006. However, the number of nurses increased from 76 in 2003 to 89 in 2004, which also remained stable up to 2006. Apart from the doctors and nurses, there are also other health personnel. This includes laboratory technicians, dispensary technicians and trained traditional birth attendants. Table 5.4 and 5.5 give a summary of staffing situation in the Metropolis.

**Table 5.4: Number of Health Personnel in the Tamale Metropolis, 2003–2006**

Year	Doctor	Nurses	Others
2003	4	76	60
2004	4	89	63
2005	4	89	63
2006	4	89	63

Source: MHMT, Tamale.

**Table 5.5: Number of Health Workers in Tamale Metropolis, 2000–2006**

Personnel	2000/3	2004/5	2006
Doctors	4	4	4
Medical Assistants			
Pharmacists			
Dispensary Assistants			
Nurses	76	89	89
Traditional Birth Assistants			
Technical Officers (Community Health)			
Laboratory Technicians			
<b>Total</b>	<b>140</b>	<b>156</b>	<b>156</b>

Source: Tamale Metropolitan Health Directorate.

### Access to and Quality of Health Services

The location of health infrastructure in the Metropolis is an important factor in determining the ability of individuals to reach the facility in less than 30 minutes. The type of illness and the proximity of a facility also determine the sort of medical attention to seek. For sickness like headache, stomach-ache and others, which are not severe, residents normally seek treatment from pharmacy shops. What they normally send to the hospitals and other health institutions are the severe cases.

There are a number of factors that influence the decision to patronize health facilities. These include the income of the individual as well as the cost of travelling to the health institution, the nature of healthcare needed and the level of education of the individual. Table 5.6 presents the different kinds of health facilities or health provider

visited by inhabitants in the Metropolis in times of sickness. From the Household Survey in 2008, about 85 per cent of those who had fallen sick within three months prior to the survey sought medical attention (i.e., visited either the private or public clinic/hospital, community health centre or the pharmacy shop). The most patronized health facility in the Metropolis is the public clinic or hospital, which accounted for 57 per cent in 2008 (Table 5.6). Only 15 per cent visited the private hospitals and clinics. About 11 per cent of the sampled population in 2008 who had fallen ill within the three months prior to the survey bought drugs from the pharmacy or drug store.

Very few of the population sampled in 2008 normally seek treatment from the traditional healers (1%) with relatively more people in the Rural Metropolis (who fell sick in the last three months prior to the survey) visiting the traditional healer than the urban counterpart. The rural population patronized the services of pharmacists or chemical sellers more than urban dwellers while about

equal proportion of the rural and urban dwellers used the Community Health Services.

**Table 5.6: Type of Health Facility/Provider Visited in Times of Illness**

Health Facility/Provider	Total	Rural	Urban
Private Clinic/Hospital	15.2	21.4	14.2
Public Clinic/Hospital	56.6	35.7	59.9
Community Health	2.8	2.4	2.9
Religious healing center	0.3	–	0.4
Traditional Healer/Herbs	1.3	2.4	1.1
Pharmacy/Drug Store	11.4	23.8	9.5
None	12.3	14.3	12.0

Source: 2008 DAEA Household Survey.

A higher proportion of people in the rural areas of the metropolis failed to seek medical attention during times of sickness compared with urban dwellers. From the household survey in 2008, of those who fell ill but did not seek medical attention, about 23 per cent did not do so because they found medical care too expensive while 75 per cent considered it unnecessary to seek medical attention (*see* Figure 5.1).

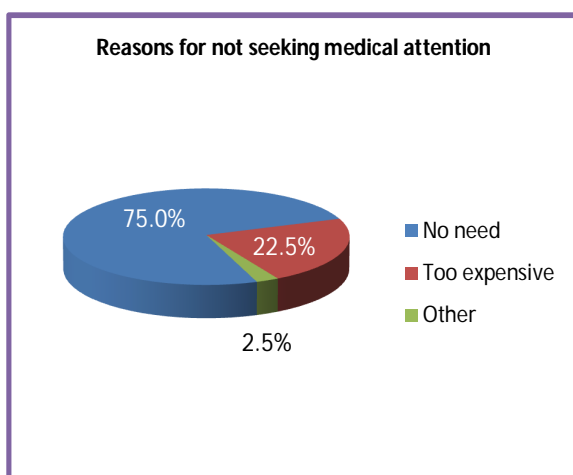


Figure 5.1: Reasons for not seeking medical attention. Source: 2008 Household Survey

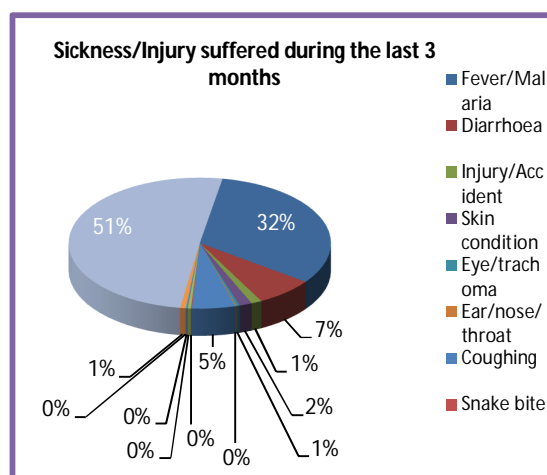


Figure 5.2: Sickness/Injury reported by households, 2008 (%)

## Disease Situation

The high level of illiteracy and poverty as well as limited access to safe drinking water

and poor sanitation have combined to expose many people to health hazards, which accounts for the low standard of living of the people. The diseases that are common in the

Tamale Metropolis are Malaria, Upper Respiratory Tract Infections (URTI), Accidents, Skin Diseases and Ulcers, Diarrhoea, Hypertension, Pregnancy Road Complications, Anaemia, Gynaecological disorders and others. Figure 5.2 presents the common sicknesses reported by households three months prior to the Household Survey in 2008.

The two most prominent sicknesses were fever/malaria (32%) and diarrhoea (7%). Malaria is the most reported disease in the Metropolis. Tables 5.7 and 5.8 show the top 10 diseases in 2005 and 2006 respectively and the number of cases recorded.

**Table 5.7: Top 10 Diseases Recorded in 2005**

Disease	No. of Cases
Malaria	66,455
Diarrhoea diseases	3,458
Intestinal worms	2,342
Anaemia	1,399
Hypertension	1,549
Rheumatism and Joint pains	1,227
Other ARI	5,477
Skin Diseases and Ulcers	5,925
Food Traffic Accidents	1,780
Home/occupational Acc.	1,377
All others	16,264

Source: MHMT, Tamale.

**Table 5.8: Top 10 Diseases Recorded in 2006**

Disease	No. of Cases
Malaria	40,608
URTI	4,195
Accidents	3,029
Skin Disease and Ulcers	2,489
Diarrhoea	1,321
Hypertension	1,321

Pregnancy Road Complications	1,065
Anaemia	1,033
Gynaecological diseases	946
All others	4,909

Source: MHMT, Tamale.

In 2005, there were 66,455 reported



Picture 5.3: A woman patient at the OPD checking her blood pressure.

malaria cases against 40,608 in 2006. The fall in the number of cases could be due to the preventive measures that were put forward by the metropolitan assembly as well as the Government to combat malaria in the Metropolis and the country as a whole. URTI is the next most reported case recorded followed by accidents.

The top 5 common diseases observed in the metropolis have severe effect on the lives of the people. Malaria, diarrhoea and anaemia are said to have contributed greatly to most deaths, especially among infants. Malaria alone accounts for over 60 per cent of all deaths in the metropolis (Table 5.9).



**Table 5.9: Four Leading Causes of Death & Morbidity (%)**

Disease	2004	2005	2006	2007	2008
<b>Death</b>					
Malaria	61.1	62.4	76.7	71.6	62.1
Anemia					3.2
Cardiovascular Accidents			4.7	4.2	
Bronchopneumonia	7.4				
Pneumonia	4.2	5.4	9.3	8.4	9.2
Diarrhoea		22.6	4.7	4.2	
Convulsion	5.3	9.7			9.2
<b>Morbidity</b>					
Malaria					
Upper Respiratory Tract Infection					
Skin Disease					
Gastroenteritis					
Home/Road Traffic Accidents					

Source: MHMT, Tamale.

**Table 5.10: Hospital Attendance in the Tamale Metropolis, 1999–2005**

Year	Attendance
1999	111,612
2000	136,808
2001	130,776
2002	64,495
2003	72,253
2004	74,545
2005	107,662

Source: MHMT, Tamale.

### Outpatient Attendance at Health Facilities

Table 5.10 show an increasing trend in the outpatient attendance at health facilities in the Metropolis for the period 1999 to 2000 that started declining from 2001 to 2002.

After increasing in 2003–2004, the number of hospital attendants increased sharply by about 30 per cent. The apparent high hospital attendance could be linked to health exemption programmes introduced by the government, including exemptions from cholera, typhoid and TB; exemption for antenatal services and for children less than 5 years as well as exemptions for the elderly. The introduction of the National Health Insurance Scheme (NHIS) has also partly

contributed to higher health attendance, especially at public health institutions and particularly for the period 2005.

### Malaria Prevention Strategies

Since Malaria is the most common disease in the metropolis, households have adopted various strategies to protect themselves from mosquitoes and avoid malarial infections. Some of the adopted strategies used by households include covering windows with mosquito nets, the regular use of mosquito coils, the use of insecticide treated nets, the regular clearing of weeds on compounds and regular house spraying, among others (Figure 5.3). The type of strategy adopted depends on the location of household as well as their income level. Most of the rural communities adopt the insecticide treated bednets for their children relative to the urban population but more of the urban population practise regular house spraying. The government has also intensified efforts to eradicate malaria incidence through her Roll Back Malaria programme.

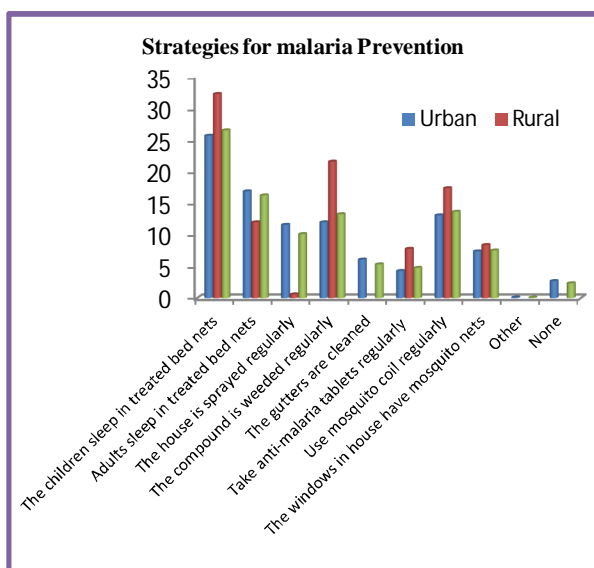


Figure 5.3: Strategies adopted by households for malaria prevention (%).

The clearing of weeds and the use of mosquito coils are practised more by the rural dwellers than their urban counterparts. Some of the households in the urban metropolis are ignorant of malaria prevention and so do nothing to prevent the disease. This therefore makes it very necessary to intensify 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.

**Table 5.11: Number of Reported HIV/AIDS Cases in the Tamale Metropolis by Sex**

Year	Number of Reported Cases		
	Male	Female	Total Number
1999			93
2000			59
2001			59
2002			118
2003	61	98	159
2004	58	72	130
2005	72	107	179
2006	20	50	70

Source: MHMT, Tamale.

## HIV/AIDS

The Tamale metropolis is as vulnerable to the HIV/AIDS pandemic as any other district in

the country. Table 5.11 shows the number of reported cases in the metropolis. The data shows that, from 1999 to 2000, the total number of reported cases decreased from 93 to 59, which remained stable in 2001. The total number of reported cases then sharply increased from 59 in 2001 to 118 in 2002, representing a 100 per cent increment. It then increased again to 159 in 2003 and decreased to 130 in 2004. In 2005, 179 cases were reported representing an increase of 37.7 percent over the previous year. The number of reported cases then dropped drastically to 70 in 2006, representing a decrease of 155.7 per cent.

There are gender disparities in the reported cases of HIV/AIDS. Figure 5.4 reveals that females report HIV/AIDS related diseases more than males. Due to ignorance and other reasons, most people refuse to report cases and to seek early treatment. This therefore calls for the intensification of campaigns to make people more aware of the importance of carrying out an HIV/AIDS test to know one's health status. There is also the need for sensitization of the disease among women since the disease is more prevalence in women than males.

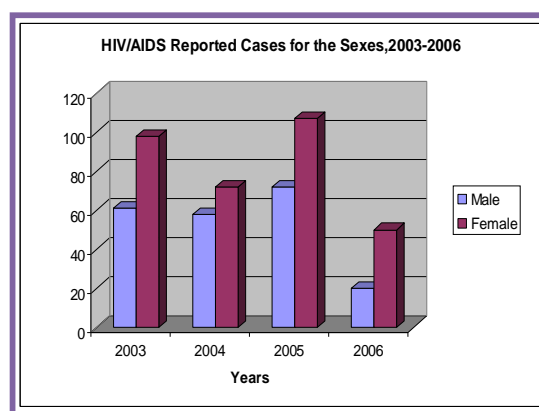


Figure 5.4: HIV/AIDS Reported cases for the Sexes, 2003–2006.

## Maternal Mortality



Ensuring improved maternal mortality is the fifth goal of the MDGs. The two indicators for this goal are the maternal mortality ratio and the proportion of births supervised by skilled health personnel. The pattern of maternal mortality in the metropolis has fluctuated over the years 2003–2007. The

ratio increased from 227 per 100,000 live births in 2003 to 234 per 100,000 in 2004 (see Table 5.12). The decline of the rate to 123 per 100,000 live births in 2005 was quite significant but could not be sustained as it rose to 241 per 100,000 live births in 2006 and then further to 561 per 100,000 live births in 2007.

**Table 5.12: Maternal Mortality Rates**

Indicators	2003	2004	2005	2006	2007
Maternal Death	24	24	16	27	72
Maternal Mortality Ratio	227/100,000	234/100,000	123/100,000	241/100,000	561/100,000
Number of Supervised Deliveries	5196	7010	8811	1836	
Proportion of Supervised Deliveries	39.5%	51.9%	65%	13%	

Source: Tamale Metropolitan District Directorate.

### Supervised Deliveries

There has been an increasing trend in the number of supervised deliveries in the Tamale metropolis. Table 5.13 shows the number of deliveries that were supervised from 2003 to 2006.

**Table 5.13: Number of Supervised Deliveries in the Tamale Metropolis**

Year	Number	Percent of Supervised Deliveries (%)
2003	5,196	39.5
2004	7,010	51.9
2005	8,811	65.0
2006	1,836	13.0

Source: MHMT, Tamale.

In 2003, 5196 deliveries were supervised, representing 39.5 per cent of birth cases in the Metropolis. The year 2005 recorded the highest number of supervised birth cases, representing 65 per cent. However, the number of supervised deliveries decreased to 1,836 cases, representing 13 percent of all deliveries in the Metropolis. Nurses and midwives in hospitals and clinics supervised most of these deliveries. Traditional birth attendants who are mostly located in the rural communities also handled some deliveries (see Figure 5.5).

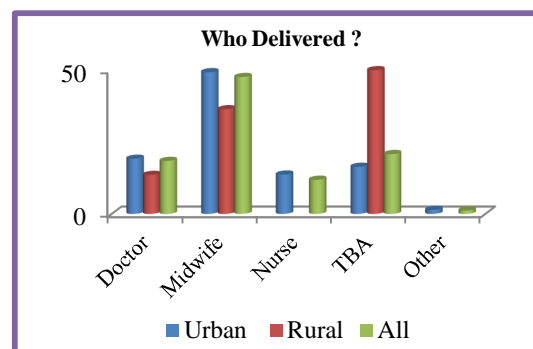


Figure 5.5: Place of Child Delivery and by Who Delivered. Source: MHMT, Tamale.

The number of supervised deliveries is rising steadily with increased awareness due to a sustained public health education. In the rural Metropolis, the number of supervised deliveries by traditional birth attendants increased.

### Family Planning

Even though efforts have been made on family planning education, acceptance levels remain low as shown in Table 5.14.

**Table 5.14: Family Planning Acceptance Numbers and Rates in the Tamale Metropolis, 1999–2006**

Year	Number	Rate (%)
1999	9,762	16.0
2000	10,994	18.0
2001	12,718	21.0
2002	–	–
2003	11,337	16.0
2004	13,345	18.5
2005	16,667	20.5
2006	3,567	4.0

Source: MHMT, Tamale.

From 1999 to 2001, the family planning acceptance level increased from 9,762 to 12,718, representing an increase of 12.6 per cent. This was due to the fact that family planning education was intensified, making more and more women to accept it. However, the number of acceptance level dropped to 11,337 in 2003. It then increased to 16,667 in 2005 and dropped drastically to 3,567 in 2006.

#### Pre- and Post-Natal Care Attendance

The survival of mother and baby during pregnancy and other deliveries are largely influenced by the regularity or otherwise of ante-natal and post-natal care received by pregnant and lactating mothers at clinics. Table 5.15 shows the levels of pre-natal and post-natal care attendance between 2003 and 2008. Attendance of pregnant women at pre-natal clinics is relatively high compared with post-natal attendance. In 2003, about 93 per cent of all pregnant women attended ante-natal care compared with 81 per cent in 2008 while 84 per cent of lactating mothers visited the clinic for post-natal care in 2003 as against 82 per cent in 2008.

**Table 5.15: Pre- and Post-Natal Care**

Natal Care	2003	2008		
	All	Rural	Urban	All
Pre-natal care	92.7	82.6	80.5	80.8
Post-natal care	84.1	72.7	82.9	81.8
Live birth	6.6	95.7	88.1	89.0
Still pregnant		4.3	7.5	7.1

Source: 2003 CWIQ, GSS and 2008 Household Survey.

There was more pre-natal care attendance in the rural Metropolis than the urban dwellers in 2008. However, there were more urban dwellers of the lactating mothers who visited the clinic relative to their rural counterparts in the sampled households.

#### Infant and Child Mortality

Life expectancy at birth, an important indicator in the HDI, is determined by infant and child mortality and in some countries by the HIV/AIDS incidence. The fourth MDG is to reduce child mortality by two-thirds between 1990 and 2015.

In the Tamale Metropolis, the under-five mortality rate per 1000 live births has seen a persistent decline for the period 2006 to 2008. The percentage decline in the number of under-five mortality rates between 2006 and 2008 were as much as 22 per cent.

**Table 5.16a: Children Under-Five Mortality Rate**

District	Under-5 Mortality Rate Per 1,000 Live Births		
	2006	2007	2008
Tamale Metropolitan	49.00	45.00	38.00

Source: NDPC, APR (2008).

The mortality rates for under-5s are not the only indicators for the goal of reducing child mortality in the MDGs. The other indicator is the proportion of 1-year-old children immunized against killer diseases such as Measles and Yellow Fever. The proportion of children immunized against Measles rose continuously from 93 per cent

in 2003 to 103 per cent and 112 per cent in 2004 and 2005 respectively (Table 5.16).

This rose further in 2006 before falling in 2007 and 2008.

**Table 5.16b: Number of Children Immunized Against Childhood Killer Diseases**

Antigens	2003		2004		2005		2006		2007		2008	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
BCG	14513	114	17090	130	19512	145	18373	132	20983	147	19119	(130/97)
PENTA-3	12882	101	13456	106	19091	145	16971	122	17443	122	15447	(105/78)
OPV-3	13044	101	13858	106	19051	141	16557	119	17443	122	15447	(105/78)
Measles	1162	93	13564	103	15051	112	19260	139	16920	119	14701	(101/75)
Yellow Fever	101448	82	14283	109	16619	123	19305	139	16627	117	14701	(100/74)

Source: Tamale Metropolitan District Directorate.

The proportion of children immunized against all the five listed childhood killer diseases improved over the 2006–2008 period.

### Child Health and Nutrition

Adequate food and good nutrition are important determinants of good health and human survival. Poor nutrition of the child not only causes morbidity and mortality but also has adverse implications for education outcomes and natural growth of the child. Essentially, three indicators are used to assess child health in the Metropolis. Each of these indices gives different information about growth and body composition which are used to assess nutritional status of the child. The indicators and the outcomes for children in the Metropolis in 2003 are presented in Table 5.17.

**Table 5.17: Child Health Indicators, 2003**

Indicator	Tamale Metropolitan			National		
	Total	Rural	Urban	Total	Rural	Urban
Stunted	38.3			32.4	33.7	30.0
Wasted	17.5			15.5	12.9	20.2
Underweight	27.2			25.8	24.4	28.4

Source: CWIQ 2003 (2003) Values include all children who are below – 3SD.

From Table 5.17, stunting refers to children whose height for-age Z-score falls below minus three Standard Deviation (-

3SD) from the median of a reference population. They are considered stunted because they are short for their age and are chronically malnourished. Stunting reflects inadequate nutrition over a long period of time and is also associated with recurrent and chronic illness. Therefore height-for-age represents the long-term effect of malnutrition in a population and does not vary according to recent dietary intake. In Table 5.17, the incidence of stunting or chronic malnutrition is observed to be worse in the metropolis than the national average.

The incidence of wasting is also worse at 17.5 per cent, compared with 15.5 per cent at the national level. The weight-for-height index measures body mass in relation to body length and describes current nutritional status. Children whose Z-score are below minus three standard deviation (-3 SD) from the median of the reference population are considered thin (wasted) for their height and

are acutely malnourished. Wasting reflects inadequate nutrition in the period immediately preceding the survey (2003) and may be the result of inadequate food intake or recent episode of illness causing loss of weight and the onset of malnutrition.

**Table 5.18: Health Insurance Status (percentage)**

Sex/Location/Age/Type	Registered	Covered	Non-Members	Total
<i>Sex</i>				
Male	57.8	30.7	9.5	100
Female	61.9	30.5	7.6	100
<i>Location</i>				
Rural	6.6	1.1	92.3	100
Urban	60.6	31.9	7.5	100
<i>Age</i>				
Under 18 years	24.1	69.1	6.8	100
18-69 years	83.0	7.2	9.8	100
70 years and above	25.0	75.0	0.0	100
<i>Type of Work</i>				
Agriculture	66.6	16.7	16.7	100
Fishing	0.0	100.0	0.0	100
Finance/Insurance/Services	82.8	8.6	8.6	100
Wholesale/Retail Trade	87.0	10.1	2.9	100
Transport/Storage/Communication	85.7	14.3	0.0	100
Others	33.6	18.3	48.1	100
All	60.0	31.5	8.5	100

Source: 2008 Household Survey.

Weight-for-age is a composite index of height-for-age and weight-for-height. It takes into account both acute and chronic malnutrition. Children whose weight-for-age is below minus three standard deviations (-3 SD) from the median of the reference population are classified as underweight. The metropolis had a higher proportion of underweight children compared with the national average. Based on the three indicators discussed, the Tamale metropolis is relatively worse off in terms of child health than the national situation.

## National Health Insurance Scheme (NHIS)

The National Health Insurance Scheme (NHIS) is a mechanism that is designed by the Government to improve access to health services by reducing, particularly for the poor and deprived, the cost of obtaining quality health services. The Tamale Metropolitan Mutual Health Insurance Scheme (TMMHIS) has been able to register a total number of one hundred and fifty-eight thousand, two hundred and thirty-five people (158,235).

More than half of the population in the metropolis (60%) is registered with the scheme, which was established mainly to replace the “cash-and-carry” system. Table 5.18 shows the number of people who are registered with the scheme, based on the 2008 Household Survey.

The table shows that about 83 per cent of people within the ages of 18 and 69 years are registered under the scheme with only 7.2 per cent covered and 9.8 per cent non-registered members. About 69 per cent of

children under-8 years of age are covered under the scheme with only 24.1 per cent registered and 6.8 per cent non-registered. About 75 per cent of the aged (70 years and above) are covered under the scheme with 25 per cent registered. In terms of sex, more females are registered under the scheme than male population. About 61.9 per cent of the female population is registered with 30.5 per cent covered and only 7.6 per cent non-registered under the NHIS.

A greater proportion of those living in the urban areas are registered under the scheme. About 60.6 per cent of the population in the urban metropolis is registered as against only 6.6 per cent in the rural metropolis, 92.3 per cent of the rural population neither registered nor covered. In terms of type of work, more people in the finance/insurance/services, wholesale/retail trade and transport/storage/communication industries of employment are registered under the NHIS scheme. In the Agricultural industry in general, 66.6 per cent of the people in the industry are registered.

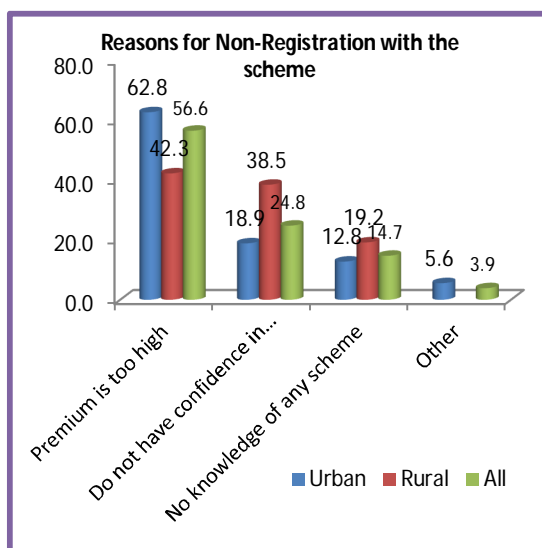


Figure 5.6: Reasons for Non-registration with the NHIS.

The reasons given for non-registration in the NHIS in the metropolis vary (see Figure 5.6). A greater proportion of the non-registered members attribute their inability to register to the high premium charged. About 62.8 per cent of the non-registered members in the urban metropolis and 42.3 per cent in the rural areas attributed their unregistered status to high premium charged under the scheme. About 39 per cent of the non-

registered rural population and 19 per cent of the urban population said they do not have confidence in the operators of the scheme while 13 per cent and 19 per cent of the urban and rural non-registered members said their inability to register is due to the fact that they did not know of the existence of the scheme. About 5.6 per cent of the non-registered urban and 3.9 per cent of the overall non-registered members in the Tamale metropolis gave other reasons for their inability to register under the scheme.

So far, the scheme has produced and distributed about 101,325 identity cards. Within a period of one year (15th November, 2005 to 30th November, 2006), a total of 8,947 insured clients have attended health facilities on the ticket of health insurance, accessing health services at the various hospitals, clinics and health centres in the metropolis and beyond. Table 5.19 presents the proportion of the population in the metropolis that has benefited from the NHIS a number of times. At least, 86 per cent of all NHIS members in the metropolis have benefited from the scheme once.

Table 5.19: Number of Times Individuals have Benefited from the Scheme

Indicator	None	Once	Twice	Thrice	4 times	5 times	6 times	7 times	Unknown
Sex									
Male	18.9	12.6	10.1	3.2	2.2	1.1	–	–	13.7
Female	19.1	15.9	13.4	6.9	3.6	1.1	1.1	0.4	14.8
Location									
Rural	64.3	24.1	34.5	10.3	–	3.4	–	3.4	24.1
Urban	32.8	29.0	22.2	10.1	6.5	2.0	1.2	–	29.0
All	38.0	28.5	23.5	10.1	5.8	2.2	1.1	0.4	28.5

Source: 2008 Household Survey.

## Water and Sanitation

### Water Supply

The metropolis has two main water systems, the urban water system and peri-urban and rural water systems based on the location of the facilities. During the dry

season, most of the water bodies dry up while the already poor underground water level falls, making boreholes and wells to dry up. Like other parts of the country, the people of the Tamale metropolis access water from a variety of sources, as presented in Table 5.20.

**Table 5.20: Sources of Water and the Number of Households that Depend on Them**

Water Source	No. of Households	%
Pipe borne inside	15040	33.22
Pipe borne outside	20664	45.65
Tanker supply	1771	3.92
Well	778	1.72
Borehole	267	0.59
Spring/Rainwater	96	0.21
River/Stream	1154	2.55
Dugout	5230	11.55
Other	269	0.59
<b>Total</b>	<b>45269</b>	<b>100</b>

Source: DAEA Household Survey, 2008.

From Table 5.20, a large proportion of the people in the metropolis (79%) obtain their source of water from pipe-borne water inside the house (33%) and from standpipes outside the house (46%). A sizeable proportion of the households obtain their drinking water from dug-outs (12%).

#### Access to Safe Drinking Water

Figure 5.7 shows that although the majority of the population have access to safe drinking water, a good number of them still obtain water from such unsafe sources as rivers/streams and dug-out holes. This is

particularly pronounced in the rural part of the metropolis. 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, particularly in areas where water supply is problematic.

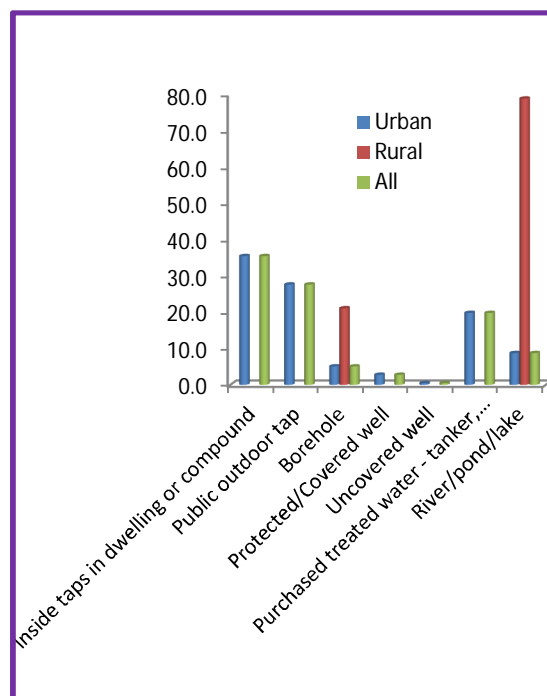


Figure 5.7: Access to safe drinking water (%).





*Picture 5.4: Water improvement delivery system in Tamale.*



*Picture 5.5: Rain-harvesting in Tamale (An example in Tamale Metro).*

There is an excess demand of 7.7 million gallons per day for safe drinking water in the metropolis. Ghana Water Company Ltd (GWCL) mainly supplies this safe drinking water. Coverage in terms of numbers is about 450,000 people. This figure includes a little over 42 communities in the rural Metropolis who enjoy treated water from the Tamale water treatment plant. The Ghana Water Company Ltd rations the water in order to attain a high percentage of coverage. Without rationing, the coverage is only 43 per cent of the urban population. With the rationing, the coverage goes up to 45 per cent.

GWCL is the Government Agency in charge of supplying potable water and has

already put forward its plans to government to expand the water system of Tamale and its environs. This includes increasing the water supply at the Dalun treatment works by an additional 6 million gallons per day. This will involve building a new water treatment plant at Dalun, laying new raw water and treated water transmission pipelines to Dalun and Tamale, respectively. This will at the end bring the total daily output to 10 million gallons and involve the laying of a new network of distribution pipes to cover the whole of Tamale.

In November 2008, a new water treatment plant was commissioned in Tamale to increase the water supply situation in the Metropolis.



Picture 5.6: The newly commissioned 30,000 m<sup>3</sup> water reservoir in Tamale.



Picture 5.7: Children fetching water at a community tap in Tamale.

### **Problems of Water Supply in the Tamale Metropolis**

During the dry season, many children, especially girls, absent themselves from school or arrive late because they and their mothers or aunts start looking for water as early as 1.00 a.m. They spend many hours waiting for their turn. They normally will make about three trips, which leave them too tired for school. The water problem sometimes results in quarrels between husbands and wives. Culturally, men are not supposed to fetch water and so when the taps start running around midnight and a man wakes the wife up to fetch water, it usually results in a quarrel. Nursing mothers especially, find it difficult to get up and fetch water at this time.

The scarcity of water sometimes affects women's economic productivity, as it takes away from them, the time available to pursue their main income-generating activity — trading. In some areas where the problem is very severe, women normally spend a lot of money on water. This is because water from wells and private taps has to be paid for and this is supplemented with water from tanker services in the dry season. Other problems connected with the low level of water supply includes non-payment of water bills by the

communities along the Dalun road and low payment by the people resulting in high cost of operations and low revenue returns. Vandalization of water pipes and other facilities and high level of illegal connections are also other causes.

### **Sanitation: Solid and Liquid Management**

As one of the fastest growing cities in the country, Tamale is faced with daunting challenges in the management of both solid and liquid wastes. Solid waste is managed through communal container system, door-to-door collection services; street litter bins systems and evacuation of heaps. The metropolis has been zoned into three. Solid waste collection services within one of the zones is taken care of by a private waste management company, with the other two being managed by the Waste Management Department of the Assembly. The Refuse Generation Rate (RGR) is about 150 tonnes per day. However the 43-(15m<sup>3</sup>) containers can take up to 7.5 tonnes of refuse per day, leaving a backlog of 142.5 tonnes per day. This results in rampant littering of streets and drains, posing health and other hazards such as breeding of mosquitoes amidst perennial flooding.



There are about 95 public toilets within the metropolis out of which 23 are under the management of private contractors. Unit Committees, Assemblymen or some group of people within the community manage the rest. The Assembly is, however, privatizing the management of toilets in phases. Under the Urban IV project, the Assembly assisted households to construct 980 household toilets facilities. The department has three cesspit emptiers used for servicing the toilets in the metropolis including other districts in the northern region. However, these emptiers are very old, with frequent breakdowns, causing unsightly scenes around toilets, particularly, during the rains.

### **Environmental Conditions**

Environmental conditions in the Tamale metropolis are not encouraging. Owing to the poor quality of the housing situation, run-off water causes erosion in some parts of the city, exposing foundations of buildings to mosquitoes. Domestic, industrial as well as commercial wastes are not properly managed, giving rise to the degradation of the environment. Open spaces are abused in terms of use. They are used for defecation and indiscriminate sitting of temporary structures, especially makeshift kiosks and disposal points for refuse. Most of these makeshift structures are along the streets thereby marring the beauty of the city.

### **Conclusions**

MDGs targets on health involve the improvement of maternal mortality rates, reduction of child mortality rate as well as combating HIV/AIDS and other diseases. This is a major focus of the metropolis Medium-Term Development Plan, 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 metropolis.

Access to medical facilities are relatively high in the metropolis as about 85 percent of those who had fallen sick sought medical attention (visited either the private or public clinic/hospital, community health centre or the pharmacy shop), as reported by the household survey in 2008. The most patronized health facility in the metropolis is the public clinic or hospital, followed by visits to the private hospitals and clinics. About 11 percent of the sampled population of the metropolis in 2008 who had fallen ill within the three months prior to the survey bought drugs from the pharmacy or drug store and very few of the population sampled in 2008 in the metropolis normally seek treatment from the traditional healers (1%) with relatively more people in the rural metropolis who fell sick in the last three months prior to the survey visiting the traditional healer than the urban counterpart. The Tamale Metropolitan Mutual Health Insurance Scheme has been able to register more than half of the population in the metropolis.

The diseases that are common in the metropolis are Malaria, Upper Respiratory Tract Infections (URTI), Skin Diseases and Ulcers, Diarrhoea, Hypertension, Pregnancy, Road Complications, Anemia and Gynaecological disorders. The two most prominent sicknesses were fever/malaria and diarrhoea, with Malaria as the most reported disease. Strategies adopted to prevent malaria attacks are diverse. Most of the rural communities adopt the insecticide treated bednets for their children relative to the urban population but more of the urban population practise regular house spraying. The clearing of weeds and the use of mosquito coils are practised more by the rural dwellers than their urban counterparts. Some of the households in the urban metropolis are

ignorant of malaria prevention and so do nothing to prevent the disease.

The pattern of maternal mortality has fluctuated over the years 2003–2007. The number of supervised deliveries, however, is rising steadily with increased awareness due to a sustained public health education. In the rural areas, the number of supervised deliveries by traditional birth attendants had increased. The attendance of pregnant women at pre-natal clinics is relatively high compared with post-natal attendance. The number of children under-five mortality rate has fallen between 2006 and 2008. 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 metropolis has two main water systems, the urban water system and peri-urban and rural water systems based on the location of the facilities. During the dry season, most of the water bodies dry up while the already poor underground water level falls, making boreholes and wells to dry up. Like other parts of the country, although majority of the population in the metropolis have access to safe drinking water, a good number of them still obtain water from such unsafe sources as rivers/streams and dug-out. This is particularly pronounced in the rural part of the metropolis. 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, particularly in areas where water supply is problematic.

As one of the fastest growing cities in the country, Tamale is faced with daunting challenges in the management of both solid

and liquid wastes. The Refuse Generation Rate (RGR) is about 150 tonnes per day. However the available containers can take up to 7.5 tonnes of refuse per day, leaving a backlog of 142.5 tonnes per day. This results in rampant littering of streets and drains, posing health and other hazards such as breeding of mosquitoes amidst perennial flooding.

Water and sanitation targets of the MDGs feature prominently in the metropolis activities and plans. In order to increase access to water and sanitation facilities, the Tamale Metropolitan Assembly has outlined strategies in its 2009 action plan. Some of the strategies include the provision of water and sanitation facilities to every community, designating new refuse disposal sites, ensuring proper management of public facilities and capacity building through activities such as organizing community durbars, enacting and promulgating bye-laws on sanitation, clearing of sites and demarcation, organizing training workshops for staff of MWST. A major challenge to achieving the health, water and sanitation targets of the MDGs in the metropolis is the 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 necessary to intensify 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.



## CHAPTER 6

# Resource Endowment in the Metropolis

## Introduction

### Natural/Environmental Resources

#### Geology

The metropolis is mostly underlain by Voltaian sandstone with a coverage area of 71.78 percent; Alluvium covers 22.95 per cent while the remaining 5.27 per cent is covered by Voltaian shale. These geological endowments give Tamale an opportunity to cultivate crops like sorghum, millet and guinea corn. Besides, the shale deposits are also good sources for brick manufacturing. These distributions are shown graphically in the map in Map 6.1 and in a tabular form in Table 6.1.

**Table 6.1: Matrix of Geology Distribution in the District**

Geology Type	% Area (Hectares)
Alluvium	22.95
Voltaian Sandstone	71.78
Voltaian Shale	5.27

#### Soil

The soil types in the area include Ferric Acrisols, Dystric Planosols and Plinthic Lixisols. Acrisols are clay-rich, and are associated with humid, tropical climates.

They often support isolated forest growth. Planosols — soil 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.

Plinthic Lixisols are soils with sub-surface accumulation of low activity clays formed under intensive weathering conditions. They are not very pronounced for crop production. Serious erosions during the rainy season cause various degrees of loss of these soil types. The proportions of areas covered by each of these soil types are shown in detail in Table 6.2 with an accompanying graphical representation in Map 6.2.

**Table 6.2: Matrix of Soil Distribution in the District**

Soil Type	% Area (Hectares)
Dystric Planosols	22.95
Ferric Acrisols	71.78
Plinthic Lixisols	5.27

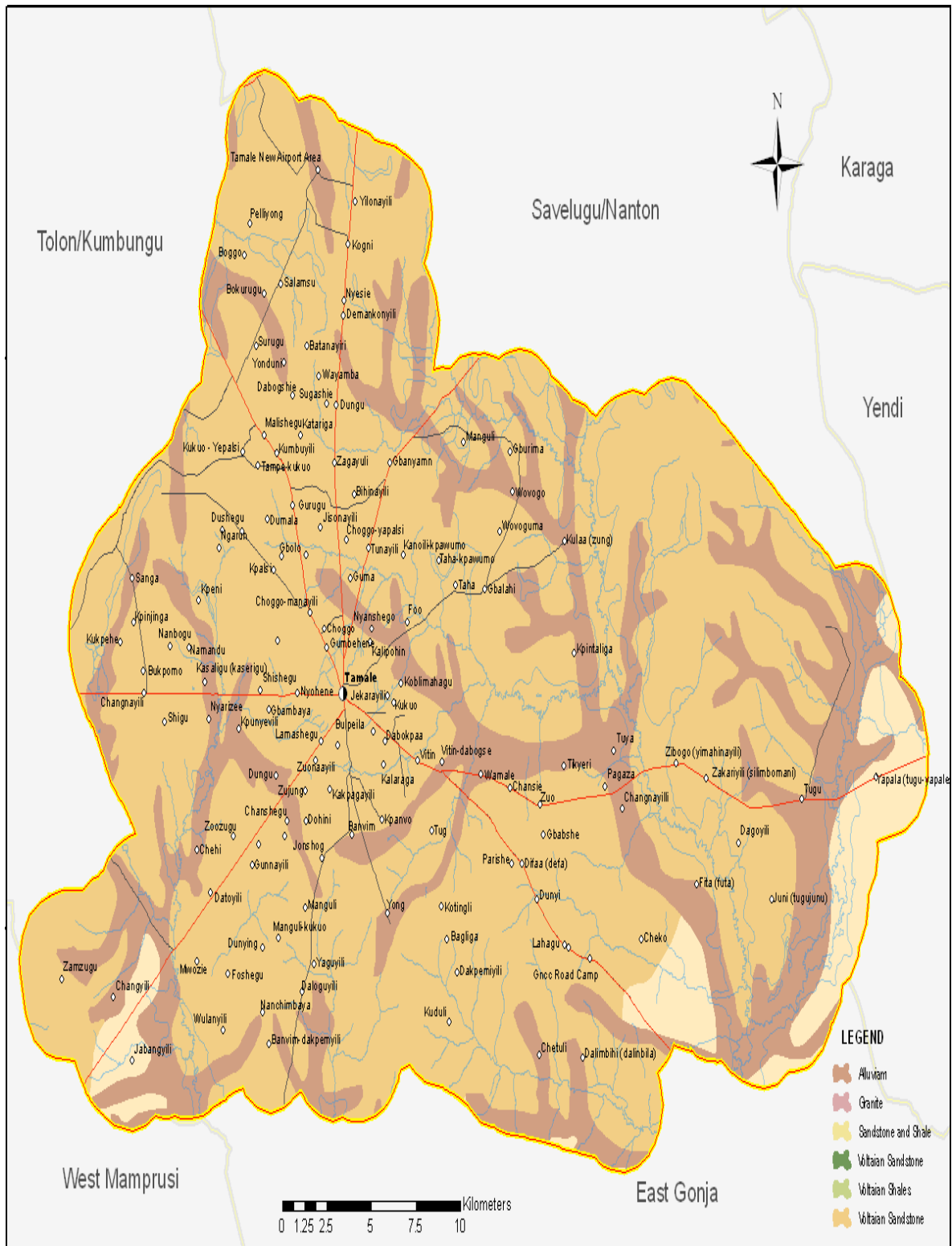
#### Land Use and Land Cover

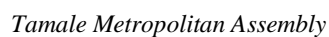
The land use/land cover types found in the Tamale Metropolitan Assembly include Cropland, Grassland, Settlement/Degraded,

Shrubland, Water Bodies (Dams) and Woodland. These land use/land cover types occur in different proportions. Map 6.3

presents the spatial distribution while, the tabular distribution is displayed in Table 6.3.

**Map 6.1: Geology Distribution in the District**









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

Land Cover/Land Use Type	% Area (Hectares)
Cropland-Cereals	12.54
Grassland	62.74
Settlement/Degraded	2.74
Shrubland	21.51
Water Bodies (Dams)	0.02
Woodland	0.44

### **Land Suitability for Selected Crops (Major Crops)**

**Land in the Tamale Municipal Area is suitable for both domestic and industrial crops. The major traditional crops cultivated in the district include maize, sorghum, millet, soya, groundnuts, cowpeas, sweet potatoes and rice. The land suitability maps depict suitability classes for crop production circumstances relevant to a set of agricultural and socio-economic conditions prevailing in the district, which were defined in terms of Land Utilization Types (LUT) based on rainfall cropping at three levels**

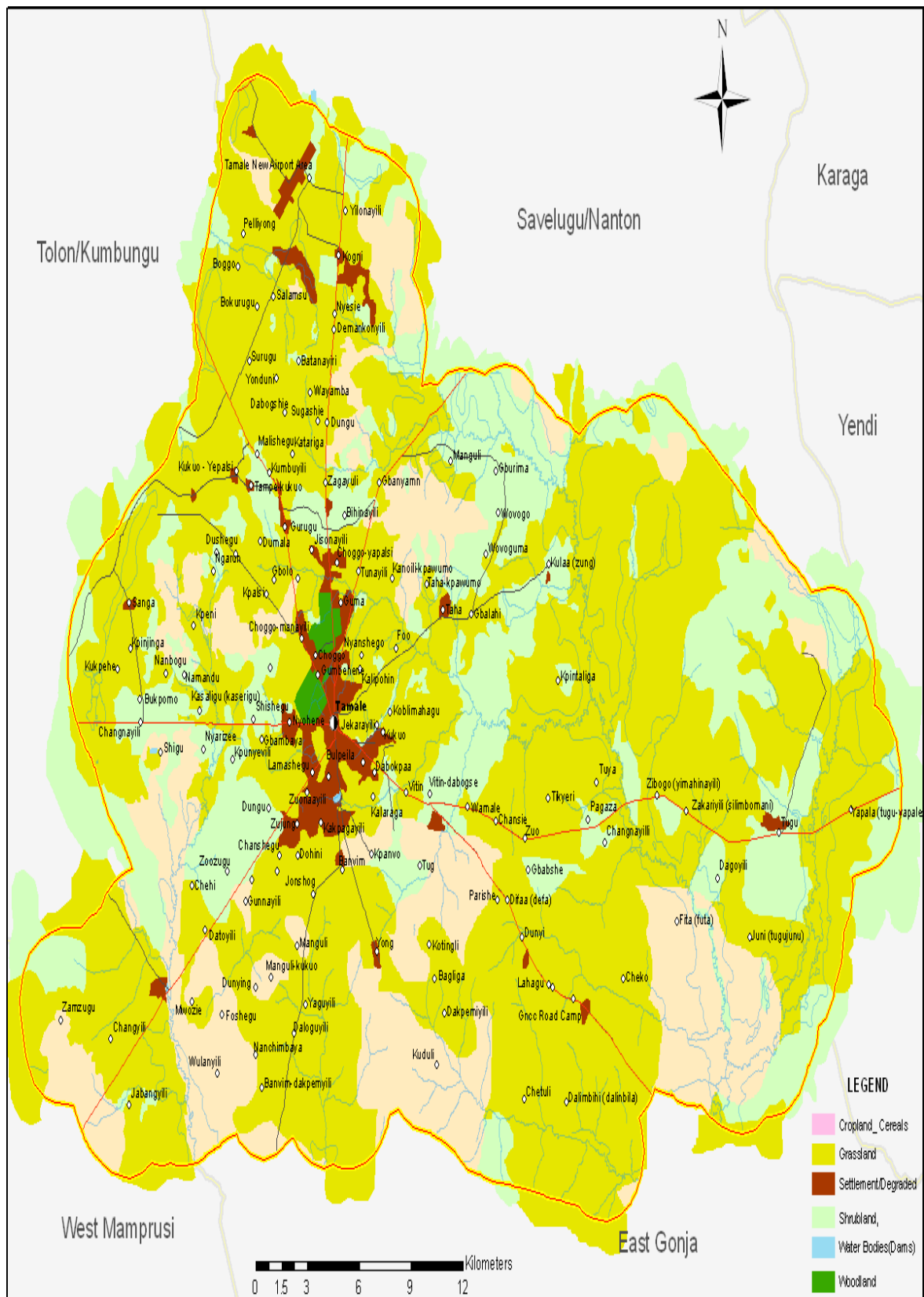
**of inputs and farm operations — low, intermediate and high. Three classes of suitability based on Land Utilization Types (LUTs) are set out in Table 6.4.**

## **Physical Resources**

### **Transportation and Communication Infrastructures**

The main roads pass through Tamale-Bolgatanga-Paga road. These are asphalt surfaced. The Tamale-Salaga, Tamale-Yendi, Tamale-Damango and Tamale-Kerjs roads are also motorable throughout the year and therefore are a major influence on the economic life of the populace (see Map 6.7). Within Tamale itself, accessibility is being improved as the road network is currently being expanded under the World Bank Urban IV projects. Tamale Metropolitan Assembly is one of the very few districts that are served by an airport, which is located 18 km north of Tamale itself. The airport handles daily flights from Accra and Kumasi by Air Link and Fan Air. It is being upgraded gradually to handle international flights in the near future.

### Map 6.3: Land Use/Land Cover Distribution in the District



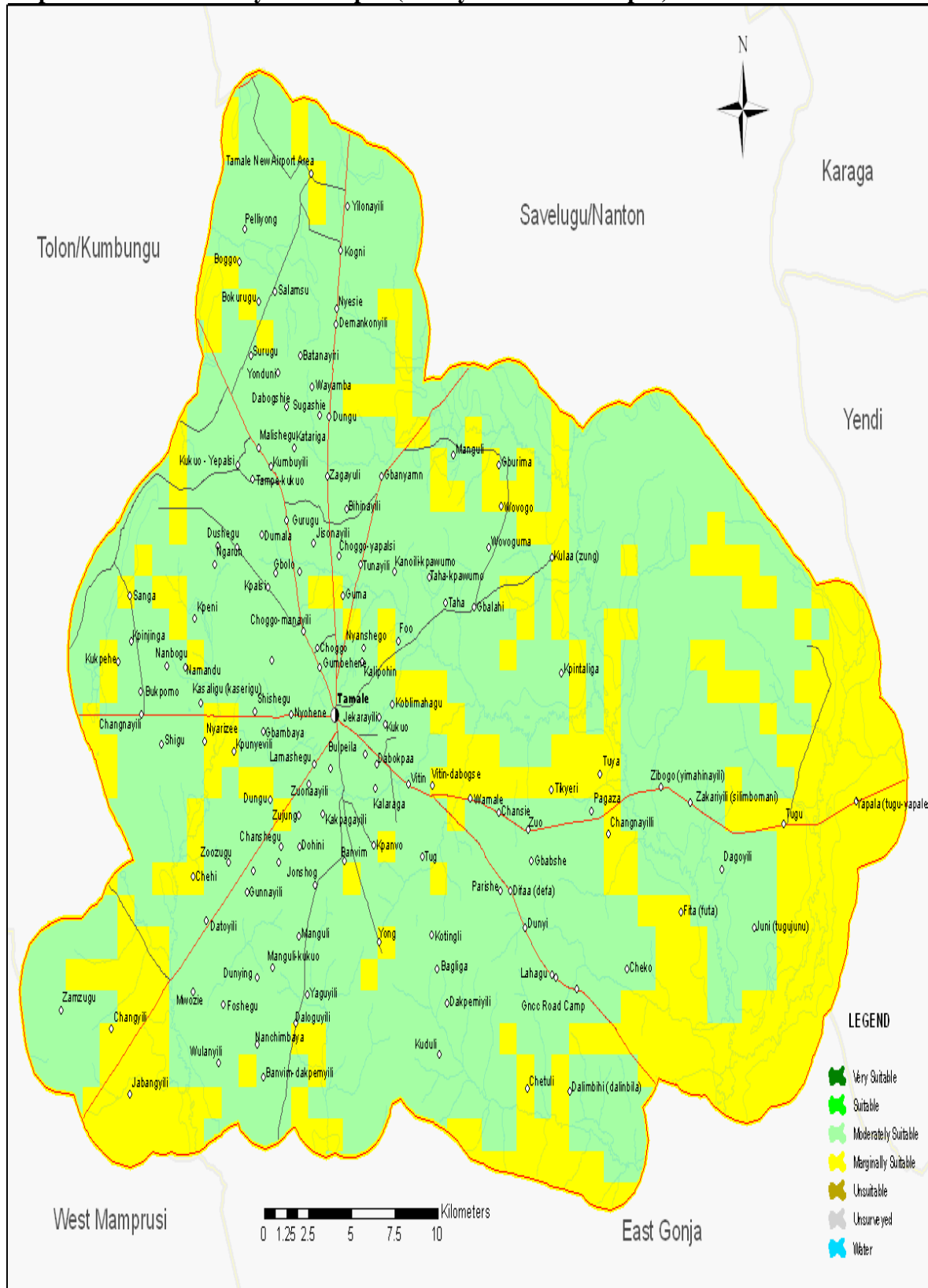
**Table 6.4: Attributes of Land Utilization Types**

Attributes	Low Inputs	Intermediate Inputs	High Inputs
Produce and production	<b>Rainfed cultivation</b> of maize, pearl millet, wetland rice, sorghum, cowpea, green gram, groundnut, phaseolus bean, pigeon pea, soybean, cassava, sweet potato, white yam, greater yam, yellow yam, cotton, tobacco, cashew, mango, shea butter, 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 cost if used
Power Source	Manual labour with hand tools	Manual labour with hand tools and/or animal traction with improved implements; some mechanization	Complete mechanization including harvesting (where applicable)
Technology	Traditional cultivars. No fertilizer or chemical pest, disease and weed control. Fallow periods. Minimum conservation measures	Improved cultivars as available; appropriate extension packages. Including some fertilizer application and some chemical pest, disease and weed control. Adequate fallow periods and some conservation measures	High yielding cultivars including hybrids. Optimum fertilizer application. Chemical pest, disease and weed control. Full conservation measures
Infrastructure	Market accessibility not necessary. Inadequate advisory services.	Some market accessibility necessary. Access to demonstration plots and advisory services.	Market accessibility essential. High level of advisory services and application of research findings
Land Holding	Small, fragmented	Small, sometimes fragmented	Large consolidated
Income Level	Low	Moderate	High

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

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

**Map 6.4: Land Suitability for Cowpea (60 days at low farm input)**

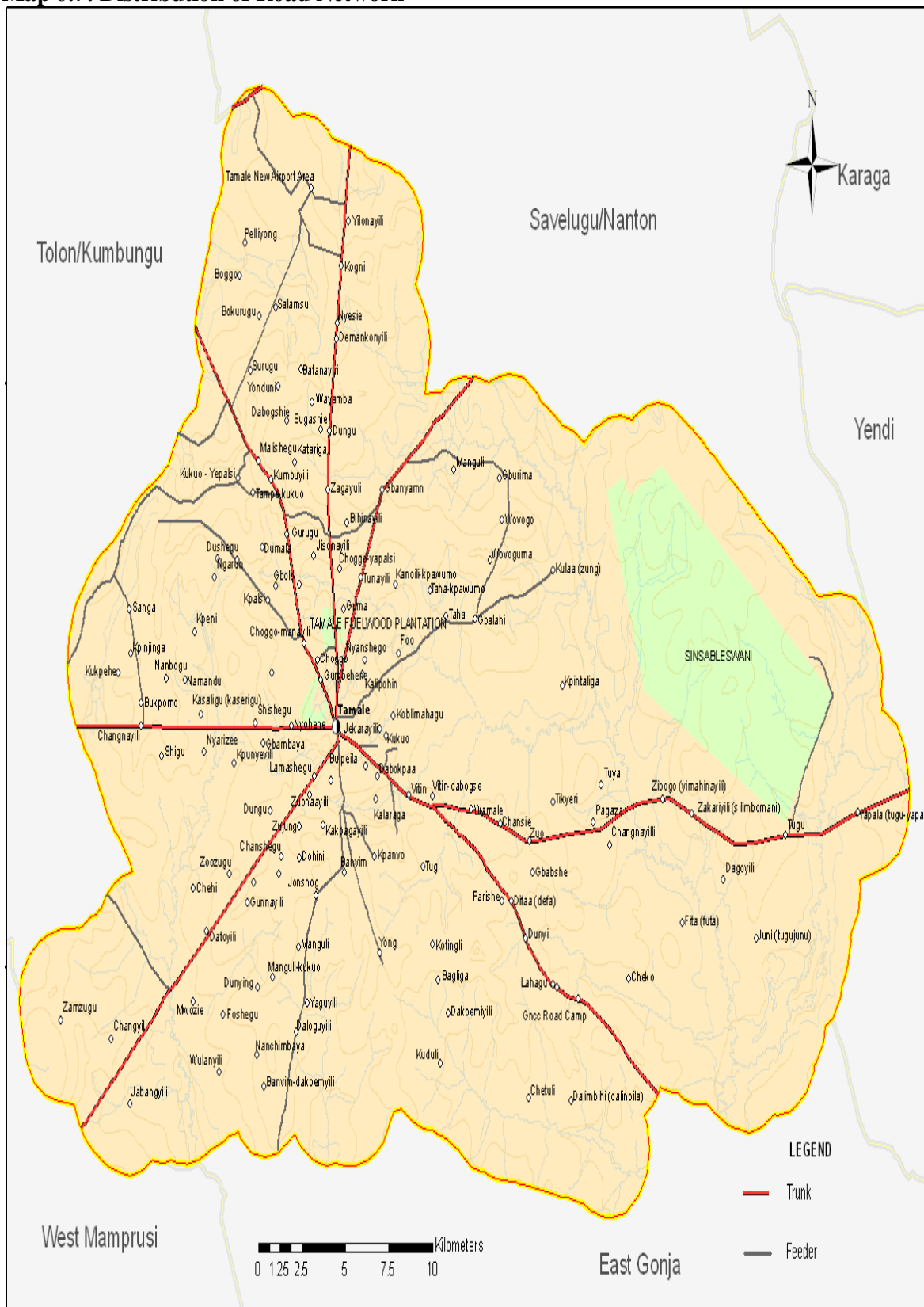








**Map 6.7: Distribution of Road Network**



## Socio-economic Resources

### Health Infrastructure

The number of health facilities within the Metropolis is quite satisfactory. However, most of these are poorly equipped. The Tamale Regional Hospital and the West End Hospitals are the only well equipped facilities. 7

Even though efforts have been made to improve access to health service delivery, patronage of these facilities has been low, particularly in the rural areas due to poverty, illiteracy and ignorance. These facilities can be found in a number of communities (as shown in Figure 6.8) including, Bulpeila, Choggo-Manayilli, Dagoyilli, Gurugu, among others.

### Educational Infrastructure

There are a number of education infrastructure resources ranging from kindergarten, primary and Junior High Schools in the Tamale Metropolitan Assembly. This includes 586 public schools and 198 private ones according to the Ministry of Education statistics of schools for 2007. Of the 586 public schools, 82 are Crèche/Nursery, 181 are Kindergartens, 235 are Primary schools and the JHS's are 88. The 198 private schools consists 79 Crèche/Nursery, 65 Kindergartens, 44 Primary schools and 10 JHSs. The total number of children enrolled in the public and

private schools is 84,635 and 10,814 respectively with a female enrolment percentage of 45.6 per cent for public schools, 51.1 per cent for private schools making a total of 46.3 per cent female enrolment in the entire Tamale Metropolitan Assembly with a Pupil/Teacher ratio of 28 to 1 for public schools and 22 to 1 for the private schools. Map 6.9 shows a spatial distribution of schools whose locations are known in the metropolis.

**Table 6.5: Matrix of Educational Facility in the Tamale Metropolis**

Type of Facility	Public Schools	Private Schools
KG/Creche/Nursery	263	144
Primary	235	44
Junior High School	88	10
<b>Total</b>	<b>586</b>	<b>198</b>

Source: MOE Statistics, 2007.

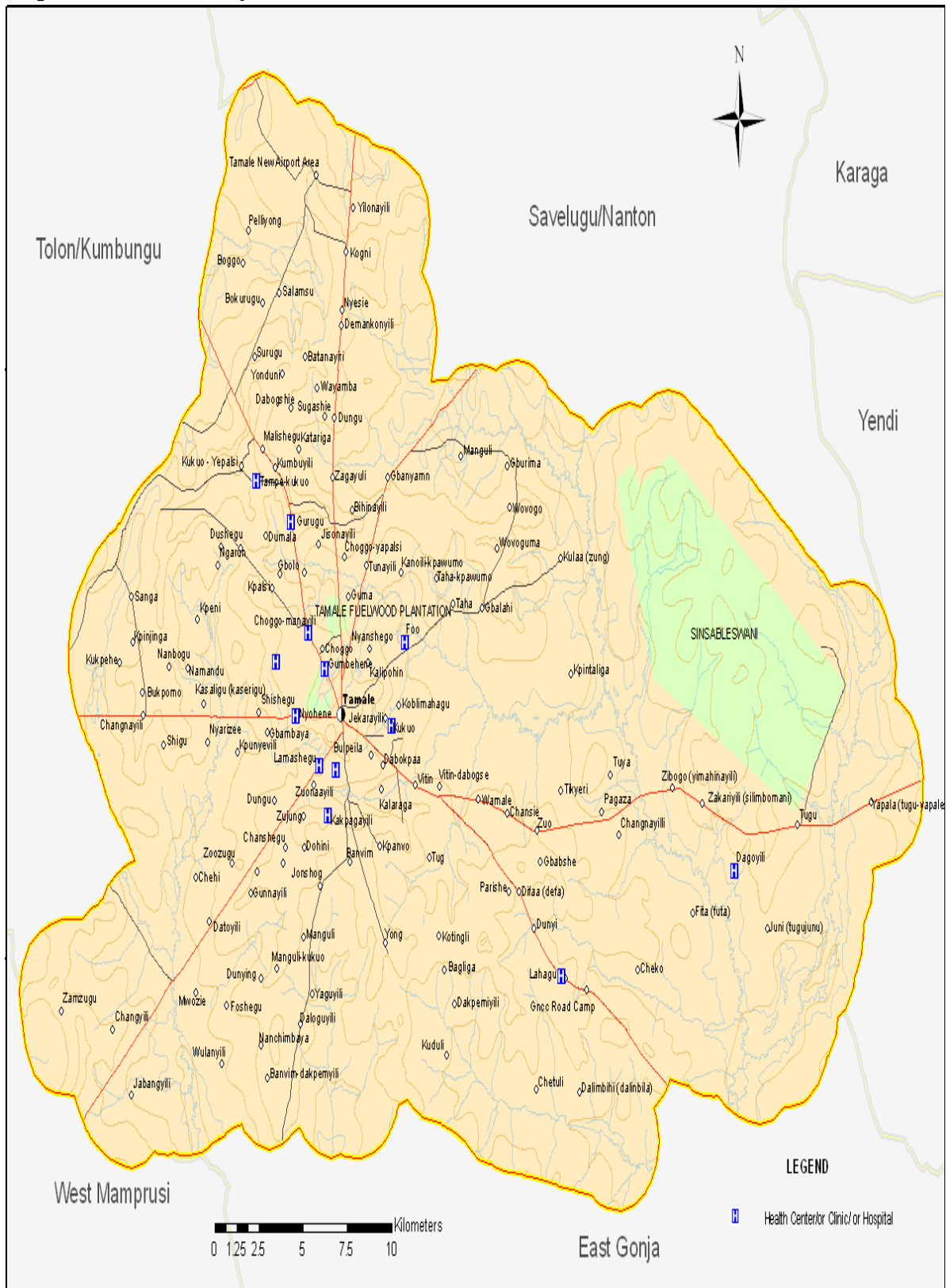
## Water and Sanitation

### Water

The Tamale Metropolis, though, an urban district, is still vulnerable in terms of adequate potable water supply. There are two main water systems in the Metropolis; they are the urban water system and peri-urban and rural water systems based on the location of the facilities. During the dry season, the adverse effect of the weather causes most of the water bodies to dry up, while the already poor underground water level falls, making boreholes and wells to dry up as well.



**Map 6.8: Health Facility Distribution in the District**







## **Sanitation**

As one of the fastest growing cities in the country Tamale is faced with daunting challenges in the management of both solid and liquid wastes. Solid waste is managed through communal container system, door-to-door collection services; street litter bins systems and evacuation of heaps. There are about 95 public toilets within the Tamale Metropolis. Open spaces are abused by being used for defecation and indiscriminate erection of temporary structures such as kiosks and disposal points for refuse.

## **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.

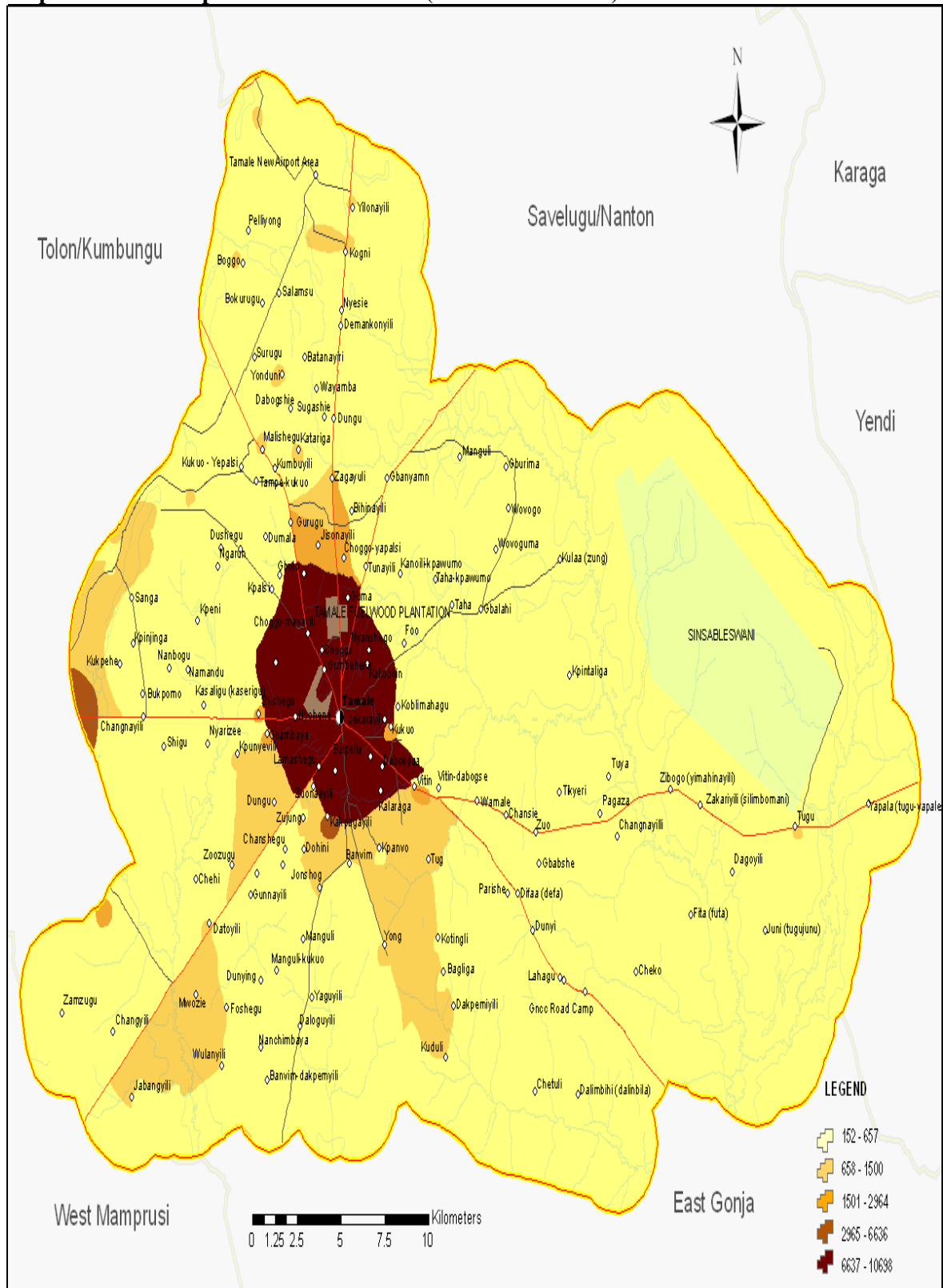
## **Human Resources**

### **Population**

The 2000 Population Census gave the population of the Tamale Metropolitan Assembly as 293,881. This is made up of 146,979 males and 146,902 females. With an urban population of 67.1 per cent, the Metropolis is the only district in the region which is predominantly urban. Map 6.11 shows in detail the distribution of the total population in all the enumeration areas in the Tamale Metropolis.



**Map 6.11: Total Population Distribution (Census 2000 data) in the District**



## Utilization of the Resource Endowment and Attainment of MDGs in the Metropolis

### Introduction

In this section, the report describes how the Metropolis has utilized the resources it is endowed with, and how the utilization has influenced the attainment of the MDGs in the Tamale Metropolis. The constraints associated with the effective utilization of these resources are also described. In addition, the report outlines the strategies adopted to solve such perennial challenges as drought, bushfires, floods, windstorms, which confront the Metropolis on regular basis.

The resource endowments utilization is key to determining the range of livelihood opportunities available to all individuals and households in the Metropolis. The larger the resource base, the less constrained the choices available, 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).<sup>5</sup>

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,

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



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 Metropolis

### *Human Resources Utilization in the Metropolis*

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

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

Main Employer	2000	2003	2008	Average
Public	12.0	16.0	20.8	16.3
Private Formal	17.3	2.6	18.6	12.8
Private Informal	68.8	80.2	58.7	69.2
Others	1.9	0.8	1.9	1.5

Source: Ghana Statistical Service, 2000 Population and Housing Census, CWIQ 2003 and 2008 Household Survey. Notes: \* Includes fishing \*\*includes students

The medium-term development plan of the Tamale metropolis 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 place emphasis, 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 metropolis 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 of 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 economically active population age 15+ in the participation of the local economy of the Metropolis. The public and the formal private sector employ about



29 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 71 per cent.

There are, however, large proportions of the economically active population 15+ that are not employed (see Chapter 3, Table 3.4), the unemployment rate (15+) increasing between 2000–2008 in the metropolis. Joblessness increases are therefore high among the rural metropolis than the urban, indicating that relatively, and more people in the rural metropolis finds it difficult to secure jobs in the metropolis.

There is also a high incidence of underemployment among the adults in the metropolis, an indication of the fact that the human resource in the metropolis is not being utilized to its maximum capacity (see Chapter 3, Table 3.5). Despite the high level of unemployment, the metropolis is making the necessary efforts to educate the active population to enhance the human resource base. The proportion of children/adults in schools for formal education and training in the metropolis, however, are comparable to national averages. In the metropolis, gross and net primary enrolment rates are higher than or similar to the national average for 2002/2003 to 2006/2007.

**Table 7.2: Per cent Adult Literacy, 2003: National vs Tamale Metropolis**

Adult Literacy	National	Tamale Metropolis
All	53.7	64.6
Male	66.2	71.7
Female	42.5	55.9

Source: 2003 CWIQ.



*Picture 7.1: One of the monthly women group meetings of the network of women organizations in Tamale. In attendance was the National Director, Department of Women, Ministry of Women and Children Affairs — Ms Francesca Pobee-Hayford.*

Gross enrolment rates at JSS level in the metropolis has remained higher than the regional and national rates over the years of 2003/2004 and 2006/2007. Similarly, the percent of adult literacy in the metropolis is comparable to the national rates (Table 7.2). The implication is that the metropolis is equipping the available human resource to be able to play its role in the local economy.

### ***The Role of Women Groups in the Metropolis***

The role of women in enhancing the utilization of resources in the metropolis are borne by the number of registered institutional, informal and community women groups with the Ministry of Women. There are about 30 institutional groups such as the Nurses Association and Police Ladies Association; 32 faith-based women groups; 23 Informal sector women groups such as the hairdressers, batic and dye; 13 local NGOs and 15 registered community women's groups. There are groups that are not registered with the NCWD but actively participate in the work of the Ministry. The NCWD, besides the various interest groups of the registered women units, seeks to enhance the participation of women in development and in the long-term work to eliminate inequality between the sexes,

thereby raising the standard of living of women and the survival, development and growth of children as well as the protection of the rights of women and children.

The amalgam of groups registered with the NCWD pursues diverse interests including self-help projects, integration of Kayayee returnees and training of single mothers. There is a network of women organizations which meet monthly to discuss issues affecting women groups. (Refer to Picture 7.1 for an example).

### ***Infrastructure Utilization in the Metropolis***

It is widely recognized that cost-effective, reliable, and affordable infrastructure services are critical for sustainable development, and are 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 main roads pass through Tamale-Bolgatanga-Paga road. These are asphalt surfaced. The Tamale-Salaga, Tamale-Yendi, Tamale-Damango and Tamale-Kerjs roads are also motorable throughout the year and therefore are a major influence on the economic life of the populace. Within Tamale itself, accessibility is being improved as the road network is currently being expanded under the World Bank Urban IV projects. Tamale Metropolitan Assembly is one of the very few districts that are served

by an airport, which is located 18 km north of Tamale itself. The airport handles daily flights from Accra and Kumasi by Air link and Fan Air. It is being upgraded gradually to handle international flights in the near future. The city authorities are also developing an Inland Transit Port to promote sub-regional trade. It is also the gateway to all the important tourism sites in Northern Ghana.

The general development of roads is concentrated within the core of the metropolis. The Department of Urban Roads indicates the metropolis has 42.9 km of asphalt surface, 313.3 km of bituminous surface dressed roads and 134.2 and 96.4 km of gravel, and earth roads, respectively. Approximately, each year about 25 per cent of the road budget is met. The Town and Country Planning Unit of the metropolis estimate a backlog of over 16 km of roads within the urban Metropolis that requires about 2 billion Ghana cedis to clear. There are also about 1000 km feeder roads that need to be improved. The fairly networked road infrastructure facilitates movements of goods and people within the Metropolis. Table 7.3 indicates that, overall, about 47 per cent of the metropolis can access public transport within 14 minutes.

**Table 7.3: Access to Public Transport in Tamale Metropolis**

Public transport	Urban	Rural	All
Less than 14 minutes	49.4	37.2	47.0
15–29 minutes	25.0	30.2	26.0
30–44 minutes	16.9	18.6	17.2
45–59 minutes	7.0	9.3	7.4
60 minutes or more	1.7	4.7	2.3

### ***Schools/Banks/Hotels***

The rate at which education provision is expanding in the metropolis is quite impressive due to the fact that the number of schools in all the levels of education has been increasing annually. For example, the number of Kindergartens in the Tamale metropolis is

indicated to have increased from 159 in 2003 to 170 in 2004 with continued increase each year up to 2008.

There has been also a tremendous increase over the past few years in the number of banks being established in the metropolis, thus improving hence access to financial institutions (Figure 7.1). Besides the Ghana Commercial Bank, Agricultural Development Bank, Standard Chartered and Barclays Banks, which had established their presence in the Metropolis, the Intercontinental Bank, UBA, Stanbic and Ecobank, among others, are strategically positioning themselves to take advantage of the increase in economic activities in the metropolis and the general economic performance which strategically could link these banks to the Sahelian region. Most of these banks are also positioning themselves to offer specialized services, tailored to the sub-sahelian region that goes beyond the Metropolis. The Metropolis is poised to serve as a gateway to the Sahel, considering its strategic position as the centre between Ghana and her neighbours such as Burkina Faso, Niger, Mali, Benin, Côte d’Ivoire and Togo.

The hospitality industry has also grown significantly with new hotels and guest houses built around the city, especially during the countdown to the African Cup of Nations Soccer Tournament of 2008.

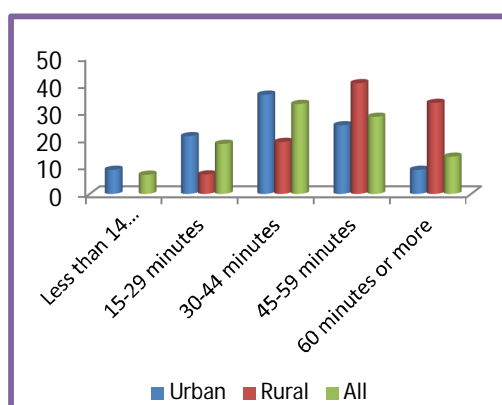


Figure. 7.1: Access to nearest financial institutions, 2008.



Picture 7.2: One of the new banks ready for business in the Metropolis.

### Information (Radio, Television, ICT)

World over, telecommunication is acknowledged to be a critical part of infrastructure. The growth and development of telecom services has a direct and significant impact on the efficiency, competitiveness and growth of the economy. Within the telecom industry, 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 Metropolis. Cellular mobile telephony has brought modern telecommunication services. 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.



Picture 7.3: One of the numerous Masts Erected.

Over the past few years, the metropolis has seen a phenomenal increase in the erection of masts for cellular mobile telephony. For instance, it is estimated that MTN has 15 masts erected, *Tigo* and *Zain* have five masts each and *One-Touch* has five masts erected. Other service providers, such as *Glo*, are feverishly installing masts in the metropolis.

The number of Internet service/cafe providers has increased in the metropolis. There are several Internet cafés, where one can use a computer with Internet access for a fee on the major roads in Tamale. The Internet cafes are connected through Africa Online, which also offers dialup service to home users.

Thus the electronic media landscape in the metropolis has been growing at a gradual but steady pace. There are four radio stations currently operating in the Tamale municipality and all of them operate on FM: Radio Savannah, Filla FM, Diamond FM and Radio Justice. In Tamale some of these radio stations pick up the newspaper review segment on the morning shows of some of the radio stations in Accra after which they discuss issues that are local in Dagbani. GTV and Metro TV reach the residents of the municipality. Fortunately TV3 and TV Africa have improved their services. Hence access to telecommunication facility has improved so much that it takes less than 14 minutes to reach a facility (Figure 7.2).



Picture 7.4: The newly built ICT centre in Tamale.

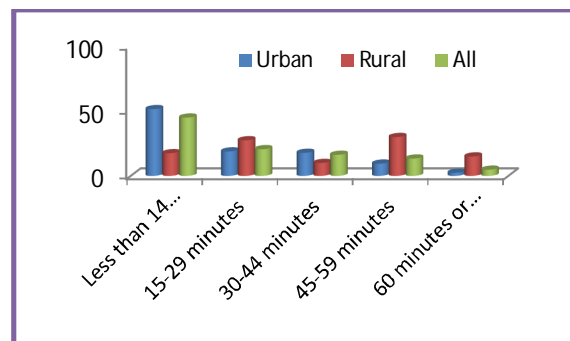


Figure 7.2: Access to nearest Telecommunication Facility, 2008.

### Housing, Water and Sanitation

Tamale metropolis is a major hub not only for the northern region but the sub-region; hence there are increases in commercial houses and businesses, among others. There has also been an increase in institutions of learning (University, Polytechnic, Training Colleges and Secondary Schools). There are also several establishments linked to agricultural production (food processing, servicing of machinery, etc.). Infrastructure has also improved considerably, enhancing employment opportunities in the metropolis and attracting people. Demand on housing, water and sanitation delivery in the metropolis has increased but the housing development has been more in the private sector. Relatively, the housing situation has improved but the quality and services are still problematic. The housing conditions in the old parts of the Metropolis are deteriorating.



Thus service distribution relatively has been bad although most of these houses are connected to the electricity. The expanding areas are more in the government/residential areas and these areas better services with better housing quality. The regularity of water supply, however, is not smooth. In 2005, the network of water services covered about 57 per cent of the entire urban area, which met only about 43 per cent of the urban population on a ration basis.

### ***Health Infrastructure: Hospitals/Clinics***

As at 2008, the metropolis had 31 health institutions made up of five public hospitals, three public health centres, seventeen clinics (six public, eight private and three mission) and six community health-planning services (CHPS). The distribution of medical staff is skewed in favour of urban Tamale. 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 normally seeks treatment from the traditional healers (1%). Relatively more people in the rural metropolis (who fell sick in the last three months prior to the survey) visited the traditional healer than the urban counterpart. A higher proportion of people in the rural areas of the metropolis 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, with an increasing trend in the outpatient attendance at health facilities in the metropolis. The proportion of children immunized against diseases rose continuously from 2003 to 2005. This rose further in 2006 before falling in 2007 and 2008. The proportion of children immunized against all the five listed childhood killer diseases improved over the 2006–2008 period. However, the two most prominent

sicknesses are fever/malaria and diarrhoea, with malaria as the most reported disease in the metropolis.

### ***Electricity/Energy***

The electricity network covers 60 per cent of the population in the metropolis, particularly those in the dense core. The Metropolitan Town and Planning Department indicates that the metropolis can be divided into three: the dense core, the dispersed middle belt and the outline peri-urban communities. Since electricity is expensive to transmit to all these areas, most focus has been on the dense core.

Alternative energy sources are being championed by NGOs in the metropolis. Solar systems have been installed in several homes. Solar lamps (for areas not on the VRA) have been provided by New Energy in collaboration with UNDP. In all, there has been the promotion of PV Solar Lighting in the three (3) Northern Regions including the Tamale metropolis; promotion to convert to LPG use of large kitchens (in schools), the establishment of woodlot in schools and communities and the establishment of partnerships between the metropolis and local gas distributors to sustain supply of gas.

## **Natural Resource Utilization in the Metropolis**

### **Water/Rivers Bodies**

The metropolis is poorly endowed with water bodies. The only natural water systems, however, are a few seasonal streams, which have water during the rainy season and dry up in the dry season. Water use in the metropolis therefore depends largely on rainfall, dug-outs and treated water. Besides drinking water (treated water, water harvesting from rainfall and from dug-outs), rainfed agriculture is predominant. Table 7.4

summarizes the available water systems in use in the metropolis.

**Table 7.4: Summary of Water Use in the Metropolis**

Water System	Numbers
Number of Wells	21
Number of Boreholes	8
Number of Ponds/Dug-outs	72
Number of Inhabitants with Pipe-borne water per total population, 2003–2008	296,000 (53%)

Source: Metro Water and Sanitation Office, TaMA.

From Table 7.4, there are 21 wells in the metropolis, 8 of which have been mechanized to small town water systems. Two springs have also been mechanized to small town water systems.

The Metropolis experiences one rainy season, starting from April/May to September/October with a peak season in July/August and a mean annual rainfall of 1100 mm within 95 days of intense rainfall. There are about 7–8 dry months when farmers have to resort to waste water for vegetable irrigation as there is no perennial stream passing through Tamale and the groundwater table is low. Most vegetable farmers therefore depend on polluted water sources. Thus the metropolis faces limited water resources and the water quality of most water bodies is poor. The dug-outs also become the source of drinking water for the livestock in the dry season. The dug-outs and streams utilization in both aquaculture and fishing in the metropolis are limited.

The use of irrigation technology is not widespread but considered of great importance in view of the seasonal and incidental occurrence of drought. The metropolis has the potential for an irrigation scheme. The Pagazaa stream, which collects all the waters of the rivers, has the potentials to be dammed for irrigation purposes.

## Forest/Biodiversity

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

The economic value of the 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 is the supply of firewood, grazing and non-wood products such as thatch and fruits. People in the rural areas also have access to the shea tree; therefore they usually have the right to fruits which is a cash source. Women exclusively process the fruits.

## Land Utilization

Land use in the Tamale Metropolis has been changing from a predominantly agricultural (for cropping and animal husbandry) use to a non-agricultural such as the provision of residential and recreational space, educational facilities expansion, transportation, waste disposal and industrial production (as a result of expanded economic opportunities/activities and urbanization). The value of land in the Metropolis has therefore shifted from a consideration of its fertility and other favourable biophysical characteristics to that of its function.<sup>6</sup> The

<sup>6</sup> Amarchey, C. A (2005).

land resources in the agricultural areas of the Metropolis are under threat of degradation due to increased demand for agricultural 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.

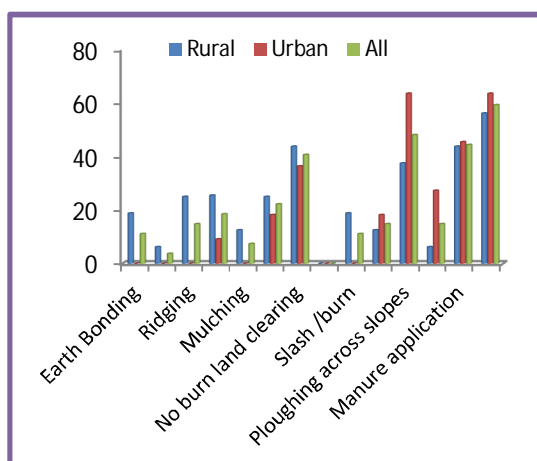


Figure 7.3: Land and Water Management Practices in the Metropolis (%).

Source: 2008 DAEA Household Survey.

Figure 7.3 shows the proportion of farm households who undertake land management practices in their farms. Most households in the metropolis use chemical fertilizers to maintain land fertility. Manure application is also prominent, as organic vegetable production has increased in response to the changing lifestyles of the urban metropolis dwellers and the growing market for more exotic vegetables.

### Institutions and Governance Utilization in the Metropolis

The changing access to 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, but the contrary is also true: access to resources affects participation in institutions. The institutions in the governance structure in the metropolis consist of the traditional leadership system and the central government structures, including the metropolitan assembly and services provided, the security and judicial systems and the role played by the various NGOs in resource access and mobilization.

At the national level, the participation of adults in the metropolis in exercising their franchise in national elections has been relatively high (Table 7.5). Participation in the 2004 national elections saw a participation of about 87 per cent. This proportion, however, declined two years later during the district level elections to about 66 per cent. The proportion of people consulted on projects initiated in their communities is, however, low (about 20%).

**Table 7.5: Participation in Political Events in the Metropolis**

Political Event	All	Location	
		Rural	Urban
2006 District Elections	66.4	72.6	64.6
2004 National Elections	87.4	88.7	87.1
Consulted on projects	19.5	29.5	16.5
Member of Unit Committee	9.3	9.7	9.2

### 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 50%) know the MCE and the MP of their locality

(Figure 7.4), the interaction of the communities with their MCE and the Member of Parliament was difficult (Figure 7.5).

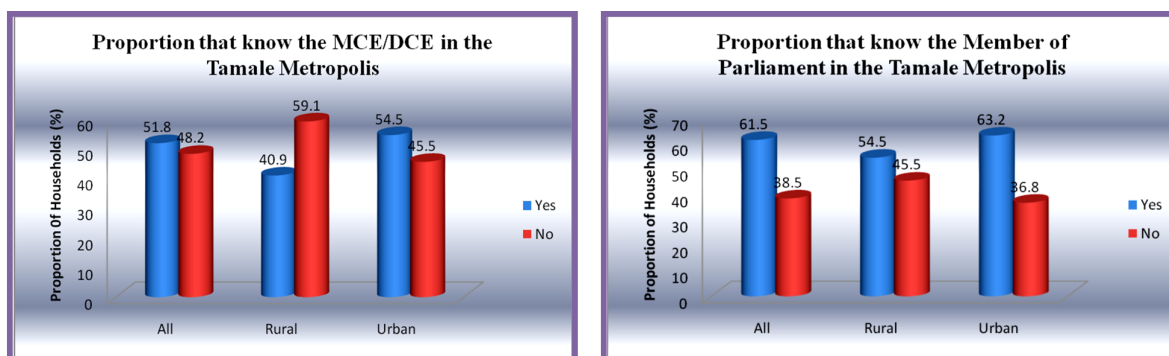


Figure 7.4: Proportion of Respondents that Know the MCE and MP (%).

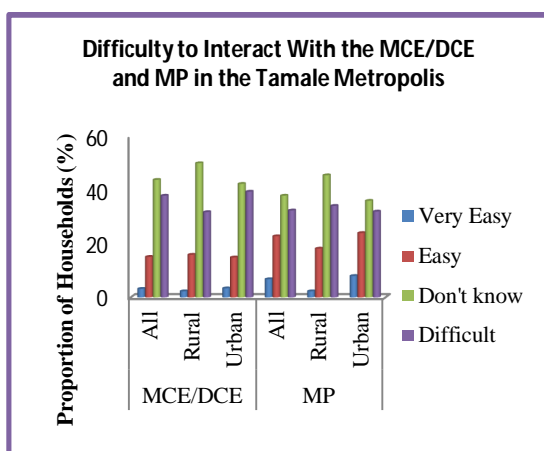


Figure 7.5: Proportion of Households Indicating Difficulty in Interaction (%).

Most communities indicated that they interact more with their local assemblyman than with the MP or MCE. Communities therefore relay their problems and grievances through their assemblymen to the Metropolitan Assembly. Their participation in community development programmes is therefore through their assemblymen. Given that communities are not consulted on projects in their communities, the participation

in community development meetings in the metropolis is low (Figure 7.6).

At the community level, several groupings/associations including CBO, FBO and other organizations have been formed with the assistance of NGOs and the metropolitan assembly in the pursuit of more economic interests like securing credit and market access. However, participation in most of these associations is low (see Figure 7.7). In Figure 7.7, only 24 per cent of households in the 2008 Household survey indicated they belong to any grouping or association. The proportion of households in the urban metropolis who belong to any association (25%) is larger than those in the rural metropolis (18%).

Figure 7.8 presents the type of associations households belong to in the metropolis. The metropolis being a predominantly agricultural area, most of the households surveyed belong to a farmer-based organization. Over all, 57 per cent of the surveyed household belong to a farmer-based organization. The proportion is relatively larger in the urban metropolis (57%) than the rural (50%). In the rural



metropolis, community based organizations are very prominent relative to the urban.

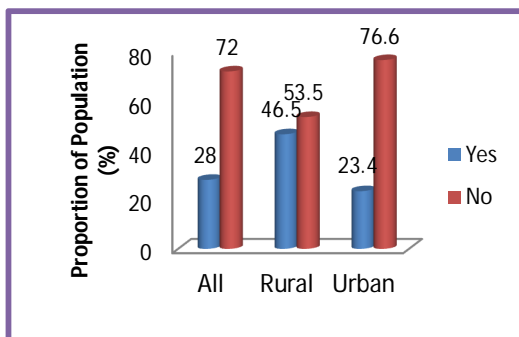


Figure 7.6: Participation in Community Development Meetings in the Metropolis.

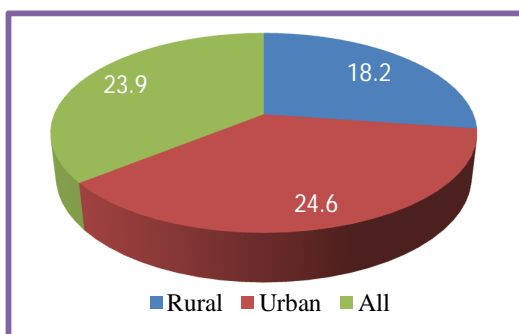


Figure 7.7: Proportion of Households that belong to Associations (%).

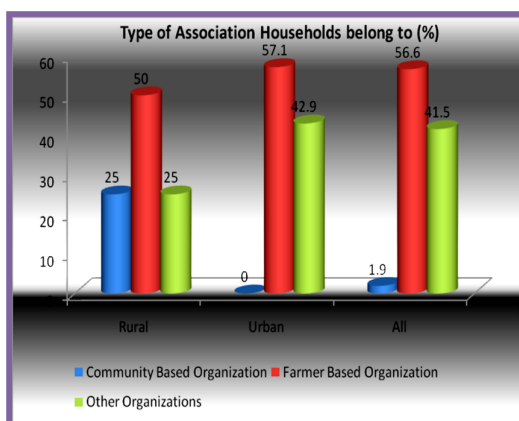


Figure 7.8: Type of Association Households

belong (%).

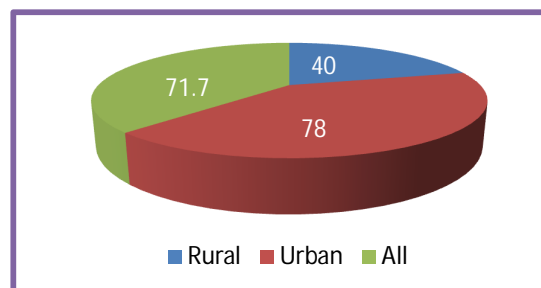


Figure 7.9: Proportion of Households that Make Contributions to their Associations.

Figures 7.9 and 7.10 presents the proportion of households who belong to associations who make regular contributions to their associations and the type of contributions made, respectively. In Figure 7.9, 78 per cent of the urban metropolis households who belong to associations make regular contributions. This contrasts with 40 per cent of the rural metropolis. In Figure 7.10, contributions made are usually in the form of cash, with an overall 91 per cent of households who belong to associations and making regular contributions, for example cash.

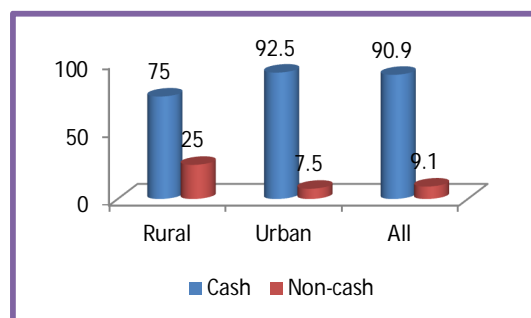


Figure 7.10: Type of Contribution Made to their Associations (%).

### Satisfaction with Quality of Service Provision in the Metropolis

Access to public services in the metropolis includes the food market, post office, the police station and legal services. In Table 7.6, it takes (on the average) 30 to 45 minutes to access public services in the metropolis by

about 50 per cent of respondents in the 2008 Household Survey. Food markets are accessed in less than 14 minutes by about 32 per cent of households, compared to 6 per cent of households to post office access and 9 per cent of police station access within the same period of less than 14 minutes.

**Table 7.6: Access to Public Services in Tamale Metropolis**

Service Access Time	Urban	Rural	All
<i>Food Market</i>			
Less than 14 minutes	31.0	33.3	31.5
15–29 minutes	32.8	11.9	28.7
30–44 minutes	24.1	28.6	25.0
45–59 minutes	7.5	9.5	7.9
60 minutes or more	4.6	16.7	6.9
<i>Post Office</i>			
Less than 14 minutes	7.0	–	5.6
15–29 minutes	20.9	14.6	19.7
30–4 minutes	37.8	12.2	32.9
45–59 minutes	24.4	41.5	27.7
60 minutes or more	9.9	31.7	14.1
<i>Police Station</i>			
Less than 14 minutes	11.7	–	9.4
15–29 minutes	19.9	11.9	18.3
30–44 minutes	33.3	19.0	30.5
45–59 minutes	25.1	38.1	27.7
60 minutes or more	9.9	31.0	14.1

Source: 2008 DAEA Household Survey.

In the area of legal services, the proportion of households that have used legal services of the metropolitan assembly in the last 12 months, according to the 2008 DAEA Household Survey, has been low at 6 per cent (see Figures 7.11 and 7.12). The perception on satisfaction of legal service provision in the communities and by the metropolitan assembly among the households is more of dissatisfaction and indifference (Figure 7.13).

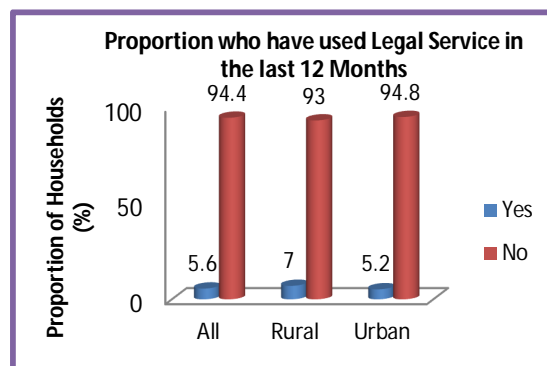


Figure 7.11: Legal Service Use, in Last 12 Months.

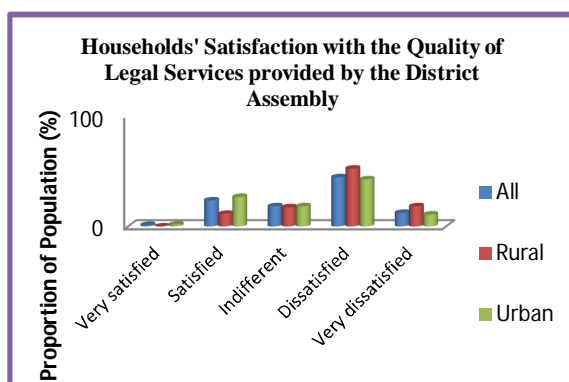


Figure 7.13: Satisfaction with Quality of Metro Legal Services.

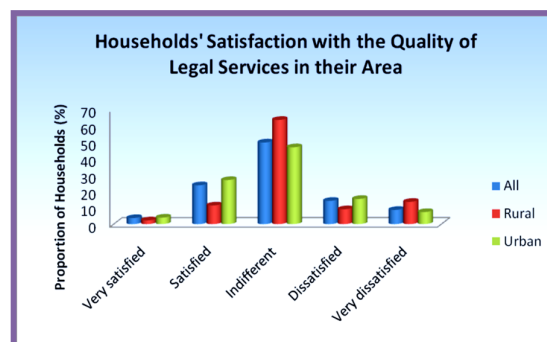


Figure 7.12: Satisfaction with Quality of Legal Service.

### **Assessment of Governance in the Metropolis over the Past 12 Months**

The UNESCAP (2009) 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 and the military, among others.

Good governance is said to have eight major characteristics. It is participatory, consensus-oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law. It assures that corruption is minimized, the views of minorities are taken into account and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society.

In Ghana's MTDPs, some pillars in the protection of rights under the rule of law and the public safety and security is the increase

in the capacity of the legal sector to enhance speedy and affordable access to justice, promoting the provision of legal aid to the poor and improving internal security, among others. 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. 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.

The other sections of Figure 7.14 presents the self-assessment of households in the Metropolis, according to the 2008 DAEA Household Survey, on Governance in terms of access to Security, Legal Services and access to the Metropolitan Assembly in the past 12 months. The proportion of households in the metropolis who have seen improvement in governance in terms of access to security services, legal services and in the change in the performance of metropolitan assembly in terms of development in their communities in the last 12 months, are 48 per cent, 43 per cent and 40 per cent respectively. Those who have seen no change or observed deterioration in the governance in terms of the delivery of these services are 52 per cent, 57 per cent and 60 per cent. Thus majority of the population in the metropolis have seen no change and/or seen deterioration in governance in accessing these services.

## *Utilization of the Resource Endowment and Attainment of MDGs in the Metropolis*

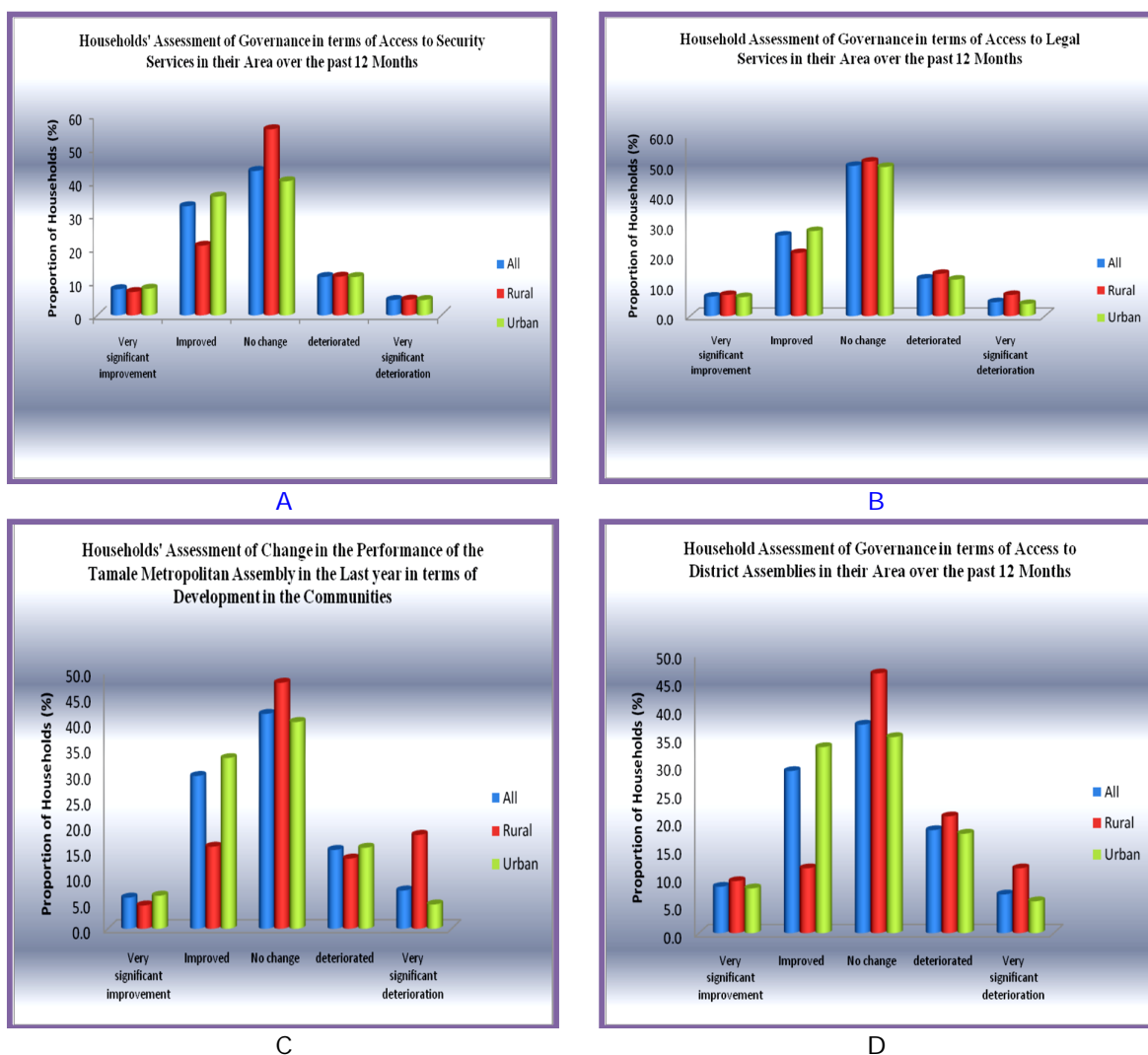


Figure. 7.14: Households' Assessment of Governance in terms of Access to Security, Legal Services and Access to the Metropolitan Assembly in the past 12 Months.

### **Constraints in Resource Endowment Utilization**

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

illiteracy rates and the under-developed rural infrastructure.

### **Constraints in Human Resources Utilization**

One key constraint in having a large proportion of the human resource in the metropolis 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 half 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.

### **Constraints in Natural Resources Utilization**

In the natural resource 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 metropolis, it is acknowledged that several hundreds of hectares of land per annum are made unproductive through bushfires and other human activities.

### **Agriculture Impact on Lands and Soil**

The farming systems in the metropolis (compound farms and bush farms) have adjusted to external factors and exhibit 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 metropolis are under threat of degradation due to increased demand for agricultural products from the rapid human population growth and lack of appropriate farm technologies. This has caused the land fallow period to be reduced with attendant declines in soil fertility. Farmers within the urban

metropolis complain of land scarcity, hence have to travel long distances outside the metropolis in search of land to farm. Those farmlands that are within the urban metropolis are intensively farmed.

### **Forest Product Exploitation**

Charcoal and firewood are major income earners for members of communities in the metropolis. These products have become significantly commercialized in the Metropolis since 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 metropolis 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**

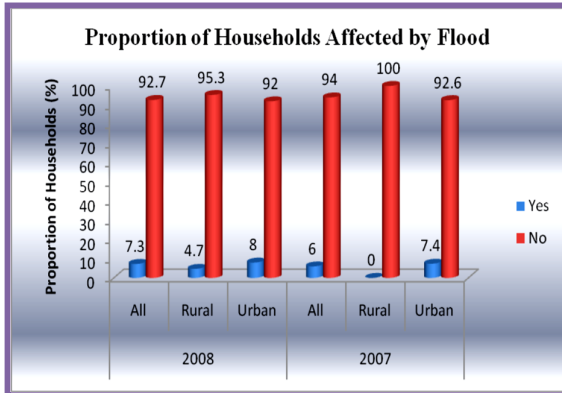
Figure 7.15 show the proportion of households in the metropolis that has been affected by hazards and environmental effects of flood, windstorm, drought and bush fires and the strategies adopted to cope with these calamities.

The proportion of all households in the metropolis who have been affected by floods 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 clearing of the drainage. Moving away from flood-prone

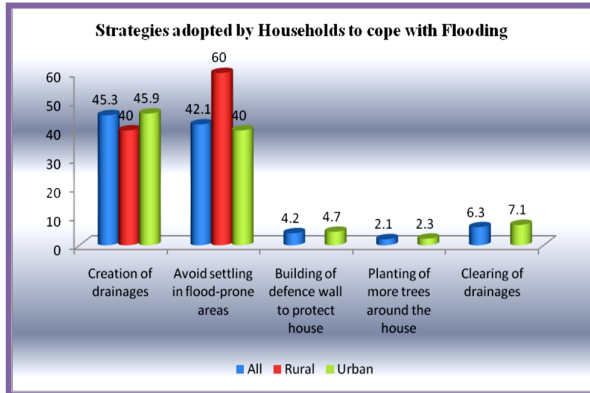
# Utilization of the Resource Endowment and Attainment of MDGs in the Metropolis

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

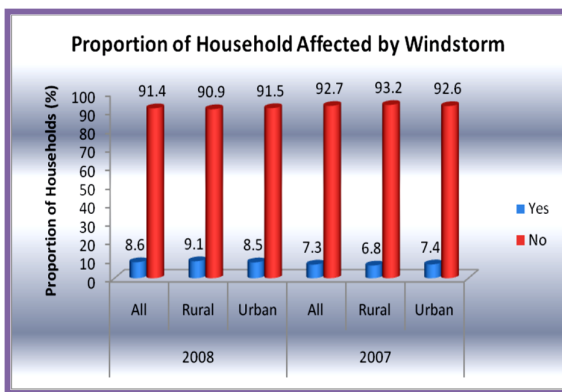
areas of the metropolis and 40 per cent of urban metropolis dwellers.



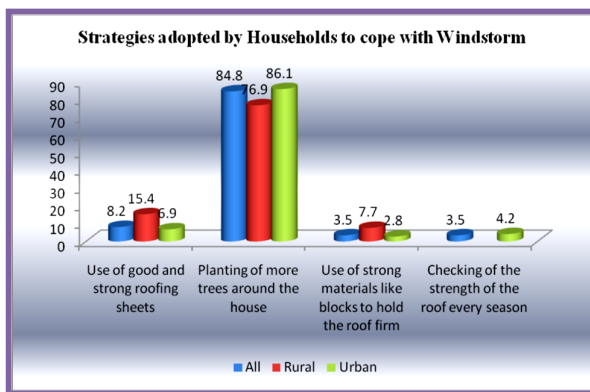
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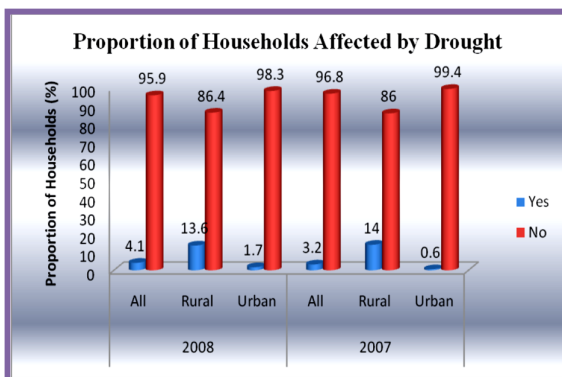
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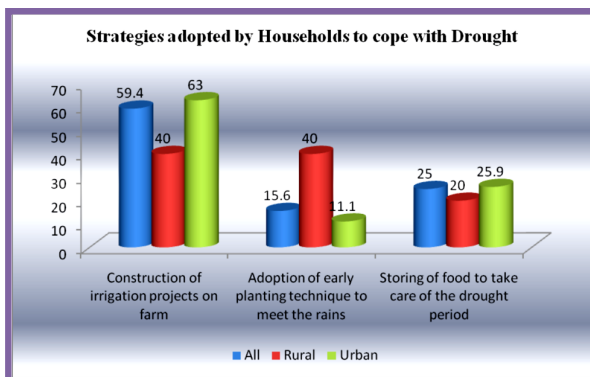
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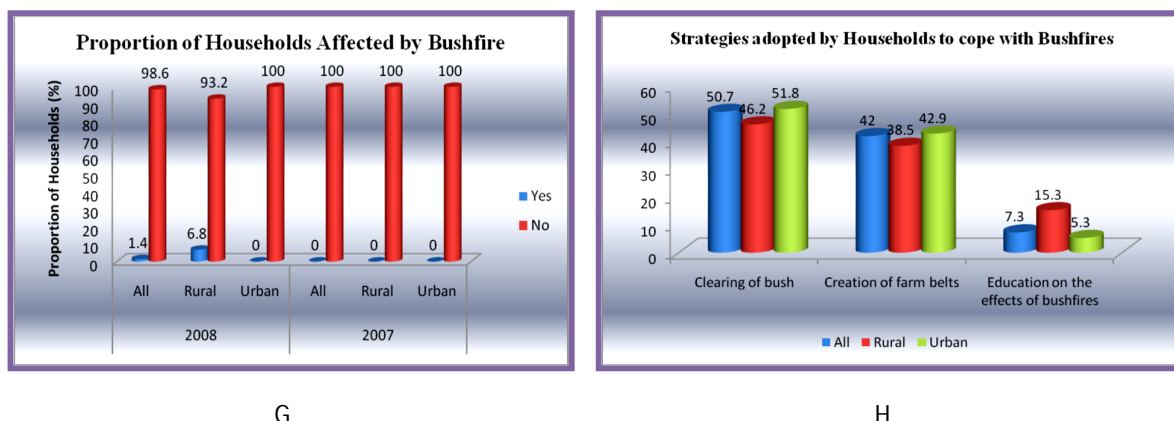


Figure 7.15: The Proportion of Households Affected by Disasters in the Metropolis and Strategies Adopted to Cope with Such Disasters. Source: 2008 Household Survey.

The next most cited strategy for coping with flooding is the creation of drainages, cited by 45 per cent of all households in the metropolis but 46 per cent in the urban and 40 per cent in the rural metropolis.

With windstorm, the proportion of all households in the metropolis 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 were cited by 77 per cent of households in the rural areas of the metropolis and 86 per cent of urban metropolis dwellers. The next most cited strategy for windstorm is the use of good and strong roofing sheets, cited by 8 per cent of all households in the metropolis but 7 per cent in the urban and 15 per cent in the rural metropolis.

With drought, the proportion of all households in the metropolis who have been affected increased from 3 per cent in 2007 to 4 per cent in 2008. Adopted strategies by households to cope with drought include soil and water management techniques on farms, adoption of early planting techniques to meet

the rains and storing of food to take care of the drought period. Adopting soil and water management techniques on farms were cited by 59 per cent of all households in the 2008 survey, but are cited by 40 per cent of households in the rural areas of the Metropolis and 63 per cent of urban metropolis dwellers. The next most cited coping strategy for drought is the adoption of early planting techniques to meet the rains and were cited by 16 per cent of all households in the Metropolis but 11 per cent in the urban and 40 per cent in the rural Metropolis. Storing food to take care of drought is a strategy that is adopted by 25 per cent of all households in the Metropolis, with 26 per cent of urban dwellers citing the use of the strategy.

### ***Enhancing Utilization of Resource Endowments in the Metropolis***

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

efficiently because failing to do so results in a personal loss. For scarce natural resources, the owners derive a scarcity rent. In properly specified property right systems, this rent is not dissipated by competition. It serves the social purpose of allowing owners to efficiently balance their extraction and conservation decisions.

The 2008 DAEA Household survey asked households the relevance of resources available to them, the payments for and the willingness to pay for these resource uses. These are presented in figures 7.15, 7.16 and 7.17 respectively.

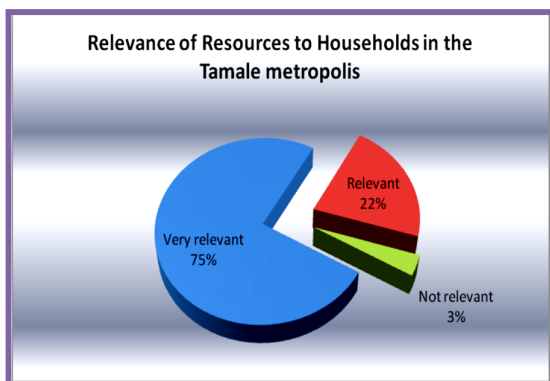


Figure 7.16: Relevance of Resources to Households in the Tamale Metropolis (%).

In Figure 7.16, about 97 per cent of households see the resource endowments as relevant to the socio-economic development of their communities. However, Figure 7.17 indicates that while 29 per cent of households indicate that nobody pays for the use of these resource endowments, 57 per cent indicates that payments for the use of the resources are borne by the government. Individuals and other entities' (traders) payment for the use of the resources is indicated by 14 per cent of the household respondents.

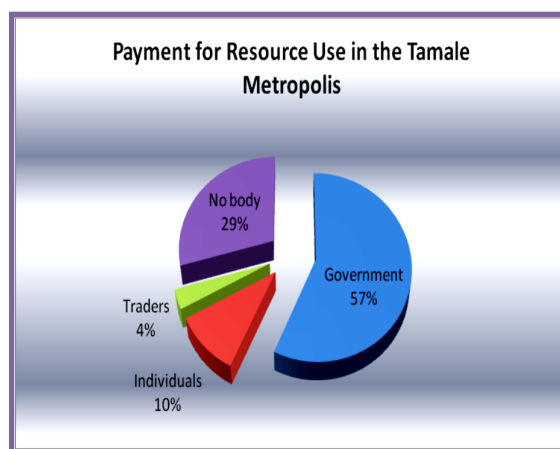


Figure 7.17: Payment for Resource Use by Households in the Metropolis (%).

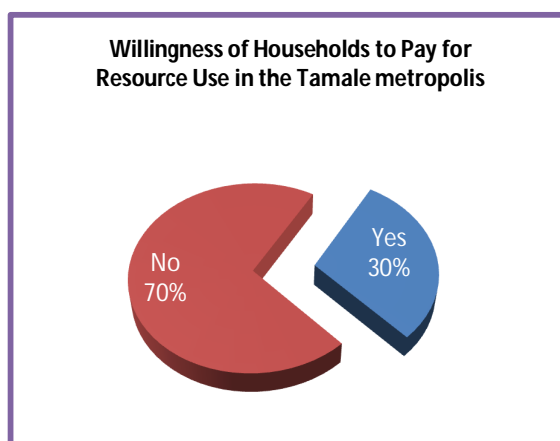


Figure 7.18: Willingness to Pay for Resource Use by Households in the Tamale Metropolis (%).

In Figure 7.18, only 30 per cent of households interviewed say they are willing to pay for resource use in the Metropolis. That is, a larger proportion of households would like to see somebody else pay for the use of resource endowments in the Metropolis.

### **Utilization of Resource Endowments and Links to MDGs in the Metropolis**

The utilization of the resource endowments in the metropolis impacts on the living conditions of the households and the poverty



outcomes of the citizenry. These are conditioned by the institutional-resource access relationships.

### Resource Endowments and Household Service Provision

MDG 7 is to ensure environmental 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 institutional-resource access relationship must deliver safe drinking water, basic sanitation and decent housing for the citizenry.

Table 7.7 summarizes the outcomes of service provision to households in the metropolis conditioned, among others, on the interaction between the institutions, communities and the utilization of the

resources available. Housing conditions, sanitation and water are key indicators in the assessment of MDGs. In Table 7.7, a summary is given of lighting (electricity), source of drinking water, toilet facility and waste (solid and liquid) disposal in the metropolis. Electricity has shown a consistent trend increase in the metropolis. In 2000, 59 per cent of households used electricity. This increased to 62 per cent in 2003. In the 2008 DAEA Household Survey, the proportion of households using electricity increased to 79 per cent. There are disparities in the proportions between the rural and urban metropolis. There is a larger concentration of use of electricity in the urban metropolis (92%) than the rural (27%). The proportion of the metropolis accessing pipe-borne water declined between 2000 and 2008. In 2000, 79 per cent of the households could source pipe-borne water. This reduced to 77 per cent in 2003. In 2008, the proportion was 62 per cent. The purchase of water from vendors seems to be increasing, as a consequence. Toilet facilities, particularly KVIP has seen increases in the metropolis.

**Table 7.7: Summary Outcomes of Household Characteristics in the Metropolis (%)**

Household Characteristics	2000 Census	2003 CWIQ	DAEA Household Survey		
	Total	Total	Rural	Urban	Total
Source of Lighting					
Electricity	58.5	61.9	26.5	92.0	79.4
Kerosene Lamp	40.2	38.1	53.1	4.6	15.5
Gas Lamp	—	—	—	0.6	0.5
Solar Energy	—	—	—	—	—
Other	1.3	—	10.2	2.8	4.6
Source of Drinking Water					
Pipe-borne water (inside)	78.9	37.4	—	44.0	35.0
Pipe-borne water (outside)	—	41	6.2	32.6	27.3
Purchase from vendor, etc.	—	2	12.5	21.1	19.5
Wells	1.7	1.6	12.7	—	3.2
Boreholes	0.6	0.7	16.7	1.7	5.0
River/Lake/Pond/Dam	—	17.3	41.7	0.6	9.5
Spring/Rain water	2.8	—	—	—	—
Other	4.5	—	—	—	0.5
Fuel for Cooking					
Firewood	45.1	45	72.7	15.6	27.2
Coconut husk	—	—	—	—	—
Charcoal	42.2	50.1	22.7	69.4	59.9

Kerosene	1.3	0.5	–	–	–
Gas	–	4	4.5	8.7	7.8
Electricity	2.7	0.2	–	5.2	4.1
Other		0.3	–	1.2	0.9
Toilet Facility					
None/beach/bush	35.6	30.7	84.4	16.7	24.5
Flush toilet	8.3	6.1	2.8	0.5	5.5
Pan/Bucket	6.2	9.4	–	1.0	0.9
KVIP	5.3	51.1	9.1	71.7	64.8
Pit Latrine	1.4	2.2	4.5	4.0	3.7
Public Toilet	41.6		–	–	–
Other	0.2	0.5	–	–	–
Solid Waste					
Collected		6.2	–	6.3	5.0
Burned by Household		38.9	45.5	10.9	17.8
Public Dump		34.8	–	45.1	36.1
Dumped elsewhere		14.9	50.0	37.7	40.2
Buried by Household		5.3	4.5	–	0.9
Other			–	–	–
Liquid waste disposal					
Through sewage system			26.5	13.3	16.2
Thrown onto street/outside			38.8	34.7	35.6
Thrown into gutter			–	39.3	30.6
Thrown onto compound			16.6	11.0	12.2
Other			12.2	1.7	5.4

Source: 2000 Population and Housing Census & 2003 CWIQ (GSS) and 2008 Household Survey.

In 2000, 5 per cent of households could access this facility. In 2003, the proportion increased to 51 per cent and to 65 per cent in 2008. Households without toilet facilities declined between 2000 and 2008. Waste disposal in the metropolis, on the contrary, seems problematic. Households dumping solid waste elsewhere, other than at a public dump, 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 metropolis among the surveyed households is usually onto the street or outside (36%) or thrown into the gutter (31%).

### Resource Endowments and Poverty Indicator Outcomes in the Metropolis

The first Millennium Development Goal (MDG) is to eradicate extreme poverty and hunger by 2015. The poverty situation in the Tamale metropolis is described by human poverty index (HPI) components in Chapter 3, Table 3.7. Overall, the metropolis is observed to have more proportion of the

population to have done better relative to the national situation in terms of adult literacy (knowledge) and access to safe water. However, the metropolis performed poorly relative to the national situation in terms of proportion of underweight children. The rapidly growing population poses question of food security in the metropolis. Protein Energy Malnutrition (PEM) is the most widespread and serious nutritional disorder in Ghana, especially among children. It is manifested in mild to severe stunting, wasting, and underweight among children. The estimated HPI components and the other poverty indicators suggest that the incidence of poverty and the level of deprivation are higher among rural households than their urban counterparts. Subjectively, poverty based on the value judgment on the part of respondents in 2003 (Chapter 3, Table 3.8 and 3.9) indicates that most households consider themselves poor. Using the level of happiness of households to capture their perception of poverty reveals that although about 59 per cent of households in 2003

considered themselves to be either poor or very poor, poverty did not adversely affect their happiness since over 79 per cent claimed to be very or quite happy.

#### 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 metropolis. Table 7.8 presents a picture of the hunger situation in the metropolis in the past 12 months prior to the 2008 Household survey. Overall, 64 per cent of households in the metropolis indicate it is not difficult in satisfying household food needs in the metropolis. There are, however, gender and location differences. It is relatively more difficult to satisfy food needs in the urban metropolis than the rural and more difficult among men than women.

**Table 7.8: 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: 2008 Household Survey.

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 and pest and diseases, and high food prices as households sold most of their products right after harvest, thus exposing themselves to food shortages later.

#### Conclusion: Utilization of Infrastructure Resource to Meet MDGs in the Metropolis

The overall assessment of the outcomes of the economic situation of the households suggests that communities in the metropolis have not fully exploited the numerous resource endowments to enhance livelihoods and to achieve the MDGs.

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. Human resource utilization is closely related to the strategy of economic, social as well as political growth of the Tamale Metropolis. The institution-resource-access relationships that highlight the participation of individuals in the Metropolis need to be enhanced for broader community participation in governance.

# Investment Opportunities, Constraints and Challenges in the Metropolis

## Introduction

Tamale is regarded as the fastest growing city in the West African sub-region and also probably the neatest city in Ghana. Tamale's growth potential is enormous as her strategic location of connecting the "south" of Ghana with Burkina Faso, Mali and Niger, among other states, is a big advantage. Indeed, the Tamale Metropolitan Assembly has plans to make the Tamale metropolis the strategic centre for investment in the West African sub-region.

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, as well as private sector and development partners in hastening development in Northern Ghana<sup>7</sup> including the Tamale Metropolis. 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 the poor — the strategy contains seven main components that include stimulating the modernization of

agricultural 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 strategic thrusts must lead to significant gains in poverty reduction under improved entrepreneurial opportunities, have potential to create jobs and wealth for both the entrepreneur and employees, are environmentally friendly both on-farm and off-farm and have relatively great potential for increasing female employment.

The metropolis produces several industrial crops such as rice, cotton, groundnuts, sheanuts and beans and plays host to manufacturing companies which process locally these crops into finished and semi-finished products exported out of the region. The metropolis is also positioned to produce capital (intermediate) goods. Vehicle repairs, fabrication of spare parts and the manufacture of farm implements such as cutlasses, bullock ploughs and trailers, leather works, pottery and carpentry are sectors potential investors would do well to explore as these also offer opportunities for

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<sup>7</sup> Northern Regional Coordinating Council Document: *Strategic Directions for Sustainable Development of Northern Ghana*, p.1.

profit. There are also major opportunities in real estate development. The Waste Management Department also has the potential, with collaborative partners, to establish a plant to process methane from solid waste in order to provide energy.

## **Investment Opportunities in the Metropolis**

### **Modernizing Agriculture and Associated Investment Opportunities**

Modernizing agricultural strategy would involve 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 assessment in investments in agriculture and related activities was solicited from the focus group discussions held with the communities and also with other stakeholders. Emphasized was the need for support for agricultural inputs in terms of combine harvesters, fertilizers, and jobs for their artisans, since these are under-utilized. Employment opportunities for women were also a focus. The overwhelming agreement is that financial support can help expand businesses in petty trading, fish trading, livestock rearing, leather works and processing of local produce (crafts, smocks, etc.) since natural and human resources in the metropolis are less exploited.



A



B

*Picture 8.1: Women processing sheabutter (A) and groundnut (B) cake in the metropolis.*

In the FGDs, the modernization of the food/natural resource extraction activities of agriculture and related activities in the metropolis was emphasized. Some of the main needs were modernizing the extraction of sheabutter; opening up cold store for fresh

fish sales and improving on livestock rearing. Opinion leaders and major stakeholders indicate that the abattoir in Tamale has no cold storage facility, and this is a big investment opportunity. Tamale can be a hub for cold storage of slaughtered animals from

the north to the south. In the FGD, enhancing investments in the clay sector for making pots/plates were raised. The communities, however, indicated that the clay resource is under pressure as the chiefs are selling off these lands for housing and other projects. Asked if the communities would advise their children to invest in agriculture, the response was “yes” but only when the children have good education. They admit that Tamale is rapidly expanding and very soon they may not be able to do some of the things they are doing now and in the way they do them. For instance, poultry farming was concentrated in the city centre but with the city expansion, poultry farming has moved to the outskirts. Hence some of the opportunities will continue to exist at the outskirts of the city.

The metropolis’ agricultural sector has many investment opportunities. With arable land and available manpower, the conditions are favourable for investment in direct production, processing, transport, the provision of agricultural inputs and marketing. In the area of production, the main crops are rice, maize, cowpea, soya beans and rice. In the metropolis and its surrounding areas, farm estates that produce cashew and mangos are coming up. Investment in fruit processing holds much promise for investors. There are also numerous opportunities in cattle and poultry farming, particularly for guinea fowl production. The establishment of a cattle market in the metropolis is mooted at Gunayili in a sister relationship with Fadamgruma in Burkina Faso, the largest cattle market in West Africa. The Tamale cattle market will be a transit point for the cattle going south from the Burkina Faso market. This market portend numerous investment opportunities for the metropolis.

Enhancing marketing opportunities of the agricultural products in the metropolis must target the domestic and international markets. The focus on the value-added chain

with more emphasis on products processed can increase the marketing opportunities. In general, technology for value-added processing is available. For most value-added technology, the critical issue is developing that technology so it is appropriate to the producers and is economically feasible. With globalization, however, consumers are becoming more aware of food product characteristics. Increasingly, among others (a) food safety and quality control has become driving forces in the food (including livestock) sector, and (b) farm production is becoming more dependent on precise information to manage production driven by biological and environmental factors including integrated pest management. Therefore to increase competitiveness, both in the domestic and international, as the metropolis develops her agricultural product markets, communities/individuals must adopt mechanisms to offer agricultural products with improved consumer-driven attributes. The focus of the production sector must be encouraged to move away not only from just growing the agricultural products but to value-addition.

### **Non-Farm and Business Development Opportunities**

The Waste Management Department has the potential, with collaborative partners, to turn the waste generated in the city in establishing a plant that could process methane from solid waste to provide biogas energy. Biogas technology, which converts biological waste into energy, is considered by many experts to be an excellent tool for improving life, livelihood, and health in the developing world.

The metropolis has abundant raw materials for producing biogas. Waste and polluted water from industry — including slaughterhouse remnants, animal dung and sewage — can be converted into carbon



dioxide and methane through anaerobic digestion. The biogas can be used for cooking and fuel, and the waste product as a fertilizer. Biogas investment opportunities therefore exist, and on a small scale, those generated from waste in the metropolis are being used at the Regional Hospital (for refrigeration and the kitchen), among other few places. Properly designed and used, a biogas digester mitigates a wide spectrum of environmental undesirables including improving sanitation; reducing greenhouse gas emissions; reducing demand for wood and charcoal for cooking, and therefore helps preserve forested areas and natural vegetation. Biogas generated can be bottled for home use. The Abattoir's opportunity to generate biogas from its waste for use can enhance its activities. Abattoir waste carries high levels of micro-organisms that cause

disease in humans and animals but are an excellent source of material for generating biogas.

The Tamale Metropolis is also positioned to produce capital (intermediate) goods from the light industrial enclave. Vehicle repairs, fabrication of spare parts and the manufacture of farm implants such as cutlasses, bullock ploughs and trailers are all potential investment-deepening opportunities, assured of strong market demand.

Besides, leatherworks, pottery and carpentry are sectors potential investors can explore as they also offer opportunities for profit. The artisanal sector in the Metropolis fabricates fuel tanks, water tanks, containers, bullock ploughs and tractor trailers, among others. Indeed anything, which is iron, can be manufactured since they have resources for them.



*Picture 8.2: Artisans at work in the metropolis.*

Clients to the light industrial enclave are located in Tamale, Bawku, Burkina Faso and Togo. For the neighbouring countries, clients request for ploughs, donkey carts and bullocks which are manufactured on contract. Financing these contracts is a major problem as most of the artisans lack collateral to meet formal bank loan demands. The opportunities, however, exist through the

small scale funding arrangements by financial institutions to enhance the productivity of these artisans to create employment for the youth.

The newly constructed Tamale Sports Stadium which has a gym, conference facility, the sports grounds and a yet to be completed 40 hotel room accommodation and restaurants, shopping mall and a discotheque



for the youth, offers yet an investment opportunity for the metropolis as well as boost tourism. The gym is opened to the public for a fee and currently has about 50 permanent members. Designed to improve personal fitness and health, the gym has a therapy room to manage various health conditions including strokes. The conference room can seat about 80 people and several organizations including BoG, Bonzali Rural Bank, Ghanafin, and NCCE. Meetings, seminars, conferences can be held there. The stadium grounds can host football matches and provide training facilities for football clubs, universities and school sports. With a

sitting capacity of about 20,235 people, the grounds can also be used for musical shows, fun games, end of year activities and funerals.

The activity rate for the use of facilities at the stadium currently stands at: conferences — once per week; stadium itself — once per month (this excludes premier league matches); training pitch use — twice per week; musicals — one per two months; and the gym use — every Saturday and Sunday. There are also corporate rooms for renting to view matches in a more relaxed atmosphere. There could also be food joints established at the stadium.



*Picture 8.3: The newly constructed Tamale Sports Stadium. Its investment opportunities are numerous.*



Hawking during games has increased. Most of these hawkers are registered with the stadium to do business when there is an activity. These include bottled water sellers, ice cream and pastry sellers. In addition, although the lands around the stadium are mostly government land, a small piece/stretch of private land (Nyohini) has seen its value rise such that there is pressure on that piece of land to be used for commercial activities such as the establishment of a fuel station (just because it is close to the stadium).

The expected inland port terminal in the metropolis also has huge investment opportunities. The potential of the Tamale Metropolis serving as the hub for northern countries like Niger, Burkina Faso and Mali by connecting Tamale to the southern railroad network, can attract investments from neighboring countries.

There are plans to establish an inland transit port in Tamale which upon completion would ease congestion at the ports of Tema and Takoradi. As expected with the Boankra Inland Port in the Ashanti region, the Tamale Inland Port would create jobs for the people; reduce the aggregate transport cost of international cargo to importers and exporters from the middle and northern parts of Ghana; facilitate the use of Ghana's Transit Trade Corridor used by the landlocked countries of Burkina Faso, Mali and Niger; promote the establishment of export processing zones in the vicinity of the inland port, and enhance and facilitate customs examination, duty payment and cargo clearance.



Picture 8.4: The proposed Inland Transit Port Terminal at the outskirts of the metropolis.

It is rumoured (which was collaborated during interview with some of respondents) that lands adjacent to the proposed inland port are all leased out, and that owners are patiently waiting for the project to commence.

### **Investments in Human Resource Development**

There are several formal education centres (both public and private) in the Metropolis and opportunities exist to enhance investments in infrastructure improvement through private-public partnerships. By improving the human resource infrastructure, institutions in the northern regions and the academic institutions in the metropolis such as the University of Development Studies, Tamale Polytechnic, SARI, among others could attract potential investors, with its highly trained human resources and infrastructure.



A

B

C

*Pictures 8.5: The newly constructed Tamale Girls High School (A); and new buildings for Tamale Polytechnic (B) and University of Development Studies (C).*

### Skill Training Centres

GRATIS-ITTU centre in the Tamale Metropolis trains the youth in artisanal skills. The centre focuses on three major skill development areas: welding fabrication, metal machinery and woodwork and admits applicants with the JSS Certificate as the minimum requirement. Some of the finished products the institute churns out are agro-processing machinery, which targets women in the rural areas and women groups in groundnut, sheabutter and gari processing, among others. It takes 3 years to train about 10–15 trainees. After graduation, some establish on their own while others join already established companies.

### ICT and Internet Expansion

Opportunities in ICT to enhance entrepreneurship and employment in the metropolis 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 metropolis. Presently the government ministries and agencies are hooked up to the internet. However, in the private sector only few shops and businesses are on the internet. It is hoped that with the growth in the ICT competition, costs will be reduced and the small and up-coming businesses will patronize the internet and its services. Thus, the opportunity to intensify and extend internet investments in the metropolis exist. Also, the linkage between agricultural research and rural radio in the metropolis 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.





A



B

*Picture 8.6: Tamale GRATIS-ITTU Centre (A) and products (B).*

## **Securing the Natural Resource Base Through Investments**

### **Alternative Energy Generation**

Alternative energy sources to the national electricity grid are being championed by NGOs in the metropolis. As already indicated, solar systems have been installed in several homes and solar lamps provided for areas not on the VRA.

In all, investment opportunities therefore exist in the development and promotion of PV solar lighting in the Tamale metropolis. There are also opportunities in the promotion of conversions to LPG use in homes and schools and the establishment of partnerships between the metropolis and local gas distributors to sustain the supply of gas. Using LPG frees the few trees.

NGO's, particularly *NewEnergy*, focuses on Energy and Environment, among others and builds the capacity of the community/partners in collaboration with the TaMA by supporting groups with funds and enhancing the training and development of local artisans for self-employment.

The NGO has also developed a Multi-functional Platform (a 3-in-1 equipment) used for rice, sheabutter and maize grinding for communities. The LPG Project has led to an increase in the number of dealers in the supply of gas (in collaboration with TaMA). Solar lamps have been provided for areas not on the VRA. The approach used by *NewEnergy* has been so successful that several applications are received from the community to establish these alternative energy sources. Herein lie the opportunities for investments.



A



B

Picture 8.7: Efficient energy-saving systems developed by *NewEnergy*, an NGO in the metropolis.

### Afforestation in the Metropolis

The vision of the Northern Development Initiative (NDI) for 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 butter trees. Not only do these *green* the environment, they also provide 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 woodlots in schools and communities. Teak and shea are important trees that thrive well in the metropolis and have high economic value. Several collaborative efforts between NGOs and development oriented programmes such as the UNDP provide seedlings to community and schools to embark on afforestation projects. Planting trees could build the woodlot capacity for the future.

### Water Reservoir Systems

The rapid expansion of the metropolis requires additional water supplies for domestic, industrial and agricultural purposes. Investment opportunities exist in rainwater harvesting by homes and schools to cut down on daily water transport, strengthening water reservoirs for dry season irrigation and livestock watering.

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 in order to go to school. They also encourage the use of overhead tanks to ensure vegetable production.

### Constraints and Challenges to Investment Opportunities in the Metropolis

The potential of the metropolis to contribute to the economic development of the Northern

Region rests on the exploitation of the abundant natural resources. Investment opportunities in the metropolis, 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 by the TaMA, along with technical support from other governmental and non-governmental organizations to facilitate the sustainable exploitation of the natural resource endowments in the Tamale Metropolis for development, including opportunities and facilities for disabled persons, and the youth that are currently are unemployed.



A



B

*Picture 8.8: A water system (A) and vegetable production nearby (B) in the metropolis.*

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

There are several institutions catering to 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 metropolis could enhance not only the

investment opportunities; it could foster the efficient exploitation and utilization of the natural resource endowments in the metropolis.

Revenue Mobilization has increased over the years, but mostly from withholding taxes, which on the average form about 39.4 percent of total collections. The IRS is also gradually cutting into the informal sector. This is because TaMA is expanding its operations and the IRS is getting closer to the people by giving them tax education and insisting on the submission of returns promptly, paying regular visits to withholding tax agents and periodic withholding auditing. There is more room for



improvement if the IRS were to operate at full capacity. There are certain areas that potentially the IRS can cover, particularly in the informal sector, but cannot do so now because of several logistical problems (lack of office accommodation, lack of finance, and lack of vehicles). There are 11 administrative districts but there is only one (1) vehicle. There are staffing problems, compounded by the conflict in the north.

The Ghana National Fire Service (GNFS) also plays an important role in safeguarding the natural resources in the metropolis. Besides rescuing victims in accidents at home and in fires, they intensively educate the community about precautions of fire; educate farmers on bushfires and their consequences, particularly on the degradation of lands, more importantly during the harmattan period, among others. Short of personnel, the metropolis has one Fire Fighting appliance, 1 Rescue Tender and one Van for emergency use (Rescue Van). At maximum operations, the outfit requires three fire fighting appliances and also needs an ambulance and water tanker. While they lack water, and have only one hydrant at UDS, which flows once in a while, a hydrant is an important necessity for the functioning of the Service. Although the Service is attractive to the youth, there is apathy on the part of the community when there is a fire call with numerous interruptions from community when fires are to be fought amidst false alarm calls.

Agricultural Extension Services (AES) need supporting to develop agriculture beyond subsistence 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 soil conditions is imperative. Presently some NGOs are involved in extension delivery and some donors are providing logistical support to MoFA extension services but these may

have to be better coordinated to ensure proper monitoring and effectiveness.

The Metropolis and other stakeholders should encourage, support and help sustain the formation of various Farmer-Based Organizations (FBOs). 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 enhance women capacity to perform their roles in the farm-to-market-chain-links.

Encouraging the involvement of NGOs in the Metropolis 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 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 TaMA support given to NGOs in the metropolis must further be strengthened to enhance the public-private sector partnerships.

## CHAPTER 9

# Conclusion

### Progress towards Meeting the MGDs in the Metropolis

The Tamale Metropolitan Assembly has made progress in the health, education, water and sanitation components in meeting several of the MDGs. In education, the Tamale Metropolis has witnessed improvement in the enrolment of school children in the primary and JHS levels of education. The sex dimension of enrolment shows that the number of male enrolment out-numbers 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, raising concerns about gender disparity in the metropolis.

The Tamale Metropolis has seen an improvement in both the gross and net enrolment rates at all levels of education. Gross enrolment rates at JSS level have remained higher than the regional and national rates over the years of 2003/2007. School attendance in the metropolis is relatively regular for most children and 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 school-children. The quality of education, however, depends on the availability of textbooks and furniture, sanitary and water facilities, conditions of school structures and quality (trained) teachers and the pupil-teacher ratio, among others. Tamale Metropolis is behind in attaining the set target of three textbooks

per pupil although trends are slowly increasing with core textbooks per pupil increasing between 2002 and 2006. Even though the textbook situation has improved dramatically over the last few years, there are still gaps in the supply of all the textbooks to schools in the metropolis.

The furniture situation for both teachers and pupils is inadequate although the trend points to a gradual increase in the number of school furniture in the metropolis. Several of the school buildings in the Metropolis require some form of rehabilitation while others require total demolition and re-construction. The pupil-teacher ratio has remained stable at 28:1 from 2003/04 to 2005/06 academic years.

In terms of toilet facilities and drinking water, there seems to be a deterioration in the proportion of schools (pre-school, primary and JHS) with these facilities. There was, however, an increase in the proportion of schools with drinking water. The performance of the Tamale Metropolitan Assembly children in the Basic Education Certificate Examinations (BECE) was relatively lower than the national average but has improved remarkably. The pass rates in English language and social studies are relatively higher than the pass rates in mathematics and science. Within the region, Tamale Metropolis children's pass rate in Mathematics, Science and Social Studies is below the Region's pass rate in these areas.

In terms of educational attainment, the Metropolis has witnessed a decline in the proportion of the population aged 6 years and

above who have completed Primary School (from 38% in 2000, 36% in 2003 to 9% in 2008) compared to the attainment of Tertiary Education from 6.2 per cent in 2000 to 21 per cent in 2008. There are also indications of increases in the proportion of the population attaining Senior High secondary and a constant proportion of the population with the vocational training. Indeed the declining proportion of the population with the lower level education and increasing proportion at the higher level of education suggests that more people are now striving for higher education than before, which could translate into improved literacy rates and productive skills of the population. However, the high proportion of the population without any education could hamper their efforts to meet the MDG target in education for all.

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 Metropolis 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 centre 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 Metropolis has fluctuated over the years 2003–2007. The number of supervised deliveries in the Metropolis, 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 Metropolis in sustaining a decline in the

area of Maternal Mortality needs attention for the realization of that MDG.

Malaria is the most reported disease 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 Metropolis has access to safe drinking water, a good number of the population still obtain water from such unsafe sources as rivers/streams and dug-outs. This is particularly pronounced in the rural part of the Metropolis. 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, particularly 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 cities in the country, Tamale is faced with daunting challenges in the management of both solid and liquid waste. 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 Metropolis 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 metropolis 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 have 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 Metropolis 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 in the rural area.

The impact of economic activity on poverty indicators shows that over all, the Metropolis performs better relative to the national situation in terms of adult literacy (knowledge) and access to safe water. However, the Metropolis 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 metropolis compared to the rural areas. This is more pronounced among men in their failure to satisfy household food needs than women.

A major challenge to achieving the health, education, water and sanitation targets of the MDGs in the Metropolis 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, for the education sector, to raise the quality of education in the Tamale Metropolis.

## **The Way Forward: Utilization of Natural Resources to Meet MDGs in the Metropolis**

There are critical areas of concern, challenges and opportunities that need serious policy considerations in order to enable the Metro-polis to utilize sustainably and efficiently the natural resources it is endowed with to improve human development as well as put the metropolis on track to meet the MDGs. These include:

- Retention levels in schools at all levels,
- Supervised delivery targets and further reduction in Maternal Mortality Rates,
- Sustaining the Under-5 Mortality Rate,
- Rural Tamale, and indeed Urban Tamale potable water coverage,
- Recommendations for water and sanitation sector need to be strengthened to ensure increased resources from metropolitan budget to the water and sanitation sector to enhance effectiveness, and
- Making provision for disabled persons.

The outcome of the economic situation of households in the communities and the progress made so far towards the MDGs suggests that the Metropolis has not fully exploited the numerous resource endowments at its disposal to generate more employment to enhance 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.

**Table 9.1: Summary of MDGs and the Situation in the Tamale Metropolis**

Millennium Development Goal	Targets	Situation in The Tamale Metropolis
<b>Goal 1: Eradicate extreme poverty and hunger</b>	<p>Target 1: Halve Between 1990 and 2015, the proportion of people whose income is less than one dollar a day</p> <p>Target 2: Halve Between 1990–2015, the proportion of people who suffer from hunger</p>	<ul style="list-style-type: none"> <li>• Unemployment rate in 15+ on the increase, higher among women than men and in the rural than urban Metropolis</li> <li>• As at 2008, about two-thirds of residents do not find it difficult to satisfy household food needs</li> </ul>
<b>Goal 2: Achieve universal primary education</b>	Target 3: Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary education	<ul style="list-style-type: none"> <li>• High gross and net enrolment rates. Increases in numbers and relative quality of education. School attendance rates not optimal, especially in rural Metropolis</li> </ul>
<b>Goal 3: Promote gender equality and empower women</b>	Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	<ul style="list-style-type: none"> <li>• There are gender gaps in terms of enrolment from one educational level to the other in the Metropolis</li> </ul>
<b>Goal 4: Reduce child mortality</b>	Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	<ul style="list-style-type: none"> <li>• Progress made in reduction in the U5 Mortality Rate (U5MR). Between 2006–2008 a fall of 22 per cent</li> </ul>
<b>Goal 5: Improve maternal health</b>	Target 6: Reduce by three-quarters, between 1990 and 2015 the maternal mortality ratio	<ul style="list-style-type: none"> <li>• Sustaining MMR reduction is a challenge. There seem to be rather an increase in MMR</li> </ul>
<b>Goal 6: Combat HIV/AIDS, malaria and other diseases</b>	<p>Target 7: Have halted by 2015, and begun to reverse the spread of HIV/AIDS</p> <p>Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases</p>	<ul style="list-style-type: none"> <li>• There are increases in the number of reported cases (1993–2006). More progress required</li> <li>• Malaria incidence still persistent. Deaths from Malaria seen no change (2004–2008). However, health insurance registration high</li> </ul>
<b>Goal 7: Ensure environmental sustainability</b>	<p>Target 9: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources</p> <p>Target 10: Halve by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation</p> <p>Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers</p>	<ul style="list-style-type: none"> <li>• Metropolitan Assembly has plans developed with programmes to tackle and reverse environmental degradation</li> <li>• Majority of the population in the Metropolis have access to drinking water but skewed towards the urban areas. There are daunting challenges in the management of solid and liquid waste</li> </ul>
<b>Goal 8: Develop a Global Partnership for Development</b>	<p>Target 16: In cooperation with developing countries, develop and implement strategies for decent work and productive work for youth</p> <p>Target 17: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries</p> <p>Target 18: In cooperation with private sector, make available the benefits of new technologies, especially information and communications</p>	<ul style="list-style-type: none"> <li>• Several NGOs engaged in developing and implementing strategies for decent/productive work in the Metropolis</li> <li>• Several NGOs also engaged in promoting affordable technologies in energy-saving techniques and ICT in the Metropolis</li> </ul>

The potential of the Metropolis 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

## *Conclusion*

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 Metropolis needs to be enhanced for broader community participation. Most communities indicated that they interact more with their local Assemblyman than with the MP or MCE, which is expected as the assemblyman resides with the local community. Communities therefore relay their problems and grievances through their Assemblymen to the Metropolitan Assembly. Their participation in community development programmes is therefore through their assemblymen. The Metropolis 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 Metropolis 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 TaMA and other stakeholders in ensuring that the human resource development agenda is prioritized.

Investment opportunities in the Metropolis 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 TaMA, along with technical support from other

Governmental and Non-Governmental Organizations to facilitate the exploitation of natural resource endowments in the metropolis to generate income to reduce poverty and help make progress on the MDGs in the Metropolis.

In addition to incentives to attract investments, strengthening institutions to secure the natural resource base to sustain investments are also important. Securing the resource base depends on credit provision, generating appropriate revenues from the existing use of the resources and safeguarding the resources. There are several institutions providing credit facilities in the Metropolis that could enhance not only the investment opportunities, but also foster the efficient exploitation and utilization of the natural resource endowments in the metropolis. Revenue mobilization is critical and the IRS in the metropolis must expand its operations and get closer to the people by giving them tax education. The Ghana National Fire Service and the Agricultural Extension Services (AES) need support in safeguarding the natural resources in the metropolis and to develop agriculture beyond subsistence standards and to encourage 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 soil conditions is imperative. Halving the number of people whose income is less than one dollar and the proportion who suffer from hunger in the Metropolis will greatly depend on agricultural resource exploitation and protection.

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



## APPENDICES

### 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.

*Appendices*

***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 1. Male 2. Female	3. Age in years (at last birthday); If less than 1 year, Code 0	4. Relationship to HH Head 1. Household Head 2. Spouse 3. Child 4. Adopted child 5. Sibling 6. Parent 7. In-law 8. Other Relative 9. Other (specify)	5. What is your marital status? 1. Never married 2. Loose/ informal union 3. Married (monogamous) 4. Married (polygamous) 5. Divorced 6. Separated 7. Widowed	6. Were you born in this town? 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 ( <i>specify</i> )...
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? (in weeks)	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)		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. Expected 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 education al level?	6. What is ... father's highest education al level?
		1. Yes →q4 2. No	1. Yes 2. No→ go to next section	01 Pre-school 11 Primary 1 12 Primary 2 13 Primary 3 14 Primary 4 Voc/Tech 15 Primary 5 T 16 Primary6 17 JSS1 18 JSS2 19 JSS3 20 M1 21 M2 22 M3 23 M4 24 SSS1 25 SSS2 26 SSS3 27 S1 28 S2 29 S3 30 S4 31 S5 32 L6 33 U6 41 42 Teacher 43 Nursing 51 Tertiary 52 Koranic 53 Special 54 Agric	01 Pre-school 11 Primary 1 12 Primary 2 13 Primary 3 14 Primary 4 15 Primary 5 16 Primary 6 17 JSS1 18 JSS2 19 JSS3 24 SSS1 25 SSS2 26 SSS3 41 Voc/Tech 42 Teacher T 43 Nursing 51 Tertiary 52 Koranic 53 Special Sch 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

	<i>Rank</i>
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.

[illegible]

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

[illegible]

Seed Type

Source of seed

1. Traditional
2. Improved (include name)

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**

[illegible]

Type of Fertilizer Code:	Source of Fertilizer
1. <i>NPK</i>	1. <i>Market</i>
2. <i>SA</i>	2. <i>NGO Development project</i>
3. <i>Urea</i>	3. <i>MoFA (Govt) Dev. project</i>
4. <i>Organic</i>	4. <i>From own animals</i>
5. <i>None</i>	

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
<b>Cattle &lt; 2year</b>			
<b>&gt; 2 year</b>			
<b>Sheep &lt; 1 year</b>			
<b>&gt; 1 year</b>			
<b>Goat &lt; 1 year</b>			
<b>&gt; 1 year</b>			
<b>Donkey &lt; 1year</b>			
<b>&gt; 1 year</b>			
<b>Pigs &lt; 1 year</b>			
<b>&gt; 1 year</b>			
<b>Other(specify)</b>			

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 <b>MALE</b> HH members	Number owned by <b>FEMALE</b> HH members	Number owned by <b>MALE</b> HH members	Number owned by <b>FEMALE</b> 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:**

1. Free range
2. Cut and feed forage
3. Feed crop residue/by-product
4. None

**WATERING:**

1. At home
2. Ponds/dams
3. Streams and rivers
4. Other (specify)
5. Other (specify)

**HOUSING**

1. None
2. Kraal in house
3. Thatch hut
4. Other (specify)

**DISEASE MGT.**

1. Self treatment
2. Seek vet. advice
3. None
4. 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. Formal 2. Informal
Current season (2008)		
Last season (2007)		

Does your household own a woodlot? 1. Yes 2. 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. Yes 2. 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/shear butter
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 government 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 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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