UNIVERSITY OF CAPE COAST

GOVERNANCE OF FOREST PLANTATION DEVELOPMENT IN SELECTED FOREST DISTRICTS IN THE ECOLOGICAL TRANSITION ZONE OF GHANA

BY

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Thesis submitted to the Institute for Development Studies of the Faculty of Social Sciences, College of Humanities and Legal Studies, University of Cape Coast, in partial fulfilment of the requirements for the award of Doctor of Philosophy degree in Development Studies

DECEMBER 2015

DECLARATION

Candidate's Declaration

I hereby declare that this thesis 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.

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Supervisors' Declaration

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

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ABSTRACT

In the world today, anticipated ecological and economic gains of natural resources have become uncertain mainly due to the complexity and weaknesses of governance. The forest sector in Ghana has, over the years, focused on Forest Plantation Development (FPD) to reverse the phenomenon of deforestation and forest degradation. However, governance remains a challenge due to poor application of principles and diverse interests of stakeholders. The main objective of this study was to investigate the effectiveness of the application of principles and challenges of governance in FPD in Ghana as a complex system. The study gathered primary data through questionnaires and structured interviews from a sample of 253 stakeholders, with three expert group discussions. The study area was eight forest districts in the ecological transition zone of Ghana.

The results confirmed that strong interconnectivity of the governance principles ensures high stakeholder satisfaction as an expected outcome of governance in FPD. However, transparency, participation, consensus building, accountability and rule of law were weak in FPD due to limited consultation of stakeholders in planning and decision making processes at all levels. Direction was the highest applied governance principle for all stakeholders as a result of high commitment and support for the continuity of the FPD programme. The study recommends that government ensures that the tenets of good governance principles permeate the whole FPD governance system, and promote networks and partnerships amongst stakeholders, forming a comprehensive communication platform for stakeholder interactions with the areas of connectivity.

ACKNOWLEDGEMENTS

This work could not have been written without the help and support of a number of people. In this respect, I wish to record my sincere thanks and appreciation for help and support received from all Forestry Commission Staff and Management who kindly provided me with information and permission to use the commission's data.

I would specifically like to thank my supervisors, Prof. S. B. Kendie and Prof. J. V. Mensah, whose coordinating efforts and time made it possible to finish this work. I am also grateful to the Institute for Development Studies of the Faculty of Social Sciences, University of Cape Coast, for giving me this opportunity to enrole on this PhD programme. A particular acknowledgement and thank you goes to all colleagues especially, Dr M. Dadebo for the encouragement, guidance and support.

A very special thank you is due to my dear wife, Mizpah and the children. I am deeply appreciative of their continuous interest and support in my studies despite the sleepless nights and difficulties faced.

DEDICATION

To my late father, Nicholas Dankwa Mintah.

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LIST OF ACRONYMS

AAC	Annual Allowable Cut
ANT	Actor-Network Theory
ACFID	Australian Council for International Development
AFDB	African Development Bank
BCP	Biodiversity Conservation Project
CBAGS	Community Biodiversity Advisory Groups
CDM	Clean Development Mechanism
CFCs	Community Forest Committees
CFMP	Community Forest Management Project
CFMU	Collaborative Forest Management Unit
CIF	Community Investment Funds
CIFOR	Center for International Forestry Research
CRM	Collaborative Resource Management
CSR	Corporate Social Responsibility
DAs	District Assemblies
DFID	Department for International Development
EPA	Environmental Protection Agency
EPP	Expanded Plantation Programme
FAO	Food and Agricultural Organization of the United Nations
FC	Forestry Commission
FCB	Forestry Commission Board
FP	Forest Plantation

FCPF	Forest Carbon Partnership Facility
FDMP	Forestry Development Master Plan
FGM	Forest Governance Monitoring
FORIG	Forestry Research Institute of Ghana
FORUM	Forest Protection and Resource Use Management
FPDF	Forest Plantation Development Fund
FPDC	Forest Plantation Development Centre
FPD	Forest Plantation Development
FPDC	Forest Plantation Development Council
FPFB	Forestry Plantation Fund Board
FSD	Forest Services Division
FSDP	Forest Sector Development Project
GFC	Global Forest Coalition
GFI	Governance of Forests Initiative
GHG	Greenhouse Gas
GP	Governance Principles
GPDP	Government Plantation Development Programme
HFZ	High Forest Zone
HIPC	Highly Indebted Poor Countries
IDA	International Development Association
IEG	Institutions for Environmental Governance
IMF	International Monetary Fund
IOG	Institute of Governance

IPF	Intergovernmental Panel on Forests
ITTO	International Timber Trade Organization
IUCN	International Union for Conservation of Nature
JICA	Japanese International Co-operation Agency
LLAs	Land-lease Agreements
MEA	Millennium Ecosystem Assessment
MESD	Ministry of Environment and Sustainable Development
M&E	Monitoring and Evaluation
MDAs	Ministries, Departments and Agencies
MMDAs	Metropolitan, Municipal and District Assemblies
MDGS	Millennium Development Goals
MEST	Ministry of Environment, Science and Technology
MLFM	Ministry of Lands, Forestry and Mines
MLNR	Ministry of Lands and Natural Resources
MLG	Multi-Level Governance
MOD	Ministry of Defence
MOFA	Ministry of Food and Agriculture
MOI	Ministry of Interior
MOJAG	Ministry of Justice and Attorney General
MSPs	Multi-stakeholder platforms
MTS	Modified Taungya System
NFPDP	National Forest Plantation Development Program
NGO	Non-Governmental Organization

NRM	Natural Resource Management
NRMP	Natural Resource Management Programme
NTFPs	Non-Timber Forest Products
PATFORM	Participatory Forest Resource Management Programme
PDU	Plantations Development Unit
PGA	Participatory Governance Assessment
POU	Plantations Operations Unit
PPP	Public Private Partnership
PROFOR	Programme on Forests
REDD	Reduced Emissions in Degradation and Deforestation
RMSC	Resource Management and Support Centre
SBPAs	Special Biological Protection Areas
SFM	Sustainable Forest Management
SPI	Special Presidential Initiative
SPSS	Statistical Product and Service Solutions
TAs	Traditional Authorities
TIDD	Timber Industry Development Division
TUC	Timber Utilization Contract
UNDP	United Nations Development Programmes
VPA	Voluntary Partnership Agreement

CHAPTER ONE

INTRODUCTION

Background to the study

Deforestation and forest degradation have become a topical issue worldwide. An FAO (2010a) report indicated an alarming rate of deforestation with a global loss of around 13 million hectares of forest each year in the last decade (2000 to 2010). The report indicated that Africa has the second highest rate of deforestation worldwide (with 3.4 million hectares of forest loss annually).

The major causes and drivers of deforestation and forest degradation as identified by Global Forest Coalition (GFC) (2010) report of a case study in five forest countries; namely Brazil, Colombia, India, Tanzania and Uganda included: persistently high demand for wood; increasing demand for land for plantations and other forms of agriculture; conflict over land tenure; industrialization, urbanization and infrastructure; poor central planning, lack of political will, and inadequate capacity; lack of alternative livelihood options; and climate change.

These key underlying causes and drivers of deforestation and forest degradation as indicated by Hall (2013) were controlled differently according to each country's context. The failure to address both major causes and direct drivers is still being compounded by poor governance, including corruption, conflicts between national and local authorities, and insufficient resources and institutional capacity which tend to increase the power and influence of the private sector on an ongoing basis.

In Brazil, the main factors were conversion of the Amazon forest into arable land for agriculture and lack of transparency in carbon transactions and corruption. Since 1988, more than 396,268.2 km^2 of Amazonian rain forest has been cleared (FAO, 2009). As part of the remedies, Brazil reviewed its agricultural policy and legal frameworks to support land tenure systems and ownership rights to land. An Amazon Fund was instituted to address deforestation and its alternatives (Viana, 2009).

In the case of Colombia, policy inconsistency and lack of inter-and intra-state institutional coordination and weak legal framework which manifested as a lack of political interest in the forest sector were the major causes. The state provided ways and means of guaranteeing the conservation and protection of territories (FAO, 2010a and MESD, 2013).

For India, a gap between demand for and the supply of fuel wood, timber and fodder, led to the unsustainable exploitation of forests and forest degradation. Most of the identified drivers of forest loss were the result of poor forest governance and decision-making by the forest departments. The capacity had to be built for all stakeholders at various levels associated with forest governance (Sud et al., 2012).

The large scale forest destruction that has afflicted Tanzania is mainly external. They are caused largely by logging for timber for local consumption or exported as logs, sawn timber or charcoal; and increasing demand for food from growing populations thus clearing of land for crops and grazing (Milledge et al., 2007). A major new threat to Tanzania's forests comes from the industrial-scale cultivation of crops for the production of biofuels and tree plantation biomass in the form of woodchips. Efforts to address forest loss in

Tanzania relied on a rigid regulatory system with a decentralized policy at the district level.

Uganda's much depleted forest cover had declined to 15% of Uganda's land surface by 2005, with annual forest loss estimated to be about 88,000 ha per year. The causes and drivers of forest loss and degradation in Uganda have been identified as population pressure and rural poverty; agricultural expansion; accelerated biomass energy demands (fuel wood and charcoal); timber exploitation; and disputed property rights and tenure of land. One key underlying cause is the issue of weak governance (non-enforcement of forest policies and low participation of indigenous groups and women in decision-making at the various levels). Uganda had to change its investment strategies such that investment in monocultures was not done at the expense of natural forests, which sequester carbon dioxide in much greater quantities than plantations (Nabanoga et al., 2010).

According to FAO (2006b), the global forest cover in 2005 was 3,952 million ha (Table 1) which is about 30 percent of the world's land area. Between 2000 and 2005, gross deforestation continued at a rate of 12.9 million ha/yr (FAO, 2006a). The area of forest plantation was about 140 million ha in 2005 and increased by 2.8 million ha/yr between 2000 and 2005, mostly in Asia. Millennium Ecosystem Assessment (MEA) (2005) scenarios forecasts that forest area in industrialized regions will increase between years 2000 and 2050 by about 60 to 230 million ha. At the same time, the forest area in the developing regions will decrease by about 200 to 490 million ha.

According to Forest Services Division (FSD) (2003), about 16 percent of Ghana's total area is under reservation. The remaining unreserved areas

have over the years become settlement, farms and source of supply of the bulk of Ghana's timber, other forest products and food crops. A typical forest reserve in Begro Forest District is shown in Plate 1. The greater proportion of timber has therefore been exploited and the rest cannot support the country's timber industry for any appreciable length of time unless managed and supported by an active forest policy (Adam et al., 2006).

Table 1: Estimates of Forest Area and Net Changes

	Forest area (mill. ha)	Annual change (mill. ha/yr)	
Region	2005	1990-2000	2000-2005
Ghana	5.5	-1.4	-1.2
Africa	635,412.0	-4.4	-4.0
Asia	571,577.0	-0.8	1.0
Europe*	1,001,394.0	0.9	0.7
North and Central America	705,849.0	-0.3	-0.3
Oceania	206,254.0	-0.4	-0.4
South America	831,540.0	-3.8	-4.3
World	3,952,026.0	-8.9	-7.3

*Including all of the Russian Federation

Source: Adapted from FAO (2006b)

The rate of deforestation is a great concern to many Ghanaians in recent times (Plate 2). Ghana has a total area of about 238,533 km^2. It is estimated that about 650 km^2 of forest is lost annually through forest abuses. Ghana's total forest area comprising natural and artificial forests as of 2005

was 5.5 million ha. The net forest loss between 2000 and 2005 was 115,000 ha per annum (FAO, 2005). Between 1990 and 2010, Ghana lost almost 34 percent of its forest cover, representing about 2.5 million hectares according to Forest Resource Assessment (FRA) (2010). This corresponds to an annual deforestation rate of approximately 2 percent. Internationally, this makes Ghana one of the countries with the highest net deforestation rates (FAO, 2006b). Accordingly, the total growing stock in Ghana's forests has decreased from 423 million m^3 in 1990 to 291 million m^3 in 2010.

Plate 1: Apedwa Forest Reserve in the Begoro Forest District

Source: Forest Services Division (2008)

Plantations are forest stands of indigenous or exotic species established by planting or sowing in the process of afforestation or reforestation (FAO, 2001). Evans (1999) and Ford-Robertson (1971) defined plantation as forest crop or stand artificially raised by planting. Plantations produce wood quickly and are of a more uniform size and quality than natural forests. This facilitates harvesting, transport, and conversion, and based on the scales of establishments and management regimes, they help to sustain socio-economic development of rural communities.

Plate 2: Degraded forest reserve in Sunyani Forest District

Source: Forest Services Division (2005)

Forest Plantation Development (FPD) is the intensive management which controls the origin, establishment and maintenance of forest but which integrates other land uses within its boundaries, and promotes the early and continuing production of wide variety of goods, tenures and values (Savill et al., 1986). FPD therefore covers policies, mechanisms, processes and activities involved in the planning, establishment, maintenance, harvesting, processing and marketing of plantation products.

FPD plays a major part in carbon sequestration and hence the inclusion of vegetation in the Kyoto Protocol adopted in 1997 for offering important options for flexible, low-cost abatement of greenhouse gases and requires developed countries to reduce their GHG emissions by 5.2 percent compared to 1990 levels, between 2008 and 2012 cost-effectively. It has been estimated that plantations accumulate carbon at an average annual rate of 0.4-8 ha^{-1} depending on the kind of species, site and management inputs (Schlamadinger & Karjalainen, 2000).

One estimate of Brown (1996) suggests that forestry has the potential to offset about 15% of the world's greenhouse gas emissions. Hence, FPD counts towards meeting a country's commitments to emission control or used for emissions trading and Clean Development Mechanism (CDM) as carbon is sequestrated in plantations (Keenan & Grant, 2000). It has led to a steep increase in the establishment of plantations in developing countries with some four million ha of plantations having been established for GHG mitigation (Carle et al., 2002).

Forests in the Asia-Pacific region cover approximately 699 million ha (FAO, 2001a). Of this area, some 113.2 million ha are forest plantations, or 16 percent of the total forest resource. This is considerably higher than the global average of plantations, which stands at around five percent. The Asia-Pacific region accounts for some 61 percent of the world's plantation forests (Figure 1).

The roles played by the private and public sectors in plantation development have experienced major changes in the Asia-Pacific region, although the level of success in involving private investors varies considerably. The available evidence suggests that plantation development can be divided into three stages, namely initiation, acceleration and maturation stages. In Australia, New Zealand and the USA, interest in the plantation sector has a long history and by the 1990s these three countries had reached the maturation stage. On the other hand, most Asian countries find themselves still in the initiation stage (Enters et al., 2003).

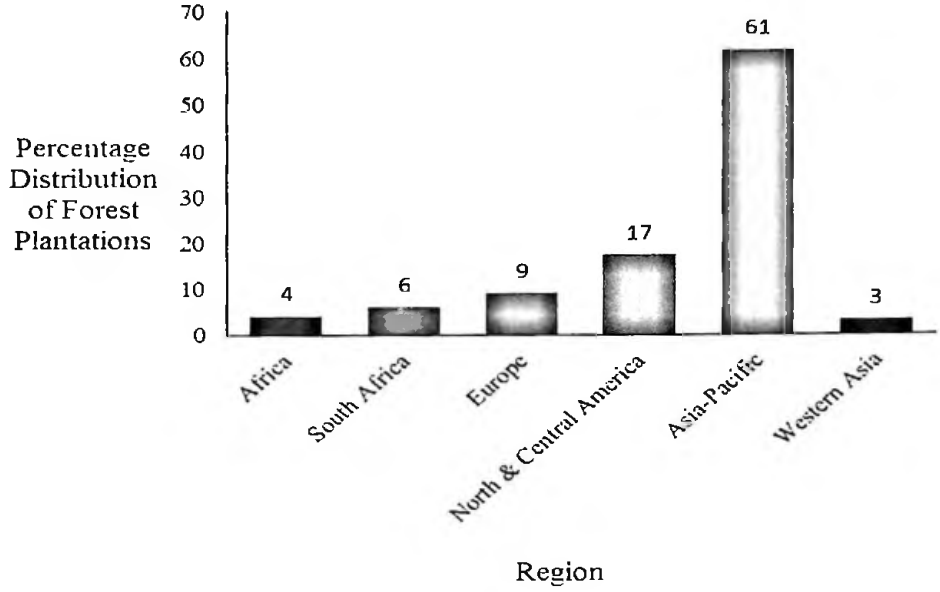

Figure 1: Global distribution of forest plantations by region in 2000

Source: FAO (2001a).

Domestic timber supplies derived from natural forests have been reduced substantially, in some countries such as Thailand to very small amounts. As a consequence of such developments, the search is on for generating alternative wood supplies. While some countries have turned to imports at least in the short term, most have attempted to augment forest plantation resources. Today more industrial round wood is sourced from plantations and trees outside forests in Asia and the Pacific than from natural forests (Brown & Durst 2003).

As noted by Gregersen et al. (2004), public-sector agencies have dominated FPD in most countries in Asia and the Pacific. This pattern has changed in many countries over the past 10 to 20 years, mainly for four reasons. First, devolution of forest management has led to greater involvement of communities and the private sector in forestry. Second, the performance of public-sector plantations with few exceptions has been disappointing. Third, shrinking government budgets make it impossible for most forest departments

to devote as much resources to forest plantations as they have in the past. Fourth, problems related to weak governance structures are driving many countries to reconsider the role of government in administering forest resources and in directly implementing forest programmes.

Considering the alarming trend of forest cover loss, embarking on FPD is inevitable, especially at the time when management of Ghana's forest resources has suffered many challenges like uncontrolled logging, mining activities, indiscriminate grazing by herdsmen, illegal farming activities, and bushfires which have degraded a reasonable portion of the reserved forest areas. In Ghana, FPD is used to compensate for the lost forest cover which involves programmes set out to replant degraded forest reserves and off-reserve areas with both indigenous and exotic tree species to achieve a sustainable resource base in future demands for industrial timber and to enhance environmental quality (Plate 3).

Plate 3: Established plantation in Bechem Forest District

Source: Forestry Commission (2010)

According to FSD annual reports between 2003 and 2010, major challenges of FPD in Ghana have been: (i) finance; (ii) land availability;

(iii) fire outbreaks; and (iv) weak governance. These challenges have seriously affected the progress of FPD in Ghana, thereby increasing the rate of forest cover loss.

Substantial capital investment is needed for FPD. In Ghana the cost estimates for private plantation establishment and maintenance are shown in Table 2. Funds normally come from four main sources: (i) international financial institutions; (ii) local and foreign equity capital; (iii) private commercial banks; and (iv) Non-Governmental Organizations (NGOs) with non-commercial interests.

Table 2: Cost of establishment and maintenance of private plantations in Ghana

Duration (Year)	Activity	Cost Per Hectare (GH¢/Ha)[1]
1st	Establishment[2] and maintenance[3]	2,500.00
2nd - 5th	Maintenance	900.00
6th - 8th	Maintenance and thinning	880.00
Above 9th	Pruning	300.00
Total	($1,137.97 as at February, 2015)	4,580.00

[1]Excluding cost of land

[2]Establishment (Demarcation, initial clearing, lopping/debris collection, peg cutting and pegging, distribution of planting materials, planting)

[3]Maintenance (Tending, singling and pruning, fire protection-ride construction and fire patrol)

Source: Adapted from Forestry Services Division (2011)

In developing countries, obtaining finance for forest plantations mostly comes from the first two sources because of the scale involved, the long time taken for the realization of returns, and the high risks involved, notably from political instability. Heavy reliance on overseas aid, bilateral support programmes, and low-interest loans from development banks is inevitable (Evans & Turnbull, 2004).

In Ghana, however, funding has been heavily reliant on donor, and bilateral support. According to Beeko et al. (2011), the overall quantum of development assistance allocated to the forest sector in the last two decades amounts to well over US$ 643 million (in 2009 dollar value). Thus, aid to Ghana's forest sector from 1989-2009 amounts to about US$ 32 million a year (in 2009 dollar value).

Other sources of funding have been from revenues accrued from the levy of timber exports in the range of about 1.5 to 30 percent of total value of exports, depending on the type of timber species and wood product as stipulated in procedures and guidelines of the Timber Industry Development Division (TIDD) of the 1999 Forestry Commission (FC) Act 571. In most cases, the funds available are not timely released and thus seriously affect the planting cycle which is mainly dependent on the raining seasons (FSD, 2006).

Fire outbreaks according to FSD annual reports (2003 to 2010), have posed a serious threat to FPD in Ghana, especially in the savannah and transition zones (Plate 4). A large proportion of available lands in the degraded forest reserves are fire prone areas. During incidence of bushfires in Ghana, fire has swept through young plantations causing colossal damage to investments (Plate 5).

Plate 4: Plantation destroyed by fire in Dormaa Forest District

Source: Forestry Commission (2011)

A number of causal factors have been associated with forest fires in Ghana, including 'manual slash and burn' land-clearing practices mainly adopted by small farmers. Past logging has also left forests degraded and very susceptible to fire (FSD, 2003).

Plate 5: Burnt plantation in Sunyani Forest District

Source: Forestry Services Division (2008)

Availability of land is another major challenge affecting FPD in Ghana. Most of the programmes under FPD in Ghana are controlled by MLNR and FC. The size of the available lands for forest plantations depends

on the degree of degradation in forest reserves i.e. on-reserves. Large tracts of land may not be available for very large commercial plantations as required by investors in one location and hence raises concerns about economies of scale. On the other hand, land outside reserves i.e. off-reserves, have various ownership types like; stool lands, family lands, and communities, which need to be dealt with cautiously due to different interest groups.

Another restriction in a particular location to the actual area available for forest plantations is the social and economic factors due to land tenures. It may be difficult for companies to obtain ownership or lease of large areas of land without conflicts with local communities who dispute land and tree tenure arrangements. Here, land is leased or acquired through outright purchase from landowners. In off-reserves, a difficulty in obtaining large areas of land is the major reason why most companies in the private sector have shown increasing interest in forming partnerships with communities and individuals for FPD (Mayers, 2000).

Governance in Ghana's forest sector encompasses multiple actors having different roles and responsibilities over the years. The key actor is the Government of Ghana represented by the Ministry of Lands and Natural Resource (MLNR) as the policy formulator and the Forestry Commission as the policy regulator and implementer which has representation in over 46 forest districts across Ghana. FSD is a division of the FC mandated to maintain, regulate the harvesting of forest resources, facilitates development of forest plantations, and protect the forest estate. Resource Management and Support Centre (RMSC) is the technical wing of the FC, responsible for

exploration, development, facilitation and implementation of standards in accordance with the national forest and wildlife policy.

Other actors, mainly institutions supporting various government policies are: Ministry of Environment, Science and Technology (MEST) and its agencies, Environmental Protection Agency (EPA) and Forestry Research Institute of Ghana (FORIG), a national research institution responsible for forest and forest products research; Ministry of Justice (Prosecutors and law courts); Ministry of Finance and Economic Planning (MOFEP); Ministry of Interior (Joint Police Patrol Teams); Ministry of Defence (Joint Military Patrol Teams); Traditional Council; District Assemblies; Private sector (Timber contractors, Plantation Seedlings Suppliers); land Owners/Chiefs; Fringe Communities; Associations (Ghana Timber and Millers Association, Ghana Foresters Association); Committees (Parliamentary select Committee for Forestry, Community Forest Committees (CFCs), Community Biodiversity Advisory Groups (CBAGs); NGOs (Forest Watch, Tropenbos International, World-Wildlife Fund (WWF)); Civil Society; and Development Partners.

Before the 1990s, Ghana's forest sector was centrally controlled by the then Ministry of Lands, Forestry and Mines (MLFM) now MLNR, and FSD. As the forest cover gradually disappeared, sustainability became paramount, and international pressures coupled with mitigation of climate change occurrences made it necessary to introduce various governance initiatives in the mid-1990s. Governance initiatives as shown in Table 3 were funded by Development Partners. This led to the introduction and promotion of concepts like community participation, multiple stakeholder involvement, consensus building, transparency in resource allocation and accountability in forestry.

With a high rate of deforestation and degradation as a result of illegal operations by chainsaw operators, non-enforcement of law and corrupt practices and non-accountability in the sector, further decentralized roles were adopted in the year 2002 (FSD, 2003).

The forest fringe communities were allowed to participate in reforestation programmes in the degraded forest reserves using the Modified Taungya System (MTS) which was introduced in FPD where Forest Plantation (FP) farmers interspersed trees with crops. The MTS introduced the benefit-sharing component where all stakeholders (FC, MTS farmers, communities and their traditional rulers) shared the benefits according to the ratio: 40:40:20 respectively by a benefit sharing agreement (FSD, 2008).

Governance in the sector still requires relevant stakeholders to be involved in decision-making through stakeholder interactions and participation. Accountability to resource owners is still low, interest and priorities in the resource by various stakeholders vary and sometimes are potential source of conflicts, likewise the enforcement of laws between communities and law enforcers (FC, 2010).

The 1992 constitution of the Republic of Ghana provides the institutional and policy framework for decentralization which required devolving of powers, responsibilities and resources from central government to local governments in a coordinated manner (Article 240 (1), 241 (3), 242 and 276 (1)). The roles and responsibilities of Metropolitan, Municipal and District Assemblies (MMDAs) and Traditional Authorities (TAs) suggest that they contribute to the same expected outcome (community development and poverty reduction).

Table 3 : Governance Initiatives in Ghana's Forest Sector

Governance Initiatives	Period	Funding Source	Objectives/Supported Governance Principles
Collaborative Resource Management Programme (CRMP)	1994		To create Collaborative Forest Management Unit (CFMU) to enhance local participation
Community Forest Committees and Forest Protection and Resource Use Management (FORUM); Community Biodiversity Advisory Groups.	1999/2000	DFID and FC	To promote community participation, transparency in resource allocation and utilization at the district level
Highly Indebted Poor Countries (HIPC) Plantation Funding Programme	2002/2006	MLFM and FC	To encourage individuals to participate in reforestation process and encourage participation, accountability, equitability and consensus building.
Collaborative Forest Management Programme (CFMP)	2003	ADB	To help reforest degraded reserves through participation, consensus building, equitability and inclusiveness of relevant stakeholders

Table 3 (con't) : Governance Initiatives in Ghana's Forest Sector

Governance Initiatives	Period	Funding Source	Objectives/Supported Governance Principles
Participatory Forest Resource Management Programme (PAFORM)	2004-2009	JICA and Government of Ghana	To introduce participatory approach to sustainable management of forest reserves in transitional zone
Greening Ghana Programme	2007	M LFM and FC	To replenish lost forest cover
Natural Resource Environmental Governance Programme (NREG)	2008	Netherlands and IDA	To improve transparency, law enforcement and improved revenue
Voluntary Partnership Agreement (VPA) and Validation of Legal Timber Programme (VLTP)	2009 to date	EU, MLNR and FC	To encourage community participation, involvement, transparency with the formation of certain governance structures

Source: Summarised from Forestry Commission (2010)

However, neither the 1992 constitution nor the 1993 Local Government Act 462 and Local Government Instruments (1994, L.I. 1589 and 1995, L. I. 1606) have provided for the relationship between MMDAs and the TAs (Chiefs) or the institutional representation of Chiefs in either DAs or sub-district structures. This notwithstanding, the forest policy and legislative regimes as shown in Table 4 seem not to be effective and all-encompassing with regards to the complex nature of governance in the forest sector currently. This is as a result of the incomplete decentralisation which limits the roles of MMDAs in involving communities for effective local level development including forest management.

According to Evans and Turnbull (2004), weak governance in the forest sector is a major challenge that militates against progress in FPD. Also, FAO (2001a) indicates that weak governance affects FPD since investment is committed for a long time, so does development, which comes with its own challenges. Similarly, Contreras-Hermosilla (2000) critically reviewed the factors affecting FPD, and cited governance weakness as a major contributing factor.

Weak governance has discouraged investments in forest plantations. Unpredictable government policies governing the establishment of forest plantations and conflicts with local communities have virtually stopped plantation development in the Philippines (Acosta, 2002). Limited transparency, accountability and participation in decision making are corrupting the allocation of land and natural resource use rights and stalling development efforts of the forestry sector (Savet, 2000).

Table 4 : Forest Policy and Legislative Regimes in Ghana

Policy and Legislation	Period	Objective
1948 Forest Policy	1948	Provide for the creation and management of permanent forest estates, research in all branches of scientific forestry, maximum utilization of areas not dedicated to permanent forestry, provision of technical advice and cooperation in schemes for the prevention of soil erosion and in land use plans
1994 Forest and Wildlife policy	1994	Conservation and sustainable development of nation's forest and wildlife resources for management of environmental quality and perpetual flow of optimum benefits to all segments of society
Forestry Development Master Plan	1996	Support implementation of 1994 Forest and Wildlife Policy
Timber Resources Management Act 547[1]	1997	Provide for the grant of timber rights in a manner that secures the sustainable management and utilization of the timber resources of Ghana and to provide for related purposes
Forestry Commission Act 571	1999	Re-establish the Forestry Commission in order to bring under the Commission the main public bodies and agencies implementing the functions of protection, development, management and regulation of forests and wildlife resources and to provide for related matters

Table 4 (con't) : Forest Policy and Legislative Regimes in Ghana

Policy and Legislation	Period	Objective
Forest and Plantation Act 2000	2000	Establish forest plantation development fund to provide financial assistance to the development of private commercial forest plantations
Forest Protection (Amendment) Act 624	2002	Amend the Forest Protection Decree 1974 (NRCD 243) to provide for higher penalties for offences therein and to provide for related purposes.
2012 Forest and Wildlife Policy	2013	Focus on increased government commitment to degraded landscape restoration through massive forest plantation development schemes, promote small and medium forest and wildlife enterprises as a means of job creation for the rural and urban poor, increase biodiversity conservation, promote sustainable management of Savanna wood land, promote ecotourism development. Consolidate good governance through accountability and transparency, enhance active participation of communities and land owners in resource management and addressing issues on tree tenure and benefit sharing.

[1]This Act 547 has undergone amendments in 2002 and 2003

Source: Adapted from Forestry Commission (2010)

Some of the notable factors of governance in Ghana which have undermined the success of FPD as indicated by FSD (2011), have been (i) the abuse of rights of stakeholders in ownership and access rights; (ii) non-existent specific/targeted policies to promote FPD; (iii) inadequate laws governing FPD; (iv) weak decentralization hampering the local development of forest plantation; (v) transparency in benefit sharing of proceeds from FPD; (vi) little involvement/participation in decision making in FPD affecting local people; and (vii) weak accountability in FPD especially with the valuation of forest plantations by relevant stakeholders.

Problem statement

Globally, governance has become a major challenge in the forest sector due to the inability of governments to enforce controls, and ensure that stakeholders' interests in the resource are maintained through the rule of law (Ros-Tonen et al., 2010; Swyngedouw, 2005; Gregersen et al., 2004; Brown & Durst, 2003; Cavill et al., 2007; Roche, 2009; Sidaway, 2005; Savet, 2000).

In Ghana, transparency in benefit sharing is unclear, stakeholder participation in decision-making is low, unclear landownership rights, insufficient enforcement of existing rules and laws, low levels of equity and inclusiveness, irresponsiveness and less accountability to resource owners as indicated by Marfo (2010) and FSD (2008) are the key underlying causes and drivers of governance in FPD. This may have led to an alarming rate of forest degradation and deforestation (Table 1 and FRA, 2010). It is quite obvious that probably the proper application of governance principles by relevant stakeholders may have been absent. Hence it will be very necessary to have a

deeper understanding of this occurrence which is exactly what this research will undertake.

Several studies have made attempts to address challenges of governance in the natural resource sector in general (Bhargava, 2006; FAO, 2001; Bellany et al, 2002; Head & Ryan, 2004; Anderson, 2001; Pound et al, 2003) but in different socio-economic settings. Some works have also been carried out in Ghana in the areas of forest conflicts and collaborative forest management by Marfo (2006 and 2007), and on equity in forest benefit sharing by Tropenbos International (Nketiah et al., 2005). Most of their findings were geared towards creating alternative livelihoods and poverty alleviation which is not the main focus of this research. Also, most of their findings were project specific and had different objectives and thus could not address the holistic picture of governance in FPD which this research hopes to achieve.

However, limitations of most of these studies were that they failed to focus on all relevant stakeholder groupings whose interactions and connectedness contribute greatly to the complexity in governance but were rather geared towards informal actors only. Another limitation was that the researchers inadequately addressed the governance challenges and complexity holistically. Using systems theory as the main underlining theoretical framework supported by the Actor-Network Theory (ANT) can help unearth the complexity and challenges of governance in FPD in particular and natural resource in general.

In Ghana, the forest sector, particularly forest plantation development, has received considerable attention through successive governments (Table 3

and Table 4) as well as donor support but the socio-economic and ecological gains have still not been remarkable (Beeko et al., 2011; Evans & Turnbull, 2004). Notwithstanding the huge donor support (over US$ 643 million) to the forest sector in the past 2 decades, the forest resource base continues to be degraded and depleted (FRA, 2010).

It is quite evident that governance challenges are affecting the progress of FPD in Ghana (FSD, 2008). A recurrent question in natural resource governance debate has been: How should governance be strengthened in the forest sector in general, and forest plantation development in particular using its principles? Also, how can the complexity and challenges in governance be addressed when multiple stakeholders (actors) are involved? Past efforts have failed to yield transformative change, often because the inherent complexity and interconnected nature of the diverse actors, rules and practices that comprise governance of forests were not adequately taken into account. Actions that are piecemeal and do not take into account the complexity of the governance challenge are unlikely to succeed. The world is still seeking answers to the question of how to effectively improve forest governance.

Objectives of the study

This study set out to investigate the effectiveness of the application of principles and challenges of governance in forest plantation development in Ghana as a complex system.

The specific objectives were to:

1. Assess the application of governance principles in the historical context of forest plantation development in Ghana based on groupings of stakeholders;

2. Investigate the challenges of governance in forest plantation development in Ghana;
3. Examine the complexity of governance in forest plantation development; and
4. Make recommendations to promote effective governance in forest plantation development in Ghana.

Research questions

In relation to the stated objectives, the following research questions were addressed in the study:

1. How are the principles of governance applied in the historical context of forest plantation development in Ghana based on stakeholder groupings?
2. What are the challenges of governance in forest plantation development in Ghana?
3. How is complexity of governance in forest plantation development addressed?
4. What recommendations will promote effective governance of forest plantation development in Ghana?

Scope of the study

This study generally examines the principles, challenges and complexity of governance under forest plantation development in Ghana through relevant groupings of stakeholders. The study focuses on the systems and actor-network theories which tackles the issues as a whole and concentrating on relationships between individual elements to unearth the governance challenges and complexity.

Evidence for this study was gathered from the transitional ecological zone of Ghana, covering eight forest districts in the Brong-Ahafo, Ashanti and Eastern regions of Ghana, where forest plantation development programmes were carried out to date as a result of the high degree of deforestation and degradation. The study focused mainly on the stakeholder groupings in the selected forest districts where governance seemed to be a real challenge due to the varied interests and power play.

Also, secondary data considered for this study was taken from 2003 to 2011. This serves as a good basis for the study period, as most of the instituted governance principles in the donor-assisted programmes would have been established with their expected outcomes evident based on stakeholder groupings.

Justification of the study

Given the rate of deforestation and desertification worldwide, it is becoming ever more imperative that natural resource governance and management become central in national development planning. Much of the deforestation has occurred mainly due to haphazard control mechanisms and defused ownership patterns especially in Sub-Saharan Africa.

Many countries are now adopting good governance principles to guide the activities of state agencies. Since 1992, Ghana has been practicing democratic governance guided by the principles of good governance. It is reasonable to expect that these principles would also be applied in the governance of natural resources.

FPD is the establishment, maintenance, processing and marketing of forest products, and plays a major role in compensating for the lost forest

cover. Governance in FPD involves multiple stakeholders who play respective roles and responsibilities based on their interests in the resource in question. In doing so, good governance principles are applied such that no stakeholder is marginalized in decision-making on resource allocation and benefits sharing. Improper application of good governance principles or lack thereof may lead to uncontrollable logging and over exploitation of the forest resources, culminating into deforestation and land degradation which are challenges that confront the world today.

Several studies have been carried out in the area of natural resource governance (Roche, 2009; Cavill et al., 2007; Sidaway, 2005; Pound et al, 2003; Savet, 2000) but these have primarily focused on single or combined governance principles. For example, Roche (2009) and Cavill et al. (2007) focus on accountability in governance, Sidaway (2005) on consensus building, Pound et al. (2003) on participation in natural resource governance, and Savet (2000) on rule of law in forest governance in Cambodia. For governance of FPD in Ghana, only a few studies have been carried out but also with focus on single or a combination of governance principles (Marfo, 2010; Nketiah et al., 2005; Agyeman et al., 2003). For example, Marfo (2010) focuses on accountability to resource owners, and Agyeman et al. (2003) and Nketiah et al. (2005) both focus on equity in revenue sharing in forest plantations.

The unique feature of this study is the application of nine governance principles in the attempt to bring out a comprehensive understanding of the complexities in natural resources governance. The study is aimed toward a holistic understanding of the problem context rather than a reductionist understanding of a single component of the overall problem. The findings of

such a wide scope of application of governance principles gives a comprehensive effect on governance of FPD. Without such critical knowledge, policy interventions in governance of FPD to optimize resources (material, human and financial) needed for national development and poverty reduction in the forestry sector could be telling only part of the story (Lockwood et al., 2010; Kooiman et al., 2008; Kaufmann et al., 2007).

Many governance scholars have overlooked the complex nature of governance in relation to FPD. Lack of such understanding is the reason why, despite the efforts various governments in Africa, including Ghana, have made towards reducing or eliminating deforestation and forest degradation, there seems to be no significant economic and ecological gains and deforestation and land degradation seem to be accelerating. It is upon this backdrop that the study has focused on FPD in the ecological transition zone, applying a mixed method research design to confirm that stakeholder interactions and areas of connectedness have a significant effect on the expected outcome of governance in FPD. This study creates a basis for all relevant and interested stakeholders, especially the government to review its policy and legal framework, and implementation strategies towards natural resource governance in general, and FPD in particular for the forest sector.

Organisation of the study

The study is organized into nine chapters. Chapter One focuses on introduction, which presents the background, objectives of study, research questions, scope of study, justification of the study and organization of study.

Chapter Two deals with conceptualization of governance through definitions of key concepts and principles of governance, review of various

theoretical underpinnings, and addresses the challenges and complexity of natural resource governance. Chapter Three reviews the theoretical perspectives by considering the the various governance models and framework applied in the natural resource sector, and finally, the conceptual framework for the study.

Chapter Four focuses on the status of Ghana's forest sector, governance initiatives in Ghana's forest sector, forest plantation development and the existing governance structure in FPD. Chapter Five focuses on the epistemology of research methodology, the study area, research design, study population, sampling procedure, the various sources of data and method of data collection, the fieldwork and challenges encountered, data processing and analysis.

Chapter Six interprets and discusses the results of the study on the application of governance principles to FPD in Ghana. Chapter Seven interprets and discusses the results of the challenges of governance in FPD.

Chapter Eight interprets and discusses the results of the study by focusing on the complexity of governance in forest plantation development. Chapter Nine contains the summary, conclusions, recommendations which will promote effective governance of FPD in Ghana, limitations of the study and directions for future research.

CHAPTER TWO

CONCEPTUALIZING GOVERNANCE

Introduction

This chapter deals with the theoretical foundation underpinning what constitutes governance and its complexity in dealing with multiple actors whose interests are shaped according to their roles and responsibilities. It also brings out insights into governance of natural resource. Initially, the review defines terminologies and concepts, then consolidating literature on governance, good governance principles, and relevant theories which back the study (systems and actor-network). Finally, the chapter addresses what constitute challenges and complexity of natural resource governance.

Stakeholders

Stakeholders are individuals or groups with a direct, significant and specific stake or interest in a given territory or set of resources and, thus, in policies or projects relating to those resources. A "stakeholder" can be defined as: any person, group, or institution that positively or negatively affects or is affected by a particular issue, goal, undertaking or outcome (Gawler, 2005). Similarly, a stakeholder is the term given to a person or group of people like a fringe community who have a vested interest in an entity like the forest. Mensah et al. (2007) also refers to stakeholders as collection of entities or a complete set of data under investigation.

Classification of stakeholders is based on power to influence, the legitimacy of each stakeholder's relationship with the resource in question, and the urgency of the stakeholder's claim on the resource. Often the process of identifying stakeholders will result in a long list of individuals and groups.

The interests of the stakeholders are mapped and prioritized in the order of importance using a power/interest grid. Power is the stakeholder's ability to influence objectives (how much they can), while interest is the stakeholder's willingness (how much they care) (Mitchell et al., 1997).

Actors

These are persons or organisations who have a vested interest in the policy that is being promoted. These stakeholders or 'interested parties' can usually be grouped into the following categories: primary, secondary and key stakeholders depending upon their level of influence and power (Schmeer, 1999). Actors are active stakeholders who interact with each other (Grimble et al., 1997).

Ros-Tonen et al. (2010) indicate that in Ghana, governance in the forest sector involves multiple actors, namely; government officials, research institutions, TAs, private investors, timber operators and millers, forest fringe communities and NGOs. The roles, responsibilities and interests of actors are varied but there exist countless interactions and interconnectivities amongst them.

Stakeholder Analysis

Stakeholder analysis is a crucial initial step in situation analysis. It identifies all primary and secondary stakeholders who have a vested interest in the issues with which the policy or programme is concerned. Stakeholder analysis is best seen as a continuing process, which should engage different groups, as issues, activities, and agendas evolve (Gawler, 2005).

Stakeholder analysis hence refers to the range of techniques or tools used to identify and understand the needs and expectations of major interests

inside and outside a given environment in question. Similarly, Schmeer (1999) asserts that stakeholder analysis is a process of systematically gathering and analyzing qualitative information to determine whose interests should be taken into account when developing and/or implementing a policy or programme.

Stakeholder Connectedness

According to Pretty and Ward (2001), connectedness refers to the existence of groups of individuals in society and the connections both within and between these groups, from micro to macro levels. Connectedness involves the degree to which stakeholders form dependent-interdependent relationships amongst themselves. Different types of connections exist; it may be two-way or one-way, and either long-established or 'subject to regular update'.

There are also vertical and horizontal connections. Horizontal interaction and connection are essential to cooperation because they imply the existence of relationships. Whether these relationships are positive or negative at first, their existence provides the opportunity to hear and understand the perspectives and preferences of others (Costanza & Folke, 1997).

Governance

Dodson and Smith (2003) broadly define governance as the processes, structures and institutions (formal and informal) through which a group, community or society makes decisions, distributes and exercises authority and power, determines strategic goals, organises corporate, group and individual behaviour, develops rules and assigns responsibility. Governance, simply put, is the process of decision-making and the process of implementation of such decisions.

Fundamentally, governance is about power, relationships, and processes of representation and accountability; about who has influence, who decides, and how decision-makers are held accountable (Plumptre & Graham, 1999). Governance focuses our attention on a much wider range of stakeholders and their relationships and networks, including individuals, government, private sector, and NGOs (Sterritt, 2001; Westbury, 2002). 'Governance' is about having structures, processes and institutional capacity in place to be able to exercise that jurisdiction through sound decision-making, representation and accountability (Hylton, 1999; Sterritt, 2001).

Governance enables the representation of the welfare, rights and interests of constituents, the creation and enforcement of policies and laws, the administration and delivery of programmes and services, the management of natural, social and cultural resources, and negotiation with governments and other groups (de Alcantara, 1998; Hawkes, 2001; Westbury, 2002). The manner in which such governance functions are performed has a direct impact on the welfare of individuals and communities.

According to Graham et al. (2003), the concept of governance may be applied in different contexts, namely; global, national, institutional and community-based. Some examples are; corporate governance, international governance, national governance, collaborative governance, local governance and natural resource governance. As indicated by Sidaway (2005), collaborative governance is the process and form of governance in which participants (parties, agencies, stakeholders) representing different interests are collectively empowered to make a policy decision or make

recommendations to a final decision-maker who will not substantially change consensus recommendations from the group.

Local governance, as noted by Shah (2006), is the formulation and execution of collective action at the local level. This encompasses the direct and indirect roles of formal institutions of local government and government hierarchies, as well as the roles of informal norms, networks, community organizations, and neighbourhood associations in pursuing collective action by defining the framework for citizen-citizen and citizen-state interactions, collective decision making, and delivery of local public services.

An analysis of governance focuses on the formal and informal actors involved in the process. Government is one of the actors in governance. Other actors involved in governance vary depending on the level of governance that is under discussion. In rural areas, for example, other actors may include influential landlords, associations of peasant farmers, cooperatives, NGOs, research institutes, religious leaders, finance institutions, political parties and the security services. Governance encompasses formal institutions of government and informal arrangements among government and non-government actors from the private sector and civil society.

Deducing from the various definitions and explanations of governance, it is quite clear that some keywords that run through are; decision making, stakeholder, structures, interactions, processes, interests and rule of law. For the purpose of this study, governance can be termed as a system of using well formed structures and informal arrangements to manage effectively all interests of stakeholders through interactive processes, and decision-making by the rule of law.

Good Governance Principles

The first contemporary public appearance of the notion of good governance came in a 1989 World Bank Report on Africa, which argued that, 'underlying the litany of Africa's development problems is a crisis of governance', World Bank (1989: 60). The Bank defines governance as '...the exercise of political power to manage a nation's affairs'.

The best approach for communities to follow in trying to achieve sustainable economic development would be to focus initially on those key principles over which they have the greatest degree of local control, which is their governance arrangement. It is only when effective governance and holistic development strategies are in place that economic and other development projects have a chance of becoming sustainable (Cornell et al., 2001; Cornell & Gil-Swedberg, 1995; Cornell & Kalt, 1992, 1995; Hylton, 1999; Institute of Governance, 1999; Jorgensen, 2000; Plumptre & Graham, 1999; World Bank, 1994). The fundamental step here is to focus on getting good governance as has been the practice world-wide.

Governance principles as indicated by Lockwood et al. (2010) can be used to direct the design of institutions that are legitimate, transparent, accountable, inclusive, and fair and that also exhibit functional and structural integration, capability, and adaptability. Together governance principles can serve as a platform for monitoring and evaluation instruments for self-assessment and audit purposes.

Having good governance means being capable of future-oriented planning, problem solving, revising objectives, re-designing structures, and taking action. Good governance is essentially concerned with creating the

conditions for legitimate and capable rule, and for collective action. It leads to social, cultural and economic developments sought by citizens (Cornell et al., 2001; Sterritt, 2001; Plumptre & Graham, 1999). It has also been characterised as having four main attributes (Westbury, 2002; Sterritt, 2001; Institute of Governance (IOG), 1999; Plumptre & Graham, 1999):

1. Legitimacy – which concerns the way structures of governance are created and leaders chosen, and the extent of constituents' confidence in and support of them. Bernstein (2005) refers to the acceptance and justification of shared rule by a community which concerns who is entitled to make rules and how authority itself is generated;
2. Power – the acknowledged legal, cultural capacity and authority to make and exercise laws, resolve disputes, and carry on public administration;
3. Resources – the economic, cultural, social and natural resources, and information technology needed for the establishment and implementation of governance arrangements; and
4. Accountability – which concerns the extent to which those in power must justify, substantiate and make known their actions and decisions.

There is no single model of governance for indigenous communities and regions, different structures and processes which will suit different groups. Nevertheless, whatever form or level of aggregation of governance is developed, communities and regions will face similar generic challenges – structural, institutional, financial, administrative, corporate and ethical (Dodson & Smith, 2003).

To address these common challenges, communities and their organizations would have to consider a set of universally accepted guiding principles at the local level which include the need for transparency, certainty of resources and authority, equity and fairness, flexibility and choice, internal and external accountability, procedures for appeal and redress, efficiency and effectiveness, legitimacy and mandate, participation, leadership, strategic vision and capacity. To strengthen the capacity of communities for more effective governance in the above areas, according to Dodson and Smith (2003), there is the need to consider and promote the following nine key elements and principles within the governing bodies:

1. Stable and broadly representative organizational structures - Organisational structures for governance can take many different forms and still be effective by supporting local objectives and the sound management of internal assets that broadly represent the rights and interests of all community members.
2. Capable and effective institutions - Social groups need institutional mechanism. Both formal and informal mechanisms regulate and delimit the behaviour and authority of individuals and groups (Cornell, 2002; Cornell et al., 2001; Sterritt, 2001).
3. Sound corporate governance - Institutional capacity informs corporate governance which, in turn, lays the solid foundation for overall governance. For communities and organisations, corporate governance is the system by which governing bodies are directed and managed (ASX, 2003; Sterritt, 2001).

4. The limitation and separation of powers - All communities need systems and processes which prevent those people who exercise legitimate powers from using that power for their own personal gain and from changing the rules to suit their own interests. Such behaviour causes conflict and can destroy a community or governing body's capacity for generating sustained development.
5. Fair and reliable dispute resolution and appeal process - Good governance involves stewardship, which is able to manage the affairs of all communities and members in such a way that it safeguards and facilitates effective exercising of their different rights and interests.
6. Effective financial management and administrative systems - Governance is not only about structures, processes and power; it is also about resources. Sound governance requires access to, and control over, financial, social, economic and natural resources and technology (Aucote, 2003; IOG, 1997, 1998; Smith, 2002b).
7. Simple and locally relevant information management systems - Information management is a governance issue. If governing bodies want to be able to plan for, and facilitate community members providing their informed consent to future development, they will need a capacity to monitor their own performance and outcomes, and to rectify operational problems (Smith, 2002a; Taylor, 2003).
8. Effective development policies and realistic strategies - The challenge of good governance goes beyond simply the financial and other resources needed at community and regional levels. The experience of indigenous groups in Canada and the USA echoes the warnings of the

World Bank which now judges not by financing gap, but by 'institutions' and 'policy' gap (Altman, 2001; World Bank, 1994).

9. Cultural 'match' and 'fit' - Underlying all these key elements and good governance is the issue of legitimacy and mandate. Each community and region will have to find some degree of match or 'common ground' between the types of governing structures and procedures it wants to develop, and the culturally-based standards, values and systems of authority of community members (Kalt, 1996).

Graham et al. (2003) define governance 'as the interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken, and how citizens or other stakeholders have their say'. Defining the principles of good governance is difficult and often controversial. However, five key principles of good governance for protected areas, based on the list of the characteristics of good governance for United Nations Development Program (UNDP, 1997) are:

1. Legitimacy and voice (participation and consensus orientation)
2. Direction (strategic vision, including human development and historical, cultural and social complexities)
3. Performance (responsiveness of institutions and processes to stakeholders, and effectiveness and efficiency)
4. Accountability (accountability to the public and to institutional stakeholders, and transparency)
5. Fairness (equity and rule of law)

Kaufmann, Kraay, and Mastruzzi (2007), on update of the Worldwide Governance Indicators (WGI) research project, covering 212 countries and

territories measured six dimensions of governance between 1996 and 2006, which reflect the views on governance of public sector, private sector and NGO experts, as well as thousands of citizen and firm survey respondents worldwide. The following set of aggregate indicators are based on hundreds of specific and disaggregated individual variables measuring various dimensions of governance, taken from 33 data sources provided by 30 different organizations:

1. Voice and accountability – measuring the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.
2. Political stability and absence of violence – measuring perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including domestic violence and terrorism
3. Government effectiveness – measuring the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies
4. Regulatory quality – measuring the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development
5. Rule of law – measuring the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of

contract enforcement, the police, and the courts, as well as the likelihood of crime and violence

6. Control of corruption – measuring the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

According to Canada Corps (2006), strong interconnectivity of key elements or principles of governance strengthens the effectiveness of governance to achieve the broad goal of societal development. For example, it is not possible to ensure accountability without transparency, rule of law and responsive participation of stakeholders in resource management. Also, within the process of governance, equity and fairness in benefit sharing assures the local communities of being part of the whole and thus leads to satisfaction, and sustainability of the resource.

International Union for Conservation of Nature (IUCN) (2007) points out that good governance is a system of decision-making which ensures that the interests, needs and aspirations of all the members of the society are taken care of; and that the pillars of governance include: accountability, transparency, responsiveness, equity and inclusiveness, effectiveness and efficiency, legitimacy and voice, participation and consensus, and the rule of law.

Five basic categories that might be used to frame an assessment of sectoral governance by the World Bank (2009) include: transparency, accountability and public participation; stability of forest institutions and conflict management; quality of forest administration; coherence of forest

legislation and rule of law; and economic efficiency, equity and incentives. Lockwood et al. (2010) indicate that a set of eight good governance principles that are designed to provide normative guidance for Natural Resource governance include: legitimacy, transparency, accountability, inclusiveness, fairness, integration, capability and adaptability.

According to Kaufmann (2003), transparency should ensure that there is flow of information, namely, access, timeliness, relevance, quality of economic, social, and political information accessible to all relevant stakeholders. An empirical analysis of the works of Islam (2003) developed in the Transparency and Accountability (T/A) Initiative, show that information flow is a critical ingredient of transparency and allows for better analysis, and monitoring and evaluation of events which are significant for people's economic and social well-being.

Participation in governance improves the effectiveness of multi-actor dialogue processes such that actors could exchange their views on issues concerning the resource as indicated by Mercy Corps (2010). It should promote ownership of the resource in terms of contribution to information flows; conflicts and feedback mechanisms; transparent decision making processes; and monitoring systems. Participation should strengthen the interface between the government and all other stakeholders and create opportunities for actors who are powerless but may be the rightful owners of the resource to have a voice regarding the usage, benefits and sustainability of the resource (World Bank, 1994). Participatory processes help to build, from the bottom-up, a culture of democratic decision-making which deepens governance.

Similarly, the works of Turnhout et al. (2010) take a critical look at how participation may influence the ways in which stakeholders can become involved. The results of their empirical studies show that participatory processes are practices that inevitably require acting, choosing, and selecting. Community involvement would help control unmanaged and unsustainable logging according to the World Bank (2003).

Responsiveness should ensure that institutions and processes try to serve and satisfy all stakeholders within a reasonable timeframe as indicated by Mercy Corps (2010). This is critical to efficiency and adaptive capacity to natural resource governance such that response to circumstances, performance, knowledge and societal objectives, preferences, and shape, change in the long-term. According to World Bank (2009), responsiveness of state institutions dictates its state of effectiveness. For the purpose of this study, the reasonable timeframe for institutions and processes to serve and satisfy stakeholders in FPD is based on Forestry Commission's 2003 - 2008 Service Charter (a document showing commitment to providing quality service to clients).

Equitability and inclusiveness actively check whether certain ethnic, social or interest groups are deliberately excluded from access to the resource and ensures that there is a balance of all actors such that no group is marginalized (IUCN, 2007). This promotes interests and equitable access to the resource and ensures that all stakeholders are considered adequately in the developing and sharing of the wealth from natural resource. Inclusive means that governance institutions and policies are accessible, accountable and responsive to disadvantaged groups, protecting their interests and providing diverse populations with equal opportunities, whilst equity helps identify

where the worst disparities lie and how, within limited resources, it could be ensured that resources go to where they are most needed (UNDP, 2007).

Rule of law refers to a governance principle in which all persons, institutions and entities, including the State itself, are accountable to laws that are publicly broadcasted, equally enforced and independently adjudicated, and which are consistent with international human rights, norms and standards as pointed out by the Secretariat of the United Nations Forum on Forests (2007). The rule of law should be fairly and impartially enforced by independent judiciary as well as an impartial and incorruptible police force. Criteria for criminal prosecution system as pointed out by Bryett and Osborne (2000) should include: efficiency, effectiveness, fairness, equity, independence, preservation of public confidence, consistency in decision making, accountability, and transparent and open application and documented procedures.

Where rule of law is strong, people uphold the law not out of fear but because they have a stake in its effectiveness. This should become evident when dealing with illegal operations in FPD such as chainsaw operators, wildlife poachers, 'galamsey' operators and 'land-guards'. Good governance initiatives may include advocacy for legal reform, public awareness-raising on the national and international legal framework and capacity-building or reform of institutions.

Consensus building should ensure that mediation of the different interests in society reaches a broad consensus on what is in the best interest of the whole community and how this can be achieved. It should also require a broad and long-term perspective on what is needed for sustainable natural

resource development and how to achieve the goals of such development. This can only result from an understanding of the historical, cultural and social contexts of a given society. Consensus building (also called collaborative problem solving or collaboration) if operated well should essentially mediate a complex conflict involving many parties. It should normally take negotiations and agreements to solve them (Pfund, 2013).

Accountability puts the necessary checks and balances in place to urge formal institutions to perform effectively hence minimizing corruption as indicated by Graham et al. (2003). Accountability operates in capacity development of civil society organizations involved in advocacy work and watch dog functions which promote the use of mechanisms for correcting and pointing out poor behaviour or abuse of power and resources (Cavill and Sohail, 2007). The interaction of relevant stakeholders strengthens the accountability demand of resource usage.

To be well-informed means that all forms of knowledge with its associated complexities and uncertainties are comprehensible. This is critical to understanding governance processes and systems. This calls for information flow and communication, documentation of procedures, policies, laws and operational guidelines reaching all stakeholders. To be well-informed as indicated by Lockwood et al. (2010) means to have knowledge which is a key component of developing solutions to complex problems characterized by uncertainty, long time scales, multidimensionality, and diverse values. Solutions to such problems have to be informed by a broad range of knowledge sources including scientific research, on-ground experience, and

the right kind of freely flowing information, together with effective communication.

With a clear sense of direction, stakeholders, according to Graham et al. (2003), should ensure that legislation provides a set of objectives and a governance framework which allows various players of a resource to have a set of parameters around which to structure their relationships and build trust over the long term period. Direction should operate such that it provides the environment in which planning can usefully take place. Indeed, the principle of direction should be imbued with an ethos of continuous improvement. Another important benefit to direction is the ability to mobilize support and resources.

For the purpose of this study, the governance principles to be assessed include: transparency, participation, responsiveness, accountability, equitability and inclusiveness, consensus building, rule of law, well-informed, and direction which are common with respect to the works cited by the various scholars, researchers and authorities of governance. Governance principles as pointed out by most scholars and authorities (Lockwood et al., 2010; World Bank, 2010; Kaufmann et al., 2007; IUCN 2007) are key to natural resource governance, and particularly, forest plantation development.

Systems Theory

Systems theory is an interdisciplinary field which studies a set of interdependent but interrelated elements coming together as a whole to exhibit a particular behaviour. Systems theory focuses on complexity and interdependence, and normally represents systems thinking as a specialization or approach. Bertalanffy (1974) in his early works of the General Systems

within the system, with intermediate storage and control over the functioning of the system as shown in Figure 2.

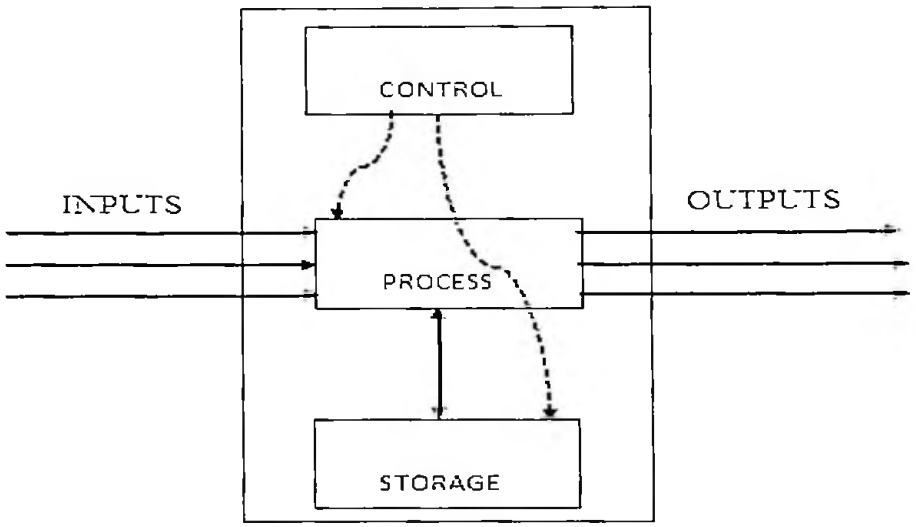

Figure 2: A General Systems Model

Source: Curtis (1992)

Littlejohn (1999) indicates that a system can be said to consist of four things as shown in Figure 3. The first is objects – the parts, elements, or variables within the system. These may be physical or abstract or both, depending on the nature of the system. Second, a system consists of attributes – the qualities or properties of the system and its objects. Third, a system has internal relationships among its objects. Fourth, systems exist in an environment. The environment of a system is what lies outside the boundaries of the system. Similarly, Arbnor & Bjerke (1997) also indicate that environment is usually defined as involving factors which are important in terms of their influence on the system but are beyond its control.

A system is a set of things that affect one another within an environment and form a larger pattern that is different from any of the parts. The underlying assumption of a systems approach is that the reality is

arranged in such a way that the whole differs from the sum of its parts. This implies that not only must the different parts of a system be studied, but also their relationships

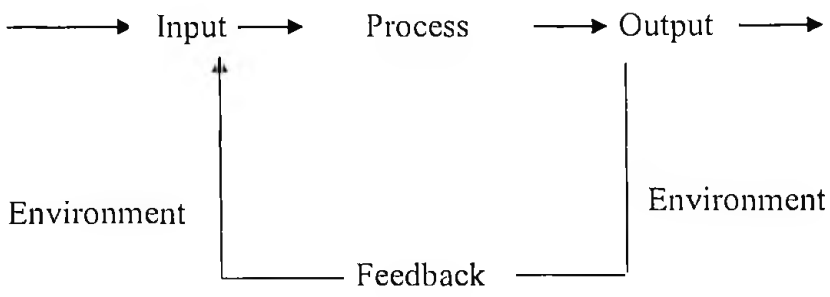

Figure 3: Simple Systems Model

Source: Littlejohn (1999)

Littlejohn (1999) further indicates that the fundamental systems-interactive paradigm of organizational analysis features the continual stages of input, throughput (processing), and output, which demonstrates the concept of openness/closedness. Another very important aspect of a high-functioning system is that it continually exchanges feedback among its various parts to ensure that they remain closely aligned and focused on achieving the goal of the system. If any of the parts or activities in the system seems weakened or misaligned, the system makes necessary adjustments to more effectively achieve its goals. This directly represents the situation in forest plantation development, whereby all stakeholders need to balance their interest such that all governance principles are applied.

Systems theory has a large scope of application in today's life, mainly because real world systems are all complex. It provides a new paradigm to think about systems whether simple or complex. A complex system is composed of many parts that interconnect in intricate ways than when it is

composed of a group of related units for which the degree and nature of the relationships is imperfectly known. Also, a complex system is a set of elements connected in order to perform a unique function that cannot be achieved by any of the parts alone (Sussman, 2000). Sussman (2000) and Ferreira (2001) further noted that the analysis of a complex system aims at understanding the structure and behaviour of inter-related parts.

Systems thinking has been defined as an approach to problem solving, by viewing "problems" as parts of an overall system, rather than reacting to specific parts, outcomes or events and potentially contributing to further development of unintended consequences (Checkland, 1981). Systems thinking is the process of understanding how things influence one another within a whole and distinguishes itself from the more traditional analytic approach by emphasizing the interactions and connectedness of its different components.

Ticknor (1990) pointed out that the successful forest management of the future will be a right-brain enterprise with a systems orientation unlike traditional forest science which is the essence of a left-brain, reductionist endeavour – analytical, quantitative and linear. It is a science which the whole is understood in terms of its elements. Systems thinking is a discipline for seeing the "structures" that underlie complex situations (Aplet et al., 1993). There is the need to balance our propensity to focus on increasing smaller scales of activity with a systems view to which natural resource governance is no exception.

Further works by Infante (1997) elaborate system perspective model to encompass several system characteristics such as: wholeness and

interdependence (the whole is more than the sum of all parts), correlations, perceiving causes, chain of influence, hierarchy, subsystems, self-regulation and control, goal-oriented, interchange with the environment, inputs/outputs, the need for balance, change and adaptability. The above characteristics help to understand a wide variety of physical, social and behavioural processes, including communication which has become a very important tool in solving conflicts and various challenges in natural resource governance.

Aronson (1998) indicated that the approach of systems thinking is fundamentally different from that of traditional forms of analysis which focuses on separating the individual pieces of what is being studied. Rather, systems thinking focuses on how the thing being studied interacts with the other constituents of the system. This means that instead of isolating smaller and smaller parts of the systems being studied, it works by expanding its view to take into account larger and larger numbers of interactions as an issue is being studied. This results in strikingly different conclusions than those generated by traditional forms of analysis, especially when what is being studied is dynamically complex or has a great deal of feedback from other sources, internal or external.

The character of systems thinking makes it extremely effective on the most difficult types of problems to solve: those involving complex issues, those that depend a great deal of dependence on the past or on the actions of others, and those stemming from ineffective coordination among those involved. Examples of areas in which systems thinking has proven its value include:

1. Complex problems that involve helping many actors see the "big picture" and not just their part of it.
2. Recurring problems or those that have been made worse by past attempts to fix them
3. Issues where an action affects the environment surrounding the issue as in natural resource governance
4. Problems whose solutions are not obvious

Natural resource governance involves structures and principles which help to manage stakeholder interests and conflicts as a result of development. The complexity of natural resource governance can be solved by using systems thinking to explore the underlining subsystems and factors which lead to main objective of the system as a whole. However, it is not the intention of this research to review all the exhaustive literature on systems theory but to an extent derive the significance of wholeness of different parts of a system to relate to governance of natural resource.

The systems theory can be applied to natural resource governance in that, all the stakeholders involved are like many parts interconnected and related to each other. This model provides a useful framework within which to situate applied governance principles with all the challenges to be addressed in natural resource governance. The interests of the various actors have different degrees of involvement and any one part cannot achieve the overall objective of all the actors put together. This implies that FPD is a dynamic process and the action or inaction of an actor has direct implications for others. The actors and processes involved in FPD are interrelated as there are countless interconnections between them which invariably manifest into complex

situations based on varied interests on the resource which the systems theory perfectly characterizes.

Actor-Network Theory

Actor-Network Theory (ANT) evolved from the field of social studies of science and technology. ANT was first developed at the Ecole des Mines in Paris in the early 1980s through the works of science and technology studies scholars (Callon, 1986; Latour, 1987) and the sociologist, Law (1987) with the aim of explaining complex networks in scientific research settings.

Further works by Law (1992) and Latour (1993) on ANT's methodology, point out scientific realism, social constructivism, and discourse analysis in its central concept of hybrids which are considered as scientific and technological artifacts. These are seen as a function of the interaction of heterogeneous elements which are shaped and assimilated into a network. The artifact is transformed into a blackbox, once the network of many actors has been stabilized (Winner, 1993). ANT, according to Latour (1996), is concerned with investigating the social and technical aspects of coextensive networks of human and non-human elements.

ANT provides a detailed account of how human and non-human actors gradually form stable actor networks which are heterogeneous in nature (Latour, 1999). A key proposition of ANT is to treat human and non-human actors as well as networks symmetrically; the rationale being that differences between them are generated in the network of relations. Human and non-human elements include stakeholders, structures, policies, legal framework, capacity building, benefits, resources and technical advice which achieve significance through relations with each other and not of themselves. William-

Jones and Graham (2003) further point out that the actions of actors and networks, and the interactions between social institutions, individuals, groups and techno-science brings into being all the components that collaborate, co-operate, compete, lead proliferation, persistence, or perishing of network determines the origins of power and structure of the network.

According to Latour (2005), the ANT tries to explain how material-semiotic networks come together to act as a whole; and that actants which denotes human and non-human actors, in a network take the shape that they do by virtue of their relations with one another. Also, nearly any actor can be considered merely as a sum of the other smaller actors, however, if the elements of the network act contrarily to the network as a whole, then the network breaks down causing the punctualisation effect to cease as well, and depunctualization effect which sets in is likened to the opening of a black box.

Drawing upon ANT, this study defines the governance structures (formal and informal institutions and relatively stable policy decisions), principles, legal framework, as non-human factors and the relevant stakeholders (Policy Group, Primary and Secondary) as the human factors. Actors, who have interests, try to convince other actors so as to create an alignment of other actors' interests with their own interests. When this persuasive process becomes effective, it results in the creation of an actor-network. It is also observed that the actor's interest are influenced by the degree of interactions and connectedness, degree of satisfaction of interaction and association of stakeholders, the environment, institutionalization of policy and legal framework, documentation, capacity building, technical advice, benefits, and resources.

ANT is rapidly gaining grounds as a practical, challenging and intriguing tool for studying actions of multiple actors which in the researcher's view can be used in unearthing challenges in governance where multi-stakeholders come into play as in FPD. Its unique approach in connecting human and non-human factors together enables it to shed more light on complexities that so far have escaped works in the transformation process of natural resource. The dynamics of these contextual elements and the struggle of actors to inscribe their interest in the resource, will transform each stage of governance with a specific foci. The application of ANT can be extended to investigate the effectiveness of natural resource governance under FPD in particular.

Challenges of Natural Resource Governance

Many challenges stem from underlying weaknesses in the way natural resources are governed. According to Surkin (2011), unclear or poor governance can lead to illegal and unsustainable use of natural resources. Poor forest governance is typically characterized by low levels of transparency, accountability, and participation in decision-making and a lack of capacity and coordination in forest management and administration. These manifest in high levels of corruption, pervasive illegal and unplanned forest conversion and use, and conflicts over forest ownership and access rights.

There are numerous and often conflicting social and institutional challenges imposed by the complex and polycentric character of governance of natural resource. Notwithstanding these facts, expectations are high for more participatory and inclusive modes of natural resource governance, which even possess more complex challenges. The diverse uses of forests in

providing the essential goods and services such as watershed management, flood and erosion control, foods, medicines, wildlife, maintaining environmental quality and biodiversity often generate conflicts between economic development and conservation objectives. It is the responsibility of governments to find the strategies for achieving an appropriate balance among these, and other objectives (FAO, 2001).

Natural resource governance addresses issues where it is often unclear where responsibilities lie and where traditionally no one sphere of government, agency, institution, or group of individuals has sole jurisdictional responsibility, such that problem solving capacity is widely dispersed and few actors or decision-makers can accomplish their mission alone (Innes & Booher, 2003). These unclear roles and responsibilities pose serious challenges on governance.

Inadequate provision of governance mechanisms such as polices and rules, institutions, and processes pose a lot of challenges on sustainability of natural resources. Oviedo (2010) indicates that without adequate governance mechanisms, conflicts over natural resource are often heightened, as different sets of actors seek to utilize resources based on their specific needs or priorities.

Another area of potential conflicts is the failure of governance in the forest sector excluding adequate participation of communities in the commercial use of forests. Devolution of management of forests to lower levels of government or local community groups is widely considered essential for good governance; community participation in decision making and implementation, equitable distribution of benefits, and sustainable

resource management (CIFR, 2005). The political will of governments in this direction of devolution of management of forests becomes a big challenge sometimes as they sense that gradually they are losing control of the state.

Governance of natural resource faces multiple challenges which can be traced to three factors that underpin the resilience of human and natural systems, namely; complexity, diversity and dynamism. More recent and still emerging perspectives recognize that natural systems can be more accurately understood as self-organizing processes driven by the principles of dynamism and complexity, as well as unpredictability and openness.

According to Bellamy (2006), key natural resource governance challenges include:

1. Balancing traditional business and industry development interests with social and environmental constraints;
2. Competing or contradictory statutory and policy objectives and strategies arising from the breadth of sectoral concerns involved in regional natural resource management systems and the complex interrelationships between them;
3. Contest over the optimum degree of openness and inclusiveness in the setting of regional objectives and priorities to foster community ownership and commitment;
4. Complex transboundary problems (territorial and sectoral) and the related challenge of creating linking and bridging devices (that is structures, processes, mechanisms and people) to enable an integrated and collective perspective;
5. Developing whole-of-government responses to regional demands;

6. Turf issues, including the need to balance cooperation and competition because organizational self-interest is still heavily engrained in regional systems;
7. Conflicting values, including competing influences of industry groups and non-governmental groups or organizations on legislation and policy outcomes;
8. Conflicting approaches to the recognition of cultural diversity and difference; Resource constraints including the adequacy of regional shares of public revenues, resources and regulatory powers; and
9. Knowledge sharing including the application of a more holistic and integrated science that crosses traditional knowledge boundaries and gives greater status to 'grass roots' or societal knowledge.

Complexity of Natural Resource Governance

Natural resource governance is complex no matter how it is perceived. It deals with multiple actors (the state, institutions, groups and individuals) of varied interests in a resource in question, multiple interactions based on different networks and associations, different spatial scale (local, regional national and international) of governance with varied challenges, conflict of varied sources, different associated policy and legal instruments, different ownership rights and tenure arrangements.

As indicated by Pound et al. (2003), multiple stakeholders such as local people, various levels of government, non-governmental organizations, and private sector actors, have different perspectives, interests, entitlements, knowledge, capabilities, values and power. Within a single forest fringe community forest, for example, there are overlapping categories of human

diversity such as gender, age, ethnicity, religion, wealth and proximity of resources. The human landscape is dynamic in nature and it becomes very complex when you need to satisfy every actor. Similarly, natural resource governance is highly complex and dynamic, involving multiple stakeholders and a variety of interconnecting institutions, laws, policies, and governance processes that impact on different aspects of natural resource use, management and human livelihoods (IUCN, 2011). Again, gaps in institutional capacity building, transparency in resource allocation, accountability and unclear roles and responsibilities with varied expectations, interests, rights and power holdings on the resource makes governance dynamic and complex (Marfo, 2010 and FAO, 2012).

According to Bellamy et al. (2003), there has been a global trend for governments to devolve specific decision-making closer to its source and with an emphasis on developing partnerships, strategic alliances, networks and broader consultation with those who are likely to be responsible for, or experience impacts from decisions. Also, the emergence of increasing community expectations for more participatory and inclusive governance arrangements has also begun to challenge traditional state-centred forms of policy-making and have generated new forms of governance-beyond-the-state as indicated in the works of Swyngedouw (2005).

Again, Bell and Park (2006) indicate three broad modes of natural resource governance which occur through hierarchies: (1) traditional forms of top-down control and regulation through the state; (2) market-based forms of resource allocation; and (3) networks which involves various forms of public-

private collaboration. These trends of decision making also introduces angles of complexity in resource governance.

There is also a constant nature of conflicts associated with natural resource governance, not only at the local and national levels but also globally and hence there is an increasing demand for international agreements on the importance of trans-boundary and multi-level governance approaches, but this has not decreased the complexity surrounding the management of the natural resources. On the contrary, as the number of actors and political levels involved increase so does the level of complexity. The notion of complexity is key to understanding the perceived failures of past governance approaches.

Bressers and Kuks (2003) noted that natural resource governance is typically highly complex and characterized by multiple levels of policy implementation; multi-actor character of policy implementation; multiple perceptions of the problem and the objectives of policy implementation; multiple strategies and policy instruments for policy implementation; and complex multi-resourced and multi-organizational basis for implementation of policy. Bingham et al. (2005) point out that governance approaches aim at addressing natural resource problems which normally occur within complex multi-level and multi-actor settings based on a more holistic approach to problem framing and policy implementation. They focus particularly on participation, deliberative processes, collaborative relationships, networks and consensus building that serve as mechanisms for cooperation and coordination among diverse and often rival participants in the policy process. The angle of policy implementation also introduces the element of complexity in resource governance.

The nature of natural resource governance deals with polycentric decision-making arrangements being carried out concurrently across a range of political decision-making levels (national, regional, local) and horizontally across a fragmented array of various stakeholders. Maher et al. (2002) proposed a national agenda for natural resource governance operating through a mix of parallel arrangements. At each level, there were different problems to be addressed. As a consequence of this development, complexity which this study hopes to unfold shows up at each level.

Thus, for governance of natural resource to be effective, the interlinked human and natural systems must parallel their interactive, dynamic and adaptive nature (Anderson, 2001). From the standpoint of local governance, the natural resource planning process appears to be generally adaptable, since it embraces the elements of subsidiarity, equity and multi-stakeholder participation (the bottom-line of decentralization). The adaptation however, varies with ranges of low, medium and high degree of innovation (Catacutan et al., 2000).

According to Bellany et al. (2002) and Head and Ryan (2004), considerable investments have been made by the Australian Government in natural resource governance experiments over the years at the regional scale, grounded in the assumptions of an emerging sustainability paradigm of change, adaptation and learning. These new regional governance approaches focus on natural resource problems and emphasize broad participation and deliberation through development of partnerships, strategic alliances and broader consultation between those with policy authority and those with significant stakes in decisions.

Lebel et al. (2006) also agree to the fact that these complex governance systems have multiple centres or authorities and, although typically multilayered, they are not necessarily neatly hierarchical. Another school of thought is that governance is not merely something that governors do, but a quality of the totality of the governing interactions among those governing and those governed – it is itself a set of interactions (Kooiman et al., 2008). Harmonization of such approaches becomes a complex system of governance.

Head and Ryan (2004) argue that this form of regional governance changes the role of government to framework setter, co-founder and facilitator, representing an adaptive form of public management. Governance is thus managed through a strategic framework of cooperation rather than primarily through regulatory and legal mandate. It is increasingly evident that regional and systemic focus in natural resource governance is a critical mechanism for addressing sustainability of interconnected natural and social systems.

Given the urgency for response posed by the sustainability challenge, in the short to long-term, what is evident is the need for an enabling environment for the governance of natural resource to move beyond the current limited focus to a more open governance system that enables social and political learning at multiple levels and centres of decision-making across public and private sectors. Thus, for natural resource governance to be effective, democratic and mutually supportive central and local governance institutions are required as indicated by Lockwood et al. (2010).

CHAPTER THREE

THEORETICAL PERSPECTIVES AND CONCEPTUAL FRAMEWORK

Introduction

This chapter reviews the various governance models and frameworks applied in the natural resource sector. It also elucidates the conceptual framework adapted for the study. Initially, the chapter addresses new forms of governance models and the lessons learnt in their application in various countries. Then various types of governance frameworks in natural resources are appraised, and finally, the conceptual framework of the study.

Governance Models and Application in Natural Resource

Over the years new forms of governance have emerged in the natural resource sector different from the traditional top-down hierarchical control. According to Wertz-Kanounnikoff and Rojat (2007) the rise of these new forms of governance does not only apply to the emergence of new actors (private sector, NGOs) and policy instruments (contracts and partnerships) but also new forms resulting from various combinations of the two and their implementation at different spatial scales (local, regional, national). The actors of governance involve the state (the most traditional actor, once perceived as the only governing authority), local government, private firms, NGOs and the community.

The new governance models consist of the following:

1. Public governance models i.e. the state governance model (traditional form of governing through hierarchy, in which public authority lies with the central government) and the decentralized public governance

model (decentralization of tasks and decision-making power from central government to local governments)

2. Public-private governance models (collaborative relations between governments and private actors) such as public-private partnerships (PPP) (Loew and McLindon, 2002), co-management systems (combined management and/or decision-making between communities or user groups and the state) (Sherry and Halseth, 2003) and global public policy networks (collaboration between the state, international organizations, civil society actors and private sector) (Reinicke and Deng, 2000; Witte et al., 2000)
3. Private governance models such as community governance (the community has regulatory control, while the state is expected to provide the necessary institutional framework for the communities to develop and execute their control without interference from the state) (Rice, 2003), corporate social responsibility (CSR) networks (global movement in which companies and organizations voluntarily integrate social and environmental concerns into their operations and reporting practices), and Non-state market-driven governance (networks of organized civil society that define and implement standards, which are regulated via market mechanisms whilst public authorities remain absent) (Cashore, 2002).

Lessons learnt in application of governance models in natural resources

In 2007, implementing co-management in Timor-Leste according to USAID (2013), required continuous engagement among all stakeholders. A platform was established for discussion and dialogue which extended from the

policy level, through to local communities. The platform created a solid basis for ongoing planning and decision making, as well as fostering increased ownership by those involved. It enabled multi-level interaction by recognizing and accommodating the different values, interests and concerns of the different actors with a vested interest in natural resources. A number of Latin American countries practicing co-management regimes have been offered a climate of land tenure rights security, substantial community benefits besides also attracting funding, support, visibility, income from tourism to the concerned areas and secured long-term access to natural resources.

A study evaluated the long-term implications of a PPP on livelihoods and natural resource dynamics under a market-oriented approach to conservation. Drawing examples from the Luangwa Valley in eastern Zambia, the study sought to answer questions on two closely interrelated aspects. These relate to the contribution of PPP to sustainable livelihoods in and around protected areas and its impacts on natural resources in game management areas (Nshimbi, and Vinya, 2014).

In Mali, the implementation of decentralized public governance model of natural resource focused on awareness creation and sensitization at both national and local levels; training of elected officials, technical government experts and NGOs at local level in participatory diagnosis of dryland environmental problems and community-driven resource management planning; and the development and implementation of a communications strategy.

The second phase of the implementation also concentrated on the establishment of a multi-purpose community cooperative in Gao and

Timbuktu. The aim was to institutionalize the mechanisms for conflict resolution and mitigation over local resources, empower women and enhance their participation in resource use decision-making, identify local development options and promote sustainable livelihoods opportunities for the rural poor.

The decentralized public governance model implemented in Niger has contributed to the strengthening of capacities of different stakeholders in local governance and management of natural resources. It also supported the development and validation of a National Environmental Education Strategy and the development of a Communications Strategy as indicated in UNDP (2014).

Natural Resource Governance Framework in the Sahel

A natural resource governance framework (Figure 4) being practiced in the Sahel hinges on three main pillars: policies, resources and institutions (Tall & Gueve, 1990). The policies deal with the political landscape, laws and regulations, decentralization and other options. With resources, the various types are considered as well as the quantity, quality and various trends. The institutions refer to local institutions where rules of access and uses are spelt out clearly. What are lacking in these local agreements are governance principles, feedback and enforcement which are very critical in decision making concerning governance of a resource.

The actors who are very important elements in decision-making through interactions and negotiations are also absent from this framework. The involvement of actors (external institutions, NGOs, civil society, projects, technical experts, etc) has played an important role in making local communities aware of the governance issues. Some of the institutions have

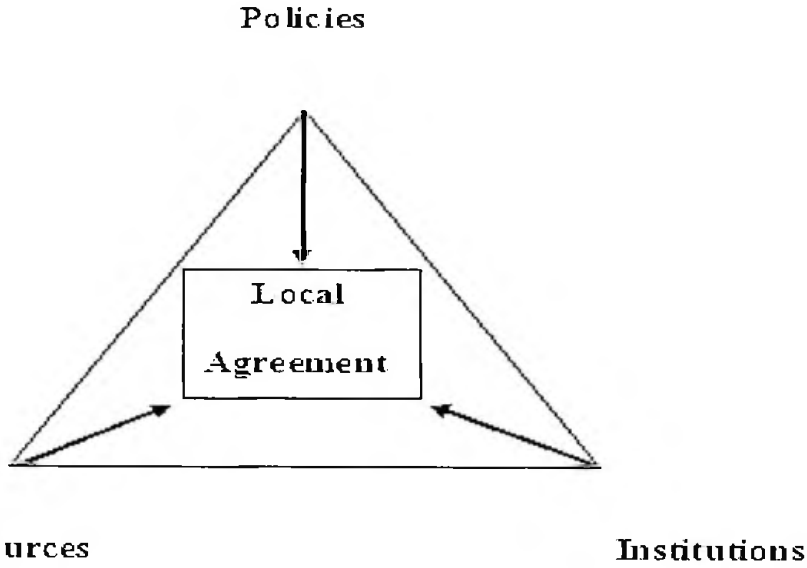

Figure 4: Natural Resource Governance Framework in the Sahel

Source: Tall and Gueve (1990)

promoted participatory methods of support, encouraging communities to take greater responsibility. Community-Based Organizations (CBOs) have helped to consolidate environmental awareness and establish new ways of natural resource governance in the locality.

Apart from just involving the actors, it is also important to consider their levels of engagement as Folke et al. (2005) indicate that governance of linked social and natural systems, generally involves polycentric institutional arrangements, which are nested quasi-autonomous decision-making units, operating at multiple scales. These arrangements involve local, as well as higher organizational levels and they aim at finding a balance between decentralized and centralized control.

In Mali, Burkina Faso and Niger application of the natural resource governance framework is facilitating how the role of central government is gradually moving away from direct implementation and evolves towards

setting policies, guidance, informing, supervising, inspecting and arbitrating, while making sure that exclusion and social injustice do not develop in the name of autonomy as indicated in Ribot et al. (2006). Similarly, in the Sahel, according to Hilhorst (2008) decentralisation is leading to an increase of power and resources at a level that is closer, better understood and more easily influenced by local people.

Governance of Forests Initiative Framework

The purpose of Governance of Forests Initiative (GFI) framework (Figure 5) is to provide understanding of governance of forests in the context of a variety of developing countries, based on widely agreed principles of good governance (Capistrano, 2010). It is a conceptual framework for defining forest governance and a comprehensive set of indicators for measuring and assessing forest governance. The GFI framework failed to address key governance principles which include; equitability and inclusiveness, responsiveness, consensus building, well-informed and direction. It also did not address the importance of feedback and control mechanisms like agreements in the governance process.

The absence of mechanisms such as local agreements complicates the local situation which leads to the exclusion of local communities when new actors buy up land in anticipation of its privatization. Patten and Odum (1981) have argued that naturally occurring ecosystems should have internal feedback systems that keep the functioning of the system within limits. Also, according to the works of Bueren and Blom (1997) and Prabhu et al. (1999), natural resource governance must respond to environmental, social and economic issues.

<table>
<tr><td colspan="2"></td><td colspan="3">GOVERNANCE COMPONENTS</td></tr>
<tr><td colspan="2"></td><td>Actors: government, international institutions, civil society, private sector</td><td>Rules: policy & law content, policy & law making processes</td><td>Practice: implementation, administration, monitoring, enforcement</td></tr>
<tr><td>PRINCIPLES OF GOOD GOVERNANCE</td><td>Transparency
Participation
Accountability
Coordination
Capacity</td><td colspan="3">Issues:
forest tenure, land use planning, forest management, forest revenues & economic incentives</td></tr>
<tr><td colspan="5">Country Profile:
(key fact and quantitative information relating to forest sector outcomes or outputs)</td></tr>
</table>

Figure 5: Governance of Forests Initiative Framework

Source: FAO and PROFOR (2011)

Similarly, Björkman et al. (2009) in their journal indicate feedback mechanism as a very important tool in community-based monitoring and that it improves on effectiveness of programmes resulting in higher stakeholder satisfaction. It also did not consider the interactions and connectedness of actors which contribute seriously to the complexity of governance in the forest sector as a whole and FPD in particular.

The GFI framework was tested in Brazil, Indonesia, Russia, Burkina Faso, Zambia, Cameroon, Kenya and Uganda supported by PROFOR, FAO, DFID and World Bank at various stages from year 2010 to 2012 (FAO & PROFOR, 2011). The objective of the exercise was to test the quality of governance often which determines whether forest resources are used efficiently, sustainably and equitably and whether countries achieve forest-related development goals. In that respect, a systematic approach to identifying areas of forest governance weakness, devising and implementing responses, and monitoring results which is key to successful forest outcomes, was used.

Lessons learnt, and some benefits in applying the GFI framework in various countries include the following;

1. In Kenya and Burkina Faso, the success of programmes will largely rest on the effective cooperation and support of forest-dependent people, the issue of equitable benefit sharing is as important as ever.
2. In Zambia, environment and natural resources sector experience difficulties in information–flow, which undermines analyses of progress in support of decision making and thus there will be the need to strengthen oversight for monitoring and evaluation (M&E) of programmes. Also, measures such as enforced multi-level performance audits, will be put in place to provide a clear and strong mechanism for tracking progress. Further, Forest Governance Monitoring (FGM) of information gaps were identified through systematically comparing the results of the needs assessment and existing data sets (FAO, 2012).

3. In Vietnam at the national level, several monitoring efforts are undertaken on procedures, results of implementation of administrative plans, spending of budgets, and judicial procedures relevant to FGM. For example, recently the Vietnam Provincial Governance and Public Administration Performance Index 2010 was published with indicators on transparency in the communal land use planning and control of corruption (bribes for land title).
4. In Brazil and Indonesia, as indicated by the Preparatory Governance Assessment (PGA) (2013), the outcome of the test helped to address the "missing middle" problem to improve understanding of the real drivers of illegality and poor governance (including those originating from outside the forest sector), at the field level, and to mainstream governance issues into Sustainable Forest Management (SFM) approaches. Also, the framework contributed to the formulation of targeted and actionable interventions to improve forest governance and to make informed choices regarding priorities, especially when improving law enforcement and strengthening institutions.

Multi-level Environmental Governance Framework

The research by Halimi (2010) developed an integrated "Multi-level Environmental Governance" (MLEG) framework (Figure 6) and explored the relationship between the core characteristics of the framework and the achievements of large scale natural resource management programmes. The core characteristics includes: Multi-Level Governance (MLG), Institutions for Environmental Governance (IEG) and Environmental Decision Making (EDM). The EDM module failed to address two very important governance

principles, namely, responsiveness and well-informed which determines stakeholder satisfaction from governance institutions and processes within a reasonable timeframe acceptable by all relevant stakeholders as well as the critical understanding of governance processes and systems respectively as indicated by Lockwood et al. (2010).

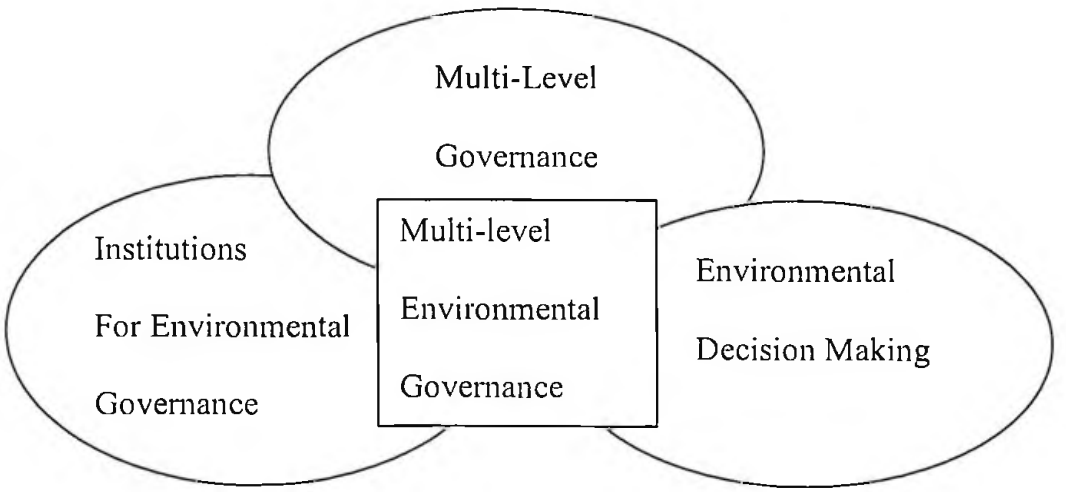

Figure 6: Multi-level Environmental Governance Framework

Source: Halimi (2010)

The implementation of MLEG framework in Indonesia benefited the forest sector by the formation of forest management units (*kesatuan pengelolaan hutan* – KPH) that ensures the involvement of civil society, academics, women's groups and Indigenous Peoples by applying principles of good governance. Also, mechanisms to mainstream gender emphasizing women's access to and control of forest resource management as well as in conflict resolution was enforced. There was also strengthening of actor's capacity through training of government representatives, indigenous people, local communities, NGO activists and business representatives in forest area planning at the central level and in the regions by applying gender, justice principles and approaches.

In Bangladesh, Benin and Nepal, the use of the framework has given rise to the formation of Multi-Stakeholder Platforms (MSPs) which have enabled marginalized groups to have voice in different sectors to engage in dialogue (civil society and government). MSPs can also enable improved coordination among government agencies which in turn leads to more effective and responsive NR governance. It is important that MSPs involve real and effective participation that goes beyond limited processes of consultation and includes different stakeholders in decision-making at all levels (Surkin, 2011).

Cleaver and Franks (2005) developed a framework for analysing water governance and poverty (Figure 7). Water governance consists of a system of actors, resources, mechanisms and processes which mediate society's access to water. The framework examines how different categories of resources are drawn on to develop specific mechanisms of access, with variable outcomes for different groups of people. Also, it helps to address how arrangements for water governance are shaped and how they impact on poor people.

The framework also deals with the actors and agents, and the processes (negotiation, decision-making and actions) stemming from the ANT. The framework has a common focus for development interventions in dynamic relationship with both the wider resources of society and with varying outcomes for differently placed people. At each interface of the framework, actors are recursively implicated by having differing degrees of command over resources and existing power relations.

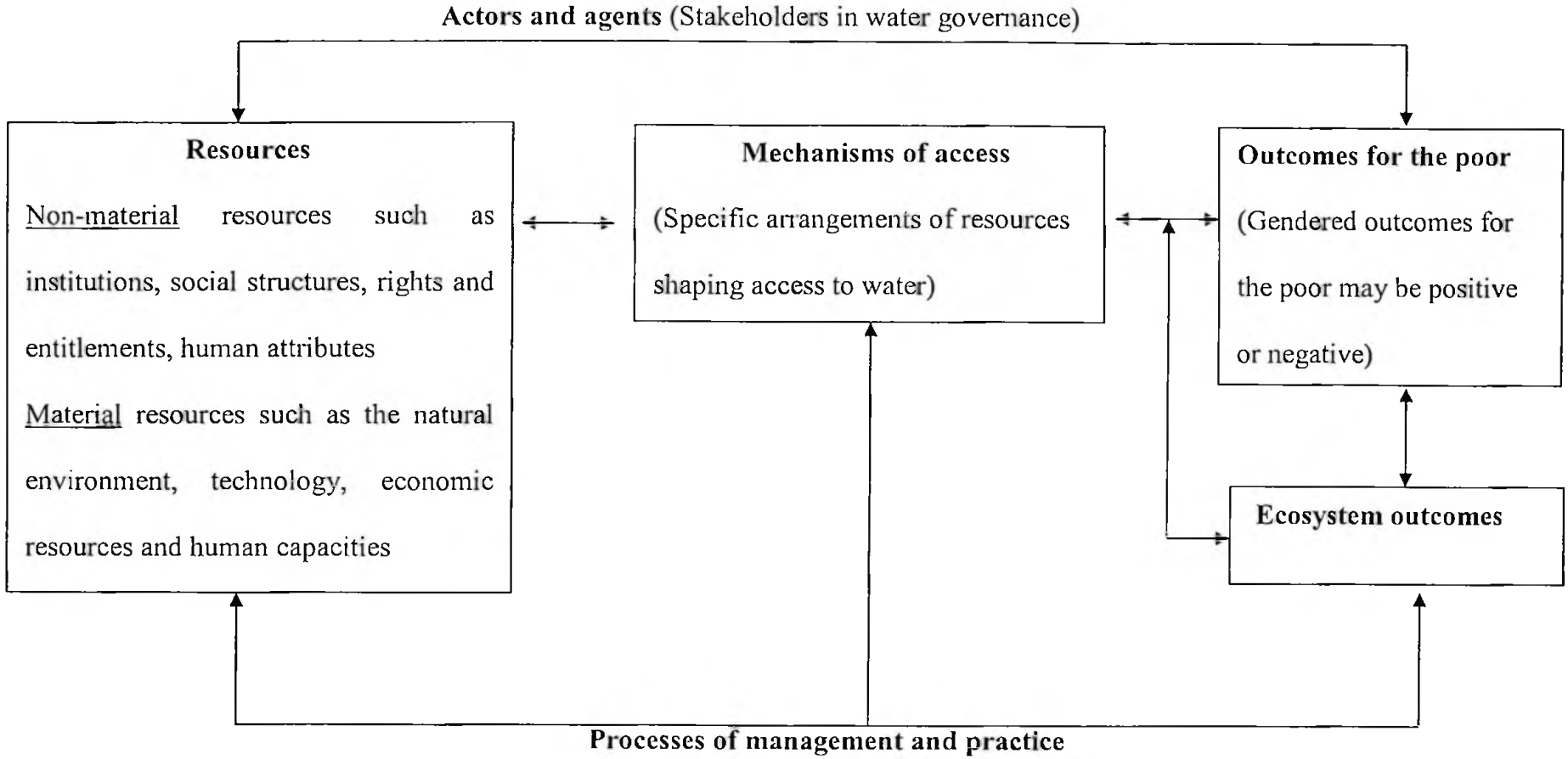

Figure 7: A Framework for analysing water governance and poverty

Source: Cleaver and Franks (2005)

Framework for Assessing and Monitoring Forest Governance

A framework (Figure 8) for assessing and monitoring forest governance as indicated by Maidell et al. (2012) is based on three components (policy, legal, institutional and regulatory frameworks; planning and decision making processes; implementation, enforcement and compliance) supported by six principles of good governance. Each component is divided into components and sub-components which can be identified and assessed.

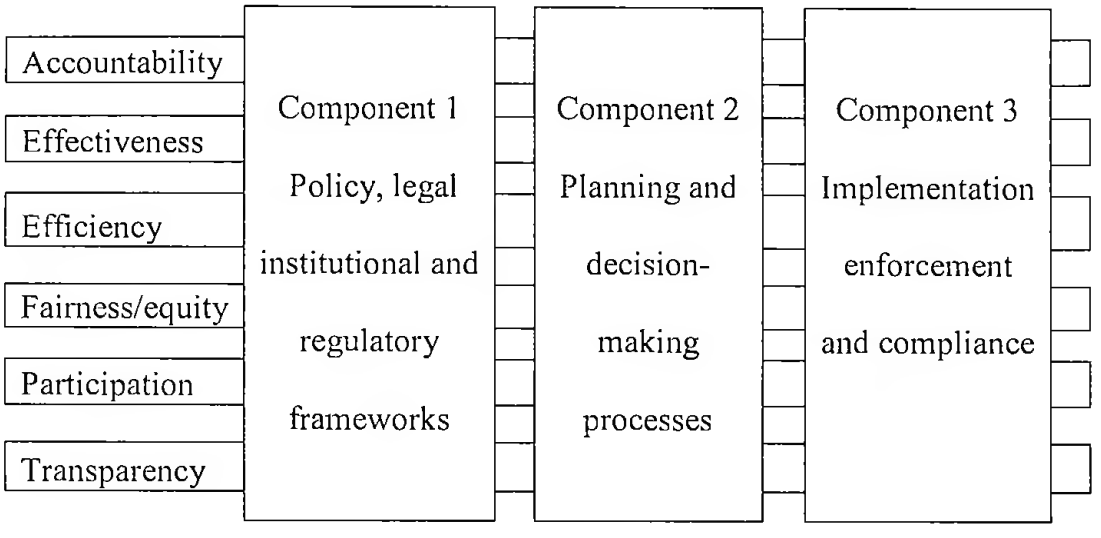

Figure 8: Framework for Assessing and Monitoring Forest Governance

Source: FAO and PROFOR (2011)

However, the framework failed to address key governance principles which include; responsiveness, consensus building and direction which may create serious gaps in governance. It also did not consider how to control stakeholder interactions and feedback. This is a major concern which may affect the governance process.

Empirical evidence of Australian Council for International Development indicates that incorporating feedback mechanism into programme implementation helps to improve accountability and effectiveness of programmes. This allows the continuous flow of relevant information

between planning, implementation, control and impacts of the resource when dealing with developmental issues (Roche, 2009).

In Burkina Faso, Cameron and Uganda, some benefits that came as a result of the application of the framework was the acceleration of the legalization of government laws and regulations on the recognition and protection of the rights of indigenous peoples. Also, mechanisms for handling complaints and the resolution of forestry tenurial conflicts that apply principles of good governance through the issuance of a Ministry of Home Affairs Regulation and regulations from Governors and District Heads were instituted. In Zambia, the framework helped to develop a common language for monitoring and how it could reveal the status of forest governance.

Conceptual Framework

The critical analysis of the various schools of thought in line with systems and the actor-network theories, drawing from the concepts and various governance models and frameworks have informed the development of a conceptual framework as presented in Figure 9 by adapting the framework for water governance and poverty (Figure 7) developed by Cleaver and Franks (2005), and incorporating ideas from various Scholars like Curtis (1992); Littlejohn (1999); Latour (2005); Capristrano (2010); Roche (2009). This conceptual framework has in common the representation of linkages between states and processes in a system and helps to understand how changes in one part of the system may have implications elsewhere, and to see how the resulting outcomes may vary.

This conceptual framework is underpinned by five building blocks based on the systems theory which covers all dimensions of governance, namely;

1. Input (Resources)
2. Transformation (Processes)
3. Output
4. Expected Outcome (Outcomes for the poor)
5. Control and Feedback Mechanism (Mechanisms of Access)

The first block, input determines the resources (Cleaver & Franks, 2005). All governance principles are applied by the material and non-material components of the resources in the input block. This means that transparency, participation, responsiveness, equitability and inclusiveness, rule of law, consensus building, accountability, well-informed and direction will form the basis that will ensure that corruption is minimized and the views of minorities are taken into consideration in decision making regarding the natural resource.

The second block, transformation (processes) handles all the interactions and connectedness of stakeholders in addition to negotiations, decision-making and actions form the basis of the actor-network theory. During the transformation stage, a lot of interests are protected some leading to conflicts, unclear instructions, legitimate rights of some stakeholders are abused, promoting resource illegalities.

The interactions amongst stakeholders are a very important feature of this concept and hence this block has been emphasized. This reminds stakeholders of their roles and responsibilities, and reinforces governance principles like inclusiveness and consensus building in general and share information on other global issues bothering on natural resource governance (e.g. climate change, greenhouse gas effects, ozone depleting layer, REDD+).

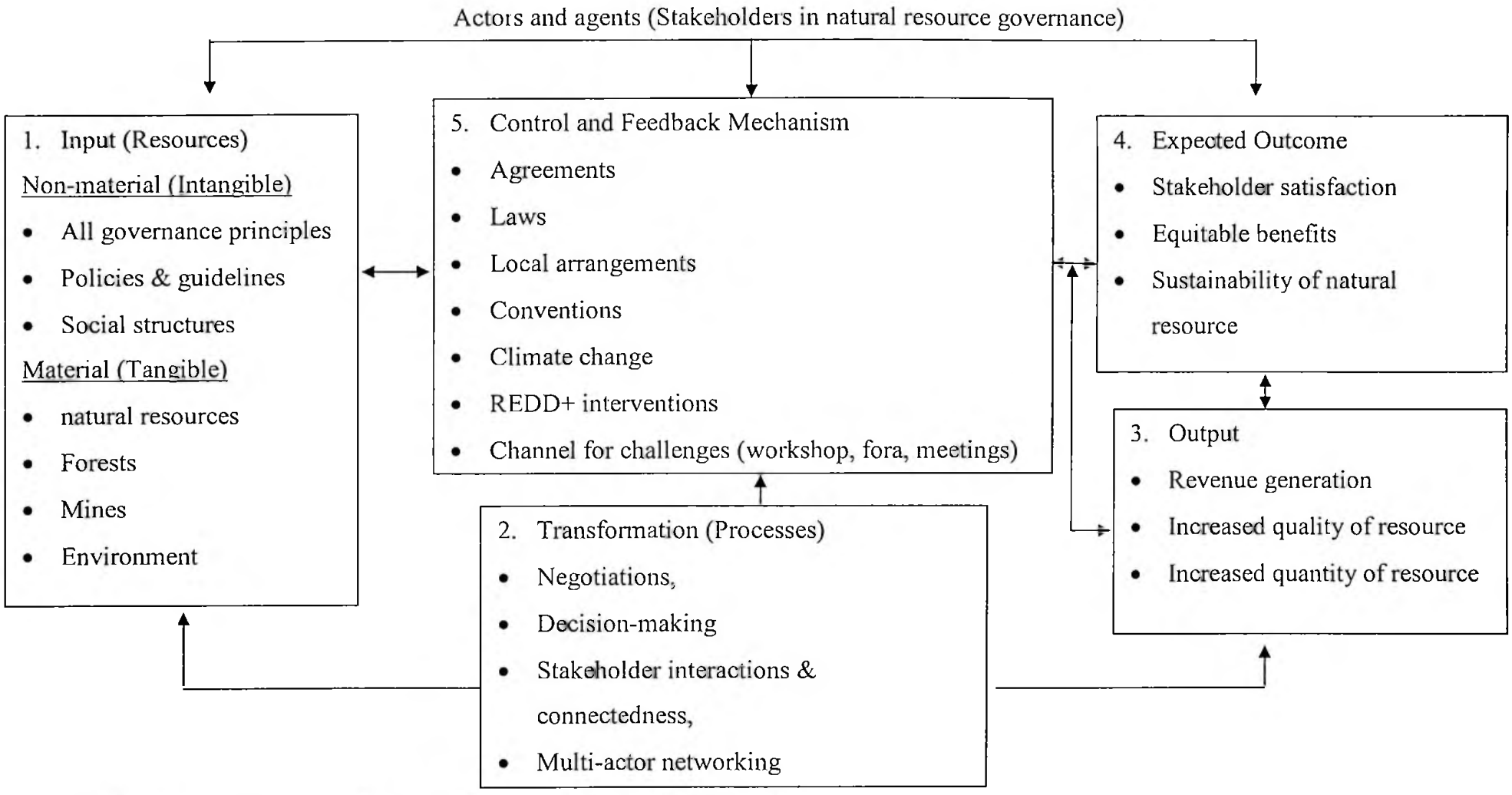

Figure 9: A Conceptual Framework for Natural Resource Governance

Source: Adapted from Cleaver and Franks (2005); Curtis (1992); Littlejohn (1999); Latour (2005); Capristrano (2010); Roche (2009)

This transformation stage deals with protecting the interests of others; those who shout loudest are heard. Others may be silent and take the law into their own hands by conducting illegal activities. The transformation stage is what brings about the complexity in natural resource governance in most countries due to the multi-actors coming into play. A lot of networking amongst stakeholders takes place here. Stakeholder connectedness at this stage is key and builds positive and negative relationships.

This third block, output, considers the effects after the inputs undergo transformation. The output deals with increased productivity (revenue generation, increased quality and quantity of resource - timber and wildlife, and protected resource). Out of this output block stems the fourth block, expected outcome.

The fourth block, expected outcome, has been modified completely from 'outcomes for the poor' as in Cleaver and Franks (2005) to suit the objectives of this study. This block in effect will deal with the expectations from the stakeholders with respect to whether the whole system objectives have been achieved by the various blocks working together as a whole, and also whether governance of NR has been effective by taking into account stakeholder satisfaction, equitable distribution of benefits to fringe communities, revenue generation to the state and sustained supply of timber/wood to the industry.

The fifth block, control and feedback mechanism as against 'mechanism of access' in Cleaver and Franks (2005), deals with the rules and regulation, laws, international conventions and agreements like Global Warming, Climate Change, Reduced Emissions in Degradation and

Deforestation (REDD) and Kyoto Protocol that help to govern the natural resource. This calls for institutional arrangements and mandates to be reinforced to prevent abuse and illegal activities on the natural resource.

The fifth block also handles feedback mechanism which serves as a channel for challenges (e.g. illegal 'chainsaw' operators, poaching of wildlife, 'galamsey operators', destruction of farmlands, settlement issues, bushfires, degradation & deforestation, and conflicts) which are mainly areas which deal with Political, Economic, Social and Technological (PEST) issues encountered during the interactions, connectedness and application of natural resource conservation practices as a result of the transformation process to the output stage back into the input block. This will then trigger the kind of decisions and degree of governance interventions necessary for the expected outcome.

The last very important aspect of this framework is the actors and agents in governance which also reflects the tenets of the actor-network theory. Actors govern the resources and have a serious impact on the controls and feedback mechanisms and continue to shape their own expected outcome on the resource. The difficulty in all this is that where there is lack of political will, the rule of law will not be applied to the letter and thus the voices of the minority are not heard; the focus and attention of the ruling government may change hence paying little attention to the sector in charge; governments may consider only economic gains and neglect environmental concerns of the exploitation of natural resource.

In conclusion, the conceptual framework depicts that strengthening the governance principles may effectively create a sustainable natural resource where all stakeholders will be satisfied and challenges could be managed

effectively. This framework is applicable to all natural resources and thus will help generate valuable insights and contribute to improved policy formulation and strategies for all stakeholders. As part of this study, this proposed framework will be tested using variables under FPD to ascertain the significance and effectiveness of governance.

CHAPTER FOUR

GOVERNANCE IN GHANA'S FOREST SECTOR

Introduction

This chapter covers the status of Ghana's forest sector. Governance initiatives in Ghana's forest sector, Ghana's forest policy and legislation, forest plantation development in Ghana, and existing governance structure in forest plantation development in Ghana are all examined.

Status of Ghana's Forest Sector

Conservation analysis estimates in biodiversity terms that Ghana lost about 80% of its forest cover between 1909 and 1990. In 1989 the Annual Allowable Cut (AAC) was set at 1.2 million cubic metres since the forest then had been over cut consistently at a rate of about two million cubic metres. In 1995, the Ministry of Lands & Forestry took a bold decision to place a ban on log exports. In August 1995, the then Minister for Lands & Forestry, launched interim measures introduced by forestry department to control illegal logging.

These efforts resulted in a total cut in 1996 of a little over 1 million cubic metres. Despite this lower cut (as mentioned in the president's sectional address to parliament) there was a marked 14 percent increase in the volume of processed wood products. The Forestry Department then pledged to strictly enforce the newly set AAC despite the immense pressure from the industry to relent. The Forestry Department promised to integrate findings of a study carried out by the Collaborative Forest Management Unit (CFMU) into the management system to involve local Communities in managing the forest resource for both Timber and Non-Timber Forest Products (NTFPs).

According to MDGS (2006), an estimate of about 79 percent of Ghana's forest cover has been lost since the beginning of the 20th century. Between 1990 and 2000, Ghana lost an average of 135,400 hectares of its forest cover per annum, representing an average annual deforestation rate of 1.82 percent. This however increased to 1.89 percent between 2000 and 2005, accounting for 115,400 hectares of forest lost per annum. Primary forest cover accounted for 353,000 hectares in 2005, while plantation cover amounted to 160,000 hectares. The total forest area (including both conserved area and degraded section) as well as plantation cover amounted to 5,357,000 hectares in 2005. In total, Ghana lost about 25.9 percent of its forest cover (accounting for 1,931,000 hectares) between 1990 and 2005 (Figure 10).

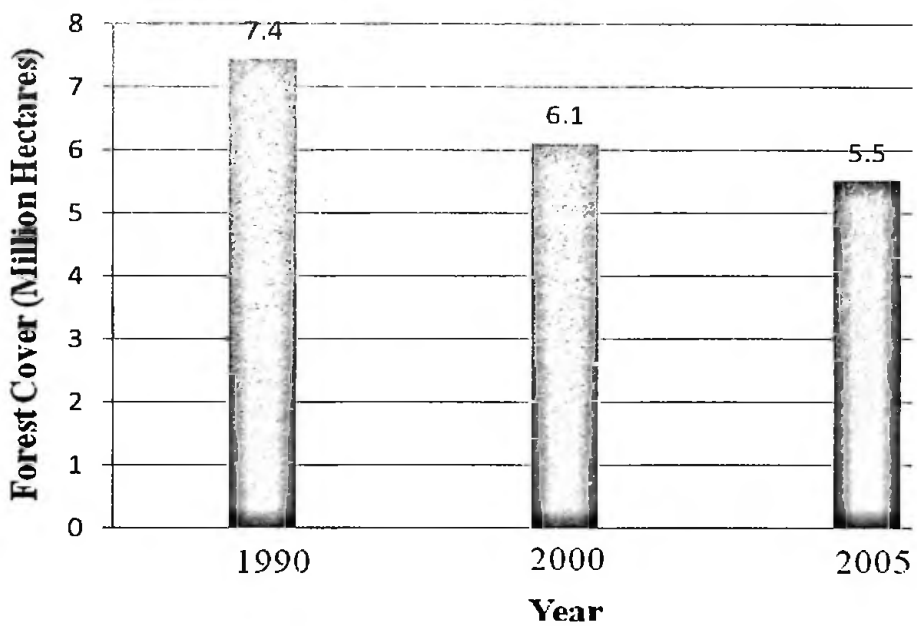

Figure 10: Trends in Forest Cover in Ghana, 1990–2005

Source: FAO (2006b).

The causes of the loss of Ghana's forest resource are varied. They include mainly poor enforcement of regulations on natural resource utilization, inefficient management of forest resources and the dependence on fuel-wood

by the poor. Also, Ghana's Millennium Development Goals (MDGs) report, indicates that the sustainability of livelihoods of some of the poorest communities in Ghana appear threatened by poor exploration practices of natural resource, especially lands and forests. Efforts towards the restoration of degraded forest reserves have also been enhanced. In 2005, the restoration of 60,000 hectares of degraded forest reserve was fast tracked and completed earlier than the target date of 2008. Notwithstanding this development, the rate of degradation by far erodes the restoration rate (FAO, 2006a).

Governance Initiatives in Ghana's Forest Sector

A number of governance initiatives were started in the late 1990s, funded by Development Partners. The reasons for initiating these projects were as a result of the rate at which Ghana's forest cover was reducing vis-à-vis governance challenges resulting from apathy from de-facto resource owners excluded from benefits, resettlement issues, and admitted farms leading to the destruction of forest reserves. The general feeling was that there was the need this time to involve all relevant stakeholders of the resource if sustainability was to be ensured. In Ghana, the forest management approach is gradually shifting towards multi-stakeholder collaboration and this requires participatory efforts and transparency in resource allocation.

The first initiative, Collaborative Resource Management Programme (CRMP), started in 1994 in response to the Ghana's Forest and Wildlife Policy. As a result of this, the Forest Department created of the Collaborative Forest Management Unit (CFMU) within its planning branch to explore and develop the potential for local people's involvement in each and every aspect of integrated high forest management including timber production,

environmental protection and bio-diversity conservation. The strategies developed included the involvement of the locals in the planning and management of the forests as well as the provision of a fair share of the revenue from sustainable forest management to landowners and access to NTFPs for domestic use on a sustainable basis.

The FC in 1999/2000 in collaboration with DFID came out with Community Forest Committee and FORUM governance concepts. Community participation in forestry was being facilitated through CFCs and CFMU. In 2003, FAO (2002) reported that 100 CFCs had been formed in the forest districts. These governance concepts were to minimize the pressure on the AAC and to involve the communities in managing the dwindling forest resource.

With the CFC, members were elected locally by their communities to liaise with forestry officials and police for the removal of trees and other exploitation activities within their communities. Some of these members were elected to be part of FORUM with the district where governance issues were discussed. Funding for the programme could not be sustained and thus most CFC members who were supposed to be independent were now relying on the District Managers of Forest Services Division (FSD) for their transport fare. As a result of funding difficulties, some members were now aiding the activities of the illegal chainsaw operators for financial gains. Forestry Commission also failed to pay for some of the external forest resource boundary cleaning exercise due to non-availability of funds. This seriously affected the participatory efforts of forest fringe communities in governance.

The FORUM was made up of representatives from FSD's district and regional level, police, fire service, and TAs. Here, issues affecting the management of forest resources were discussed. CFC and FORUM brought some level of transparency in resource allocation and utilization at the District Level. Forestry felling permits were to be copied to the CFCs. This ensured that the communities were aware of the number of trees to be felled by companies and how much royalties were due them and their TAs. The communities were to also assist in the fight against illegal felling which usually led to lost revenue. They were also made to participate in boundary cleaning for some financial gains.

The HIPC funding initiative started in 2002 from MLFM and then transferred to FC in 2006. The objectives of this initiative was to assist individuals participate in reforestation process, encourage individuals to use their lands for Forest Plantation Development, alleviate poverty, and to create jobs. The key governance principles in this funding initiative were participation, accountability, transparency and equitability and consensus building.

Collaborative Forest Management Programme (CFMP) was funded by ADB in 2003 to basically help reforest degraded reserves. The objectives of CFMP were to increase household incomes of forest fringe communities and to increase the supply of timber to meet the present and projected supply-demand gap. The programme had four components namely: Integrated Forest Management; Capacity Building and Institutional Strengthening; Sustainable Livelihood Support Scheme; and Project Management. The programme was implemented in five forest reserves namely; Afram Headwaters, Asubima,

Yaya, Worobong South and Esuboni. The key governance principles in this project were participation, consensus building, and equitability and inclusiveness.

PATFORM governance programme was implemented from April 2004 to March 2009 with the objective of using participatory approach for sustainable management of forest reserves in the transitional zone. This programme was piloted in Sunyani District. The programme was funded by JICA and the Government of Ghana.

Greening Ghana Programme was launched nationally in the Central Region of Ghana in 2007, as part of her 50th anniversary celebration of Ghana's Independence Day. The objective of this programme was to cover an area of about 5000 ha with plantation trees. In all about 3,125,000 seedlings were provided by FSD and the HIPC plantation programme as part of this exercise. The responsible agencies for this programme were MLFM in collaboration with FSD, Regional Council, District Chief Executives (DCEs), District Assemblies (DS), NGOs, Individuals, local communities, Chiefs and TAs, parks and gardens, religious bodies and educational institutions.

Ministry of Lands and Natural Resource together with the Forestry Commission are implementing the Natural Resource and Environmental Governance (NREG) programme, which is a sector budget support programme which started in 2008. The NREG is a 5-year programme aimed at implementation of broad programmes of natural resources and environmental governance. This led to Ghana signing onto the Voluntary Partnership Agreement (VPA) with Validation of Legal Timber Programme (VLTP) has been the front burner of issues addressed in the forest sector today. Greening

Ghana Programme is also an important initiative which has been introduced by the sector Ministry in collaboration with the FC. Most of these initiatives were centred on aspects of governance principles like community participation, involvement and transparency with the formation of certain governance structures.

Ghana's Forest Policy and Legislation

In 1948, the first Forest Policy was formulated. It emphasized management of the permanent forest estates to the detriment of the substantial stand that occurred off-reserve (outside forest reserves). The off-reserve timber therefore became decimated with time to make way for agriculture especially cocoa cultivation and other land uses by the citizenry. The formulation of the policy was also without the involvement of the people and the institutions of state like the then Forestry Department, empowered by law to ensure the development and management of the forest resources.

There was also indiscipline and abuse by leasees. The timber contractors destroyed farmers' crops in the process of felling but paid little or no compensation. Thus, farmers developed a dislike for the timber contractors and made sure that every good quality tree wasdestroyed before the contractors invaded their farms with the felling equipment. All these associated problems manifested during the implementation of the policy.

By the mid-1980s, it was realized that increasing population pressure and uncontrolled logging, especially outside forest reserves had encouraged large scale deforestation. Therefore a review of both the 1948 policy objectives, and strategies for meeting them was carried out in 1989 and adopted in 1994.

The 1994 Forest and Wildlife Policy was aimed at the conservation and sustainable development of the nation's forest and wildlife resources for the maintenance of environmental quality and perpetual flow of optimum benefits to all segments of society. It was established to reflect the realities of the day by laying emphasis on sustainability, multiple use values, efficient commercial utilization and participatory forest management.

The policy contains five specific objectives related to: the management and enhancement of Ghana's permanent forest estate and wildlife; the promotion of the development of viable and efficient forest–based industries; the promotion of public awareness and involvement of the rural people in the forest and wildlife conservation; the promotion of research–based and technology-led forestry and wildlife management, utilization and development to ensure resource sustainability, socio-economic growth and environmental stability; the development of effective capability at national, regional and district levels for sustainable management of forest and wildlife resource.

To date, this policy has been implemented most effectively within the forest reserves, with off-reserve forests often unregulated and over or illegally harvested. An integrated forest management approach that reconciles protection, production and the people's interest through collaboration was adopted in order to achieve the 1994 policy objectives.

Forests are owned by communities through TAs, managed by government, and logged and utilized by private contractors. These arrangements, specified in the 1992 constitution, are reflected in the 1997 Timber Resource Management Act and the 1999 Forestry Commission Act 571. The Forestry Commission was restructured as an autonomous corporate

body in 1999 under Act 571 to improve its effectiveness. In addition, the public forest-sector agencies responsible for the protection, development, management and regulation of forest and wildlife resources were brought under its purview.

The introduction of the current timber utilization contract system which was legally backed with the Timber Resources Management Act 547 (1997) and Legislative Instrument 1649 (1998) was meant to provide support to the 1994 forest policy. The potential timber utilization contract holder should be financially sound in terms of machinery acquisition, agree to undertake a reforestation plan, and adhere to laid down prescriptions by the Forestry services division. These among others, were meant to instill some levels of discipline in the business of timber.

In 1996, the Ministry of Lands, Forestry and Mines launched the forestry development master plan (1996–2020) to guide the implementation of the 1994 forest and wildlife policy. The forestry development master plan outlined strategies, programmes and scheduling for implementation of the 1994 forest and wildlife policy with the aim of maximizing the rate of socio-economic development of the country and optimizing the operations of the timber industry. The master plan was implemented through a multi-donor-assisted ten-year programme called the natural resources management programme, which had four components: high forest, savanna, wildlife resource management and biodiversity conservation in the high-forest zone.

The weakness of the 1994 forest and wildlife policy, and the 1996 forestry development master plan are that both policy documents contain generalized statements of intent with the implementation measures not

explicitly included. The strategies outlined have either not been implemented or ineffective. This has resulted in a weak and demoralized forest sector and a heavy subsidized timber industry. Also, there has been no serious commitment by successive governments to provide the required resources for implementation of the measures (Agyeman et al., 2007). Governance of FPD in the 1994 Ghana's Forest and Wildlife Policy has not been well addressed.

Forest Plantation Development in Ghana

The Government of Ghana launched the first forest plantations programme using the taungya system in 1930. The farmers were given parcels of degraded forest reserves to produce food crops and to help establish and maintain timber trees. The intention was to produce a mature crop of commercial timber in a relatively short time, while also addressing the shortage of farmland in communities bordering forest reserves. About 75 percent of Ghana's current total area of commercial public and private forest plantations of 35 000 ha were established using the taungya system (Agyeman et al., 2003).

Three principal establishment methods were used:

1. The Taungya system is very important in the provision of revenue during the long gestation period before the first commercial thinning and the final harvest. It is also very important in ensuring that the fringe communities participate in forest management in accordance with the 1994 Forest and Wildlife Policy. This is with respect to the rehabilitation of the degraded natural forest and open forest areas which are outside the reserved forests.

2. Enrichment planting was practiced as post harvest management operation in logged forest reserves. This was mainly in rain forest and semi-deciduous forest areas (i.e. Ashanti & Brong-Ahafo regions). Enrichment planting needs a great deal of labour and the tending period is always under-estimated.
3. The third method was the use of direct planting or establishment of tree plantations. Direct plantation was to rehabilitate failed Cedrella stands planted in the early 1970s.

In 1960, the FAO proposed a national forest plantation estate of 590,000 ha (FAO/UNEP, 1981) but in the late 1960s, a National Land Use Planning Committee revised the objectives downward and targeted an estate of 110,000 ha to be established over a 10 year period from 1970/71 (Nsenkyire, 1992). The main objectives in plantation formation in the late 1960s by the FD had been to improve the stocking of commercial species in poorly stocked forest reserves to meet the expanding timber industry and also to provide employment for the rural dwellers (Apomasuh, 1992).

It has been estimated that approximately 50,000 ha of plantations were established by the state in the HFZ in 88 forest reserves between 1963 and 1987. The Forest Department plantations were established in the forest reserves due to easy access to land in these areas. Of the 50,000 ha planted in the HFZ, 15,000 ha (33%) was assessed to have been successful by the FD in 1991. More than 80 percent of the stands had stocking of less than 300 stems/ha, and only a third have basal areas in excess of 18 m^2/ha (FD, 1994).

With regard to the decline in wood production, FC of Ghana and Private Sector engaged in massive plantations cumulating to about 40,000 ha

between 1970 and 1978. These plantations currently provide the key source of transmission poles for rural electrification, furniture and export. Between 1971 and 1975 a total area of about 28,400ha of Plantations had been established at the annual rate of about 5,700ha. It decreased between 1976 & 1980 to about 2,400ha per annum and till then about 1,700ha per annum between 1981 and 1984. Since 1985 the annual rate of planting had been estimated as 1,000ha. Between 1970 and 1980, the Government of Ghana, through the FD planted about 50,000 hectares of plantations with such species suited to the ecology and beneficial to the local economy as *Tarrietia utiis* (Nyankom), *Terminalia ivorensis* (Emire), *Cedrela odorata* (Cedrela), *Tectona grandis* (Teak), *Nauclea diderrichii* (Kusia) to mention a few, to meet the country's projected demand for wood and wood products.

In 1985, there was lack of cooperation from the participating farmers because they had no rights to benefits accruing from the planted trees (Milton, 1994), and no decision making role in any aspect of forest management (Birikorang, 2001). In 1998, Timber Resource Management Regulations (Act 547) also introduced timber utilization contract (TUC), which enjoins concession holders to execute reforestation project of 10 ha per km^2 of contract area exploited. This intervention also contributed tremendously towards streamlining the land tenures under FPDs on-reserve. Other problems including lack of supervision by the FD (now the Forest Services Division of the FC), inadequate financing mechanisms and abuse of power by public officials, especially in farm allocation (Agyeman et al., 2003) resulted in the farmers neglecting the tree crops and abusing the system, and hence the Taungya system was abandoned.

National Forest Plantation Development Programme (NFPDP) launched in September 2001 at Ayigbe in the Wenchi District of the Brong-Ahafo Region was aimed at planting up to 20,000 ha of trees per annum, 30,000 jobs provided mainly to rural communities and 120,000 tonnes of foodstuff produced. The objectives of the NFPDP included; restoring the forest cover of degraded forest reserves, addressing the wood deficit situation in the country, especially timber which has been estimated as 4-5 million cubic meters per annum and fuel-wood consumption also estimated at 14 million cubic meters per annum (FSD, 2007), creating employment opportunities at the rural community level to generate income for forest fringe communities, plantation owners, timber processors and invariably the national economy, significantly increasing food production in the country.

This was in line with government's intention to cover 10 percent of Ghana's land mass within the next five years. This was to help bridge the current and future supply and demand deficit in the timber industry, and to safeguard the environment. The Presidential initiative led to the creation of a plantation department within the FSD solely for plantation establishment, protection, maintenance and sustainable production of sawn logs and poles. This initiative also created a new drive for the establishment of forest plantation in the Brong-Ahafo region such that over 120,000 hectares of plantation of both indigenous and exotic tree species has been established in the degraded areas that were poorly stocked with trees.

Forest plantation development has for a long time been identified as one of the important strategies required to meet the demand for wood resources in Ghana, where the rate of forest cover loss remained as high as 1.7

percent per year in the 1990s (FAO, 2001). Studies conducted by FC on the attitude of farmers, and the impact of the Taungya system together with the issue of the communities looking unconcerned whilst illegal chainsaw operators fell our national plantation timber, motivated the Government to revise the old taungya system to what is now known as Modified Taungya System (MTS). In the modified taungya system, the farmer now has equal share on what he/she participated in establishing the plantation.

Benefit sharing agreements have been signed with the various stakeholders to express their commitment in the participatory process. The farmers now take responsibility for activities like planting, pegging, weeding. In the Agreement, after the proceeds of the sale, FC takes (40%), the participating farmer (40%) and the remaining (20%) is shared between communities and then traditional rulers. Also, Land-lease Agreements (LLAs) have been signed between the Chief Executive of the Forestry Commission and the Forest Plantation Investors for a period of 50 years with an option of a second renewal.

Forest conservation and management in Ghana, guided by the principles, objectives and strategies of the 1994 Forest and Wildlife policy, emphasizes Ghana's commitment to sustainable management of forest resources in the country. The forest development Master Plan, 1996-2020, prepared by the Ministry of Lands and Forestry (MLF), guided the implementation of the forest and wildlife policy, and expected that within the medium term (1996-2000), a programme of sustainable development would lead to; harvesting of timber and non timber forest products (NTFPs) within sustainable levels, management of existing forest resources to ensure that the

productivity of the high forest increases by 40 percent and to ensure the quantity, productivity and stability of watersheds improvement, forest outside the established reserves under sustainable system of timber management, individuals and communities increasingly involved in protection, tree planting and management of forest resources, and reduce the incidence of bush fires in the forest reserves as well as off reserve lands.

In pursuing the objective of the 1994 Forest and Wildlife policy, and realizing the serious national wood shortage in the future and the lack of capacity building to continue with plantation development on its own, the Forest Plantation Development Fund (FPDF), Act 583 was passed in 2000. This Act was passed by parliament to establish a FPDF to provide financial assistance for the development of private and commercial forest plantations, for research and technical advice to persons involved in commercial plantation forestry on specified conditions to provide for the management of the fund, and to provide for related matters. This was then amended to Act 623 in 2002 to enable plantation growers, both in the public and private sectors, to participate in forest plantation and to provide for related matters.

The programme is currently being implemented under three main strategies. The first strategy, the MTS involves the establishment of plantations by the FSD in partnership with peasant farmers. The FSD provides technical direction, surveys and demarcates degraded forest reserve lands and supplies pegs and seedlings while the farmers provide all the labour inputs in the form of site clearing, pegging, planting, fire protection and maintenance. The farmers are permitted to cultivate their food crops which are inter-planted with the tree crops on the same piece of land. The farmers, in addition to the

food crops they harvest, have a (40%) share in the returns from the investment. The FC also has a (40%) share while the landowner and community will have a (15%) and (5%) share respectively (MLNR, 2008).

The second strategy utilizes hired labour and contract supervisors to establish industrial plantations. Plantation workers are hired and paid a monthly wage to establish and maintain plantations, whilst plantation supervisors are given one year renewable contract employment to supervise and offer technical direction. The plantation department exercises general oversight and monitors field activities to ensure compliance with quality standards for plantation establishment. This strategy is employed by the Government Plantation Development Programme (GPDP) which is funded through the HIPC benefits.

The third strategy involves the release of degraded forest reserve lands by the FC to private entities after vetting and endorsing their reforestation and business plans. The operations of these private developers are then monitored through periodic field visits by the plantation department to ensure compliance with the approved reforestation plans as indicated by FSD (2005). The benefit sharing scheme used under this commercial plantation is as follows; the investor has a 90% share in the returns from the investment, the landowner has a 6% share plus ground rent, whilst the local community and FC will have a 2% share each (MLNR, 2008).

The Community Forest Management Programme (CFMP) was funded through a loan contracted by the government of Ghana from the African Development Bank (AFDB) in 2003. The CFMP, had MLFM as the executing agency, with the Forest Plantation Development Centre (FPDC) established in

Table 5: Forest Plantation Development in Ghana

Year Established	Planting Method	Programme
2003	MTS	NFPDP
2004 - 2006	MTS / Direct planting	NFPDP / Community Forest Management Project (CFMP)
2007	MTS / Direct Planting	NFPDP / FC/FSD Model Plantation Programme
2008 - 2009	MTS / Direct Planting	NFPDP
2010	Direct Planting	Expanded Plantation Programme (EPP)
2011 - 2012	Direct planting / Public Private Partnership (PPP)	EPP

Source: Adapted from Forest Services Division (2013)

Brunner et al. (2002) indicate that within the framework of the existing structures are hybrid governance structures which include such formal and informal institutions, as well as any relatively stable arrangements for policy decisions in civic (or non-governmental) groups of any kind which need to be evaluated constantly.

Figure 11 shows the governance structure which currently exists under NFPDP. It includes Governmental Institutions and their Implementing Agencies; Forestry Research Institute of Ghana (FORIG) under the Ministry of Environment, Science and Technology (MEST), Ministry of Justice and Attorney General (MOJAG), under which the judiciary and court system operates, Ministry of Interior (MOI), where all internal security issues, especially forest plantation offences are dealt with, and the Ministry of Defense (MOD). Occasionally, the police and the army form monitoring teams to arrest illegal chainsaw operators while Ministry of Local Government with its corresponding agencies, MMDAs deal with community issues.

Other relevant institutions involved in FPD are Forest Plantation Fund Board (FPFB) which oversees disbursements of plantation funds accrued from Highly Indebted Poor Countries (HIPC), Forestry Commission Board (FCB) which reports to MLNR, Intermediary Groups (Community Forest Committees and Taungya Groups), and Local Authorities (Traditional Council, Landowner and Chiefs).

Currently, the plantation department in the Forestry Services Division under FC provides all technical advice and extension services under the existing NFPDP programmes. The Plantations Department has four main units namely; plantation operations unit, plantations development unit, HIPC Office and the Forest Plantation Development Council (FPDC). The plantations operations unit handles all field operations under NFPDP which includes developing, management and harvesting forest plantations.

To make management of forest plantation operations effective, the country has been divided into 46 forest districts under the Forestry Commission of Ghana. Forest District Offices which are the operating units of FSD of the FC are responsible for forest management, protection and development. The forest district office is headed by an FSD District Manager who reports to the FSD Regional Manager who in turn reports to the Operations Director in FSD Head Office, Accra. The FSD District Manager on behalf of the Chief Executive of FC and the Executive Director of FSD manages and regulates the resources in trust for the landowners and the government.

Forest District Offices play intermediary roles on behalf of the TAs for management of on-reserve and off-reserve resources. This has alienated both the Landowners and Farmers from the resource and in some cases act as a source of conflict. The District Manager is in-charge of the administration and operations of a forest district.

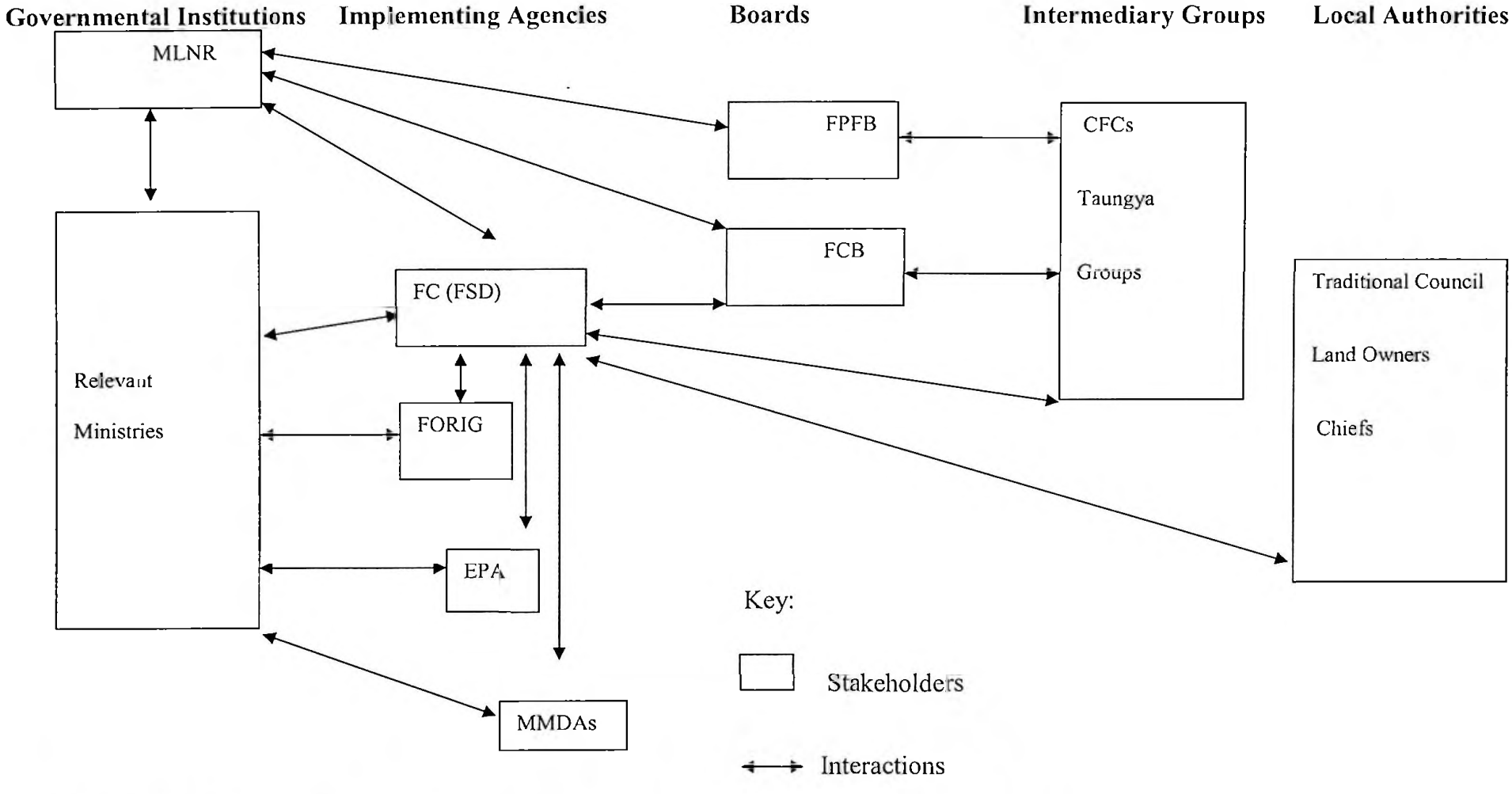

Figure 11: Governance Structure under National Forest Plantation Development Programme

Source: Author's Own Construct, 2011

The District Manager works with a team which consists of: (i) Assistant District Manager (ADM) who assists the DM to carry out his core mandate of managing the natural forests and plantations; (ii) Forester(s) assist the ADM(s) in managing the operational activities of the forest district; (iii) Range Supervisor(s), who are in-charge of ranges (unit of a forest district), and handles day-to-day activities in the on/off-reserve of the range, supervises the activities of the timber contractors and are also responsible for the establishment and management of plantations, supervises forest guards; (iv) Forest Guards are responsible for the protection of their beats (unit of a range) and (v) a few non-supporting staff (accountants, secretaries, drivers etc). The number of ADM(s), Range Supervisors, Foresters and Forest Guards depends on the size of the forest district as well as the prevailing timber activities as at the time.

Plantations development unit furnishes all relevant stakeholders with technical information, and training on FPD and production. The unit also liaises with the sector ministry, MLNR in promoting the expansion of plantations in Ghana. The HIPC office which is responsible for disbursement of HIPC funds to private individuals who are interested in FPD outside forest reserves, reports directly to the Director of Plantations. The FPDC is a newly setup council which manages about 0.5% of funds set aside as export levies by timber exporters for forest plantation development. This council also reports directly to the head of plantation department.

The plantation department makes sure that all operational guides like the manuals of operation and other technical manuals are current and should be available for all prospective and plantation developers, and other relevant

stakeholders. Also, technical extension services are rendered to the communities as well. It is quite clear from the functions of the plantation department of FSD, that the adaptation of community-based governance structures reduces the burden on overloaded policy makers in national structures of governance; resolve more place-based issues economically, competently and in the common interest; and restore some responsibility and accountability to the communities most directly affected.

CHAPTER FIVE

METHODOLOGY

Introduction

This chapter describes the epistemology of research methodology, study area, research design, study population, the sampling procedures used, sources of data, the various methods of data collection and what the fieldwork and challenges entailed. The use of questionnaires (quantitative), semi-structured interviews and expert group meetings (qualitative) employed in this study allowed for the collection of data from large and varied groups of stakeholders. After the data collection phase was completed the data was processed and analyzed.

Epistemology of Research Methodology

The term epistemology comes from a Greek word 'episteme', meaning knowledge. Epistemology is 'the branch of philosophy concerned with the theory of knowledge, which seeks to inform us, how we can know the world' (Jary & Jary, 1991). In simple terms, epistemology is the philosophy of knowledge or of how we come to know the world. Epistemology refers to the assumptions about knowledge and how it can be obtained (Hirschheim, 1992). All research, be it quantitative or qualitative is based on some underlying assumptions about what constitutes a valid research and which methods are appropriate. This study adopts a mixture of two major epistemological standpoints, namely; (i) positivism, and (ii) interpretivism.

The positivist philosophical foundation, according to Newman (2000), combines a deductive approach with precise measurement of quantitative data to enable the discovery and confirmation of casual laws to predict human

behaviour. The study adopted the positivist philosophical foundation to enable the researcher employ quantitative methods which seems to generalize the results. The quantitative methods used were numerical data, collecting facts and then studying the relationship of one set of facts to another which becomes more of a systems outcome and not thinking and acting human. According to the researcher, some of the advantages of positivism include; (i) collection of large amount of data was economical because of using a small sample size for representation, (ii) clear theoretical focus, (iii) greater opportunity for researcher to retain control of research process, and (iv) ease to compare the collected data.

This thinking, according to Buchanan (1998), brings up the principle legacy of positivism as a dichotomy between objective knowledge and subjective opinion which creates a flaw in failing to take account of essential characteristics of human behaviour and social life, which cannot be measured, or predicted using numbers or universal laws. This is one of the reasons why this study also employs the interpretist philosophical foundation due to the complexity of governance which is based on stakeholder involvement and interests which is more of a social issue.

The theoretical perspective of interpretivism understands that human beings cannot have knowledge of the world independently of what is in their minds. Therefore the interpretist research methodology which is inductive, deals holistically with qualitative application to explore the complex human issues which is transferred during the results of the study. This is a reaction against the very strident claims of positivism. Intrepretivisim's epistemological assumption is that reality is created through social interaction:

the concept that meaning and knowledge are socially constructed within a certain context and time.

Interpretists see facts as the product of human interactions which are shared understandings and meanings that are not always predictable. Hence, the study employs a qualitative method which is less quantifiable and has subjective interpretations, reasoning, and feelings of stakeholders in order to understand and explain inherent complexities in governance. Therefore, the focus of interpretivism is not numbers but on words. Some of the advantages of interpretivism according to the researcher, include; (i) facilitation of the understanding of how and why, (ii) responses to changes that occur in the research process, and (iii) good understanding of social issues (Denzin & Lincoln, 2000).

Clearly each branch of epistemology has its inherent strengths and weaknesses; however, as Depoy and Gitlin (1998) rightly assert, it is becoming important to triangulate both ideologies and their associated methods. It is apparent from the above description that there is considerable overlap between the two philosophical foundations. The relative balance depended upon the research questions and the chosen style of data analysis and interpretation used in the study. It is based on the above epistemological standpoints that this research has been designed to ensure that there is a need to employ a mixture of quantitative and qualitative methods.

Study Area

The study area is the Republic of Ghana which shares borders with Cote d'Ivoire to the West, Burkina Faso to the North and Togo to the East. Ghana is divided into 10 Regions administratively. According to GSS (2012),

Ghana has a population of about 25 million and covers an estimated area of 238,533Km^2 (FAO, 2006a). Ghana has a tropical climate with marked regional variations in temperature and rainfall patterns. The major (April to July) and minor (September to October) rainy seasons in Ghana are very important natural occurrences for FPD since the planting and survival rates of seedlings are very much dependent on the rains.

The ecological transition zone lies between the Guinea savannah and deciduous forest zone (Figure 12). As a result of high rate of land degradation and deforestation through illegal activities and bad farming practices (slash and burn), the ecological transition zone is characterized by a mosaic of degraded forest (basal area less than 5m^2/ha) with widespread patchy areas of weeds such as *Chromoleras odorata* (Acheampong shrub) and *Pennisetum purpureum* (elephant grass) (FC, 2011).

Selection of forest districts

Ghana has a total of 46 forest districts located in different ecological zones. Eight out of the 14 forest districts in the ecological transition zone comprising Ashanti, Brong-Ahafo and Eastern regions were chosen for the study. A forest district spans one or more political district(s) and may contain two or more forest reserves depending on the size and the boundaries as gazetted by the Republic of Ghana. Tables 6, 7 and 8 show the regions and the forest districts where the study area is located (FSD, 2008).

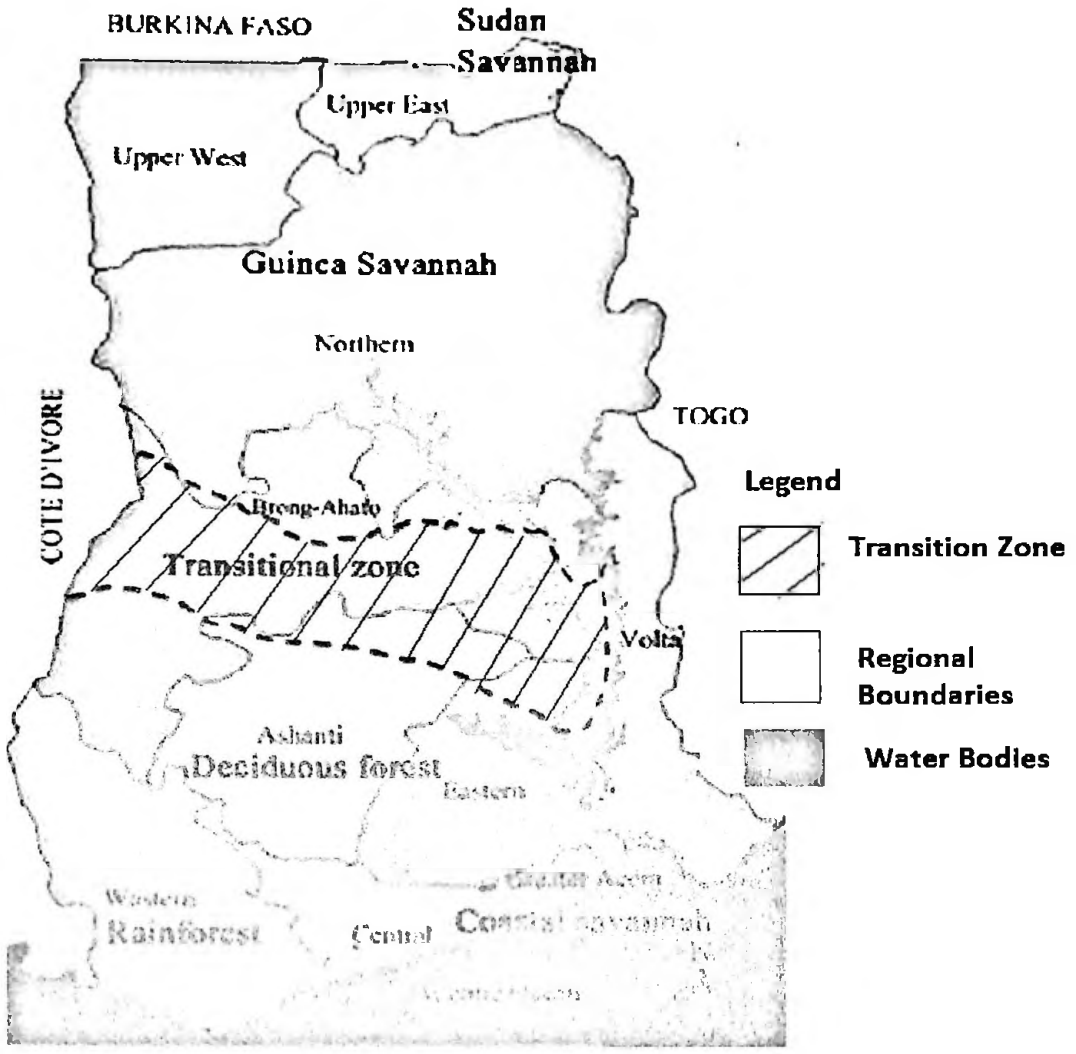

Figure 12: Ecological Zones of Ghana

Source: FAO (2010c)

These eight forest districts were selected based on the following four reasons:

1. The highest recorded illegal activities such as logs chain-sawing, sand-winning and mining emanated from these selected eight forest districts and thus posed heavy degradation and deforestation challenges for the forest sector (FSD Annual Reports between 2003 and 2008).
2. Various governance initiatives were instituted in these eight forest districts through the Ghana government and donor partners during the mid 1990s when the forest sector was undergoing decentralization due

to over exploitation of the forest resource. So, the lessons learnt from the outcome of these governance initiatives were very important for knowledge acquisition as well as replication to other ecological zones.

3. To decrease the rate of forest cover loss which was alarming in the selected ecological zone, intense FPD activities were undertaken by the FSD/FC, supported by the government of Ghana through its sector ministry, the then Ministry of Lands and Forestry. The eight forest districts are situated in the same ecological transition zone, so the same timber species (teak and cedrela) were used for the plantation activities due to similar soil composition and rainfall patterns.
4. In addition, the training module designed by the FC and MLNR to build the capacity of its critical stakeholders in the eight selected forest districts, were based on the same ecological characteristics, tree species and climatic conditions. The module is therefore not applicable to the other ecological zones.

Various stakeholders such as farmers, Private FP Developers, TAs, landowners, and District Assembly members, can be found in the study area. Stakeholders of all eight forest districts were taken through the same training (seedlings nursing, establishment, and maintenance, harvesting, processing and marketing of plantation products) modules, as well as FPD governance concepts and sensitization programmes by the then sector ministry, MLF and FC.

Table 6 : Forest Districts in the Brong-Ahafo Region

Forest District	Forest Reserve	Area(Km^2)
Sunyani	Nsemere	18.10
	Sawsaw	62.94
	Tain Tributaries I	30.60
	Yaya	51.30
	Amoma Shelterbelt	44.03
	Asukese	265.00
Bechem	Bosumkese	138.31
	Aparapi Shelterbelt	19.17
Dormaa	Mpameso	322.50
	Pamu Berekum	189.10
	Tain Tributaries II	509.20

Source : Forest Services Division (2011)

Traditional Authorities (Chiefs and Elders) are non-state actors who enjoy considerable legitimacy and hold power in many respects in the forest districts (Ashie-Kotey et al., 1996). The stool land owners are major stakeholders in managing the forest resources. Apart from being recipients of royalties, they have the power to determine the suitability of any forest activities in the area, like FPD and timber activities.

The communities occupy the fringes of the forest reserves and are stakeholders in managing and protecting the resources. They also sign social responsibility agreements with plantation developers, and serve as workers on plantations and nurseries.

Table 7 : Forest Districts in the Ashanti Region

Forest District	Forest Reserve	Area(Km^2)
Bekwai	Oda River	164.20
	Nkrabia	100.20
	Subin Shelterbelt	22.53
	Apamprama	34.70
	Green Shelterbelt	12.10
	Denyau Shelterbelt	12.40
	Supuma Shelterbelt	25.00
	Dampia Range	80.30
	Pompo Headwaters	12.20
	Bosumtwi Range	78.70
	Jeni River	21.50
	Obuasi C' Area	0.44
	Fum Headwaters	72.50
Kumawu	Anumsu North	43.80
	Anumsu South	12.69
	Bomfoum	294.70
	Kumawu Waterworks	1.00

Table 7 (con't) : Forest Districts in the Ashanti Region

Forest District	Forest Reserve	Area(Km^2)
Juaso	Asonari Hills	1.60
	Bandai Hills	160.80
	Bandai Hills North	66.50
	Bobire	54.60
	Dome River	80.50
	Kronwan	5.70
	Onyimso	8.50
	Mirasa Hills	67.30
	Prakaw	9.80
	North Fomangsu	42.70
	South Fomangsu	41.40

Source : Forest Services Division (2011)

The communities are represented by unit committees who act on their behalf in negotiations, conflict management and protection of reserves. The number of the communities living along the fringes of the forest reserves depends on the size of the forest districts and the political districts within which they fall. Not all the fringe communities/members were actively involved in FPD activities

Farming is the main occupation of the communities in these eight forest districts. Most of the farmers are involved in FPD. FSD model plantations and seedling nurseries are also located in this area. Private forest plantation developers are actively involved in plantation development on/off

forest reserves of these forest districts which are a main source of timber and other raw materials.

Table 8 : Forest Districts in the Eastern Region

Forest District	Forest Reserve	Area(Km^2)
Mpraeso	Southern Scarp (Kwahu)	146.75
	Northern Scarp (East)	49.21
	Northern Scarp (West)	64.75
	Esukawkaw	122.2
	Kade Bepo	16.84
	Nkawanda	8.00
	Abisu	9.10
	Worobong North (Kwahu)	13.31
	Worobong South (Kwahu)	41.80
	Jade Bepo	5.20
	Jade Bepo Ext	0.80
Begoro	Pusupusu River	0.87
	Southern Scarp (Akim)	154.60
	Apedwa	4.14
	Atewa Range Ext.	26.40
	Atewa Range	232.32
	Boti Falls	1.30
	Dede	51.10
	Worobong South (Akim)	106.20
	Worobong North (Akim)	14.60

Source : Forest Services Division (2011)

In the Brong-Ahafo region, Sunyani, Bechem and Dormaa forest districts were selected (Figure 13). Sunyani forest district consists of six forest reserves and covers a total area of 4830.94 km^2 (FSD, 2011). It has a population of 208,496 (GSS, 2012). Sunyani forest district falls largely within the moist–semi deciduous forest vegetation zone. Most of the primary vegetation can be found in patches around the north-west, east and southern parts of the forest district. These include the Yaya and the Amoma forest reserves. This vegetation zone also contains most of the valuable timber species. As a result of lumbering and farming practices, most of the forest areas have been degraded. Re-afforestation is therefore being undertaken in the forest reserves to reverse the trend using four communities (Nyamebekyere – Kobedi, Ayakomaso, Mpatasie A and Mpatasie B).

The Bechem forest district oversees two forest reserves with a total area of 157.48 km^2. The population of the forest district is 78,128 (GSS, 2012). The forest district lies in the moist semi-deciduous forest zone. There are two main forest reserves namely; the Bosumkese forest reserve which covers a total area of 138.31 km^2 and Aparapi shelterbelt forest reserve which also covers an area of about 19.17 km^2. There are different tree species of economic importance such as odum, mahogany, ceiba, cassia and akasaa that can be found in the forest reserves (FSD, 2011). Four communities namely; Ahyiaem, Nsuapem, Bomaa and Mamponteng are involved with FPD.

Dormaa forest district has a population of 159,789 (GSS, 2012). It consists of three forest reserves with a total area of 1020.8 km^2 (FSD, 2011). The Mpameso forest reserve is located at the south, Pamu-Berekum at the northwest and Tain II at the west of the Dormaa forest district.

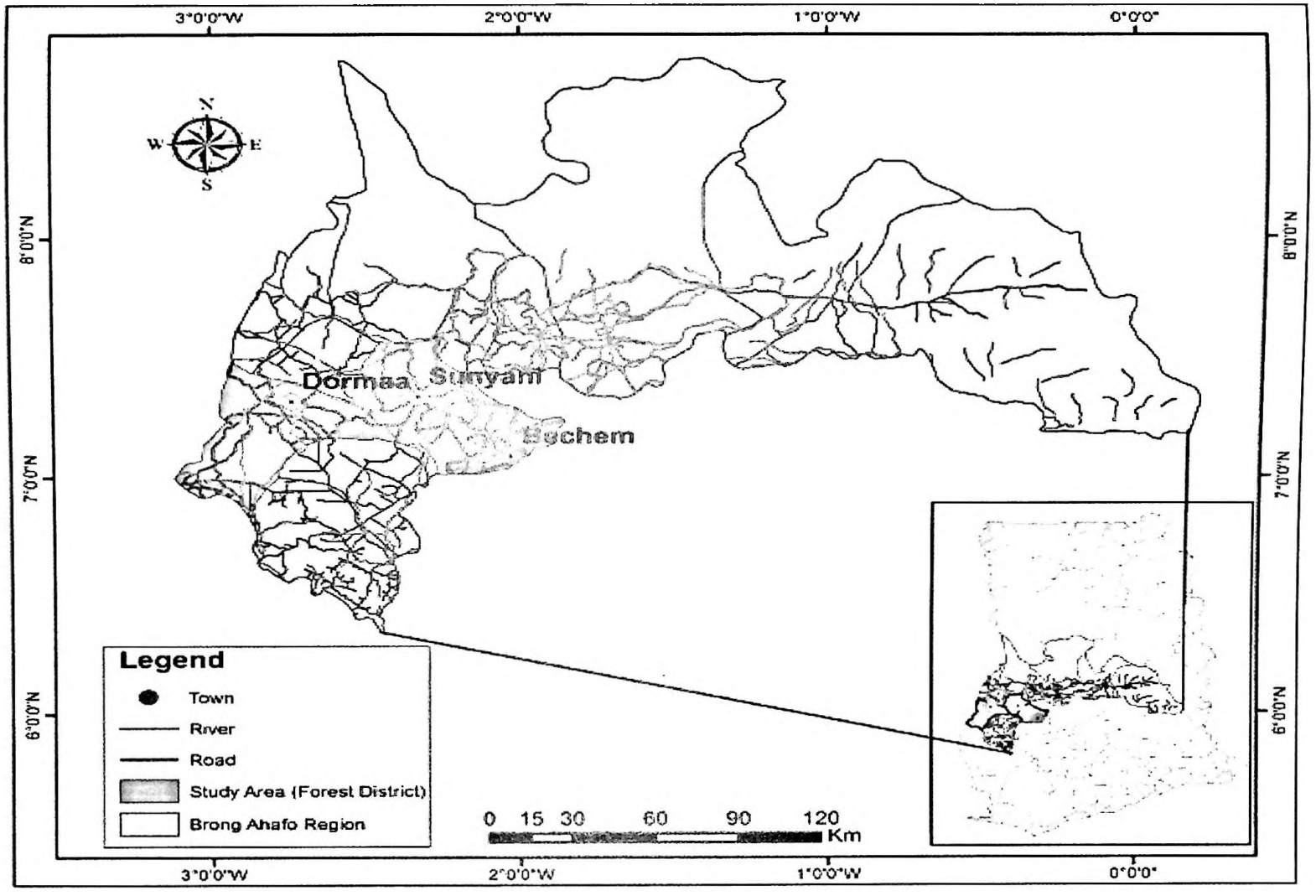

Figure 13: Study Area (Forest Districts in the Brong-Ahafo Region)

Source: Plantation Department, Forestry Commission (2013)

Timber species including wawa, odum, sapele and mahogany are predominant in the area. The major vegetation types are the unused forest, broken forest, grassland and extensively cultivable forestland and forest reserves. The broken forest is also located at the extreme southwest. The forest district is characterised by forest interspersed with grassland, mainly, elephant grass, shrubs and a few scattered trees with heights ranging between 15m and 28m high. The forest has been extensively cultivated leading to an invasion of grassland vegetation (FSD, 2003). Dormaa forest district has six communities (Asunsu No. 1, Asunsu No. 2, Kradaso I, Kradaso II, Unity Farm - Kobedi and Nkenkyenmamu) involved in FPD.

Bekwai, Kumawu and Juaso were the selected forest districts from the Ashanti region (Figure 14). The Juaso forest district encompasses eleven forest reserves, covering a total of area of 539.4 km^2 (FSD, 2011). The forest district has a population of 117,245 (GSS, 2012). The vegetation mainly consists of moist semi-deciduous forest region (vast forest lands) where different species of tropical hardwoods with high economic value abound. These include odum, mahogany, ofram, teak, and wawa. The Juaso forest district consists of four communities (Pokwai-Odumase, Ewenase, Kpone Praso and Teshie Praso) involved with FPD. The reserves have been encroached upon by illegal chainsaw operators.

Already, the North and South Formansu Forest Reserves have been depleted of tree species of commercial importance. Frequent outbreak of bushfires has also contributed to the depletion of forests and other forms of environmental degradation in the Juaso forest district.

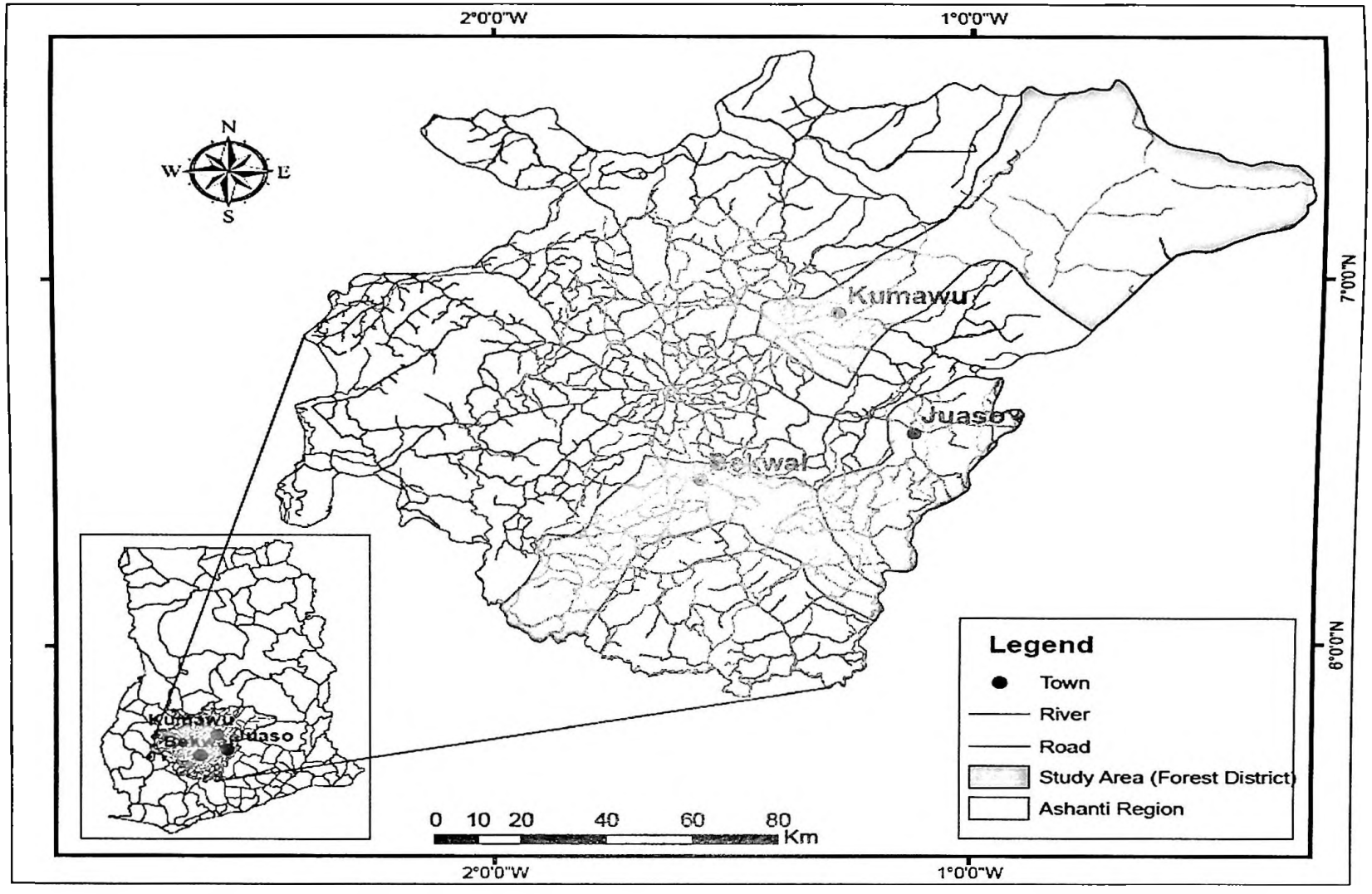

Figure 14: Study Area (Forest Districts in the Ashanti Region)

Source: Plantation Department, Forestry Commission (2013)

The Bekwai forest district has a population of 118,024 (GSS, 2012). It covers a total area of 636.77 km^2 (FSD, 2011). It administers thirteen forest reserves and lies within the moist semi-deciduous forest zone. Species in the forest are odum, wawa, edinam and mahogany. The vegetation has been reduced to secondary forest due to bad farming practices in the area. Four forest fringe communities namely, Adakabunso, Danso, Agogosu and Asamama are involved in FPD.

Kumawu forest district consists of four forest reserves and covers a total area of 352.19 km^2 (FSD, 2011). Kumawu forest district has a population of 93,937 (GSS, 2012). The southern part of the district is covered with semi-deciduous forest. The northern part is covered with Guinea savannah and consists of short deciduous fire resistant trees. The rest of the vegetation consists of transitional and forest zones. The transitional zone covers about 70 percent while the forest zone covers about 30 percent (FSD, 2003). In Kumawu forest district, six communities namely; Wolaponso, Amanpema, Bahankra, Bodomase, Brobonso and kwaman are involved in FPD.

From the Eastern region, Mpraeso and Begoro forest districts were selected (Figure 15). The Mpraeso forest district has a total area of 477.96 km^2 and administers eleven forest reserves (FSD, 2011). The population of the forest district is 69,757 (GSS, 2012). The forest district lies within the semi-deciduous forest zone. The vegetation is dense in terms of tree coverage with most trees shedding off their leaves in the dry season. Trees of economic value like odum, wawa and sepele are found in the forest. A greater part of the natural vegetation has been altered due to man's activities on the land.

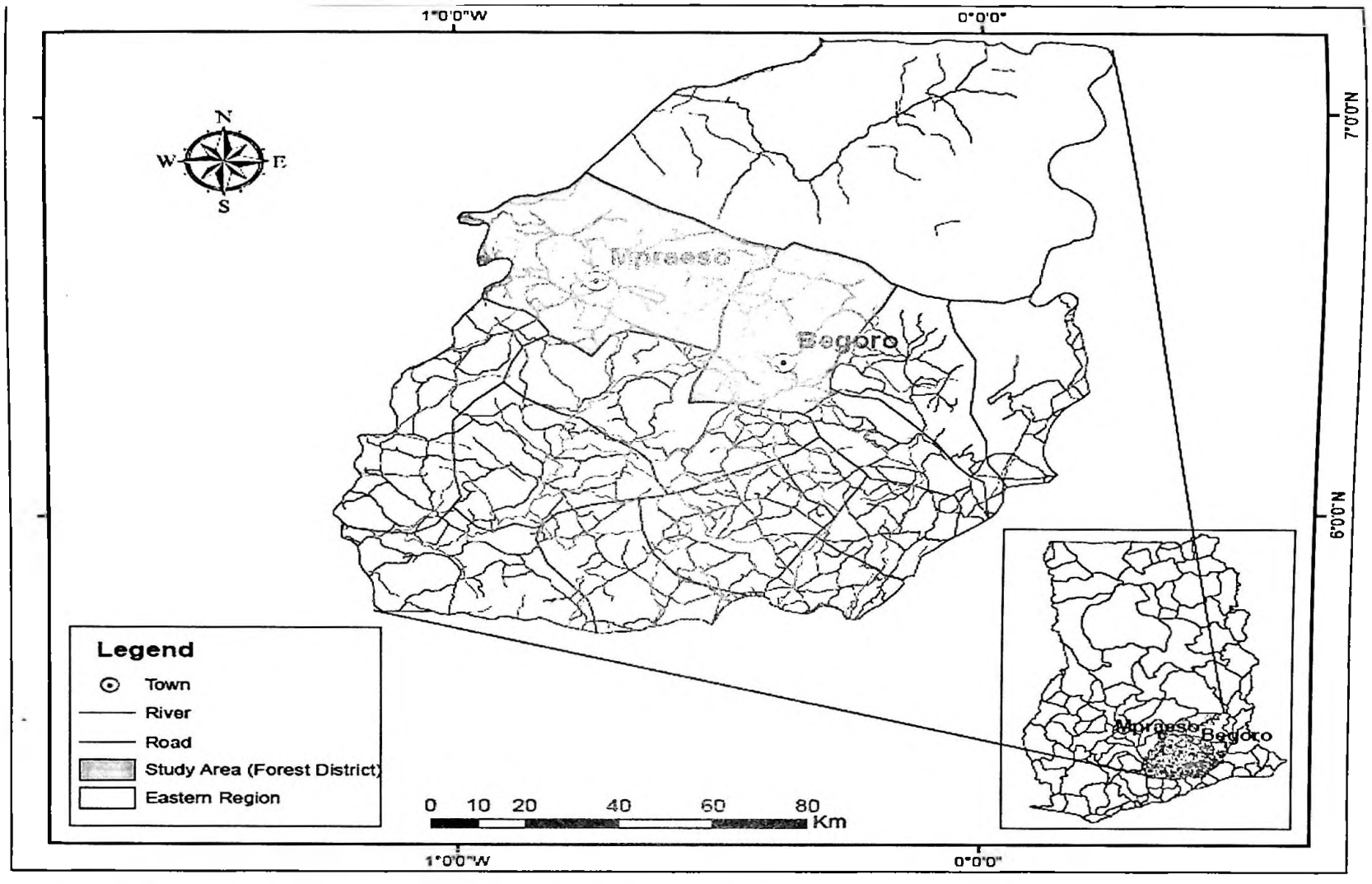

Figure 15: Study Area (Forest Districts in the Eastern Region)

Source: Plantation Department, Forestry Commission (2013)

Bush fires have destroyed majority of Taungya farms established within the forest reserves to replace the lost vegetation. Three communities (Ododotumtum, Odotokokor and Ankwanserem) are involved in FPD.

The Begoro forest district encompasses 9 forest reserves, covering a total area of 591.53 km^2 (FSD, 2011). The population of the district is 108,614 (GSS, 2012). The predominant vegetation type found in the district is the semi-deciduous forest. The hilly nature of the district's topography coupled with intensive farming activities has led to severe erosion and deforestation activities which have been a major threat to the district vegetation. Five communities namely, Feyiase, Obuoho, Akyem Bomaa, Larbikrom and Pimpimso are involved with FPD.

Research design

Most contemporary social science research is devoted to examining whether a programme causes some outcome or result. The research design employed by this study is a mixed method which is a combination of the collection and analysis of quantitative as well as qualitative data. The mixed method employed by the study is known as concurrent nested or embedded as indicated by Creswell (2009). The researcher first gave priority to the quantitative data which guided the study, whilst the qualitative data was embedded or nested. This method was to seek information at different levels of stakeholder engagement, and to bring to light hidden information by based on each stakeholder's interest and perception on the resource.

Creswell (2009) indicates that a mixed-methodological approach seeks to integrate quantitative and qualitative data to obtain a comprehensive analysis of the research problem. The use of multiple methodologies in this

study permits triangulation of the data to improve the validity of the findings, and enables greater inferences from the results. The mixed method employed by the study helped the researcher to investigate into the problem which provided details where a small amount of information existed. Various methods of data collection such as questionnaire administration, structured interviews and expert group discussions were used. The method also focused on connecting ideas to understand cause and effects and how stakeholders come together to interact.

A mixed method as a research design, answers questions like; how many? how much? how efficient? how effective? and how adequate? Also, it allows the researcher to relate the variables in the study to a conceptual framework where the design dictates how the variables are to be measured in testing their relationship and the effect of one variable on another as well as measures what impact one variable has on another (Cohen & Manion, 1994; Fowler, 1993; Babbie, 1990).

Study Population

Castillo (2009b) asserts that a research population is known as a well-defined collection of individuals or objects known to have similar characteristics. According to McDaniel and Gates (2006), population of any research is the entire group of people about whom the researcher needs to obtain information. Based on a sampling frame from a register obtained from the Plantations department of FSD, different stakeholder categories in FPD informed a study population of 392 as shown in Tables 9 and 10. Frankel and Wallen (2000) define target population as a larger group to which the researcher hopes to apply the results.

Sampling procedure

A multi-stage stratified random sampling technique was used to select key stakeholder categories for the study from the eight forest districts based on the register prepared by the Plantation Department of the FC. The register is a list of all stakeholders who received material resources (planting materials, and seedlings), technical and financial assistance from FC and the Government of Ghana on various plantation programmes (Table 5). This register served as a sampling frame for the study. According to Agresti and Finlay (2008) multi-stage stratified random sampling is considered as appropriate due to its advantage of ensuring representativeness and accuracy in sample drawing.

The multi-stage stratified random sample was constructed by first dividing the study communities into two groups on the basis of whether elements have been directly or indirectly involved with FPD. Based on this criterion, two distinct stakeholder groups were produced; namely, primary (Taungya heads and MTS farmers, private FP developers, seedling suppliers) and secondary (stool land owners/Chiefs, District Assembly representatives, traditional authority representatives, forest fringe community members).

In the second stage, relevant strata were developed based on the various categories of stakeholders and their population listed according to the chosen stratification. Proportional stratification was applied.

The sample size of each stratum is proportional to the population size of the stratum as Särndal et al. (2003) indicate. Strata sample sizes were determined by the following equation:

$$n_h = (N_h / N) * n$$

where n_h is the sample size for stratum h, N_h is the population size for stratum h, N is total population size, and n is total sample size. The elements to sample were identified and randomized within each stratum of the primary and secondary stakeholder groups. The sample size in each stratum was interviewed during the survey.

As noted by Newman (2000), random sample drawing does not only help to depict the target population with sufficient accuracy but also enables the researcher to establish a statistical relationship between the sample and the population. A total of 253 elements were found as a sample size of the selected categories. This consisted of 188 and 65 elements directly and indirectly involved with FPD respectively as shown in Table 10.

The sampling units for interview in the field were selected based on numbering pieces of paper representing the population size per stratum and selecting randomly till the number corresponding to the sample size per stratum was reached as in a raffle. The corresponding numbers on the pieces of paper were then cross-checked with that of the register in the Plantation Department. A list of the corresponding details of the interviewees' was prepared from the register as their numbers coincided with their details. This was the list used in conducting the interviews in the field.

Purposive sampling was used in selecting 12 discussants each for the three expert group discussions held as part of the qualitative method to have a deeper understanding of the areas of governance in FPD which needed clarity and was not adequately covered in the quantitative approach.

Table 9: Stakeholders in Forest Plantation Development

Category	Stakeholders	Roles and Responsibilities	Interests
Policy Group	Ministry of Lands and Natural Resources	Policy direction and legislative reforms to support FPD.	1. Law enforcement 2. Review land ownership rights 3. Coordination and monitoring of illegal activities
	Forestry Commission	Implementing agency for FPD	1. Implementation of FPD programmes 2. Regulation, extraction, technical expertise, inputs and education
Primary Stakeholders	Taungya heads	Directly involved in establishment of plantations	Investment and benefits
	MTS Farmers	Directly involved in establishment of plantations	Investment and benefits
	Private FP Developers	Directly involved in establishment of plantations	Investment and benefits
	Seedlings Suppliers	Provide seedlings for the FPD	Investment and benefits

Table 9 (con't): Stakeholders in Forest Plantation Development

Category	Stakeholders	Roles and Responsibilities	Interests
Secondary Stakeholders	Stool land Owners / Chiefs	Provide land for FPD	Ownership of land for plantation activities and benefits
	District Assemblies	Provide framework for policy implementation at the local level, conflict resolution, land use planning and parallel role in forest governance	Benefits
	Traditional Authorities	Community leadership and mobilization, land use planning and parallel role in forest governance	Benefits
	Forest Fringe Communities	Actively involved in law enforcement at the local level and provide labour for FPD	Benefit and protection of resource at local level

Source: Forest Services Division (2003)

Purposive sampling was also employed for the selection of the key informants (Staff of the FC and MLNR) based on their knowledge, experience and involvement in FPD programmes. As indicated by Creswell and Plano Clark (2011), purposive sampling involves identifying and selecting individuals or groups of individuals that are especially knowledgeable about and/or experienced with a phenomenon of interest. This category of key informants is referred to as the 'policy group' in this study based on their influence in policy direction and implementation of FPD. The total number of elements in the policy group was 37.

Sources of Data

To be able to obtain the needed data for this study, both primary and secondary data sources were used. The primary data was mostly gathered from four main sources. The first source of primary data was collected from primary stakeholders, namely; Taungya farmers (Heads and MTS farmers), private forest plantation developers (on/off-reserves) and seedling suppliers.

The second source was from secondary stakeholders namely; stool land owners, chiefs, traditional authority representatives, District Assemblies representatives and forest fringe community members. The third source was from policy makers and implementers i.e. MNLR and FC respectively. The fourth source was solicited from experts in governance and FPD.

Table 10: Samples for the study

Category	Stakeholder group	Stakeholder strata	Population size	Sample size	Sample method
Randomized selected samples	Primary	Taungya Heads and MTS Farmers	189	122	Multi-stage stratified random
		Private FP Developers	69	44	
		Seedlings Suppliers	34	22	
	Secondary	Stool land Owners, Chiefs	20	13	Multi-stage stratified random
		District Assembly Representatives	25	16	
		Traditional Authority Representatives	15	10	
		Forest Fringe Community Members	40	26	
	Total		392	253	
Non-randomized selected samples	Policy Group	Staff of Ministry of Lands and Natural Resources and FC		37	Purposive
	Expert Group	Experts in governance and FPD		36	

Source: Author's Construct, 2012

Secondary data was collected from the Ministry of Lands and Natural Resources, annual reports of FSD and FC, FC's service charter and policy documents. Other secondary data were collected through literature review of journals, books, internet and other relevant documents. The secondary data was generally used to complement the primary data, and to serve as a rich source of history on the study area as noted by Sarantakos (2005).

Methods of Data Collection

Quantitative and qualitative methods of data collection were used in this study to ascertain the fact that good research practice involves the use of multiple methods to enhance the validity of the research findings as pointed out by Mathison (1988), as well as triangulation which according to Hemmati (2001) helps in facilitating validation of data through cross verification from two or more sources. These methods relied upon the use of explanatory and evaluative research in the form of questionnaires, and expert group discussions to gather as much data as needed for a meaningful analysis.

The quantitative method used was administering open-ended questionnaires to the policy group (Appendix 1) and conducting structured interviews with the primary and secondary stakeholders (Appendices 2 and 3) for data collection. In all, one set of questionnaire was designed to meet specific needs of the policy group respondents, whilst two sets of interview schedules were designed for the primary and secondary respondents. Each questionnaire and interview schedule contains five major sections (A, B, C, D and E) with about 16 sub-sections which address the various blocks of the conceptual framework as well as answering the posed research questions.

The first section of the questionnaire and interview schedule dealt with background characteristics of respondents. The second section tackled the assessment of application of governance principles in the historical context of FPD in Ghana. In all, nine governance principles were assessed. Each governance principle is made up of elements which are considered as statements and/or questions depending on the stakeholder category. For the Policy Group, the elements were mostly statements, whist that for the primary and secondary stakeholders were mostly questions with a few statements. Most of the results in this section have been illustrated as figures and tables.

The third section addressed the challenges of governance in FPD. The fourth section, governance deficits in Ghana's 1994 Forest and Wildlife Policy in relation to FPD and finally, the last section addressed the complexity of governance under FPD, as well as suggestions to promote effective governance in FPD in Ghana.

The questions were designed to solicit stakeholders' view on governance of FPD in Ghana. The majority of the questions in the questionnaire were written in a five-point Likert scale style format, and the rest simple 'Yes' and 'No' questions and fill-in tables. The questionnaire and interview schedules contain a combination of factual questions, open ended questions and statements. The survey of the primary and secondary stakeholders was carried out in eight purposively selected forest districts of FC.

In order to complement the quantitative method, the qualitative method (expert group discussions) was used. This normally brings out insight and

understanding in ways which the questionnaire items may not have been able to solicit. Also, this method is used to get information about how people think, feel and act and what they know. This kind of technique looks more likely to give more substance to reveal detailed information and is concerned with trying to achieve a clear understanding of the problem under review. It fills the gaps left in the questionnaire.

Expert Group meetings

In all, three expert group meetings were held in Bechem, Juaso and Begoro, three FSD forest district offices in the Brong-Ahafo, Ashanti and Eastern regions respectively. These locations are part of the selected forest districts. Interestingly, the timing of the meetings coincided with the celebration of the forestry week which made it easier to organize the experts at these locations. In keeping with academic standard of not having more than 12 people for such group meeting, the researcher selected 12 experts in each location to discuss the themes that pertained to the research objectives. Each meeting lasted about three hours with a total of 30 minutes coffee break.

The guide for expert group meetings (Appendix 4) was carefully developed to facilitate discussions and also bring out critical issues that were directly relevant to the research topic. The meeting proceedings and discussions were recorded by three field assistants and backed by tape-recordings with the permission of the members in all three meetings to help the researcher fill in missed out statements. The expert group meetings offered the opportunity for critique of relevant issues and also proposed key recommendations. During the session, there were occasional rejections of

opinions, and participants had to confirm the feasibility of certain suggestions and recommendations. In discussions, multiple meanings were revealed as different discussants interpreted the topics of discussions in different ways to address various aspects of the study. For consistency sake, getting to the end of discussions, common meanings were arrived at and certain facts confirmed before concluding meetings.

Interaction is the key to successful expert group meetings as observed by Krueger and Casey (2000), Morgan (1997) and Stewart and Shamdasani (1992) which was indeed the case during the observations made during the discussion sessions. The reactions of each person sparked ideas in others, and one person filled in a gap left by others. There were also discussions with senior government officials with regards to issues and challenges in policy formulation for FPD in Ghana and the way forward. Finally, the recordings from all three expert group meetings discussions were aggregated for each theme and reviewed by the researcher and an independent third party who was an expert in governance and FPD.

Fieldwork/Data Collection

In all, eight Field Research Assistants were employed to help gather data for this research. These assistants were selected based on their knowledge of the local languages and the area. They were trained in how to administer questionnaire and also conduct structured interviews prior to making a trip for the fieldwork. The Field Research Assistants were mainly Plantation Supervisors, Assistant District Managers and a few District Managers of the FC. The fieldwork was conducted in August and November, 2012, after the

rainy seasons, where most of the primary stakeholders were ready for planting activities in the field.

In the course of conducting structured interviews in the field, the research team on some occasions translated the interview guide into local language of respondents. The researcher paid attention to research ethics. So, as part of handling ethical issues in the research, the respondents were informed of their rights and the protection of their views as much as possible.

Given the degree to which personal biases may influence research findings, respondents were encouraged to be objective as possible. Besides, the researcher made conscious effort to reduce his personal biases in moderating discussions since this affected findings. As a point of fact, Silverman (2000) observes that every researcher has personal perceptions, beliefs and values which could influence the decision making process during field research and data analysis.

Fieldwork challenges

Two main challenges faced during the fieldwork were recorded. First, the difficulty of data collection from the field during the raining seasons where most of the tracts to the plantation sites were inaccessible. Ironically, this was the best time to meet most of the primary and secondary respondents as it was the planting period. This difficulty was addressed by the assistance of FC staff who had created rapport with these respondents such that they were made to visit the forest district office for interviews. Second, most of the farmers kept on re-scheduling their interview sessions as they were busy planting in the field. The researcher and his field assistants exercised patience for delays of

meeting times. Again, with the help of the FSD district managers and their assistants, interviewees were convinced to stay longer in sessions.

Data processing and analysis

In this study, a total of 290 respondents were selected, out of which 37 were administered questionnaires and 253 interviewed. In all, 282 responses were received from the field but 280 were edited, collated and used to interpret the results of the research after rejecting two questionnaires for poor completion. Questionnaires were numbered, coded and entered into Statistical Product and Service Solutions (SPSS) version 16.0, and in some instances, Microsoft Excel 2010. Data from the quantitative survey were analysed. Statistical and other forms of analysis were generated from the secondary and primary data sources for discussion. Although the data analysis was done largely through descriptive statistics, the whole process also incorporated elements of inferential statistics.

For this research, cross-tabulation tables (contingency tables) which display the relationship between two or more categorical (nominal or ordinal) variables was applied to most of the different sections of the questionnaire which mostly represent the blocks in Figure 9 in Chapter Two. In the different scenarios, the variables of the various blocks were considered as dependent or independent, depending on the nature of the linkages.

The Pearson Chi-Squared Test was used for significance testing of the data from Cross-Tabulations Tables for the study. Relationships between dependent and independent variables were tested as well as the strength of these relationships. Such analysis showed meaningful inclinations by using

Chi-Square test to explore the significance of these relationships. Inferential analysis was used to help draw conclusions about these results in the quest for in-depth analysis and deeper interpretation of the data (Campbell, 2007). In a few instances adjustments had to be made to the cross-tabulation to achieve reliable results by either combining some of the rows or columns in a logical way if the conditions (at most 20% of the expected counts was allowed to be less than five, and the minimum expected count should be at least equal to one) were not satisfied. Only cases where significant relationships were found were reported in this study.

In the qualitative phase of the study, the view-points obtained through the open-ended questionnaires from the policy group, and the three expert group meetings were used in constructing detailed narratives according to the provided themes in the guide for expert group meetings as Creswell (2002) indicates. In some instances, the researcher utilized verbatim quotations and condensed summaries from interviews and discussions to provide brief overviews and specific aspects of governance in FPD to provide answers to the research questions and theoretical ideas underpinning the research as pointed out by Bryman (2008) and Langdridge (2004) in qualitative analysis.

CHAPTER SIX

APPLICATION OF GOVERNANCE PRINCIPLES

Introduction

This chapter presents and discusses the results on the background characteristics of respondents as well as the application of the nine governance principles in FPD. Each of the nine governance principles is characterized by several elements which are represented as the opinions of the respondents as a homogenous group (Chapter Four). For ease of interpretation, the responses under the Likert scale have been grouped into two standpoints. For example, strongly agree and agree are combined to indicate agreement, while the responses under strongly disagree and disagree are combined to indicate disagreement. Apart from the first section of this chapter which addresses the background characteristics of respondents, each of the remaining sections deals with the results and relevant discussions of one of the nine governance principles applied in FPD.

Background characteristics of respondents

The three main identified respondents were: (i) policy group; (ii) primary stakeholders; and (iii) secondary stakeholders.

The policy group comprised the respondents from the Ministry of Lands and Natural Resources and the Forestry Commission, where policies and regulations governing the natural resource are developed and made transparent to local authorities. The respondents of the policy group were mostly males in their 40 years to 55 years age bracket. Most of them had their

masters' and a few PhD degrees and were very experienced in governance, forestry, policy issues and had a lot of field experience in FPD. The least of them in terms of their educational background had a first degree but with over 15 years working experience.

The primary stakeholders (farmers, private sector and seedlings suppliers) who are directly involved with the resource were also male dominated. Majority were in the 45 years to over 60 years age bracket. They were mostly illiterate with a few literate persons from the private sector. Most of their experiences have been in farming within the forest reserves, raising of seedlings and planting of trees. The secondary stakeholders (stool land owners, chiefs, traditional authority members, district assembly representatives and forest fringe community members) were mainly in the 45 years and over age bracket, mostly males and with diverse educational backgrounds.

Analysis of the background characteristics of a total of 280 respondents showed that there was a gender imbalance, as male respondents were 266 (95%) and far outnumbered the females 14 (5%). This imbalance supports the claim that although women are primary collectors and users of forest resources, their involvement in decision making is nominal (Ardayfio-Schandorf, 2007; Gautam, 2004). Therefore, the results may be biased towards male opinions. The majority of 224 (80%) respondents were between the ages of 40 to 75 years. About 203 (73%) respondents were illiterates whilst 77 (27%) were mostly graduates from the tertiary and vocational institutions.

These findings are not healthy for a developing economy where the future of the forest sector is in FPD.

The implications of such findings is that with the alarming rate of deforestation and degradation, coupled with the complexity of governance and climate change issues, the forest sector will need a lot of literate persons to take up the challenges now and for the next 20 years and above according to experts. This means that acquiring advanced knowledge and skills is paramount, and will require more persons (especially the youth who are more vibrant) with tertiary education and above. Also the gap of gender imbalance will have to be closed in order to involve more females in the sector for expediency in decision-making.

Transparency in FPD

Transparency as a governance principle applied in FPD serves as an ingredient for monitoring and evaluation as pointed out by the World Bank (2009), Lockwood et al. (2010), Taylor (2003) and Kaufmann (2003). As an input requirement, transparency affects stakeholder satisfaction, commitment and sustainability as an expected outcome of governance in FPD (Cleaver and Franks, 2005; Capistrano, 2010; FAO, 2012).

The elements of transparency consist of the provision of clear policy decisions, accessible information, clear programmes and guidelines, clear rules and regulations, relevant information on the resource, timely response to available information, and apparent financial information (see for example, Kaufmann, 2003; Islam, 2000; Aucote, 2003). Once there is accessibility and clarity of information, stakeholder conflicts are minimized. When the elements

of transparency are high then stakeholder confidence in institutions are revived and brings commitment to the local communities in preserving and protecting the resource. These elements of transparency are clear indications to ensure that no relevant stakeholder is left in the dark.

Views of Policy Group on transparency in FPD

The views of the Policy Group (Table 11) show that about 78 percent of the respondents agreed to the fact that the relevance of information on FPD programmes was one key element for transparency in FPD. However, the irony of the matter is that if information is relevant and it is not easily accessible and clear, then it cannot be used for timely decision making. Likewise the apparent nature of financial information which was the least scored element of transparency (25%) by the Policy Group. If the financial information is apparent to all stakeholders and not easily accessible, then it cannot also be used.

If information is not accessible, then it may leave a gap which may distort the transparency process as was observed in Zambia (FAO, 2012) during the implementation of the GFI framework. This assertion is in line with Smith (2002c) and Aucote (2003), where access to and control over financial information is necessary for effective financial management which is a key component of sound governance (Dodson and Smith, 2003).

Table 11: Views of Policy Group on Transparency in FPD

Elements of Transparency	Percentage Scores					
	SD	D	U	A	SA	Total
Clear policy decisions	6.0	8.0	14.0	47.0	25.0	100.0
Accessible information	3.0	11.0	26.0	40.0	20.0	100.0
Clear programmes and guidelines	3.0	6.0	17.0	59.0	15.0	100.0
Relevant information	0.0	3.0	19.0	64.0	14.0	100.0
Timely response	3.0	19.0	31.0	39.0	8.0	100.0
Often organized documentaries	6.0	28.0	35.0	28.0	3.0	100.0
Clear rules and regulations	8.0	11.0	31.0	44.0	6.0	100.0
Apparent financial information	17.0	19.0	39.0	17.0	8.0	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. n = 37 : multiple responses

Source: Field data (2012)

Views of primary and secondary stakeholders on transparency in FPD

Views of primary stakeholders (Table 12) show that 94.7% of responses by private forest plantation developers also agreed to the timely response to requests as the highest transparency element. The responses of the secondary stakeholders agreed to easy access to information (70%) as the highest transparency element. Timely response to requests means that it is quick but either negative or positive, so easy access to information for decision making as opined by the secondary stakeholders still holds and directly supports the assertion by Kaufmann (2003) that transparency should ensure the easy flow of relevant information for stakeholders such that the

right decisions could be made through communication, planning, and monitoring performance and outcomes without negatively affecting development of the resource. Easy access to information is therefore, an essential component of transparency.

Most of the expert group discussants indicated that the procedures for allocation of degraded lands in the reserves for FPD were transparent to a certain degree because the available lands were published on websites of FC, and occasionally publications appeared in the Daily Graphic and Ghanaian Times. The question however is how many farmers can access the website and read the newspapers?

Majority of the respondents also attested to the fact that the application procedure for degraded land was too cumbersome and that potential farmers had to travel to the head office of FC in Accra to pick up forms from the Plantation department. The procedure, according to them, needs to be made simpler such that one could easily access forms from the district and regional FSD offices. They all agreed that it is better to decentralize the application process thus bringing part of the governance process closer to the resource owners which is more effective and supports the claim of Folke et al. (2005), Label et al. (2006) and Lockwood et al. (2010) on bringing the governance processes closer to the fringe communities for governance effectiveness.

Table 12 : Views of Primary and Secondary Stakeholders on Transparency in FPD

Elements of Transparency	Percentage Scores											
	Taungya Farmers (n = 122)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Aware of rules, regulations and policy	77.4	22.6	100.0	55.6	44.4	100.0	67.4	32.6	100.0	43.6	56.4	100.0
Aware of plantation guidelines	88.0	12.0	100.0	54.2	45.8	100.0	65.5	34.5	100.0	56.4	43.6	100.0
Clear guidelines	86.4	13.6	100.0	64.7	35.3	100.0	64.3	35.7	100.0	52.0	48.0	100.0
Easy access to information	45.0	55.0	100.0	61.1	38.9	100.0	58.1	41.9	100.0	70.0	30.0	100.0
Timely response to requests	42.0	58.0	100.0	70.6	29.4	100.0	94.7	5.3	100.0	35.6	64.4	100.0

Source: Field data (2012)

The analysis from Tables 11 and 12 and the expert group discussions clearly show that relevant information flow is critical for transparency as indicated by Islam (2003), Taylor (2003) and Canada Corps (2006). However, for transparency to be effective, information should be such that it is relevant and easily accessible but this was not the case on the ground (FSD, 2007).

Participation in FPD

The relevance of participation as a governance principle in FPD improves the effectiveness of the multi-actor dialogue process and promotes the ownership of the resource as indicated by Mercy Corps (2010) and World Bank (1994). It also strengthens the interface between the government and all other stakeholders in FPD and increases stakeholder involvement to achieve stakeholder satisfaction and sustainability of the resource as an expected outcome (Turnhout et al., 2010; World Bank, 2003).

The elements of participation characterize how actors got involved, and how they contributed to all processes and decisions concerning the resource. These elements are measured by the frequency of invitations received for events such as forums, workshops and meetings, involvement in events on FPD, contribution towards decisions through voting rights and signature endorsements, formulation and implementation of policies and programmes, and finally, to ensure that all relevant stakeholders are involved in decision-making concerning a resource by giving them representation on governing bodies. These elements of participation are clear indications to check whether all relevant stakeholders were involved and responsible for all related decisions in the governance of the resource.

Views of Policy Group on participation in FPD

The views of Policy Group as shown in Table 13 signify that about 62 percent of the responses from the Policy Group agreed that stakeholders were often invited to FPD events. Being invited to FPD events gives the stakeholders the opportunity to contribute to the governance process by giving their views on issues relating to the resource.

The invitation on its own is not a means to an end as it depends on the number of times these events were organised. The invitation can be timely or untimely which may be on purpose or not, hence depriving stakeholders the opportunity of being present to improve the effectiveness of the multi-actor dialogue processes.

A stakeholder being present at FPD events is also not a guarantee that contributions made will be accepted. This sometimes makes rightful owners of the resource powerless. Participation, according to the empirical studies of Turnhout et al. (2010), inevitably reqiures acting, choosing, and selecting which may explain the reason why the least element of participation scored, was all relevant stakeholders involved in decision-making concerning FPD (32%). In all, respondents took a relatively neutral position ranging between 49 and 22 percent meaning that they were not even sure whether participation existed or is necessary in FPD governance. This clearly shows weakness in participation as a principle of governance in FPD.

Table 13: Views of Policy Group on Participation in FPD

Elements of Participation	Percentage Scores					
	SD	D	U	A	SA	Total
Many invitations to FPD events (forums, workshops and meetings) received by all relevant stakeholders	5.0	8.0	30.0	46.0	11.0	100.0
All relevant stakeholders often invited to FPD events	8.0	8.0	22.0	51.0	11.0	100.0
All relevant stakeholders involved in FPD events	3.0	11.0	34.0	41.0	11.0	100.0
All relevant stakeholders provided inputs in formulating Ghana's 1994 forest and wildlife policy	0.0	5.0	49.0	35.0	11.0	100.0
All relevant stakeholders involved in decision-making concerning FPD	5.0	19.0	44.0	24.0	8.0	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. n = 37 : multiple responses

Source: Field data (2012)

Views of primary and secondary stakeholders on participation in FPD

Views of primary and secondary stakeholders on participation in FPD are presented in Table 14. The highest score was for the attendance of FPD events (76.4%) by the respondents of the Taungya Farmers. The results of all

other stakeholder responses were lower than the scoring of the Taungya farmers. This result shows that there were indeed some opportunities for all stakeholders to contribute accordingly to the usage, benefits and sustainability of the resource as indicated by the World Bank (1994). As to whether their contributions were committed needs further probing.

Interestingly, there were very low scores (0% to 9.5%) for provision of inputs to the formulation of the 1994 Forest and Wildlife policy by all respondents of relevant stakeholders apart from the policy group. Also, very low scores (42.1% to 59.6%) were recorded for the joining of stakeholders in FPD events. This sends a wrong signal for governance, since the voices of the resource owners themselves are not heard and fully taken into account at the policy formulation stage. This may be a reason for clear conflicts as their interests may not be addressed during implementation of the policy.

From Table 15, the scores by respondents of the primary and secondary stakeholders generally show that the frequency of attendance of FPD events were low (50% and below). Apart from the respondents of Private FP Developers (primary stakeholder) who scored 50 percent, the highest, the rest of the scores were negatively skewed around the neutral position. However, the frequency of attendance may also depend on how many times these events were organized by the Policy Group.

Table 14: Views of Primary and Secondary Stakeholders on Participation in FPD

Elements of Participation	Percentage Scores											
	Taungya Farmers (n = 122)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Attended events (forums, workshops and meetings)	76.4	23.6	100.0	47.4	52.6	100.0	48.8	51.2	100.0	71.7	28.3	100.0
Joined stakeholders in FPD events	59.6	40.4	100.0	42.1	57.9	100.0	44.2	55.8	100.0	54.2	45.8	100.0
Provided inputs in formulating Ghana's 1994 forest and wildlife policy	9.5	90.5	100.0	0.0	100.0	100.0	4.7	95.3	100.0	0.0	100.0	100.0

Source : Field data (2012)

Views of expert group on participation in FPD

One member from the expert group discussion meeting held in Juaso forest district during the session noted that:

> *As a chief and a forester, I am in constant communication with my community members and subjects to deliberate on issues regarding the governance of FPD and natural resource in general. Any time I receive invitations from MLNR or FC, I make sure that I deliberated on issues with my members before attending the event but I must admit that the invitations are rare.*

A member from the expert group discussion meeting held in Begoro forest district also indicated during the discussion that:

> *I was occasionally invited to durbars when government officials were visiting certain plantation sites or when certain interventions like REDD, Climate Change and VPA were being introduced.*

Deducing from the statements of the two experts from the Juaso and Begoro forest districts expert group discussions, it is clear that involvement is key to governance but in FPD the opportunity for bringing stakeholders together was rare. This confirms earlier descriptive results of low participation in FPD.

A retired teacher who is a well-known Private FP Developer in Bechem forest district, a member from the expert group discussion meeting held in Bechem stated that:

> *I had never laid my eyes on even the draft 1994 Forest and Wildlife policy document as far back as 2005. It was only during a forestry*

week celebration recently that one official from MLNR tried to explain a certain degraded land issue that I was dealing with, when reference was made to the 1994 Forest and Wildlife policy document.

It is evident that not all relevant stakeholders provided inputs to the formulation of the 1994 Forest and Wildlife policy document according to the discussant from the Bechem forest district expert group discussions. This confirms earlier quantitative results that the implementation of the policy is bound to have challenges based on stakeholder ownership and interest.

From the claims made so far, it is clear that multi-stakeholder meetings had not been regular and thus elements of participation might be very low in FPD. This means that participation in FPD was generally low and really reflected evidence on the ground (FSD, 2008). As indicated by Surkin (2011), effective participation should go beyond limited processes of consultation and include different stakeholders in decision-making at all levels but this was not the case in FPD.

Responsiveness in FPD

In FPD, responsiveness as a governance principle ensures that the Policy Group is effective, efficient and satisfy all stakeholders within a reasonable timeframe (Mercy Corps, 2010; World Bank, 2009). A lack of responsiveness can quickly erode trust in the FPD programme which will seriously affect stakeholder commitment.

Table 15: Views of Primary and Secondary Stakeholders on Frequency of Attendance of FPD Events

Stakeholders	Frequency in Percentages					
	Very often	Often	Unsure	Not often	Not Very often	Total
Taungya Heads And MTS Farmers (n = 122)	28.0	21.0	4.0	30.0	17.0	100.0
Seedlings Suppliers (n = 22)	11.0	11.0	12.0	22.0	44.0	100.0
Private FP Developers (n = 44)	30.0	20.0	10.0	20.0	20.0	100.0
Secondary Stakeholders (n = 65)	12.0	10.0	4.0	48.0	26.0	100.0

Multiple responses

Source: Field data (2012)

The elements of responsiveness consist of whether there was high demand for information on FPD, quick response to requests, high involvement, response time stipulated in FC's service charter (FC, 2008a) for FPD was met and general satisfaction of responses received. These elements measure the efficiency and effectiveness of regulating institutions, and directly relate performance to the governance of the resources.

Views of Policy Group on responsiveness in FPD

For the views of the Policy Group, Table 16 shows that about 70 percent of the respondents agreed that high demand for information was the key element of responsiveness in FPD. The demand for information being high does not necessary mean that the requests were handled within a reasonable timeframe.

To be precise, responsiveness would also depend on the response time, the type of request in FC's service charter, and whether the stakeholders were satisfied with the response. The clear position on responsiveness by the respondents might have been affected by the high scores of the neutral position (16% to 50%). The lowest score (14%) for meeting response time as an element of responsiveness in FPD, means that FC might lack the requisite capacity and capability to meet current demands or else review response time in its service charter to current exigencies of time.

Table 16 : Views of Policy Group on Responsiveness in FPD

Elements of Responsiveness	Percentage Scores					
	SD	D	U	A	SA	Total
Demand for information on FPD was high	3.0	11.0	16.0	51.0	19.0	100.0
Response to requests were quick	5.0	11.0	28.0	51.0	5.0	100.0
Response time stipulated in FC's service charter for FPD were met without any delays	8.0	30.0	48.0	14.0	0.0	100.0
All stakeholders were satisfied with responses received	6.0	22.0	50.0	14.0	8.0	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. n = 37 : multiple responses

Source: Field data (2012)

Views of Primary and Secondary stakeholders on responsiveness in FPD

The views of the primary and secondary stakeholders as shown in Table 17 indicate that although there were delays in responses to information requests, Taungya farmers (primary stakeholder) were generally satisfied with the responses received (75.9%). This result is contrary to the responses of the Policy Group in relation to satisfaction which is very low (22%). The difficulty with respect to respondents of the Taungya farmers on satisfaction of responses received might be that; (i) it is only FC that is mandated to attend to their specific needs in FPD and so have no other choice, (ii) they are not privy to the existence and contents of FC's Service Charter (FC, 2008a), and

(iii) they do not know the resources (material, finance, human and time) that go into such demands so they have no problem with the status quo.

Equity and Inclusiveness in FPD

Equity and inclusiveness provide the opportunity for stakeholders of FPD to maintain, enhance, or generally improve their well-being for existence and value to society as pointed out by IUCN (2007). In FPD, this governance principle would empower communities to understand the rights they possess to certain services and the means of obtaining them. It also identifies where the worst disparities lie and how, within limited resources, it could be ensured that resources go to where they are most needed (UNDP, 2007).

The elements of equity and inclusiveness deal with whether: (i) there is a fair reflection of all actors' views on issues concerning the resource; (ii) an actor can easily change policy formulating processes without recourse to others; (iii) there is equitable sharing of benefits; (iv) all views of actors are considered in decision-making; and (v) there is multi-stakeholder consultation before formulating rules and regulations governing the resource. Once fairness is ascertained then conflicts are minimized and all actors contribute to the governance of the resource with one voice.

Table 17 : Views of Primary and Secondary Stakeholders on Responsiveness in FPD

Elements of Responsiveness	Percentage Scores											
	Taungya Farmers (n = 122)			Seedlings Supplier (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Request for information	73.6	26.4	100.0	55.6	44.4	100.0	72.1	27.9	100.0	71.7	28.3	100.0
Delays in responses	31.2	68.8	100.0	50.0	50.0	100.0	56.7	43.3	100.0	53.5	46.5	100.0
Satisfied with responses	75.9	24.1	100.0	58.3	41.7	100.0	43.8	56.2	100.0	60.0	40.0	100.0

Source : Field data (2012)

Table 18: Views of Policy Group on Equity and Inclusiveness in FPD

Elements of Equityand Inclusiveness	Percentage Scores					
	SD	D	U	A	SA	Total
Fair reflection of other views in policy formulation	0.0	14.0	21.0	57.0	8.0	100.0
Ability of an actor to easily change a policy formulating process of FPD without recourse to others	11.0	22.0	48.0	14.0	5.0	100.0
Equitable sharing of benefits	11.0	25.0	31.0	25.0	8.0	100.0
Consideration of all views in all decisions taken	11.0	14.0	40.0	30.0	5.0	100.0
Consultation before formulating rules and regulations	3.0	19.0	48.0	22.0	8.0	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. n = 37 : multiple responses

Source: Field data (2012)

Views of experts group on equity and inclusiveness in FPD

About 70 percent of the members of the Bechem forest district expert group discussions meeting agreed that their communities were not involved in benefit sharing, and that it was determined by the Policy Group i.e. MLNR and FC. One Taungya farmer said that:

I am aware that some benefits and incentives are received by our Chief from the government but our community has never enjoyed such benefits and incentives. Only members of the Chief's palace do.

During the expert group discussions meeting in Juaso forest district, deliberations on equity in benefit sharing nearly turned into a fight between one Taungya farmer and a Chief who was accused of using the benefits received from FC to marry many wives. An early intervention of the researcher brought the situation under control.

It is generally clear from the results and claims that equity was not that low. Most primary (Taungya farmers and seedlings suppliers) and secondary stakeholders (Stool land owners/chiefs, District Assemblies representatives, forest fringe communities and TAs) who, according to plantation department records, normally received benefits and incentives claimed that there was some level of fairness in the sharing, at least from the government side. The difficulty was how the distribution of benefits was executed at the local level as noted by (UNDP, 2007).

Also, involvement in planning and decision-making processes in FPD was very low as the scores of the responses by the policy group, as well as the primary and secondary stakeholders depicted. This means that inclusiveness is still a big challenge in governance of FPD which is contrary to IUCN (2007), when protecting stakeholder interests and providing diverse populations with equal opportunities is not ensured. In general, there was a balance in the application of equity and inclusiveness as a governance principle in FPD.

Table 19 : Views of Primary and Secondary Stakeholders on Equity and Inclusiveness in FPD

Elements of Equity and Inclusiveness	Percentage Scores											
	Taungya Farmers (n = 37)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Received incentives	43.3	56.7	100.0	26.3	73.7	100.0	27.9	72.1	100.0	28.3	71.7	100.0
Fair share of incentives received	58.7	41.3	100.0	83.3	16.7	100.0	33.3	66.7	100.0	61.5	38.5	100.0
Involved In planning process	39.1	60.9	100.0	10.5	89.5	100.0	16.3	83.7	100.0	31.7	68.3	100.0
Received benefits	55.4	44.6	100.0	0.0	100.0	100.0	65.1	34.9	100.0	53.4	46.6	100.0
Fair share of benefits received	57.7	42.3	100.0	n/a	n/a	n/a	58.1	41.9	100.0	75.8	24.2	100.0

Source : Field data (2012)

Rule of law in FPD

Illegal operations in the forest sector in general poses a serious governance challenge, hence for FPD to succeed, it is required that the rule of law as a governance principle is applied without fear or favour. This means that there should be independent, efficient, and accessible judicial and legal systems; with a government that applies fair and equitable laws equally, consistently, coherently, and prospectively to its entire people and decision-making as indicated by UNFFS (2007) and Bryett and Osborne (2000).

The elements of rule of law consider the extent to whether stakeholders were involved in investigations of forest offenses, effective legal system put in place, exhibition of impartiality by security agencies, evidence of equal access to justice, enforcement of rules and regulations, and the use of conflict resolutions and mediation strategies. These elements in totality determine whether the rule of law worked effectively and impartially in the governance of FPD by the choice of the respondents.

Views of Policy Group on rule of law in FPD

The views of the Policy Group as shown in Table 20, illustrates the extent of application of the rule of law as a governance principle in FPD. The involvement of organizations in investigation of forest offences attracted the highest score (78%). The neutral position ranging from eight percent to 61 percent scored by respondents means that respondents were not even sure whether the elements of the rule of law existed or is necessary in FPD governance. The scoring of the other elements were generally low, and

highlights the fact that there was weakness in the rule of law as a governance principle in FPD.

Table 20: Views of Policy Group on Rule of Law in FPD

Elements of Rule of Law	Percentage Scores					
	SD	D	U	A	SA	Total
Involvement in investigations of forest offenses	3.0	11.0	8.0	50.0	28.0	100.0
Effective legal system	3.0	11.0	61.0	22.0	3.0	100.0
Exhibition of impartiality by security agencies	8.0	19.0	53.0	14.0	6.0	100.0
Evidence of equal access to justice	3.0	17.0	46.0	31.0	3.0	100.0
Enforcement of rules and regulations	8.0	17.0	22.0	53.0	0.0	100.0
Use of conflict resolution and media strategies	6.0	20.0	45.0	23.0	6.0	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. n = 37 : multiple responses

Source: Field data (2012)

Views of Primary and Secondary Stakeholders on rule of law in FPD

Views of the primary and secondary stakeholders in Table 21 shows that the Private FP Developers rated effective legal system as the highest (58.3%) element of the rule of law in FPD. Apart from the efficient legal system, the averages of the rest of the elements of the rule of law were far

Table 21 : Views of Primary and secondary Stakeholders on Rule of Law in FPD

Elements of Rule of Law	Percentage Scores											
	Taungya Farmers (n=122)			Seedlings Suppliers (n=22)			Private FP Developers (n=44)			Secondary stakeholders (n=65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Evidence of forest offence	24.5	75.5	100	21.1	78.9	100	14	86	100	33.3	66.7	100
Effective legal system	48.7	51.3	100	55.6	44.4	100	58.3	41.7	100	54.2	45.8	100
Exhibition of impartiality by security agencies	38.5	61.5	100	55.6	44.4	100	26.5	73.5	100	31.4	68.6	100
Evidence of equal access to justice	29.8	70.2	100	50	50	100	44.4	55.6	100	54.7	45.3	100

Source : Field data (2012)

Views of Policy Group on consensus building in FPD

Table 22 presents the extent of application of consensus building as a governance principle in FPD by the respondents of the Policy Group. Solving of conflicts through stakeholder collaboration in FPD was the highest scored element (61%) and the least-scored element was stakeholder involvement in addressing FPD issues (37%) which may have been due to the rather large neutral score of 49 percent. The results generally show that consensus building from the respondents perspective needs improvement as the average score for the rest of the elements were below 50 percent mark.

Views of primary and secondary stakeholders on consensus building in FPD

Table 23 depicts consensus building in FPD as perceived by respondents of primary and secondary stakeholders. Jointly addressing FPD issues was scored by Taungya farmers as the highest element with 61.5 percent. This means that the best way to solve issues of general interest (resource) is to consider the opinion of various actors. Stakeholder involvement in conflict mediation was the lowest rated (15.8%) element by seedlings suppliers. The solution to conflicts is normally influenced by the historical, cultural and social context of the actor but where there are clear policies and guidelines, mediation becomes very objective thus supporting the assertion by Pfund (2013) that the use of mediation and agreements in consensus building are tools for conflict resolution.

Table 22: Views of Policy Group on Consensus Building in FPD

Elements of Consensus Building	Percentage Scores					
	SD	D	U	A	SA	Total
Often met all relevant stakeholders to discuss FPD issues	3.0	27.0	21.0	38.0	11.0	100.0
Consideration of all interests before taking decisions	5.0	19.0	24.0	49.0	3.0	100.0
Stakeholder involvement	3.0	11.0	49.0	32.0	5.0	100.0
Regular meetings to discuss FPD issues	8.0	16.0	35.0	30.0	11.0	100.0
Collaboration in solving policy implementation issues	3.0	14.0	37.0	32.0	14.0	100.0
Involvement in mediation of conflicts	0.0	17.0	41.0	42.0	0.0	100.0
Solving of conflicts through stakeholder collaboration	3.0	19.0	17.0	53.0	8.0	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. n = 37: multiple responses

Source: Field data (2012)

Although stakeholder collaboration was the practice as noted in FPD (2005), the results from Table 23 show that stakeholder involvement in conflicts mediation was minimal. The low stakeholder involvement in conflicts mediation might be as a result of effectively addressing issues jointly,

thereby minimizing conflicts in FPD. Generally, apart from jointly addressing issues, the scores of the rest of the elements were far below 50 percent. This clearly shows that consensus building was either not well understood as a governance principle or it was quite weak in FPD.

Accountability in FPD

Accountability, as a governance principle applied in FPD, will ensure that the necessary checks and balances are put in place to check corruption, illegal activities and institutional inefficiencies. It will also promote the use of mechanisms for detecting abuse of power and resources as indicated by Cavill and Sohail (2007).

The elements of accountability entail rendering accounts on financial disbursements on benefits from the sale of forest plantation proceeds and royalties, regular auditing operations, existence of national protocol for M&E team and its effectiveness, frequency of field verifications, provision of evidence, known actions and decisions under FPD and public and institutional liability. These elements are clear indications to ensure that there is answerability in resource governance (Graham et al., 2003).

Views of Policy Group on accountability in FPD

The views of the Policy Group on accountability in FPD is shown in Table 24. Respondents agreed that 78 percent made frequent field visits and inspections by relevant institutions, and conducted regular financial and operational auditing. These two elements support the claim of Cavill and Sohail (2007) and Graham et al.(2003) that accountability should include the necessary checks and balances to correct abuse of power and resources.

Table 23: Views of Primary and Secondary Stakeholders on Consensus Building in FPD

Elements of Consensus Building	Percentage Scores											
	Taungya Farmers (n = 122)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Involvement in conflict mediation	17.3	82.7	100.0	15.8	84.2	100.0	20.9	79.1	100.0	20.3	79.7	100.0
Jointly addressing issues	61.5	38.5	100.0	36.8	63.2	100.0	29.3	70.7	100.0	35.0	65.0	100.0
Regular stakeholder meetings	47.1	52.9	100.0	22.2	77.8	100.0	28.6	71.4	100.0	28.6	71.4	100.0

Source : Field data (2012)

Although the neutral position of the Policy Group respondents were quiet high ranging from eight to 50 percent, the general agreement on the elements far outweighed the disagreement. The results show that accountability as a governance principle was well entrenched in FPD.

Table 24 : Views of Policy Group on Accountability in FPD

Elements of Accountability	Percentage Scores					
	SD	D	U	A	SA	Total
Rendering of accounts on financial disbursements	6.0	8.0	47.0	33.0	6.0	100.0
Regular financial and operational auditing	6.0	0.0	16.0	53.0	25.0	100.0
Existence of national protocol for M&E team	6.0	17.0	18.0	42.0	17.0	100.0
Effective M&E	6.0	14.0	30.0	39.0	11.0	100.0
Frequent field visits and inspections by relevant institutions	3.0	11.0	8.0	64.0	14.0	100.0
Evidence of answerability	8.0	22.0	42.0	28.0	0.0	100.0
Known actions and decisions under FPD	6.0	8.0	36.0	47.0	3.0	100.0
Public and institutional liability	9.0	13.0	50.0	25.0	3.0	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. n = 37 : multiple responses

Source : Field data (2012)

On the contrary, scores on evidence of accountability and public and institutional liability were lowest (28%). This means that indications on accountability were not reflective on the ground which made it obvious that there might be compromises to undermine the process or that the claim by the Policy Group respondents of high accountability (78%) in FPD was unfounded.

Views of primary and secondary stakeholders on accountability in FPD

Views of primary and secondary stakeholders are as shown in Tables 25 and 26. Table 25 illustrates responses on two main elements of accountability by stakeholders. The Tanugya Group scored the first element (whether any account was rendered to any stakeholder regarding financial disbursements by the Government on any aspect of the FPD programme) as the lowest (1.9%) whilst the second element (whether monitoring and evaluation team (s) conducted field visits to stakeholders' plantations) the highest (94.4%).

The results from Table 25 show that there were lapses in accountability with regard to financial transactions which might have serious implications on the FPD programme. Another observation was that there might be many ineffective field visits by monitoring and evaluation teams in the sense that their findings and recommendations in the field might not be committed into the governance process.

Table 25 : Views of Primary and Secondary Stakeholders on Accountability in FPD

Elements of Accountability	Percentage Scores											
	Taungya Farmers (n = 37)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholder (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Render accounts	1.9	98.1	100.0	10.5	89.5	100.0	14.3	85.7	100.0	8.6	91.4	100.0
Conduct M&E field visits	94.4	5.6	100.0	78.9	21.1	100.0	80.5	19.5	100.0	9.3	90.7	100.0

Source : Field data (2012)

Table 26 illustrates the frequency of monitoring and evaluation field visits in FPD. About 48 percent of respondents among the Taungya farmers agreed that visits were conducted quarterly. This was the highest score amongst all stakeholders apart from the Policy Group. The results from Table 26 are true reflections of plantation operations in the sense that Taungya farmers are involved with direct planting and hence need constant technical supervision from FC as indicated by FSD (2005).

The frequency of these field visits conducted has positive or negative effects on accountability; such that it might deter stakeholders from abuse of power and resources (corruption) or help avoid or correct technical flaws which might go a long way to boost confidence and commitment of stakeholders. The private FP developers were the only stakeholders to have witnessed other (18.8%) field visits apart from the monthly, quarterly, semi-annually and annually. This was because private FP developers controlled their own activities themselves so it was possible to decide to involve the services of FC plantation experts as and when needed. On the other hand, operations of on-reserve private FP developers were monitored through periodic field visits by plantation staff of FC to ensure compliance with approved reforestation plans.

Table 26: Views of Primary and Secondary Stakeholders on M&E Visits in FPD

Stakeholder	Monthly	Quarterly	Semi-Annually	Annually	Other	Total
Taungya farmers (n = 37)	15.0	48.0	14.0	23.0	0.0	100.0
Seedlings suppliers (n = 22)	33.3	13.3	26.7	26.7	0.0	100.0
Private FP developers (n = 44)	21.9	12.5	31.2	15.6	18.8	100.0
Secondary stakeholders (n = 65)	9.7	32.3	32.3	25.7	0.0	100.0

Source : Field data (2012)

Well-informed in FPD

To be well-informed in FPD means that all stakeholders should have the critical understanding of the governance processes and systems as indicated by Lockwood et al. (2010). This means having a detailed understanding of what the FPD programme entails and on-ground experience.

The elements of well-informed governance principle determine how knowledgeable stakeholders are with regard to issues concerning FPD. The elements consist of familiarity with literature, 1994 forest and wildlife policy, rules and regulations of FPD, assessing whether stakeholders were conversant with all aspects of FPD through reading, listening and watching documentaries. Satisfying all elements means that one is well-informed and can contribute to solving complex challenges.

Views of Policy Group on well-informed in FPD

Views of the Policy Group as shown in Table 27 indicate the extent to which respondents of the Policy Group were well-informed or knowledgeable in FPD in Ghana. About 81 percent of the respondents agreed to how very familiar they were with the contents of the 1994 Forest and Wildlife policy with respect to FPD. The average score for the rest of the elements was above 60 percent which clearly shows that respondents were generally knowledgeable or well-informed about FPD in the Policy group.

Views of primary and secondary stakeholders on well-informed in FPD

Views of the primary and secondary stakeholders in Table 28 show that for Taungya farmers, about 88.7 percent of the respondents agreed to the fact that the request for information on FPD was the key element to be well-informed. Requesting for information on FPD alone does not make one knowledgeable. Reading documents on FPD which is a key aspect of acquiring knowledge was rather low (23.4%) for Taungya farmers.

Table 27 : Views of Policy Group on Well-informed in FPD

Elements of Well-Informed	Percentage Scores					
	SD	D	U	A	SA	Total
Familiarity with knowledge on FPD	5.0	14.0	6.0	51.0	24.0	100.0
Often requested for documents	0.0	16.0	21.0	41.0	22.0	100.0
Familiarity with contents of 1994 forest & wildlife policy	0.0	11.0	8.0	51.0	30.0	100.0
Conversant with all aspects of FPD	5.0	14.0	22.0	24.0	35.0	100.0
Read extensively about FPD	3.0	11.0	16.0	35.0	35.0	100.0
Familiarity with all rules & regulations of FPD	0.0	8.0	24.0	38.0	30.0	100.0
Very often watched and listened to documentaries	5.0	19.0	19.0	41.0	16.0	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. n = 37: multiple responses

Source : Field data (2012)

Generally, the average score for most of the elements by the respondents of the primary and secondary stakeholders was around 55 percent, meaning that they were well-informed about FPD. On the other hand, according to Lockwood et al. (2010), to have knowledge requires a stakeholder to be well vested in all the rest of the elements including experience, together with effective communication.

Table 28 : Views of Primary and Secondary Stakeholders on Well-informed in FPD

Elements of Well-Informed	Percentage Score											
	Taungya Farmers (n = 122)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Request For Information On FPD	88.7	11.3	100.0	20.0	80.0	100.0	74.4	25.6	100.0	58.2	41.8	100.0
Read Documents On FPD	23.4	76.6	100.0	58.8	41.2	100.0	56.4	43.6	100.0	61.7	38.3	100.0
Listen Or Watch Documentary	62.6	37.4	100.0	78.9	21.1	100.0	59.5	40.5	100.0	70.0	30.0	100.0
Attend Gatherings on FPD Issues	77.8	22.2	100.0	42.1	57.9	100.0	58.5	41.5	100.0	72.4	27.6	100.0

Source : Field data (2012)

This knowledge should have the ability to solve complex problems with uncertainty, long time scales, multidimentional, and diverse values as in governance. So once not all the well-informed elements of the governance principle are fulfilled, then complex challenges under FPD cannot be addressed adequately.

Direction in FPD

Direction as a governance principle applied in FPD would ensure that all stakeholders operate within a certain environment guided by a governance framework which supports long-term planning and sustainability of resource (Graham et al, 2003).

The elements of direction characterize how committed stakeholders are to FPD; whether financial support for the programme is adequate, and training programmes organized constantly for stakeholders, achievement of programme objectives, effect of socio-economic issues on FPD, and whether enough planning process went into FPD. All these elements of direction if addressed appropriately will culminate into the sustainability of FPD. Direction as the last governance principle gives rise to long-term planning in governance and development needs in forest plantations. It also needs to be in the context of historical, cultural and complex settings.

Views of Policy Group on direction in FPD

Views of the Policy Group in Table 29 show the extent of clear sense of direction in FPD. The respondents of the Policy Group agreed by the highest score (89%) that their organizations were committed to FPD. Stakeholders can be committed when they are governed by effective

development policies and realistic strategies as affirmed by UNDP (1997) and Kaufmann, Kraay, and Mastruzzi (2007) based on the characteristics of good governance.

Table 29 : Views of Policy Group on Direction in FPD

Elements of Direction	Percentage Scores					
	SD	D	U	A	SA	Total
Very committed to FPD	6.0	3.0	2.0	47.0	42.0	100.0
Adequate financial support	8.0	22.0	31.0	31.0	8.0	100.0
Organized a lot of training programmes	6.0	17.0	33.0	36.0	8.0	100.0
Achievement of stated objectives on FPD by government	0.0	6.0	36.0	44.0	14.0	100.0
Effect of socio-cultural issues on FPD	3.0	9.0	36.0	43.0	9.0	100.0
Enough planning process went into FPD	6.0	6.0	33.0	44.0	11.0	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. n = 37: multiple responses

Source : Field data (2012)

For the Policy Group, the agreement for all elements far outweigh the disagreement which means that direction as a governance principle was high which supports the claim by Graham et al. (2003) that apart from satisfying all

the elements of Table 29, stakeholders should also ensure that legislation provides a set of objectives and governance framework which allows various actors of the resource to have a set of parameters to structure their relationships and build trust over a long term period.

Views of primary and secondary stakeholders on direction in FPD

For the views of primary and secondary stakeholders shown in Table 30, 100 percent of the respondents of Private FP Developers agreed to the fact that FPD programme in Ghana should continue whilst only 2.3 percent agreed that there has been a continuous flow of incentives from the Government to support FPD programme. In as much as stakeholders would like FPD programme to continue, they want to guard against discontinuity of incentives which would serve as a deterrent to stakeholder commitment. On the contrary, some stakeholders can be committed to FPD because of availability of funds as grant from the government, and after securing the grant they show less commitment as was the case of the Taungya farmers (FSD, 2008). Other stakeholders can also be committed purely based on the interest to undertake plantation programmes.

In terms of training, apart from respondents of seedling suppliers that scored highest (85.7%), the rest were generally low as shown in Table 31. Training as part of human development is a key element of direction in FPD. Training addresses the knowledge gap which ensures that FPD is supported adequately in terms of capacity development for sustainability (UNDP, 1997). Other stakeholders also observed that there was a narrow gap between planned and actual activities for FPD as indicated by FSD (2008).

Table 30 : Views of primary and Secondary Stakeholders on Direction in FPD

Elements of Direction	Percentage Scores											
	Taungya Farmers (n = 122)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Success of FPD programme	81.3	18.7	100.0	78.9	21.1	100.0	85.0	15.0	100.0	65.5	34.5	100.0
Continuation of programme	96.2	3.8	100.0	94.4	5.6	100.0	100.0	0.0	100.0	98.3	1.7	100.0
Commitment	90.3	9.7	100.0	94.1	5.9	100.0	95.2	4.8	100.0	78.8	21.2	100.0
Well planned programme	75.8	24.2	100.0	70.6	29.4	100.0	78.9	21.1	100.0	66.0	34.0	100.0
Continuous flow of incentives	12.2	87.8	100.0	15.8	84.2	100.0	2.3	97.7	100.0	12.5	87.5	100.0
Participation in training	55.9	44.1	100.0	36.8	63.2	100.0	37.2	62.8	100.0	23.7	76.3	100.0

Source : Field data (2012)

Table 31 : Views of Primary and Secondary Stakeholders on Frequency for Training Participation in FPD

Stakeholder	Percentage Scores					
	Not Very Often	Not Often	Unsure	Often	Very Often	Total
Taungya Farmers (n = 122)	19.1	28.6	6.2	31.8	14.3	100.0
Seedlings Suppliers (n = 22)	0.0	0.0	14.3	57.1	28.6	100.0
Private FP Developers (n = 44)	18.8	43.6	0.0	18.8	18.8	100.0
Secondary Stakeholders (n = 65)	18.8	26.0	6.4	30.0	18.8	100.0

Multiple responses

Source : Field data (2012)

Conclusion

This chapter has highlighted that, although women are the primary collectors and users of forest resources, however, their involvement in decision-making is nominal as noted by Ardayfio-Schandorf (2007) and Gautam (2004). This position was confirmed by the study that out of 280 (100%) total respondents, there was a gender imbalance of 266 (95%) males as against 14 (15%) females.

The chapter shows that the application of a governance principle in FPD is based on the opinions of the respondents on its elements (Kaufmann, 2003; Dodson and Smith, 2003). It was confirmed that clear and relevant information flow was key for transparency which generally showed a low application in FPD. Participation was also very low in FPD, especially in the areas of policy inputs and limited consultation in decision making at all levels. With responsiveness, there was a dichotomy between the Policy Group as against the primary and secondary stakeholders with respect to stakeholder satisfaction which was high for primary and secondary stakeholders, and low for the Policy Group. This was attributed to FC lacking the requisite capacity and capability to meet current demands

In addition, the chapter shows that there was high sense of equity by the fair share of incentives and benefits to stakeholders, and very low application of inclusiveness due to the nominal involvement of stakeholders in planning and decision-making process in FPD. Though there was evidence of forest offences, there was weakness in the application of rule of law in FPD. Apart from stakeholders jointly addressing issues, consensus building was quite weak in FPD. Even though there were frequent field monitoring and evaluation, evidence on the ground showed that there were lapses in financial transactions, hence leading to weak accountability in FPD.

The chapter has also pointed out that stakeholders were not well-informed about FPD in general, although they requested for information on FPD issues. The Policy Group seemed to be better placed with knowledge in FPD, and were very familiar with the 1994 forest and wildlife policy as

CHAPTER SEVEN

CHALLENGES OF GOVERNANCE IN FOREST PLANTATION DEVELOPMENT

Introduction

This chapter examines the challenges of governance in FPD. Such challenges include incidence of fire outbreaks, competing land use, illegal operations, finance, and weak governance. Due to the focus of this study, only weak governance as a challenge in FPD has been addressed in detail. The chapter then deals with the causes of weak governance such as ineffective supervision and monitoring, unclear roles and responsibilities, weak institutions, commitment, policy direction, political interference, individual interests, financial resources, human resources, logistics, incentives, and weaknesses in governance provisions.

The chapter also addresses the effects of weak governance which includes abandonment of FPD programme, and massive deforestation and land degradation. The chapter also discusses governance issues related to Ghana's 1994 Forest and Wildlife Policy on FPD.

Challenges in Forest Plantation Development in Ghana

Challenges of governance in FPD are major concerns which impede the progress of the programme in totality. These challenges are normally multidimensional, multi-sectoral and affect multiple actors in FPD.

The major challenges of governance in FPD identified by the study included: incidence of fire outbreaks (FSD, 2010); competing land use where there is demand for land for agriculture, conflict over land tenure,

industrialization, urbanization and infrastructure (Mayers, 2000); illegal operations relating to logging, mining and sand winning; financing of FPD which is considered in the light of a long-term investment with a minimum of 25 years (gestation to maturity period for teak or cedrela) with high risk for development (FSD, 2010); and weak governance which means that there are either weaknesses in governance provisions (processes, procedures, structures and policies) or weaknesses in governance principles or lack thereof or weaknesses in guidelines as applicable to the various stakeholders in FPD (CIFR, 2005; Acosta, 2002; Savet, 2000; Hermosilla, 2000).

All these governance weaknesses emanate from non-enforcement of legal framework and policy, low transparency in resource allocation and benefit sharing, unclear roles and responsibilities leading to weak accountability, less equity and inclusiveness and participation in decision-making (Evans and Turnbull, 2004; FAO, 2012; FAO, 2001a; Marfo, 2010).

Weak governance has serious implications on the outcome of governance in FPD, since all the parts of the governance system are supposed to work together to achieve the expected outcome (stakeholder satisfaction, equitable benefits, gender, the poor, sustainability). This means that any part that works under capacity affects the expected outcome (Checkland and Scholes, 1990; Littlejohn, 1999; Infante, 1997).

Views of Policy Group on challenges of governance in FPD

The views of the Policy Group on challenges of governance covered weak governance which entailed the weaknesses in governance provisions, weaknesses in governance principles, and lack of certain governance

principles in FPD as shown in Figures 16, 17 and 18 respectively. About 77.9 percent of respondents from the Policy Group in Figure 16 agreed that weaknesses in governance provisions pose a serious governance challenge in FPD. The weaknesses in governance provisions were typically characterized by inefficient and ineffective processes and procedures, weak structures and unsupportive policy guidelines in FPD (CIFR, 2005; Bellamy, 2006).

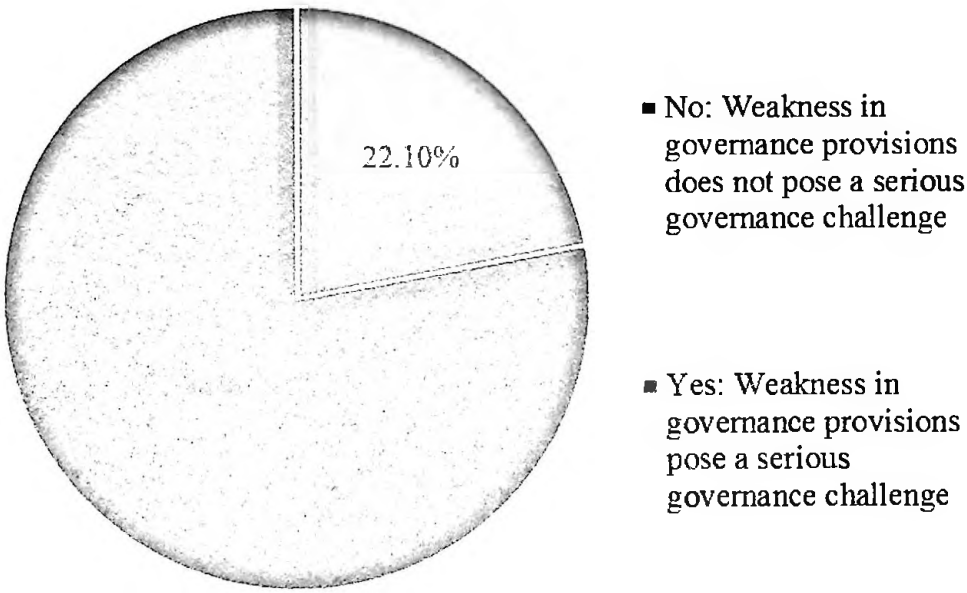

Figure 16: Views of the Policy Group on Weaknesses of Governance Provisions in FPD

Source: Field data (2012)

Figure 17 depicts that 81.1 percent of the Policy Group respondents agreed that weaknesses in governance principles pose serious governance challenges in FPD. Such weaknesses in governance principles as mentioned by a majority of respondents manifest in low accountability, as well as non-enforcement of the rule of law. Issues of workers/farmers apathy towards FPD due to mistrust of institutions and implementing agencies like FC also played an important role in weaknesses of governance principles (FSD, 2008).

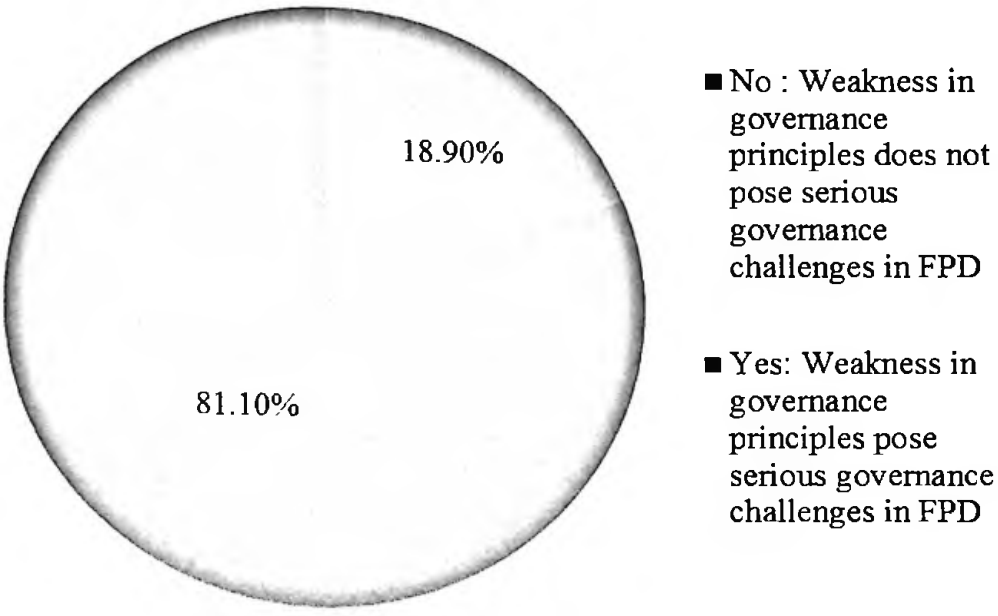

Figure 17: Views of the Policy Group on Weaknesses of Governance Principles in FPD

Source: Field data (2012).

About 78.4 percent of the policy group respondents in Figure 18 agreed that lack of certain governance principles is a major challenge to governance of FPD. This affirmation is a true reflection of good governance as pointed out by IUCN (2007), Canada Corps (2006), World Bank (2009) and Mercy Corps (2010), where strong interconnectivity of all the key principles of governance strengthens the effectiveness of governance leading to satisfaction, and sustainability of the resource. Hence, lack of any key governance principle distorts the whole governance system and creates a challenging gap to be addressed by the actors and actants of the system according to the ANT (Latour, 2005).

Lack of certain governance principles in governance of FPD characterizes a system with some of its parts removed such that it will have to

adjust till the wholeness and interdependence is achieved as claimed by works of Infante (1997) and Aronson (1998) in systems thinking. This phenomenon will affect actions of actors, network and interactions between relevant institutions within the governance framework as confirmed by William-Jones and Graham (2003) and Latour (2005).

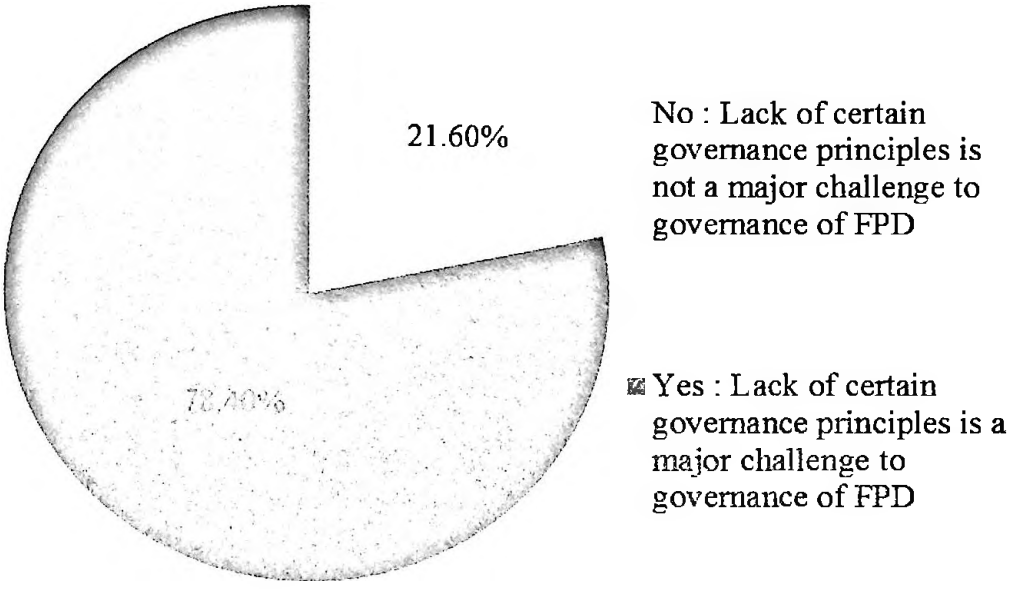

Figure 18: Views of the Policy Group on Lack of certain Governance Principles in FPD

Source: Field data (2012)

From Figures 16, 17 and 18 it is obvious that weakness of governance provisions and principles, and lack of certain governance principles pose serious challenges in FPD. These were major challenges that confirm the claims by Hermosilla (2000) and Bhargava (2006) that weakness of governance constitutes weakness of governance provisions and principles or lack of certain principles.

About 50% of respondents of the Policy Group were of the view that there was little effort made towards capacity building, communication

amongst key stakeholders, weak cross-sectorial partnership, and loose control systems with weak monitoring and evaluation regimes in FPD. Also, stakeholder expectations such as stakeholder satisfaction and equitable benefits were not properly managed thus encouraging unclear roles and responsibilities (Innes and Booher, 2003) and also posing serious challenges on governance.

Views of primary and secondary stakeholders on weak governance in FPD

The views of the primary and secondary stakeholders on weak governance which is characterized in the form of the usage of guidelines (whether they were effective or had limitations), weaknesses in governance principles, and lack of certain governance principles is shown in Table 32. The results show that 87.8 percent of the sampled private FP developers were of the opinion that the guidelines were effective in governance of FPD. The significance of effective guidelines to the private FP developers confirms the same position according to the scoring of the remaining primary and secondary stakeholders. Also, the general low scoring in the limitations of the guidelines is a confirmation that the usage of guidelines had fewer challenges. However, how effective a guideline is depends on its comprehensiveness, quality of formulation and implementation, and the credibility of the stakeholders' commitment to use such guidelines (see also Kaufmann, Kraay, and Mastruzzi, 2007) on measuring dimensions of governance.

Table 32: Views of Primary and Secondary Stakeholders on Weak Governance

Challenges	Taungya Farmers (n = 122)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Effective guidelines	64.6	35.4	100.0	68.8	31.2	100.0	87.8	12.2	100.0	74.4	25.6	100.0
Limitations in guidelines	33.7	66.3	100.0	35.3	64.7	100.0	34.3	65.7	100.0	56.4	43.6	100.0
Weaknesses in G.P.	30.9	69.1	100.0	56.2	43.8	100.0	47.4	52.6	100.0	59.5	40.5	100.0
Lack of certain G.P.	26.8	73.2	100.0	25.0	75.0	100.0	42.9	57.1	100.0	58.5	41.5	100.0

G.P. = governance principles

Source : Field data (2012)

The lowest score of 25 percent by respondents of the seedlings suppliers for lack of certain governance principles in FPD means that governance in FPD encountered some challenges even though they were small. The general scores of primary and secondary stakeholders on the position of weaknesses in governance principles and lack of certain governance principles also meant that serious challenges in governance were encountered as noted. It appears the governance system had some of its parts not functioning thus affecting its wholeness (Infante, 1997).

Some of the challenges mentioned by respondents of the various stakeholders were illegal operations in the plantations, incidence of fire, insufficient material support, land organisation and tenure, organisation of labour, accessibility of land, seedlings supplies and delays in demarcation of land. Certain limitations stated by some respondents of various stakeholders were that, provision of incentives and financial assistance were not forth coming to boost the morale of plantation workers. Also, most respondents emphasized that monitoring and supervision which is very important for plantation developers was ineffective.

Views of expert group on weak governance in FPD

From the expert group discussions, there were different opinions regarding the subject of addressing weak governance as a challenge. Some of the members of the expert group discussion held in Bechem were of the view that weak governance included: the difficulties of managing stakeholders of diverse interests and rights to the resource; information gaps in FPD affected transparency and the knowledge base of stakeholders; promotion of control

mechanisms which do not sometimes favour the local communities staying close to the resource base i.e. forest plantations; unclear expected outcome of programmes, bad policies and procedures; and non-enforcement of laws or introducing few penalties for abuses which were not deterrent enough.

For instance, a governance expert from the expert group discussions held in Bechem said that:

> *Accountability, transparency, rule of law and equity and inclusiveness of stakeholders have been stifled to operate normally hence the weakness in governance in FPD.*

Supporting this, another member from the expert group discussion held in Begoro, a plantation and governance expert stated that:

> *Governance in FPD does not seem to start from the policy level with strict adherence. Transparency and stakeholder consensus building is not ensured at all times, and the rule of law does not work. Plantation inventory data is not entirely linked to digitized maps and is not shared out.*

The above claim means that policy implementation is weak from the start, as a gap is already created for the whole FPD governance system. This is just like a system which has many parts but cannot work together efficiently and effectively due to the absence of a binding objective. Also, the tenets of good governance are not being well applied in FPD, so it creates weak information flow, non-accountability of resources, unfairness in procedures, unbalanced interests which seriously affects the governance process as claimed by Kaufman (2003) and Islam (2003).

Another member from the expert group discussion in Begoro, a policy expert noted that:

The principles of governance in the forest sector are unclear to stakeholders in the programme document. Cross-sectoral partnership and accountability in planning and decision-making is weak. There were no clear guidelines for rigorous monitoring and evaluation to improve the weak control system.

A private FP developer from the expert group discussion held in Bechem echoed:

Stakeholders were not sensitized enough about the FPD programmes, and hence stakeholder roles and responsibilities were not clearly defined. Prescribed sanctions for violating stakeholder roles and responsibilities were absent from the programme document.

Similarly, a chief elaborated that:

Involvement of all relevant stakeholders in policy formulation, implementation and monitoring was low hence sense of ownership was not ensured.

A governance and plantations expert from the expert group discussion held in Juaso pointed out that:

There was no proper technical supervision in community nurseries hence seedlings produced were not of good quality. This affected the surviving rate of the plantations. Also, contracts under FPD were not carried out by professionals thus leading to programme deficiencies. Other observations were that there were no constant logistics supplies

and that prevalent delays in payment of plantation workers wages had direct implications on commitment and productivity.

From the above statements, it can be deduced that implementation of FPD programme was not well understood by most stakeholders. This might have given rise to ownership problems where roles and responsibilities were not clearly defined. The implementation of FPD programmes should have taken into consideration cross-sectoral teams for accountability purposes through supervision, monitoring and evaluation as Cavill and Sohail (2007) indicate in minimizing corruption as was the case in implementing FGM in Zambia and noted by FAO (2012).

Technical supervision, contracts awards, timely supply of logistics and payment of plantation workers should have been given priorities in the FPD from the onset. These underlying factors seriously impinge on the success of governance in FPD as was observed by PGA (2013) in studies in Brazil and Indonesia.

Causes of Challenges in Governance of FPD

The major causes of weak governance as a challenge in FPD were: the level of commitment of stakeholders; the policy direction of the forest sector which does not support FPD; political interference which normally affects the governance processes which might eventually lead to inadequate accountability resulting in corruption; the balancing of individual interests as against the outcome of FPD programme as Bellany (2006) indicates; non-provision of incentives for relevant stakeholders; the irregular flow of financial resources on long-term basis (Evans and Turnbull, 2004; Beeko et

al., 2011); inexperienced and incompetent human resources to support the programme; the untimely provision of material resources (required logistics); ineffective supervision and monitoring; weak institutions (inefficient and ineffective); ineffective guidelines; and unresolved land ownership and access rights.

Views of Policy Group on causes of weak governance in FPD

The views of the Policy Group on the causes of weak governance in FPD are shown in Table 33. About 53.5 percent of the respondents agreed that human resource was the key factor giving rise to weak governance in FPD. This means that if governance of FPD will succeed, then it will depend on the experience and competence of human resources who are actors. If there are forest crimes and conflicts, it takes human resources to solve them. Corruption might take place only through actions or inactions of human resources. So in general, just like the ANT, the human resources form part of the network of the FPD governance system which takes shape by virtue of their relations with one another (Latour, 2005).

Again, from the results, political interference had the lowest score of 18.2 percent by the Policy group responses. This means that political interference can be easily controlled by the same human resources addressed as a key factor above. As noted by Lockwood et al. (2010), governance principles can serve as a platform for self assessment and audit purposes if considered as universally accepted guidelines in FPD. So in this case, political interference cannot derail the governance process entirely, especially where

roles and responsibilities of relevant stakeholders are clear and there is strict adherence to the governance principles.

Table 33: Views of Policy Group on Causes of Governance Challenges in FPD

Causes of Governance Challenges	Percentage Scores Policy Group (n = 37)					
	SD	D	U	A	SA	Total
Commitment	12.9	19.4	48.4	3.2	16.1	100.0
Policy direction	21.9	21.9	34.3	15.6	6.3	100.0
Political interference	36.4	30.3	15.1	15.2	3.0	100.0
Individual interests	20.6	23.5	23.6	17.6	14.7	100.0
Incentives	12.1	21.2	30.3	21.2	15.2	100.0
Financial resources	33.3	13.3	26.7	16.7	10.0	100.0
Human resources	10.7	10.7	25.1	32.1	21.4	100.0
Material resources	23.3	20.0	16.7	26.7	13.3	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. Multiple responses

Source : Field data (2012)

Views of primary and secondary stakeholders on causes of governance challenges in FPD

The views of the primary and secondary stakeholders on causes of weak governance are presented in Table 34. The results show that respondents of seedlings suppliers equally agreed by 100 percent that human and material resources (required logistics) are the key causes of governance challenges in

roles and responsibilities of relevant stakeholders are clear and there is strict adherence to the governance principles.

Table 33: Views of Policy Group on Causes of Governance Challenges in FPD

Causes of Governance Challenges	Percentage Scores Policy Group (n = 37)					
	SD	D	U	A	SA	Total
Commitment	12.9	19.4	48.4	3.2	16.1	100.0
Policy direction	21.9	21.9	34.3	15.6	6.3	100.0
Political interference	36.4	30.3	15.1	15.2	3.0	100.0
Individual interests	20.6	23.5	23.6	17.6	14.7	100.0
Incentives	12.1	21.2	30.3	21.2	15.2	100.0
Financial resources	33.3	13.3	26.7	16.7	10.0	100.0
Human resources	10.7	10.7	25.1	32.1	21.4	100.0
Material resources	23.3	20.0	16.7	26.7	13.3	100.0

SA = Strongly Agree; A = Agree; U = Unsure; D = Disagree; SD = Strongly Disagree. Multiple responses

Source : Field data (2012)

Views of primary and secondary stakeholders on causes of governance challenges in FPD

The views of the primary and secondary stakeholders on causes of weak governance are presented in Table 34. The results show that respondents of seedlings suppliers equally agreed by 100 percent that human and material resources (required logistics) are the key causes of governance challenges in

FPD, and political interference (16.7%) the least. Human and material resources are very important factors that affect governance as affirmed by Bellamy (2006). The views of the human resource (actors) are needed for decision-making which is influenced by using material resources in governance of FPD. The logistical support is very necessary when it comes to raising quality seeds by seedlings suppliers. They need planting materials such as polythene bags, black soil, boots, seeds and irrigation systems during the dry seasons (FSD, 2005).

Table 34: Views of Primary and Secondary Stakeholders on Causes of Governance Challenges in FPD

Causes of Governance Challenges	Percentage Scores			
	Taungya Farmers (n = 122)	Private FP Developers (n = 44)	Seedlings Suppliers (n = 22)	Secondary Stakeholders (n = 65)
Commitment	68.8	78.3	42.9	31.2
Policy direction	37.9	71.4	25.0	62.1
Political interference	51.9	51.0	16.7	48.1
Individual interests	63.6	66.7	50.0	36.4
Incentives	27.7	67.5	20.0	72.3
Financial resources	23.4	84.2	33.3	76.6
Human resources	47.1	47.1	100.0	52.9
Required logistics	32.1	47.0	100.0	67.9

Source : Field data (2012)

Political interference as a factor causing weak governance in FPD according to respondents of seedlings suppliers may not be of significant importance since guidelines prescribed by the plantations department of the FSD excludes such intentions. On the other hand, political interference can be of utmost importance when stakeholder interactions on accountability demand on resource usage are weak. If civil society organizations involved in advocacy work and watch dog functions do not promote mechanism for pointing out poor behaviour or abuse of power and resources as claimed by Cavill and Sohail (2007), then politics comes into play. Political interference can influence governance of FPD negatively when the rule of law, transparency, accountability and equity and inclusiveness as governance principles are low and ineffective (FSD, 2008).

Another equally important factor causing weak governance as a challenge in FPD as agreed by respondents of the Taungya farmers was commitment (68.8%). This factor is so relevant to the success of the FPD programme such that all the necessary incentives and benefits can be provided but if there is no commitment, then the expected outcomes cannot be achieved. Commitment can be built only if there is trust in the whole governance system as indicated by Graham et al.(2003) and IUCN (2007) in strengthening the effectiveness of governance.

Again, from Table 34, 84.2 percent of the sampled Private FP developers, and 76.6 percent of sampled secondary stakeholders agreed that financial resources were the key factors driving weak governance in FPD. Plantation establishment and maintenance in Ghana is expensive (Table 2) and

thus timely flow of funds is necessary. This is a true reflection of the case on the ground since according to FSD (2011), field assessments of forest plantations, revealed that maintenance is hardly carried out due to lack of funds. Hence the success rates of seedlings are low. Also, a lot of funds are needed to support the protection of the forest plantations against illegal activities (FSD, 2006).

Views of Expert Group on causes of weak governance as a challenge in FPD

Some members of the expert group discussion held in Begoro mentioned that a detailed communication plan, as well as a structured periodic review and control measure must be put in place to minimise risks during FPD. Focusing on effectiveness of governance under FPD, one member from expert group discussions held in Begoro stressed that:

> *There were certain elements of politicization of FPD programmes such as awarding contracts to unqualified companies with no forestry background but with strong political links to undertake certain activities in plantation development. These actions resulted in less commitment and mistrust amongst relevant stakeholders.*

One member from the expert group discussion held in Juaso also pointed out that:

> *Some of the causes of weak governance as a challenge in FPD included: exerting little or no oversight responsibility, favoritism and nepotism which encourage corruption; unfunctional government officials and institutions; bureaucracy, exercising control and monopoly by government; low wages of forest plantation workers and*

untimely release of funds and logistics for programmes; and lack of commitment and motivation of stakeholders.

Finally, the statement from another member from the expert group discussion held in Juaso explicitly emphasized that:

Individual interests, political interference and inadequate capacity greatly caused the weakness in the application of governance principles under FPD.

It can be deduced from the above claims that the causes of governance challenges cannot be controlled if all relevant stakeholders do not play their respective roles and responsibilities, as well as not adhering to common policy guidelines. This position is supported by Lockwood et al. (2010). Factors such as political interference, favoritism and nepotism which are more behavioral in nature need more time to address using change management strategies. It can also be deduced from the statements that weak governance can be attributed to low transparency in terms of uneasy access to relevant information, weak accountability in terms of monitoring, non-enforcement of the rule of law during forest offenses, low multi-stakeholder participation, consensus building, equity and inclusiveness have been militating against the progress of FPD as asserted by Mercy Corps (2010), World Bank (2009) and Lockwood et al. (2010).

Effects of Challenges of Governance in FPD

The effects of challenges of governance had serious implications on the outcomes of the FPD programme. The two major effects identified in the

study were: abandonment of FPD programme, and massive deforestation and land degradation.

The primary stakeholders (taungya farmers) abandon the forest plantations after harvesting their crops when practicing MTS. The farmers desert the farms due to frustration from discontinued incentives to the farmers, inadequate transparency in benefit-sharing, untimely flow of funds for maintenance of forest plantations from FC. Also seedlings suppliers become frustrated when planting materials (polythene bags, seeds, pegs, forks and watering cans) and incentives are not provided regularly. All these frustrations and mistrust result into non-commitment to the FPD programme (FSD, 2003).

Massive deforestation and land degradation is encouraged through the escalation of forest crime and corruption, increased conflicts over forest ownership, and access rights as an effect of weak governance as a challenge in FPD. Massive deforestation and degradation becomes a major effect if the rule of law is not enforced, resource owners feel cheated in benefit-sharing, and feel neglected in decision-making by inadequate inclusiveness and low participation in governance of FPD (FRA, 2010; FAO, 2009; FAO, 2006a; FAO, 2006b).

Views of Expert Group on effect of weak governance

The views of experts, solicited on the effects of governance challenges in relation to weak governance, were presented as statements based on the reflection of their understanding of the subject of abandonment of FPD programme. One Taungya farmer from the expert group discussion held in Bechem pointed out that:

Suddenly, incentives have been stopped by the Government, our low wages too are not paid on time, how does Government expect us to take care of our families? Why is there a problem or is the government not interested in the programme?

Clearly, the above statement is a reflection of an unsatisfied stakeholder who is vulnerable and desperate. In this state the farmer could be easily persuaded to carry out an illegal operation in the forest plantation. It can also be deduced that there is lack of information flow, thus transparency might be low in FPD as Kaufmann (2003) and Islam (2003) indicate. It is also clear that the farmer is not well-informed about FPD issues. If this farmer is not well educated through regular participation in multi-stakeholder discussions, he/she might abandon the FPD programme.

Another Taungya farmer stressed in Juaso during the expert group meeting that:

It seems as if the FC is not in the capacity to maintain the forest plantations. I have suffered to raise the seedlings with my family. I don't remember the last time I received any money to hire labourers to weed around the seedlings from FC.

The above statement clearly reflects the situation on the ground. In most cases according to FSD (2006), most plantations have been invaded by weeds which compete with the plantation seedlings; hence the survival rates of seedlings are low. This is due to lack of funds from FC on regular basis for maintenance. Even though the farmer seems committed, with time he might abandon the

programme. The expected output of FPD cannot also be achieved if things remain as they are.

One seedlings supplier during the expert group meeting in Begoro, also noted that:

> *When there are delays in the supply of planting materials and payments from FC, I become so worried because I need to cater for my family and pay the nursery workers. Had it not been for the trust I have built over the years, most of my nursery workers would have abandoned me for owing them so much. Some of the nursery workers believe that I have been paid by FC and have used the money for other things. To be honest with you, I haven't received any payments from FC for the last 8 months. I even owe the rural bank some money.*

It seems the statement above reflects the delay in the flow of financial and material resources from FC which might be as a result of inefficiencies of the governance system. This might affect the delivery of seedlings to plantation sites, therefore affecting the expected output of the FPD programme which has mostly been the case according to FSD (2010). It can be deduced that the seedlings supplier depends solely on FPD for livelihood. It is clear that the stakeholder in question is very committed to the programme but if with time the status quo remains the same, and frustration sets in, then he might abandon the programme.

Statements of experts based on the reflection of their understanding on the effects of governance challenges in relation to weak governance were presented on massive deforestation and land degradation. A chief, who is also

a businessman and owes commercial forest plantation from the expert group discussion held in Juaso echoed that:

> *Due to the inadequate enforcement of the rule of law, illegal operations are on the increase in Juaso. People commit forest crime in broad day light. Most of the plantations floors in Juaso are being mined for gold. Several attempts to bring this act to the attention of the law-enforcers have proved futile.*

Similarly, another chief during the same expert group discussion in Juaso noted that:

> *Most of the youth in Juaso are involved in 'galamsey' in the forest reserves where most of our teak plantations are sited. Infact, it is a great worry to most of us.*

The above two statements from the Juaso expert group discussions reflects how illegal activities is on the increase. The rule of law is not being enforced means that it might be compromised or weak. This means that some of the culprits might have managed to find middle grounds with some of the resource owners (Chiefs, Traditional Authorities, stool land owners) who are already indulged in corruption.

With the youth involvement in this kind of 'galamsey' menace, without constant education, the situation might lead to over exploitation of the resources. Without the FC and Government re-strategizing to apply certain governance models like community governance as noted by Rice (2003) and co-management systems (Sherry and Halseth, 2003) the status quo will

remain. Other governance principles such as participation and inclusiveness needs to be improved in governance of FPD in the Juaso forest district.

A governance expert from the expert group discussion held in Begoro pointed out that:

> *As a governance expert I have been dealing with a lot of resource owners who feel cheated because the expected benefits from the FC are not forth coming.*

A chief from the expert group discussions held in Bechem said that:

> *Sometimes I feel like reclaiming my land from the Government and use it for cocoa farming or surface mining for gold, where the benefits are high. How can one be a resource owner and do not take part in decision-making on the resource? Infact, I feel cheated.*

From the above statements it is clear that most stakeholders are becoming dispassionate about the FPD programme due to low transparency, participation, equity and inclusiveness, inadequate accountability and rule of law in the governance processes. The moment the question of trust and ownership comes into play, then corruption sets in, and stakeholders might begin to find ways and means of encouraging illegal operations as they are dissatisfied with the current dispensation about governance in FPD (FC, 2013).

When this apathy situation occurs, then it might trigger the effect of weak governance which includes abandonment of the FPD programme and over exploitation of the resource, hence massive deforestation and land degradation takes over as Bellamy (2006) and Canada Corps (2006) indicate.

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Governance issues related to Ghana's 1994 Forest and Wildlife Policy

The significance of the Ghana's 1994 forest and wildlife policy (Chapter Three) in relation to governance in FPD, determines the level of stakeholder participation, equity and inclusiveness, accountability, transparency in resource allocation, and how stakeholder interests are protected in the policy through legal instruments as pointed out by Sud et al. (2012). This policy is to serve as a guide to governance issues such as stakeholder involvement in conflict management, ownership and access rights to resource, benefit-sharing mechanism, utilization and development of forest to ensure sustainability and how the rule of law is enforced. To date, the forestry development master plan (1996-2020) to guide the implementation of the 1994 forest and wildlife policy has not been effective (Agyeman et al., 2007; FSD, 2011; Marfo, 2010).

Views of stakeholders on Ghana's 1994 forest and wildlife policy

Governance issues in relation to Ghana's 1994 Forest and Wildlife Policy in FPD were examined by ascertaining whether the respondents were familiar with the policy, issues in the policy and how they should be addressed. From Table 35, it is clear that apart from about 89.2% of the respondents of the Policy Group who agreed to have read the policy, only 10.9 to 27.1 percent of the rest of the respondents had read the policy. The result indicates that the Policy Group were more well informed than the primary and secondary stakeholders. This is consistent with the assertion by Lockwood et al. (2010) on knowledge acquisition through reading.

Table 35: Views of Stakeholders on Governance Issues related to Ghana's 1994 Forest and Wildlife Policy

Issues	Percentage Scores														
	Policy Group (n = 37)			Taungya Farmers (n = 122)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Read 1994 forest and wildlife policy document	89.2	10.8	100	10.9	89.3	100	21.1	78.9	100	23.3	76.7	100	27.1	72.9	100
Policy addresses governance issues in FPD	62.2	37.8	100	60	40	100	80	20	100	78.6	21.4	100	84.2	15.8	100

Source: Field data (2012)

Also, the result from Table 35 might be due to the high illiteracy rate amongst the primary and secondary stakeholders or that there might have been a few or no translated versions of the policy document for them to read. Another reason may be that the respondents were not aware of the existence of such an important document or were not involved in the formulation and implementation process of the policy, hence ownership becomes questionable. This means that stakeholder participation was ineffective as indicated by Mercy Corps (2010) in transparent decision making processes and monitoring systems of resource governance. The awareness of the existence of the policy and the involvement in its formulation and implementation reflects the degree of transparency, participation and equity and inclusiveness amongst the stakeholders as addressed in Chapter Five.

Although from the results, most respondents in the range of about 60 to 84.2 percent agreed that the policy addresses governance issues in FPD, some were of the opinion that very important issues like the following were not addressed: 1) transparency in financial disbursements; 2) accountability of stakeholders to institutions and vice-versa ; 3) stakeholder participation in decision making and activity planning; 4) enforcement and punitive measures of rule of law; 5) perennial fire-outbreaks and response to bush fires; 6) suitable farming activities and practices; 7) state support for subsidies; 8) technical advice; 9) supervision and maintenance of plantations; 10) availability of policy documents; 11) supply of equipment; 12) payment of plantation workers; 13) involvement of stakeholders in policy formulation; 14) involvement of landowners in selection of plantation sites in regions; 15)

benefit sharing for migrant or settler farmers on lands earmarked for FPD; 16) access rights of migrant taungya farmers.

In the policy document, how governance issues were addressed according to some respondents, were that; participation and inclusiveness of all relevant stakeholders were clearly stated in the policy statement. This seemed to be promoted through forest management planning, FPD and forest protection (FSD, 2003). Stakeholder participation in decision making and activity planning were not clear in the policy.

There were also no policy guidelines that dealt with corruption and accountability. The absence of such governance provisions in the policy are serious and contrary to the claim by Kaufmann, Kraay, and Mastruzzi (2007) if corruption needs to be controlled. Although governance provisions in relation to FPD in the 1994 Forest and Wildlife policy have not been well addressed, in general, there have been no serious commitments by successive governments to provide the required resources for implementation of such provisions (Agyeman et al., 2007).

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CHAPTER EIGHT

COMPLEXITY OF GOVERNANCE IN FOREST PLANTATION DEVELOPMENT

Introduction

Complexity in governance occurs when multiple actors having various perspectives, interests, entitlements, knowledge, capabilities, values and overlapping categories of human diversity such as gender, age, ethnicity, religion, wealth and proximity of resources have to reach an expected outcome (equitable benefits, stakeholder satisfaction and sustainability) (Pound et al., 2003; Bresser & Kuks, 2003; Bingham et al., 2005; Lebel et al., 2006). Lockwood et al. (2010) indicate that participatory and deliberative models of governance are more effective in harnessing complexity because they increase interaction within systems. These interactions are normally actions of actors and networks between and among institutions, individuals, and groups (William-Jones & Graham, 2003; Latour 2005).

In Forest Plantation Development, complexity in governance generates unpredictable and hard to control expected outcomes and, for this reason, defies such well-known policy strategies as coordination from the government (MLNR and FC), and reduction of the problem to a limited number of controllable variables. This is why it is very important that for effective governance, FPD is considered as a complex system with a set of elements connected in order to perform a unique function that cannot be achieved by any of the parts alone as Sussman (2000) and Ferreira (2001) indicate in systems thinking.

This chapter deals with the complexity of governance in FPD. First, the chapter considers how multiple actors perceive the complexity of governance by examining feedback and control mechanism as well as output and expected outcome of governance in FPD. Secondly, it considers how the components of governance relate to each other such as governance principles and stakeholder interactions, stakeholder interactions and output, output and expected outcome, output and feedback mechanism, feedback mechanism and application of governance principles, and control mechanism and stakeholder interactions. Thirdly, the scope of complexity is examined in the form of stakeholder interactions, degree of satisfaction with stakeholder interactions, and association or connectedness with stakeholders in governance of FPD. The harmonization of perceptions, expectations and dimensions and scope of complexity results in the effectiveness of governance.

Feedback Mechanism in Governance of FPD

Incorporating feedback mechanism in FPD ensures that various parts of the governance system remain closely aligned and focused on achieving the expected outcome. It assists to improve accountability and monitoring of the effectiveness of FPD. It also helps to address potential conflict areas and allows room for review of strategies to reshape direction, resulting in higher stakeholder satisfaction (Roche, 2009; Björkman et al., 2009).

Views of Stakeholders on Feedback Mechanism in FPD

The views of stakeholders on feedback mechanism are as shown in Table 36. About 84% of the Policy Group respondents agreed that feedback mechanism is used in governance of FPD. The use of feedback mechanisms in

governance is confirmed by Maidell et al. (2012) as a benefit to the implementation of a common framework used to assess and monitor forest governance in Burkina Faso, Cameroon and Uganda. Feedback mechanism is needed to ensure accountability and transparency in monitoring the entire governance process in FPD which is in line with Bjorkman et al. (2009) in community-based monitoring. Also, in Zambia, GFI governance framework was tested and feedback mechanism was introduced to support decision making as indicated by FAO (2012). This directly confirms the perception of the Policy Group who scored the highest mark (84%) with respect to feedback mechanism usage in governance of FPD.

The results also show that both respondents of seedlings suppliers and private FP developers agreed to the fact that the usage of feedback mechanisms are important in the governance of FPD by scoring 100 percent. Indeed, there was general agreement by all stakeholders that feedback mechanisms are important in addressing challenges in FPD as the scoring ranged between 87 and 100 percent.

However, the claim by stakeholders as to the importance of feedback mechanism did not manifest in the agreement as to whether there were feedback mechanisms in governance of FPD or not. Apart from the respondents of Policy Group who scored 84.0 percent as the highest, the scores from the rest of the stakeholders were low. This suggests that there was a general weakness in feedback mechanism in governance of FPD. This weakness as indicated by PGA (2013) can be addressed by mainstreaming governance issues.

Table 36 : Views of Stakeholders on Feedback Mechanism in Governance of FPD

Issues	Percentage Scores														
	Policy Group (n = 37)			Taungya Farmers (n = 122)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Usage in FPD	84.0	16.0	100.0	58.4	41.6	100.0	26.3	73.7	100.0	56.4	43.6	100.0	42.6	57.4	100.0
Importance in FPD	95.7	4.3	100.0	97.7	2.3	100.0	100.0	0.0	100.0	100.0	0.0	100.0	87.0	13.0	100.0

Source : Field data (2012)

Views of experts on feedback mechanism in FPD

During the expert group meetings, about four members from each expert group indicated that they occasionally participated in workshops and meetings organized by MLNR or FC/FSD to deliberate on FPD issues but hardly got feedback. One farmer from the expert group discussion held in Juaso forest reserve said that:

> *I have never received any feedback from any workshop before. This statement I have made is a likely statement from all my colleague stakeholders on this matter.*

A Chief from the expert group discussions meeting in Begoro also re-echoed the feedback mechanism issue by stating that:

> *I do not remember the last time that I received minutes from these meetings. During workshops, we make a lot of contributions but we do not get any feedback whether the contributions have been committed or implemented.*

The statements from the expert group meetings above confirm that feedback mechanism in governance of FPD was generally weak.

Control Mechanism in Governance of FPD

In order to determine how effective a natural resource governance system is, it is very necessary to check on its controls which act as regulatory mechanisms or processes for stakeholder behaviour and interactions in an attempt to gain conformity and compliance to the objectives for which the programme was set.

Views of Policy Group on control mechanisms in governance of FPD

The views of the Policy Group on control mechanisms in FPD are shown in Figure 19. About 52 percent of the respondents of the Policy Group were in agreement that control mechanisms had affected governance arrangements in FPD, whilst 26 percent were in disagreement. This result shows that control mechanisms like climate change, REDD+, agreements, laws, international conventions are significant in governance of FPD.

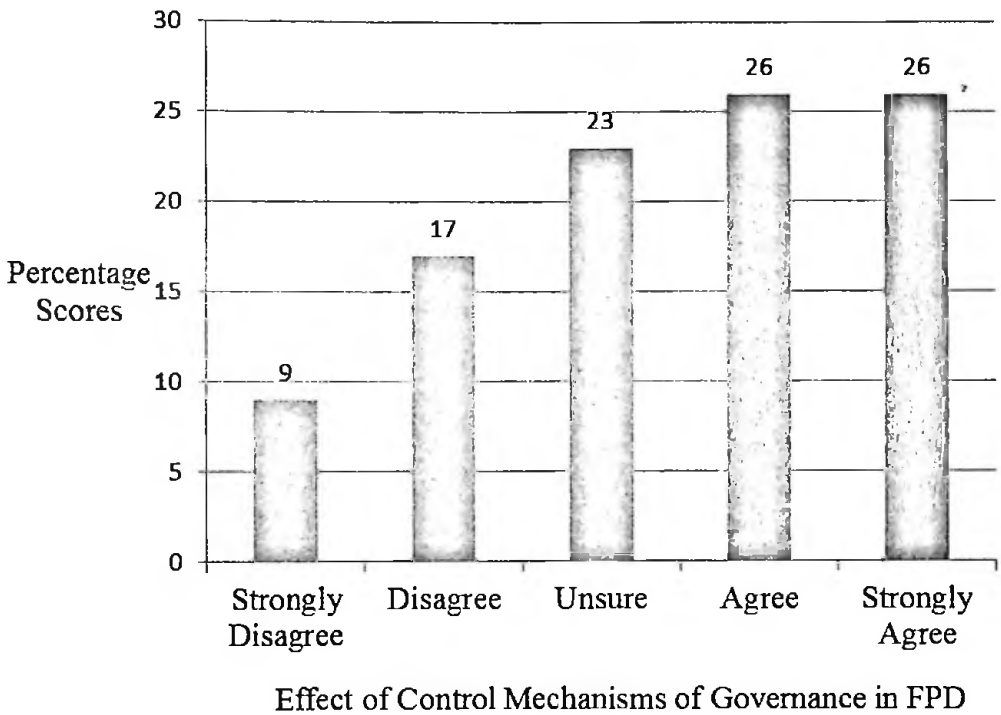

Figure 19: Views of the Policy Group on Control Mechanism in Governance of FPD

Source: Field data (2013)

The importance of control mechanisms in governance of the forest sector in general and FPD in particular cannot be overemphasized. According to Beeko et al. (2011), Ghana has received a lot of development assistance

allocated to the forest sector in the last two decades. This is as a result of Ghana being party to most of these conventions and agreements. The recent agreement, the Voluntary Partnership Agreement, was signed in 2005. Most of these control mechanisms comes with certain prescriptions which support sustainability of the natural resource.

Views of primary and secondary stakeholders on control mechanisms in governance of FPD

About 71 percent of the respondents of Private FP Developers agreed that control mechanisms have an impact on governance of FPD (Figure 20). As indicated by all respondents of the primary and secondary stakeholders except the Taungya farmers, control mechanisms have manifested in increasing commitments by international conventions to support plantation related programmes. Most private FP developers were recipients of the HIPC plantation funds (FSD, 2008). This means that the taungya farmers might not be well-informed about issues relating to control mechanisms in governance of FPD. Ironically, taungya farmers face the actual impact of climate change on the ground by depending on the slightly changed weather conditions to plant but are not fully aware of the effect (FSD, 2012).

Various departments and units such as Climate Change, Timber Validation and NREG Secretariat have been setup in the FC headquarters as a result of some of these control mechanisms. Ghana is beginning to witness the negative effects of some of these natural occurrences; for example climate change, where rainfall and temperature patterns are deviating from the norm (FSD, 2012).

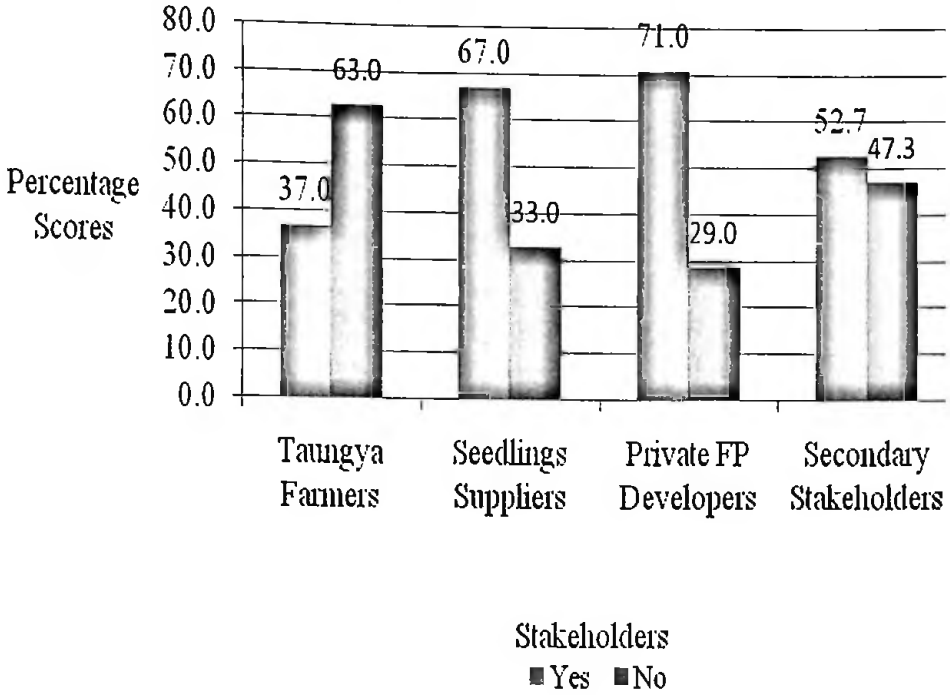

Figure 20: Views of the Primary and Secondary Stakeholders on Control Mechanism of Governance in FPD

Source: Field data (2012)

Output of Governance in FPD

In this section, output of governance was determined by the respondents of the Policy Group agreeing to the fact that revenue was generated in FPD. The rest of the respondents, primary and secondary stakeholders, determined output in terms of whether agreements were signed, as well as funds received from any government source to support any FPD activities. For Taungya farmers and private FP developers, output was further determined by plantation area established and released (off-reserve) whilst for seedlings suppliers, it was the number of seedlings supplied. If the output of governance is high then it means that the system is effective and well

coordinated by the various parts (input, transformation, feedback, expected outcome).

Views of the Policy Group on output of governance in FPD

Revenue generation as an output of governance in FPD is shown in Figure 21. About 86 percent of the respondents from the Policy Group agreed that FPD has generated revenue as an output to the FPD programme. According to FAO (2001) and FSD (2005), there is evidence of revenue generation which confirms the claim by the respondents of the Policy Group through the supply and demand for wood and wood products in Ghana. Revenue generation has also been manifested in employment generation for forest fringe communities, plantation owners and workers, and timber processors. In FPD, the MTS supports significantly increased food production due to the interspersing of plantation trees with food crops which generates income for the farmers and the state in general as indicated in FSD (2007).

Views of the primary and secondary stakeholders on the output of governance in FPD

The views of the respondents of primary and secondary stakeholders on the output of governance (agreements signed and government funds received) are shown in Table 37. Clearly, respondents of Taungya farmers scored the highest in terms of agreements signed (75.5%). The result is a true reflection of what pertains in the operations of the plantations department of the FC. Majority of the Taungya farmers signed benefit sharing agreements to express their commitment in the participatory process in FPD (FSD, 2003-2008 and MLNR, 2008). The government funds received by stakeholders

through the HIPC plantation secretariat were indeed inadequate for FPD programme according to the FSD (2008) report. This confirms the low scores by all respondents of stakeholders on the output of government funds received.

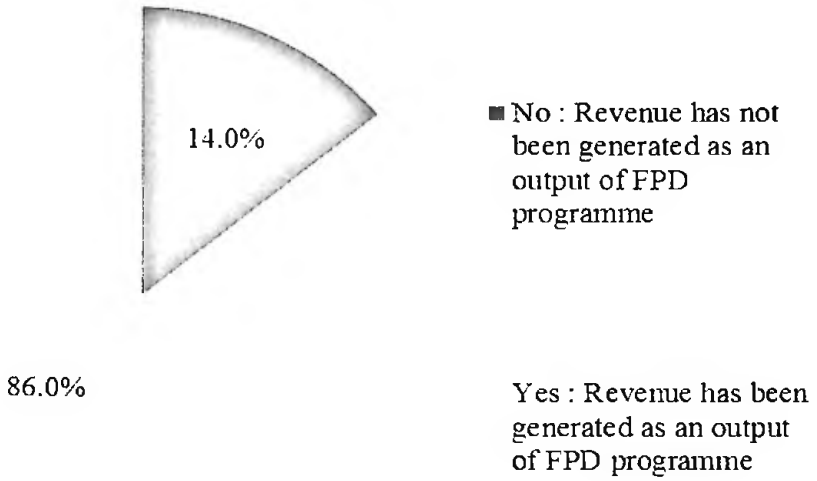

Figure 21: Views of Policy Group on Output of Governance as Revenue Generation in FPD

Source: Field data (2012)

Table 38 illustrates plantation areas in hectares released and established by Taungya farmers and Private FP Developers. About 88 percent, the highest score of the respondents of Private FP Developers, agreed that small scale off-reserve plantation areas (up to 500 Ha) were released and about 81.4 percent of small scale plantations were established.

The results confirm that large scale commercial farming was not practiced by Taungya farmers and private FP developers. No large scale establishment of plantations explains the challenge of access to large tracts of off-reserve land for commercialization of FP (see also FSD, 2008; Mayers, 2000).

Table 37 : Views of Primary and Secondary Stakeholders on Output (Agreements Signed and Government Funds Received) of Governance in FPD

Output	Percentage Scores											
	Taungya Farmers (n = 37)			Seedlings Suppliers (n = 22)			Private FP Developers (n = 44)			Secondary Stakeholders (n = 65)		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Agreements Signed	75.5	24.5	100.0	41.9	58.1	100.0	41.9	58.1	100.0	38.3	61.7	100.0
Government Funds Received	14.4	85.6	100.0	22.0	78.0	100.0	22.0	78.0	100.0	11.7	88.3	100.0

Source : Field data (2012)

Table 38 : Views of Taungya Farmers and Private FP Developers on Output (Plantation Area Established and Released) of Governance in FPD

Plantation Area Type	Percentage Scores							
	Taungya Farmers (n = 122)				Private FP Developers (n = 44)			
	Small Scale (Up to 500 Ha)	Medium Scale (500 - 1000 Ha)	Large scale (>1000 Ha)	Total	Small Scale (Up to 500 Ha)	Medium Scale (500 - 1,000 Ha)	Large scale (>1,000 Ha)	Total
Plantation area established	79.8	20.2	0.0	100.0	81.4	18.6	0.0	100.0
Plantation area released	81.5	18.5	0.0	100.0	88.0	12.0	0.0	100.0

Source: Field data (2012)

Figure 22 depicts that about 50 percent, the highest score for respondents of seedlings suppliers, agreed to the fact that seedlings supplied belonged to the medium scale category (550,000 to 1,100,000). The supply of seedlings is a very important component of FPD programme. The success rate of plantations largely depends on the quality of seedlings as well as environmental conditions. The production of quality seedlings by Seedlings Suppliers depends on the materials, incentives and technical advice given by FSD through its plantation department as noted in FSD (2003). Due to economics of scale, the seedling nurseries are normally sited in the forest fringe communities close to the plantation sites.

Expected Outcome of Governance in FPD

In this section, expected outcome of the FPD is evaluated by respondents of all stakeholders based on equitable distribution of benefits to communities and stakeholder satisfaction in FPD. The expected outcome of any programme is determined by what the initial terms of reference set out to achieve over a long-term period. In Ghana, various regimes of FPD programmes (Table 5) have been carried out with different expected outcomes (stakeholder satisfaction, equitable benefits, gender, the poor and sustainability) which have not been successfully achieved (FSD, 2012).

Views of stakeholders on expected outcome of governance in FPD

The views of stakeholders on the expected outcome of governance in FPD are shown in Table 39. About 72.2 percent of the respondents of the Private FP Developers agreed that there was equitable sharing of benefits for stakeholders.

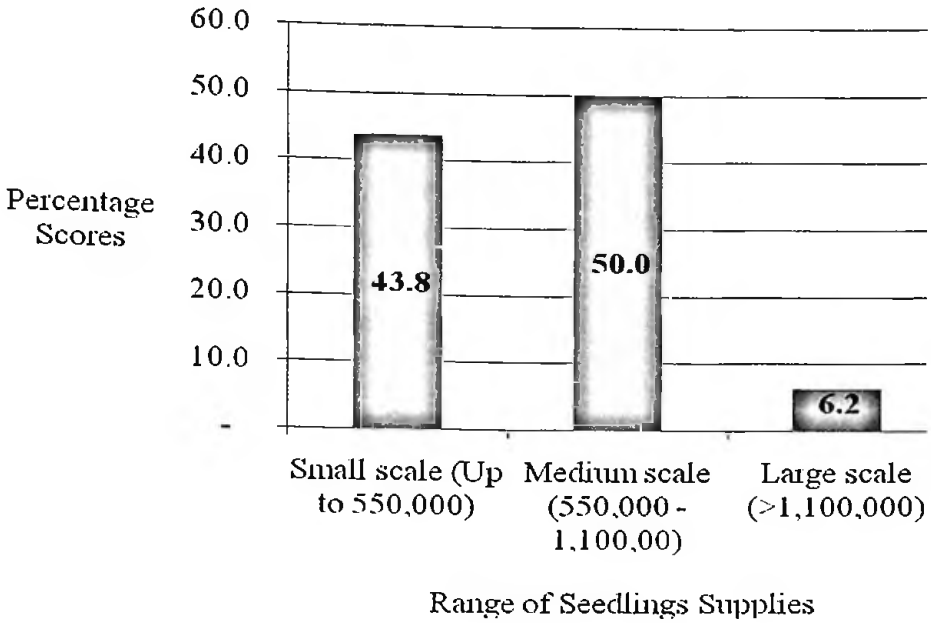

Figure 22: Views of Seedlings Suppliers on Output of Governance (Rating the Number of Seedlings Supplied) in FPD

Source: Field data (2012)

This result was reflective on the ground according to FSD (2008), where it was indicated that benefits were paid to stakeholders, though not timely but followed laid down payment policies and procedures from FC. Returns of payments are sent to the district assemblies for accountability purposes (FC, 2008b). Also, 81.4 percent of the respondents of the Private FP Developers agreed that stakeholders were satisfied with FPD programme. Generally, all stakeholders were satisfied with the FPD programme due to the evidence of the high scores by respondents.

Table 39 : Views of Stakeholders on Expected Outcome of Governance in FPD

Expected Outcome	Percentage Scores														
	Policy Group n = 37			Taungya Farmers n = 122			Seedlings Suppliers n = 22			Private FP Developers n = 44			Secondary Stakeholders n = 65		
	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total
Equitable Distribution of Benefits	71.5	28.5	100.0	50.0	50.0	100.0	41.2	58.8	100.0	72.2	27.8	100.0	62.3	37.7	100.0
Stakeholder Satisfaction	57.4	42.6	100.0	76.0	24.0	100.0	72.2	27.8	100.0	81.4	18.6	100.0	59.6	40.4	100.0

Source : Field data (2012)

Governance Principles and Expected Outcome of Governance in FPD

This section uses cross-tabulations to show the relationship (or lack thereof) between governance principles and the expected outcome of governance in FPD. It also shows which relationship is significant according to the Chi-Square test. The results from Tables 40 and 41 showed significance for Taungya farmers. When the degree of application of governance principles, specifically, transparency and participation increased, expected outcome also increased. This supports the claim by IUCN (2007) and Graham et al. (2003) that where there are interests, needs, and aspirations of the community in decision-making, there is a high level of stakeholder satisfaction.

The views of Taungya farmers on participation and stakeholder satisfaction are as shown in Table 40. The results of the relationship between the application of participation and stakeholder satisfaction showed that there was a very high positive significant association ($p=0.000<p=0.05$). This result means that the more stakeholders were involved in decision-making in FPD, the more they became satisfied as Mercy Corps (2010) and Turnhout et al. (2010) indicate. As indicated by FSD (2008), participation which should improve stakeholder involvement and effectiveness of multi-actor dialogue processes such that actors could exchange their views on issues were inadequate.

The views of Taungya farmers on the relationship between transparency and stakeholder satisfaction are as shown in Table 41. The results of the relationship between the application of transparency and stakeholder satisfaction showed that there was a high significant positive relationship

($p=0.002<p=0.05$). This means that as transparency increases, stakeholder satisfaction also increases. Hence there are less conflicts and the confidence of stakeholders in the governance processes become entrenched.

Table 40: Views of Taungya Farmers on Participation and Stakeholder Satisfaction in FPD

Participation	Stakeholder Satisfaction					
	No		Yes		Row Total	
	f	%	f	%	F	%
Disagree	7	46.7	8	53.3	15	100.0
Unsure	9	45.0	11	55.0	20	100.0
Agree	7	10.4	60	89.6	67	100.0
Column Total	23	22.5	79	77.5	102	100.0
Chi-Square Test		Value	df		Asymp. Sig. (2-sided)	
Pearson Chi-Square		16.386[a]	2			0.000

Source: Field data (2012)

The application of transparency as one of the significant governance principles in FPD directly supports the assertion by Kaufmann (2003) and Islam (2003) that transparency ensures that there is flow of accessible, timely, and relevant information for prompt decision making. Without relevant information, contribution towards better analysis, monitoring and evaluation, conflict management and planning will be difficult in the governance of FPD.

Table 41: Views of Taungya Farmers on Transparency and Stakeholder Satisfaction in FPD

Transparency	Stakeholder Satisfaction					
	No		Yes		Row Total	
	f	%	f	%	F	%
Disagree	10	41.7	14	58.3	24	100.0
Unsure	7	36.8	12	63.2	19	100.0
Agree	6	10.2	53	89.8	59	100.0
Column Total	23	22.5	79	77.5	102	100.0

Chi-Square Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.422[a]	2	0.002

Source: Field data (2012)

Output and Expected Outcome of Governance in FPD

This section examines the relationship (or lack thereof) between output and the expected outcome of governance in FPD. It also shows which relationship is significant according to the Chi-Square test. Apart from the scores of respondents from the Policy Group and Private FP Developers that showed insignificant relationships between the output and expected outcome of governance in FPD, scores from the other primary and secondary stakeholders were significant.

The most significant relationship ($p=0.002<p=0.05$) existed between signing of agreements and stakeholder satisfaction according to the views of Taungya farmers as shown in Table 42. It is clear from the results that if the signed agreements increase, stakeholder satisfaction also increases. This means that more stakeholders are becoming committed to the FPD programme

because their expectations are being met or there might be other unknown benefits which need further investigation.

Paradoxically, a signed agreement (output) is not a means to an end (expected outcome). The agreements (BSAs and LLAs) signed show the commitment between the Policy Group and the primary and secondary stakeholders. Commitment can be eroded if stakeholders are not satisfied with FPD programme. Also, the expected outcome of the FPD programme may not be met due to other underlying factors, such as constant flow of financial resources and required logistics which Hall (2013) and FSD (2008) indicate.

Table 42: Views of Taungya Farmers on Signing of Agreements and Stakeholder Satisfaction in FPD

Signing of Agreements	Stakeholder Satisfaction					
	No		Yes		Row Total	
	f	%	f	%	F	%
No	12	42.9	16	57.1	28	100.0
Yes	11	14.7	64	85.3	75	100.0
Column Total	23	22.3	80	77.7	103	100.0
Chi-Square Test	Value		df		Asymp. Sig. (2-sided)	
Pearson Chi-Square	9.342[a]		1			0.002

Source: Field data (2012)

Stakeholder dissatisfaction can arise as a result of inadequate or lack of application of governance principles such as transparency, accountability, rule of law, participation, consensus building, equity and inclusiveness, responsiveness which tend to distort stakeholder expectation in natural

resource governance (Lockwood et al., 2010; World Bank, 2010; Kaufmann et al., 2007; IUCN, 2007).

Output and Feedback Mechanism of Governance in FPD

In this section the relationship between output and the feedback mechanism of governance in FPD and its significance are examined. The results from the study show that apart from the scores of respondents from the Policy Group and seedlings suppliers that were significant, scores from other primary and secondary stakeholders were insignificant.

Table 43 shows the most significant relationship ($p=0.001<p=0.05$) between signing of agreements and addressing challenges through feedback mechanism in FPD by respondents of the Private FP Developers. It is also clear from the results that as signing of agreements increase, the addressing of challenges also increase. This trend is generally obvious because it means that as the stakeholders in FPD increase, so does the signing of agreements to commit them, and hence the challenges generated by the governance system also increase.

Feedback mechanisms according to Bjorkman et al. (2009) are very important tools for addressing such challenges to improve effectiveness of programmes resulting in higher stakeholder satisfaction. Similarly, incorporating feedback mechanism into programmes helps to improve accountability and effectiveness as indicated by Roche (2009). In conclusion, results obtained from Table 43 show that feedback mechanisms are considered very essential to enable correction and improvement in the output of the FPD programme.

Table 43: Views of Private FP Developers on Signing of Agreements and Addressing Challenges of Governance in FPD

Signing of agreement	Addressing challenges					
	No		Yes		Row Total	
	f	%	f	%	F	%
No	15	65.2	8	34.8	23	100.0
Yes	2	12.5	14	87.5	16	100.0
Column Total	17	43.6	22	56.4	39	100.0
Chi-Square Test	Value		df		Asymp. Sig. (2-sided)	
Pearson Chi-Square	10.665[a]		1			0.001

Source: Field data (2012)

Control Mechanism and Stakeholder Interactions in FPD

This section determines the relationship between control mechanism and stakeholder interaction of governance in FPD. It also shows which relationship is significant according to the Chi-Square test. The significant relationship ($p=0.040<p=0.05$) between control mechanisms and interactions with Taungya farmers is shown in Table 44.

This means that the prevailing rules and regulations, agreements and conventions surrounding governance of FPD seriously affect the relations amongst stakeholders by strengthening the accountability demand of resource usage as indicated by Cavill and Sohail (2007). Similarly, according to Graham et al. (2003) the control mechanism provides a governance framework which allows various stakeholders to structure their relationships and build trust over a long term period.

them support the decentralization processes as indicated in Ribot et al. (2006). Appendices 5, 6 and 7 represent results on issues of complexity.

Appendix 5 represents views of stakeholders on stakeholder interactions in FPD. About 90.6 percent of respondents of the Policy Group were strongly in agreement that they mostly had interactions with FC/FSD, whilst about 30 percent agreed to have had least interactions with District Assemblies. This result is quite obvious for FC/FSD as they are the responsible implementing and regulatory agency for the government on FPD issues. FC/FSD has representations at the districts and regions of Ghana (Forestry Commission Act 571 of Table 4).

The District Assemblies represent the government administratively at the districts but do not play a very active role in the operations of FPD. They provide the framework for policy implementation at local level, conflict resolution, land use planning and parallel role in forest governance as indicated in FSD (2003), hence the low scoring. On the contrary, it is important that power and resources increase at a level that is closer, better understood and more easily influenced by the forest fringe communities as in Sahel according to Hilhorst (2008) using the District Assemblies.

For the respondents of Taungya farmers, about 75.6 percent of respondents were in agreement that they mostly had interactions with FC/FSD. This finding is as a result of the mandate of FC/FSD as all the policies, guidelines and directives from the ministry would have been carried out through various participatory forms on behalf of the ministry at the local levels by FC/FSD, the implementing agency. The lowest score (8.2 %) agreed by the respondents of the Taungya farmers to have had least interactions with MLNR

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represents durbars for launching FPD programmes or plantation site visits by the minister responsible for MLNR according to FSD annual reports (2003 - 2008).

About 72.2 percent of the respondents for Seedlings Suppliers were in agreement that they mostly had interactions with FC/FSD, whilst about 7.1 percent agreed to have had least interactions with MLNR. This result is similar to that of the interactions with the Taungya farmers, and confirms the roles and responsibilities set by the plantations department of FSD of the FC. The seedlings suppliers deal mostly with the FSD/FC on technical issues, incentives, extension services and demand for seedlings (FSD, 2003).

Stakeholder interactions in FPD as scored by respondents of the Private FP Developers shows that about 65.9 percent of respondents agreed that they mostly had interactions with both FC/FSD, whilst none agreed to have had interactions with District Assemblies. This may be explained by the nature of business of the Private FP Developers who interact with FSD/FC through periodic visits to ensure compliance with approved reforestation plans. Hence conflicts are managed by the Private FP Developers who concentrate on degraded forest reserve land and almost all the benefits (90%) come to them as sole investors in FPD (MLNR, 2008).

About 64.7 percent of respondents of the Secondary stakeholders were in agreement that they mostly had interactions with FC/FSD, whilst 25.8 percent agreed to have had least interactions with both Taungya farmers and Stool lands/Chiefs. This may be explained by the fact that Secondary stakeholders constantly interacted with FC/FSD based on the Forestry Commission Act 571 as well as BSA with the Secondary stakeholders

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(MLNR, 2008). The low interactions with Taungya farmers and Stool lands/Chiefs is as a result of conflict management and land use issues being discussed amongst secondary stakeholders themselves (FSD, 2005).

The results generally show that there are more interactions with the FC/FSD which is mandated as per the Commission's Act 571 to deal with FPD in Ghana. The least interaction is that with the District Assemblies which are not directly involved in plantation work but are responsible for ensuring implementation of government's policy at the local level. To achieve the effectiveness of governance of FPD, all relevant stakeholders need to be fully connected or related with each other as indicated by Bressers and Kuks (2003), and Bingham et al. (2005) in resource governance.

Appendix 6 represents views of stakeholders on the degree of satisfaction with stakeholder interactions in FPD. This scope of complexity brings out the weaknesses and strengths in stakeholder relations which are needed in effective resource governance according to Ros-Tonen et al. (2010) during countless interactions and interconnectivities amongst stakeholders.

About 48.5 percent of respondents for the Policy Group, being the highest score, agreed that they were satisfied with stakeholder interaction on FPD issues with both Taungya Heads and Forest Fringe Communities. Although in Appendix 5, FC/FSD had the highest stakeholder interactions, the Policy Group is more satisfied with the interaction with the Taungya Heads and Forest Fringe Communities. As indicated by the 2007 annual report of NFPDP the success of the FPD mainly depended on how committed the Taungya Heads and Forest Fringe Community members were with respect to FPD activities. This means that the FC/FSD needs to do more in terms of

technical supervision as an implementing agency of the MLNR according to the mandate of the FC to derive the satisfaction of the Policy Group (FSD, 2008).

The least agreed score (16.6%) for degree of satisfaction with stakeholder interactions is for District Assemblies. This lowest score interestingly coincides with the least score of interactions in appendix 5 which is explained by the roles and responsibility of District Assemblies in FPD.

The high scores of neutrality (unsure position) ranging between 16.1 to 42.4 percent may have affected the results either negatively or positively. The large degree of neutrality shows that most stakeholders were not that well-informed (knowledgeable) about FPD issues which according to Lockwood et al. (2010) are key in developing solutions to complex problems like governance of FPD.

For Taungya Farmers, it was noted that about 76.8 percent of respondents agreed to the fact that they were satisfied with stakeholder interactions on FPD issues by FC/FSD, with the least agreement being 7.3 percent for District Assemblies. This result explains the same trend of scoring in appendix 5 which is as a result of the roles and responsibilities of FSD/FC and District Assemblies in the whole FPD programme.

About 62.5 percent of respondents of Seedlings Suppliers agreed to the fact that they are highly satisfied with stakeholder interaction on FPD issues by FC/FSD, whilst, the least agreement being zero percent for both Stool lands/Chiefs and District Assemblies. The results show that Seedling suppliers are absolutely not satisfied with the relations with Stool lands/Chiefs and District Assemblies. Stool lands/Chiefs and District Assemblies can be more

involved according to FSD annual reports (2003-2008) in releasing of lands for nurseries, use of irrigation systems, tractors for ploughing, conflict management and for participatory monitoring of FPD programmes.

With respect to respondents for the Private FP Developers on the degree of satisfaction of stakeholder interaction with FPD issues, about 73.7 percent agreed that FC/FSD had the highest score, whilst District Assemblies scored the least with zero percent. This result explains the roles and responsibilities of FC/FSD and District Assemblies, and how well-informed stakeholders are with respect to governance of FPD.

For Secondary Stakeholders, about 61 percent of respondents agreed to the fact that they were satisfied with stakeholder interaction on FPD issues by FC/FSD, whilst, the least agreement being 23 percent for MLNR. The scoring of the respondents of the secondary stakeholders is not far from the reality based on the roles and responsibilities played by FC/FSD and MLNR as a Policy Group as mandated by Law.

Generally, the result shows a fair degree of stakeholder satisfaction with FPD issues across all relevant stakeholders. This may be explained by the secondary stakeholders playing a more general role in the governance of FPD. The degree of stakeholder satisfaction is generally okay with the policy group and primary stakeholders, but is a bit low with the secondary stakeholders. This explanation may be due to the fact that the secondary stakeholders, especially the DAs and TAs have not been properly engaged in the governance process or their roles and responsibilities have not been properly defined in the FPD programme (Table 9). The high scoring in the neutral position (unsure scoring) ranging between 0 to 60 percent also affected the results negatively or

positively. This may be due to lack of comprehension of the statement or respondents were just undecided due to how well-informed stakeholders were.

Appendix 7 represents the views of stakeholders on the association of stakeholders with the area of connectedness (institutionalization of policy and legal framework, documentation, capacity building, technical advice, benefits and resources). Connectedness as indicated by Pretty and Ward (2001) involves the degree to which stakeholders form dependent-independent relationships amongst themselves. Connectedness plays an important role in the scope of complexity in governance of FPD as confirmed by Kooiman et al. (2008), Canada Corps (2006) and Lebel et al. (2006).

About 58.3 percent of respondents of the secondary stakeholders agreed by the highest score that MLNR is associated with institutionalization of policy and legal framework on FPD issues. This result reflects the roles and responsibilities of stakeholders especially MLNR in forest governance (Table 9) and Forest and Plantation Act 2000. Although the MLNR plays a major role in institutionalization of policy and legal framework on FPD issues, the FC as mandated by Act 571 and the District Assemblies also play their part.

Respondents of seedlings suppliers agreed with about 50 percent as the highest score that FC/FSD is mostly associated with documentation. This means that for the FPD programme to be successful there should be adequate information on FPD issues which should be well documented for stakeholder referencing. Generally, the results show low scoring for documentation for all stakeholders, and thus does not support Lockwood et al. (2010) as a basis in upholding the application of well-informed as governance principle for knowledge acquisition and sharing.

About 46.2 percent (as the highest score) of respondents for Private FP Developers agreed that Taungya farmers are mostly associated with capacity building. This score is quite low for Taungya farmers especially as capacity building is very important for all relevant stakeholders in FPD as indicated by FC (2010), FAO (2012) and Dodson and Smith (2003) for more effective governance. Gaps in institutional capacity building also has a serious impact on the success of FPD according to Marfo (2010), and hence lays a solid foundation for overall governance as confirmed by ASX (2003) and Sterritt (2001).

About 79.2 percent (the highest score) of respondents for Private FP Developers agreed that Taungya Heads are mostly associated with technical advice. This opinion of the respondents of the Private FP Developers is not always true according to FSD (2005), as the quality of seedlings supplied initially by seedlings suppliers greatly affect the survival rates of FP hence technical advice is very important for the seedlings suppliers as well.

Respondents of seedlings suppliers scored about 100 percent for Taungya farmers being connected with benefits. This opinion of respondents cannot be wholly true because according to MLNR (2008) benefit sharing scheme under MTS is in the ratio of 40:40:15:5 for Taungya farmers, FC, landowner and community respectively. The benefit sharing scheme under commercial plantation is as follows; Private FP Developer has 90 percent, landowner has 6 percent, and local community and FC, 2 percent each. This clearly shows that there is an information gap which needs to be addressed by application of transparency and accountability as supported by Kaufmann (2003) and Islam (2003). Stakeholders are not well-informed about FPD issues

and thus do not support the claim by Lockwood (2010) that knowledge acquisition should cover information for long-term decision-making to solve complex problems.

About 100 percent of respondents of seedlings suppliers agreed that DAs, TAs and Forest Fringe Communities are mostly associated with resources. This opinion by respondents of seedlings suppliers is not truly the case if resources are considered as forest plantations only. In this case other stakeholders involved are; Stool lands owners, Chiefs, Taungya farmers and Private FP Developers according to FSD (2003). On the other hand, if resources are considered as; material, human and financial, which is really what the researcher means, then it gives a total perspective for scope of complexity which will involve all relevant stakeholders including government being represented by MLNR and FC, based on their clear roles and responsibilities as in governance of FPD (Table 9).

From the results, apart from resources, benefits and technical advice which had strong associations with various stakeholders, critical areas such as institutionalization of policy and legal framework, documentation and capacity building, did not receive adequate attention from relevant stakeholders in governance of FPD. This occurrence confirms the Actor-Network Theory in relation to associations formed by the multiple actors within a network of relevant stakeholders (Latour, 2005). Also, if the elements of the network act contrarily to the network as a whole, then the network breaks down as pointed out by William-Jones and Graham (2003). So for governance of FPD to be effective all stakeholders should be well connected.

CHAPTER NINE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents summary, conclusions and recommendations of the study. Summary highlights what the study set out to do, methodology used and key findings of the study. Conclusions are derived from the key findings while recommendations are based on the findings and conclusions. The chapter ends with limitations of the study and areas for further studies.

Summary

This study set out to investigate the effectiveness of the application of principles and challenges of governance in FPD in Ghana as a complex system. To address the main objective of the study, four specific research questions were posed in the introductory chapter. Drawing on various governance models and frameworks, empirical data and supported by theoretical reasoning from systems and actor-network theories, the study came out with a conceptual framework for natural resource governance.

To achieve the objective of this study, in-depth quantitative and qualitative approaches have been used in Chapter Five. A study area covering eight forest districts in the ecological transition zone which had experienced governance interventions due to its heavy degradation and deforestation activities in Ghana was selected with seven major actors being used as subjects for a study of a sample size of 253. Three expert group discussions were used for further study to gain important qualitative insights of governance in forest plantation development.

Key findings of the study

Application of governance principles

1. The application of transparency was low in FPD. Participation was also very low in FPD, especially in the areas of policy inputs and limited consultation in decision making at all levels. With the application of responsiveness, there was a dichotomy between the Policy Group as against the primary and secondary stakeholders with respect to stakeholder satisfaction which was high for primary and secondary stakeholders and low for the Policy Group.
2. There was high sense of equity by the fair share of incentives and benefits to stakeholders, and very low application of inclusiveness due to the nominal involvement of stakeholders in planning and decision-making process in FPD. Apart from stakeholders jointly addressing issues, consensus building was quite weak in FPD.
3. The rule of law was generally weak as the results depicted an average below 50 percent. It was only the involvement of institutions in the investigation of offences as an element which showed significant scoring of about 78 percent. Although almost all stakeholders (Policy Group, primary and secondary) claimed there were frequent field visits and inspections by M&E teams and regular financial and operational auditing, evidence of accountability clearly showed serious lapses with regard to financial transactions and public and institutional liability.
4. Stakeholders were not well-informed about FPD in general, although they requested for information on FPD issues. The Policy Group seemed to be better placed with knowledge in FPD, and were very

familiar with the 1994 forest and wildlife policy as compared to the primary and secondary stakeholders. For direction as a governance principle applied in FPD, all stakeholders showed commitment and clearly supported the continuity of the FPD programme.

Challenges of governance in FPD

1. About 77.9 and 81.1 percent of respondents from the Policy Group agreed that weaknesses in governance provisions (inefficient and ineffective processes, weak structures and unsupportive policy guidelines) and governance principles respectively, posed serious governance challenges in FPD. Also, about 78.4 percent of the respondents of the policy group agreed that lack of certain governance principles posed challenges in FPD.
2. Seedlings suppliers equally agreed by 100 percent that human and material resources (required logistics) are the key causes of governance challenges in FPD, and political interference (16.7%) the least factor.
3. About 84.2 percent of the sampled Private FP developers and 76.6 percent of sampled secondary stakeholders agreed that financial resource was a key factor driving weak governance in FPD.

Complexity of governance in FPD

1. As the application of governance principles increases, the expected outcome of governance in FPD also increases with a very high significance of $p=0.000<p=0.05$. All nine governance principles had significant relationships of varied strengths with stakeholder interactions. For example, views of Taungya farmers on participation

versus stakeholder satisfaction revealed the most significant association of $p=0.000<p=0.05$.

2. There existed high significant relationship between feedback mechanism and output of governance, an example being; views of respondents of Private FP developers on signing of agreements and addressing challenges of governance in FPD ($p=0.001<p=0.05$).
3. Stakeholder interactions with FC/FSD were the highest (90.6%) whilst the secondary stakeholders had the least of interactions with all relevant stakeholders. Generally, stakeholder interactions were low. All stakeholders were quite satisfied with interactions with FC/FSD but dissatisfied with interactions with District Assemblies and Stool lands/Chiefs.
4. Apart from resources, benefits and technical advice as area of connectedness which had strong associations with various stakeholders, critical areas such as institutionalization of policy and legal framework, documentation and capacity building, did not receive adequate attention from relevant stakeholders in governance of FPD.

Conclusions

Governance of forest plantation development in recent times has taken a centre stage as a result of challenges in restoring lost forest cover and the complexity in managing multiple actors having different interests and rights to the resource. Therefore, it has become necessary to address governance holistically from different perspectives of relevant stakeholders. This study signifies the importance of systems thinking in understanding wholeness as well as depending on relations built amongst human and non-human actors

forming a network of a common interest as affirmed by ANT. Apart from the quantitative results, qualitative evidence was consistent, and in some instances used in triangulating the quantitative results.

The application of governance principles in the historical context of FPD shows that transparency, participation, rule of law, consensus building, and accountability were low whilst equity and inclusiveness, responsiveness and well-informed governance principles were slightly in a balance with respect to relevant stakeholder perceptions. The application of direction for governance of FPD was high for all stakeholders (Policy Group, primary and secondary), and shows high commitment and continuity of the FPD programme in Ghana.

The views of stakeholders suggest that challenges in governance of FPD can be attributed to weakness in governance provisions and principles or lack thereof, capabilities of human resource, the required logistics and availability of financial support. However, the difficulties of managing multiple actors, information gaps, and promotion of control mechanisms which do not favour forest fringe communities, unclear programme objectives, policy guidelines and procedures are all underlying factors which can also militate against the governance of FPD.

To address complexity in governance of FPD, further statistical analysis, showed that scores of respondents from all relevant stakeholders had significant relationships with all the blocks in the conceptual framework (Figure 9). The results also confirmed that all nine governance principles had significant relationships with stakeholder interactions such that when the application of governance principles increased, the expected outcome of FPD

programme also increases with very high significance. This means that strong interconnectivity of governance principles strengthens the effectiveness of governance in FPD.

Apart from FC/FSD, stakeholder interactions amongst other stakeholders were low and hence there was a high affinity for encouraging feedback mechanisms amongst stakeholders. All relevant stakeholders were quite satisfied with interactions with FC/FSD but realized that District Assemblies and Stool lands/Chiefs needed to be more involved in the governance process. It also came to light that institutionalization of policy and legal framework, documentation and capacity building were very important areas of connectedness that all relevant stakeholders were not addressing in the governance of FPD.

Recommendations

Based on the findings and conclusions of the study, the following recommendations have been made for effective governance of FPD in Ghana as per relevant stakeholders:

A. Government

1. Governance in FPD should be strengthened by the government ensuring that all the nine governance principles in the study are interconnected and made explicit in the programme, policy document and guidelines, such that they are applied equally to all relevant stakeholders.
2. The government should ensure that the tenets of good governance principles permeate the whole natural resources governance system in general. Hence, there should be absolute transparency, accountability,

and equity and inclusiveness in benefit sharing and distribution of plantation revenue by government and the FC. Also, the government should ensure that the rule of law is enforced by prescribing deterrent sanctions against illegalities in FPD. Most of the laws governing FPD should be reviewed to include modernization, taking into consideration the roles and responsibilities of all stakeholders. This should include FPD contractual agreements which specify targets, sanctions and rewards.

3. To overcome weak governance as a challenge impeding the progress of FPD, governance provisions should be strengthened by government through policy review. This means that relevant institutions, structures and processes should be made efficient and effective in the delivery of services to meet responsiveness required in FPD demands. Institutionalization of policy and legal framework, documentation and capacity building, also needs to be strengthened.
4. Continuous investments and incentives provision for FPD has posed a serious challenge over the years. This has been identified by the study as being problematic as a result of the unsustainable nature of the source of funds. Most donor funding stop within sometimes 5 years into say 25 years of programme duration. Endowment funding for more reliable accountable public-private partnership as an engine of growth in the timber industry should be introduced in FPD by the government, where there will be absolute transparency, accountability with an effective framework for monitoring and evaluation.

5. The government should increase commitments to international conventions, and take advantage of various financial supports from interventions such as REDD+, VPA, Climate Change and Carbon Sequestration which act as control mechanisms to support FPD programmes. These control mechanisms when employed also help to regulate stakeholder behaviour and interactions in an attempt to gain conformity and compliance to the objectives for which the programme has been set to achieve an expected outcome.
6. The government should also establish a comprehensive feedback mechanism at various stakeholder levels (governmental, institutional, and community-based) which should include an online feedback system, feedback indicators of how well stakeholder feedback is gathered and utilized effectively, and sharing of feedback data under governance of FPD. This feedback mechanism should provide the community the opportunity to influence FPD strategies or policies, and build the trust resulting in higher stakeholder satisfaction.
7. The government should ensure that FPD programmes are a national priority in Ghana's forest and environmental sustainability efforts. This should entail better planning, including available and sufficient financial resource (budgetary allocation funds), support schemes, a clear sense of direction and strong political will, national commitment, and sector leadership by MLNR.

B. Ministry of Lands and Natural Resources

1. The MLNR should ensure that different interests of relevant stakeholders are integrated in order to establish networks and

partnerships amongst the various stakeholders (Policy group, primary and secondary). These networks and partnerships could be promoted through stakeholder interaction and connectedness forming part of the comprehensive communication platform for effective governance of FPD. Cross-sectoral partnerships and accountability in planning and decision making should be encouraged in FPD by the MLNR.

2. An effective monitoring and evaluation mechanism for forest plantation operations in the field should be put in place by MLNR. It should include clear guidelines for effective monitoring and reporting. For the sake of proper accountability, and to ensure that government's interest is well secured, the monitoring and evaluation team should have multi-stakeholder representation especially from MLNR, FC/FSD, District Assemblies, Stool lands, Chiefs, TAs and Forest Fringe Communities so as to protect each other's interest in terms of delivery of FPD expected outcome, and to ensure accountability and transparency, participation and consensus building in decision making and conflict resolution and management purposes. The monitoring and evaluation reports should be published for the general public to ensure accountability and transparency.

C. Forestry Commission

1. The FC should put in place appropriate implementation arrangements for different forms of FPD programmes such that there is full involvement of all stakeholders in policy formulation, implementation and monitoring to ensure a sense of ownership, commitment and expected outcome.

Traditional Authorities and Stool lands/Chiefs). There should be very clear and well-informed roles and responsibilities for the secondary stakeholders. The FC should ensure that secondary stakeholders play a key role in conflict management, sensitization and translation of policy directives for primary stakeholders.

D. All stakeholders

1. There should be intensive interactions between the Policy Group, primary and secondary stakeholders which the study identified as weak amongst the secondary stakeholders. The more the interactions, the more stakeholders are connected to each other to uncover the complexity and ensure effectiveness of governance in FPD.

Limitations of the study

The study encountered four main limitations: First, some officials in the Plantation Department of FC were initially reluctant in releasing information for the study. This was solved after explaining the benefits of the study to them and assuring them that all the information collected will be treated as confidential material. So all information obtained from the plantation department was validated by documents, reports and cross-checking from the field, and other relevant sources like RMSC and FORIG.

Secondly, although forest plantation development deals with several stakeholders, not every stakeholder was covered in the primary data collection, as it would have been extremely expensive, time consuming, and a herculean task to accomplish. To overcome this limitation, a list of stakeholders in forest plantation development was adapted from FSD (2003). Reliable sampling methods of 0.05 error margins were used to fairly cover the population.

Thirdly, Ghana has different ecological zones, namely; coastal, transition, rainforest and savannah. These have different forest and wildlife species, and different cultural settings for the fringe communities. The study was not able to cover all these zones completely due to inadequate resources and time constraints. However, the areas covered had various degrees of deforestation and degradation activities posing serious governance challenges. The choice of the transition zone had similarities to other ecological zones, thereby giving a fair reflection of the peculiar characteristics.

The fourth limitation was that the present study was conducted in one ecological zone, namely, the transition zone, with its distinct socio-economic and environmental characteristics. It is thus quite difficult to predict the extent to which the study findings can be applied in other ecological zones in the country. One therefore has to be careful in generalizing the study findings for other zones although there exists some similarities.

The way the four main limitations were tackled, ensured that the quality of data and objectivity in the data analysis were not compromised.

Areas for Further Research

Governance hinges on three cardinal points such as principles, people and structures. This research has dealt with the principles and the people (stakeholders) to a certain degree. Another area that needs in-depth study is the local governance structures for FPD which need to be strengthened according to the recommendations.

Another interesting area is how governance principles as applied to FPD could be modelled for in-depth analysis to determine the various proportions needed to make governance in FPD effective.

Also, as this research considered Ghana's context as a new academic research which provides some insights and directions for international application of this conceptual framework (Figure 9). Suggestions are made for further research:

First, from the contextual aspect, this research encountered a demanding context of theoretical assertions. Most of the findings were validated from developed to developing country context. However, some of the findings are not only challenging new evidence but also tentative when verified in any follow-up studies. The study provides a confirmation that stakeholder interactions and areas of connectedness have a significant effect on the expected outcome of governance in FPD based on data from the ecological transition zone of Ghana. Therefore a research avenue is open for further validation in different country contexts. An extension to compare the situation in other countries might provide some more answers on governance challenges as ecological, economic and political background may be different.

Secondly, it will be very interesting researching into a comparative study of natural resource sectors such as mining, water and energy using the same conceptual framework to answer similar research questions in line with the chosen sectors. Thirdly, there should be further research which includes forest districts in all the different ecological zones in Ghana using the unique feature of this study i.e. by applying all the nine governance principles to ascertain that such a wide scope of application gives a comprehensive effect on governance for comparison and generalization of the findings.

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APPENDICES

APPENDIX 1

QUESTIONNAIRE FOR POLICY GROUP

Date: Place:

This research is undertaking a study on 'Governance of forest plantation development in selected forest districts in the ecological transition zone of Ghana' which is targeted at the Policy Group where policy on Forest Plantations Development is formulated and implemented.

This research work is ONLY for the purposes of research in connection with a post-graduate academic work at the Institute of Development Studies of the University of Cape Coast. Respondents are therefore guaranteed absolute confidentiality.

Section A: Background Characteristics of Respondents

Please tick the appropriate box relating to your circumstance.

1. Sex: (a) Male { } (b) Female { }
2. Indicate your age: .....years
3. Education: (a) Primary { } (b) JHS/MSLC { } (c) SHS/SEC SCH { } (d) Vocational { } (e) Tertiary { } (f) Non Formal { } (g) None { } (h) Other { }
4. Indicate years of involvement in Forest Plantation Development .....
5. Which institution do you belong to? (a) MLNR { } (b) FC { }

Section B: Governance principles

Transparency

6. Please rate the extent to which Forest Plantation Development in Ghana was transparent during the period of 2003 – 2008 in the statements below; using a 5-point scale, where SA=Strongly Agree (5); A= Agree (4); U= Unsure (3); D= Disagree (2); SD=Strongly Disagree (1).

No	Statements	SA	A	U	D	SD
a)	Policy decisions to address Forest Plantation Development issues were clear.					
b)	Information on Forest Plantation Development was accessible.					
c)	Forest Plantation Development Programmes and guidelines were clear.					
d)	Information on Forest Plantation Development Programmes was very relevant.					
e)	Response to requests for information on Forest Plantation Development was timely.					
f)	Documentaries on Forest Plantation Development were often organized for stakeholders.					
g)	Forest Plantation Development decisions taken and their enforcement followed clear rules and regulations.					
h)	Financial disbursements and budgets of Forest Plantation Development programmes were clear to all relevant stakeholders.					

Participation

7. Please rate the extent to which Forest Plantation Development in Ghana has been participatory during the period of 2003 – 2008 in the statements below; using a 5-point scale, where SA=Strongly Agree (5); A= Agree (4); U= Unsure (3); D= Disagree (2); SD=Strongly Disagree (1).

No.	Statements	SA	A	U	D	SD
a)	Many invitations to Forest Plantation Development events were received.					
b)	All relevant stakeholders were often invited to Forest Plantation Development events.					
c)	All relevant stakeholders highly involved in Forest Plantation Development events.					
d)	All relevant stakeholders made inputs in formulating Ghana's 1994 Forest and Wildlife policy.					
e)	All relevant stakeholders are involved in decision-making concerning Forest Plantation Development					

Responsiveness

8. Please rate the degree of responsiveness on Forest Plantation Development issues in Ghana during the period of 2003 – 2008 in the statements below; using a 5-point scale, where SA=Strongly Agree (5); A= Agree (4); U= Unsure (3); D= Disagree (2); SD=Strongly Disagree (1).

No.	Statements	SA	A	U	D	SD
a)	There was a high demand for information on Forest Plantation Development by relevant stakeholders.					
b)	There was quick response by your organization to requests made by stakeholders on Forest Plantation Development					
c)	Response times stipulated by FC's service charter on Forest Plantation Development were met without any delays.					
d)	All stakeholders were generally satisfied with responses received.					

Equity and Inclusiveness

9. Please rate the degree of equitability and inclusiveness in Forest Plantation Development in Ghana during the period of 2003 – 2008 in the statements below; using a 5-point scale, where SA=Strongly Agree (5); A= Agree (4); U= Unsure (3); D= Disagree (2); SD=Strongly Disagree (1).

No.	Statements	SA	A	U	D	SD
a)	Policy formulation fairly reflected stakeholder's view					
b)	An actor can easily change the policy formulating process of Forest Plantation Development without recourse to others					
c)	Benefits from Forest Plantation Development were shared equally by all relevant stakeholders.					
d)	All decisions on Forest Plantation Development took into consideration relevant stakeholders' views.					
e)	All relevant stakeholders were consulted before formulating rules and regulations that govern Forest Plantation Development.					

Rule of Law

10. Please rate the extent to which rule of law was applied in Forest Plantation Development in Ghana during the period of 2003 – 2008 in the statements below; using a 5-point scale, where SA=Strongly Agree (5); A= Agree (4); U= Unsure (3); D= Disagree (2); SD=Strongly Disagree (1).

No.	Statements	SA	A	U	D	SD
a)	Your organization was involved in investigations of forest offences					
b)	Legal system in settling disputes with regards to Forest Plantation Development was effective.					
c)	Ghana's security agency exhibited impartiality in the discharge of their duties towards conflicts or offences under Forest Plantation Development.					
d)	Equal access to justice for all relevant stakeholders of Forest Plantation Development was evident.					
e)	Rules and regulations governing Forest Plantation Development were enforced in the forest sector.					
f)	Conflict resolution and mediation strategies were always used in solving Forest Plantation Development issues.					

Consensus Building

11. Please rate the extent to which consensus building was applied in Forest Plantation Development in Ghana during the period of 2003 – 2008 in the statements below; using a 5-point scale, where SA=Strongly Agree (5); A= Agree (4); U= Unsure (3); D= Disagree (2); SD=Strongly Disagree (1).

No.	Statements	SA	A	U	D	SD
a)	You often met all relevant stakeholders when issues under Forest Plantation Development were discussed.					
b)	The interests of all relevant stakeholders were considered before taking decisions on Forest Plantation Development issues.					
c)	All relevant stakeholders were involved in addressing Forest Plantation Development issues.					
d)	All relevant stakeholders met regularly to discuss issues pertaining to Forest Plantations development in Ghana.					
e)	Policy implementation issues on Forest Plantation Development were always solved through collaboration.					
f)	Mediation of conflicts in Forest Plantation Development involved all relevant stakeholders.					
g)	Stakeholder collaboration was used to solve conflicts in Forest Plantation Development.					

Accountability

12. Please rate the extent to which accountability was applied in Forest Plantation Development in Ghana during the period of 2003 – 2008 in the statements below; using a 5-point scale, where SA=Strongly Agree (5); A= Agree (4); U= Unsure (3); D= Disagree (2); SD=Strongly Disagree (1)

No.	Statements	SA	A	U	D	SD
a)	All relevant stakeholders rendered accounts to your institution regarding financial disbursements made on any aspect of Forest Plantation Development.					
b)	Auditors checked financial transactions and operations of Forest Plantations Development regularly.					
c)	National protocol existed for Monitoring and Evaluation Team(s) to conduct field visits to Forest Plantations sites.					
d)	Monitoring and Evaluation for Forest Plantation Development activities effective.					
e)	Frequent field visits and inspections were organized by your institution under Forest Plantation Development programmes.					
f)	The right to call for an account and the right to impose sanctions if the account or actions accounted for were inadequate was evident under Forest Plantation Development.					
g)	Relevant stakeholders justified, substantiated and made their actions and decisions known under Forest Plantation Development.					
h)	Liability to the public and to institutional stakeholders was the order of the day under Forest Plantation Development.					

Well-informed

13. Please rate the extent to which you were knowledgeable in Forest Plantation Development in Ghana during the period of 2003 – 2008 in the statements below; using a 5-point scale, where SA=Strongly Agree (5); A= Agree (4); U= Unsure (3); D= Disagree (2); SD=Strongly Disagree (1).

No.	Statements	SA	A	U	D	SD
a)	You were very familiar with literature on Forest Plantation Development.					
b)	You often requested for documents on Forest Plantation Development.					
c)	You were very familiar with the contents of the 1994 forest and wildlife policy with respect to Forest Plantation Development.					
d)	You were very conversant with all aspects of Forest Plantation Development					
e)	You read extensively about Forest Plantation Development.					
f)	You were very familiar with all the rules and regulations governing Forest Plantation Development.					
g)	You very often watched and listened to documentary on Forest Plantation Development.					

Direction

14. Please rate the extent to which clear sense of direction was given in Forest Plantation Development in Ghana during the period of 2003 – 2008 in the statements below; using a 5-point scale, where SA=Strongly Agree (5); A= Agree (4); U= Unsure (3); D= Disagree (2); SD=Strongly Disagree (1).

No.	Statements	SA	A	U	D	SD
a)	Your organization is very committed to Forest Plantation Development.					
b)	Adequate financial resources were used in supporting Forest Plantation Development activities.					
c)	You institution organized a lot of training programmes on Forest Plantation Development.					
d)	Government was on course to achieve its stated objectives on Forest Plantation Development.					
e)	Socio-cultural issues (farming practices, funerals, poverty, unemployment etc) have seriously affected Forest Plantation Development programmes.					
f)	Enough planning process went into Forest Plantation Development.					

15. In your opinion what should be the future direction of Forest Plantation Development in Ghana?

Please comment:

.....

Section C: Challenges in applying governance principles

Challenges

16. Kindly indicate by using a scale of 1(Strongly Disagree) – 5 (Strongly Agree) which of the following factors affected governance of Forest Plantation Development.

(a) Commitment { } (b) Policy Direction { } (c) Political Interference { }

(d) Individual Interests { } (e) Socio-Cultural Settings { }

(f) Incentives { } (g) Financial Resources { } (h) Human Resources { }

(i) Logistics { } (j) Other, State .....{ }

17. In your opinion were certain governance principles lacking in Forest Plantation Development?

(a)Yes (b) No

Please comment:.....

17. What is your view on the statement that: weaknesses in governance provisions pose a serious challenge in Forest Plantation Development Programme?

(a) Strongly Agree (b) Agree (c) Unsure (d) Disagree (e) Strongly Disagree

Please comment:

.....

18. Are there weaknesses in governance principles that pose a serious challenge in Forest Plantation Development Programme?

(a)Yes (b) No

If yes, list them?

.....

19. What were the governance challenges encountered under Forest Plantation Development and how were they handled? Please comment:

.....

Section D: Governance deficits in Ghana's 1994 Forest and Wildlife policy

20. Have you read Ghana's 1994 Forest and Wildlife Policy before?

(a)Yes (b) No

21. If your answer to question 20 is Yes, does the policy document address issues with respect to governance in Forest Plantation Development?

(a)Yes (b) No

22. If your answer to question 21 is No, what are the governance issues that need to be addressed?

Please comment:

.....

23. If your answer to question 22 is Yes, how were governance issues addressed in the policy document?

.....

.....

Section E: Complexity of governance in Forest Plantation Development

Feedback Mechanism

24. Is feedback mechanism used in governance of Forest Plantation Development?

(a)Yes (b) No

25. Is Feedback mechanism important in the governance of Forest Plantation Development?

(a)Yes (b) No

Output

26. Has Forest Plantation Development in Ghana generated revenue?

(a)Yes (b) No

Please comment:

.....

Expected Outcome

27. How do you agree to the statement that benefits to communities have been equitably distributed in Forest Plantation Development Programme?

(a) Strongly Agree (b) Agree (c) Unsure (d) Disagree (e) Strongly Disagree

Please comment: .....

28. To what extent do you agree that you are satisfied as a stakeholder with the Forest Plantation Development Programme in Ghana?

(a)Strongly Agree (b) Agree (c) Unsure (d) Disagree (e) Strongly Disagree

Please comment:.....

Control Mechanism

29. Control mechanisms such as laws, agreements, conventions and interventions have affected governance arrangement in Forest Plantation Development in Ghana. Please tick the extent to which you agree with this statement.

(a) Strongly Agree (b) Agree (c) Unsure (d) Disagree

(e) Strongly Disagree

Please comment .....

Scope of Complexity

30. Please indicate by ticking your degree of interaction with stakeholders according to the scale of Strongly Disagree (1) to Strongly Agree (5) on Forest Plantation Development Issues?

Stakeholders	**1**	**2**	**3**	**4**	**5**
Ministry of Lands and Natural Resource					
Forestry Commission (Forest Services Division)					
Taungya heads					
Farmers practicing modified taungya system					
Private Developers (On/Off-Reserve)					
Seedlings Suppliers					
Stool land Owners / Chiefs					
District Assemblies					
Traditional Authority Representatives					
Forest Fringe Communities					

31. Please indicate by ticking the degree of satisfaction with stakeholder interaction according to the scale of Strongly Disagree (1) to Strongly Agree (5) on Forest Plantation Development Issues?

Stakeholders	1	2	3	4	5
Ministry of Lands and Natural Resource					
Forestry Commission (Forest Services Division)					
Taungya heads					
Farmers practicing modified taungya system					
Private Developers (On/Off-Reserve)					
Seedlings Suppliers					
Stool land Owners / Chiefs					
District Assemblies					
Traditional Authority Representatives					
Forest Fringe Communities					

32. Please indicate by ticking how you were associated to the following stakeholders on Forest Plantation Development Issues:

Stakeholders	Area of Connectedness					
	Institutionalization of policy and legal framework	Documentation	Capacity Building (Meetings, Forums and Training Workshops)	Technical Advice	Benefits	Resources
Ministry of Lands and Natural Resource						
Forestry Commission (Forest Services Division)						
Taungya heads						
Farmers practicing modified taungya system						
Private Developers (On/Off-Reserve)						
Seedlings Suppliers						
Stool land Owners / Chiefs						
District Assemblies						
Traditional Authority Representatives						
Forest Fringe Communities						

Suggestions

33. Was the governance of Forest Plantation Development effective?

(a)Yes (b) No

Please comment:

.....

34. As an important stakeholder of forest sector, in your opinion, how should governance be approached to create value in Forest Plantation Development?

.....

35. How can stakeholder expectations be managed in Forest Plantation Development?

.....

Section B: Governance principles

6. Are you aware of any rules and regulations governing Forest Plantations Development in Ghana?

   (a)Yes (b) No

   If yes, what rules and regulations do you know?

   .....

7. Are you aware of guidelines for plantation establishment, maintenance and production?

   (a)Yes (b) No

8. Were the guidelines for establishing Forest Plantations clear to you?

   (a)Yes (b) No

9. Was information on establishing Forest Plantations easy to access?

   (a)Yes (b) No

10. Was the accessed information on relevant?

    (a)Yes (b) No

11. Did you attend any events (forum, workshop and meetings) on Forest Plantation Development?

    (a)Yes (b) No

12. If the answer to Question 11 is Yes, kindly indicate how often by ticking?

    (a) Very Often { } (b) Often { } (c) Unsure { }

    (d) Not Often { } (e) Not Very Often { }

13. If the answer to Question 11 is Yes, kindly tick to indicate which institution

invited you?

(a) Ministry of Lands and Natural Resources { }

(b) Forestry Commission (Plantation Department) { }

(c) Forest Services Division (Regional/District Office) { }

(d) District Assembly { }

(e) Traditional Authority { }

(f) Other { }, Please State .....

14. If the answer to Question 11 is Yes, what was the purpose of the event (forum, workshop and meeting)?

.....

15. What were the benefits of the event?

.....

16. If the answer to Question 11 is No, why haven't you attended one?

Please state the reason why:.....

.....

17. Have you joined other stakeholders in Forest Plantation Development events?

(a)Yes (b) No

18. If yes, kindly tick which stakeholders?

(a) Forestry Commission (FC) (Plantation Department) { }

(b) Ministry of Lands and Natural Resources (MLNR) { }

(d) Forest Services Division (District/Regional Office) { }

(e) District Assembly { }

(f) Traditional Authority { }

(g) Other { }, Please state .....

19. Did you provide inputs in the formulation of Ghana's 1994 Forest and Wildlife policy?

(a)Yes (b) No

20. Did you ever request for information on Forest Plantation Development?

(a)Yes (b) No

21. If the answer to Question 20 is Yes, what sort of information did you request for?

(a) Technical { }(b) Financial { }(c) Administrative { }

(d) Legal { } (e) Other { }, Please State .....

22. If the answer to Question 20 is Yes, which institutions was approached?

(a) Ministry of Lands and Natural Resources { }

(b) Forestry Commission - Plantation Department { }

(c) Forest Services Division – Regional/District Office { }

(d) District Assembly { }

(e) Traditional Authority { }

(f) Other { }, Please State .....

23. If the answer to Question 20 is Yes, was your response delayed?

(a)Yes (b) No

24. Were you generally satisfied with the responses received?

(a)Yes (b) No

25. Have you received any incentives from the Forest Plantation Development Programme?

(a)Yes (b) No

26. If the answer to Question 25 is Yes, did you receive a fair share of the incentive?

(a)Yes (b) No

27. If the answer to Question 25 is Yes, Please tick which types of incentives were received?

(a)Financial { } (b) Material { } (c) Other { }, State .....

28. Have you been involved in any planning process of Forest Plantation Development Programme?

(a)Yes (b) No

29. Did you receive any benefits from Forest Plantation Development?

(a)Yes (b) No

30. If the answer to Question 29 is Yes, did you receive a fair share of the benefit?

(a)Yes (b) No

31. Is there evidence of any forest offence in connection with Forest Plantation Development Programme?

(a)Yes (b) No

32. How were infringements of the laws governing Forest Plantation Development resolved?

.....

33. Has the legal system been effective in settling disputes or conflicts in conection to Forest Plantation Development?

(a)Yes (b) No

34. Did Ghana's security agencies exhibit impartiality in the discharge of their duties towards conflicts or offences under Forest Plantation Development?

(a)Yes (b) No

35. Is there evidence of equal access to justice under Forest Plantation Development Programme?

(a)Yes (b) No

36. Have you been involved with the mediation of a forest plantation conflict which involved many stakeholders?

(a)Yes (b) No

37. Have you joined other stakeholders to address Forest Plantation Development issues?

(a)Yes (b) No

38. If the answer to Question 37 is Yes, kindly tick which institutions were present?

(a) Ministry of Lands and Natural Resources { }

(b) Forestry Commission - Plantation Department { }

(c) Forest Services Division – Regional/District Office { }

(d) District Assembly { }

(e) Traditional Authority { }

(f) Other { }, Please State .....

39. Did you meet regularly with other stakeholders to discuss issues on Forest Plantation Development?

(a)Yes (b) No

40. If the answer to Question 39 is Yes, Please tick which issues were discussed?

(a) Technical { }(b) Policy { }(c) Legal { }(d) Finance { }

(e) Management { } (f) Other { }, State .....

41. Have you rendered any accounts to any stakeholder regarding financial disbursements by the Government on any aspect of the Forest Plantation Development Programme?

(a)Yes (b) No

42. If the answer to Question 40 is Yes,, kindly tick which stakeholders?

(a) Forestry Commission (FC) (Plantation Department) { }

(b) Ministry of Lands and Natural Resources (MLNR) { }

(d) Forest Services Division (District/Regional Office) { }

(e) District Assembly { }

(f) Traditional Authority { }

(g) Other { }, Please state .....

43. Did Monitoring and Evaluation Team(s) conduct any field visits to your Plantation?

(a)Yes (b) No

44. If the answer to Question 43 is Yes, Please tick how often?

(a) Monthly (b) Quarterly (c) Semi-annually (d) Annually

(e) Other, state .....

45. If the answer to Question 43 is Yes, Please tick from which institution the Monitoring and Evaluation Team (s) represented?

(a) Ministry of Lands and Natural Resources { }

(b) Forestry Commission - Plantation Department { }

(c) Forest Services Division – Regional/District Office { }

(d) District Assembly { }

(e) Traditional Authority { }

(f) Other { }, Please State .....

46. Have you followed any procedures or guidelines on Forest Plantation establishment?

(a)Yes (b) No

47. Did you read any literature on establishing Forest Plantations?

(a)Yes (b) No

48. If the answer to Question 47 is Yes, kindly tick which source it came rom?

(a) Ministry of Lands and Natural Resources { }

(b) Forestry Commission (Plantation Department) { }

(c) Forest Services Division (Regional/District Office) { }

(d) District Assembly { }

(e) Traditional Authority { }

(f) Other { }, Please State .....

49. Did you listen to or watch any Forest Plantation Development documentary?

(a)Yes (b) No

50. Did you attend any form of gathering to discuss issues under Forest Plantation Development?

(a)Yes (b) No

51. In your opinion has the Forest Plantation Development Programme been successful?

(a)Yes (b) No

52. If the answer to Question 51 is No, please state why it has not been successful?

.....

53. Should the Forest Plantation Development Programme in Ghana continue?

(a)Yes (b) No

Give reasons if the answer to Question 53 is Yes or No?

.....

54. Kindly tick which socio-cultural issues have effect on Forest Plantation Development Programmes?

(a) Farming Practices { } (b) Funerals { } (c) Poverty { }

(d) Chieftaincy { } (e) Other { }, kindly state .....

55. Are you committed to Forest Plantation Development programme?

(a)Yes (b) No

How or Why?

.....

56. Do you think the Forest Plantation Development Programme was well planned?

(a)Yes (b) No

How or Why?

.....

57. Has there been a continuous flow of incentives from the government to support the Forest Plantation Development Programme?

(a)Yes (b) No

58. Have you had any form of training on Forest Plantation Development during 2003 - 2008?

(a)Yes (b) No

If yes, state what kind of training?

.....

59. If the answer to Question 58 is Yes, kindly indicate by ticking how often?

(a) Very Often { } (b) Often { } (c) Unsure { }

(d) Not Often { } (e) Not Very Often { }

Section C: Challenges in applying governance principles

60. Were guidelines under Forest Plantation Development effective?

(a)Yes (b) No

61. If the answer to Question 60 is No, what should have been done to make it effective?

.....

62. Kindly indicate by using a scale of 1(Strongly Disagree) – 5 (Strongly Agree) which of the following factors affected governance of Forest Plantation Development.

(a) Commitment { } (b) Policy Direction { } (c) Political Interference { }

(d) Individual Interests { } (e) Socio-Cultural Settings { }

(f) Incentives { } (g) Financial Resources { } (h) Human Resources { }

(i) Logistics { } (j) Other, State .....{ }

63. In your opinion were certain governance principles lacking in Forest Plantation Development?

(a)Yes (b) No

64. If yes, which governance principles were lacking?

.....

65. Were there limitations in the guidelines for establishing Forest Plantations?

(a)Yes (b) No

66. If the answer to Question 64 is Yes, Kindly state them?

.....

67. Did you face any challenges with applying the guidelines to Forest Plantation Development in Ghana?

(a)Yes (b) No

If yes, what were some of the challenges? Please comment.

.....

Section D: Governance deficits in Ghana's 1994 Forest and Wildlife Policy

68. Have you read Ghana's 1994 Forest and Wildlife Policy before?

(a)Yes (b) No

69. If your answer to question 68 is Yes, does the policy document address issues under governance in Forest Plantation Development?

(a)Yes (b) No

70. If your answer to question 69 is No, what are the governance issues that need to be addressed?

Please comment:.....

Section E: Complexity of governance in Forest Plantation Development

71. Is feedback mechanism used in in Forest Plantation Development?

(a)Yes (b) No

73. Is feedback mechanism important in the governance of Forest Plantation Development?

(a)Yes (b) No

74. Do you think control mechanisms (laws, agreements, conventions, interventions, and natural occurrences etc) have had an impact on governance of Forest Plantation Development programme?

(a)Yes (b) No

If yes, state why?

.....

75. Which of the following describes the area of plantation you have established? Please circle appropriate rating (This should not be answered by Seedlings Suppliers)

(a)Small Scale (Up to 500 ha) (b) Medium Scale (500-1000ha)

(c)Large scale (>1000 ha)

77. How much area of land (Off-Reserve) has been released to you? Please circle appropriately.

(a) Small Scale (Up to 500 ha) (b)Medium Scale (500-1000 ha) (c)Large scale (>1000 ha)

78. How do you rate the number of seedlings supplied during 2003 - 2008? (This question should only be answered by Seedlings Suppliers)

(a)Small scale (up to 550,000) (b) Medium scale (550,000-1,100,000)

(c)Large Scale (<1,100,000)

79. Have you signed any agreement with respect to Forest Plantation Development?

(a)Yes (b) No

80. Have you received any funds from any Government source with respect to Forest Plantation Development Activities?

(a)Yes (b) No

81. Were the benefits to your communities equally distributed under Forest Plantation Development programme?

(a)Yes (b) No

82. Have you been satisfied as a stakeholder with respect to Forest Plantation Development Programme?

(a)Yes (b) No

Please comment:

.....

83. Please indicate by ticking the degree of interaction with stakeholders according to the scale of 1 (Strongly Disagree) to 5 (Strongly Agree) on Forest Plantation Development Issues?

Stakeholders	1	2	3	4	5
Ministry of Lands and Natural Resource					
Forestry Commission (Forest Services Division)					
Taungya heads					
Farmers practicing modified taungya system					
Private Developers (On/Off-Reserve)					
Seedlings Suppliers					
Stool land Owners / Chiefs					
District Assemblies					
Traditional Authority Representatives					
Forest Fringe Communities					

84. Please indicate by ticking the degree of satisfaction with stakeholder interaction according to the scale of 1 (Strongly Disagree) to 5 (Strongly Agree) highest on Forest Plantation Development Issues?

Stakeholders	1	2	3	4	5
Ministry of Lands and Natural Resource					
Forestry Commission (Forest Services Division)					
Taungya heads					
Farmers practicing modified taungya system					
Private Developers (On/Off-Reserve)					
Seedlings Suppliers					
Stool land Owners / Chiefs					
District Assemblies					
Traditional Authority Representatives					
Forest Fringe Communities					

84. Please indicate by ticking how you were associated with the following stakeholders on Forest Plantation Development Issues:

Stakeholders	Area of Connectedness					
	Institutionalization of policy and legal framework	Documentation	Capacity Building (Meetings, Forums and Training Workshops)	Technical Advice	Benefits	Resources
Ministry of Lands and Natural Resource						
Forestry Commission (Forest Services Division)						
Taungya heads						
Farmers practicing modified taungya system						
Private Developers (On/Off-Reserve)						
Seedlings Suppliers						
Stool land Owners / Chiefs						
District Assemblies						
Traditional Authority Representatives						
Forest Fringe Communities						

Suggestions

85. As an important stakeholder of the forest sector, do you think Forest Plantation Development in Ghana has a future?

(a)Yes (b) No

Please comment:.....

APPENDIX 3

INTERVIEW SCHEDULE FOR SECONDARY STAKEHOLDERS

This research is undertaking a study on 'Governance of forest plantation development in selected forest districts in the ecological transition zone of Ghana' and is targeted at the secondary stakeholders under Forest Plantation Development in Ghana.

This questionnaire is ONLY for the purposes of research in connection with a post-graduate academic work at the Institute of Development Studies of the University of Cape Coast. Respondents are therefore guaranteed absolute confidentiality.

Section A: Background characteristics of respondents

Please tick the appropriate box relating to your circumstance.

1. Sex: (a) Male { } (b) Female { }
2. Indicate your age: .....years
3. Education: (a) Primary { } (b) JHS/MSLC { } (c) SHS/SEC SCH { } (d) Vocational { } (e) Tertiary { } (f) Non Formal { } (g) None { } (h) Other { }
4. Indicate years of involvement in Forest Plantation Development .....
5. Which category do you belong to? (a) Stool land Owners/Chiefs { } (b) Traditional Authority { } (c) Forest Fringe Communities { } (d) District (e) Assemblies { }

Section B: Governance principles

6. Did you receive financial statements of Benefit Sharing Disbursements on plantation sales proceeds in Ghana during 2003 - 2008?

   (a)Yes (b) No

7. If yes, kindly tick from which source?

   (a) Forestry Commission (FC) (Plantation Department) { }

   (b) Ministry of Lands and Natural Resources (MLNR) { }

   (d) Forest Services Division (District/Regional Office) { }

   (e) District Assembly { }

   (f) Traditional Authority { }

   (g) Other { }, Please state .....

8. If yes, kindly tick how often these statements were received?

   (a) Very Often { } (b) Often { } (c) Unsure { } (d) Not Often { } (e) Not Very Often { }

9. Did you ever access any information on Forest Plantation Development programme?

   (a) Yes (b) No

10. If yes, kindly tick from which source the information was accessed?

    (a) Forestry Commission (FC) - Plantation Department { }

    (b) Ministry of Lands and Natural Resources (MLNR) { }

    (c) FC Website { }

    (d) Forestry Services Division (FSD) – District/Regional Office { }

(e) District Assembly { }

(f) Traditional Authority { }

(g) Other { }, Please state .....

11. If yes, how often was information accessed?

(a) Very Often { } (b) Often { } (c) Unsure { } (d) Not Often { } (e) Not Very Often { }

12. Was the information easily accessed?

(a) Yes (b) No

13. Was the accessed information on relevant?

(a)Yes (b) No

14. Are you aware of any Act or Policy governing Forest Plantations Development in Ghana?

(a)Yes (b) No

If Yes, please state .....

15. Did you contribute towards the formulation of the 1994 Forest and Wildlife Policy?

(a) Yes (b) No

If Yes, In what ways were your views accepted?

.....

16. Are you aware of any Plantation Guidelines?

(a)Yes (b) No

17. If the answer to question 16 is 'Yes' were the guidelines clear?

(a)Yes (b) No

18. Are you aware of what goes into the Social Responsibility Agreement (SRA) as part of Forest Plantation Development programmes?

(a)Yes (b) No

19. Did you attend any events (forum, workshop and meeting) on Forest Plantation Development?

(a)Yes (b) No

20. If yes, kindly indicate how often?

(a) Very often { } (b) Often{ } (c) Unsure { }

(d) Not Often { } (e) Not Very Often { }

21. If yes, kindly tick to indicate which institution invited you?

(a) Ministry of Lands and Natural Resources (MLNR) { }

(b) Forestry Commission (Plantation Department) { }

(c) Forest Services Division (District/Regional Office) { }

(e) District Assembly { }

(f) Traditional Authority { }

22. What was the purpose of the event (forum, workshop and meeting)?

.....

23. What were the benefits of the event (forum, workshop and meeting)?

.....

24. If the answer to Question 19 is No, why haven't you attended one?

Please comment:.....

25. Have you joined other stakeholders in Forest Plantation Development events?

(a)Yes (b) No

26. If yes, kindly tick which stakeholders?

(a) Forestry Commission (FC) (Plantation Department) { }

(b) Ministry of Lands and Natural Resources (MLNR) { }

(d) Forest Services Division (District/Regional Office) { }

(e) District Assembly { }

(f) Traditional Authority { }

(g) Other { }, Please state .....

27. Did you ever request for information on Forest Plantation Development?

(a)Yes (b) No

28. If yes, what sort of information did you request for?

(b) Technical { }(b) Financial { }(c) Administrative { }

(d) Legal { } (e) Other { }, State .....

29. If the answer to Question 27 is Yes, which institutions did you approach?

(a) Ministry of Lands and Natural Resources (MLNR) { }

(b) Forestry Commission (Plantation Department) { }

(c) Forest Services Division (District/Regional Office) { }

(d) District Assembly { }

(e) Traditional Authority { }

(f) Other { }, Please state .....

30. Was the response delayed?

(a) Yes (b) No

31. Were you generally satisfied with the responses received?

(a)Yes (b) No

32. Did you receive any incentives from the Forest Plantation Development Programme?

(a)Yes (b) No

33. If the answer to Question 32 is Yes, were the incentives equally shared?

(a)Yes (b) No

34. If the answer to Question 33 is Yes, which types of incentives were received? Please tick.

(a) Financial { } (b) Material { }(c) Other { }, State .....

35. Did you receive any benefits from the Forest Plantation Development Programme?

(a)Yes (b) No

36. If the answer to Question 35 is yes, were the benefits equally shared?

(a)Yes (b) No

37. If the answer to Question 36 is Yes, which types of benefits were received from Forest Plantation Development programme? Please tick.

(a) Stumpage { } (b) Concession fees { } (c) Royalties { }

(d) Revenue from taxes { } (e) Other { }, state .....

(f) How much revenue from taxes was paid in 2011 .....

38. Have you been involved in any planning process of Forest Plantation Development Programme?

(a)Yes (b) No

39. Is there evidence of any form of forest offence in Forest Plantation Development? Please tick.

(a)Yes (b) No

40. How were infringements of the laws governing Forest Plantation Development resolved? Please state.

.....

41. Has the legal system been effective in settling disputes or conflicts with regard to Forest Plantation Development?

(a)Yes (b) No

42. Has Ghana's security agencies exhibited impartiality in the discharge of their duty towards Forest Plantation Development?

(a)Yes (b) No

43. Is there evidence of equal access to justice for all relevant stakeholders of Forest Plantation Development programmes?

(a)Yes (b) No

44. Have you been involved with the mediation of a forest plantation conflict which involved many stakeholders?

(a)Yes (b) No

45. If the answer to Question 44 is Yes, kindly tick who were the stakeholders?

(a) Ministry of Lands and Natural Resources { }

(b) Forestry Commission (Plantation Department) { }

(c) Forest Services Division (Regional/District Office) { }

(d) District Assembly { }

(e) Traditional Authority { }

(f) Other { }, Please State .....

46. Have you joined other stakeholders to address Forest Plantation Development issues?

(a)Yes (b) No

47. Did you meet regularly with other stakeholders to discuss issues pertaining to the development of Forest Plantations in Ghana?

(a)Yes (b) No

48. If the answer to Question 47 is Yes, kindly tick which stakeholders?

(a) Ministry of Lands and Natural Resources { }

(b) Forestry Commission (Plantation Department) { }

(c) Forest Services Division (Regional/District Office) { }

(d) District Assembly { }

(e) Traditional Authority { }

(f) Other { }, Please State .....

49. If the answer to Question 47 is Yes, which issues were discussed? Please tick

(b) Technical { }(b) Policy { }(c) Legal { }(d) Finance { }

(e) Management { } (f) Other { }, State .....

50. Have you rendered any accounts to any stakeholders regarding financial disbursements by the Government on any aspect of the Forest Plantation Development Programme?

(a)Yes (b) No

51. If the answer to Question 50 is Yes, kindly tick which stakeholders?

(a) Ministry of Lands and Natural Resources { }

(b) Forestry Commission (Plantation Department) { }

(c) Forest Services Division (Regional/District Office) { }

(d) District Assembly { }

(e) Traditional Authority { }

(f) Other { }, Please State .....

52. Have auditors checked your books concerning Forest Plantations Development operations?

(a)Yes (b) No

53. If the answer to Question 52 is Yes, kindly state how often?

(a) Monthly (b) Quarterly (c) Semi-annually (d) Annually

(e) Other, state .....

54. Did Monitoring and Evaluation Team(s) conduct any field visits to Plantations under your jurisdiction?

(a)Yes (b) No

55. If the answer to Question 54 is Yes, what has been the routine? Please tick.

(b) Monthly (b) Quarterly (c) Semi-annually (d) Annually

(e) Other, state .....

56. Have you requested for information on Forest plantation Development Programme?

(a)Yes (b) No

57. Did you read any document on Forest Plantation Development?

(a)Yes (b) No

58. If the answer to Question 57 is Yes, kindly tick which sources it came from?

(a) Forestry Commission (FC) (Plantation Department) { }

(b) Ministry of Lands and Natural Resources (MLNR) { }

(c) FC Website { } (d) FSD (District/Regional Office) { }

(e) District Assembly { }

(f) Traditional Authority { }

59. Did you listen to or watch any Forest Plantation Development documentary?

(a)Yes (b) No

60. Did you attend any form of gathering to discuss activities of Forest Plantation Development?

(a)Yes (b) No

61. In your opinion has the Forest Plantation Development programme been successful?

(a)Yes (b) No

If the answer to Question is No, please state why it has not been successful?

.....

62. Should the Forest Plantation Development Programme in Ghana continue?

(a)Yes (b) No

Give reasons if the answer is Yes or No?

.....

63. Kindly tick which socio-cultural issues have effect on Forest Plantation Development Programmes?

(a) Farming Practices { } (b) Funerals { } (c) Poverty { } (d) Chieftaincy { }

(e) Other { }, kindly state .....

64. Are you committed to Forest Plantation Development programme?

(a)Yes (b) No

How? .....

65. Do you think the Forest Plantation Development Programme was well planned?

(a)Yes (b) No

How? .....

66. Has there been a continuous flow of financial resources from the government in Forest Plantation Development Programme?

(a)Yes (b) No

67. Have you had any form of training on Forest Plantation Development programme?

(a)Yes (b) No

If yes, state what kind of training?

.....

68. If yes, kindly indicate how often?

(a) Very Often { } (b) Often { } (c) Unsure { }

(d) Not Often { } (e) Not Very Often { }

Section C: Challenges in applying governance principles

69. Has governance in Forest Plantation Development in Ghana been effective?

(a)Yes (b) No

If No, what should be done to make governance effective?

.....

70. Kindly indicate which of the following factors affected governance of Forest Plantation Development?

(a) Commitment { } (b) Policy Direction { } (c) Political Interference { }

(d) Individual Interests { } (e) Socio-Cultural Settings { }

(f) Incentives { } (g) Financial Resources { } (h) Human Resources { }

(i) Logistics { } (j) Other, State .....{ }

71. In your opinion were certain governance principles lacking in Forest Plantation Development?

(a)Yes (b) No

Please comment:

.....

72. Are there weaknesses in governance principles that affect Forest Plantation Development Programme?

(a)Yes (b) No

If yes, list them?

.....

73. Do you presently face any challenges with governance of Forest Plantation Development in Ghana?

(a)Yes (b) No

If yes, what are the challenges? Please comment.

.....

Section D: Governance deficits in the Ghana's 1994 Forest and Wildlife Policy

74. Have you read Ghana's 1994 Forest and Wildlife Policy before?

(a)Yes (b) No

75. If your answer to question 74 is Yes, does the policy document address issues under governance in Forest Plantation Development?

(a)Yes (b) No

76. If your answer to question 75 is No, what are the governance issues that need to be addressed?

.....

Section E: Complexity of governance in Forest Plantation Development

77. Do you use feedback mechanism for addressing challenges in Forest Plantation Development?

    (a)Yes (b) No

    Please comment:

    .....

78. Are feedback mechanisms important in the governance of Forest Plantation Development?

    (a)Yes (b) No

79. Do you think control mechanisms (laws, agreements, conventions, interventions, and natural occurrences, etc) have had an impact on governance of Forest Plantation Development programme?

    (a)Yes (b) No

    Please comment:

    .....

80. Have you signed any agreement with respect to Forest Plantation Development?

    (a)Yes (b) No

81. Have you received any funds from any Government source with respect to Forest Plantation Development Activities?

    (a)Yes (b) No

82. Has Forest Plantation Development been sustainable?

(a)Yes (b) No

Please comment:

.....

83. Were benefits to communities equitably distributed in the Forest Plantation Development Programme?

(a)Yes (b) No

85. Have you been satisfied as a stakeholder with respect to Forest Plantation Development Programme in Ghana?

(a)Yes (b) No

Please comment:

.....

84. Please indicate by ticking your degree of interaction with stakeholders according to the scale of 1(Strongly Disagree) to 5 (Strongly Agree) on Forest Plantation Development Issues?

Stakeholders	1	2	3	4	5
Ministry of Lands and Natural Resource					
Forestry Commission (Forest Services Division)					
Taungya heads					
Farmers practicing modified taungya system					
Private Developers (On/Off-Reserve)					
Seedlings Suppliers					
Stool land Owners / Chiefs					
District Assemblies					
Traditional Authority Representatives					
Forest Fringe Communities					

85. Please indicate by ticking the degree of satisfaction with stakeholder interaction according to the scale of 1 (Strongly Disagree) to 5 (Strongly Agree) highest on Forest Plantation Development Issues?

Stakeholders	1	2	3	4	5
Ministry of Lands and Natural Resource					
Forestry Commission (Forest Services Division)					
Taungya heads					
Farmers practicing modified taungya system					
Private Developers (On/Off-Reserve)					
Seedlings Suppliers					
Stool land Owners / Chiefs					
District Assemblies					
Traditional Authority Representatives					
Forest Fringe Communities					

84. Please indicate by ticking how you were associated with the following stakeholders on Forest Plantation Development Issues:

Stakeholders	Area of Connectedness					
	Institutionalization of policy and legal framework	Documentation	Capacity Building (Meetings, Forums and Training Workshops)	Technical Advice	Benefits	Resources
Ministry of Lands and Natural Resource						
Forestry Commission (Forest Services Division)						
Taungya heads						
Farmers practicing modified taungya system						
Private Developers (On/Off-Reserve)						
Seedlings Suppliers						
Stool land Owners / Chiefs						
District Assemblies						
Traditional Authority Representatives						
Forest Fringe Communities						

85. As an important stakeholder of forest sector, do you think Forest Plantation Development in Ghana has a future?

(a)Yes (b) No

Please comment.....

APPENDIX 4

GUIDE FOR EXPERT GROUP MEETINGS

a. Degree of transparency in the allocation of degraded land for forest plantation development.

b. Extent of involvement of Forest Fringe communities during benefit sharing.

c. Decision making process under Forest Plantation Development.

d. Governance challenges in Forest Plantation Development.

e. Approach to effective governance under Forest Plantation Development.

APPENDIX 5
VIEWS OF STAKEHOLDERS ON STAKEHOLDER INTERACTIONS IN FOREST PLANTATION DEVELOPMENT

SI	Percentage Scores per Stakeholder																									
	Policy Group					Taungya Farmers					Seedlings Suppliers					Private FP Developers					Secondary				
	SD	D	U	A	SA	SD	D	U	A	SA	SD	D	U	A	SA	SD	D	U	A	SA	SD	D	U	A	SA
1	21.4	10.7	25.0	0.0	42.9	40.8	42.9	8.2	4.1	4.1	64.3	21.4	7.1	7.1	0.0	55.0	15.0	5.0	0.0	25.0	34.6	7.7	26.9	7.7	23.
2	0.0	6.3	3.1	12.5	78.1	2.1	7.4	14.7	18.9	56.8	5.6	11.1	11.1	22.2	50.0	0.0	2.4	31.7	29.3	36.6	15.7	9.8	9.8	29.4	35.3
3	12.1	18.2	6.1	21.2	42.4	7.9	7.9	19.1	21.3	43.8	28.6	21.4	7.1	14.3	28.6	0.0	7.7	26.9	26.9	38.5	19.4	22.6	32.3	12.9	12.9
4	6.1	12.1	15.2	39.4	27.3	3.2	5.3	38.3	24.5	28.7	17.6	5.9	23.5	35.3	17.6	6.7	20.0	13.3	26.7	33.3	17.9	7.7	17.9	35.9	20.5
5	12.9	12.9	22.6	32.3	19.4	39.0	26.8	7.3	14.6	12.2	7.1	14.3	35.7	38.6	14.3	3.4	6.9	37.9	24.1	27.6	16.1	25.8	25.8	25.8	6.5
6	18.2	21.2	12.1	18.2	30.3	2.9	30.9	47.1	8.8	10.3	29.4	11.8	17.6	17.6	23.5	17.6	38.2	14.7	8.8	20.6	33.3	19.4	11.1	13.9	22.2
7	22.6	9.7	25.8	19.4	22.6	25.9	44.8	15.5	10.3	3.4	33.3	20.0	33.3	6.7	6.7	28.0	24.0	40.0	8.0	0.0	16.1	35.5	22.6	12.9	12.9
8	26.7	30.0	13.3	16.7	13.3	40.4	31.9	14.9	8.5	4.3	50.0	7.1	0.0	28.6	14.3	53.3	46.7	0.0	0.0	0.0	21.4	21.4	21.4	25.0	10.7
9	25.8	16.1	19.4	25.8	12.9	35.6	31.1	13.3	17.8	2.2	21.4	42.9	14.3	21.4	0.0	38.9	27.8	27.8	5.6	0.0	8.0	12.0	40.0	24.0	16.0
10	12.1	9.1	21.2	27.3	30.3	27.4	6.5	22.6	30.6	12.9	17.6	5.9	41.2	11.8	23.5	33.3	4.8	23.8	33.3	4.8	19.4	22.2	25.0	16.7	16.7

SI=Stakeholder Interactions;1=MLNR; 2=FC/FSD; 3=Taungya Heads; 4=Farmers practicing MTS; 5=Private FP Developers; 6=Seedlings Suppliers; 7=Stoollands/Chiefs

8=District Assemblies; 9=Traditional Authorities; 10=Forest Fringe Communities; SD=Strongly Disagree; D=Disagree; U=Unsure; A=Agree; SA=Strongly Agree

Source : Fieldwork (2012)

APPENDIX 6
VIEWS OF STAKEHOLDERS ON THE DEGREE OF SATISFACTION WITH STAKEHOLDER INTERACTIONS IN FOREST PLANTATION DEVELOPMENT

DS	Percentage Scores per Stakeholder																								
	Policy Group					Taungya Farmers					Seedlings Suppliers					Private FP Developers					Secondary Stakeholder				
	SD	D	U	A	SA	SD	D	U	A	SA	SD	D	U	A	SA	SD	D	U	A	SA	SD	D	U	A	S
1	6.1	24.2	42.4	12.1	15.2	52.9	19.6	11.8	9.8	5.9	54.5	9.1	18.2	0.0	18.2	29.4	17.6	0.0	23.5	29.4	42.3	0.0	34.6	11.5	11
2	9.1	9.1	36.4	21.2	24.2	0.0	14.7	8.4	28.4	48.4	0.0	18.8	18.8	25.0	37.5	2.6	2.6	21.1	42.1	31.6	7.3	4.9	26.8	29.3	31.
3	16.1	16.1	19.4	25.8	22.6	5.4	8.6	18.3	38.7	29.0	20.0	13.3	6.7	46.7	13.3	0.0	13.6	27.3	27.3	31.8	32.1	7.1	14.3	35.7	10.
4	15.2	9.1	30.3	27.3	18.2	1.1	18.3	32.3	23.7	24.7	15.4	15.4	7.7	46.2	15.4	0.0	34.6	23.1	11.5	30.8	5.3	15.8	21.1	28.9	28.9
5	22.6	12.9	32.3	25.8	6.5	28.9	28.9	13.2	7.9	21.1	16.7	25.0	8.3	16.7	33.3	0.0	12.0	24.0	44.0	20.0	22.6	12.9	29.0	12.9	22.6
6	21.9	15.6	25.0	28.1	9.4	5.1	37.3	32.2	11.9	13.6	6.7	20.0	26.7	13.3	33.3	20.7	17.2	34.5	17.2	10.3	14.7	35.3	5.9	23.5	20.6
7	22.6	19.4	29.0	19.4	9.7	39.3	39.3	11.5	8.2	1.6	40.0	40.0	20.0	0.0	0.0	26.0	31.6	31.6	10.5	0.0	20.6	29.4	20.6	20.6	8.8
8	26.7	23.3	33.3	13.3	3.3	29.3	36.6	26.8	4.9	2.4	18.2	18.2	36.4	9.1	18.2	36.4	36.4	27.3	0.0	0.0	20.0	20.0	36.0	16.0	8.0
9	24.1	20.7	17.2	34.5	3.4	33.3	35.4	16.7	12.5	2.1	10.0	30.0	60.0	0.0	0.0	42.9	14.3	35.7	7.1	0.0	18.5	29.6	25.9	18.5	7.4
10	19.4	16.1	16.1	35.5	12.9	22.4	8.6	34.5	19.0	15.5	0.0	26.7	33.3	20.0	20.0	11.8	5.9	41.2	23.5	17.6	29.0	9.7	22.6	9.7	29.0

DS=Degree of Satisfaction;1=MLNR; 2=FC/FSD; 3=Taungya Heads; 4=Farmers practicing MTS; 5=Private FP Developers; 6=Seedlings Suppliers; 7=Stoollands/Chiefs 8=District Assemblies; 9=Traditional Authorities; 10=Forest Fringe Communities;SD=Strongly Disagree;D=Disagree; U=Unsure; A=Agree; SA=Strongly Agree

Source : Fieldwork (2012)

APPENDIX 7

VIEWS OF STAKEHOLDERS ON ASSOCIATION OF STAKEHOLDERS WITH AREA OF CONNECTEDNESS IN FOREST PLANTATION DEVELOPMENT

AS	Percentage Scores per Stakeholder																											
	Policy Group						Taungya Farmers						Seedlings Suppliers						Private FP Developers						Secondary Stakeholders					
	I	D	C	T	B	R	I	D	C	T	B	R	I	D	C	T	B	R	I	D	C	T	B	R	I	D	C	T	B	R
1	39.7	19.0	19.0	7.9	6.3	7.9	51.7	13.8	17.2	8.6	3.4	5.2	0.0	0.0	0.0	0.0	0.0	0.0	52.2	21.7	4.3	8.7	8.7	4.3	58.3	29.2	4.2	0.0	4.2	4.2
2	16.5	19.8	25.3	17.6	3.3	17.6	2.7	28.6	26.5	26.5	8.6	7.0	0.0	50.0	0.0	50.0	0.0	0.0	5.4	25.0	16.1	37.5	7.1	8.9	17.6	31.4	15.7	23.5	5.9	5.9
3	3.3	11.5	27.9	24.6	21.3	11.5	1.9	8.4	24.3	44.9	11.2	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.8	79.2	0.0	0.0	0.0	6.1	24.2	48.5	15.2	6.1
4	7.5	10.4	20.9	29.9	20.9	10.4	2.2	6.7	31.5	34.8	14.6	10.1	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	46.2	38.5	11.5	3.8	0.0	12.5	28.1	34.4	15.6	9.4
5	10.0	18.0	14.0	34.0	12.0	12.0	0.0	3.4	13.8	24.1	34.5	24.1	0.0	0.0	0.0	0.0	0.0	0.0	5.6	8.3	16.7	27.8	22.2	19.4	0.0	16.7	16.7	41.7	8.3	16.7
6	5.1	10.2	18.6	28.8	15.3	22.0	0.0	6.0	10.0	32.0	14.0	38.0	25.0	25.0	0.0	0.0	25.0	25.0	0.0	0.0	8.0	20.0	8.0	64.0	0.0	7.1	3.6	21.4	25.0	42.9
7	20.0	15.0	25.0	12.5	20.0	7.5	13.2	36.8	13.2	10.5	10.5	15.8	0.0	0.0	0.0	0.0	0.0	0.0	4.5	4.5	13.6	4.5	50.0	22.7	0.0	20.8	16.7	12.5	37.5	12.5
8	19.4	12.9	19.4	16.1	19.4	12.9	12.5	37.5	17.5	5.0	12.5	15.0	0.0	0.0	0.0	0.0	0.0	100.0	14.3	28.6	7.1	7.1	14.3	28.6	4.8	19.0	23.8	9.5	4.8	38.1
9	15.6	6.3	18.8	12.5	31.3	15.6	15.4	17.9	41.0	2.6	12.8	10.3	0.0	0.0	0.0	0.0	0.0	100.0	6.3	12.5	18.8	6.3	43.8	12.5	12.0	20.0	16.0	8.0	28.0	16.0
10	6.9	3.4	25.9	20.7	24.1	19.0	2.3	9.1	13.6	13.6	45.5	15.9	0.0	0.0	0.0	0.0	0.0	100.0	5.0	0.0	20.0	20.0	55.0	0.0	3.8	15.4	7.7	3.8	50.0	19.2

AS=Association of Stakeholders; 1=MLNR; 2=FC/FSD; 3=Taungya Heads; 4=Farmers practicing MTS; 5=Private FP Developers; 6=Seedlings Suppliers; 7=Stool lands/Chiefs; 8=District Assemblies; 9=Traditional Authorities; 10=Forest Fringe Communities; I=Institutionalization of Policy and Legal Framework; D=Documentation; C=Capacity building; T=Technical Advice; B=Benefits; R=Resources

Source : Fieldwork (2012)