SURVEY OF LAND AND FOREST TENURE SYSTEMS AFFECTING MANGROVE CONSERVATION AND MANAGEMENT

FINAL REPORT

ITTO PRE-PROJECT PPD 108/04 REV. 1. (F): Sustainable Community Management, Utilization and Conservation of Mangrove Ecosystems in Ghana

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Executive Summary

Ghana is well endowed with natural resources, including mangroves. As a common property resource, its management is affected by the prevailing tenure systems. In Ghana, two natural resource tenure systems operate simultaneously. These are the state and customary tenure systems.

The sustainable community management, utilization and conservation of mangrove ecosystems in Ghana, is a pre-project being carried out by the Government of Ghana and funded by International Tropical Timber Organization (ITTO) for a period of a year. The project seeks to address issues related to access, ownership rights and tenure and to provide baseline information to develop community-based policies and strategies to ensure sustainability of the mangrove ecosystems in the country. The objective of this study is therefore to review land and forest tenure systems affecting mangroves management in Ghana and make recommendations to strengthen its management and conservation by the local communities.

This study focused in two areas namely Nzema East and Mfantseman Districts located along the coast of Ghana. A total of fourteen communities were involved in the study. The major approaches used for the execution of the task were desk study, key informant interviews, focus group discussions, field observations and pre-validation workshop.

The findings of the study have been highlighted in a SWOT analysis diagram (4.4). Among them are well established traditional structures, strong security of tenure and indigenous knowledge on mangrove ecosystem, mangrove areas serving as a breeding grounds for mosquitoes, as well as conflictive district byelaws on ownership and control with the traditional norms on ownership.

The need to identify the different stakeholders within the communities and build a platform that will facilitate the protection and management of the mangroves; the District Assemblies to empower the local institutions through amendment or enactment of appropriate byelaws which will give authority to Traditional Authorities and recognize ownership of the mangroves by the communities; the Natural Resource Management Action Plan of the District Assemblies should consider all wetlands and mangroves areas for rehabilitation with financial support from the Plantation Development Fund; and mandating the Unit committees within the communities to support the enforcement of the mutually agreed rules and byelaws within the Youth Employment Programme were among the recommendations made to strengthen mangroves management and conservation by the local communities and the district institutions.
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SECTION ONE: INTRODUCTION AND BACKGROUND INFORMATION

1.0 Introduction

Ghana is well endowed with natural resources, including mangroves. As an integral part of the natural resource endowment of the country and mostly found along the coast, tidal river estuaries and lagoons, their conservation and protection are needed to sustain them and to ensure the continued delivery of their socio-economic and environmental services.

As a common property resource, its management is affected by the prevailing tenure systems. In Ghana, two natural resource tenure systems operate simultaneously. These are the state and customary tenure systems. The customary tenure is based on the traditions of the local communities and the state tenure is the administrative system governed by the state rules and regulations (FAO, 1995). By definition, tenure is a legal concept which refers to bundle of both rights and obligations: the rights to own, hold, manage, transfer or exploit resources and land but also obligation not to use these in a way that harms others (Bruce, 1998). It defines the property and what a group can do with it. Moreover, tenure is also a social institution involving traditional practices, customary and formal laws. In many rural communities, natural resource tenure as a social institution, defines not only their relationship to the land and natural resources but also the relationships between members of the community and those outside it, in terms of rights and obligations on the control and use of natural resources. Therefore, it governs ownership and access to natural resources which is a gateway to use and benefits from these resources.
As the case may be, the forest and land tenure systems have profound influence on the management, conservation and protection of mangroves. With the country’s mangrove resources supporting the rural economy in diverse ways in terms of economic services and goods, involving the user communities in the management responsibilities and understanding the prevailing tenure systems are important in the sustainable management of the resources.

1.1 Background of Project

The sustainable community management, utilization and conservation of mangrove ecosystems in Ghana, is a pre-project being carried out by the Government of Ghana and funded by International Tropical Timber Organization (ITTO) for a period of a year.

The project seeks to address issues related to access, ownership rights and tenure and to provide baseline information to develop community-based policies and strategies to ensure sustainability of the mangrove ecosystems in the country. It therefore aims at identifying opportunities and threats and developing a proposal for sustainable community management, utilization and conservation of the mangrove ecosystems in the country. Also, it will ensure the rehabilitation of mangrove ecosystems that have been degraded through alternative usage, over-exploitation and unsustainable means.

As part of the project, tenure security, institutional arrangements and governance to empower local communities in mangrove management and decision-making will be strengthened.

1.2 Objective of study

The objective of this study is therefore to review land and forest tenure systems affecting mangroves management in Ghana and make recommendations to strengthen its management and conservation by the local communities.

1.3 Organization of the Report

The first section of this report is the introduction, which looks into the background information and objective of the study. The second section describes the study area and
the methods used to carry out the assignment. The results and discussion of the study are presented in section three and four which looked at the general assessment of land and forest tenures at the international and Ghana perspectives. The last section is devoted to conclusion and recommendations.
SECTION TWO: STUDY AREA AND METHODS

2.1 Study Area

2.1.1 Location

The pre-project focused on two areas namely Nzema East and Mfantseman Districts located along the coast of Ghana. The Nzema East District is located between longitude 2° 05' and 2° 35' West and latitude 4° 40' and 5° 20' North. And Axim is the District Capital. Mfantseman District is located along the Atlantic coastline of the Central Region of Ghana and extends from latitudes 5° 7' to 5° 20' North of the Equator and longitudes 0° 44' to 1° 11' West of the Greenwich Meridian, stretching for about 21 kilometers along the coastline and for about 13 kilometers inland and constituting an area of 612 square kilometers. The District capital is Saltpond (DMTP, 2006).

Figure 1 Map of Ghana showing Nzema East and Mfantseman Districts
2.1.2 Selection Criteria for the communities

Within the districts, eight communities were selected for the study. These were selected based on;

- The presence of mangrove vegetation;
- Ownership and stake in the management of mangroves;
- Involvement in mangrove related economic and social activities;

2.1.3 Drainage

In Nzema East, the communities are located around the Amansure River/Estuary. On the other hand, the communities in Mfantseman District are scattered around the Emissa River and its wetland area.

Mfantseman District is endowed with a number of rivers and streams including the Narkwa, Emissa (Ochi), Nkasaku, Eko, Egya, Aworaba, Kwasinzema and Bruka. The river Emissa flows into the sea via the Emissa lagoons at Emissano community (DMTP, 2006).

The catchment of the Amansure wetland is drained by five main rivers namely the Amadenra, Avuni, Bosoke Ayevula and Kugyake and a number of streams. These water bodies’ flow into the Amansure lagoon. The Amansure River then takes flow from the lagoon into the sea. There are several outlets canals from the lagoon connecting the outside flood plains.

2.1.4 Vegetation and Major Livelihoods

In Mfantseman District, the vegetation consists of dense scrub tangle and grass. It is believed that the District was once forested, but the forest has been systematically destroyed through centuries of bad environmental practices such as bush fires and deforestation. However, pockets of relatively dense forest can be found around fetish groves and isolated areas. These physical characteristics have combined effectively to offer opportunities in agriculture (farming) to the people. The proximity to the sea has made fishing a major activity along the coastal communities. The climate, soils and
rivers/streams have made farming possible especially in the inland areas. Among the crops cultivated are cocoa, oil palm, pineapples, oranges, plantain, cocoyam and coconut (DMTP, 2006).

In Nzema East District, the Amansure catchment lies within the Wet Evergreen forest zone of Ghana (Hall and Swaine, 1981). The vegetation in the wetland is described as swamp forest on the basis of its floristic composition. A recent preliminary biodiversity survey carried out in the wetland indicates that five main vegetation types exist in the area (Enu-Kwesi and Vordzogbe, 2001). These are the aquatic vegetation, swamp and mangrove forest, ‘forest islands’ or thickets, grassland and farmlands. Forest reserves identified in the area include Draw, Edumfri and Ebi Shelter Belt Forest Reserves. In the interior, the Nini-Sushien and Ankasa forests protrude into the district. Mangrove ecosystems are also abundant and predominate along rivers and estuaries such as Ankobra and Amansure. The district is also located near the sea, making fishing a major livelihood of the people. Other livelihood engagements include coconut farming and processing.

2.1.5 Population Size

Mfantseman District

The Mfantseman District has a total population of 152,264 comprising 69,670 males and 82,594 females. The annual rate of population growth is estimated as 2.8%. The statistics on population of the communities are shown in table1 below:

Table 1: Population of the selected communities in Mfantseman District

<table>
<thead>
<tr>
<th>Communities</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narkwa</td>
<td>2,721</td>
<td>3,138</td>
<td>5,859</td>
</tr>
<tr>
<td>Asaafa</td>
<td>1,941</td>
<td>2,332</td>
<td>4,273</td>
</tr>
<tr>
<td>*Emissano</td>
<td>1,100</td>
<td>1,300</td>
<td>2,400</td>
</tr>
<tr>
<td>*Suprudo</td>
<td>540</td>
<td>780</td>
<td>1,320</td>
</tr>
<tr>
<td>*Kuntu</td>
<td>1,500</td>
<td>2,000</td>
<td>3,500</td>
</tr>
<tr>
<td>*Kermit Edumafa</td>
<td>1,600</td>
<td>1,868</td>
<td>3,468</td>
</tr>
</tbody>
</table>

(Source: 2000 Population and Housing Census/ * communities perception)
**Nzema East District**

The estimated total population of the district is 142,959. This is made up of 71,723 males (50.2%) and 71,326 females (49.8%). Growth rate is 2.5% according to the 2000 national population census. Table 2 shows the population sizes of the eight selected communities fringing around the Amansure River.

**Table 2 Population of the selected communities in Nzema East District**

<table>
<thead>
<tr>
<th>Community</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azuleloanu</td>
<td>646</td>
<td>761</td>
<td>1,407</td>
</tr>
<tr>
<td>Ampain</td>
<td>600</td>
<td>570</td>
<td>1,170</td>
</tr>
<tr>
<td>Bankanta</td>
<td>359</td>
<td>439</td>
<td>798</td>
</tr>
<tr>
<td>Sanzule</td>
<td>774</td>
<td>843</td>
<td>1,617</td>
</tr>
<tr>
<td>Eikwe</td>
<td>751</td>
<td>1,026</td>
<td>1,777</td>
</tr>
<tr>
<td>Kristan</td>
<td>491</td>
<td>495</td>
<td>986</td>
</tr>
<tr>
<td>Ala Bokazo</td>
<td>279</td>
<td>266</td>
<td>545</td>
</tr>
<tr>
<td>Aloakpoke</td>
<td>103</td>
<td>123</td>
<td>226</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,003</strong></td>
<td><strong>4,523</strong></td>
<td><strong>8,526</strong></td>
</tr>
</tbody>
</table>

(Source: 2000 Population and Housing Census)

**2.2 Data Collection**

Data was collected through desk study, interviews, focus group discussions, field observations and workshop (pre-validation).

**2.2.1 Desk Study**

This involved the identification, extraction and review of all existing documents on land and forest tenure systems, land and forest policies and laws, and bye-laws at the district and community levels.

**2.2.3 Focus Group Discussion and Interviews**

The selected communities were visited and focus group discussions held were attended by representatives of various stakeholders in the community, including the chiefs. In addition, interviews were conducted with Key Informants (chiefs, Assembly representatives, District Environmental Officer/Planning Officers). The informants constituted the sources of information for gaining background information on mangrove and tenure arrangements in the communities.
2.2.4 Pre-validation Workshop

A one-day workshop was held in each district to validate data collected. In each district, three to five representatives from the selected communities participated, including District Assembly representative. The workshop was also used in filling the gaps and collect other data not previously gathered.
SECTION THREE: REVIEW OF LAND AND FOREST TENURE SYSTEMS

3.1 Natural Resource Tenure Concept

Natural resource tenure is not only a legal concept but a complex social institution. As a legal concept, it refers to bundle of both rights and obligations: the rights to own, hold, manage, transfer, or exploit resources and land, but also the obligation not to use these in a way that harms others (Bruce 1998). Birgegard (1993) referred to it simply as the terms and conditions on which natural resources are held and used. Tenure defines property and what can be done with it. It also defines who controls these assets, who benefits from them and where the power to make decisions about them is vested.

As a social institution, it defines not only relationship of a community to the land and natural resources but also the relationships between members of the community and those outside it, in terms of rights and obligations on the control and use of natural resources (Birgegard, 1993). It is a key means to survival in any community as it determines the access to and use of the resources. Social identification with a group is therefore an important prerequisite for access to natural resources.

Natural resources cover a range of natural assets such as land, water, rivers, forest, fisheries and other natural assets. In the broad context of land tenure, rivers, forest and other natural resources on land constitute the objects of tenure. A community’s rights to these natural resources define their natural resource tenure (WRI, 2005).

Characteristically, tenure is multiple because different resources are put to different uses. For example, forested land, river banks, home garden, etc are all likely to be ruled by different tenures and in any community tenure is a system and diverse. This diversity is due to the need to differentiate tenure rules for different resources to make resource use socially and economically efficient (Birgegard, 1993). Hence, there are usually different set of tenures which form tenure system governing different land uses or type of users, but they should constitute a coherent system complementing each other (Bruce, 1989).
Natural resource tenure involves often traditional practices and customary authorities and formal laws (WRI, 2005). Therefore, two tenure systems operate simultaneously. These are the state and customary tenure systems. The customary tenure is based on the traditions of the local communities and the state tenure is the administrative system governed by the state rules and regulations (FAO, 1995).

Based on ecological and management arrangement, there are three broad types of tenure situation or niche. These are the agricultural holding, the commons and government forest reserve. In the agricultural holding, the key tenure issue is the extent to which the farmer has the security of tenure to invest in trees because they are slow growing and constitute long-term investment. In the commons, it’s the effectiveness of community resource management and the capacity of the community to exclude outsiders from the use of the resources. The reserves are created to protect forest from non sustainable use in free access or ill-controlled commons situation. It is only through licensing from the state or accepted custom can one have the rights to gather forest products from reserve (Bruce, 1989).

3.2 Tenure Security and Investment in Environment

The question of rights in natural resources concerns security of tenure (Bruce, 1989) and security of tenure exerts tremendous influence on how land and resources are used. There is general agreement that tenure security is one important factor for farmers’ willingness to make investment in land improvement (Birgegard, 1993). Secure tenure can be defined as the certainty that a person’s rights to continuous use of land or resources will be recognized and protected against challenges from individuals and the state (WRI, 2005). This kind of certainty provides incentive to make long-term investments in maintaining or enhancing the productivity of that property (Bruce, 1989).

Insecure tenure translate to a lack of assurance that one’s land or resource rights will be respected over time (Mein-Dick et al, 2002 in WRI, 2005). When insecurity of tenure acts as a disincentive to long-term investments to land improvement, the quality of land deteriorates. This is true as well for tenure rights over forests, mangroves, fisheries and other natural resources where the benefits of good stewardship can only be gained over time. This will affect sustainable forest management practices including tree planting if
their tenure over the forests is restricted and they cannot count on reaping the benefits of such practices. The potential sources of insecurity of tenure are varied and include annual redistribution of parcels of land and where state legislation claims ownership of trees growing on holding and requires permit to gain use rights. (Bruce, 1989).

In many situations, the concepts of tree tenure and land tenure exist as separate arrangements. This is because trees are not part and parcel of land on which they grow but constitute object of tenure or property rights separable from the land on which they grow. Many tenure systems confer property rights in standing trees quite distinct from the land on which they are located. Also, a tree tenure regime may distinguish between planted and wild trees and rights to use tree products depend on the nature of use, whether it is for subsistence or commercial use (Bruce, 1989). Hence security of tenure is not concerned with only land but also object of the land and the rights in trees is also important in long-term investment in trees.

3.3 Tenure on the Commons

Common property resources are resources held in common (Bruce, 1989). This concept became popular with the introduction of the ‘tragedy of the commons’ propounded by Garrett Hardin in 1968 to explain that resources held in common are inevitably overexploited and degraded. In open access situation, the danger of degradation is clear but in a situation where there is ownership and potential of exercising mechanisms of control, Hardin’s theory could be misleading. Community control of resources is primarily associated with geographically-bounded communities where ties of kinship buttress territorial ties. Under the commons, three elements must be clearly defined and these are the community, institutions and the mechanism of control (Bruce, 1989). The argument is that, a commons is community administered and its existence ultimately depends on whether members of the community consider that its benefits outweigh its costs. Though a common property tenure arrangement provides for effective management of natural resources, enforcement of rules is difficult because members have different degrees of interest in the resources because resources are multipurpose and creates heterogeneity in the community.
The concept of the commons presumes the existence of a community, the proprietor of the commons, whose members are the persons, entitled to use of the commons and the right to exclude non-members is central to this concept.

The commons provides the basis for management of use by members and the possibility of control and restrains of use in the common interest (Bruce, 1989). This is purported to limit and regulate pressure on the resources. Hence a clear identification of community which can use and control use of a resource is the essential step towards understanding commons management. However, community ownership of a resource does not guarantee effective community control because such control requires the ability to both exclude outsiders and control behaviour of members. And also the protection of trees can be a problem because in a community based on a system of reciprocal rights and obligations, this is often difficult to do and the personal or institutional capacity to enforce exclusionary rights may be very weak (Bruce, 1989).
SECTION FOUR: LAND AND FOREST TENURES IN GHANA

4.1 Ownership and Institutional Arrangements

In Ghana, land is governed by both customary and statutory laws, operating side by side. The country has a total land area of 23 million hectares, of which 78 percent is under customary tenure and the state owns about 22 percent with statute law applying exclusively to about 20 percent. In essence, the community\(^1\) holds management responsibility for much of the lands under customary land law (DFID, 2003).

In view of this however, ownership of land is categorized into five (5). These are: The State/public, stool, vested, private and family land ownerships. The state and vested categories are lands which by virtue of State Lands Acts 1962 (Acts 125) and Administrative of Lands Acts 1962 (Acts 123) are vested in the government in the interest of the public or appropriate stool respectively.

In the formal sector, the administration and services of land is vested in five (5) public agencies. These are Lands Commission, Survey Department, Land Valuation Board, Office of Administrator of Stool Lands and Land Title Registry. These are under the Ministry of Lands and Forestry. The administration of all stool lands is vested in the appropriate stool on behalf of and in trust for the subject of the stool in accordance with customary law and usage (Constitution, 1992). In the case of family lands, the vestment is in the Family Head (Abusua Panyin) on behalf of the family. Lastly, Private ownership of lands is acquisition of the land by outright purchase and is legally recognized as titled properties by individuals.

In the community, the chief/head of family, in council with the elders take all important decisions over the lands. In coastal state, the absolute interest may be vested in smaller communities, such as clans and families, and the heads of such clans and families have the administrative authority to deal with land (DFID, 2003). There are three main modes by which members of a community may acquire land. These are inheritance, acquisition

\(^1\) Under customary land law the community may range from an entire tribe to a small family
and as a gift. However, because most land ownership in the country is characterized by religious beliefs and practices, outright sale is not encouraged. For example, for the northern tribes, land is a sacred trust of the ancestors who preserved it for the use of their descendants and the general belief is that to sell land is a sacrilege. Thus, customary land tenure not only sees land as a spiritual entity, it also recognizes land as a divine heritage, which the spirits of the departed ancestors expect to be preserved and handed down to future generations. It is a heritage entrusted to the community, and the responsibility to ensure its preservation and subsequent enjoyment by future generations rests on the whole community. Though customary laws do not expressly frown on land sales to migrants (i.e. non-community members), they do not promote them because of the traditional philosophy of land being a sacred trust of the ancestors (DFID, 2003).

The communal land tenure confers on every member a usufruct and an inherent right to occupation and use of the land. This right qualifies a member of the community to access any portion of the communal land for his use, though the normal practice is for the member to seek permission from the chief or family head before taking tenancy of any land (DFID, 2003). In this way, chiefs/family heads ensure an equitable distribution of land, though it leads to fragmentation and small holdings with consequent low productivity.

The religious beliefs and traditional practices characterizing land ownership in the country have affected not only ownership but also their uses. Typically with the Akans, land is a supernatural feminine spirit with Thursday being the natal day of the spirit and set aside from the cultivation. Any breach incurs legal sanctions. These religious concepts of land have affected not only the ownership scheme of land but also the uses and manner of usage of land (DFID, 2003).
4.2 Land Tenures in Nzema East and Mfantseman Districts

4.2.1 Ownership, Access and Institutional Arrangements

Generally, land is not a scarce resource in both districts, though there was evidence of some communities making use of lands of other communities. The community (i.e. stool and family) lands are the common ownership types identified. Also, there are common property resources such as lagoons, rivers and mangroves constituting objects of tenure which are owned by the communities but held in trust by the stools. The communities in these districts have well defined institutional structures such as the Traditional Authority or Family Head and Elders to manage and administer the land resources. The chief or head of family, in council with their elders, takes all important decisions. The land tenure systems in the communities are indicated by the various uses for the land. Noted among them are farming, sand and gravel winning, salt production, fishing and infrastructural development.

In the study communities, stool lands are not sold outright but could be leased for short or long-term periods for the purpose of agriculture and the arrangement renewed on annual basis. However, family lands can be sold outright, leased and/or transferred in the form of inheritance. The laid down institutional arrangements do not show any element of discrimination between members and non-members in terms of access and use rights except in the nature of use and length of occupancy. Members of the communities have usufruct right and access to stool lands. Occupation requires seeking permission and performing certain traditional requirements such as offering of schnapps to the Traditional Authority. However, for non-members, payment of token with schnapps and annual payment of royalties to the stool are required but this is also true for a different family members occupying land of another family. Moreover, use of family lands by both member and non-member of a community may require payment of token or entry into two types of farming arrangement named Abunu\(^2\) and Abusua\(^3\). Unless, the occupancy of land is for long-term project, under which the terms and conditions of the contract requires payment of an agreed amount of money, annual payment of royalties.

\(^2\) Abunu – Dividing the proceeds from the land into two whereby the landowner takes half and the tenant also takes half.
\(^3\) Abusua – Dividing the proceeds from the land into three whereby the landowner takes one third and the tenant two thirds.
and renewal of contract is the norm, unless stated differently in the contract. Lands under long-term projects are found in Mfantseman District where large tracts of community lands are released to non-members of the community for salt production and to members and associations within the communities for agroforestry.

The different land tenures distinguish between the land and objects of tenure such as coconut trees on lands which are recognized as different property and therefore attract separate payment. Acquiring the land does not necessarily give one access or rights over the objects of tenure. However, where the objects on the land are naturally grown, they do not attract any payment but where they were planted, the contract recognizes the need to make payment or compensation to the owner. In many cases, the object of tenure is the coconut trees in these districts.

4.2.2 Land Tenures and its Impacts on Mangrove Vegetation

The land tenure systems or institutional arrangements in the communities give usufruct rights to every member of a community to land and its objects of tenure such as the lagoons, rivers and mangroves forest within the perceived boundary and area of jurisdiction of each community. Mangrove forest is part of the mosaic vegetation of the rural landscape and constitutes a common resource.

Security of tenure is not undermined as the tenure arrangement makes provisions for the payment of drinks, annual payment of royalties and compensations to gain tenancy, occupancy and user rights to land and its object of tenure. The granted access, tenancy, use rights by the Traditional Authorities/heads of families are not contested once it involves a member of the community, a recognized migrant and the provisions are met. The tenures also indicate some level protection of mangrove in the sense of restricted access and use rights through observance of taboo days.

a) Common issues within the two study area

In both districts, factors such as lack of rules governing the level of utilization and management of mangroves as well as inadequate knowledge on the importance of mangroves, the salt industry and rice cultivation present potential threats to the conservation of the mangrove resources. Also, the perception of mangrove abundance
serves as a potential threat and field observation indicates indiscriminate harvesting of mangroves, with such behaviour attracting no sanctions.

b) Issues within each District

The Nzema East District

➢ **Communities land tenure situational analysis**

In Nzema East District, most communities have well defined knowledge of their territorial areas of mangroves and exercise control over them. The land tenure arrangements in the communities confers on each member of the appropriate community access and use rights but allow extraction or harvesting of mangroves for subsistence use. Supposedly, access is restricted for an outsider and accessibility and use rights are granted by the Traditional Authority upon request by outsiders but exclusion of outsiders is weak because of the perceived interdependency of neighbouring communities. Restriction and regulation in terms of access and use are through strict observance of taboo days, when entry into both the rivers/lagoons and mangrove forest is restricted and flouting this restriction attracts sanctions. Observation indicated that mangroves are being used as building materials, medicine and fuelwood.

In this district, though overexploitation is limited by the existence of other sources of fuelwood and building materials such as the coconut truck, palm branches and shells and other woody materials, it is also supported by strict observation of the taboos, which attract sanctions when flouted. These factors have contributed to the intactness of the mangrove vegetation in the district. However, the scarcity of farming lands presents a potential threat to mangrove conservation in this area. Field observation indicates access to the swampy areas where mangroves are well endowed for rice cultivation and this is a threat to mangrove conservation, though only small areas of mangroves have been converted into rice farms.

➢ **District Assembly Byelaws**

Regulation of access and use rights is also through the enforcement of relevant District Assembly Byelaws. For example the section 79 (subsection 1, 2 and 3) of the Local Government Act, 1993 (Act 462) conferred powers on the Nzema East District Assembly
to enact the Fishing Net and Fishing Methods Bye-laws of 2004, the section 1 which restricts the use of dynamite gelignite, other explosives substance or poisonous matter in fishing in rivers, which are also harmful to the mangrove vegetation. Interaction and observation indicate knowledge of and strict observance of this Bye-law as contravention of this law attracts a fine of 200,000 cedis or in default to a term of imprisonment not exceeding six (6) months (Local Government Bulletin, 2006). Also, the Control of Water Bodies and Use of Rivers Bye-law of 2006 clearly states the vestment of ownership of and use of all riversides in the District Assembly (ibid.), making the District Assembly the formal custodian of all the vegetation along water bodies in the district. This is an important issue for careful consideration because most mangrove vegetation forms a belt along the water bodies. This bye-law raises the question of whom (district or traditional authorities) has absolute control of these resources in its jurisdiction. Potentially, this could undermine the power and control of traditional authorities over such resources in their territories. There is therefore competing claims which could undermine security of tenure of the community members and also result in conflict between these two power institutions. This has the potential of inducing and creating open access situation as control may be lost and the usufruct rights of communities questioned. This bye-law exists in conflict with the customary laws in terms of who has control and can make decisions and may in the near future raise questions on which institution to consult when one needs to use vegetation along the banks of rivers, though the communities know they have usufruct access and use rights. Despite this potential threat, it serves to reinforce traditional bye-laws emphasizing subsistence use and taboo days observance to avoid indiscriminate exploitation and harvesting of mangroves.

**Mfantseman District**

- **Communities land tenure situational analysis**

Within the communities in Mfantseman District, land tenure systems clearly define who has access and use rights and who has not. They indicate usufruct access and use rights for all community members and migrants but with no measures to exclude outsiders. The tenure arrangement does not restrict access and use rights to mangroves. Observations show open access situation, characterised by a relatively high level of degradation. Even though, subsistence use is the preferred situation, the tenure
situation is silent on the quantity to be extracted by community members and also encourage conversion of mangroves to other uses. Observations and evidences indicate indiscriminate harvesting of the mangrove vegetation and conversion of large tract of mangrove to salt industry. Though, there is sprouting and natural rejuvenation of mangroves in some parts, the problematic factor and competing land use, the salt industry, keeps expanding. It was understood that the salt industry derives its incentives from its ability to create employment for the youth and to generate revenue to support community development. It was also evident that the communities do not attach much value to the ecological importance of the mangrove as defensive barriers, though local knowledge indicates its importance for fish, other wildlife and medicinal uses. Its use as fuelwood is minimal as there are other sources such as coconut palms branches and shell and other vegetation. The arrangement also permits harvesting by outsiders on commercial scale if the market becomes available. However, the tenure arrangement is strong on the observation of taboo days which is respected by the people and attracts sanctions if flouted. Though it was evident that the mangroves serve many purposes such as the construction material and medicine, many of the communities see the mangrove vegetation as a nuisance and breeding grounds for mosquitoes and other insects and and therefore would want the mangrove vegetation cleared to control them.

➢ **District Assembly Bylaw**

Formal arrangement regarding the conservation of mangroves is weak in terms of enforcement and non-specificity for mangrove management, though indication of efforts to conserve natural resources in the district is provided by a natural resources management action plan. This plan focuses on reforestation of Narkwa-Ochi Basin but not Emissa River. Also part of the plan is to educate the communities, enact and enforce bye-laws to protect land, water bodies and forests against degradation (DMTP, 2006).

**4.3 Forest Tenure Systems and its Impacts on Mangroves**

Forest reserves and resources in the country are vested in the state in trust for the appropriate communities and ownership is reserved by the landholding communities. The Forestry Commission is the government agency responsible for the control and management forest resources and this mandate also covers timber resources in the off-
reserve landscape (Kotey et al., 1998). This responsibility of management is not specifically mangrove inclusive as the focus is on timber resources.

The vestment of the forests in the state curtailed the access and usufruct rights of these landholding communities to the resources, with access and use rights granted through issuing of permits by Forestry Commission. This is compounded by the lose of rights to the timber trees even in the off-reserve landscape and served as a disincentive to tree planting and management of the resource (Kotey et al., 1998). However, the 1994 Forest and Wildlife Policy (MLF, 1994) and other legislations recognize the rights of the communities based on the guiding principles (3.2.1) and (3.2.12) which place emphasis on the rights of people to have access to natural resources and responsibility to ensure their suitable use as well as security of tenure as part of the incentives for achieving conservation and sustainable development of the forest resources for maintenance of environmental quality and benefits (MLF, 1994).

As indicated in the legislations and regulations, the terms and conditions under which land for harvesting is held are spelt out as well as obligations under them. For example, under the Timber Resource Management Act, 1997 (Act 547), it states that: “no person shall harvest timber from any land to which section 4 of the Act applies unless he holds timber rights in the form of a timber utilization contract entered into under this Act in respect of the area of land concerned”. It further details out the entity that qualifies to apply for the Timber Utilization Contract, the period of tenancy, the appropriate entity responsible for award of the contract, sanctions for default and other conditions under which a type of land with timber could be held and obligation such as payment of royalties, compensation and reforestation of area harvested. Hence, there is appropriate framework spelling out the terms and conditions under which natural resources and land are held.

The most relevant legislations and legal documents however lack specificity regarding the status of mangroves with the exception of the Ghana’s Wetlands Conservation Strategy which aims at ensuring sustainable wetland use within the general context of Ghana’s National Land Policy (1999) and other water related policies and enactments. In this policy the government (specifically, Wildlife Division) is committed to the restoration,
rehabilitation and protection of wetlands as indicated by the Korle Lagoon Rehabilitation Project. Also, during the implementation of the Coastal Wetlands Management Project, the Wildlife Division, in collaboration with NGOs and local communities, carried out a number of rehabilitation activities in the Ramsar Sites. A typical example is the collaboration with a local NGO (Green Earth Organization) and the local communities in the replanting of degraded mangrove areas within the Songor Ramsar Site.

The Ghana Wetland Conservation Strategy is the only relevant legal framework, in support of mangrove conservation, though other legislations such as Water Policy and the Plantation Development Fund could be used to influence the behaviour of tenure holders towards the desired social and environmental goals. They provide security of tenure and encourage investment in planting of mangroves.

In this study districts, forest reserves identified were not easily accessible because of the distance. Forest reserves such as Draw, Edumfri and Ebi Shelter Belt are further from the focus communities. However, the forest type is ‘forest islands’ or thickets, grassland and farmlands. The forest patches more or less constitute potential farmlands and access to them for purposes such as farming and collection of NTFPs is not restricted unless on taboo days.

One peculiar incidence serving as disincentive to a lead major cash crop in the coastal communities is St. Paul disease particularly in Mfanteeman District, which has killed large areas of coconut trees. However, the policy framework such as the Plantation Development Fund can provide the support and opportunities to encourage replanting of coconut in the context of agroforestry, as a way of also replanting the mangroves. The presence of already established cassia woodlots within some communities, particularly in the Mfanteeman District, makes agroforestry easily acceptable by the communities. The establishment of woodlots is an indication of interest in tree planting.
### 4.4 SWOT Analysis (Strengths, Weaknesses, Opportunities and Threats) of the Land Tenure Systems of Study Findings

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tbody>
<tr>
<td>➢ Well-established traditional structures to control and make decisions on mangroves</td>
<td>➢ Weak institutions and byelaws at the community level to manage mangrove ecosystems</td>
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<tr>
<td>➢ Communities well aware of the boundaries of mangrove areas.</td>
<td>➢ Generally weak or lack of legal support for mangrove conservation by the District Assembly</td>
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<td>➢ Presence of other community-level organizational structures such as unit committee to help in policing mangroves</td>
<td>➢ Perceived abundance of mangrove forest has contributed to indiscriminate harvesting and destruction of mangroves for salt production in Mfantseman District</td>
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<td>➢ Well endowed mangrove presence gives the motivation for placing portions of the mangroves under different management regimes, i.e. utilization and strict protection</td>
<td>➢ Scarcity of farming lands in Nzema East District can lead to increasing encroachment of the swampy areas where mangroves are well endowed for rice cultivation</td>
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<tr>
<td>➢ Strong security of tenure and local knowledge on mangrove can serve as incentives for conservation of mangroves</td>
<td>➢ Youth unemployment and economic aspirations of the communities in Mfantseman District</td>
</tr>
<tr>
<td>➢ Strongly observed Taboo days in all the districts</td>
<td>➢ Mangroves as breeding grounds for mosquitoes resulting in malaria</td>
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<tr>
<td>➢ Cassia woodlots establishment and inherent sprouting ability of mangroves</td>
<td>➢ Existence of St. Paul disease of coconut plantation one of the major income sources of the study districts.</td>
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<td>➢ Existence of alternatives to mangroves as fuel wood and building materials</td>
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<th>Opportunities</th>
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<td>➢ Existence of Plantation Development Fund to support reforestation or agroforestry project whiles supporting mangrove management.</td>
<td>➢ Expanding salt industry. Also the potential expansion of rice farms.</td>
</tr>
<tr>
<td>➢ Existence of Ghana’s <em>Wetlands Conservation Strategy</em> to support rehabilitation of mangroves</td>
<td>➢ Potential market for mangroves sites for other land use, particularly in Mfantseman District.</td>
</tr>
<tr>
<td>➢ Existence of NGOs and other organizations working in the communities. They will be helpful in educating the communities on mangrove conservation.</td>
<td>➢ Confictive district byelaws on ownership and control which could result in competing exercise of powers by the District Assembly and Traditional Authorities and consequently undermine the traditional structures.</td>
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<td>➢ The expansion of the natural resources management action plan at Mfantseman district to other riverine/wetlands can safeguard other mangrove areas under the district.</td>
<td>➢ Availability of mangrove land market for outsiders for salt production.</td>
</tr>
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<td>➢ Existence of District environmental Byelaws and its deterring sanctions.</td>
<td>➢ Non-mangrove specificity nature of the 1994 Forest and Wildlife Policy</td>
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<tr>
<td>➢ Existence of National Youth employment programme in the districts.</td>
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<tr>
<td>➢ Recognized rights and access of communities to natural resources by the 1994 Forest and Wildlife Policy</td>
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SECTION SIX: CONCLUSION AND RECOMMENDATIONS

The survey of the forest and land tenure systems in the context of the management or conservation of mangroves reveals three major issues consistent with the elements indicated as important for the commons (Bruce, 1989). These are community, institutions and the mechanism of control.

- **The Community**

The review and field study indicate geographically bounded communities are linked with ownership of well defined mangrove areas. The common organizational structure which hold the mangroves in trust for the communities are the Traditional Authorities. Generally, the communities are heterogeneous because of the different interests in and uses of the mangrove resources. This creates the need to identify the different stakeholders within the communities and build a platform that will facilitate building of consensus on ways of protecting the mangroves. Anything in contrast will distort any control mechanisms and commonly agreed rules to enhance conservation of mangroves.

- **Institutions**

Most of the communities have established organizational structures which include the Traditional Authorities and Family Elders who have the vested decision power and control of the mangroves and most lands are held in trust by them for the communities or members of the appropriate families. However, because of factors such as decentralization resulting in establishment of the District Assemblies and Unit Committees institutions, the powers of these traditional structures have waned to some extent as the study indicates evidence of competing claims of ownership of the mangrove resources by the District Assembly and this potentially threatens the control of the resources by the Traditional Authorities. There is therefore the need for the District Assemblies to empower the local institutions through amendment or enactment of appropriate byelaws which gives authority to Traditional Authorities and recognizes ownership of the mangroves by the communities.

Other institutions within the communities such as the Unit Committees can serve as supporting bodies in terms of policing and implementing mutually agreed upon rules.
within the framework of the Youth Employment Programme. The Natural Resource Management Action Plan of the District Assemblies should consider all wetlands and mangroves areas for rehabilitation with financial support from the Plantation Development Fund. Developmental organizations working within the communities can support educations on mangrove conservation taking advantage and using the local knowledge on mangroves. The Wildlife Division can conserve and rehabilitate the mangroves effectively in collaboration with the Traditional Authorities, District Assembly, Unit Committees and NGOs working in the communities within the framework of the Ghana Wetland Conservation Strategy.

- **Mechanisms of Control**

Most of the communities have norms, practices and byelaws which to some extent protect the mangroves in terms of regulating access to and excluding outsiders. However, these were found to be weak in terms of enforcement, documentation and best described as ‘bones without flesh’. With the exception of the strictly observed taboo days, the rules could be seen as seeking an ideal situation of protection but enforcement is weak and sanctions not deterring. The District Assemblies and Government legislations are both complementary and conflictive and weakly enforced, though deterring.

These factors call for the need to mandate the Unit committees within the communities to support the enforcement of mutually agreed upon rules and byelaws within the Youth Employment Programme. The security of tenure facilitate environmental investment but government expertise and financial support within the framework of the legislations will assist in the establishment of woodlots and other agroforestry practices to meet the needs of the communities for fuel wood and building materials. The tenure reforms in terms of acquisition of land for salt production need critical attention particularly at the Mfansteman District. This context would require addressing issues of youth unemployment, the salt industry expansion and health related issues generated by the mangroves in the district. Aquaculture can serve as more economic alternative to salt production as the communities are mainly fishing communities. Also, extending the National Youth employment Programme to these coastal areas will counteract the economic basis for converting the mangrove areas.
References


