

INTRODUCTION

The third trimester field practical programme (TTFPP) is an essential component of the curricula of the University for Development Studies (UDS).

The PNDC law 279 (1992) has mandated the university to blend the academic work with that of the community so as to promote active and constructive interaction between the two for the development of northern Ghana and the country as a whole.

PURPOSE

- To expose both students and lectures practically to the nexus of developmental problems of deprived communities in Ghana and particularly northern Ghana (upper east, upper west, northern and Brong Ahafo region)
- To inform the ongoing research, teaching and learning activities of the university which are designed to meet the development needs of local communities.
- To place the university in a better position to provide useful services through the exchange of knowledge and its application to address the intractable development needs and aspirations of these communities.

GENERAL OBJECTIVES

The proposed general objectives of the integrated concept of the TTFPP includes

- Helping students to develop favorable attitudes towards working in rural and deprived communities.
- Exposing students practically to the nature of the development problems of northern Ghana in particular and the country as a whole.
- Providing useful services to Ghanaian rural communities through the exchange of knowledge and its application to address the felt needs and aspiration of these communities
- Generating data for further research into problem solving, developmental issues and other purposes.

SPECIFIC OBJECTIVES

The specific objectives of the integrated third trimester field practical programme (TTFPP) for year one are outlined below.

- To equip students with the basic tools, techniques and skills required for community studies.
- To introduce students to community studies through living in and working with the community.
- To help students to marry traditional knowledge with scientific knowledge in their community studies.
- To assist students to apply the methods and experience acquired to collect relevant data, analyze the data and on that basis write a comprehensive community profile.

RESEARCH METHODOLOGIES

The group used the under listed methods and techniques to gather data about the profile of the community.

○ KEY INFORMANT

This technique was adopted to gather information about the history, ethnicity, kinship, taboos, modern and traditional political system and health and nutrition of the people.

○ TRANSACT WALK

The group undertook a transact walk to gather information and locate certain social amenities like school, source of drinking water, layout of the settlement and geological characteristics which helped us to draw the map of the community.

○ FOCUS GROUP DISCUSSION

This method was adopted to gather information on economic and social services such as farmers, dawadawa processors etc.

○ PERSONAL INTERVIEWS

This technique was employed with the aid of a well composed questionnaire to obtain key information on their income, occupation, health, household size, education level, population distribution, economic activities and the level of migration.

○ PERSONAL OBSERVATION

This method was employed in the course of the research to observe the peoples way of life, geology, sanitation, relief, vegetation, nature of the soil as well as facilities of the community

○ RECONNAISSANCE SURVEY

The group undertook a reconnaissance survey in the community in order to obtain a fair knowledge and first hand information of the community.

○ DIRECT AND PARTICIPATORY OBSERVATION

This was adopted to obtain information on the ways of farming, natural resources available, culture as well as technical infrastructure.

○ SAMPLING

This method was used to collect information on income distribution and gather additional information on population characteristics, educational status, occupational distribution, migration and religious denomination with the aid of a questionnaire to verify the already collected data.

RESEARCH CONSTRAINS

- ❖ Language barrier hindered the purpose of the work since only a handful of the population could speak the English language
- ❖ The group faced transportation problem since we had to walk to Zuarungo before getting access to transportation to acquire secondary data.
- ❖ Difficulty in getting some secondary data from some departments in the Bolgatanga municipality.
- ❖ Unwillingness of the community members to give us accurate information especially on their income with the perception that the figure could be used to tax them.

Unit 1.0 NATURAL RESOURCES AND ENVIRONMENT

1.1 PHYSICAL RESOURCES BASE

(I) LOCATION

Kantia is a rural community found in Zuarungo which can be located in the eastern part of the Bolgatanga municipality in the upper east region of Ghana. The Bolgatanga municipality in which Kantia can be found has Bolgatanga as its regional capital with a total land size of 1620sqkm. It shares boundaries to the north with Bongo and Kassena Nankana districts, to the south with Kassena Nankana and Tellensi-Nandom districts and to the west with Kassena Nankana district.

Kantia as a community understudy falls between longitude 00° 48W and latitude 10° 47N. It is about 6.12km away from the Bolgatanga municipal and approximately 2km from Zuarungo. Kantia is bounded by Kpatia at the east, Tongo at the west, Tongo-Beo at the south and Zonno at the north.

SOURCE: SURVEY DEPARTMENT/GROUP FIELD SURVEY 2010

(II) RELIEF

Generally, the land of Kantia is plain with no hills or highlands above 6 feet. However, from the north western part down to the dam at the southern part is lower

SOURCE: GROUP FIELD SURVEY 2010

(III) DRAINAGE

The Kantia community has a stream and a dam which serves as the only drainage system. The stream serves as a boundary between Kantia and Tongo-Beo at the south. It flows through the southern and to the eastern part of the community. It flows in the rainy season and dries up in the dry season.

The dam which is located at the south eastern part of the community serves as a major source of water for economic activities during the rainy reason and dries up during hammatan since the dam is not large.

SOURCE: GROUP FIELD SURVEY 2010

(IV) CLIMATE

The information gathered from the meteorological department shows that the climate of the Bolgatanga municipality is tropical continental as experienced in the northern regions

Temperature is generally high throughout the year with an average temperature of 28°C. The highest maximum temperature rises up to 45°C before the rainy season in May. The lowest minimum temperature reduces to about 12.8°C in August.

The rainfall type is convectional in nature and it is characterized by a single rainy season from may to October that is six months with the total number of rain ranging between 70 to 80 days with a mean annual rainfall ranging between 950mm-1100mm with a relative rainfall variability of 17% during the rainy season and very erratic.

The relative humidity in the morning around 06:00 HRs is between 81% and 92% in the rainy season and in the dry season, it falls to a minimum of 45%. In the afternoon around 15:00 HRs, the relative humidity is between 47% and 71% in the rainy season and falls to a minimum of 31% during the dry season.

SOURCE: METEOROLOGICAL DEPARTMENT

(V) VEGETATION

The vegetation of the community is savannah grassland with scattered trees and shrubs. Most trees are found along the stream. The common trees are the baobab, dawadawa, ebony, kapok and Shea nuts.

These trees are economically valuable both locally and naturally. Some of these trees are eaten locally as fruits and are extracted and processed for sale. They serve as the main bridge for the community during the hunger periods. Most of the members in the community rely on the fruit to cope with the hunger situation until they harvest the next crops. They serve as roofing materials for the community.

SOURCE: GROUP FIELD SURVEY

(VI) GEOLOGY

The geology of Kantia is the belt type granitoides. These are medium to coarse grained and they are dark grey in color. They are usually exposed on hilly grounds and along streams. In some places, they occur as massive outcrops while in some places they occur as isolated outcrops. However, in Kantia, they are mostly found along the stream.

The soil type in Kantia community is sandy loam. This makes it suitable for the cultivation of cereals like guinea corn and millet, legumes are also grown. Some areas also have clayey loam soil which supports the cultivation of rice during the rainy season and construction of a dam in the community.

SOURCE: GEOLOGICAL DEPARTMENT AND GROUP FIELD SURVEY

(VII) MAJOR FINDINGS

- Due to the unimodal rainfall pattern and a long period of drought in the community, there is low productivity of farm products at the end of the year.
- The dam is not large enough for irrigation project and also dries up during the dry season.
- The lowland area and the soil type of the community is suitable for the cultivation of rice.

- Most of the rocks are found along the stream.

1.2 BIOLOGICAL RESOURCE BASE

(I) PLANTS ECONOMIC AND WILD TREES

The community can boast of some economic plants for their livelihood such as Shea, dawadawa, baobab, kapok etc

The economic trees, its scientific names and uses are shown in the table below.

COMMON NAME	SCIENTIFIC NAME	USES
Dawadawa	<u>Pakia biglobosa</u>	<ul style="list-style-type: none"> ▪ The fruits are eaten ▪ The seeds are processed for sale which serves as a major source of income for the community
Baobab	<u>Adansonia digitata</u>	<ul style="list-style-type: none"> ▪ The leaves are used for making soup ▪ The fruits are eaten
Cotton/silk e.g. Kapok	<u>Gossypium spp</u>	<ul style="list-style-type: none"> ☒ For making pillows and mattresses ☒ They are also spanned into thread
Mango	<u>Magnifera indica</u>	<ul style="list-style-type: none"> • The fruits are eaten • The bark of the mango trees are used for medicinal purposes
Red berries (sisibi)		<ul style="list-style-type: none"> • Fruits are eaten
Shea nut tree		<ul style="list-style-type: none"> • The fruits are eaten • Seeds are processed into Shea butter for sale • Shea butter is used as pomade and also used as cooking oil

SOURCE: GROUP FIELD SURVEY 2010

(II) ANIMALS (AQUATIC AND TERRESTRIAL)

• AQUATIC

There are few streams line bodies in the community which makes aquatic animals very rare in the community. Not withstanding the scarcity, there is a dam which serves as a habitat for amphibians like some fishes and crocodile

- **TERRESTRIAL**

Most members in the community rear domestic animals such as sheep, cattle, goats, pigs, donkeys and poultry. But there are some animals which endanger the life of the people in the community, examples are snake, scorpion etc.

SOURCE: GROUP FIELD SURVEY 2010

(III) FOREST

There is no forest in the community. The trees are scattered due to the long period of drought, bush fires and other farm practices.

SOURCE: GROUP FIELD SURVEY 2010

(IV) MAJOR FINDINGS

- Economic trees such as dawadawa and Shea nut are not enough to promote large scale agro-industries.
- The farmers used to have a lot of animals but because of the long period of drought and education, the children to take care of the animals are now schooling and this has compelled the farmers to sell out their animals.

1.3 ENVIRONMENTAL ISSUES

(I) NATURAL ENVIRONMENT

The community laid emphasis against deforestation leading to conservation of trees which serves as wind breaks and reduces the carbon dioxide (CO₂) level in the atmosphere. Local technology of turning waste and animal droppings into manure has contributed immensely to the good sanitation of the community. This has increased the soil fertility on small scale basis.

However, the community lack both private and public toilet that has led to indiscriminate deposition of faeces behind houses and along water bodies. The health of the people in the community is therefore threatened. But burning is rampant in the community during the dry season, which exposes the soil directly to sun rays, wind and water erosion.

SOURCE: GROUP FIELD SURVEY 2010

(II) BUILT ENVIRONMENT

The houses are scattered and isolated with an improper lay out leading to poor drainage system. Most of the houses are built with laterites and roofed with thatch and aluminum sheets. The thatch roofs are mostly unroofed by high wind velocity.

Social groups such as "Akobu" helps each other in farming and churches help in peace prevailing in the community. Aside this, there is a non-governmental organization (NGO) called CENSUDI (centre for sustainable development initiatives) that helps the community in terms of education, poverty and fight for the rights of women.

SOURCE: GROUP FIELD SURVEY 2010

(III) LEVEL OF ENVIRONMENTAL DEGRADATION

Even though the community members are prevented from cutting down trees, there is a high level of environmental degradation due to continuous farming on the land every year, bush burning and over-grazing.

SOURCES: GROUP FIELD SURVEY 2010

(IV) MAJOR FINDINGS

- Indiscriminate defecation pollutes the environment.
- The animal's droppings serve as the main source of fertilizer for crop production in the community.

2.0 POPULATION CHARACTERISTICS

(I) POPULATION SIZE

According to the 2007 population and housing census conducted by a non-governmental organization (NGO) called CENSUDI (centre for sustainable development initiatives), Kantia community had a resident population of 795 (368 males and 427 females). The community had eighty (80) houses.

From the houses survey conducted by the group during the field practical programme, it was discovered that the community has a resident population of 871 with 424 males and 447 females. The community now has 81 houses.

By comparing, the population has increased by 76 which is 9.6% within the last three (3) years. The insignificant increase in the number of houses, that is by only one over the last three year period is due to the fact that individuals extend the already existing houses instead of building new ones.

SOURCE: GROUP FIELD SURVEY/CENSUDI REPORT

(II) AGE-SEX STRUCTURE

From the research conducted by the group on sex distribution, it was revealed that Kantia has a female population of 447 which represents 51.32% as against the male population of 424 also representing 48.68%

SEX DISTRIBUTION

SEX	NO OF PEOPLE	PERCENTAGE	DEGREES
MALE	424	48.68	175.25
FEMALE	447	51.32	184.75
TOTAL	871	100	360

A PIE CHART SHOWING THE SEX DISTRIBUTION OF KANTIA

TABLE: AGE SEX STRUCTURE

AGE	MALE	FEMALE	TOTAL	PERCENTAGE
0-4	44	54	98	11.25
5-9	58	45	103	11.83
10-14	54	70	124	14.24
15-19	68	50	118	13.55
20-24	49	31	80	9.18
25-29	30	23	53	6.08
30-34	21	29	50	5.74
35-39	19	27	46	5.28
40-44	11	26	37	4.24
45-49	8	11	19	2.17
50-54	13	16	29	3.32
55-59	7	5	12	1.37
60-64	4	6	10	1.14
65-69	28	36	64	7.34
70+	10	18	28	3.21
TOTAL	424	447	871	100

A BAR CHART SHOWING THE AGE SEX STRUCTURE

LABOUR FORCE

From the pyramid above, the labour force which falls between the ages of 15-60, which corresponds to 444 people, represents 50.98% of the total population in the community.

Mathematical illustration of percentage (%) labour force

$$\begin{aligned}\text{Labour force (\%)} &= \frac{\text{Labour force population}}{\text{Total population}} \times 100 \\ &= \frac{444}{871} \times 100 \\ &= 50.98\%\end{aligned}$$

AGE DEPENDENCY RATIO

The age dependency ratio is the number of people who depends on the working age and this is approximately 1:1

Mathematical illustration

Labour force population : dependency ratio

$$\begin{aligned}444 : 427 \\ 1 : 0.95 \\ 1 : 1\end{aligned}$$

ECONOMIC DEPENDENCY RATIO

The economic dependency ratio is the number of people who depend on the income earners. This is approximately 5:7

Mathematical illustration

$$\begin{aligned}\text{Income earners: dependants} \\ 364: 507 \\ 5:7\end{aligned}$$

Implication: this implies that seven (7) people depend on five (5) income earners.

SOURCE: GROUP FIELD SURVEY 2010

(III) POPULATION DENSITY

The population is less dense with in the community since the people are not overcrowded.

It however becomes less denser after harvesting since most of them migrate to the south

(IV) HOUSEHOLD SIZE

There are 146 households in the community with a population of 871. From our field survey, the average household size is 5.97 which is approximately 6 people per household

Mathematical illustration of the average household size

$$\begin{aligned}\text{Average household size} &= \frac{\text{Total population}}{\text{Total number of household}} \\ &= \frac{871}{146} \\ &= 5.97\end{aligned}$$

Therefore the average household size is approximately 6 people per household. Out of 146 households, males dominate the household heads with 134 household heads being males and the remaining 12 households are being headed by females.

SOURCE: GROUP FIELD SURVEY 2010

(V) FERTILITY AND MORTALITY RATES

FERTILITY RATES

YEAR	FEMALE	MALE	TOTAL
2008	3	7	10
2009	6	8	14
2010	5	3	8

From the table above, the birth rate increased between 2008 and 2009 by 40%

Mathematical illustration

$$\begin{aligned}\text{Rate} &= \frac{14 - 10}{10} \times 100 \\ &= 40\%\end{aligned}$$

MORTALITY RATE

YEAR	MALE	FEMALE	TOTAL
2008	3	5	8
2009	4	2	6

From the table above the mortality rate decreased between 2008 and 2009 by 25%

Mathematical illustration

$$\begin{aligned}\text{Rate} &= \frac{6-8}{8} \times 100 \\ &= -25\%\end{aligned}$$

(VI) MIGRATION

The community experience two types of seasonal migration. One type is observed immediately after crop harvest and another one before farming. Immediately after harvest, young women and men migrate to the southern towns to seek for jobs to earn money in order to acquire properties such as basins, cooking utensils, bicycles, cloths etc. and around the lean period, the married men migrate to the south to work for income in order to come back and support their families.

(VII) MAJOR FINDINGS

- Members in Kantia community rely on the rainfall for their farming activities and since most of them are farmers, they migrate to southern Ghana to seek for jobs during the dry season.
- Although the dependency ratio is approximately 5:7 but due to low income of the community members, it is difficult for them to take care of themselves.
- From the 2008/2009 mortality and fertility rate, there was an increase in the number of fertility as compared to the mortality. This shows a gradual increase in the population of the people in the Kantia

3.0 SOCIAL DEVELOPMENT

(I) RELIGION

There are three religious groupings in Kantia. These are Christian religion, African traditional religion and Islamic religion. Christian religion dominate with 536 people representing 61.50%, African traditional religion is next with 376 people also representing 35.86% and Islamic religion being the last with 23 people which represents 2.26% of the total population. There was no one who claimed not to be affiliated to any religion in the community.

The table below shows the number of people as affiliated to the religion denomination in Kantia

RELIGION DENOMINATIONS

RELIGION	NO OF PEOPLE	PERCENTAGE	DEGREES
Christian	536	61.54	221.5
ATR	312	35.82	129.0
Islamic	23	2.64	009.5

A PIE CHART SHOWING THE DISTRIBUTION OF RELIGION IN KANTIA

SOURCE: GROUP FIELD SURVEY 2010

(II) ETHNICITY, KINSHIP, VALUES, TABOOS AND MARRIAGE

ETHNICITY

The people of Kantia belong to the frafra ethnic group and predominantly speak "Gurune" with few people speaking "nabt" and "talen".

There are four (4) clans in the community, which are the "Anambasabissi", 'Gumbissi', "Adabangabissi" and "Paskologobissi". The community is dominated by the "Anambasabissi" clan with 40 houses which represents 49.38% of the total number of houses, the "Gumbissi" has 19 houses which represents 23.46%, the "Adabangabissi" has 13 houses representing 16.05% and "Paskologobissi" which is the smallest clan has 9 houses which represents 11.11% of the total number of houses that is 81. The "Gumbissi" are the indigenous people of the community.

CLAN DISTRIBUTION

CLAN	NO OF HOUSES	PERCENTAGE	DEGREES
ANAMBASABISSI	40	49.38	177.80
GUMBISSI	19	23.46	84.40
ADABANGABISSI	13	16.05	57.80
PASIKOLOGOBISSI	9	11.11	40.00

A PIE CHART SHOWING THE CLANS IN KANTIA

SOURCE: GROUP FIELD SURVEY 2010

KINSHIP

Kantia is a frafra community that practices both extended and nuclear family system. The system of inheritance is through the father line (patrilineal inheritance) which is mostly practice in the northern Ghana.

In the community, the successor usually stays with the family members and takes care of the family through the help from other family members.

SOURCE: GROUP FIELD SURVEY 2010

VALUES

Kantia community has certain values that they cherish and uphold. Among these values are as follows

- Respect for the elderly
- Obedience
- Hard working
- Trust worthiness
- Decent dressing
- Charity
- Good human relations
- Sincerity
- Abstinence from theft
- Squatting when greeting an elderly person

SOURCE: GROUP FIELD SURVEY 2010

TABOOS

According to the elders of Kantia, there are some taboos, which they observe as a way of maintaining their customs and cultures as well.

They include

- It is a breach of tradition to have sexual intercourse with somebody's wife or husband.
- It is also a taboo for a stranger to see or take pictures of some special rites like burial of an elderly person in the community.

SOURCE: GROUP FIELD SURVEY 2010

MARRIAGE SYSTEM

Marriage is a union between a man and a woman of two families who have agreed to stay together as a husband and a wife and have gone through all the necessary customary rites recognized in the society for such a union.

Most of the marriage in the community are polygamous with few being monogamous and is therefore considered as a very important aspect of the lives of the people of Kantia.

OLD SYSTEM OF MARRIAGE

In the community when a young man reaches the age of marriage, that is from the ages of 20 onwards and he meets a would be partner either in a market place, a funeral, at a gathering etc. he proposes to the girl and if given a favorable response, the girl gives the direction of her house. The young man either in the company of a friend or alone, pays the first visit to the girl house. This is termed the knocking visit. No cola nut or tobacco is offered on this visit. The message from the prospective suitor of this visit is simply that, he has found a friend in the house of his visit.

The formal counting visit is in two or three day's time. The young man directs a relative to where the girl's house is located. The relative sent goes with cola nuts, tobacco, and one guinea fowl to greet the girl's parents. If these items are received, it signifies that the prospective suitor is welcome. On the second visit after the counting visit, the relative who undertook the first trip is sent again to the girl's house this time with cola nuts, tobacco and two guinea fowls. During the knocking visit only ordinary drinking water is served to the suitor. During the counting visit "Zoom-koom" or floor mixed with water is served to the visitor that is the relative who made the visit. A third visit is made by the same person who has been visiting, he now visits with the normal cola nuts and tobacco but this time, 3 guinea fowls are offered. Again, on this visit, the parents might have consulted their daughter to find out if she would marry the prospective suitor. If the girl response is positive, food is cooked for the suitor to signify that a leading way has been paved for the marriage to be contracted.

The visitor is then sent home with a message that an elderly person be sent on the last and final day this elderly person is supposed to be an uncle of the girl's clan. On the final visit, the visitor goes with cola nut, two guinea fowls and is detained until evening. All this while, "Zoom-koom" is served to the visitor in the morning "Tuo-zaafi" in the afternoon. This is followed by a sumptuous meal in the evening. The elders of the clan are informed that their daughter is being sent to the marital home that very evening.

A special dish is served to the girl. This is made up of a big cock or a dog meaning that the girl at her marital home should not compete with the children of the house in eating fowl or dog meat. Members of the girl's clan also participate in the feast for the girl.

Finally the girl is taken to her marital house by the elderly person called in the local dialect "Pogsama" or "Pogsigra". A message is given through the "Pogsama" that the brother of the girl will be visiting in five (5) or six (6) days time for feasting. When the girl brother arrive on the day of feasting he is welcomed with first drinking water, roasted groundnuts and a roasted fowl

Since the purpose of the visit is already known, greetings are exchanged and the brother would state that they demand three (3) animals that are two goats and a sheep for the feast. The husband's clan then enters into a bargain to offer a sheep and a goat. If there is a compromise the two animals are shown to the visitors that is the girl's brothers who on acceptance would ask that the animals be slain and the feast commence. Normally, a fowl is slaughtered and cooked alongside the sheep and the goat.

After the feast, when the visitors are departing to their home in the girl's family home, the husband also send them with a message that, they the husbands clan will follow a "tindan-noa" return with yet another message that the in-laws are demanding three (3) cows initially as dowry and a fourth cow be paid later. The in-laws (the girl's parents) sent two people to notify the girl's husband of their earlier demand of the cows with "Zoom-koom" and a return message that they the opposing in-laws are finding the dowry cows and would notify that the girls parents at an appropriate time. This may take a year or less.

The mode of dowry varies depending on the urgency of the in-laws demand. They may accept two cows and the final and fourth cow is paid either on the death of the wife or when the off-spring of the wife is a girl and also marries. This is what prevailed in the past.

PRESENT MARRIAGE

The meeting of the would-be spouse by the man follows the same sequence as in the old system of marriage. The only variation is that, the would-be couple may meet either in the church or else where. Yet usual cola nuts and tobacco follows with a bottle of "akpeteshie" and money is offered on the knocking visit to create an impression that the would-be suitor is capable. This is when the girl had introduced the boy friend to the family.

Subsequent visits may even be up to six (6) or ten (10) days and on each visit besides the cola nuts and tobacco, two (2) bottles of "akpeteshie" is accompanied. However, the final visit by the "Pogsama" goes with three (3) guinea fowls, cola nuts and tobacco and a gallon of "akpeteshie". The marriage is then contracted and the feasting day is announced. On this day the brother in-law comes with an urgent demand. Three animals are demanded. It follows with killing of a fowl and roasted groundnuts.

Besides the food, two (2) bottles of "akpeteshie" is offered as welcome. To impress the brother in-laws, the husband may opt to present a full gallon of "akpeteshie". After the feast, the departing message given by the brother in-laws is that four (4) cows be brought in as dowry before the confirmation cock is presented by the "pogsama". The cows should come with a smock and an embodied cap. In the present day marriage no option is given for piecemeal dowry.

SOURCE: CHIEF AND ELDERS

(III) GENDER ISSUES

Gender relations can be viewed under three different microscopes, namely, social, economic and political issues. The breakdown is as follows.

▪ SOCIAL ISSUES

Obviously, there is gender disparity with the females at the underside for example when a meeting is called, whether or not the women attend rest in the hands of her husband. The vulnerability of women is amply deepened through marginalization. Their movement is most often approved by their husbands, who appear to be the lords rather than partners.

▪ ECONOMIC ISSUES

The situation is not different economically. Having the chunk of the people being farmers, pre-farming activities are shared between the man and the woman. The produce and income acquire from the farm ultimately belongs to the man. The woman is often at the frontline of income earning having rather a little to show for their effort. Aside this, after harvest most men only provide the family with some bags of millet, guinea corn and maize leaving the rest of the responsibilities on the women. This does not help the women to get money for savings.

▪ POLITICAL ISSUES

Decision making is the sole business of males and husbands, a situation which is common countrywide. Our investigations in the community revealed a dependency trend of this gab. Husbands cook up ideas and sell it to their wives who can only accept them without questioning.

On the higher level, incase of emergency, you have a fairly good representation of the male gender. Unfortunately, the same cannot be said of our mothers, wives and sisters. It would only be appropriate that leaders and opinion leaders ensure gender equality especially on issues that linger on female concerns.

It is worth mentioning that an abysmally small percentage of the male sex, especially the elderly accept as useful the decisions and judgments of the other sex. That mutual respect which is crystal clear and visible among both genders cannot be over emphasized.

SOURCE: CHIEF AND ELDERS

(IV) EDUCATION

In the community understudy, there is only one nursery and a primary school with a total enrolment of 264 pupils of which 142 pupils are boys and the remaining 122 pupils are girls.

Below is the table showing the total enrolment for Kantia nursery and primary school for 2008/2009 and 2009/2010 academic year.

TABLE: ENROLMENT FOR 2008/2009 AND 2009/2010 ACADEMIC YEARS

YEAR	2009/2010			2008/2009		
CLASS	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL
KG 1	24	23	47	12	16	28
KG2	16	13	29	11	4	15
PRIMARY 1	20	11	31	10	15	25
PRIMARY 2	19	16	35	24	12	36
PRIMARY 3	18	13	31	21	10	31
PRIMARY 4	13	10	23	12	26	38
PRIMARY 5	14	25	39	12	8	20
PRIMARY 6	18	11	29	9	12	21
TOTAL	142	122	264	111	103	214

A GROUP BAR CHART SHOWING THE SCHOOL ENROLMENT OF KANTIA
NURSERY AND PRIMARY SCHOOL (2009/2010)

According to the 2008/2009 academic year they had a total enrolment of 214 as against 264 pupils in 2009/2010 academic year. This means that there is an increase of 50 pupils which represents 23.4% of 2008/2009 academic year.

Mathematical illustration of the percentage increase in the enrolment is shown below

$$\text{Percentage increase} = \frac{\text{Difference in 2008/2009 and 2009/2010 number}}{2008 / 2009 \text{ number}} \times 100$$

$$= \frac{50}{214} \times 100$$

$$= 23.40\%$$

- SCHOOL DROP OUT RATE

The school drop out number for the 2008/2009 academic year was 4 and 2009/2010 academic years was 21. This shows an increase in the school drop out by 17 pupils representing 425%

Mathematical illustration of school drop out rate

$$\begin{aligned}\text{School drop out rate} &= \frac{\text{difference in 2008/2009 and 2009/2010 number}}{2008 / 2009 \text{ number}} \times 100 \\ &= \frac{17}{4} \times 100 \\ &= 425\%\end{aligned}$$

The school drop out rate is increased by 425% with respect to the 2008/2009 drop out rate

LITERACY RATE

From the research conducted by the group, it was revealed that out of the population of 871 people, 495 people are literates representing 56.8% where as the remaining 376 are illiterates also representing 43.2% of the total population in the community.

Mathematical illustration of the literacy rate and illiteracy rates in Kantia

$$\begin{aligned}\text{Literacy rate} &= \frac{\text{Number of literates}}{\text{Total population}} \times 100 \\ &= \frac{495}{871} \times 100 \\ &= 56.8\%\end{aligned}$$

$$\begin{aligned}\text{Illiteracy rate} &= \frac{\text{Nunber of illetrates}}{\text{Total population}} \times 100 \\ &= \frac{376}{871} 100 \\ &= 43.2\%\end{aligned}$$

TEACHER PUPIL RATIO

From the research conducted by the group in the school, it was revealed that the number of teachers in the school is 9 of which 4 are trained and the remaining 5 are untrained

Considering the total number of pupils in the school that is 264, the teacher pupil ratio is 1:29. The trained teacher pupil ratio is also 1:66 and the untrained teacher pupil ratio is 1:53.

EDUCATIONAL STATUS

Below is a table that shows the educational status of the people of Kantia from the field survey conducted.

EDUCATIONAL STATUS	NO OF PEOPLE	PERCENTAGE
Nursery	87	0.99
Primary	181	20.78
JHS	129	14.81
SHS	78	8.92
Tertiary	20	2.30
Illiteracy	376	43.20
total	871	100

A BAR GRAPH SHOWING THE EDUCATIONAL STATUS IN KANTIA

CONDITIONS OF KANTIA PRIMARY SCHOOL

The conditions of Kantia primary school are discussed below

BUILDING

The Kantia primary school has a unit block structure roofed with iron sheets which contains six (6) classrooms and a staff common room.

The structure is not properly ventilated and also not plastered. This does not make it conducive for teaching and learning to be effective. The school lacks a classroom block to accommodate the nursery pupils. This compels them to sit under trees for studies

FURNITURE

The school in general has inadequate furniture. The primary one (1) and two (2) has no desk so the pupils sit on the floor for studies and the other classes have only 41 desks which are not enough.

TEXT BOOKS

The table below shows the number of text books in the Kantia primary school.

CLASSES	TEXT BOOKS				
	ENGLISH	CREATIVE ART	NATURAL SCIENCE	CITIZENSHIP EDUCATION	MATHS OLD SYLLABUS
P1	25	35	26	Not use	39
P2	36	68	36	Not use	42
P3	31	57	31	Not use	7
P4	39	48	25	39	26
P5	20	70	22	29	31
P6	7	34	17	23	21

The school has inadequate textbooks and even the mathematics textbooks are the old mathematics syllabi. The nursery has no teaching and learning materials such as slates, charts, text books, etc.

WATER AND SANITATION

There is a nearby borehole which serves as a drinking water for the school. The school has a neat compound with trees that serves as a shade for the pupils. It has no football field and toilet facility,

TREND OF ACADEMIC PERFORMANCE OF THE PUPILS

From the teachers, the performance of the pupils is encouraging. It increases from primary one (1) to primary three (3), and decreases at primary four (4) and reaches its peak at primary six (6). This may be due to the fact that when the pupils are in primary one (1) to primary three (3), they are not grown enough to work in the farm but from primary four (4) to primary five (5) they are forced to work in the farm. This reduces their performance and when they get to primary six (6), they would have to write an entry examination to the JHS in the near-by communities so their parents allow them to study.

SOURCE: GROUP FIELD SURVEY/SCHOOL

POTENTIALS AND PROBLEMS ANALYSIS OF THE KANTIA PRIMARY SCHOOL USING SWOT

STRENGTH	WEAKNESS	OPPORTUNITIES	THREATS
▪ Available plot	▪ Natural	▪ GES can	• High

for school building <ul style="list-style-type: none"> ▪ Retired educationalist ▪ Available craftsmen and artisans ▪ Available labour 	disaster <ul style="list-style-type: none"> ▪ furniture 	help with teaching and learning materials <ul style="list-style-type: none"> ▪ NGOs can help with funding for building materials and some teaching and learning materials 	illiteracy <ul style="list-style-type: none"> • High poverty • Financial contribution
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(V) HEALTH

There is no health centre in the Kantia community. The community members visit the Zuarungo health centre which is about two (2) km away from Kantia for medication. The dominant disease in Kantia is malaria, cholera, elephantiasis, diarrhea, waist pains, snake bites and skin infections.

TYPES OF TRADITIONAL HEALTH FACILITIES

There are health volunteers, traditional birth attendants, herbalist and peer educators who are trained by the Ghana health services, the district assembly and CENSUDI. The role of these people among other things is to link the community to these organizations to bring improved health services to the community.

SOME DISEASES AND TYPES OF HERBS USED

DISEASE	HERBS USED
Hay fever	The back of the stem of "kinkalaga" is boiled for drinking and bathing
Piles	The roots of a plant called "sigila" is boiled for drinking and bathing
Infertility	The roots of a plant called "goony" and "beenyo" is boiled for drinking and bathing

SWOT ANALYSIS ON POTENTIALS AND CHALLENGES IN THE HEALTH SECTOR

STRENGTH	WEAKNESS
<ul style="list-style-type: none"> ○ Availability of land ○ Traditional herbalist ○ Health volunteers ○ Active youth 	<ul style="list-style-type: none"> ○ High illiteracy ○ High poverty ○ Inadequate participation in youth department projects
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ○ Availability of NGOs ○ Ministry of health can help the 	<ul style="list-style-type: none"> ○ Natural disaster ○ Government policies

community with medical logistics and personnel ○ District assembly can help the community with personal logistics and infrastructure	○ Ethnic conflicts
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(VI) HOUSING

Out of the 81 houses in the community, 33 are built with laterites ("atakwame") roofed with aluminum sheets and thatch, 31 are built with laterites and roofed with thatch, 8 are also built with both blocks and laterites and roofed with aluminum sheets and the last 8 are built with laterites and roofed with aluminum sheets. As a result of the extended family system, compound houses dominate as compared to the other types of houses.

Through our field survey, the most densely populated house is housing 71 people while the least populated house is housing only 1 person with an average of 11 people in a house.

Only the southern part of the community has no access to electricity but the rest have access to electricity.

A number of them have kitchen and bathroom. Only one house has its own water supply and the others depend on the community boreholes and wells. The houses are constructed in a dispersed form. However apart from two houses, there is no place of convenience in the other houses.

The houses in the community are owned by family heads and are occupied by the members of that family.

There are some problems associated with housing in the community. These are

- Most of the houses are roofed with thatch and are easily to be removed by high wind velocity.
- The ratio of people to a room is higher which leads to easy spread of diseases.
- The frequent changing of the thatch is very tedious

SOURCE: GROUP FIELD SURVEY 2010

(VII) WATER AND SANITATION

WATER

The community has 2 public boreholes, 2 private boreholes and 3 wells that serve as their main source of water. The community has a stream which flows in the rainy season and a dam that serves as a drinking water for their domestic animals, washing of dawadawa and other commercial activities.

The boreholes and wells are found in the centre of the community which is distant from the people living around the boundaries of the community while the dam is located in the southern part of the community.

Some problems of water supply in the community are

- Insufficient water supply for bathing and cooking leads to malnutrition and skin diseases.

- Limited opportunities in some income generating businesses such as chop bars, malt processing, rice parboiling etc.
- Waste of economic time in accessing water.
- Frequent quarrels among the women at the water sites

SANITATION

Refuse are disposed at backyard farms in the community. However, there are few places of convenience which are all private but not for public use. This has compel the people in the community to free themselves in the near by bushes.

Most of their solid waste especially leftover foods are used to feed farm animals. There are stagnant waters in the community during the rainy season. Water also flows through gutters in the direction of the dam in the community when raining. Liquid waste from the various houses drains their backyards and become stagnant. When it rains, stagnant water flows into the water bodies.

Majority of the community members defecate any where causing environmental pollution. This has led to the danger of infectious diseases like diarrhea, cholera and bilharzias due to the inadequate access of KVIP(s)

Also, there is no special place for dumping refuse. This has compel the members of the community to dump their refuse in close by bushes, backyards which drain to the water bodies during the rainy season causing water pollution, breeding of mosquitoes and many others.

Similarly, the poor drainage system found in community aggravate a lot of stagnant water bodies increasing the breeding of mosquitoes leading to the increase in the number of malaria cases

SOURCE: GROUP FIELD SURVEY 2010

(VIII) MAJOR FINDINGS

- From the survey, it was noted that the heads of families are mostly traditionalists and their children who form the majority are Christians.
- The poverty level of the people has made majority of the children unable to feather their education.
- Inadequate motivation of health volunteers and traditional birth attendants have make them not to be able to give out their best to help the people in terms of health needs.
- Although the population is increasing, the number of houses is not increasing since they build to attach already existing houses leading to overcrowding in the various houses. This leads to easy spread of diseases in the houses,
- The absence of a place of depositing waste like refuse, toilet and others have led to the cholera and malaria diseases prevailing in the community.

4.0 ECONOMIC DEVELOPMENT

(I) EMPLOYMENT STATUS

Out of a total population of 871, 444 people are the potential labour force representing 51% of the total population. 364 people out of the 444 people of the potential labour force are employed which represents 82% of the potential labour force. 80 people who represent 18% of the potential labour force are inactive. 19 people out of the 80 people in the inactive labour force are unemployed. This number represents 23.75% of the inactive labour force

TABLE: POTENTIAL LABOURE FORCE

LABOUR FORCE	NO OF PEOPLE	PERCENTAGE	DEGREES
EMPLOYED	364	82	295.1
INACTIVE	80	18	64.9
TOTAL	444	100	360

A PIE CHART SHOWING THE POTANTIAL LABOURE FORCE IN KANTIA

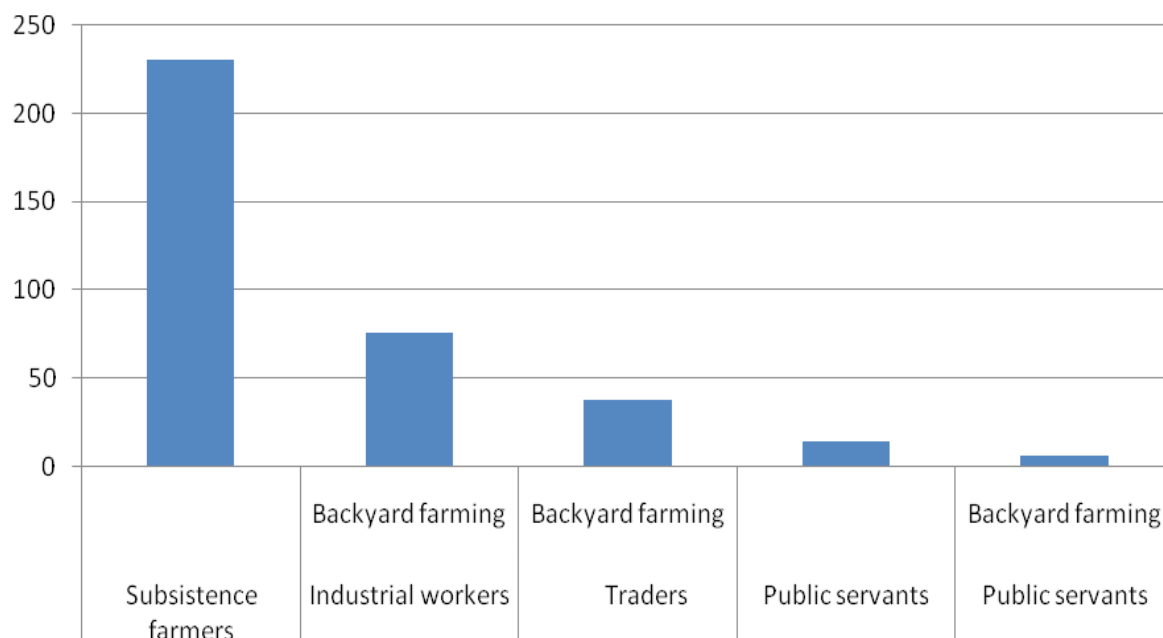
(II) OCCUPATIONAL DISTRIBUTION

364 people representing 41.79% of the total population are employed. Out of this number, 230 people representing 63.19% of the employed people are only subsistence farmers, 76 people representing 20.88% of the employed people are industrial workers and also undertake backyard farming as their minor occupation, 38 people also representing 10.43% of the employed people are traders with backyard farming as their minor occupation, 14 people representing 3.85% of the employed people are public servants only and the remaining 6 people which represents 1.65% of the employers are also public servants with backyard farming as their minor occupation.

TABLE: OCCUPATIONAL DISTRIBUTION

MAJOR OCCUPATION	MINOR OCCUPATION	NO OF PEOPLE	PERCENTAGE
Subsistence farmers		230	63.19
Industrial workers	Backyard farming	76	20.88
Traders	Backyard farming	38	10.43
Public servants		14	3.85
Public servants	Backyard farming	6	1.65
Total		364	100

A BAR CHART SHOWING THE OCCUPATIONAL DISTRIBUTION IN KANTIA



SOURCE: GROUP FIELD SURVEY 2010

(III) AGRICULTURAL PRODUCTION

Agriculture refers to the production of crops and rearing of farm animals for consumption and also for industrial purpose. The sustainability of Kantia community depends mainly on agriculture and other petty activities.

Our research shows that with the population of 871, the active labour force constitutes 364 people out of which 350 engage in agricultural activities which represent 96.15% of the active labour force. Most of the farmers practice subsistence farming. They only sell out their farm produce during bumper harvest. The main agricultural activity in Kantia is mixed farming that is the production of crops and the rearing of farm animals such as livestock and poultry.

LAND TENURE SYSTEM AND MODE OF LAND ACQUISITION

Land in the community is communally owned under the care of the clan heads. However land is under the absolute control of the Tindana (land custodian). An individual who wants to acquire land in Kantia will first go to the Tindana with cola nuts, tobacco, schnapps and small amount of money to show his intension. The Tindana then send the person to the chief to notify him about his intension to acquire land. The intender is expected to bring along items such as what was sent to the Tindana. When all is done the land under consideration is issued to him/her. However, land can also be acquire through inheritance

FARMING SYSTEMS

From our field survey, it was discovered that the people practice mixed farming, mono cropping and mixed cropping.

Mixed farming is a system of farming where a farmer grow crops and rear animals on the same piece of land at the same time

Mixed cropping is a system of farming in which two or more crops are grown on the same piece of land at the same time.

Mono cropping is a system were a farmer grows one type of crop on a particular land

From our research conducted most of the animals are kept under semi intensive with just a few farmers keeping their animals under extensive. With the extensive system, animals are allowed to roam freely without restrictions whilst in the semi intensive system animals are allowed to spend part of their time outside and part indoors normally in the evenings,

TYPES OF LABOUR

There are three main types of labour in the community. The first and dominant one is manual labour, where by simple farm tools like cutlass and hoe are used for farming. This is followed by animal labour whereby cattle and donkeys are used for ploughing and carrying of farm products and the last one is mechanized labour where few farmers use tractors to plough their farm.

FARMING TECHNOLOGY AND INPUTS

The methods of farming in the community are mostly through the use of crude tools such as hoes and cutlasses. However few hire tractors for ploughing with others using the mould board plough with labour from donkeys and bulls. Only few farmers are able to buy fertilizer and hybrid seeds from the ministry of food and agriculture whilst others still use the local seeds and the little manure from their farm animals.

SOURCE OF FINANCE

Through the group's interview with the farmers, it was realized that they get external loans through the ministry of food and agriculture (MOFA) to supplement their funding. They also finance their production through personal savings, money lenders and sale of agricultural produce during bumper harvest.

ACCESS TO AGRICULTURAL EXTENSION SERVICES

From the interviews we had with MOFA and the farmers, it was revealed that there is an extension officer who educates farmers on new methods of farming, disease control and farming practices such as plant spacing, fertilizer application early weeding, use of hybrid seeds etc.

MAJOR CROP GROWN IN OUTPUT LEVEL

The major crops grown in the Kantia community are mainly cereals such as millet, guinea corn, maize and rice. Legumes such as groundnuts, cowpea, Bambara beans and soya beans are also grown. Nutritional vegetables such as pepper, okro, kenaf and garden eggs are cultivated on small scale and mostly by women as supplementary crop produce.

MODE OF TRANSPORT FROM HOMESTEAD TO FARM

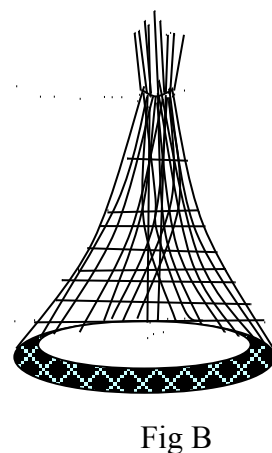
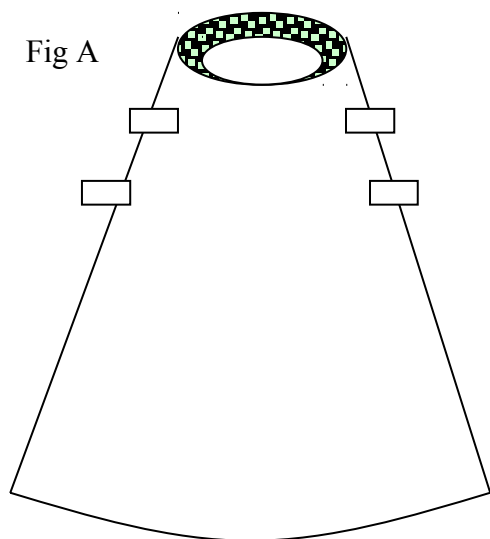
Most farms are found around their houses with few farms at distant places. They usually walk comfortable to their farms with few riding on motorbikes and bicycles to the distant farms. They also use donkey cart to transport their farm produce.

STORAGE FACILITIES

A conical like storage facility called "baarre" is the common storage facility in the community. Crops such as guinea corn, millet and groundnuts are mostly dried after which they are kept in the "baarre".

A DIAGRAM SHOWING THE LOCAL STORAGE FACILITY IN KANTIA "BAARE"

body ;Fig A
cover;Fig B



MARKETING OF FARM PRODUCE

The farmers sometimes sell some of their produce during bumper harvest. Due to the absence of a market place in the community, the farmers are compelled to send their produce to places like Zuarungo and Bolgatanga which does not favor them due to high cost of transportation.

The farmers face the following problems in marketing

- High cost of transportation to market centers
- Low prices of goods during bumper harvest
- Price fluctuations
- Poor pricing

EXTENSION OFFICER-FARMER RATIO

There is a single extension officer who caters for the Zuarungo area within which the Kantia community is found

ANIMAL PRODUCTION

The main animals reared in the community are goats, sheep, cattle and pigs. Donkeys are also reared for farming activities. Fowls, guinea fowls and turkey are the birds reared in Kantia

OUTPUT LEVELS

From the group field survey, these animals are reared on small scale

TABLE: FARM ANIMALS AND THEIR NUMBERS

ANIMALS	NUMBERS	PERCENTAGE	DEGREES
GOATS	562	20.87	75.13

SHEEP	375	13.92	50.13
CATTLE	151	5.61	20.19
PIGS	133	4.94	17.78
DONKEYS	13	0.48	1.74
BIRDS	1459	54.18	195.03
TOTAL	2693	100	360

A PIE CHART SHOWING THE FARM ANIMALS

COMMON ANIMAL DISEASE

From the interview the group had with the veterinary officer from MOFA department and the field survey the group undertook shown the disease and their corresponding animals as shown in the table below

TABLE: DISEASE OF FARM ANIMALS

ANIMALS	DISEASE AND PEST	SYMPTOMS	CONTROL
Sheep and goat	<ul style="list-style-type: none"> • Tick • worms 	<ul style="list-style-type: none"> • diarrhea 	<ul style="list-style-type: none"> • Deworming • Dipping • Spraying
Cattle	<ul style="list-style-type: none"> •Tsetse fly •Tick •Foot and mouth 	<ul style="list-style-type: none"> •Itching of skin •Small fluid field •Swelling in the openings 	<ul style="list-style-type: none"> •Hand picking •Keeping kraals clean and dry
Pigs	<ul style="list-style-type: none"> ▪ African swine fever ▪ Piglet pneumonia 	<ul style="list-style-type: none"> ▪ Diarrhea ▪ Reddish skin 	<ul style="list-style-type: none"> ▪ Deworming
Birds	<ul style="list-style-type: none"> ▪ Newcastle ▪ coccidiosis 	<ul style="list-style-type: none"> ▪ Coupling and sneezing ▪ Lost of weight and appetite ▪ Blood stains in droppings 	<ul style="list-style-type: none"> ▪ Good ventilation

VETERINARY SERVICES: OFFICER FARMER RATIO

There is a single veterinary officer who serves Kantia and its neighboring communities

MARKETING

The farm animals are usually sent to the nearby market when they are matured for sale while others slaughter them for sale.

AGRICULTURAL SUPPORTING INSTITUTIONS

There is no specific financial institution that directly supports agriculture in the Kantia community. However, the farmers can mobilize themselves and seek financial assistance from ADB and rural banks through MOFA to expand their farms

The farming organization in Kantia is "azeyrunsampowba" which composes of both farmers and dawadawa processors coming together to fight for their welfare. However, the farmers also come together to help one another. This is locally known as "akobu"

POTENTIALS AND CHALLENGES IN THE AGRICULTURAL SECTOR

TABLE: SWOT ANALYSIS IN THE AGRICULTURAL SECTOR

STRENGTH	WEAKNESS
<ul style="list-style-type: none"> • Available labour • Indigenous knowledge in farming 	<ul style="list-style-type: none"> • Poor soil fertility • Poor marketing for crop produce • High cost of labour

OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> Partnership of NGOs, MIDAs and MOFA 	<ul style="list-style-type: none"> erratic rainfall lack of external market for farm produce incidence of natural disaster such as flood, drought, high wind velocity

SOURCE: GROUP FIELD SURVEY/MOFA DEPARTMENT

(IV) INDUSTRIAL ACTIVITY

TYPE	INDUSTRIAL COMPOSITION	NO OF PEOPLE	PERCENTAGE (%)
Forest/wood based industry	Carpentry	5	6.58
Service-related industries	Dress making Corn milling	4	5.26
Metal based industries	Blacksmith	2	2.63
Agro-based industries	Pito brewing Dawadawa processing Shea butter' processing	61	80.27
Traditional textiles industries	Smock making	4	5.26
total		76	100

SCIENTIFIC PRINCIPLE BEHIND THE INDUSTRIAL PROCESS

DAWADAWA PROCESSING

- Boiling

- Filtration
- Decaying
- cooling
- Winnowing

SHEA BUTTER EXTRACTION

- Drying
- Cracking
- Frying
- Decantation

PITO-BREWING

- Drying
- Frying
- Fermentation
- Boiling
- Cooling

ENVIRONMENTAL IMPACT OF INDUSTRIAL ACTIVITY ON THE COMMUNITY

- The discharge of smoke and both solid and liquid waste disposal brings about environmental pollution
- Source of fuel for the industries is obtained from the few trees available which could lead to deforestation

TYPES OF OWNERSHIP

All the industries in the community are owned individually

AGE AND EDUCATIONAL BACKGROUND OF INDUSTRIALIST

The industrialist falls between the ages of 30 to 50 and are all illiterates

SOURCES OF STARTING CAPITAL

Some of the industrialist take over from already existing industries where as others get their initial capital through personal savings and from family members

TYPE OF LABOUR AND EDUCATIONAL BACKGROUND

The owners are the source of labour with help from family members. Most of them are illiterates.

METHODS OF PRODUCTION AND INPUTS

DAWADAWA PROCESSING

- The dawadawa pods are pluck from the dawadawa tree and then crack to get access to the yellowish dawadawa fruit
- The fruits are washed in water to dissolve the yellowish fruit leaving the actual seeds
- The seeds are boiled to soften the seed coats
- They are pounded with washed dried sand to enhance the removal of the seed coats

- The sand and seed coats are washed away to get the kernels
- The kernels are boiled again until they become soft
- The kernels are then drained, allowed to cool and kept for 24 hours to decay
- The decayed dawadawa is molded and made ready for marketing and consumption

THE SOYA BEANS PREPARATION OF DAWADAWA

- The seeds of the soya beans are roasted and cracked
- The kernels are obtained through the process of winnowing
- The kernels are boiled until they become soft, drained, allowed to cool and Kept for 24 hours to decay
- The decayed soya beans dawadawa is molded and made ready for marketing and consumption.

PITO BREWING

- The guinea corn, which is the main raw material is soaked in water for about three (3) days to germinate
- The germinated guinea corn is then dried and milled into flour
- The steams of okro plant are pounded and added to a solution of the milled flour with excess water
- The mixture is boiled, allowed to cool and sieved to get rid of the chaff of the guinea corn
- The sieved liquid is boiled again until it is assumed to be a bit dark brown in color
- The dark-brown liquid (pito) is allowed to cool and a local yeast is added to it to ferment and served into pots
- A foamy yeast substance on the surface of the pito in the pot is collected during serving, left to dry and later used for subsequent brews. However, the cool dark brown liquid (pito) can also be served without adding the local yeast to ferment it.

SHEA BUTTER EXTRACTION

- Fresh she nuts are collected from the bush
- It is dried and cracked to obtain the kernels
- The kernels are dried and pounded into pieces after which they are fried
- They are either grinded on milling stones, pounded into paste or milled into paste.
- Water is added to the paste and the mixture is stirred and thoroughly beaten with hands until a heavy white substance, thus oil in the raw state appears
- The fatty substance is scooped into a pan and boiled with clean water until oil starts settling on the surface
- The hot oil is allowed to cool and also scooped leaving behind the waste sediments (black in outlook).
- The scooped oil is allowed to cool further and stirred gently till it solidifies. The Shea butter is now ready for consumption and marketing

MARKETING OF PRODUCTS

Industrial products like dawadawa, Shea butter and others are sent to the nearby market on market days for sale.

Products like pito is being sold in their houses and bars

WASTE DISPOSAL

- The pito waste are used to feed pigs
- The filtered dawadawa wastes are deposited on the farmland to improve the soil structure and fertility
- The Shea butter waste are also used as fuel

PROBLEMS IN THE INDUSTRIAL SECTOR

- 1 Lack of credit facilities for the industrialist
- 2 Inadequate water supply.
- 3 Environmental degradation through bush fires, tree felling for firewood and charcoal as well as bad farming practices that have led to the destruction of many economic trees such as dawadawa and she nut, consequently affecting their fields
- 4 The lack of innovative ideas among the operators has made it impossible for them to devise the means of prolonging the shelf lives of their products especially pito
- 5 High cost of transportation of goods to accessible market
- 6 Poor pricing of products

POTENTIALS AND CHALLENGES IN THE INDUSTRIAL SECTOR

POTENTIALS

- The use of inexpensive indigenous raw materials
- Cheaper methods of production
- Manual labour makes their product safe from oil
- Free from spoilage and other forms of contamination
- No payment for labour used
- No Environmental pollution
- Waste is useful
- No use of additives

CHALLENGES

- The mode of preparation is not hygienic and attractive
- Inadequate raw materials
- Improper packaging
- Lack of proper storage facilities
- Inadequate capital to expand business

SOURCE: GROUP FIELD SURVEY 2010

(VI) HOUSEHOLD INCOME AND EXPENDITURE

The random sampling carried out by the group revealed the following income per annum. The amount per annum was getting base on the cost of a bag of the farm

produce and the number of bags each farmer gets and the income that the traders and the public servants earn.

NUMBER OF HOUSES	HOUSE EARNERS	INCOME PER ANNUM GH¢
1	Public servant/traders	1170
2	Farmers	225
3	Farmers/traders	810
4	Farmers/traders	720
5	Farmers/traders	855
6	Farmers	135
7	Farmers	1170
8	Farmers	315
9	Farmers/public servants	450
10	Farmers/traders	660
11	Farmers/traders	270
12	traders	1260
13	Farmers	620
14	Farmers/traders	450
15	Farmers/traders	1080
16	Farmers	225
17	Farmers	360
18	Farmers	225
19	traders	180
20	Farmer	150

From the field survey, it was revealed that the household major source of income is through farming activities.

HOUSEHOLD EXPENDITURE

The major household expenditure is on the feeding of the family since most of their farm produce are kept for feeding. Aside this, the traders also use most of their profits to buy food stuffs for their family. They also spend some of their income on their children education.

INCOME DISTRIBUTION

The table shows the 20 houses that were randomly sampled to determine the income of the people

HOUSE	INCOME PER ANNUM GH¢	PERCENTAGE INCOME PER ANNUM	PERCENTAGE QUINTILES ON INCOME	% CUMULATIVE INCOME QUINTILES	PERCENTAGE QUINTILES ON HOUSEHOLD	PERCENTAGE CUMULATIVE ON HOUSEHOLD
1	135	1.00	$\frac{690}{13369} \times 100$ $= 5.16$	5.16	$\frac{4}{20} \times 100$ $= 20\%$	20
2	150	1.12				
3	180	1.35				
4	225	1.68				
5	225	1.68	$\frac{1125}{13369} \times 100$ $= 8.42$	13.57	$\frac{4}{20} \times 100$ $= 20\%$	40
6	225	1.68				
7	315	2.36				
8	360	2.69				

9	450	3.37	$\frac{2190}{13369} \times 100$	29.95	$\frac{4}{20} \times 100$	60
10	450	3.37	= 16.38		= 20%	
11	620	4.71				
12	660	4.94				
13	720	5.39	$\frac{2190}{13369} \times 100$	56.21	$\frac{4}{20} \times 100$	80
14	810	6.06	= 26.25		= 20%	
15	900	6.73				
16	1080	8.08				
17	1170	8.75	$\frac{5854}{13369} \times 100$	100.00	$\frac{4}{20} \times 100$	100
18	1170	8.75	= 43.79		= 20%	
19	1260	9.42				
20	2254	16.86				
Total	13369	100.00	100.00	100,00		100.00

Total income for sample = GH¢13369

$$\text{Average annual income} = \frac{\text{Total income}}{\text{Number of household sampled}} \times 100$$

$$= \frac{13369}{20}$$

$$= \text{GH¢}668.45$$

Therefore the poverty line is = GH¢668.45

Considering GH¢668.45 as the poverty line household, below the poverty line can be determined by

$$\frac{\text{Total Household}}{\text{Household sampled}} \times \text{Number of household below poverty line}$$

$$= \frac{146}{20} \times 12$$

$$= 88$$

Therefore 88 households are below the poverty line from the above findings, it can be concluded that out of the total household of 146, only 58 households are living above the poverty line of 668.45

$$\text{Poverty Gab} = \frac{\text{Total household}}{\text{Household sampled}} \times \text{Income sampled below the poverty line}$$

$$= \frac{146}{20} \times 12700.55$$

$$= \text{GH¢}92714.015$$

This implies that all household below the poverty line require GH 92714.015 to enable them rise above the poverty line

$$\begin{aligned}\text{Total annual income} &= \frac{\text{Total household}}{\text{Household sampled}} \times \text{Total income of household sampled} \\ &= \frac{146}{20} \times 13369 \\ &= \text{GH} \pounds 97593.75\end{aligned}$$

$$\begin{aligned}\text{Per capita income} &= \frac{\text{Total annual income}}{\text{Total population}} \\ &= \frac{97593.75}{871} \\ &= \text{GH} \pounds 112.05\end{aligned}$$

$$\begin{aligned}\text{Co-efficient inequality} &= \frac{\text{Top 40\%}}{\text{Bottom 20\%}} \\ &= \frac{13.57}{43.79} \\ &= 0.31\end{aligned}$$

(VII) TRANSPORT AND COMMUNICATION

TRANSPORT

There is no lorry station in Kantia so majority of the people foot to the nearby communities before they can get access to a lorry station, others use bicycles and motorbikes as their means of transportation.

The community has a motorable road even though it is not tarred. The road runs from Tongo-Beo through Kantia to Zuarungu and to Bolgatanga.

TRANSPORTATION PROBLEMS

- The community has no access to a lorry station.
- There are no commercial cars in the community.

COMMUNICATION

The community has access to mobile phone services and some radio and television stations

COMMUNICATION PROBLEMS

- ❖ poor mobile phone network
- ❖ some television stations are not accessible in the community

SOURCE: GROUP FIELD SURVEY 2010

(VIII) ENERGY

Kantia community rely much on fuel wood such as plant stock firewood and charcoal for both domestic and commercial purposes. Artificial source of energy such as electricity and liquefied petroleum gas are also used for socio-economic development in the community

Except the southern part of the community the rest of the community has been connected to the national grid of electricity. Out of 81 houses, 59 houses have access to electricity whilst the remaining 22 houses have no access to electricity in the community.

PROBLEMS OF ENERGY USED

- ❖ The cutting down of trees for firewood and charcoal degrades the environment
- ❖ High cost of using artificial energy

SOURCE: GROUP FIELD SURVEY 2010

(IX) MAJOR FINDINGS

- ❖ During the dry season, some of the community members migrate to the south to seek for jobs.
- ❖ Labour force in the community rest more on the women.
- ❖ They practice subsistence farming because of land fragmentation and inadequate funds.
- ❖ They use outmoded methods of farming and equipments.
- ❖ They sell out most of their farm animals during the long dry season.

- ❖ The majority source of income in the community is from the industrial sector
- ❖ Although the community has a motorable road commercial cars are not readily accessible and available apart from market days.
- ❖ Some part of the community has no access to electricity.

5.0 HISTORY AND LOCAL GOVERNANCE

HISTORICAL DEVELOPMENT OF THE COMMUNITY

According to the elders of the Kantia community, in the olden days, two brothers who were hunters happen to be the ancestors, migrated from the kusaa land around Bawku after fighting their elder brother over guinea fowl eggs issue to their present settlement which is now Kantia.

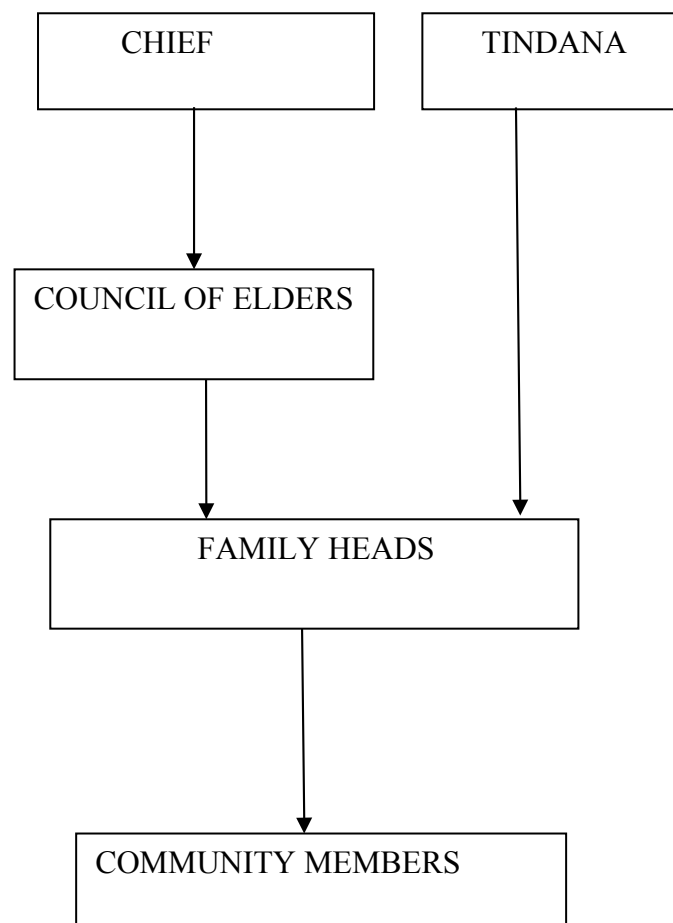
It happened that the elder of the two brothers proceeded leaving the younger with a spear on top of a tree where he slept. Whilst on the tree, in the night he killed a buffalo with his spear. Eventually he settled on the land and named it Kantia. The name Kantia comes from kani which means a spear and tia which also means a tree in the local frafra language in remembrance of his first night on the land.

SOURCE: CHIEF/KEY INFORMANT

TRADITIONAL POLITICAL SYSTEM

The traditional leadership structure includes the Tindana, the chief, council of elders, family heads and the community members.

The order of authority is shown below



The women have their leader known as "mangazia" She organizes the women to help in communal labour anytime there is a community project.

Decision making in the community is taken by both the modern and the traditional political systems with each having its functions.

Tindana is the land custodian and handles land issues. The chief and elders handles other issues at the traditional level whilst at the household level, decisions are solely taken by household heads.

Decision making is not democratic as most of the community members do not participate in the process

SOURCE: CHIEF/KEY INFORMANT

MODERN POLITICAL STRUCTURE

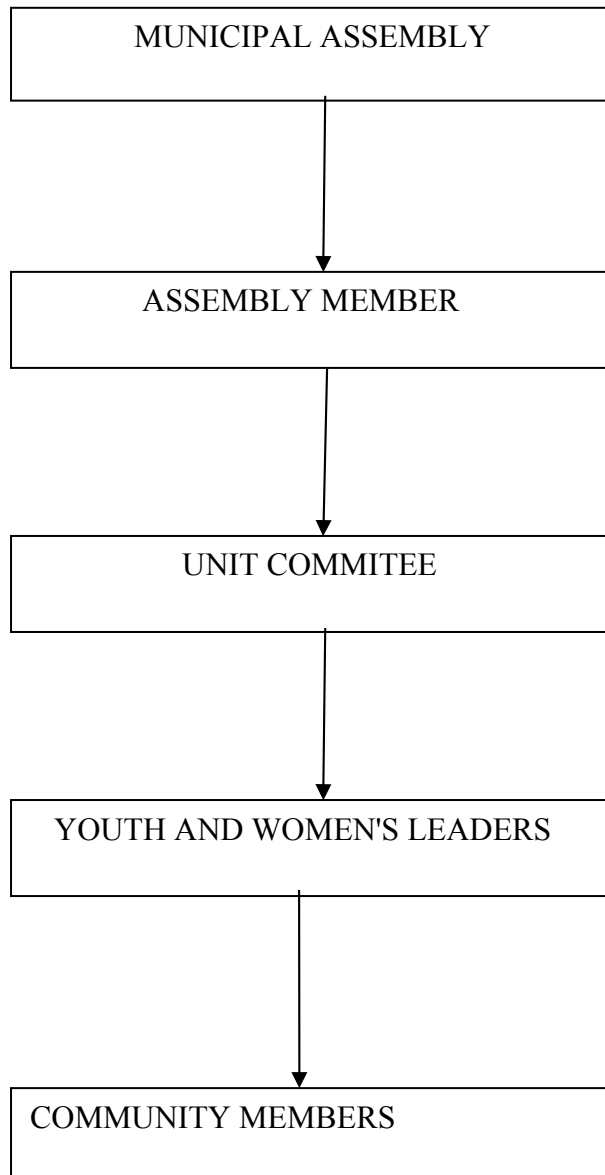
The Bolgatanga municipal assembly is a modern political system established at the local level to govern the various communities under the municipal of which Kantia community is not exempted

The community enjoys decentralized administrative policy stated in the local government act 462 (1992) and the new local government system also enshrined in the 1992 constitution

The community has one assemblyman, who is the true representative of the people at the municipal assembly. He plays an intermediary role between the people of Kantia and the municipal assembly by sending information to and fro. To this effect, he serves as a link between the traditional and modern political system through the dissemination of information.

The unit committee plays a supervisory role in the community. They also help in the dissemination of information at the grass root level.

The diagram below shows the hierarchy of modern political structures and the flow of information



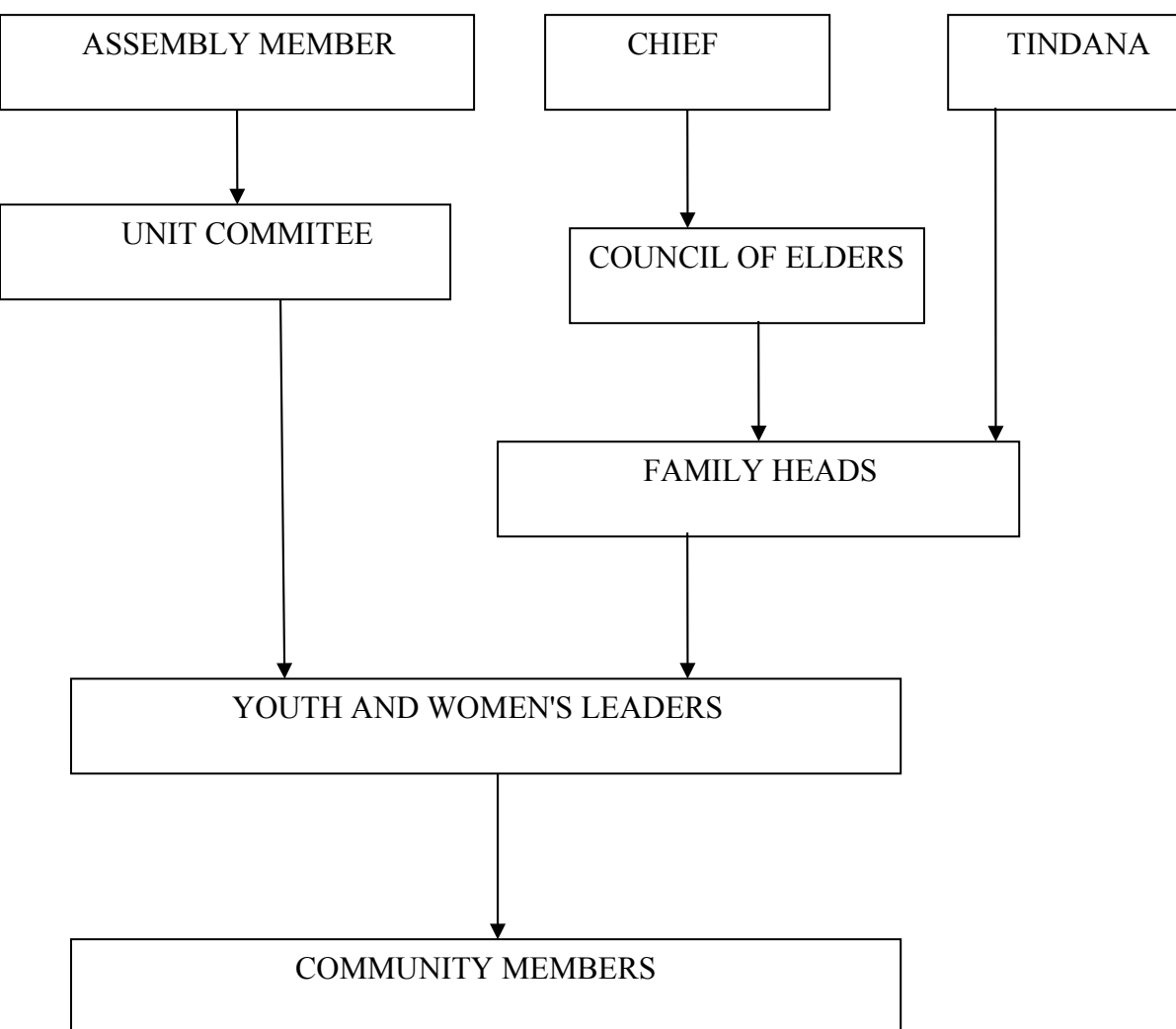
SOURCE: BMA/GROUP FIELD SURVEY 2010

INTERRELATIONSHIP BETWEEN THE MODERN AND TRADITIONAL POLITICAL INSTITUTIONS

The two administrative bodies collaborate with each other very well in the community. The following illustrates this assertion

- There is a direct interrelation between the chief and his council elders and the assemblyman.
- They both work towards peace and order in the community.
- Both systems pre-inform each other before developmental meetings are held in the community.

The diagram of the modern political system linkages is shown below



SOURCE: GROUP FIELD SURVEY 2010

COMMUNITY INITIATED PROJECT

- CENSUDI, the NGO in the community is initiating on the reduction of bridge price and abolishing of certain funeral practices.
- CENSUDI is seeking for funds for the building of a nursery block in the community.

ON-GOING PROJECT

- CENSUDI has organized a free extra class for the JHS students in the community.

6.0 COMMUNITY PROBLEMS AND POTENTIALS EMANATING FROM COMMUNITY PROFILE

DEVELOPMENT PROBLEMS

Kantia like most deprived communities is faced with numerous challenges that impair the development of the community. The numerous problems confronting the community cover all the sectors of the community.

NATURAL RESOURCE AND ENVIRONMENT

The natural resource and environment of the community suffers numerous setbacks. Among the setbacks are below

- One seasonal period of rainfall experienced by the community affects agricultural output.
- The dry season experienced in some part of the year affects livestock rearing since the animals do not get grass and water to live on.
- The dam in the community is not large enough for irrigational and other economic activities and also dries up in the dry season.
- The economic trees such as dawadawa and Shea- nut are not enough to promote large scale agro-industries
- Lack of KVIPs has led to indiscriminate defecation which pollute the air and the water bodies

POPULATION CHARACTERISTICS

- Migration of the community members to the southern Ghana during the dry season reduces their labour force
- Majority of the people are not employed during the dry season since they are farmers and depend on the rainy season.

SOCIAL DEVELOPMENT

- ❖ Due to poverty, majority of the children are not able to feather their education.
- ❖ High illiteracy rate affects the development of the community due to difficulty in accepting modern and better methods of farming.
- ❖ The only nursery and primary school in the community lacks adequate building, desk and other learning materials
- ❖ The absence of refuse dump and KVIPs have the potential of causing the spread of diseases
- ❖ High cost of marriage has the potential of causing teenage pregnancies, rapes etc.
- ❖ Absence of a health centre, motivation for the health volunteers and traditional birth attendants has affected health care delivery.
- ❖ Overcrowding of the people in the houses can easily lead to the spread of diseases.
- ❖ Less quality materials for building has led to easy destruction of their houses.
- ❖ The women in the community spend a lot in taken care of the family and that does not allow them to save to improve their businesses

ECONOMIC DEVELOPMENT

- ❖ Crops and livestock in the community are affected with pest and diseases resulting in low output.
- ❖ Inadequate capital for mechanized farming and their inability to access loans.
- ❖ Poor pricing of products during bumper harvest.

- ❖ Network interference which invariably affects communication of people with occasional network failures.
- ❖ Lack of the national grid of electricity at the southern part of the community.
- ❖ There is high poverty rate in the community since most of the people are living below the poverty line.
- ❖ Lack of a market centre has led to high cost of transportation of their farm produce to the near by market centers.
- ❖ Improper storage facilities for their farm produce in the community.
- ❖ The use of fuel especially firewood and charcoal is expensive since cutting down of trees is not allowed.
- ❖ Inadequate capital and water especially during the dry season affects industrial activities in the community.

HISTORICAL AND LOCAL GOVERNANCE

- ❖ There is a delay of funds for developmental projects as a result of the long procedure involved.
- ❖ The marginalization of women in decision making also affects the socio-economic development of the area.

SOURCE: GROUP FIELD SURVEY 2010

PROBLEMS FACED BY THE COMMUNITY MEMBERS

A problem is an unfulfilled desire. A problem could also be viewed as a negative situation which needs to be worked upon. The following problems were identified by the community members during the focus group discussions. The primary problems facing the community members are;

- Pest and diseases infestation (PDI)
- High unemployment during the dry season (HU)
- No access to credit facilities (NCF)
- Lack of modern farm implements (MI)
- Lack of a lorry station (LS)
- Lack of a market centre (MC)
- Inadequate water supply (IWS)
- Expensive fuel for cooking (EFC)
- Absence of KVIPs in the community (KVIP)
- Lack of electricity at the southern part (ESP)

PAIR WISE RANKING

A pair wise ranking is a structured method for making a small list of items in priority order and also to make decision in a consensus oriented manner. The listed problems of the community were critically examined by the community members to identify the one that needs immediate attention. This task was accomplished successfully through the use of pair wise ranking

Below is the pair wise matrix used.

PROBLEMS	PDI	HU	NCF	MI	LS	MC	KVIP	IWS	EFC	ESP	TOTAL	RANKING
PDI	*	HU	NCF	PDI	PDI	PDI	PDI	IWS	PDI	ESP	5	5 th
HU	HU	*	NCF	HU	HU	HU	HU	IWS	HU	ESP	6	4 th
NCF	NCF	NCF	*	NCF	NCF	NCF	NCF	IWS	NCF	NCF	8	2 nd
MI	PDI	HU	NCF	*	MI	MI	MI	IWS	MI	ESP	4	6 th
LS	PDI	HU	NCF	MI	*	LS	KVIP	IWS	LS	ESP	2	8 th
MC	PDI	HU	NCF	MI	LS	*	KVIP	IWS	MC	ESP	1	9 th
KVIP	PDI	HU	NCF	MI	KVIP	KVIP	*	IWS	KVIP	ESP	3	7 th
IWS	IWS	IWS	IWS	IWS	IWS	IWS	IWS	*	IWS	IWS	9	1 st
EFC	PDI	HU	NCF	MI	LS	MC	KVIP	IWS	*	ESP	0	10 th
ESP	ESP	ESP	NCF	ESP	ESP	ESP	ESP	IWS	ESP	*	7	3 rd

PROBLEMS		SCORE	RANK
ACRONYMS	MEANING		
IWS	Inadequate water supply	9	1 st
NCF	No access to credit facilities	8	2 nd
ESP	Lack of electricity at the southern part	7	3 rd
HU	High unemployment	6	4 th
PDI	Pest and diseases infestation	5	5 th
MI	lack of modern farm implements	4	6 th
KVIP	Lack of kvip	3	7 th
LS	Lack of lorry station	2	8 th
MC	Lack of market centre	1	9 th
EFC	Expensive fuel for cooking	0	10 th

From the pair wise analysis, it was revealed that inadequate water supply is of outmost concern to the community members among the other problems given.

THE PROBLEM TREE AND CONTENT ANALYSIS

The problem tree is a diagram showing the cause effect relationship of an existing problematic situation. The essence of the problem tree analysis is to determine the cause effect relationship between identified problems.

BASIC STEPS EMPLOYED BY THE GROUP FOR DEVELOPING A PROBLEM

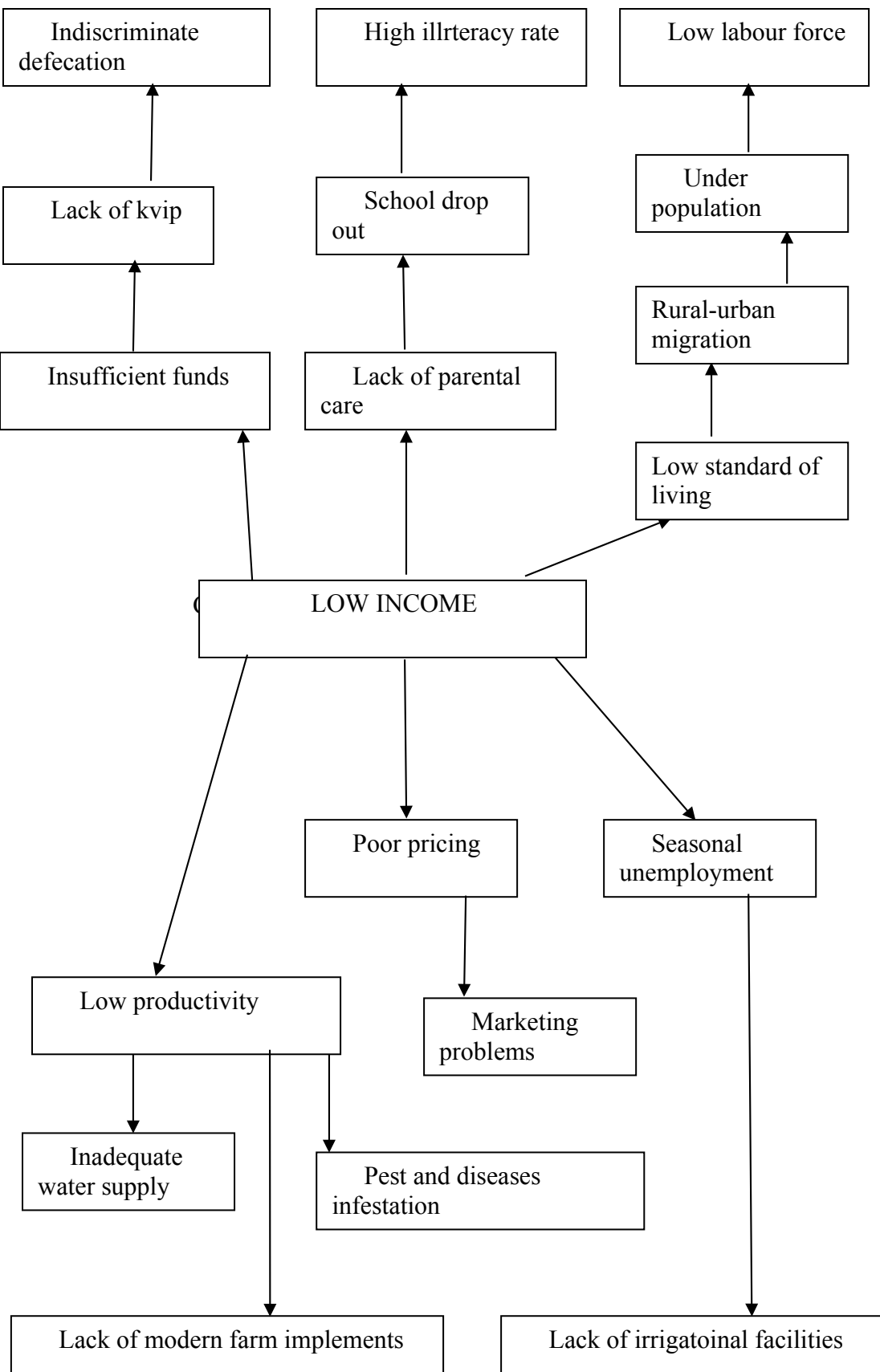
Identification of major problems existing with in the stated community through brainstorming

- Identification of the starter problem (core problem).
- Identification of the causes of the starter problem
- Effects of the starter problem
- Establishing cause effect hierarchy between the problems and visualization of the cause effect relations in a diagram form.

Based on the content analysis adopted, the following problems have been identified by the group

- Low standard of living
- Rural-urban migration
- Insufficient funds
- Lack of irrigation facilities
- Poor pricing
- Pest and diseases infestations
- Low productivity
- Seasonal unemployment
- Lack of modern farm implements
- Lack of kvip
- Indiscriminate defecation
- Low income
- Low labour force
- Inadequate water supply
- Expensive fuel for cooking
- Under population
- High illiteracy rate
- Lack of parental care
- School drop out

PROBLEM TREE



SOURCE GROUP FIELD SURVEY 2010

DEVELOPMENT POTENTIALS

Irrespective of the avalanche of problems bedeviling the community all is not doom and gloom. It has bits and pieces of potentials which can be harnesses to improve the quality of life of its people. Enlisted below are some of the potentials of Kantia community tailored along the various units.

NATURAL RESOURCES AND ENVIRONMENT

- The plain nature of the lands is a good pointer to mechanized farming. This will shoot up productivity level and enhance their standard of living.
- To ensure all year round farming, the Kantia dam can be renovated and enlarged.
- The personal co-existence can ensure exchange of ideas and opinions as a pre-requisite for sustainable development.
- The soil type and the nature of the land enhance the production of rice in large scale.
- The location of the community is nearer to the regional capital (Bolgatanga). This enhances trade between Kantia and the regional capital.

POPULATION CHARACTERISTICS

- Kantia has a comparatively low economic dependency ratio. This could positively affect the savings culture of the dwellers
- The people have a relatively small population which could guarantee equitable distribution of wealth and majority of the population falls within the labour force
- The good road in the community could help trading activities between the community and other towns and villages.

SOCIAL DEVELOPMENT

- The liberty to own property and acquire land with less difficulty is a good incentive for investors as well as NGOs
- Availability of trained traditional herbalist, health volunteers and traditional birth attendants (TBAs)
- Availability of land to undertake developmental projects such as health centre, nursery, junior high school (JHS), KVIPs etc

ECONOMIC DEVELOPMENT

- Availability of economic trees such as red berries (sisibi), baobab, dawadawa trees and others
- The practice of mixed farming helps the farmers to get manure to fertilize their soil and use the plants excess to feed their farm animals. This practice also help to improve the diet of the farmer
- Availability of labour for both agricultural and industrial activities
- The nearness of the community to MOFA helps the community to get easy access to veterinary and agricultural extension services
- The good road in the community could help trading activities between the community and other towns
- The community has access to electricity

- Access to mobile phone networks

HISTORICAL AND LOCAL GOVERNANCE

- Availability of non-governmental organization called centre for sustainable development initiatives (CENSUDI) who help the community in developmental projects
- A well organized interrelationship between the modern political and traditional political systems is a good indicator for government decentralization process
- There are no chieftaincy disputes which allow peace to prevail in the community

SWOT ANALYSIS FOR THE KANTIA COMMUNITY

STRENGTH	WEAKNESS
<ul style="list-style-type: none"> ▪ Availability of donkeys and bulls for ploughing ▪ Motorable road ▪ High labour force ▪ Available land for developmental projects ▪ Available primary school block 	<ul style="list-style-type: none"> ▪ High illiteracy ▪ Low standard of living ▪ Old methods of farming ▪ Rural-urban migration ▪ Absence of market centre ▪ Absence of health centre ▪ Absence of lorry station ▪ High poverty
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ▪ Support from district assembly ▪ Support from CENSUDI ▪ Support from individuals 	<ul style="list-style-type: none"> ▪ Natural disaster ▪ Late disbursement of funds from district assembly ▪ Disunity among some of the community members.

SOURCE: GROUP FIELD SURVEY 2010

CONCLUSION

In a nut shell, Kantia community has the potential of developing due to the availability of the natural resources. It therefore requires immediate attention to ensure that these resources are harnessed effectively and efficiently.

However, inadequate water supply which base on the pair wise ranking emerged first among enlisted problems could be said to be the most pressing problem confronting the community and therefore makes it difficult for domestic and industrial activities to take place

Based on the content analysis employed by the group, other problems retarding the development of the community were also identified. As a result of low income, other related effects of these problems are enormous. Among these affects is illiteracy, low standard of living, lack of KVIPs, sufficient funds etc Moreover, low income in the community has other causes which cannot be underestimated. Some of these causes are low productivity, diseases and pest infestations, seasonal unemployment, poor pricing which is also caused by marketing problems

Despite the problems affecting the community, it enjoys some opportunities from a notable NGO called CENSUDI and help from other individuals.

The community is therefore endowed with natural resources that with little support and collaborative effort, development can take place to enhance the standard of living of the people in Kantia

RECOMMENDATIONS

Based upon the findings that were thrown up against the backdrop of our research, the following recommendations are made for the development of the good people of Kantia as a community.

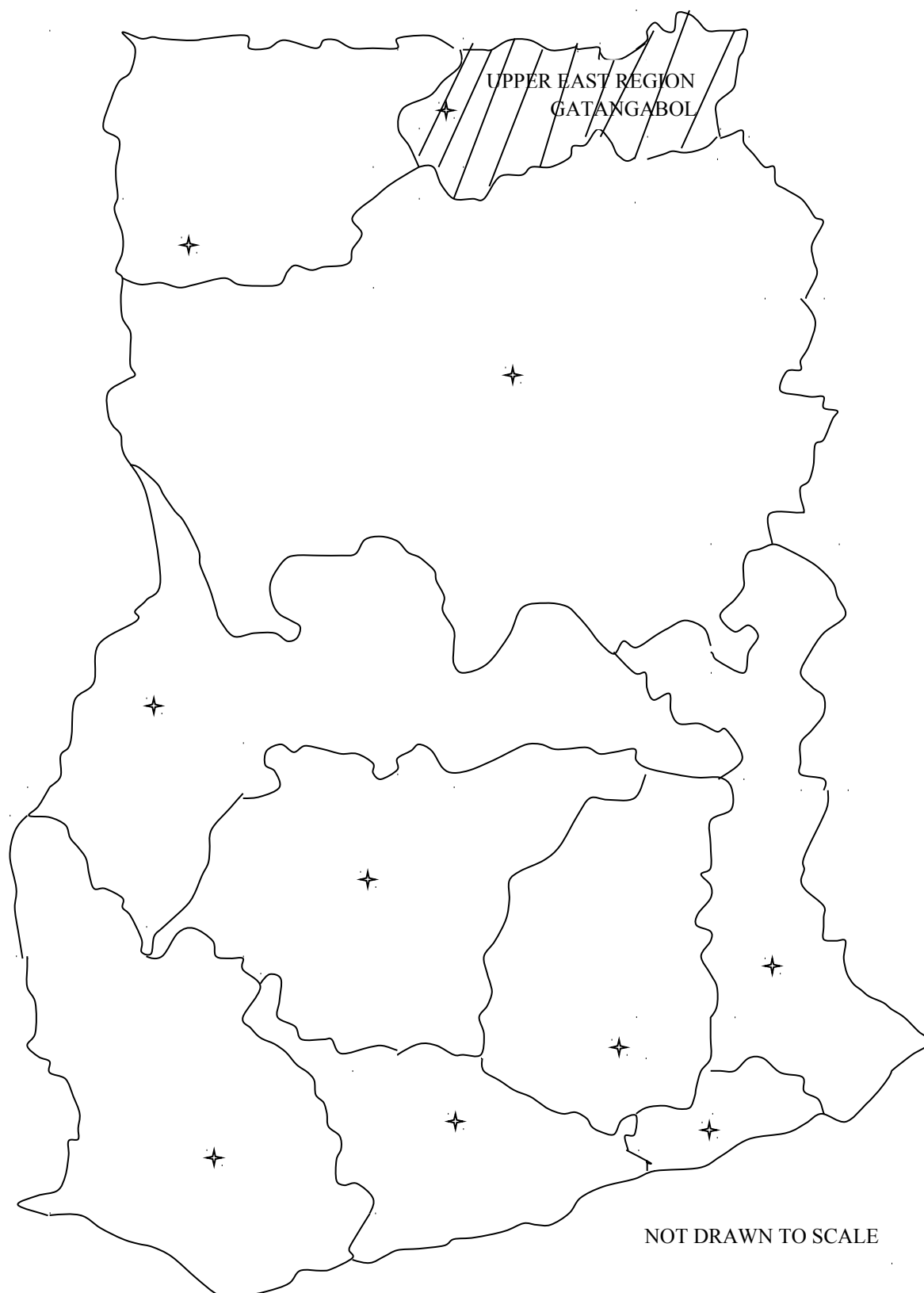
- The dam in the community should be renovated and enlarged for irrigational purposes
- The government and other development partners should haise up and raise a well-equipped mini market and lorry station in Kantia. This will facilitate trade and open the community up for growth
- The assembly person should interact and motivate the people regularly to help them become very active in their responsibilities
- Credit facilities and terms regarding land acquisition should be made flexible. This would made it possible for the farmers and traders to acquire funds to expand their farm and trading activities respectively
- MOFA, NGOs and other stakeholders should assist the people with modern agricultural implements as well as educational facilities. With this, the productivity of the community will improve
- Tree planting projects should be encouraged
- The high cost of dowry required for marriage should be reduced
- Finally, women should be given the chance to participate in decision making and fair share in property distribution.

APPENDIX

LIST OF ACRONYMS USED

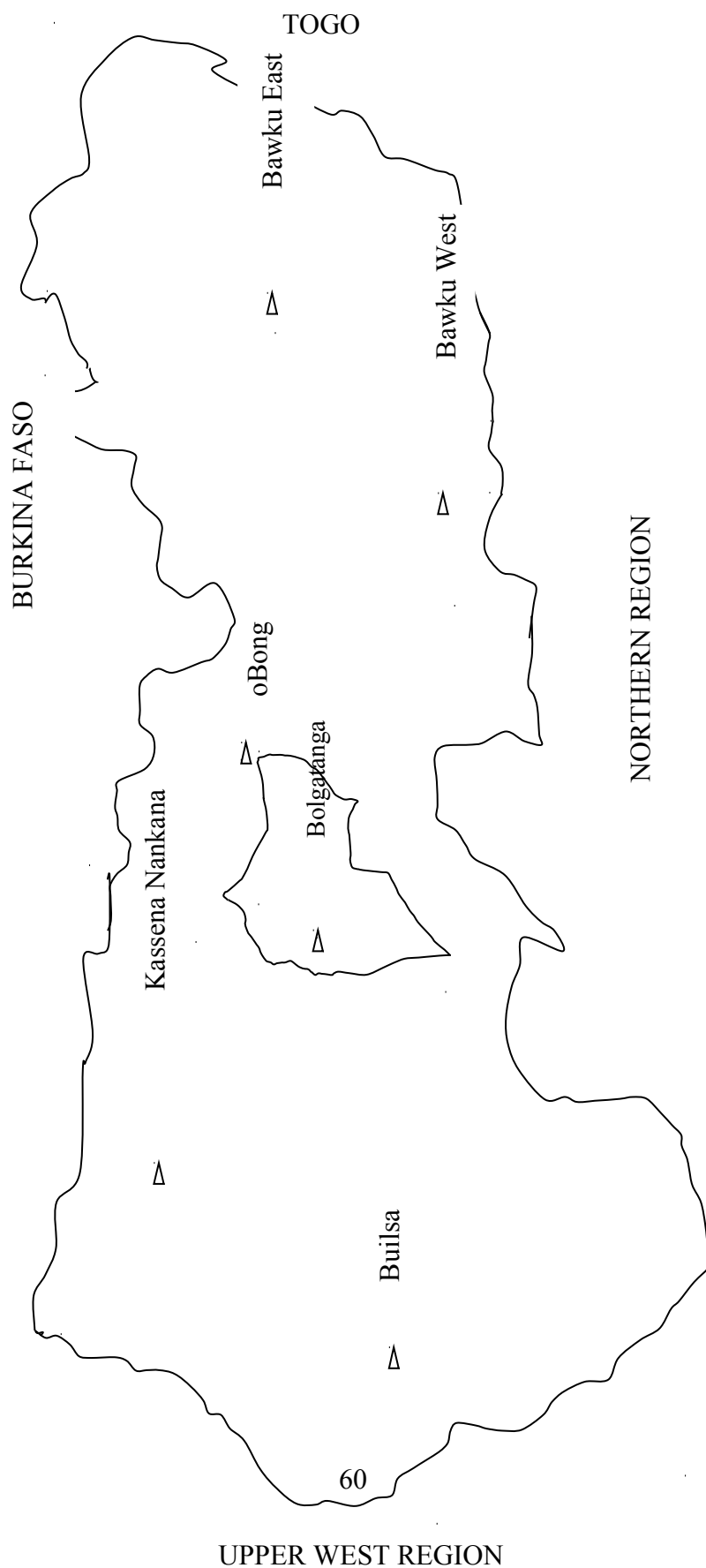
ACRONYMS	MEANING
CENSUDI	CENtre for SUstainable Development Initiatives
KVIPs	Kumasi Ventilated Improved Pits
NGOs	Non-Governmental Organizations
TTFPP	Third Trimester Field Practical Programme
JHS	Junior High School
SHS	Senior High School
TBA	Traditional Birth Attendants
ATR	African Traditional Religion
SWOT	Strength, Weakness, Opportunities and Threats
BMA	Bolgatanga Municipal Assembly
MOFA	Ministry Of Food and Agriculture

A SKETCH MAP OF GHANA SHOWING THE REGION UNDERSTUDY

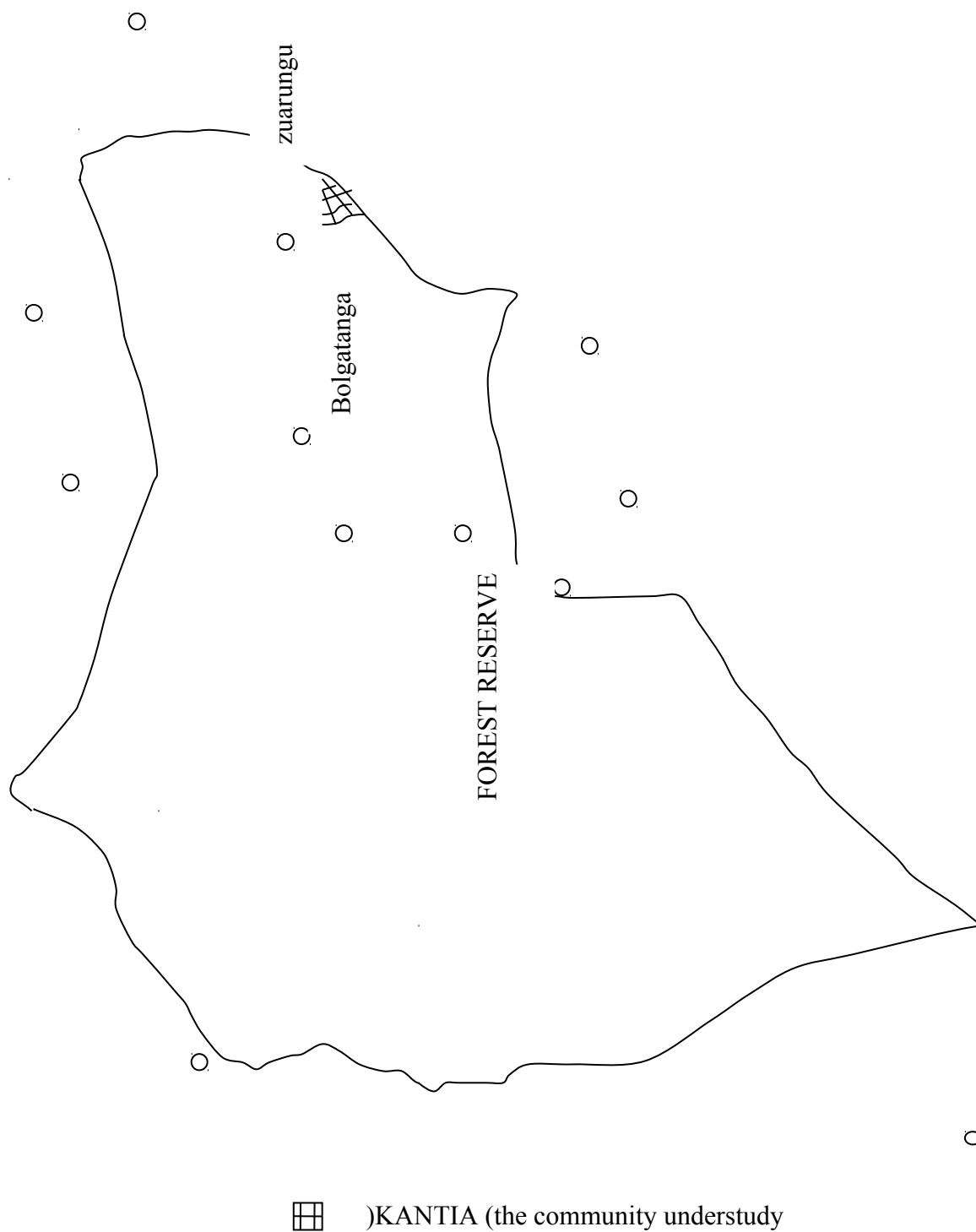


NOT DRAWN TO SCALE

A SKETCH MAP OF THE REGION SHOWING THE MUNICIPAL
UNDERSTUDY



A SKETCH MAP OF THE MUNICIPAL SHOWING THE COMMUNITY UNDERSTUDY



A SKETCH MAP SHOWING THE LAYOUT OF THE COMMUNITY UNDERSTUDY

