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SUSTAINING COMMUNITY FORESTRY IN THE KASSENA - NANKANA DISTRICT OF GHANA: PROBLEMS AND PROSPECTS

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ABSTRACT

The paper examines factors accounting for sustainable community forestry projects in the Kassena-Nankana District of Ghana. Semi-structured interviews, focus group discussions, transect walks and observation techniques were used to collect data. The paper demonstrates that existing local organizational structures that support forestry projects, community members' participation in project decision-making, external support and protection of the forests from bush fires contribute to sustainability. The paper shows that in the Kassena-Nankana District:

- *Community participation in decision-making for forestry projects is low at 27%.*
- *There exists local organizational structure in all the sampled communities.*
- *There exists a high incidence of bushfires on community forestry projects.*
- *There exists external support for community forestry projects in the district.*

Hence, it concludes that:

- *The practice of tree planting (community forestry) is gaining ground rapidly in the district, but the culture of caring for planted trees is still poor.*
- *The district has high potential in sustaining community forestry projects.*
- *Socio-economic constraints emanate from their low level of formal educational achievement that limits their access to information and zeal to mobilize external resources to support the projects.*

KEY WORDS: Sustainability, Community Forestry, Organizational Structure, Participation, Linkages

1.0 INTRODUCTION

The current environmental crisis in the Sahel and other dry land areas of Africa, including Northern Ghana has been attributed largely to artificial factors. Some of the major factors identified include high population growth, over-cultivation, overgrazing and deforestation. There is the growing concern about damage caused to the environment through the adoption of non-sustainable exploitation of natural resources in the process of generating short-term income for people engaged in these activities (Nsiah-Gyabaah, 1994; World Bank, 1986).

Reliable statistics clearly indicate that Ghana has only two million out of 8.222 million hectares of its forests left due to uncontrolled exploitation of forest resources (Avoka, 1998). Meanwhile, research findings indicate that unsustainable exploitation of natural resources is partly due to poverty of the people and rapidly increasing population of the sub-region (World Bank, 1986). Research show that many of the peoples of the sahel region, within which lies the Kassena-Nankana District, do not have other alternative sources of livelihood (Narayan, D. & Nyamwaya, 1996; Nkrumah, Makain & Arku, 1999). This suggests a need for addressing the challenges of natural resources conservation and promoting alternative sources of income for the people.

Considerable efforts have been made by the Ghana Government to protect and manage forest resources. However, the conventional method employed by government has yielded limited success over the past three decades. This is because, in the past, foresters were seen as policing officers, with sole responsibility for forest management. The local people were not involved in the forest resource development, and were often denied access to the resources. This was to result in constant encroachment on forest reserves by the people.

In order to ensure sustainable forest resource management, the concept of community forestry has been introduced in Ghana for over a decade. Relevant ministries, government agencies and non-governmental organizations have been encouraging and supporting District Assemblies, communities and individuals to adopt the concept as a means of providing for their local forest needs and helping to reduce the fast growing deforestation facing the nation (Nsiah-Gyabaah, 1994; Nkrumah, Makain & Arku, 1999). Meanwhile, inadequate financial resources and the inability to ensure equity in distribution of the benefits from these projects are major issues for actors in development. Measures to resolve some of these issues are now resulting in the encouragement of the use of new development strategies in developing countries. That is, developing countries have shifted from centrally managed and supply-driven approaches towards participatory approaches that place local stakeholders at the heart of the process (World Bank 1986; Chambers 1983; Nkrumah, Makain & Arku, 1999).

In view of the changing trends, the Kassena-Nankana District has adopted the community forestry concept to meet their forest needs. There are clear indications that the communities are gradually adopting the concept. However, one major problem that saddles the effective and efficient adoption and implementation of community forestry is care for planted trees in the fields. Since the success and sustainability of community forestry development depends largely on **"tree growing rather than tree planting"**, the aim of this paper is to find out factors responsible for the poor management of planted trees by communities that have adopted the community forestry concept in the Kassena-Nankana District. The key questions addressed in the paper are: To what extent are community members involved in decision-making processes in the community forestry projects especially regarding initiating the pro-

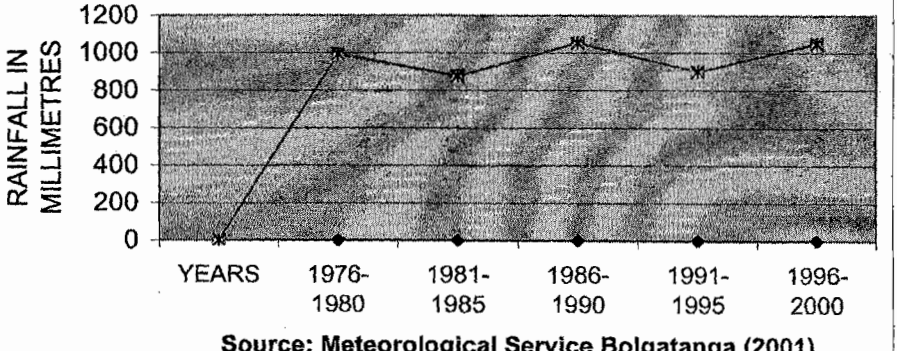
ject, organizing local structures to support and manage the project as well as choosing tree species and soliciting external support? Are community members protecting woodlots from bush fires? Are the Ministry of Food and Agriculture and other organizations assisting individuals or communities engaged in community forestry projects?

2.0 BACKGROUND

The Kassena-Nankana District is one of the six districts of the Upper East Region of Ghana. It is located approximately between latitude 11^0 10^1 and 10^0 30^1 North and longitude 1^0 01^1 and 1^0 30^1 West. It covers an area of about 1,676 square kilometers. The population of the District is approximately 150,949 (Ghana Statistical Service: 2000). Economic activities center largely on agriculture and related processes. The area is generally low-lying with an average height of 100 meters above sea level with few isolated hills rising above 300 meters. Tributaries of the Sissili, Tankara, White Volta and Tono rivers drain the area. A dam has been constructed over the Tono River, which provides irrigation opportunities for farmers in the District.

The climate of the District is similar to the rest of Northern Ghana – interior continental, characterized by pronounced dry and wet seasons (Walker, 1957). The two seasons are influenced by two oscillating air masses. The first, is the warm, and dry harmattan wind, which blows in a northeastern direction across the whole area. During this period (late November to early March), rainfall is virtually absent, vapor pressure is very low and relative humidity rarely exceeds 20%. Temperature is generally between 27^0-29^0 Celsius. The months of May to October marks the wet season. Total rainfall per annum amounts to 800mm. In addition to the low rainfall, the amounts of rainfall vary from year to year. See Figure 1 below.

FIG. 1: AVERAGE RAINFALL IN MILLIMETRES (5 YEARS)



Source: Meteorological Service Bolgatanga (2001)

The vegetation is mainly of the Sahel/Sudan Savannah types consisting of open Savannah with fire-swept grassland separating deciduous trees among which may be seen a few broad-leaved and fire-resistant tree species. Dense vegetative areas are mainly forest reserves (See Table 1 below).

Table 1: Forest Reserves in Kassena-Nankana District

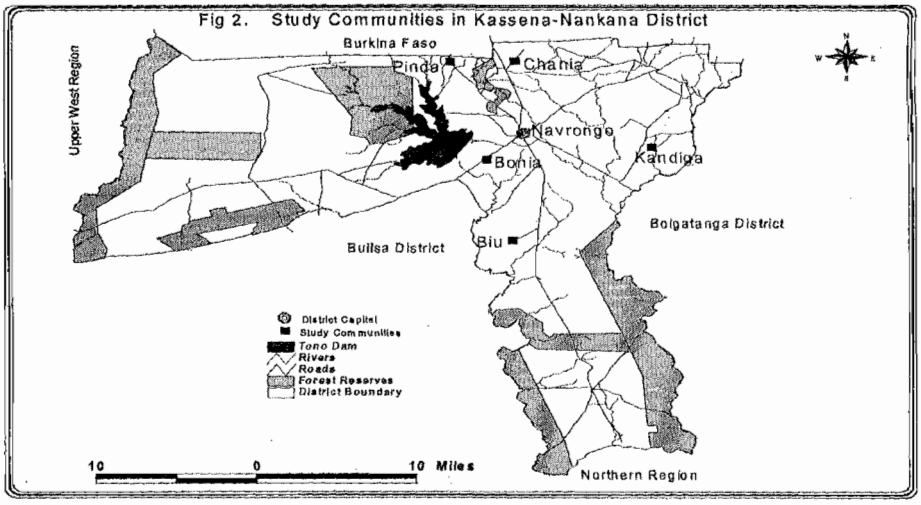
Range	Name of Forest Reserve	Gross Area (km^2)	Perimeter (km)	Remarks
Chiana	Chiana Hills	44.899	25.834	Communal
	Chasi Hills	72.492	32.693	forest Reserve
	Sissili North	82.742	27.688	Reserve
Kassena-Nankana	Aseblika	39.835	15.784	Communal forest
	Kalagul Naga	45.407	33.095	Communal forest
	Tankwiddi West	119.094	33.142	Reserve
	Saboro	0.295	2.380	Reserve
	Tankara	5.074	12.369	Communal forest Reserve
	Neboro	3.106	14.172	
		411.950	197.167	

Source: District Development Planning Office, Navrongo, 1995.

The land tenure system in the District is mainly communal, and community members may allocate virgin land, if any, with the permission of the *Tindana* or *Tigatu* who is the custodian of the land (Dittoh, 2004; Kassena-Nankana District, 1996-2000). Communities in the study area are highly dependent on fuel wood as their main source of energy for domestic and local small-scale industries such as pito brewing and shea butter extraction. With continuous reduction in the vegetative cover, people are gradually turning to millet, guinea corn and maize stalks as sources of energy. The use of these stalks for fuel wood contributes to low soil fertility because they are no longer returning to the soil as organic matter. These prevailing conditions motivated the researcher to embark on data collection in 2001 to ascertain the prospects of existing community forestry projects in the district.

Out of the District Forestry Office's list of fifteen communities currently undertaking community forestry projects, five communities were randomly selected. They were Bonia, Biu, Chania, Kandiga and Pinda representing a cross-section of the district (Figure 2). The selection of sample communities to represent the District was based on relative homogeneity in terms of ethnicity, occupation, culture, belief systems and religion.

Various methods were employed such as transect walks, interviews, focus group and key informant discussion. Sixty members of the community forestry projects were interviewed from the five selected communities. Quota for each community was determined by population size of each community's committee members. Interviewees were chosen from households through a simple random sampling method. In addition, one executive member from each of the selected forestry project committees was interviewed.



3.0 THEORETICAL FRAMEWORK

According to Eckholm (1975), there will never be enough foresters to plant trees to replace the fast removing vegetation cover globally. Therefore, governments must mobilize their peoples and help them through the concept of community forestry. Through this concept, people participate in decision-making and are given the technical and financial assistance to support their future demands for fuel-wood, fodder, fruits and environmental protection.

Two schools of thought have emerged on the forms of community participation. These are the Participatory and Beneficiary Approaches (Wells and Brandon, 1992). The Beneficiary Approach perceives community participation in projects as passive because they have little or no contribution to make in project implementation. The goals of this approach to development are set on tangible economic benefits such as income levels and farm productivity. In the case of the Participatory Approach, projects seek to involve the people in all phases of the project cycle from initiation to implementation stages. The Participatory Approach is thus an expression of the populist theory of development, which accepts the positive role of the community in mobilizing themselves to address some community problems (Midgely, 1989).

The Food and Agricultural Organization (1986b) support the participatory concept by suggesting that communities must not simply accept any species given to them in an extension project. They must be allowed to choose the species they believe, after proper advice on and consideration of what best suits the area and community needs. This research will fully utilize this concept in assessing communities' forestry projects in Kassena-Nankana District. Midgely (1989) as well as Nkrumah, Makain and Arku (1999) observe that participatory approaches to development promote and accelerate economic and social progress because the benefits are equitably distributed. Other advantages of community participation include the strengthening of interpersonal relationships, fostering of self-confidence, improvement of material gains and reduction in feelings of powerlessness and alienation.

Cohen and Uphoff (1977), Paul (1987) and Salmen (1987) identify five main areas in which local people can participate in rural development projects such as community forestry. These comprise:

- Information-gathering-project designs to collect information and share information with intended beneficiaries on the overall project concept and goals.
- Intended beneficiaries are consulted on every issue of the project. Beneficiaries have an opportunity to interact and provide feedback during project design and implementation.
- Beneficiaries participate in decision making for project design, implying a greater control and responsibility than the passive acceptance of possibly unwanted benefits.
- When beneficiary groups identify a new need in a project and decide to respond to it they are taking the initiative for their own development.
- Participatory evaluation by beneficiaries can provide valuable insights and lessons for projects design and implementation.

4.0 FINDINGS

4.1 Demographic characteristics of respondents

Table 2 below reveals that 90% of community forestry members were farmers. The second highest of 7% were petty traders and the least of 3% were civil servants. The results are in conformity with the state of the district profile. That is, the district is predominantly rural with more than 70% of the population living in rural settlements with population less than 2000. The principal land uses reflect the almost total rural base of the district economy. About 80 % of the economically active people depend on agriculture for their livelihood. Large tracts of land are put to cultivation of major crops such as maize, millet, guinea corn and groundnuts (Kassena–Nankana District, 1996 – 2000).

TABLE 2: Occupation of Respondents

Occupation	*No. of Persons*	*Percent*
Farmers	54	90.0
Petty Traders.	4	6.7
Civil Servants	2	3.3
Total	60	100.0

Source: Field Survey, October 2001

On literacy, Table 3 shows that 83% of community forestry members had no formal education. The second highest of 10 % had primary education and those with secondary education were 7%. The results confirm the low literacy rate of 18% in the Upper East Region, which comprising the Kassena-Nankana District. The literacy rate is lower than the estimated national rate of 40 % (Regional Education Office, 2003).

Table 3: Educational level of Respondents

Level of Formal Education	No. of Persons	Percent
No education	50	83.3
Primary	6	10.0
Secondary	4	6.7
Total	60	100.0

Source: Field survey, October 2001

4.2 Community Organizational Structure

Information obtained from the sampled community members indicates that there exists an organizational structure at the community level. A complex yet hierarchical structure was depicted in all of the communities that participated in the study.

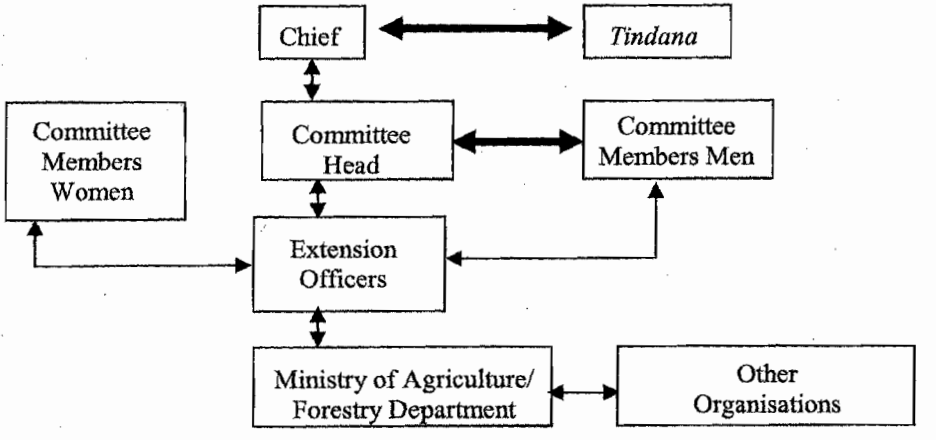
The Chief and the *Tindana* are the top-most authorities in the community and function in different but complementary roles for the sustenance of the community. At the traditional, district, regional or national levels, the chief is the political head and leader of the people, through whom community challenges and potentials are channeled for redress on any matter affecting the community. The *Tindana* is the custodian of the land and pacifies the gods for fruitful yield and peaceful and harmonious co-existence with the natural environment.

At the second level of this hierarchy are community members selected to serve on a committee that mobilizes human and financial resources and oversees the location, activities, implementation and monitoring of the community forestry project. The

committee comprises men, women and youth, headed by a chair. The chair links the committee to the chief and *Tindana* who, in turn, are linked by their traditional authority as the topmost of the hierarchy. The members of the committee and chair link the community to external and internal supporters of the project. Thus, all matters relating to the project are channeled through this group to the community. For example, extension services on provision of seedlings, planting methods, post-planting guidance, provision of tools and money or labour to manage the project are channeled through the committee.

According to community members a strong link, indicated by the size of the arrow in the diagram, means good working relationship between the Chief and Tindana, committee through its chair, and external sponsors namely the Ministry of Agriculture through the District Forestry Department, other organizations like Irrigation Company of Upper Region (ICOUR), and the Environmental Protection Agency (EPA). They perceive good working relationship as the Tindana and chief providing land for project, mobilizing local fund and labour to support the project and respecting decisions taken by the committee instituted by the community in the interest of the project. Good working relationship with the external sponsors means receiving tools, seedlings, or finances on time as well as receiving extension services at least once a month. For them, a weak link (poor working relationship) means delay or inadequate provision of services or materials from external sponsors. As well, weak link implies a situation where the chief and/or Tindana ignores suggestions and views expressed by the committee overseeing the project. There is a multi-dimensional/directional engagement among the various components as shown in Figure 3 below.

Figure 3: Community Organizational Structure



Source: Field Survey, October 2001

Figure 3 depicts a strong link (meaning good working relationship) between the chief and Tindana at the topmost hierarchy. This is evident in the relationship between chief and Tindana, the committee's head and committee members (men), as well as the extension officers and the Ministry of Agriculture/ Forestry Department. Figure 3 also depicts a weak link among the project head, project committee members (women) and the extension officers who link them to external supporters. Also, there exists weak link between the Ministry of Agriculture/Forestry Department and other organizations.

4.3 The weak linkages are the backwash effect of the following:

(a) The participatory and beneficiary approaches initiated in encouraging farmers to plant trees, which did not allow individuals, group or communities to be part of the decision-making at the onset of the project. Thus, seedlings were transported to individuals, group or community by the district forestry department without consultation on choice of seedlings, desire for farmers to plant trees and ownership rights to the project;
(b) The District Assembly's ineffective coordination and monitoring of organizations involved in promoting community forestry projects in the district and;
(c) The Extension Officers' inability to sensitize and educate the intended beneficiaries on the importance of the community forestry project as a concept in the district, in maintaining a balance ecosystem.

4.4 Community Forestry Projects

During transect walks selected communities forestry projects were inspected. Discussions with informants revealed that plot sizes vary from 1.5 to 6 acres and four out of the five projects had experienced bush fires. See Table 4 below. The highest is three for Pinda, whose project is three years old. The least of two incidences of bush fires occurred in Chania, Biu, and Kandiga, with project life two and three years, respectfully. The only exception was the Bonia project, which is five years old and had not experienced any bushfires. The results depict a high incidence of bushfires, especially during the long dry period in the district.

Table 4: Bushfire Incidence in Community Forestry

Community	Age of Project	Size (in acres)	Frequency of Bush Fire
Chinia	2	6	2
Bonia	5	4	0
Pinda	3	3	3
Kandiga	3	4	2
Biu	2	1.5	2

Source: Field survey, October 2001

During a focus group discussion, committee members revealed that most bushfires were human-induced, intentionally or unintentionally. This finding supports Nsiah-Gyabaah's (1994) assertion that environmental degradation is natural and/or human-induced.

Table 5 below reveals that males dominated the community forestry committee in all the sampled communities. Bonia had the highest of 83% males with Chiana the least of 67%. Chiana had the highest female committee members of 33% and Bonia the least of 17%. These results reflect the male-dominated nature of the communities, a typical feature characteristic of the traditional setting in the Kassena-Nankana District (Nkrumah, Makain & Arku, 1999). The main reasons given by community members were that men head households, own families, control family property and serve as mouthpiece of families.

These assigned roles empower men as the supreme authority in the communities. As a result, women are not allowed to participate in any activity, unless permitted by their husbands if married, their father, uncle or brother if they are single, separated or widowed. These are the main reasons for poor representation of women in the sampled communities.

Table 5: Sex of Forestry Project Committee Members

COMMUNITY	MALE		FEMALE	
	FRE-QUENCY	PERCENT	FRE-QUENCY	PERCENT
Chinia	6	66.6	3	33.4
Kandiga	4	80.0	1	20.0
Pinda	3	75.0	1	25.0
Bonia	5	83.3	1	16.7

Source: Field survey, October 2001

The survey revealed that there was little consultation between external supporters and community members. The majority, comprising 83% of community members, were not involved in the selection of tree species for the forestry projects. The least of 17% claimed they were involved. See Table 6 below.

Table 6: Community Members Involvement in Tree Species Selection fro Planting

RESPONSE	NO. OF PERSONS	PERCENT
NO	50	83.3
YES	10	16.7
TOTAL	60	100.00

Source: Field Survey, October 2001

The major reason for this finding is the participatory and beneficiary approaches initially practiced in encouraging communities or individuals to plant trees. With this approach, District Forestry Officers supplied tree seedlings to communities at no cost to individuals, groups or sections of the community who had no desire of planting tree. Consequently, tree seedling distributed either remain lying to whither in the towns or when planted were not protected from animals or given any care to survive (Nkrumah, Makain, & Arku 1999). This approach was less successful because the intended beneficiaries were not part of the initial process.

Table 7 reveals that 45% and 40% of community members prefer fruit trees seedlings (e.g., mango, cashew et cetera) and fuelwood, respectfully. Those who preferred fodder for livestock were only 5%. These are indications that the community members' main focus was on meeting their basic needs through the forestry projects rather than conservation. That is, using the fruits to supplement their food requirements and generating additional income from the sale of fruits to augment household income and meet food needs during the long dry periods. As well, they were interested in securing fuel wood, their major source of energy for domestic and small-scale industries.

Table 7: Community Members Preference for Tree Species

Species Preference for Trees	No. of Persons	Percent
Fruit (Mango, Cashew etc)	27	45.0
Fuel Wood	24	40.0
Medicinal Plants	6	10.0
Fodder livestock	3	5.0
Total	**60**	**100.00**

Source: Field survey, October 2001

According to community members, the level of satisfaction expressed in Table 8 was based on the number of visits to their communities by extension officers, delivery of materials, seedlings or farm practice services rendered within specified time frame.

Table 8: Beneficiary Assessment of External Support

Level of Satisfaction	No. of Respondents	Percent
Very Satisfied	3	5.0
Satisfied	24	40.0
Not Satisfied	33	55.0
Total	**60**	**100.00**

Source: Field survey, October 2001

Consequently, those expressing "very satisfied" or 5% of the respondents meant any two of the aforementioned was received, at least once a month. The majority, 55%, expressing not satisfied meant none of these services was rendered to their communities within three months period. Even though they may have received some support, they could record once or twice a year. They claimed that such services or support were either too late or associated with constraints the community members could not readily resolve. For example, delivery of seedlings and training for planting was scheduled for March in May, when farmers were busy weeding their crops. The likelihood that any farmer will sacrifice working on livelihood crops for a forestry project that will not provide any immediate return like food or income for his/her family's survival is very remote.

5.0 CONCLUSION

The study revealed that the community forestry approach is gradually being recognized in the Kassena-Nankana District. However, there is low collaboration and coordination in activities among the institutions and organizations involved in community forestry in order to provide effective and efficient tree caring support services to the communities engaged in the project. One of the main reasons for this setback is the ineffective application of the participatory and beneficiary approaches adopted at the planning and implementation stages of the community forestry project. This approach has not provided the opportunities for the beneficiaries to participate fully in the decision- making processes of the projects.

The findings from the study reveal that the community level organizational structure for implementing the community forestry activities is weak and ineffective. That is to say, the project committees lacked the organizational capacity and strong external links to mobilize, effectively, external resources in support of projects. Even at the local level, there exists a weak link between the Committee chair and female committee members. Moreover, the weak link between the District Forestry Office and organizations such as the Irrigation Company of Upper Region (ICOUR), and the Environmental Protection Agency (EPA), the Extension Officers and the Project Committee Head and members encourages high dependence of supporting institutions on contact persons. The contact persons (i.e., influential member(s) of the community living in or outside the community) become main source through whom information, material or funds for community projects are channeled. The weak link between extension staff, external supporters and community members on tree species selection and decision-making at the initial stages of the project needs careful review and improvement during District planning for successful community forestry.

6.0 RECOMMENDATIONS

Despite the teething problems of community forestry project in the District, it is apparent that the concept of community forestry can be sustained. Evidence from the sampled communities clearly indicates that the district has a high potential in sustain-

ing community forestry project. Thus, it must be encouraged at all levels through effective, efficient and supportive mechanisms well coordinated between all stakeholders involved and interested in maintaining balance in the ecosystem.

Community Forestry Projects could become an integral part of the general framework of rural development in the District and other parts of Ghana. This is because isolating community forestry project and treating it as secondary will only endanger its prospects.

There should be active participation of the communities throughout the planning and implementation process of the project. Involving the community is paramount in the choice of project site, selection of tree species for the project and mobilizing resources, including labour, to care for the trees planted.

Institutions and organizations involved in establishing community forestry projects should avoid using contact person(s) as link to any project. Rather, they should assist the communities to establish competent local organizational structure or strengthen existing ones and deal with them as a group or team for effective and efficient care of planted trees.

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