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STAKEHOLDER CONFLICTS AND SUSTAINABLE FOREST MANAGEMENT IN THE ASSIN NORTH AND SOUTH DISTRICTS

BY

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DECLARATION

Candidate's declaration

I hereby declare that this dissertation is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's signature: ..... Date: 23/12/08

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Supervisor's declaration

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

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ABSTRACT

The Assin North and South districts are well endowed with forests and wildlife resources. However, conflicts among the numerous stakeholders over these resources are leading to the unsustainable management of these resources.

It has been established that several factors account for the unsustainable management of the forests and wildlife resources. Though several approaches have been applied by the resource managers to promote sustainable resource management, the conflict among the numerous stakeholders over these resources still remain a serious problem in the study area.

The research was designed not only to find out the causes of the conflicts but also to determine the stakeholders' perspective on the solutions to the conflicts to enhance sustainable forest resource management. The outcome of the study was that so many reasons accounted for the dissatisfaction among stakeholders and topmost among all was lack of trust among stakeholders.

In conclusion, conflict among stakeholders was found to be common in the study area and it resulted in the unsustainable exploitation of forest resources. Sustainable forest resource management has therefore been thrown out of gear by these conflicts. It was recommended, among other things, that the government should develop the capacities of the stakeholders by strengthening and sustaining the participatory processes in forest programmes planning, solve the rural poverty problem, review the revenue sharing formula to ensure equity and include conflict resolution principles in forest resource management planning programmes.

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AOSL	Administrator of Stool Lands
CFC	Community Forest Committee
DA	District Assembly
FAO	Food and Agriculture Organisation
FC	Forestry Commission
FD	Forestry Department
FFC	Forest Fringe Community
FMP	Forest Management Plans
ITTO	International Tropical Timber Organisation
LI	Legislative Instrument
MLF	Ministry of Lands and Forestry
MLF&M	Ministry of Lands, Forestry and Mines
NTFP	Non-timber Forest Products
RMSC	Resource Management Support Center
SFM	Sustainable Forest Management
SRRA	Social Responsibility Agreement
TA	Traditional Authority
TBI	Tropenbos International
TRM	Timber Resource Management
TUC	Timber Utilisation Contract
TUP	Timber Utilisation Permit
WCED	World Commission Environment and Development

CHAPTER ONE

INTRODUCTION

Background of the study

Since years immemorial man has lived in the environment, which is a home, a resource and a repository for waste. Every society developed from one geographical environmental location of a kind and as societies evolves, various knowledge systems also evolved about the environment and all its resources including the forests. Most African societies believe the natural resources are shared among the dead, the living and the generations unborn. The societal belief systems resulted in the development of reverence for the environment and the resources, which also evolved into indigenous conservation and preservation measures to protect and enhance the sustainable use of nature's resources for the benefits of the stakeholders (the dead, the living and posterity).

Before the 1960s, natural resources were seen as plentiful, and were there to be exploited as cheaply as possible and in quantities which did not acknowledge resource frontiers (Mannion et al., 1994). Development was seen as synonymous with the destruction of forests and forest resources for economic growth. Many people raised objections to this global approach of unsustainable development during that era; unfortunately they were trated as marginal voices.

Schumacher (1974), in his book "Small is Beautiful" succeeded in stirring up environmental consciousness in the developed countries in his era.

Indeed natural resources were plentiful and looked exhaustible when populations were low. Unfortunately, as the world population increased and the development craze started, the pressure on natural resources also increased. This resulted in the scramble for the scarce resources, which subsequently led to the developed world colonizing the underdeveloped countries, and this cascaded down to the local level where clans and tribes fought for lands and resources.

Since 1972 there has been an increased attention of the world community to issues of conservation and wise use of natural resources, culminating in the 1987 Earth Summit organized by the United Nations Conference on Environment and Development in Rio de Janeiro, Brazil. In an effort to held the deleterious effects of deforestation, global warming and climatic change, certain European countries unilaterally moved to restrict the importation of tropical timbers. In response, the International Tropical Timber Organisation (ITTO), of which Ghana is member, launched its Target 2000, aimed at ensuring that trade in tropical timber will be sourced from sustainable managed forests by the year 2000.

The global thinking concerning growth and development changed and the world began to think about development that will sustain the human environment. Sustainable Forest Management (SFM) was also carried along like all other development processes. The World Conference on Environment and Development (WCED) in (1987) defined Sustainable Development as "development that meets the needs of the present without compromising the

ability of future generations to meet their own needs" became adoptable for sustainable resource management.

Malthus (1798) warned of resource depletion in relation to uncontrolled population growth. He postulated that there was the tendency for the population of some countries if not checked by dwindling food supply to grow at a geometric rate and double every 30 to 40 years. Malthus explained that as population increased, geometrically, land, which is a fixed factor, would cause food supply to expand at an arithmetic rate. That means that food production will actually decline with increasing population. Todaro (1989) criticized the Malthusian Theory because technological advancement was not factored in, and explained that technological progress will offset the inhibiting forces of rapid population growth.

The forest and its resources continue to decline at alarming rates with population growth and also with improved technologies in road construction, transport and equipment for timber harvesting and processing. The worlds' demand for growth and development increased the deforestation through timber exploitation, land for settlement expansion, agriculture, reangeland mining, infrastructural development and other non-profitable actions like wars, wildfires, floods, pollution and many others. In a world where poverty and inequality are endemic, there will always be a scramble for natural resources to improve, maintain or even advance the quality of life.

In 2005, the world population hit an all time height of 6.477 billion with an annual population growth of 80 million. As the human population increased,

threat of biodiversity becomes greater. The situation is much more pronounced in the Tropical Regions with Sub Saharan Africa expecting a rise in its current population of 133 million to an estimated 189 million by 2020 and 307 million by 2050 (Eves et al., 2002).

According to an ITTO (2006) survey of forest resources in the tropics, there are 1,521 million hectares of forests in the tropics and out of this 814 million hectares are under permanent forest estates. It is also said that 36.33 million hectares are managed sustainably. All the tropical forests are said to be under severe threats by war and armed conflicts, unprofitable to government, concessionaries and local communities because of high costs of management, the threats of conversion to other land uses, fire, illegal logging, lumbering and trade, lack of resources to manage these forests sustainably and poor condition of service and low moral among resource managers.

In Africa, and for that matter Ghana, the situation is not different since that ITTO survey covered the whole continent of Africa. The forest reserves of Ghana are diminishing at an alarming rate. A survey conducted on Ghana's forests revealed that, out of the 266 gazetted forest reserves, only about 16% are productive. The rest are in various stages of degradation. However, the forestry sector continued to be the third highest foreign income earner and contribute 6% of the country's gross domestic product (GDP). Close to 7.5 million cubic meters of timber is removed annually through both legal and illegal means. The legal annual allowable cut is 1.5 million cubic meters, which means the rest is illegally harvested. Wood fuel also account for about 16 million cubic meters per annum

and this is about 75% of all domestic and industrial energy sources in the country (Forestry Commission, 2003).

Ghana with its current population growth rate of 2.8% per annum will have its available forest destroyed in no time by 2050 at the present deforestation rate of 65,000 ha per year. Ghana has about 1.8 million hectares of permanent forest estates, which is being deforested at the rate of 65,000 ha/year. All things being equal, if nothing is done to forestall it, in 25 years from now, there would be no productive forests for Ghana. Basically, the pressure come in the form of clearing land for agriculture, settlement, mining, fuel wood, timber, game for food, infrastructural development and baseless setting of wildfires to the forests. As the resource dwindled, stakeholders are in serious contention over the little that is left. Under these circumstances, there is an urgent need to protect and develop strategies for the sustainable management of the forest resources.

In Ghana, like in many other countries where conflicts exist over natural resources especially forests resources, the environment is degraded and sustainable forest management and livelihood programmes are undermined and poverty is consequently aggravated.

According to the 2007 Forestry Commission's annual report, forest destruction for livelihood in the Assin North and South Districts, is on the increase. The Central Region of Ghana is the fourth poorest region in the country and besides the Asikuma-Odoben-Brakwa, Assin North, Assin South and Twifo Heman Lower Denkyira and Twifo Heman Upper Denkyira Districts, the rest of the thirteen districts are poorly endowed with forest resources. There are no

"industries" in the area and most of the people depend directly or indirectly on the forest and forest resources for their livelihoods. The rate of population growth has also placed unprecedented pressure on the forests resources.

The struggle for survival has brought about higher than acceptable levels of timber exploitation in the districts under study through illegal means. Presently almost all the timber in off-forest reserve areas are illegally harvested or too remotely located that harvesting is not possible for lack of roads. A visit to the forest reserves showed that they are seriously under siege by illegal timber harvesters. According to the regional forestry manager for Central Region (Mr. J. S. K. Elletey), sustainable forest reserve planning has become very difficult since the illegalities are varied and widespread.

Land disputes are very common in the two Assin districts and the community leaders spend most of the time contending in the courts over land ownership. The youth are therefore having field-days in poaching, illegal lumbering and the clearing of lands for agriculture. Reports from the forestry office in Cape Coast indicate that the most devastating of the entire siege on the forest resources is the indiscriminate felling and sawing of timber by chainsaw operators.

According to the 1992 Ghana Living Standards Survey (GLSS), the two Assin districts are the fourth poorest districts in the Central region. The implication of this is that the average income per household in the district is below seventy thousand cedis per annum; illiteracy is high because of the low

level of education in the district and ignorance is high due to poor information flow.

Statement of the problem

The two Assin districts are among the under-privileged districts in the Central Region in terms of infrastructure and development. Though it has a very large land area with fertile soils, large tracts of forests, which are rich in timber and wildlife, the resources are not available to all. The reason according to the district magistrate is that much of the lands have injunctions placed on them by law courts. An investigation conducted at the Assin Fosu forestry district office indicate that over 72 local timber contractors have been permitted to harvest timber to meet the timber needs of the district. They all failed due to lack of funds and machinery to operate.

There is also a very strong government presence in the district to implement all the necessary policies and programmes to ensure equity and sustainable management of the forest resources in the district. Among the decentralized government ministries/departments/agencies are the Ministry of Lands, Forestry and Mines, District Assemblies, the Police Service and the Judicial Service. Despite all these, there is very serious indiscipline in the harvesting of forest resources. The contractors are not harvesting according to the yields/quotas given to them and will not pay the stumpage fees of what they have harvested. There is a very high influx of chainsaw operators in the district and they are illegally and indiscriminately felling and sawing timber and thereby

throwing management plans out of gear. These illegal timber sawing are mostly done inn connivance with some landowners and the forest fringe communities who violate the participatory agreement signed with the Forestry Commission (Forest Services Division situation report for 2006).

The police are reluctant to arrest the perpetrators and the judiciaries do not sufficiently punish the culprits causing the chainsaw operators to use violence to ward-off the forest managers in pursuit of their selfish interests. Poaching for bush meat is equally worrying. The conflicts are heightening between resource managers and poachers/chainsaw operators over illegal harvesting of forest resources; among chiefs over land, boundaries, benefit sharing, and forest resources and also between the District Assembly and resource mangers over their inability to stop illegality and the use of force to fight illegality (Forest Services Division situation report for 2006).

The main objective

The main objective of the study is to determine the impact of stakeholder conflicts on sustainable forest management in the Assin north and south districts. Specifically, the objectives are:

- To determine the local people's perception on the usefulness of forests and forest resources;
- To determine the causes of indiscriminate destruction of forests and forest resources

- To determine the causes of conflicts between stakeholders over forest resource use and management and
- To determine what stakeholders perceive as the best way to reduce the conflicts and resource destruction.

The study has been structures to answer the following questions:

- How do stakeholders perceive the importance of forest?
- What are the causes of forests and forest resources destruction?
- What are the causes of conflicts among stakeholders?
- How does stakeholder conflict affect sustainable forest management? And
- How can stakeholders resolve their conflicts?

Significance of the study

The incorporation of stakeholders at all levels of policy, program and project planning, management and equity in benefit sharing in a transparent and participatory manner will lead to public understanding and acceptance of sustainable forest resource management. Anything different will only heighten the already existing conflicts that will enhance the destruction of forest and forest resources. The study is to unearth the causes of conflicts over forest resources in the Assin north and south districts that are hampering sustainable management and contribute to the current search for alternate resource conflict resolution to promote sustainability. It is also to provide information for a more participatory policy review and formulation for future forest management policies, programs and projects.

Limitations

This research being a case study did not cover one hundred percent of the total population of the area under study and could therefore not be totally sufficient. Again, the search did not cover the orthodox methods of conflict resolution like the court but rather employ tools that would facilitate the review of policies, programmes and projects periodically and participatory to suite changing trends and social needs. Finally, for lack of adequate funds and limited time, sample sizes were reduced for convenience.

Definition of terms

Taungya – A Burmese word – a process of forest plantation development where forestland is given to village communities to farm and plant food crops and in turn plant tree crops for forestry. The farm is then maintained by the farmers for three years by which time the tree crops may close canopy and no more favourable for the food crops and a new plot is given out. The farmers have full benefits from the food crop, while forestry has full benefit of the tree crop. It is also a form of land tenure system in Bruma.

Organization of chapters

The study has been divided into five chapters. Chapter one covers the background to the study, statement of the problem, objectives of the study, justification of the study, limitations, definitions and organization of the study. The chapter two deals with theoretical and conceptual literature reviews on

resource conflicts, past or forest management practices in retrospect, current forestry practices, poverty and forest degradation and participatory forest management.

Chapter three provides a vivid description of the methodologies used, and these include data collection procedures and the statistical analysis that would be employed to arrive at a tangible presentation of the findings. The fourth chapter showcases the data analysis and a discussion of results and findings. The statements of findings and a summary of the chapter are also included.

Finally, the fifth chapter contains the summary, conclusion and recommendations. A summary of the findings and their interpretations as related to the theories in the literature reviewed and conclusions drawn based on the interpretations made. Recommendations were made for the adoption of the findings for policy formulations, further research and for other practical use.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Theories of resource conflicts

Conflicts emerge because people have different use for resources such as forests, water, pasture and land, or want to manage them in different ways. Disagreement also arises when these interests and needs are incompatible, or when the priorities of some user groups are not considered in policies, programs and projects (FAO, 2000).

The violation of basic human rights in forest use or management is at the root of many conflicts, particularly when powerful political or economic forces control the management and use of resources that are needed by communities for survival (Fisher et al., 2000). They reiterated that if we want peace we must seek justice. Conflicts in community forestry are not simply the outcome of centralized decision-making or changes to more decentralised form of governance. It is an inevitable situation in which people have differently defined interests and goals in the use and management of forest resources. Conflicts therefore occur over tenure, access, control and distribution of forestlands or products. Arnold, (1992) noted that crucial issues of resource conservation and sustainable development could only be addressed if people enjoy a secure livelihood. The concerns of stakeholders in forest resources go beyond strict economic interests, and

addresses issues of equity, participation, and integration and of increasing role of all groups in decision-making processes concerning natural resource management.

It is commonly said that conflicts are bad and therefore regarded for negative tendencies only. They are however normal and form part of human social and political life. Buckles and Rusnak (1999) looked at conflict as an intense experience in communication and interaction with transformative potential. For marginal groups seeking to redress injustices or extreme inequalities in resource distribution, conflict is an inherent feature of their struggle for change. Most conflicts are also characterized by the presence of multiple stakeholders who themselves may have subgroups with varying interests. When they are not properly identified and addressed, they result in violence, cause environmental degradation, disrupt projects and undermine livelihoods.

The conditions for sustainable development cannot be said to be in place when hundreds of millions of people in developing countries who are directly dependent on environmentally important and threatened natural resources, including forests, have no nationally authorized legal incentives for sustainably managing those resources (Owen, 2000).

Historically, forest management of public and sometimes private lands has been an activity of State and its agencies, established through constitution, legislation and regulations that largely reject local claims to forest resources. Professionals and bureaucrats led these activities, deriving options for use based on economic, scientific and planning criteria. Decision makers then determine use and management strategies through negotiations with most influential parties in a

wider political arena. The gradual globalisation of the world economy has, in many areas, reinforced State claims to forest resources. In such instances, this has further facilitated the exploitation of forests by nationals and transnational companies, to the disadvantage of local forest users (Poffenberger, 1999).

Therefore most development plans and programs that are pursued without indigenous concerns are often not welcome or practicable leading to failures in most protective and developmental forest management programs in and among societies worldwide. Regrettably, sustainable forest management often pursue policies and programs that do not cater for socio-cultural believes and the indigenous well-being of societies and thereby alienating the indigenes from their 'home'.

Forest resource management in retrospect

The practice of maintaining natural areas for the common good and restricting development to protect the resources they contain was uncommon until the twentieth century, when such areas were considered before the twentieth century, it was generally at the request of, and for the exclusive use of royalty. Reserves for hunting and riding were set- aside for Assyrian noblemen as far back as 700 B.C., and open spaces were reserved for the use of the ruling class in ancient Rome and Medieval Europe (Runte, 1979). The undeveloped regions were simply considered to be areas that had not been tamed and had no particular value in the absence of development and use.

Apart from serving the recreational needs of the ruling class, small areas of land were occasionally designated to protect certain species valuable for hunting or other purposes. In Lithuania, a reserve for the European bison was established in 1541; in Switzerland, a reserve to protect the chamois was set up in 1569 (Boardman 1981). The harvesting of oak forests for shipbuilding in England during the sixteenth and seventeenth centuries prompted calls for controls and protection of forests (Hoskins 1970). The practice of protecting outstanding natural areas for their scenic beauty and for recreation and enjoyment by the general public is scarcely more than a century old. The first national part "the yellow stone" was proclaimed in the United States of America in 1872. The growth of the national park movement continued slowly until after World War II when a lot more parks were established (Hoskins, 1970).

In Africa and Ghana, single trees, single species of trees and small to large tracts of forests were preserved because of hteri mystical, historical or spiritual functions. Plants species like the Odii (Okuobaka oubrevillei) is considered to be so mystical that it is not safe to even sit under it. Wild animal do not roost on it nor eat its fruits. There are many sacred grooves, burial grounds and ancestral hhomes dotted all over Ghana and Africa that are preserved for their socio-cultural values. Communally, these preservation and or conservation practices were effective due to either the mystical powers attached or the communal action that could be taken against offenders. Aside from such lands, all other communally owned lands are treated as 'common goods' where the forests and forests resources are competitively exploited on to total destruction without

government interventions. It is very clear that the degree of commitment in Ghana toward the sustainable management of forests and forest resources decreases from private, through communal to governmental ownership.

The tragedy of growth

Humans are insatiate. History tells us that humans continually seek improved welfare. The widely accepted theory of the evolution of modern civilisation is based on a model of prosperity resulting from economic success. Economic growth typically implies increased population. Both economic and population growth has correlated with the accelerated exploitation of natural resources. McNeil (2000), iterated that such growth would result in environmental degradation which could lead to an ecological disaster. Klare (2004) also indicated that the current accelerated rate of economic and population growth may not be sustainable given the strain on the environment and the increasing geopolitical competition.

The population theory, as Malthus postulated, naturally tends to grow geometrically, or as we would now say, exponentially. In a finite world, this means that the per capita share of the world's goods must steadily decrease. Also, a finite world can only support a finite population (Hardin, 1984).

Hardin used a scenario of the tragedy of the commons to illustrate the inevitable and the end of destiny based on the tragedy of freedom in a common. In this illustration, a picture of a pasture that is open to all, and the expectation that each herdsman will try to keep as many cattle as possible on the common is

painted. Such an arrangement may work reasonably satisfactorily for centuries because tribal wars, poaching, and disease will keep the numbers of both man and beast well below the carrying capacity of the land. Finally, however, comes the day of reckoning, that is the day when the long desired goal of social stability becomes a reality. At this point, the inherent logic of the commons remorsely generates tragedy.

As rational beings, each herdsman seeks to maximise his gain. Adding together the component utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. Another animal, another animal... But this is the conclusion reached by each and every rational herdsman sharing a common. There in is the tragedy. Each man is locked into a system that compels him to increase his herd without limit in a world that is limited. Ruin is the destiny toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a common brings ruin to all (Harding, 1984). Evidently, natural resources need some forms of regulation and management, to avoid unprecedented catastrophes that are unnatural.

According to Conner (1987), most of the coastal fisheries of Southern Asia are approaching or have exceeded maximally sustainable yields because of tremendous increases in fishing efforts over the last two decades. The explanation is that unlike most agricultural and forestry lands, which involve specific property rights, the sea generally, is regarded as a common property or an open-access resource. It is therefore common in Southeast Asia for landless agricultural

labourers and unemployed urban workers to take up fishing as an occupation of last resort.

Forest management policies, laws and projects

Natural resource policies, programs and projects offer significant means of addressing many of the needs and concerns that propel resource-related conflicts. Ironically, these themselves can serve as a source of sources or arenas of conflicts, even though their intention is to ameliorate such conflicts (FAO, 2000). This situation generally arises when there is inadequate local participation in all phases of interventions, and when insufficient consideration is given to anticipated conflicts that might emerge.

The guiding principles for the Ghana Forest Policy were based on both national convictions and international guidelines and conventions. From the national standpoint, such principles are embodies in the Constitution of the Fourth Republic, the Environment policies of the new parliamentary government, the Environmental Action Plan, as well as protection of forest and wildlife resources that will seek to develop appropriate strategies, modalities and programs in consultation with relevant agencies, rural communities and individuals. The 1994 Forest and Wildlife Policy formalised the emphasis on sustainable forest management and participation between the stakeholders and contain specific guiding principles and strategies on rights of access to forests, and the protection of forests and wildlife. The first guiding principle (3.2.1) states that the government of Ghana recognises and affirms 'the right of people to have access to

natural resources for maintaining a basic standard of living and their concomitant responsibility to ensure the sustainable use of the resource' (Ghana Forest and Wildlife Policy, 1994).

The questions that remain unanswered are: were all the stakeholders involved from the beginning to the end of the formulation of the policies? Did they all agree in principle to most of the tenets? How regularly would they be reviewed? If all are answered in the affirmative, why do conflicts still exist?

Poverty and forest resource degradation

Unemployment has been pinpointed as one of the main reasons for poverty while poverty is also believed to be the major cause of land degradation in Asia and the pacific (FAO, 1983). Poverty in areas where there is land shortage lead to non-sustainable land management practices and direct degradation. Poor farmers precipitated, perhaps by unemployment are led to clear forest, cultivate steep slopes, overgraze rangelands and make unbalanced fertiliser applications (FAO, 1994). Environmental degradation resulting from population growth among other factors in turn perpetuates and deepens poverty as the poor attempt to survive on a diminishing resource base (FAO, 1994).

For most of Africa, demographic pressure results in expansion of farmlands, the shortening of fallow periods or the intensive use of land with inappropriate technologies and practices, on all scores, the result is land degradation, which deepens poverty (Awusabu-Asare et al, 2000). The environmental degradation, which accompanies the exploitation of natural

resources, has imposed considerable cost to the economy of Ghana. The total annual cost of environmental degradation in Ghana was 41.7 billion cedis (40% of GNP). A further disaggregating showed that the environmental degradation cost due to crop production is estimated at 26.0 billion cedis while the estimated environmental degradation due to grazing is 2.8 billion cedis (Ghana National Report 1991). Next to agricultural, forestry imposes on estimated environmental degradation cost of 10.8 billion cedis on the economy of Ghana. Together, agriculture and forestry have imposed an estimated environmental degradation cost of 89.6 billion cedis in 1988. Given that about 70% of the population in rural areas depends on agriculture for their livelihood, the continued degradation of the environment due to unsustainable agricultural practices could intensify their poor living conditions.

Contemporary issues in Ghana's forestry

In 1908, the Forestry Department was conceived when the then Gold Coast government felt the need to introduce forestry into the colony. One Mr. H. N. Thompson of the Nigeria Forest Service was invited to look into the timber industry.

Mr. Thompson submitted his report recommending the need for hte enactment of forest legislation to protect trees and timber and hte issueing of Property Marks to timber operators. He further recommended that a Forestry Department with a laid down Forestry Policy be established. These

recommendations were accepted and a small department was born in 1909 with one McLeod as head.

Earlier, in 1888, small samples of Ghana's timber, and in 1891, some 3,360 cubic meters of timber consisting of mainly Khaya and Entandrophragma species were exported to England. This increased to 84,900 cubic meters in 1913 only to decline to 28,300 cubic meters in 1918 obviously because of the World War (Forestry Department Records).

The First Forest Protection Ordinance was passed in 1909 and in 1913 it became law in Ghana. This ordinance could not be enforced due to the strong opposition from the chiefs and landowners to the creation of forest reserves. The then government constantly persuaded the chiefs to place forests under reservation through bye-laws and this also had very little success.

As a result of the war, the department was closed down in 1916 and was again re-opened in 1919 to continue its work of selection, demarcation and constitution of forest reserves. The whole process was so slow and meanwhile, the growing cocoa industry accelerated the rate of deforestation, a situation that also heightened the need for forest reservation. In 1927, a new Forest Ordinance was enacted under which a number of reserves were constituted in the ensuing years.

Ghana also suffered the economic depression between 1930 and 1934 and it bogged down activities in the Forestry Department as well. The government reduced her expenditure on staff and inputs to the minimum. After the recession from the depression, the Department reserved 15,000 square kilometres of forests reserves by 1939. The work of reservation continued into the fifties when

management planning of the reserves was introduced. A total of 15,151 square kilometres of reserves were constituted by end of 1957, which was 18.4% of the total lands in the closed forest zone. This was against the planned target of 25% proposed by the head of the Department in 1935 for the high forest zone.

Currently, the Forest Services Division maintains 279 legally constituted forest reserved including fuel wood plantations across the country. The total landmass of these reserves is 25,598 sq km spread throughout the country. This forms approximately 11% of the total land area of Ghana. Out of the total, 52.27% are primarily managed for the production of timber. The remaining 47.73% are managed for the protection reserves include barrier reserves, which check the drift of savannah down south as a result of intensive farming, grazing and annual bush burning. There are also the shelterbelt reserves, which maintain favourable humid conditions for agriculture in the south. These are found mainly in areas where cocoa coffee and other agricultural activities are heavily concentrated.

Aside these forest reserves, there are 13,489 sq km wildlife reserves, which is 6.2% of Ghana's total land surface area. These are composed of seven (7) National Parks, Six (6) Resource Reserves, two (2) Wildlife Sanctuaries and one (1) Strict Nature Reserve. There are also five (5) RAMSAR sites and other proposed reserves that cover approximately 1.4% that are being managed but not legally constituted. This brings up to 18.6% of the total Ghana's land area under protection as forests.

There are many conflicts that run through all the years in Ghana's progress towards the reservation and sustainable management of her forests. As earlier said, the chiefs and people resisted reservation because the colonial government never explained the need to them. Some lands were also reserved against the will of landowners while others never got any compensation for their lands that were taken away by force. A legal curtain was only established between the forest and the people and those who 'trespassed' were punished.

In addition, those who were employed were only paid for their labor and never made to understand why they should help protect the forest and its resources. Finally, all that they saw was that timber was taken away from their forest daily to foreign lands without their consent even though the forest and its resources belonged to them.

It is argued that forest policies and management plans in most developing countries including Ghana are deeply rooted in the colonial drive toward the exploitation of the forests and their resource to the disadvantage of the owners. Kyeretwie (2005) stated "The colonial government formal state organised scientific forestry followed the first cocoa boom at the end of 19th century". The colonial establishment learned that plantations and thus landownership were not necessary for successful corporate control of domestic cocoa industry. Under its 1909 Forestry Policy, the colonial government intervened to create a permanent forest belt that would sustain the ecological conditions for cocoa and the economic conditions for colonialism. Forest reserves were originally established for conservation purpose. The Forestry Department adopted a hostile or at least a

paternalistic stance towards forest-owing communities and used its draconian statutory powers to oust them completely from forest reserves. This attitude towards resources owners has probably been the most consistent aspect of policy in the last century (Kyeretwie, 2005).

Owusu (2005) reiterated that the forestry and wildlife sector of Ghana has gone through considerable reforms in the past twenty (20) years. All the high profile projects in the sector such as Forest Resource Management Project, the Natural Resource Management Project, the Forest Inventory and Management Project, the Forest Protection and Resource Use Management Project, the Forest Sector Development Project, the Protected Area Management and Wildlife Conservation Project, and the Northern Savannah Biodiversity Conservation Project all had policy reform components. Especially since the Forest and Wildlife Policy was adopted in 1994, most of the reforms have promoted stakeholder, and particularly forest fringe community participation in forest management.

A few of these initiatives, for example the Social Responsibility Agreements (SRA), have subsequently been backed by or incorporated into legislation but many have not. Consequently, an imbalance has developed between policy and legislation, which creates confusion and weakens policy implementation (Owusu, 2005).

Stakeholder conflict resolution

There are several strategies that local communities, resource users, project managers and public officials can use to manage and to resolve conflicts. A vast

repertoire of local-level strategies and techniques for managing and resolving conflicts regarding natural resource has evolved within communities. There are many cross-cultural similarities – negotiation, mediation and arbitration are common practice, as are more coercive measures such as peer pressure, gossip, ostracism, supernatural sanctions and violence (FAO, 2000). These customary natural resource management strategies have both strengths and limitations.

National legal systems, governing natural resource management are based on legislation and policy statements including regulatory and judicial administration. Adjudication and arbitration are the main strategies for addressing conflicts. However, some national system takes into account legal systems based on local custom, religion, ethnic group or other entities.

The multidisciplinary field of alternative conflict management addresses natural resource conflict through promotion of joint decision-making. It arose in part as a response to the adversarial style of managing conflicts used by the legal system. The field also draws upon conflict management strategies long relied upon by communities in settling their disputes. Practitioners use methods such as negotiation and mediation to help parties reach a consensus. The goal is to seek long mutual gain for all stakeholders.

The major conflict revolutionary approaches used by government, that is the legal system, remain elusive to the main challenges that face the forestry sector. Policies, along with the laws and regulations enacted to implement them, can mitigate conflicts, create new conflicts or exacerbate existing ones. Before the 1994 Forestry and Wildlife Policy formulation, the general direction for forest

management was toward the production of timber. This resulted in the lost of about 80% of Ghana's forest cover over the last century at an alarming rate of 65,000 per annum. The main beneficiaries were government, the landowners and the timber contractors. The most disadvantaged were the rural forest fringe communities who beside denial of the benefits also lost their farm crops through logging and hauling

The 1994 Forest and Wildlife Policy redirected the focus of forest management to include the conservation and sustainable development of the nation's forests and wildlife resources for the maintenance of environmental quality and the perpetual flow of optimum benefits to all sectors of society. In this wise, sustainable forest management and the promotion of public awareness and the involvement of rural people was enshrined as an objective. Although the involvement of the rural people in forest management was not captured in the Forestry Development Master Plan (1996-2000) the following attempts were made to address the non-involvement of the rural folks in forest management.

- A Collaborative Forest Management Unit established at the Resource Management and Support Centre (RMSC) in Kumasi under the Forestry Commission was mandated to develop systems that would involve the rural communities in forest management. The communities picked up the concept very quickly because they saw it as an opportunity for them to express their long denial and also to enjoy some benefits. Very quickly over 1000 Community Forestry Committee (CFC) Groups and the Community Biodiversity Advisory Groups (CBAG) were formed in the high forest zones

of Ghana. The programme never had any legal support and also due to limited budgetary support, the groups cannot be sustained.

- The involvement of Traditional Authorities, District Assemblies and communities in resource exploitation through the identification of potential Timber Utilisation Contract (TUC) areas and the negotiation of Social Responsibility Agreements (SRA) were provided for by the Timber Resource management Act 1997 (Act, 547) and its Amendment (617) and in the Timber Resource Management Regulation (LI, 1649) and their Amendments (LI1721) to ensure that stakeholders took part in forest management and that benefits flowed to them. It is interesting to note that the implementations of these beautiful enactments are woeful due to absolute suspicion among the stakeholders.
- The introduction of the Timber Utilisation Permits by the same Timber Resource Management Act 1997 (Act, 547) and its Amendment (617) and in the Timber Resource Management Regulation (LI, 1649) and their Amendments (LI, 1721) was to ensure that stakeholders had access to timber for development projects at the community level yet the implementation again rarely benefitted those it was intended.
- The 1992 Constitution specified the benefit sharing especially for the stumpage fees, rents and royalties to ensure that the affected shareholders got their due shares. These were to be done as follows: For revenue from off-reserves forest resources, the government (Forestry Commission) gets 40% while the AOSL took 10%. The rest is given out as follows: 55% to the

District Assemblies, 25% to the Stoolland and 20% to the Traditional Authority. From the reserve revenues, Government takes 60% of the lot, AOSL then takes 10% and the rest is shared as before. In this provision, the Traditional Authorities are not pleased with the share and they continue to express their dissatisfaction at every opportunity.

- A new type of revenue is anticipated when the Modified Taungya Plantation begin to mature. The proposed sharing is as follows; 40% for the farmer, 40% to Government (FC) 15% to the Traditional Authorities and 5% to the Communities. The reality would come when harvesting of these plantations begin. Clearly the landowners (stools) are left out and they would protest at the appropriate time.

In summary, policy reforms in Ghana have been made to ensure greater involvement of stakeholders in forest management planning, implementation and monitoring, in resource exploitation and in some commercial forestry operations. In the productive reserves, timber utilisation contract holders are also to assume greater responsibility for the sustainable management of the resource. In all, the aim is to move toward a wider multi-resource management.

However, Opoku Kyeretwie (2005) in his submission to a Tropenbos International workshop stated that "this crisis in Ghana Forestry Sector is now notorious; the unsustainable rates of logging, growing poverty in the forest fringe communities, poor returns to the public and resource owners from forest resource exploitation, weak enforcement of sector rules and regulations and pervasive corruption in the public sector". The challenges are clear and strong in that

legislation that governs land and tree tenure, and farmer tree rights which are fundamental has not been enacted. The inability to stop the escalating illegal chainsaw operations, and finally, the failure of government to find comprehensive solutions to the rural poverty and ignorance are conflict points that are smouldering and could be disastrous if not addressed holistically.

Conceptual framework

An FAO publication on Conflict and Natural Resource Management stated some concepts and the literature review affirm that stakeholder conflicts may arise during policy, programme and project implementations that seek to promote sustainable forest resource management; and these include the following eight issues;

- Policies imposed without local participation – Natural resource policies and interventions are often formulated without the active and sustained participation of communities and local resource users. Some governments have long relied on centralised management strategies based on centralised control by administrative units and technical experts. These policies and practices frequently fail to take into account local right to and practice regarding, natural resources. Such new introductions without local inputs may end up supplanting, undermining or eroding community institutions governing resource use.
- Lack of harmony and coordination between bodies of law and legal procedures – most countries are characterised by legal pluralism that is the

operation of different bodies of formal and informal laws and legal procedures within the same socio-political space. These legal orders may be rooted in the nation-state, religion, ethnic group, local custom, international agreements, or other entities. They then overlap resulting in different legal bodies that can be complementary, competitive or contradictory. Resource conflicts sometimes emerge because there is a lack of harmony and coordination among these different legal orders, particularly when policies, programmes and projects fail to consider local situations.

- Poor identification of and inadequate consultation with stakeholders – Stakeholders are people who possess an economic, cultural or political interest in, or influence over a resource. The stakeholders may need the resource for subsistence, tourism or for cultural reasons such as use for sacred sites. The concept is complex and dynamic because stakeholders are not generally homogenous but can be further divided into subgroups according to their specific interest. Conflicts can occur because planners and mangers identify stakeholders inadequately. Or they refuse to acknowledge a group's interest in a resource. Many policies and interventions face challenges in defining exactly what constitute a community because of the limited ability of planners to identify the range of interests within it. When planners and managers fail to identify and consult with the full spectrum of stakeholders, they limit their understanding of these groups' diverse needs and priorities and their indigenous knowledge of the situation. This increases the likelihood of conflict emerging.

- Uncoordinated planning – Despite growing recognition of the need for integrated approaches to natural resource management, many governmental and other agencies still rely on sectoral approaches with limited cross-sectoral planning and coordination. Overlapping and competing jurisdictions and activities among agencies may result in their inability to reconcile the needs and priorities of various stakeholders.
- Inadequate or poor information sharing – Effective sharing of information on policies, laws, procedures and objectives can enhance the success of programmes and reduce conflicts. In contrast, lack of information on the intention of the planning agencies may lead to suspicion and mistrust.
- Limited institutional capacity – Conflicts arise when governmental and other organisations lack the capacity to engage in sustainable natural resource management. Organisations not only face financial constraints for staff and equipment, they also often lack the expertise to anticipate conflicts, or to handle conflicts that arise in the course of their activities.
- Inadequate monitoring and evaluation of programmes – Programmes and projects are often designed without clear monitoring and evaluation components, especially regarding natural resource conflicts. Without systematic monitoring and evaluation of natural resource management activities, it is more difficult to identify, pre-empt or address conflicts.
- Lack of effective mechanisms for conflict management – For natural resource management programmes to be effective, mechanisms for participatory conflict management and resolution need to be incorporated from the onset

into the design and implementation. These mechanisms should ensure that open or smouldering conflicts are constructively dealt with to reduce the chances of their escalating. In some organisations, such mechanisms cannot be easily installed because existing legislation or policy does not permit it (FAO, 2000).

Natural resource conflicts have always been with mankind, due in part to the multiple and competing demands on resources. Conflicts can rise if user groups or stakeholders are excluded from participating in natural resource management. They also occur if there are; contradictions between local and introduced management systems; misunderstanding and lack of information about policy and programme objectives; contradictions or lack of clarity in laws and policies; inequity in resource distribution; or poor policy and programme implementation. Population growth and rural poverty cannot be overlooked since they also appeared to have negative influences on resource degradation.

CHAPTER THREE

METHODOLOGY

Introduction

The study area is the Assin North and Assin South districts (see Fig. 1). They have Assin Fosu and Nsuam as their district capitals. The area is 2363km^2 and has a population of 196,457. According to the 2000 Ghana population census, the major settlements and hte populations of the areas are; Assin Fosu – 22,837, Assin Breku – 5,985, Assin Akonfodi – 3,762, Assin Akropong – 3,263, and Assin Nyankumasi – 3,043.

The study area is located about 50km north of Cape Coast and share boundaries with Ashanti Region to the North, Eastern Region to the Northeast, Asikuma-Odoben-Brakwa districts to the east, Abura-Asebu-Kwamankese and Mfantsiman districts to the south, Twifu Heman Lower Denkyera district to west and Twifu Heman Upper Denkyera district to the northwest respectively. There are eight (8) permanent government forest reserves namely; Kakum, Attandanso, Bimpong, Krochua, Apimanim, Ajuesu, Ochi Block One and Ochi Block two and two (2) community forest reserves; Adwenase and Namtee, which constitute 18% of the total land area. The Kakum and Attandanso reserves are wildlife reserves.

There are also 48 district assembly electoral areas with 73 assembly persons 22 of who are government appointees in the Assin north and south

assemblies. There are three (3) paramouncies and these are Attandanso, Apimanim and Afutuakwa. The first two own much of the lands in the two districts.

The population

The population comprises the stakeholders of the forest resources in the Assin north and Assin south districts. These stakeholders are the landowners, the forest fringe communities, the District Assembly, the resource managers (government), timber contractors, non-timber forest product collectors and traders. There might certainly be subgroups like non-governmental organisations, donors, etc; however, the study primarily would focus on the landowners, district assemblypersons, unit community members, forest fringe community members, timber contractors and the resource managers due to time and resource constraints.

Sampling procedures

Quantitatively, a series of steps were employed to obtain a reliable sample for the study. For the uniqueness of the subjects, the sample frame of stakeholders was also categorised for the sampling. The procedure is described as follows:

Landowners – In Ghana, land and landed resources are owned by the living, the dead and the yet unborn. These resources are however held in trust by the stools in case of the Assins for the people. The sample frame for the landowners therefore covered the living and only the sitting chiefs or their

representatives in the Assin North and South districts. The names of all the stools were collected during a reconnaissance visit to the study area from the three traditional councils totalling 32. Twenty-five percent of these stool occupants were randomly selected through the lottery method to ensure that each stool had an equal chance of selection. The sample may look small, however, it was representative, the reason being that the subjects are homogenous. They have the same inheritance and succession, the same resources and the same customary and traditional practices concerning ownership. The issue of time and resources were serious constraints to the researcher.

From the records of the Forestry Commission, there are seventy-two (72) registered timber contractors in the Assin District. These are all limited liability holders and operate on permit (timber utilisation permit, TUP) bases. The identification marks of the timber contractors (Property Marks) were listed and randomly, 10% were selected using the lottery method to constitute the sample for the study. All the contractors are members of the Ghana Timber Association who are all loggers who do not process timber. They are all limited liability companies and hold not more than 25km2 of permit area to operate. That explains why 10% was taken.

Similarly, 20% and 10% of the 48 Assemblypersons and the 65 resource managers (both Forestry and Wildlife Divisions of the Forestry Commission workers in the study area) respectively were randomly selected to form the samples. The payroll numbers in the case of the Forestry Commission workers and the names of the Assemblypersons were used for the listing to avoid bias.

According to the electoral commission records there are 1,600 settlements in the Districts. The study however, considered only the 48 forest-fringe communities (communities that share boundaries with forest reserves and those not more than 3km from the reserves). These forest fringe communities have populations averaging 300 persons per community. Each family (household) has an average of seven persons and this gives us a total of about 43 households in each community. A two-step sampling was employed. Ten percent of the 48 forest fringe communities, which gave 5, were randomly selected using the lottery method. The names of all the 48 forest fringe communities were listed to form the sample frame and out of that the five communities were drawn for convenience. From the five randomly selected forest fringe communities, five households were also randomly selected using the lottery method from each as the sample units. The house numbers used by the National Health Insurance Scheme were used as the identification marks for the random selection of the five houses. A total of 25 household units were randomly selected. The reason for selecting only the forest fringe communities was that they live closest to the resources and depended directly on the forests and their resources. Twenty-five households out of the lot seem small but that is a homogenous sample in terms of land holding and forest resource use practices. Secondly for lack of time and resources sample sizes were reduced.

In the case of non-timber forest product (NTFP) collectors and sellers, it was found that there existed no statistical data and that their operations were seasonal. These are the charcoal, firewood, mushroom, snail, wild honey, leaves,

medicinal plant-part collectors, hunters etc. Non-probability sampling (qualitative) was used to choose the units. The accidental sampling method was used to collect information from identified units at the Bongolow, Fosu, Andoe and Nyankumasi Ahenkro markets because of lack of data and the unstationary nature of the units. Five of each of the identifiable group was sampled.

Data collection

Interview schedules were prepared for all the various stakeholders sampled. Questionnaires were used to gather the relevant information from the respondents. The data was collected between January and March in 2007. The communities in the study area do not go to farms on Tuesdays and interviews were done on those day. Five research assistants were trained to collect the data by administering the questionnaires. The fieldwork took 10 days after 5 days of reconnaissance study and interview schedule testing.

The data gathered from the field were edited to ensure that all interviewing schedules were completed and contained accurate information. The data were then coded and computerised using the Microsoft Excel software for analysis. Statistics including percentages and frequencies were established. These statistics were deemed relevant because they served as bases for drawing justified conclusions from the finding to the study.

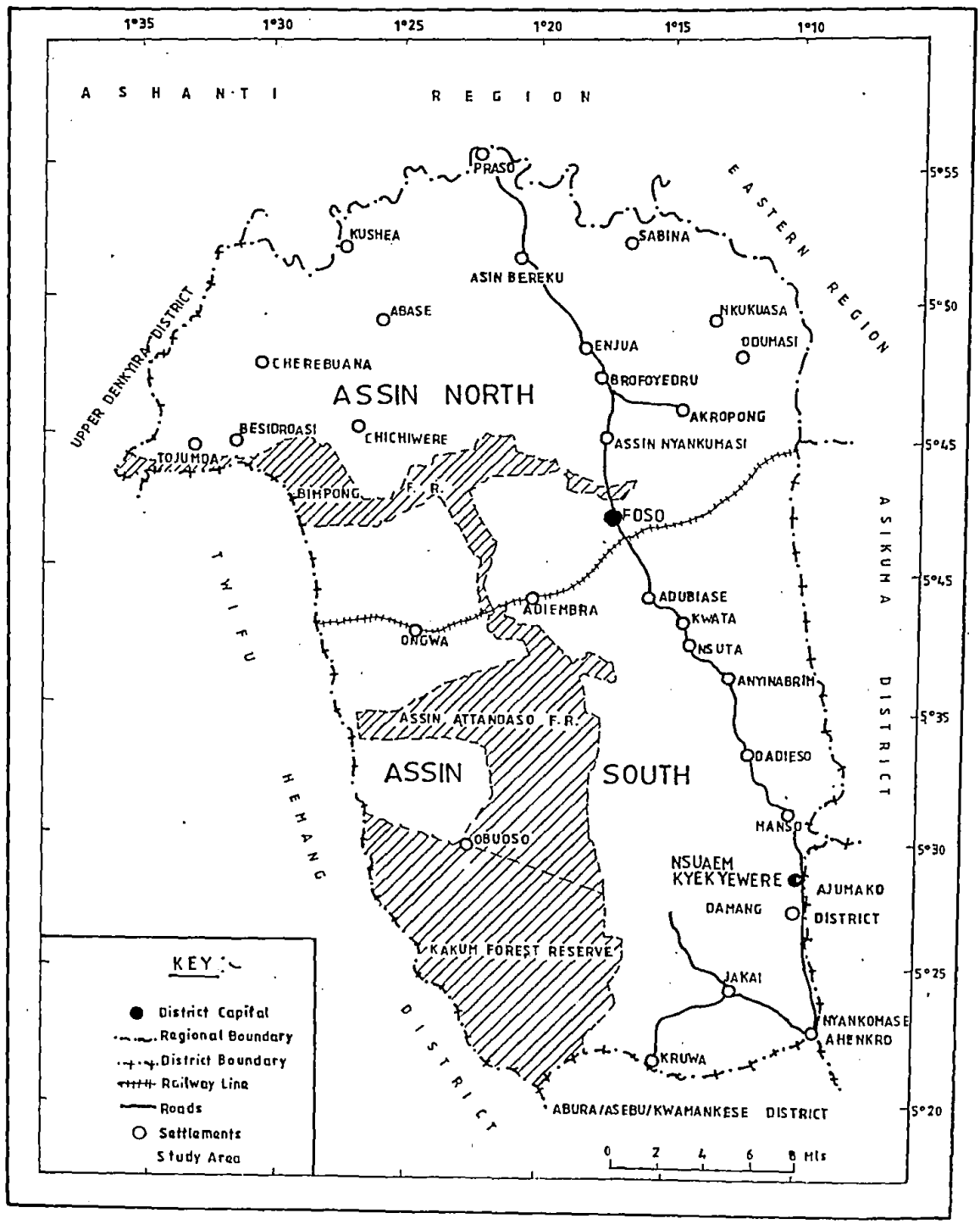

Figure 1: Map of Assin North and South districts

Source: Department of Geography and Tourism, 2007

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSIONS

Introduction

The data were gathered from the landowners, the forest fringe communities, the District Assemblypersons, timber contractors, non-timber forest product collectors and sellers and the forest resource managers. The analyses were used to establish the major causes of conflicts over forest resources in the study area and the appropriate recommendations made for the resolution and prevention of these conflicts to enhance sustainable forest management.

Background information of respondents

The respondents' age, sex, occupation and level of education were probed into, since such information is very vital in the understanding of the study. A description of the background characteristics of respondents is therefore given at this stage. A total of 100 respondents were intervie4wed for the study and out of this number, as many as 63 respondents ranged between 18 and 50+ years. Table 1 gives an illustration of the ages of the respondents. Sixty-five percent of the respondents were between 39 and 50+ years in age.

In the age distribution of respondents in table 1, seventy (70) percent fall below the age of 50. The indication is that only history could keep the people

informed about past forestry issues that occurred before the 1960s such as forest reservation meetings and forest reserve settlement commissioners' courts.

It is not however probable that proceedings from such meetings at the community level, or with other stakeholders could be remembered vividly for transmission to the present generation. It is therefore possible that consultative meeting on forest resource reservation could be forgotten where there are no participatory updates.

Table 1: Age distribution of respondents

Age	Frequency	Percentage
18 – 27	11	11
28 – 38	24	24
39 – 49	35	35
50+	30	30
Total	100	100

Source: Fieldwork, 2007

Occupation of respondents

One's occupation, tell a lot about the poverty level or otherwise of a person. Analyses of the respondents' major and secondary occupations were probed into. The major occupations of the inhabitants in the study area are basically cash crop and food crop farming. The study however revealed that there are other important livelihoods that the people depend on. Tables 2 and 3 provide details of the major and secondary occupations of the respondents.

In table 2, 31% of the respondents heavily rely on farming to earn their livelihood. It does not mean that they do not do other business (minor) during the off-farming season. They could also be involved in three or more other jobs. For instance a teacher was found to be doing farming, trading and weaving of baskets.

Table 2: Major occupation of respondents

Major occupation	Frequency	Percentage
Farming	31	31
NTFP collectors/ sellers	31	31
Trading	13	13
Contractor	10	10
Civil servant	6	6
Basketry	5	5
Teaching	2	2
Tailor	2	2
Total	100	100

Source: Fieldwork, 2007

Basically, all the respondents derived their livelihood from the forest and its resources except the teaching, tailoring and the civil service, which accounts for just 10% of the major employment as indicated in Table 2. Farming accounted for 31% of the respondents and even though the types of farming and the crops produced were not studies, the people in the study area are basically subsistent farmers with just a few in commercial cocoa and oil palm farming according to the Assin District profile report of 2002.

Secondary occupation in this study refers to jobs that the respondents do to supplement the incomes that come from their main jobs. The secondary occupation can also be referred to as the respondents' part time or spare time jobs. It was not surprising to notice from the respondents that 48% spend most of their spare time harvesting non-timber forest products (NTFP) to supplement their incomes.

Table 3: Secondary occupation of respondents

Secondary occupation	Frequency	Percentage
NTFP collectors/ sellers	48	48
Farming	30	30
Trading	13	13
Hunting	4	4
Basketry	3	3
Chain sawing	2	2
Total	100	100

Source: Fieldwork, 2007

Table 3 also shows that all the respondents depended on the forest and its resources as a support to their main livelihood. As much as 48% depended on the non-timber forest products such as firewood, charcoal, snails, bush meat, mushroom, wild yam, wild spices, rope for weaving, sponge, leaves for rapping, pestles, etc to supplement their incomes. These are everyday needs of the local communities. These must be seriously considered in policy and regulatory

planning to ensure sustainability. Regulations must not be too burdensome and should be agreeable to all stakeholders.

Educational background of respondents

It was realised that the educational background of stakeholders could influence their perception, attitude to change and use of modern technology among others. In this regard, an attempt was made to assess the level of education of the respondents. Many Ghanaians hold the view that conflicts over forest and forest resources are a result of ignorance, which is mainly due to lack of information and low educational background.

Table 4: Level of education of respondents

Level of education	Frequency	Percentage
No formal education	51	51
Middle school/ JSS	30	30
Tertiary level	12	12
Senior Secondary school	7	7
Total	100	100

Source: Fieldwork, 2007

From Table 4, it is clear that as many as 51% of the total respondents had no formal education. Those with formal education are 49% of the respondents interviewed. Ignorance is always attributed to lack of knowledge and since knowledge is the major import of education, it stands to reason that the inadequate educational levels could have serious influence on stakeholders' perception on

conflicts and resource issues. Indigenous knowledge cannot cater for the changing and complexities in forest resource conflict situations in the present era let alone the future.

General issues about the environment

Questions on general issues about the environment were prepared with the view of determining how conscious respondents were to their environment. In some communities it is possible to meet people who cannot relate their environmental problems with their own actions. The study was also to find out what remedial actions that were put in place to address the environmental challenges if ever they were identified as problems.

Table 5: Perceptions about stakeholders' environmental problems

Environmental issue	Pressing challenge scoring			
	First	Second	Third	Total
Reduction in wood products	72	23	5	100
Poor soil fertility	45	35	20	100
Increased temperature	45	11	44	100
Loss of biodiversity	39	28	33	100
Weed invasion	34	49	17	100
Water pollution	34	54	12	100
Flooding/ drought	2	34	64	100
Total	255	224	201	

Source: Fieldwork, 2007

Table 5 shows how the respondents saw the environmental problems that confront them at their various locations. The respondents prioritised 7 different environmental issues according to how seriously they affected them. The most pressing environment problems that confronted them varied from reduction in wood products to flooding/ drought according to the respondents' opinion. The interesting thing is that all the listed issues affect the respondents though the magnitudes are different. It is evident that the respondents are conscious of the environmental problems that surround them due to the unhealthy use of forest and forest resources.

The respondents were requested to state the roles they played in solving environmental problems. In Table 6, various activities were recorded including the fact that some respondents did absolutely nothing to stop or alleviate the environmental problems they encountered in their communities. Comparatively, the highest score from respondents is that they carried out environmental education and thereby created the awareness for community members to act to mitigate the problems.

From Table 6, the top rankings are realised from the respondents in the area of education and awareness creation (23%); used of communal labour to correct environmental ills (17%) and those that do nothing (17%) because they feel they have no power to do anything. Comparatively, a very significant percentage said they do nothing about their surrounding environmental problems. It is a clear indication of man's attitude towards the environment, though the

problem is caused by man, the solution should come from somewhere else. Although ignorance could be blamed, however apathy could not also be ruled out.

Table 6: Stakeholders' role in solving environmental problems

Actions taken to solve environmental problems	Frequency	Percentage
Education and awareness creation	23	23
Use of communal labour to correct the situation	17	17
Did nothing about the situation	17	17
Reporting to the appropriate authorities	10	10
Planting of trees	9	9
Requested government to permit chain sawing	7	7
Collaborate with government to stop destruction	7	7
Arrest and prosecution	6	6
Use of proper farming techniques	4	4
Total	100	100

Source: Fieldwork, 2007

The most important fact to note from the response is that most of the respondents took some action to address their environment challenges. These include awareness creation, arrest of offenders, reporting of offenders to the appropriate authorities, tree planting and even up to the use of appropriate methods of farming.

The problems persisted despite the stakeholders' initiatives to solve them because the respondents believed that people are generally disobedient

(indiscipline); the laws are ineffective because they are impossible to obey; the people are poor and will do anything to earn their livelihood as indicated in Table 7. Some respondents also are of the view that the laws and policies do not have a human face. That means the laws do not respect the rights of the stakeholders and are so strict that stakeholders feel alienated from their property (simply put, the laws are impossible). Poverty and population increase were also listed among the reasons why environmental problems persist despite the efforts put in.

Table 7: Why environmental problems persist

Response	Frequency	Percentage
Disobedience	37	37
Impossible laws	17	17
Poverty	31	31
Population increase	15	15
Total	100	100

Source: Fieldwork, 2007

Issues on forests and forest resources

The intention was to find out the value of the forest from the perspective of the respondent stakeholders. It is a fact that the value stakeholders attach to a resource determines their commitment to its conservation.

In Table 8, it is evident that the respondent stakeholders knew the value of forests and their resources. A closer look showed that, stakeholders' value for

forest is for timber production, wood for domestic use, rains and bush meat because of the high scores given by respondents. These values conflict with one another. Wildlife management cannot be merged with timber harvesting on the same piece of land.

Table 8: The value of forests to the stakeholders

Value of the forests	Frequency	Percentage
Timber	20	20
Wood for housing and fuel wood	17	17
Rainfall	16	16
Habitat for wildlife and bush meat	15	15
Protect water bodies	9	9
Medicine	6	6
Wind break	5	5
Potential land for farming	5	5
To absorb carbon dioxide and give oxygen	4	4
Tourism	3	3
Total	100	100

Source: Fieldwork, 2007

The entire respondents agreed that the forest and its resources are reducing at a very fast rate due to the combination of the following factors; over exploitation of forest resources, clearing of lands for farming and bushfires. Respondents are also of the view that these resources can be restored though it

would take a long time through replenishing and participatory management after the awareness has been created.

Stakeholders and forest resources relations

The intention was to find out who the respondents believed are the forest stakeholders towards the sustainable management of the resources. In Table 9, the government, landowners, chiefs and communities were identified by respondents as the main stakeholders.

Table 9: List of stakeholders

Response	Frequency
Government	43
Landowners	35
Chiefs	12
Communities	10
Total	100

Source: Fieldwork, 2007

There are so many stakeholders when dealing with forest resources. Unfortunately, in Table 9, some respondents probably considered stakeholding as ownership and that could account for the few stakeholders recorded. It must be realised that subgroups also exist among key stakeholders that must not always be overlooked when considering stakeholders in resource policy planning. However, it was also found that the Government is the most powerful stakeholder with the

highest record of 43. The various stakeholder roles were surveyed and the responses are grouped below.

The roles of the landowners in forest resource management were probed into and respondents acknowledge that landowner could do so much to sustain the resources illustrated in Table 10. The landowner could help protect the resources through communal labour. It is possible that when they are involved in the management planning they would invest their energy, and other resources in forest management.

Table 10: The roles of landowners in forest resource management

Stakeholders	Frequency	Limitations
Landowners	35	- Protect forest resources
	18	- Organise communal labour
	15	- Organise community meetings on forestry
	12	- Give out consent to good contractors
	11	- Receive royalties for development
	9	- Contribute to foresee resource planning
Total	100	

Source: Fieldwork, 2007

In Ghana forest resources managememetn has been the responsibility of government. Government draws the policies, laws and the management plans for these resources. Government does all the financing of the forestry project and the

choice of who should work. The allocation of the resource are also done by the government.

The Forestry Commission manages the forest and forest resources as mandated in the constitution of Ghana. The respondents revealed that the government is fully responsible for the sustainable management of forest resources in collaboration with other stakeholders. The activities included the development of policies through to revenue collection and disbursement as shown in Table 11.

Table 11: The role of government in forest management

Stakeholders	Frequency	Limitations
Government	24	- Develop policies for forest management
	21	- Finance forestry activities
	20	- Employ staff to manage forest resources
	12	- Draw management plans
	10	- Vet and award concessions
	7	- Regulate the harvesting of forest resources
	6	- Collect and disburse forest fees
Total	100	

Source: Fieldwork, 2007

The constitution of Ghana mandated the district assemblies to take 55% of all stumpage feed paid on timber after management fees have been deducted from the gross. The study sort to find out from the respondents the role of the district

assemblies in the sustainable management of the forest and their resources to merit the shares they are allocated from the revenue collected. The results are shown in Table 12.

Table 12: The role of the District Assembly in forest management

Stakeholders	Frequency	Limitations
District Assembly	42	- Monitor forest management projects
	41	- Receive forest fees for development
	17	- Address conflict concerns of stakeholders
Total	100	

Source: Fieldwork, 2007

The respondents listed three functions of the district assemblies as shown in Table 12. District assemblies are to monitor all forest management practices as their foremost function, receive forest fees for development and address conflicts among stakeholders. The respondents therefore expect district assemblies to be more responsible in forest resource management. Unfortunately, most district assemblies are more concerned with just the hygiene of the communities.

The respondents are of the view that timber contractor also have a role to play in the sustainable management of forests and forest resources. Paramount among their functions is the harvesting of timber according to laid down rules and regulations as indicated in Table 13. The respondents believe that contractor could support the communities more adequately by providing lumber for the local

market, and even construct access roads to facilitate the conveyance of food crops to market centres.

Table 13: The role of the timber contractors in forest management

Stakeholders	Frequency	Limitations
Timber	33	- Harvest yields/ quotas according to plans
contractors	22	- Pay fees promptly
	18	- Support communities with SRA
	11	- Ensure availability of lumber for local use
	9	- Employ community members
	7	- Develop community road network
Total	100	

Source: Fieldwork, 2007

Table 14: The role of the communities in forest management

Stakeholders	Frequency	Limitations
Communities	36	- Assist in plantation development
	34	- Assist in forest protection
	30	- Assist in forest boundary cleaning
Total	100	

Source: Fieldwork, 2007

To ascertain what communities can do to manage the forest resources respondents identified forest plantation development, forest protection and forest

reserve boundary cleaning. Table 14 illustrates the response of the respondents on the roles communities can play.

Table 15: The roles of NTFP collectors in forest management

Stakeholders	Frequency	Limitations
NTFP	64	- Pay fee for commercial collection
	36	- Assist in the regulation of forest resource harvest
Total	100	

Source: Fieldwork, 2007

In table 15, the respondents listed the roles that NTFP collectors played or ought to play to ensure the sustainable management of forest resources. The highest score by the respondents was for NTFP collectors to pay when collections are for commercial purposes. The revenue accrued would be used to develop the resources. They also have the role in protecting forest resources.

Limitations of stakeholders

In every production system, if there is a hitch anywhere from planning to execution, it is common knowledge that failure would occur. It is also true that in an organisation when a sector fails to perform, there cannot be success. In hte management of forest and forest resources all the stakeholders are important for sustainability. Sustainable management cannot be attained where stakeholder limitations are overwhelming.

The study was therefore to unearth the stakeholder limitations that could either generate conflicts or hinder sustainable resource management.

Table 16: Limitations of landowners in their roles

Stakeholders	Frequency	Limitations
Landowners	42	- Poor bargaining capacity
	35	- Limited finances to undertake projects
	23	- Lack of control of communities
Total	100	

Source: Fieldwork, 2007

In Table 16, respondents revealed that landowner do not have the capacity to adequately bargain with government and contractors for better deals for compensations, and in social responsibility agreements. Lack of finance to undertake forest resource related projects and lack of control to prevent or regulated communities from sustainable harvesting of resource were identified as some of the limitations of landowner.

Table 17: Limitations of government in their roles

Stakeholders	Frequency	Role
Government	40	- Budgetary limitation
	35	- Ineffective supervision
	25	- Inadequate equipment and personnel
Total	100	

Source: Fieldwork, 2007

The respondents listed three limitations of government as shown in Table 17 to include budgetary limitations, ineffective supervision and inadequate

equipment and personnel. Budgetary constraints are real issues even in developed countries and have a limiting effect on supervision and equipment and personnel employment generally.

Table 18: Limitations of District Assembly in their roles

Stakeholders	Frequency	Role
District Assembly	56	- Lack of qualified personnel
	44	- Financial constraints
Total	100	

Source: Fieldwork, 2007

In Table 18, the respondents identified lack of qualified personnel and financial constraints as the major limitations to the effective operations of district assemblies regarding resource management. District assemblies are government subvented and if financial limitations affect government then the district assemblies would also be affected. Qualified personnel are available in the market and can be hired provided finances are there. It is therefore possible that due to the financial limitations of district assemblies they are not able to hire qualified staff to management forest resources.

The respondents identified lack of community cohesion and poor management capacities of community members as limitations of the communities to solving environmental problems that confront them. It is a common revelation in most communities that the social structures are collapsing. The influence of governmental structures and civil disorder are widespread and negatively affect

community cohesion. These intend adversely affect community leadership toward the execution of communal plans.

Table 19: Limitations of communities in their roles

Stakeholders	Frequency	Role
Communities	54	- Poor management capacity
	46	- Lack of community cohesion
Total	100	

Source: Fieldwork, 2007

Timber contractors refers to the timber companies that have been given the timber harvesting rights to harvest timber in either the forest reserves or in areas outside the legally constituted forest reserves. It is mandatory for these contractors to harvest timber according to the laid down rules, pay stumpage fees and take care of the landowners and communities in terms of providing assistance for their development projects.

The respondents identified that contractors are unable to perform in their expected roles due to lack of modern technology, financial constraints, poor understanding of the business and poor marketing capabilities as indicated in Table 20. In most businesses when these factors are limited then output would be adversely affected and other dependent stakeholders suffer stress. In the timber industry for instance, limited finance would lead to the non-payment of timber royalties, fees and other operational obligations. Dependent stakeholders like the

landowners and communities would be deprives of their shares of the fees, which would consequently create conflicts.

Table 20: Limitations of timber contractors in their roles

Stakeholders	Frequency	Role
Timber	31	- Lack of modern technology
contractors	29	- Financial limitations
	22	- Poor understanding of the business
	18	- Poor marketing capacity
Total	100	

Source: Fieldwork, 2007

Table 21: Limitations of NTFP collectors in their roles

Stakeholders	Frequency	Roles
Landowners	65	- Lack of finance to develop resource
	35	- Lack of techniques of resources management
Total	100	

Source: Fieldwork, 2007

In Table 21, respondents attributed lack of financial and techniques of resource management to the cause of NTFP collectors' inability to perform successfully in their roles. Inventories conducted by the Forestry Commission indicate that NTFPs are fast diminishing and no efforts are put in place to sustain

them. Communities dependent on NTFPs to supplement their incomes and if these are not managed in a sustainable way they will sooner or later get extinct.

Addressing stakeholder limitations

Collectively the study revealed poor capacity for all the stakeholders. They all needed financial support, human resource and market development and technological improvement. The landowners and contractors needed to sharpen their expertise in business management and administration while the communities and NTFP collectors needed knowledge in sustainable harvesting. There is therefore the need to deploy finance, technology and expertise to all the stakeholders to enhance their performances in their various roles.

Reasons why stakeholders begrudge forestry administration

Respondents advanced a series of reasons why they begrudged the forest resource administration for their woes. Table 22 depict the administrative measures instituted by the Forestry Commission that respondents perceive to be the causes of conflicts among stakeholders. These complaints include high stumpage fees, non-involvement of stakeholders, inadequate financing of forestry projects, poor remuneration of the forestry sector workers, the inability of the Forestry Commission to stop the illegal and indiscriminate felling of trees and timber for and other unlawful activities like illegal farming, poaching and charcoal burning etc as shown in Table 22.

Table 22: Stakeholder complaints against forestry administration

Reasons	Frequency
Instituting high stumpage fees	21
Not doing much to sustain the participatory process	18
Inadequately financing of forestry projects	15
Poor remuneration and motivation of its staff	14
Inability to collect stumpages owed by timber contractors	10
Lack of transparency in the award of concessions and permits	9
Inequity in benefit sharing	7
	6
Total	100

Source: Fieldwork, 2007

High stumpage fees are unfavourable to stakeholders who source these forest resources for commercial purposes. When participatory processes in the administration are not sustained, then other stakeholders would complain of lack of transparency. The respondents also believed that the administrators do not share benefits equally. The respondents blame the administrator for their inability to collect stumpages owed by contractor and stop illegal forestry activities. These failures adversely affect the revenue that accrue to stakeholders and thereby create conflicts.

Stakeholders and conflicts

Respondents know that government is a powerful stakeholder of forests and their resources since it makes the laws, manages the forests and takes the

largest shares in terms of revenue. It is the view of respondents that the government should be more proactive and committed to the sustainable managements of the forests. They believed that revenue should be equitably shared and the highest shared should go to the landowners.

The respondents blamed the government for not doing much in the areas of involving the stakeholders in decision-making concerning forest management (participation) and not adequately supporting its staff to efficiently manage the forest resources.

Landowners are basically chiefs who hold the resources in trust for their communities. They have the power to approve or refuse to approve concessions or permits for timber contractors. They are therefore to transparently account to their citizen on all financial matters and also protect the resources for posterity.

The chiefs on the other hand accuse the citizens for not doing much to protect the resources. The chiefs also lack the capacity to protect and ensure the effective bargaining with government for equitable benefit sharing. All these complaints are a result of stakeholders' inability to play their roles adequately.

The citizens in the communities counter blame the chiefs for not doing much to restrain the timber contractors from destroying their farms during timber harvesting. They are of the view that the chiefs give out the lands to these unscrupulous timber contractors without consulting them and connive with the contractors to cheat them even over revenues.

Conspicuously, the forest fringe communities feel sidelined and would therefore prefer the chain saw operators because they get instant payment and less

destruction of their farms during operations. This also account for the apathy expressed when it comes to communal work on forestry issues.

The chiefs together with other stakeholders do not understand why the district assemblies (DAs) should get the greatest shares of the revenue from timber and wildlife. The Constitution of Ghana shared the revenue with the DA getting 55% while the landowning stool (Chief) gets 25% and the Traditional Authority (TA) gets 20%. The DAs also are entitled to 80% of all revenue that accrue from wildlife management. The argument is that the DAs do not use their share of the money for development that benefits the landowning communities. The chiefs also blame government for sharing the revenue in that manner. The landowners also accuse government for taking so much (that is, 40% from off reserve and 60% from all revenue reserved areas) as management fee as provided in the natural resource management law on forest fee fixing.

Non-timber Forest Product collectors are stakeholders who collect the resources free of charge except when it is done on commercial quantities. These stakeholders should pay fees when the resources are collected in commercial quantities. However, because the collectors have no idea of the size of the resource base, the sustainable quantity to harvest per annum cannot be ascertained. There is therefore an opportunity for the collector to gather these resources far above the sustainable quantities. This would negatively affect sustainable management of the resource.

Contractors are accused on all fronts by the rest of the stakeholders. The reasons for the accusations were examined during the study. Basically, the

contractors could not fulfil their statutory roles in the area of prompt payment of stumpage and other fee and the fulfilment of their social responsibility agreements. In Table 23, the respondents enumerated the details of the shortcomings of the contractors. All the stakeholders had some complaints to tell about the negated roles of the contractors and the destruction caused to farmlands and crops.

Table 23: Complaints against timber contractors

Complaints	Frequency	Percentage
Non-payment of fees	24	24
Destruction of farms	22	22
Non-payment of compensations	20	20
Destruction of NTFPs	18	18
Interference in forest administration	13	13
Disturb wildlife	03	03
	100	100

Source: Fieldwork, 2007

In the above table respondents complain that timber contractors do not pay royalties; they destroy farms and refuse to pay compensations to the farmers; they trample over minor forest produce and disturb wildlife; they are so powerful that they can cause not only resource management but also ministers to lose their jobs. They can influence judgements of the forestry administration and make the rules and regulations useless.

The banning of chainsaw in the sawing of timber in 1994 made the chainsaw operators group of stakeholders very prominent. Most of the lumber component is constructional works in Ghana is from the chain saw operators. Their operations are illegal as far as the laws and regulations in Ghana are concerned. According to an FAO sponsored study, Ghana looses over $16 billion annually in revenue ever since the ban on chain sawing of timber was instituted in 1994.

Table 24: Why illegal chain sawing persist

Response	Frequency
Unaffordable sawmill lumber prices	18
Destruction and non-payment of compensation for damaged crops by legal contractors	17
Over difficulty in getting permit to operate	16
Affordable in the market	15
Lucrative though illegal	14
Instant payment for collaborators	11
Over high stumpage fees	09
Total	100

Source: Fieldwork, 2007

However, Table 24 explains that the operation bring satisfaction to most other stakeholders because it is available and affordable. The trees are sold directly to the operators for instant cash, which would not have gone to them if

timber contractors cut the trees from their farms. The damages to the farmers' crops are minimal because the logs would not be skidded and the operators pay compensation instantly.

The respondents concede that operators enjoy collaboration from the youth who are hired to carry the lumber to the roadside, monitory forestry personnel and fight them when the need arise for a fee. Some of the chiefs and elders receive various sums of money from the operators as 'welcome' fees to the communities. The operators hire accommodations from the villagers and this brings income to them. All along the routes bribes are paid to clear the way for safe passage of the lumber.

These jobs created by the operators are highly appreciated by all of the beneficiaries (community members) since there are no sources of employment for them. Ghanaians get the lumber at comparatively low price unlike lumber from the sawmills. The chainsaw operation, which powers development in the construction industry, therefore seems unstoppable despite the fact that it is illegal.

Misunderstanding among stakeholders

The causes of misunderstanding among stakeholders were probed to establish the roots of conflicts, which are very important when conflicts are to be addressed. The proceeding Table 25 provide respondents view of the causes of misunderstanding among stakeholders.

Table 25: Causes of misunderstanding among stakeholders

Response	Frequency
Lack of trust among stakeholders over benefits sharing	17
Difficulty in getting permits	15
Non-payment of royalties and compensation	13
Lack of available resources in the local market	12
Attacks by chain saw operator on resource managers	11
Non-involvement in decision making	10
Destruction of forest resources	9
High overhead costs in illegal operations	7
Use of force to prevent access to resources	6
Total	100

Source: Fieldwork, 2007

In Table 25 the respondents identified lack of trust in benefit sharing as the highest cause of misunderstanding among stakeholders with the highest score of 17, use of force to prevent access to resources had the least score of 6. The response by respondents as in Table 25 showed that so many issues contribute to the misunderstanding among stakeholders. Stakeholders are aggrieved over unfair benefit sharing, non-payment of royalties, high stumpages, and the depletion or destruction of forest resources. Stakeholders were aggrieved with the statutory fixing and sharing of stumpage fees and the respondents describe that as unfair. Attention must be given to all the causes in order to limit conflicts. It may seem

that forceful implementation of the laws is the least cause of misunderstanding however, the effective management of resources hinge on effective laws.

Forest offences

Forest offences were referred to as illegal logging, illegal sawing of lumber, illegal hunting (poaching), illegal farming in forest reserves and illegal harvesting of NTFPs in commercial quantities. These activities are illegal because they contravene the forest policies and laws. Attempts were made to find out whether the stakeholder know of the existence of the policies and laws that govern forest resources.

Table 26: Awareness of the existence of resource policies and laws

Response	Frequencies	Percentage
Yes	81	81
Not sure	19	19
No	0	0
Total	100	100

Source: Fieldwork, 2007

Despite the low circular education in the study area the response shown in Table 26, registered a very high awareness of 81% of the existence of forest resource policies and laws. Only 19% of the respondent said they were ignorant of the existence of forest policies and laws. For the 81 people who were aware of the existence of the policies and laws governing forest resources also said they got to

know it through the media, reading and from meetings on forestry issues which they attend.

Table 27: Are the policies and laws obeyed

Response	Frequencies	Percentage
Yes	57	57
Not sure	28	28
No	15	15
Total	100	100

Source: Fieldwork, 2007

Table 27 revealed that only 15% of the respondents believed that the forest resource policies and laws were obeyed. The reason for the 15% obedience may be that those persons have both the political power and the financial resources to obtain permits for these resources or are not brave enough to disobey the laws. It can straight away be said generally, that forest policies and laws are not obeyed in the study area as revealed from the response.

Forest and forest resource policies, laws and regulation are most often not obeyed due to a number of reasons. According to Poffenberger, 1999, the management of public and sometimes private forestlands has been an activity of state and its agencies, established through constitution, legislation and regulations that largely reject local claims to forest resources. He reiterated that professionals are bureaucrats lead these activities, deriving options for use based on economic, scientific and planning criteria. Decision makers then determine use and

management strategies through negotiations with the most influential parties in a wider political arena. The gradual globalisation of the world economy has, in many areas, reinforced State claims to forest resources. In such instances, this has further facilitated the exploitation of forests by nationals and transnational companies, to the disadvantage of local forest users (Poffenberger, 1999). When stakeholders are marginalised in this manner, then the policies and laws so developed would not be obeyed.

Table 28: Reasons why forest policies and laws are not obeyed

Response	Frequency	Percentage
Lack of job	23	3
Poverty	17	17
Weak law enforcement	16	16
Lack of lumber for local use	15	15
Difficulty in obtaining permit	11	11
Penalties are low	6	6
Ignorance of the laws	5	5
Land hunger	4	4
Deliberate	3	3
Total	100	100

Source: Fieldwork, 2007

The respondents in Table 28 give nine reasons why forest policies and laws are not obeyed. The five most prominent reasons were: lack of jobs – 23,

weak law enforcement – 16, poverty – 17, lack of lumber for local use – 15, and difficulty in obtaining permit legally – 11. In my opinion, resources are resources because people place value on them; laws regulating their use must not antagonise the users.

Consequences of non-obedience of the policies and laws

The effects of illegal forest activities on the stakeholders and the resource themselves were examined. Table 29 spells out the respondents' opinion on non-obedience of forest resource policies and laws on both the stakeholders and the resources themselves.

Table 29: Consequences of forest offences on stakeholders and the resources

Response	Frequency	Percentage
Conflicts among stakeholders	30	30
Depletion of forest resources	23	23
Degradation of forest lands	20	20
Extinction of some valuable fauna and flora	14	14
Increased poverty	13	13
Total	100	100

Source: Fieldwork, 2007

A conflict among stakeholders was found to be the major consequence for all the forest offences in the study area. Respondents scored 30% as the highest consequence of the illegal activities. The conflict among stakeholders basically is

a fight over the fast diminishing resources. The non-adherence to the rules and regulation that govern the forest and its resources resulted in the depletion of the forest resources in the study area. The respondents linked the forest depletion to the degradation of forestlands and the extinction of valuable fauna and flora. The final result is poverty though it had the lowest score from the respondents.

Table 30: How forest offences could be prevented

Response	Frequency	Percentage
Available and affordable resources	41	41
Awareness creation	39	39
Strict enforcement of the law	20	20
Total	100	100

Source: Fieldwork, 2007

The respondents were also sure that these offences could be stopped when forest resources are made available and affordable to consumers. Currently the lumber or timber component of forests resources from legal sources is very scarce and from the micro-economic principles prices hike with scarcity. The ordinary person can only get these resources from the illegal source, which also promotes forest offences. Through awareness creation, and/or strict enforcement of the laws respondents believe forest offences could be reduced or even stopped. A combination of the three would make the laws very effective.

Stakeholder participation in resource management

There is the general opinion among development partners that most projects failed because of lack of participation from beneficiaries. Efforts were therefore made to study the participation among stakeholders in this project. The work was meant to determine whether respondents had any knowledge of interactions among stakeholders as far as forestry issues were concerned.

Respondents were to indicate whether participatory interaction existed or not among or between stakeholder. The frequencies of interactions from the respondents are as shown in Table 31.

Table 31: Participatory interaction among stakeholder

Response	Frequency	Percentage
No interactions	75	75
Yes (interactions exist)	25	25
Total	100	100

Source: Fieldwork, 2007

From the response in Table 31, it was clear that stakeholder meetings on forestry issues were limited. Only 25 said there exist participatory interactions among stakeholders while 75 claimed there were no farms of participatory interaction. Participatory interactions ensure transparency in resource management and use and thereby reduce conflict. When participation is lacking, information on the roles of stakeholders will be minimal or even absent and conflicts will arise.

Table 32: Types of participatory interaction among stakeholder

Response	Frequency	Percentage
Meetings among stakeholders	12	12
Meetings with resource managers	88	88
Total	100	100

Source: Fieldwork, 2007

Table 32 showed that participatory meetings or interactions were frequent between resource managers (government) and also the other stakeholders on forest resource issues. It was clear that though participatory meetings or interaction were few, it was evident that contractors met with landowners to discuss social responsibility agreements and collected letters of consent or approvals to harvest timber on their lands.

The desires of stakeholders

The desires of the stakeholders on participatory processes were also studied. The respondents wished there could be frequent interactions between and among stakeholder to take decisions on issues concerning forest resource policy planning, management and also to address the problems affecting the resources. The constraints were that, who would facilitate the meetings to ensure decorum and how would their decisions affect national policies to be effective.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter gives accounts of the summary of the findings, the conclusions arrived at and recommendations in line with the objectives of the study.

Summary of findings

The study looked at the causes of conflicts, forest stakeholders' roles in the conflicts, forest offences that develop as a result of the conflicts and how they affect sustainable forest management in the Assin north and Assin south districts of the Central Region of Ghana. All the landowners, assembly persons, forest fringe communities, non-timber forest product collectors and sellers, timber contractors and forest resource managers constituted the population for the study. Random selection was used to sample the units from the various categories of stakeholders.

A total of eighty (80) respondents were interviewed comprising eight (8) landowners, eight (8) resource managers, seven (7) each of timber contractors and Assemblypersons, and twenty-five (25) family heads from the forest fringe communities and forty-five (45) non-timber forest product collectors and sellers.

The forty-five (45) non-timber forest product collectors and sellers included five (5) each of wild-animal hunters, mushroom collectors, snail sellers, wild honey sellers, charcoal burners, firewood collectors, leaves for rapping collectors, medicinal herbs sellers and weaving material collectors. In-depth interviewing was employed as the major technique for data collection. The major results of the fieldwork are summarised as follows;

Forest resources depletion in the study area continued to be on the ascendancy despite the negative impact on the people and the environment such as poverty, reduction in soil fertility and loss of biodiversity and forest cover. The people were conscious of all the numerous negative impacts of forests resource depletion yet for survival, they cannot stop.

Conflicts within and between stakeholders continue to smoulder with occasional outbursts and yet solutions to these remain illusive. These intra and inter-stakeholder conflicts resulted from lack of trust between stakeholders, desperate moves to sustain life, and the expression of disgust for resource managers' inability to satisfy their resource needs. The results these conflicts are low morale, apathy, lawlessness and the breakdown of civil order in the communities leading to the unsustainable exploitation of forest resources to the detriment of sustainable management of these forest resources.

Forest offences were found to be accelerating without the stakeholders doing anything about them. These offences ranged from illegal harvesting and chain sawing of timber, poaching, to illegal farming in forest reserves. The attitude of the stakeholders was that of 'harvest whatever one can and in whatever

quantities and damned the future consequences'. It showed total expression of apathy with some and a field day for others.

Participatory forest management seemed to be the hope for the future elimination of conflicts. Unfortunately, suspicion and ignorance continue to prevent stakeholders form meeting to discuss forestry issues. The study showed that, the people have the eagerness to participate in forest resource management, however they lack the capacity. Government established modalities and procedures for the smooth implementation of participatory forest management, but the capacity for its sustainability remain a mirage.

Low capacities of stakeholders in the study area were identified as lack of financial resources, lack of equipment, low education and poor communication flow. All the stakeholders were found to lack the capacities to perform their roles to promote sustainable forest management and curtail conflicts.

Conclusions

It was evident from the study that illiteracy was very high in the study area and contributed greatly to most of the conflicts over natural resources. Stakeholder conflicts are not new with natural resource ownership, use and management. They occur over a variety of complex causes and effects. These range from conflicting values placed on forests and their resources, poor stakeholder identification, inequity in benefit sharing through to denial of peoples' participation in resource management.

Conflicts lead to apathy and the unsustainable exploitation of forest resources. The loss of these resources multiplies the suffering of stakeholders through pronounced poverty, loss of biodiversity and environmental degradation. It is obvious that when the environment is degraded, it starts a whole visual cycle of human sufferings. The ray of hope remains in the respondents' eagerness to solve these conflicts through participatory means using alternate conflict resolution methodology provided assistance is given in the area of capacity building.

Conflicts are bas especially when they are negative and violent. They can degenerate into the loss of resources, property and life. Sustainable forest resource management as much as possible must therefore always be people centred and purported toward alleviating poverty or improving the standards of living in addition to the sustainable environmental management for posterity.

Recommendations

- Resource policy planners must endeavour to include conflict resolution strategies in their plans and provide a vibrant customer services procedures to promptly address complaints as an alternate way of resolving conflicts.
- The Forestry Commission should take pragmatic steps to ensure that forest resources especially lumber are available for the public and at affordable prices to stem the illegal exploitation of these resources

- The government should review the forest resource revenue sharing procedure outlined in the Constitution to make it equitable or ensure that stakeholder roles are effectively played to commensurate their shares in the royalties; and
- Participatory forest management should be pursued with utmost commitment to ensure that all stakeholders participate in forest resource policy planning, development and management.

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APPENDIX

QUESTIONNAIRE SCHEDULE

Introduction

The questions are designed for the study of conflict and resource management in Ghana, a case study in Assin North and South Districts. It is therefore wished that you would give your candid view about it by responding factually to the questions on the subject.

Objective

The project is a Master of Arts programme leading to a Masters Degree in Environmental Management and Policy. You are invited to share plainly and clearly your views and be sure that you will not be betrayed and your opinion will be confidentially protected.

Modulus 1: Background information

1.1 Your age? A. 18 – 27 B. 28 – 38 C. 39 – 49 D. 50+

1.2 Your sex?[1] Female Male

1.3 Occupation? Main ..... Secondary .....

1.4 Level of education (choose one that fits you now);

No school JSS Middle SSS University/others

[1] Please write on the back of the page if the space provided is not enough

Modulus 2: General issues about your environment

2.1 Indicate and prioritese 3 most pressing issues affecting you and your environment

2.2 What are you doing about them?

2.3 If you are doing something about them, why are they persisting?

Modulus 3: Issues on forests and forest resources

3.1 What will you consider as the 3 most important values of forest and forest resources?

1

2

3

3.2 Are the forest resource still available as before? A. Yes B. No

3.3 If No, why?

3.4 Can the forest resources be restored? A. Yes b. No

3.5 If Yes, how and if No, why?

3.6 Who are the stakeholders for forests and forest resources? List in order of importance.

1 4

2 5

3 6

3.7 What make stakeholders unhappy about forest administration in your locality/ Ghana?

1 4

2 5

3 6

3.8 List the roles these stakeholders play in forest resource management

Stakeholder	Roles
Landowners	
Government	
District Assembly	
Communities	
Timber contractors	
NTFP collectors	

3.9 What are the limitations of the stakeholders in their roles?

No.	Stakeholder	Limitation

3.10 What do you suggest should be done about the stakeholder unhappiness?

1 3

2 4

Modulus 4: Stakeholder and conflicts

4.1 Name some of the misunderstandings among stakeholders

4.2 What in your opinion bring about the lack of understanding?

4.3 What do you think could be done to create understanding?

Modulus 5: Forest resource offences

5.1 What are some of the forest offences that you know of in your area?

5.2 Why do people commit them in your opinion?

5.3 Can they be stopped?

5.4 If Yes, how and if No, why?

Modulus 6: Forestry policies and laws

6.1 Are you aware that there are policies and laws governing forest and forest resources? A. Yes B. No C. Not Sure

6.2 Why did you choose a, b or c?

6.3 Are people obeying these policies and laws? A. Yes B. No C. Not sure

6.4 List some of the reasons why the laws are not obeyed.

1 4

2 5

3 6

6.5 What are the consequences of the lawlessness on the resource and stakeholders?

Modulus 7: Stakeholder participation

7.1 Do you hold community meetings on forestry issues? A. Yes B. No

7.2 If No, why and if Yes, how often?

7.3 Do outsiders hold meetings with you on forestry issues? A. Yes B. No

7.4 If Yes, what were the issues?

7.5 Have you ever met with government officials over forestry issues?

A. Yes B. No

7.6 If Yes, what were the issues?

7.7 Would you like your community to hold regular meetings to discuss forestry issues that affect all of you? A. Yes B. No

7.8 What would you like to be in the agenda for such meetings? List as many as you wish.