

4 GOVERNANCE FOR SUSTAINABLE FOREST-RELATED LIVELIHOODS IN GHANA'S HIGH FOREST ZONE

By Mirjam A.F. Ros-Tonen¹, Mercy Derkyi¹, Thomas Insaadoo², Andy Bell³ and Jennie Ledger³

¹ Amsterdam Institute for Social Science Research (AISSR) - University of Amsterdam, the Netherlands.

² Faculty of Renewable Natural Resources (FRNR) - Kwame Nkrumah University of Science and Technology (KNUST), Ghana

³ MSc programme in International Development Studies, University of Amsterdam, the Netherlands

Abstract

This paper presents preliminary results of research carried out under the TBI Ghana/University of Amsterdam/KNUST 'Governance for sustainable forest-related livelihoods in Ghana's High Forest Zone' programme. The paper starts out by presenting the objectives and components of the programme and the methods employed in the studies carried out thus far. After that, the main features and challenges of the forest governance process are presented. Moreover, it shows that in spite of the intention to promote co-management with participation of forest fringe communities, the prevailing mode of governance is still hierarchical, characterised by vertical relationships between the state and non-state actors in forest governance.

Against this governance context, the authors perform a detailed analysis of the actors involved in forest governance and livelihoods, distinguishing between statutory, customary, market, civil society and hybrid governing structures. Actors use forest and tree resources for their livelihoods in various ways. A more detailed examination is carried out of the contribution of two major forest-related activities to rural livelihoods, namely non-timber forest product extraction and farming under the Modified Taungya System. The last part of the paper outlines different kinds of forest and tree-related conflicts that inevitably arise due to the multiple governing structures and wide variety of actors and their conflicting interests.

The authors present three 'fishbone' or cause-effect diagrams, which clarify the kind and causes of such conflicts occurring, respectively, in (1) forest reserves, (2) off-reserve areas and (3) both forest and off-reserve areas. The authors conclude that various cross-links exist between the TBI-Ghana/UvA/KNUST programme and the EU Voluntary Partnership Agreement as regards combating illegal logging, with both aiming to improve livelihoods and governance. Key to these improvements is reducing

forest and tree-related conflicts, reconciling interests and creating partnerships between the various actors involved in forest governance and management.

Overview of the Governance for Sustainable Forest-Related Livelihood Research in Ghana: Background to the project

A review of forest research in Ghana reveals that information on forest-related livelihoods is still scarce. Most research tends to focus on parameters for sustainable forest management of timber resources and on ecological processes. With her study on non-timber forest products, Julia Falconer (1992) set the stage for the recognition of the importance of forest resources for forest-adjacent communities, which had hitherto been neglected in policies characterised by a focus on industrial forest users and timber-based forest management.

Several studies have subsequently been carried out to review the possibilities of involving communities in forest management and these paid attention to co-management (Brown 1999), community-based natural resource management (Leach *et al.* 1999) and adaptive management (Mayers and Kotey 1996). More recent research has focused on environmental policies and governance arrangements that are needed to enhance the role of forest resources in rural livelihoods (Amanor 1999, Amanor and Brown 2003, Wiggins *et al.* 2004), including those related to forest tenure (Owubah 2001, Boakye and Baffoe 2007, Zhang and Owiredo, 2007). However, hardly any knowledge is available on the role of forest resources in the livelihoods of forest-adjacent people, the governance arrangements that hinder or enhance the poverty-alleviating potential of forest-related livelihoods and the conflicts that occur as a result of conflicting interests between various forest users.¹ Yet, such knowledge is not only indispensable to improve forest-dependent livelihoods, but also to curb the potential negative effects on people's livelihoods of the implementation of the Voluntary Partnership Agreement (VPA) which is intended to combat illegal logging.

The 'Governance for sustainable forest-related livelihoods in Ghana's High Forest Zone' programme – a cooperative effort between Tropenbos International Ghana, the University of Amsterdam (UvA) and Kwame Nkrumah University of Science and Technology (KNUST) – aims to fill this gap. In so doing, this programme aims to contribute to TBI Ghana's objective to generate and promote knowledge to improve forest-dependent livelihoods and conservation for rural poverty reduction. This paper presents the characteristics of this programme, as well as some preliminary results.

Components of the project

The 'Governance for sustainable forest-related livelihoods in Ghana's High Forest Zone' programme was initiated in 2008 with a view to generating insight into and formulating recommendations on governance arrangements that enhance forest and tree-related

¹ In the TBI Ghana programme, a PhD study has been realised on forest conflicts (Marfo 2006), but this focused on actor-response processes, power relationships and actor empowerment, rather than on livelihood-related conflicts.

livelihoods. Its research component² encompasses two PhD studies and several MSc studies. The PhD studies deal with:

- Forest governance and conflict management: understanding forest-related livelihood conflicts from different stakeholders' perspectives (2008-2011) (researcher: Mercy Derkyi, UvA/AMIDSt)³;
- Governance arrangements and innovations for improved forest-related livelihoods in Ghana's High Forest Zone (2008-2011) (researcher: Thomas Insaadoo, KNUST).

MSc studies, carried out by students of International Development Studies at the University of Amsterdam, deal with related themes to complement the studies carried out by the PhD students. In 2009, two MSc students – Andy Bell and Jennie Ledger – carried out studies on the importance of non-timber forest products (NTFPs) and the Modified Taungya System (MTS) for rural livelihoods in the High Forest Zone. New studies are being prepared on the role of bush meat trade and the contribution of commercial plantation development to rural livelihoods.

The studies encompass the following components:

1. *Actor analysis*: Which actors have a stake in the resources in Ghana's High Forest Zone, and what are their characteristics and interests?
2. *Policy analysis*: What policies are relevant for securing and enhancing forest-related livelihoods and how have these changed in the past decades?
3. *Institutional analysis*: Which formal and traditional institutions regulate people's access to forest resources, *i.e.* their rights to own, to use, and to have a say in the allocation of these resources?
4. *Livelihood analysis*: What livelihood options exist in Ghana's High Forest Zone?
5. *Conflict analysis*: What forest livelihood-related conflicts can be discerned in Ghana's High Forest Zone and what are their characteristics in terms of actors, resources and interests involved?

The outcome of these components will be integrated into a synthesis study to be published in 2011. This synthesis will encompass recommendations for improved (i) forest-based livelihood options, (ii) forest governance arrangements, and (iii) conflict resolution mechanisms.

Below, we present some preliminary results, related specifically to (a) the nature of the governance process in Ghana's High Forest Zone (actors, modes and challenges), (b) prevailing forest and tree-related livelihood portfolios, (c) the contribution of two specific forest land uses to rural livelihoods, *i.e.* NTFP extraction and the Modified Taungya system (MTS), and (d) forest and tree-related livelihood conflicts (types, causes, and conflict management arrangements). Finally, this paper looks into the links

² The programme also includes a training component, with 1-2 Ghanaian MSc students per year receiving 3 month training at the University of Amsterdam.

³ Due to a merger AMIDSt – the Amsterdam research institute for Metropolitan and International Development Studies – was dissolved to form a part of the Amsterdam Institute of Social Science Research (AISSR) as from 1 January 2010.

that exist between this research project and the on-going European Union-Ghana Voluntary Partnership Agreement (VPA).

Methodology

The research was carried out from June –September, 2009 in some selected areas of Ghana's High Forest Zone in Nkawie, Asankrangwa, Sefwi and Sunyani Forest Districts. We used different research techniques such as semi-structured questionnaires and focus group discussions among both forest fringe communities and forest governors and experts. The Poverty-Forests Linkages Toolkit developed under the Programme on Forests (PROFOR)⁴ – hereafter referred to as the PROFOR toolkit – was used to assess the relative contribution of forest and tree-related activities to people's livelihoods. PROFOR developed this tool because the importance of forests to rural livelihoods⁵ is often overlooked in national development processes such as poverty reduction strategies. This hiatus is due to inadequate evidence documenting how forests sustain the poor and the PROFOR toolkit was designed to facilitate relevant data collection and analysis with regard to ways in which forests sustain the poor (<http://www.profor.info/profor/node/60>).

Tool 4 was used in this research to analyse livelihoods, using ranking and looking at the components that make up both the cash and non-cash income of people in forest fringe communities. Analytical tools such as SPSS, Excel and fishbone diagrams were useful in our analyses of the data collected. The fishbone diagram is an analysis tool that provides a systematic way of looking at the effects and causes that create or contribute to those effects. Due to the function of the fishbone diagram, it can be referred to as a cause-and-effect diagram. The design of the diagram resembles the skeleton of a fish. Therefore, it is often referred to as the fishbone diagram and, since it was invented by Dr Kaoru Ishikawa, a Japanese quality control statistician, it is also referred to as the Ishikawa diagram (<http://quality.enr.state.nc.us/tools/fishbone.htm>). In addition, we made use of relevant literature and secondary data such as official documents and laws within the forestry sector. The preliminary findings were shared during the Illegal or Incompatible project workshop held in Ghana in October 2009.

Preliminary Results

Governance modes and challenges

This study takes the notion of 'interactive governance' developed by Kooiman and Bavinck (2005: 17) as a starting point. This concept is defined as "the whole of interactions taken to solve societal problems and to create societal opportunities;

⁴ The Programme on Forests is a multi-donor trust fund financed by the Department for International Development (DFID) of the United Kingdom, the Finnish Department for International Development Cooperation, the Japanese International Forestry Cooperation Office and Swiss Development Cooperation (SDC). The German Government is an in-kind contributor. Set up by the United Nations Environmental Programme (UNEP) in 1996, PROFOR has been hosted by the World Bank since 2002 (<http://www.profor.info>).

⁵ PROFOR uses as a basis the frequently quoted World Bank (2001) estimate that an estimated 1.2 billion people worldwide rely on forests for some part of their livelihoods.

including the formulation and application of principles guiding those interactions and care for institutions that enable and control them'. Based on research on fisheries, Kooiman and Bavinck (*ibid.*, p. 21-22) identified three styles or modes of governance:

- *Self-governance* – a situation in which actors take care of themselves, out of sight of government;
- *Hierarchical governance* – which is a top-down style of intervention and interaction between the state and its citizens, in which steering, planning and control are the key concepts, expressed in instruments such as laws and policies;
- *Co-governance* – a collaborative way of governing in which responsibilities are shared between the State and societal parties with a common purpose in mind. This mode of governance is characterised by horizontal relationships, with no actor being solely in control.

In the Ghana situation we can say that Ghana's forest sector has a blend of hierarchical and co-governance modes of governance. The hierarchical mode of governance - with the Forestry Commission (FC) being the main responsible agency for forest management – is a legacy of British colonial rule. The co-governance arrangements are rooted in the 1994 Forest and Wildlife Policy and its legislative instruments, especially the provisions and guiding principles relating to community forestry. However, in practice the hierarchical mode of governance prevails over co-governance and it can be argued that this applies to both statutory and customary governance arrangements (Derkyi, forthcoming).

In addition to the prevalence of the hierarchical mode of governance, despite intentions to move towards co-governance, forest governors and experts on Ghanaian forest governance identified the following governance challenges for Ghana's forest sector:

- Laws being insufficiently differentiated for forest reserves and off-reserve areas whereas contexts and actors are different;
- Conflict analysis and management are not part of the training of the resource manager;
- Inadequate staff and logistics for the Forestry Commission, especially at district level;
- A clash between customary and statutory laws with the former being less readily recognised in the forest conflict management process.

Solutions for these problems lie in a decentralised and interactive approach to forest governance with feedback loops during implementation, differentiated laws and regulations adapted to the specific on-reserve and off-reserve conditions, sufficient funding of the Forestry Commission and capacity building, with due attention to conflict management for forest practitioners in academic curricula as well as a clearly defined role for customary laws in conflict management.

Actors in forest governance and livelihoods

Actors involved in forest and tree governance and livelihoods include individuals,

households, associations, companies, institutions, NGOs, traditional authorities, local communities and government officials that have roles, responsibilities and interests or are involved in (a) forest and tree resource use, (b) forest and tree resources management, (c) forest and tree resource conflicts and/or (d) resolving or managing forest and tree resource conflicts. It also includes people who have a share in benefits or who influence decision making or implementation.

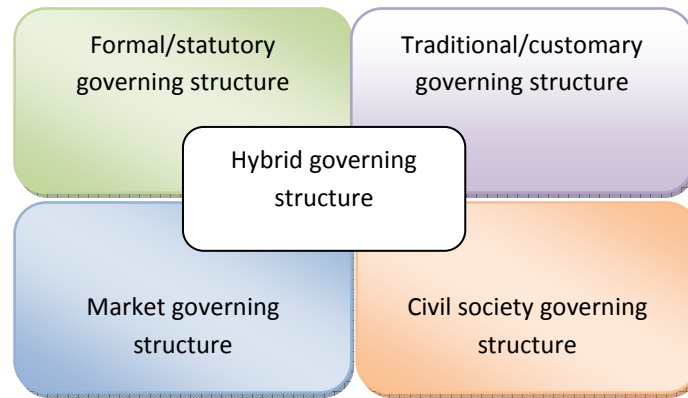


Figure 1: Categories of actors in forest governance, forest and tree-related livelihoods, conflicts and conflict management in Ghana's High Forest Zone

As illustrated in Figure 1, the actors involved in forest governance and forest and tree-related livelihoods and conflicts, can be grouped into five main categories: (i) actors in the formal/statutory governing structure, (ii) actors in the traditional or customary governing structure, (iii) actors in the market governing structure, (iv) actors in the civil society governing structure, and (v) actors in the hybrid governing structure. We examine these actors in more detail below.

Actors in the formal/state governing structure

The institutions which are legally mandated to manage forest and tree resources are termed forest governors. These include the Ministry of Lands and Natural Resources (MLNR), which is responsible for designing appropriate governance principles and guidelines enshrined in policy and laws as well as for monitoring and directing the policies. Under MLNR, the two most important institutions with regard to forest and tree-related livelihoods are the Forestry Commission (FC) and the Administrator of Stool Lands (Figure 2). The FC is made up of three key divisions namely the Forest Services Division (FSD), the Wildlife Division (WD) and the Timber Industry Development Division (TIDD) (Figure 2). The FC's responsibilities include ensuring effective implementation of the policies and laws and effecting management goals related to sustainable forest and wildlife management and development of the timber industry. The Administrator of Stool Lands – established by the 1992 Constitution and

1994 Stool Lands Act (Act 481) – is in charge of the management of stool lands on behalf of the communal land owners.⁶

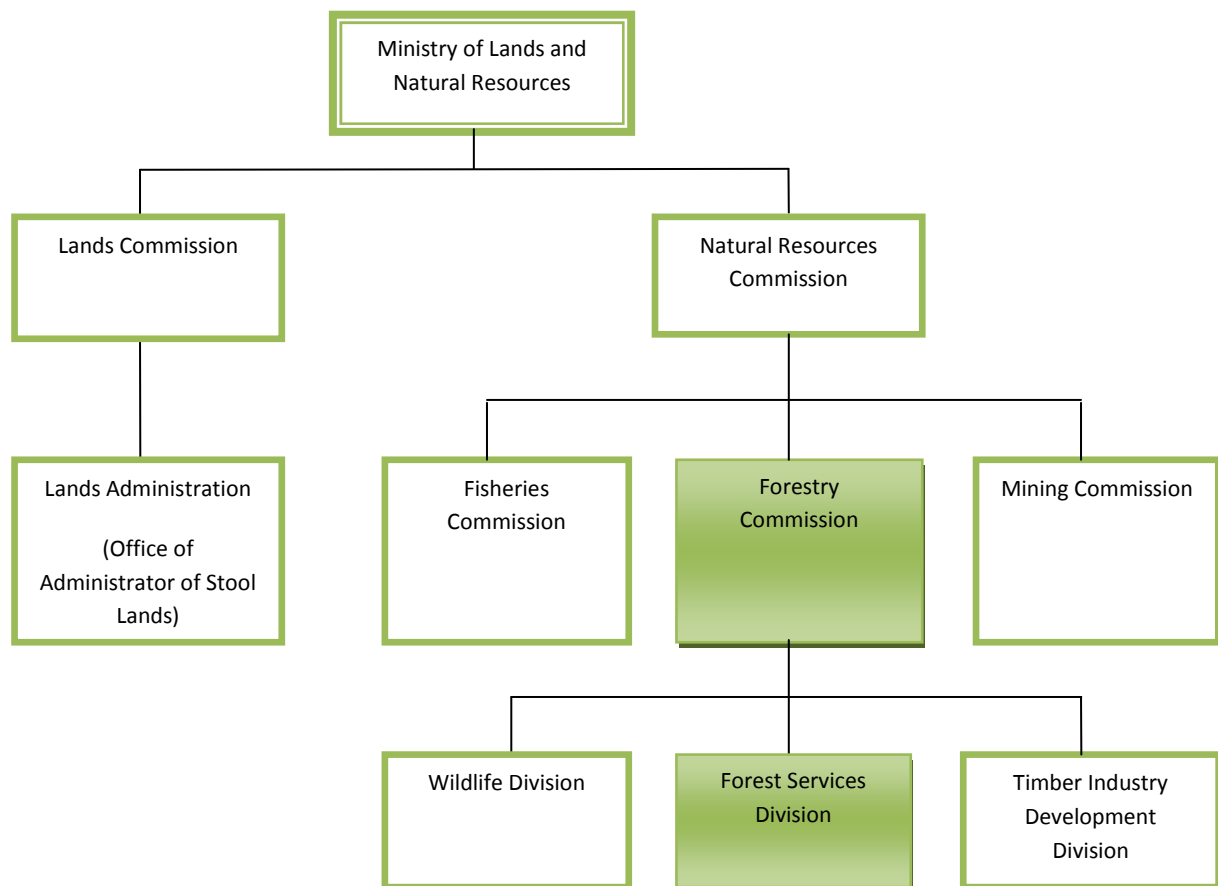


Figure 2: Structure of the Ministry of Lands and Natural Resources

In addition to the forest governors, other relevant actors in the formal/statutory governance structure are those in charge of the distribution of revenues and law enforcement, being the District Assemblies, the Ghana Police & Military and the Judiciary.

Actors that are closely related to the formal/statutory structure but that are not officially part of it are those at national and international level that sponsor and support forestry development, research and capacity building. At national level these include academic institutions (e.g. the Faculty of Renewable Natural Resources (FRNR) at KNUST) and research institutions (e.g. the Forest Research Institute of Ghana - FORIG). At international level these are donors representing foreign governmental organisations (e.g. the UK Department for International Development, DFID) and inter-governmental organisations such as the Food and Agriculture Organization of the United Nations.

⁶ URL: <http://www.ghanalap.gov.gh/index1.php?linkid=88> accessed 23 January 2010.

Traditional or customary governing structure

The traditional or customary governing structure consists of communities and customary institutions.

Communities are interpreted in this study as groups of people that share a particular geographical space (usually a village) and its natural resources, but that are not necessarily homogenous in terms of interests and socioeconomic positions. Asare (2000) – who defines ‘community’ as a conglomeration of people with identifiable characteristics and common or differing interests – distinguishes the following five categories of communities related to forests:

1. People with ownership rights over the forest;
2. People living within or close (1-5 km) to the forest estate;
3. People who use forest products such as timber, NTFPs or bush meat;
4. People who are affected by changes in the forest environment or negatively affect the forest environment;
5. People who provide resources towards forest management.

In terms of supporting forest resource management, communities have been mandated to help control and prevent wildfire and protect the national plantation schemes in return for 5% of the final proceeds as well as social responsibility agreements in timber utilisation contract operational areas.

Customary institutions are mostly found in community settings depending on the level of hierarchy. The village chief (locally called *Odikro*, which literally means ‘owner of the village’) resides near the forest resources, even though he is not the landowner. The *Odikro* is normally appointed caretaker chief at village level by the divisional chief (*Ohene*) under whose jurisdiction a number of *Odikros* serve. In turn, the *Ohene* serves under the head of the traditional state (*oman*), the paramount chief (*Omanhene*)⁷ (Mayers and Kotey 1996, Kasanga 2003, Kendie and Guri 2006).

In Southern Ghana, chiefs at all levels have a council of elders to assist in administrative functions. Traditional councils around a paramount chief – the *oman* level – are made up of the *Omanhene* and *Ohemaa* (queen mother) and all divisional chiefs (*Ohene*). At the divisional level the *Ohene* and his *Ohemaa*, all subdivisional chiefs (*Apakanhene*) and all clan heads (*Abusaupanyim*), make up the council of elders. At village level the council of elders is called *besuanfo*, which means committee of seven, referring to the seven heads of clan (*Abusaupanyim*) that form the council (Asare 2000, Kendie and Guri 2007). The traditional councils, based on a combination of statutory and customary law, often hold the landholding authority in the High Forest Zone (Mayers and Kotey, 1996). In Ghana, 78% of the land is in the hands of customary land holders (Sasu 2004: 2). An important

⁷ The female counterparts of the *Omanhene* and *Ohene* are referred to as *Ohemaa* (queen mother) whereas the female counterpart of the *Odikro* is the *Obaapanyin*. The latter can be the chief’s mother, his mother’s sister, sister, a mother’s sister’s daughter or a sister’s daughter (Kendie and Guri 2006).

traditional authority in this respect is the stool. The stool (or in Northern Ghana: skin) is the symbol of chieftaincy at all levels. In statutory law a stool (or skin) is defined as any person or body of persons having control over community land, including family land, as a representative of a particular community (Kasanga 2003: 144). The stool can only hold land in trust for communal landowners but has no say in the management of forest resources, which is under the jurisdiction of the FC. The management of stool lands is in the hands of the Administrators of Stool Lands, which body is part of the formal/statutory governing structure.

Market governing structure

The timber industries are the most important actors that make up the market governing structure with different categories and sub-categories of actors. Owusu (2009) reported four key sub-groups namely: loggers, buyers, millers and the downstream wood processors which include furniture makers, lumber sellers (vending wood from both legal and illegal sources) and carpenters of all sorts. The only actors active in logging with legal recognition are Timber Utilization Contract (TUC) or concession holders, Timber Utilization Permit (TUP) holders that extract timber for non-commercial uses and salvage permit holders that extract wood from areas to be transformed for development purposes such as road construction, expansion of human settlement or cultivation of farms (Marfo 2010). Each of these holders may belong to one or both of two main bodies, namely the Ghana Timber Association (GTA) and the Ghana Timber Miller Organisation (GTMO).

Mayers and Kotey (1996) assert that the main interest of this group of actors is to access logs from marketable species at the lowest possible prices with a view to converting them to high-value processed lumber for sale at high prices. The means available to these actors to achieve their interests are the strong influence they have at policy level as well as the *de facto* control over large forest areas. Other actors in this group are investors in commercial timber plantations and traders in NTFPs and bush meat.

Civil society governing structure

The civil society governing structure in the forestry sector consists of national and international environmental organisations as well as NGOs that contribute to capacity building, forest restoration and ensuring legality. Examples are national organisations engaged in advocacy such as Forest Watch Ghana (FWG) and the Rural Youth Development Association. The international actors in this arena include Tropenbos International Ghana for research and capacity building, Care International for humanitarian aid and the Forest Stewardship Council which promotes certification of sustainably managed forest lands.

Hybrid mode of governing structure

The research carried out under the TBI-UvA-KNUST programme revealed three hybrid modes of governance. The first one is at community level and is a blend of statutory and

customary influences. The reason for this is that these structures were initiated by the formal sector engaging people from the traditional governing structure. Specific actors in this arena are (i) Modified Taungya System (MTS) farmers, (ii) Community Forest Committees (CFCs), (iii) Community Biodiversity Advisory Groups (CBAGs), (iv) Fire Volunteers Squads and (v) Unit Committees (see Table 1).

Table 1: Community-based institutions in the hybrid governing structure

Institution	Mandate
• Modified Taungya System (MTS) committees	• Allocate cropping rights to MTS farmers who are allowed to plant crops in reforestation schemes in return for tending the seedlings and saplings and a share in the proceeds.
• Community Forest Committee (CFCs)	• Enhance community empowerment and participate in resource management
• Community Biodiversity Advisory Groups (CBAGs)	• Act as social fencing to protect Globally Significant Biodiversity Areas within forest reserves • Prevent and combat wild fires
• Fire Volunteers Squads	• Stimulate local development using communal labour and village fundraising to build schools, clinics, wells and latrines
• Unit Committees	

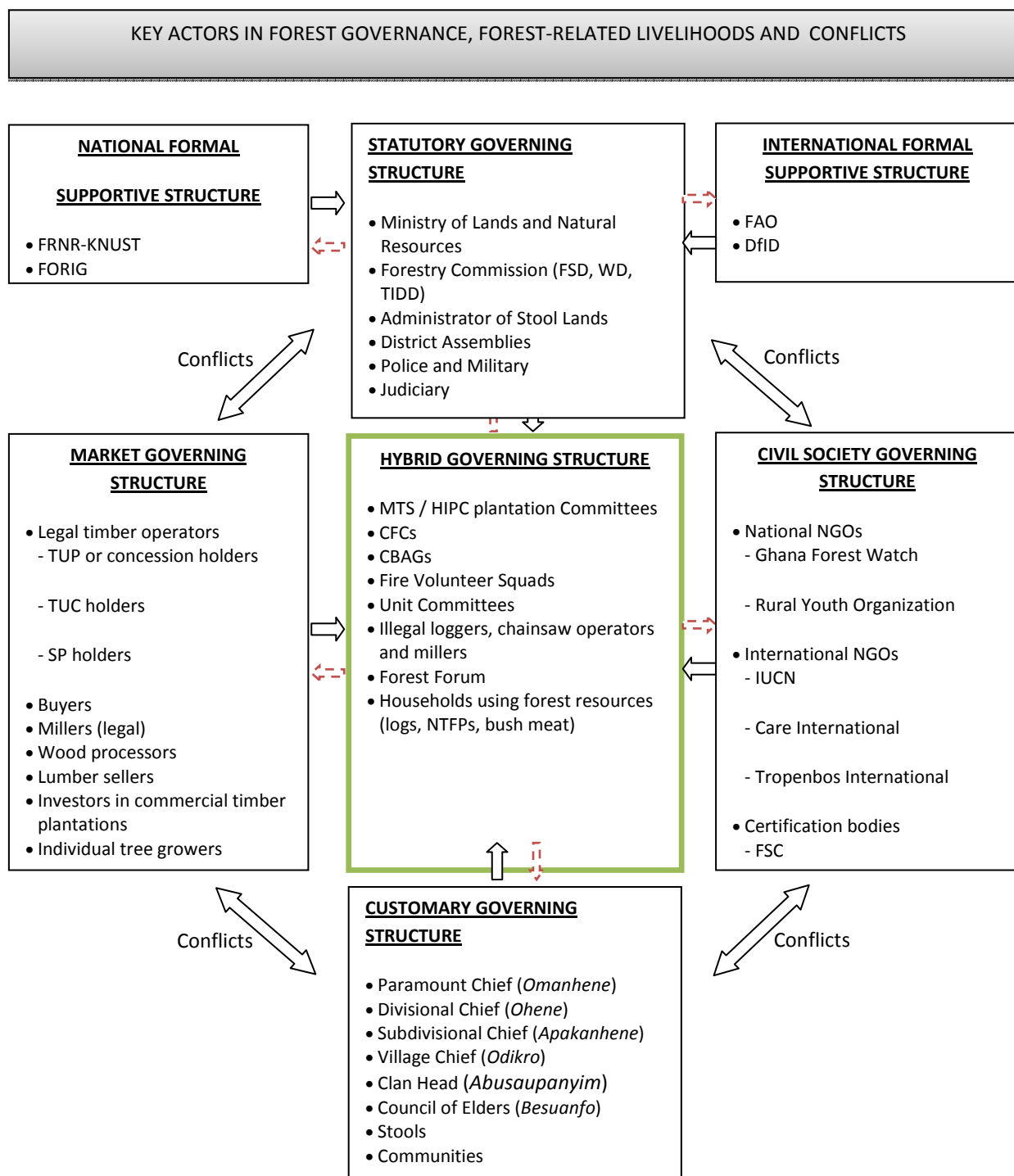
Sources: Mayers and Kotey 1996; Kasanga 2003; World Bank 2006.

The second hybrid mode refers to illegal logging, chainsaw lumbering and illegal lumber selling. This is a hybrid arena because the actors operate at multiple levels of scale, ranging from micro (the community) to macro (the government) in Ghana's geopolitical settings. The actors in this mode also come from a blend of formal, market and traditional governing structures. Actors in this hybrid mode include illegal chainsaw operators, illegal timber loggers and illegal lumber sellers. Each actor in the hybrid structure has a specific role in forest management.

The third group in the hybrid governing structure is the Forestry Forum. This is a forum made up of representatives from the customary, state and the market governing structure, including communities and timber operators. The Forestry Forum is functional at national and regional levels and in some districts of Ghana.

Figure 3 gives an overview of the key actors in forest governance, livelihoods and conflicts in Ghana's High Forest Zone.

Figure 3: Key actors in Ghana's forest sector



Acronyms in alphabetical order: CBAGs = Community Biodiversity Advisory Groups, CFCs = Community Forest Committees, DfID = Department for International Development (UK), FAO = Forest and Agriculture Organization of the United Nations, FORIG = Forest Research Institute of Ghana, FRNR-KNUST = Faculty of Renewable Natural Resources of Kwame Nkrumah University of Science and Technology, FSC = Forestry Stewardship Council, FSD = Forest Services Division, HIPC = Highly Indebted Poor Countries, IUCN = International Union for the Conservation of Nature, MTS = Modified Taungya System, NGOs = Non-governmental organisations, NTFP = Non-timber forest products, SP = Salvage Permit, TIDD = Timber Industry Development Department, TUC = Timber Utilization Contract, TUP = Timber Utilization Permit, WD = Wildlife Division

Forest and tree-related livelihood portfolios and components

The forest and tree resources within the High Forest Zone serve as a source of cash and non-cash income in both rural and urban livelihoods. The forest and tree-related components in the livelihood portfolios identified in this research include:

- Planted trees on farmlands;
- Timber tree nursery establishment;
- Commercial timber plantations;
- Plantations established with HIPC funds;
- Timber logging (either legal or illegal) and benefits from the Social Responsibility Agreement;
- Nurturing of naturally grown timber trees on farmlands;
- Compensation payment for logging damage on farmland;
- Modified Taungya System (MTS) farming; and
- Non-timber forest product extraction (both for domestic and commercial purposes).

Different governance and benefit-sharing arrangements have been designed for each of these activities, as shown below:

Planted trees on farmlands

If a landowner plants trees on farmland, 100% of the crops (all types) and 100% of the tree benefits are for the landowner. However, if the farmer is not the owner of land, the arrangement – observed in Asankrangwa Forest District – is that the farmer receives 67% and the landowner 33% of the tree and permanent crop benefits, whereas the supporting timber company has the first option when it comes to buying the mature timber at prevailing market prices. This arrangement applies to off-reserve areas where trees are planted on farmland and involves farmers, landowners and a timber company.

Timber tree nursery establishment

Tree seedlings are produced in nurseries on the basis of two main systems. One system applies to the MTS and HIPC schemes, with the FC (FSD) being responsible for supplying the farmer groups and/or workers with good quality seedlings. To that end, the FSD contracts individuals and groups to produce timber tree seedlings. These people and groups may or may not be directly involved in the MTS or HIPC schemes. The FC purchases the tree seedlings from the producers and supplies them to the participants in the MTS and HIPC planting schemes. The other system applies mainly to the commercial and on-farm tree planting schemes, where the investor or farmer is responsible for producing his/her own tree seedlings. Small-scale on-farm tree planters receive these seedlings mostly free of charge from supporting institutions. Examples of such organisations are SAMATEX, a timber company in the Asankrangwa Forest District, and Recerca e' Corporazione (RC), an Italian NGO that used to promote on-farm tree planting in the Sefwi Forest District.⁸ The FSD is supposed to supervise the tree seedling production activities.

⁸ Research is continuing to clarify where the commercial plantation developers get their seedlings from.

Commercial timber plantation development

Where commercial timber plantations are established, a land lease agreement is signed between the landowner and investor before any plantations are established. The investor and/or employees from the adjacent community plant timber trees in the degraded forest reserves that were allocated to them. In most cases, they intercrop with annual agricultural crops during the first three years of plantation establishment. The benefits from the plantation trees are shared on the basis of 90% for investor, 6% for landowners, 2% for the Forestry Commission and 2% for adjacent communities – with the proceeds from the crops going to the planter of these crops. The arrangement applies to degraded forest reserve areas where commercial plantations are being established. The actors involved include investors (local and expatriate), the Forestry Commission, adjacent communities and stools.

Plantations established with HIPC funds

The same arrangement applies when plantations are established with so-called HIPC funds – a fund established under the Highly Indebted Poor Countries (HIPC) plantations initiative which aims to improve the living conditions of deprived citizens of Ghana by serving as a source of short-term employment opportunities. Workers, who are mostly community members, receive monthly wages. This scheme is also meant to increase the tree cover of the degraded forest reserves. Under this programme, contracts are given to plantation supervisors (non-staff of FSD) who supervise the workers as regards planting trees in degraded forest reserves (sometimes in addition to cultivating their food crops under the same conditions as those governed by the MTS farming system).

Timber logging and benefits from the Social Responsibility Agreement

In case of legal timber logging, timber contractors negotiate with local communities adjacent to Timber Utilization Contract (TUC) / concession areas about the provision of goods and services to a maximum of 5% of the value of stumpage fees. This arrangement, referred to as the Social Responsibility Agreement (SRA), applies to both on-reserve and off-reserve areas. The scenario is different with respect to illegal logging or chainsaw lumbering operators who may come from both inside and outside the villages.⁹ Within the communities, the illegal operators establish various informal arrangements with selected community members, including (i) tree spotters, who help the operators to identify trees, (ii) lumber carriers or loading boys, (iii) chainsaw operators and (vi) informants and spies. In the informal arrangement no SRA benefit goes to the communities or royalties to the chiefs because no tree stumpage fees are paid to the Forest Services Division.

⁹ A recent study by Adam *et al.* (2007) cited in Marfo (2010: 12) found that people involved in chainsaw operations come from a range of backgrounds, with the majority including farmers (48%), unemployed youth (16%), previous timber company workers (7%) and traders (6%), as well as mechanics, masons and labourers.

Nurturing of naturally grown timber trees on farmlands and compensation payments

On-farm tree nurturing generates no direct benefits for either the farmer or the communities who often do tend and protect naturally grown economic trees. Revenues from tended trees are shared between the Forestry Commission (60%), District Assembly (DA) (20%), landowner or traditional authority (TA) (15%) and the administrator of stool lands (ASL) (5%), with the farmer receiving only compensation payment in case of logging damage to crops on farmlands.

Modified Taungya System (MTS)

The MTS is a legally-binding land lease and benefit sharing agreement for tree-planting schemes in which farmers receive parcels of degraded forest reserve areas earmarked for conversion to plantations to produce food and vegetable crops¹⁰ and help replant the degraded forest area. Intercropping is carried out during the first three years of plantation establishment, after which only tree growing is allowed. Under this scheme, the farmers are considered co-owners who are guaranteed 100% of the agricultural crop proceeds. The benefits from the trees are shared on the basis of 40% for farmers, 40% for the Forestry Commission, 15% for the land owner and 5% for adjacent communities. This arrangement applies to degraded forest reserve areas and involves MTS farmers, the Forestry Commission and stool authorities.

Non-timber forest product extraction

Villagers – both male and female - in forest-adjacent communities use various kinds of non-timber forest products, with the most important being pestles, canes, palm, spices and chewing sticks. If extraction takes place further away, on hilly terrain or involves some risk of getting caught by the FC officials, NTFPs are extracted mainly by men, and they also take primary responsibility for hunting. Women mainly extract herbs and spices as well as medicinal plants for their own use. Extraction can take place for both domestic use and for sale. Permits – acquired from the Wildlife Division for animal products and with the Forest Services Division for plant products - are required when products are extracted from the forest reserve for commercial use. No permits are required for the extraction of NTFPs for domestic use, either from on-reserve or off-reserve areas. Incomes (either cash or non-cash) from NTFP extraction function primarily as a safety net. Benefits for the government take the form of a permit fee when products are extracted for commercial purposes.

Understanding the contribution of NTFPs and Modified Taungya System to local peoples' livelihoods

Having reviewed the governance arrangements, the actors and the activities related to forest and tree-related livelihoods, the question arises of how important these activities are to people's livelihoods. To answer that question, several case studies have been (and are being) carried out by International Development Studies MSc students at the

¹⁰ Farmers are allowed to plant maize, plantain and coco yam, but not cassava (staple food in the region) which is thought to compete with the trees for nutrients.

University of Amsterdam. Below we present the results of the application of PROFOR tool 4 in the studies on NTFP extraction and the MTS respectively.

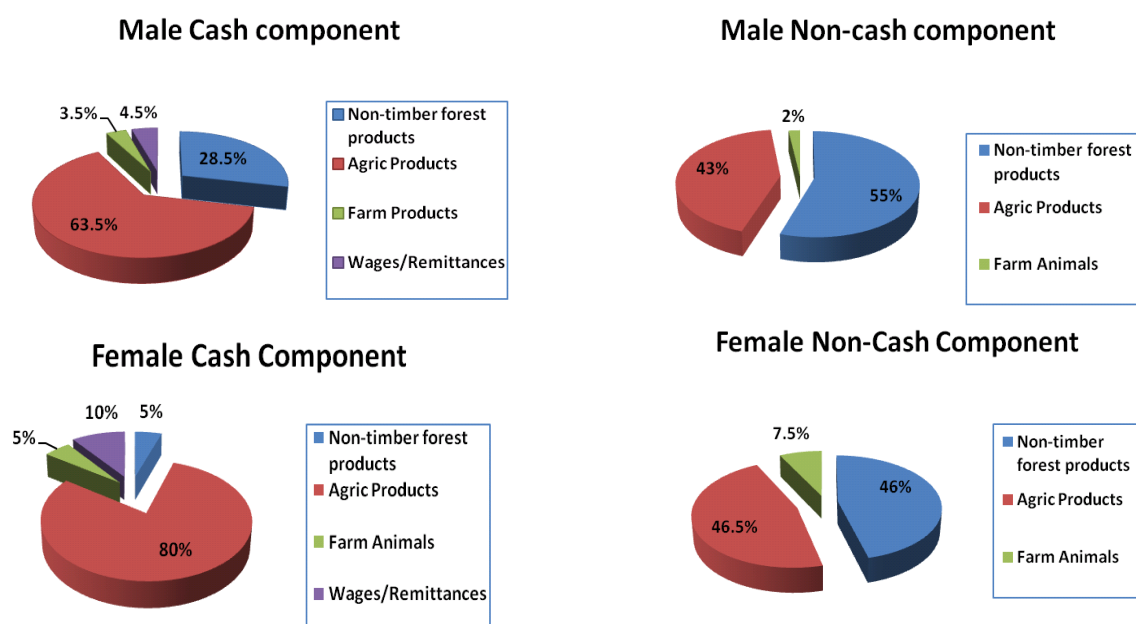
Analysis of NTFPs contributions to local people's livelihoods

Figure 3 shows the results of the 'PROFOR' exercise in Kyekyewere, a so-called 'Admitted Village' in Tano Offin Forest Reserve. Based on a group exercise with 10 males and 10 females, respectively, the pie charts present the cash and non-cash benefits for both sexes, with a focus on non-timber forest products.

Female CASH component and male CASH component: It is evident that, while both groups earn most income from agricultural products, the male group earns far more from NTFPs than the female group (28% compared to just 5%). The question is why is there such a large difference? Household surveys show that many of the respondents claimed that men were the ones who primarily went into the Forest Reserve to collect NTFPs because it was either too dangerous (risk of being caught without a permit) or because many of the products are simply too large to carry out of the reserve. Of the NTFPs that were taken and used by the women in Kyekyewere, most were small, such as herbs and spices, and small plants used for medicinal purposes.

Female NON-CASH component and male NON-CASH component: What is most noticeable here is that both NTFP figures not only stood out but are actually closer together this time (46% and 55%), unlike the CASH component. The annual non-cash component of a household's livelihood was described to the participants as things they benefit from and use daily, but do not receive income from. It is evident here that NTFPs contribute quite a lot to people's livelihoods. Almost every participant, from both the

Figure 3: Cash and non-cash benefits according to gender, with a focus on the importance of non-timber forest products in KyeKyewere, an 'Admitted Village' in the Tano Offin Reserve, HFZ Ghana



female and male groups, rated things like mushrooms, pestles, canes, bush meat, snails and chewing sticks.

To summarise, it can be said that the study revealed diverse livelihood profiles for both sexes, ranging from agriculture (food/cash crops and animal products) to wages/remittances and non-timber forest products. The analysis revealed that, in terms of cash, men benefit more from NTFPs than women, but that the non-cash benefits did not exhibit distinct differences. It could be said that neither of the sexes access NTFPs for their livelihoods, but that women use their products for domestic rather than for selling purposes.

Analysis of the contribution of the MTS to local people's livelihoods

Dotiem, which is on the fringe of the Tano Offin Forest Reserve, was the second village from which data was collected using the PROFOR tool. Here the focus was on the contribution of the Modified Taungya System to the livelihoods of the villagers. The male and female groups, each of which is made up of 10 MTS farmers, were asked to divide their yearly income (both in non cash and cash terms) according to the area they derived most of it from. In this way they could chose between products derived from the natural forest, crops from the MTS, agricultural products from land exclusively used for farming and products from fallow lands.

Female CASH and NON-CASH income: Figure 4 highlights the relative importance of the MTS, particularly in terms of its cash and non-cash contribution to the livelihoods of women, which is 50% and 54% respectively. In this case, hardly any income is

Figure 3: Cash and non-cash benefits according to gender, with a focus on the importance of non-timber forest products in KyeKyewere, an 'Admitted Village' in the Tano Offin Reserve, HFZ Ghana

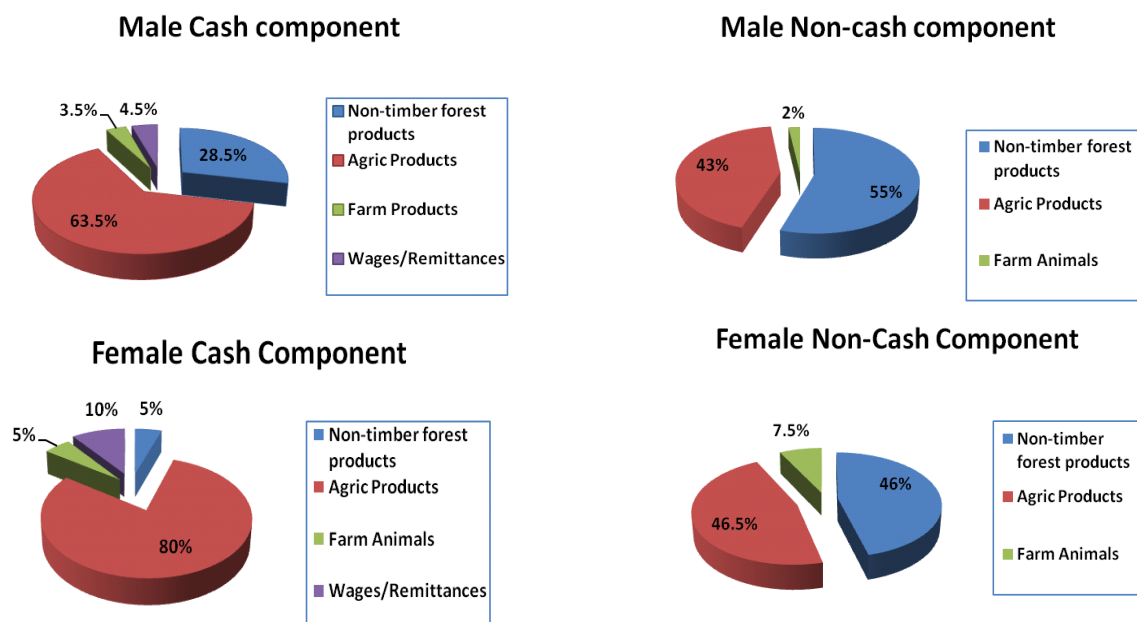
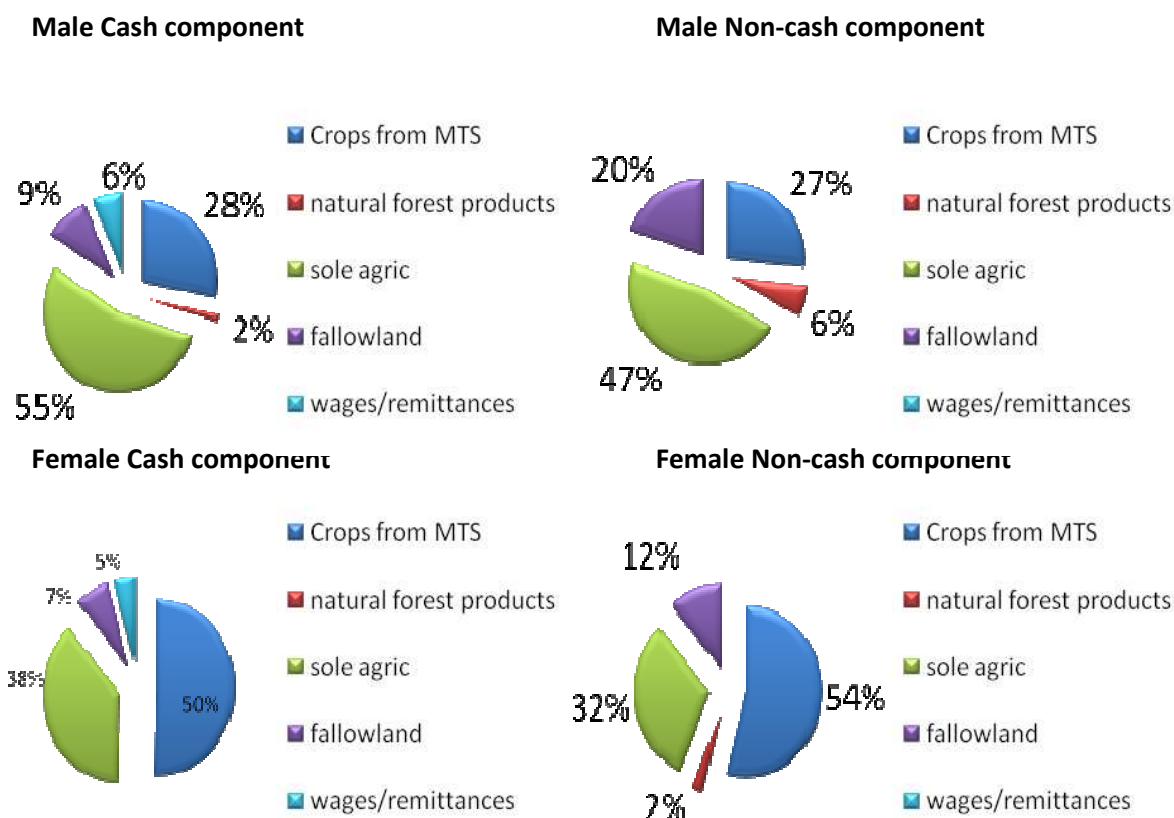


Figure 4: Cash and non-cash benefits according to gender, with a focus on the importance of crops under the Modified Taungya System in Dotiem village bordering the Tano Offin Reserve, HFZ Ghana



generated from products harvested from the natural forest (0% cash; 2% non-cash) or from fallow lands (7% cash; 12% non-cash). It transpires that, once the women sign the MTS agreement, they use the crops derived from it - cocoyam, plantain, maize and, to a lesser extent, tomatoes, pepper and firewood - as their main source of income (both cash and non cash).

Male CASH and NON-CASH income: When the men in the village participated in the livelihood ranking it became evident that, although they rely on the products derived from MTS as a source of cash and non-cash income (28% and 27% respectively), they derived the major proportion of their income from land exclusively used for farming (55% of cash and 47% of non-cash income). As is the case with women, products derived from natural forest and fallow lands were of minor importance.

To summarise, it is clear that both groups are reliant on MTS as a source of income but that in this case women derive a higher proportion of cash and non-cash income from agricultural products cultivated under the MTS. As in the analysis of the NTFPs, the MTS analysis in Dotiem also revealed a diversity of livelihood portfolios.

Forest and tree-related conflicts and prevailing management strategies

The above sections clearly showed that several actors are involved in the various forest and tree-related livelihood options and arrangements surrounding them. This

inevitably leads to conflicts due to diverging interests. We categorised forest governors and experts' views on forest and tree-related livelihood conflicts in the High Forest Zone into three (3) main scenarios:

1. Conflicts prevalent in Ghana's gazetted forest reserves;
2. Conflicts prevalent in off-reserve forest management areas; and
3. Conflicts prevalent in both off and on forest reserves management areas.

These scenarios are presented in adapted Fishbone diagrams with the smaller bones representing deeper causes of the larger bones they are attached to. Each bone is a link in a cause-and-effect chain that leads from the deepest causes to the targeted problem.

The target problem is the prevalence of forest and tree livelihood conflicts in Ghana gazetted forest reserves in the High Forest Zone. This problem is affected by six different livelihoods conflict categories as depicted above, with each category being contributed to by single or multiple driving factors. Each category contains different actors with competing claims. The actors commonly involved in on-reserve conflicts include:

- Local communities & FSD
- Admitted farm owners and FSD
- NTFP collectors and FSD (forest guards)
- MTS farmers and leaders
- Among MTS farmers
- MTS farmers and illegal farmers

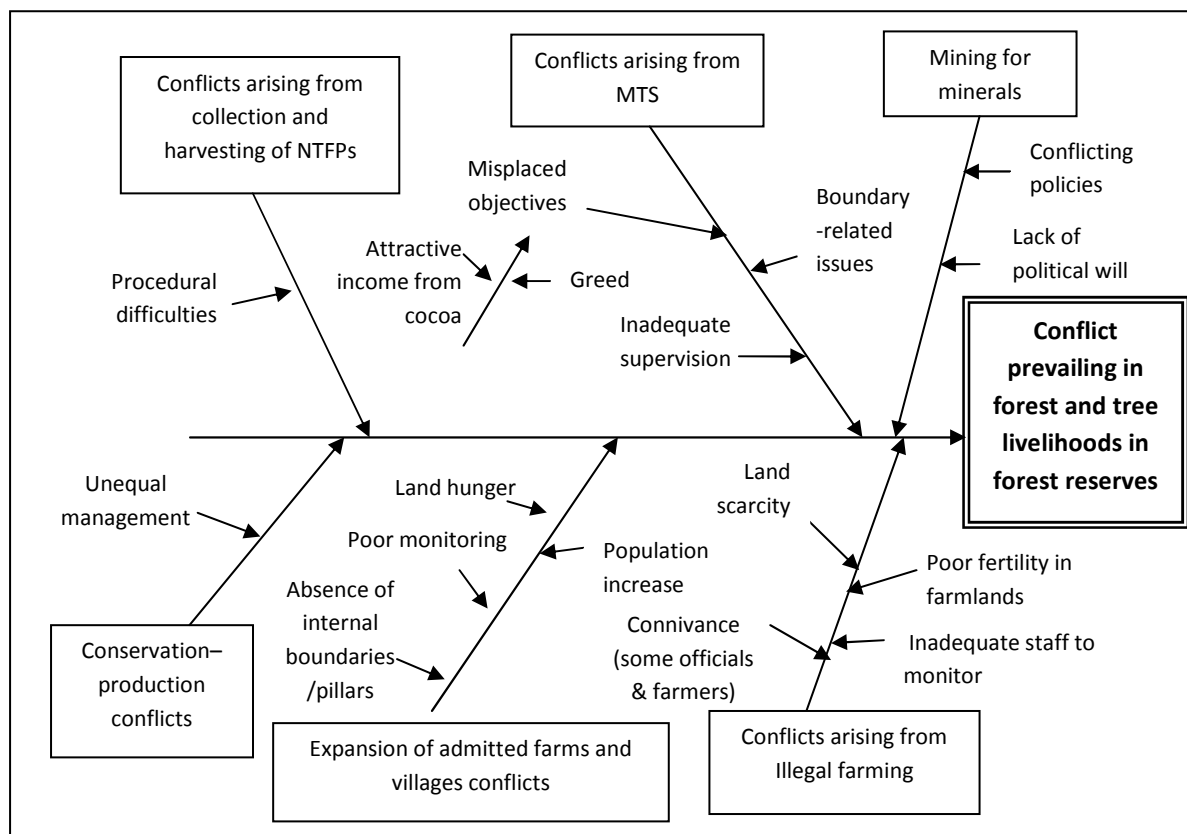


Figure 5: Fishbone diagram depicting the different conflict categories and causes prevalent in forest reserves of Ghana (Source: Fieldwork March – August 2009).

Conflicts usually evolve around illegality issues (NTFP extraction, expansion of admitted farms, and illegal farming), the allocation and use of MTS land, and competing land uses (e.g. mineral mining versus farming or conservation versus productive uses) (Figure 5).

Respondents revealed four (4) key conflict categories in the off-reserve forest management areas with each category having a multiplicity of contributing causes. The key actors within this scenario include:

- FSD vs. timber operators
- FSD vs. farmers
- Fulani herdsmen vs. farmers
- Farmers vs. timber permit holders/chainsaw operators
- Tree planters vs. FSD

Off-reserve conflicts typically evolve around competing land uses (pastoralism versus farming; farmers versus timber operators) and conflicts between users of off-reserve forest land and resources (farmers, timber operators, tree planters) and the FSD (Figure 6).

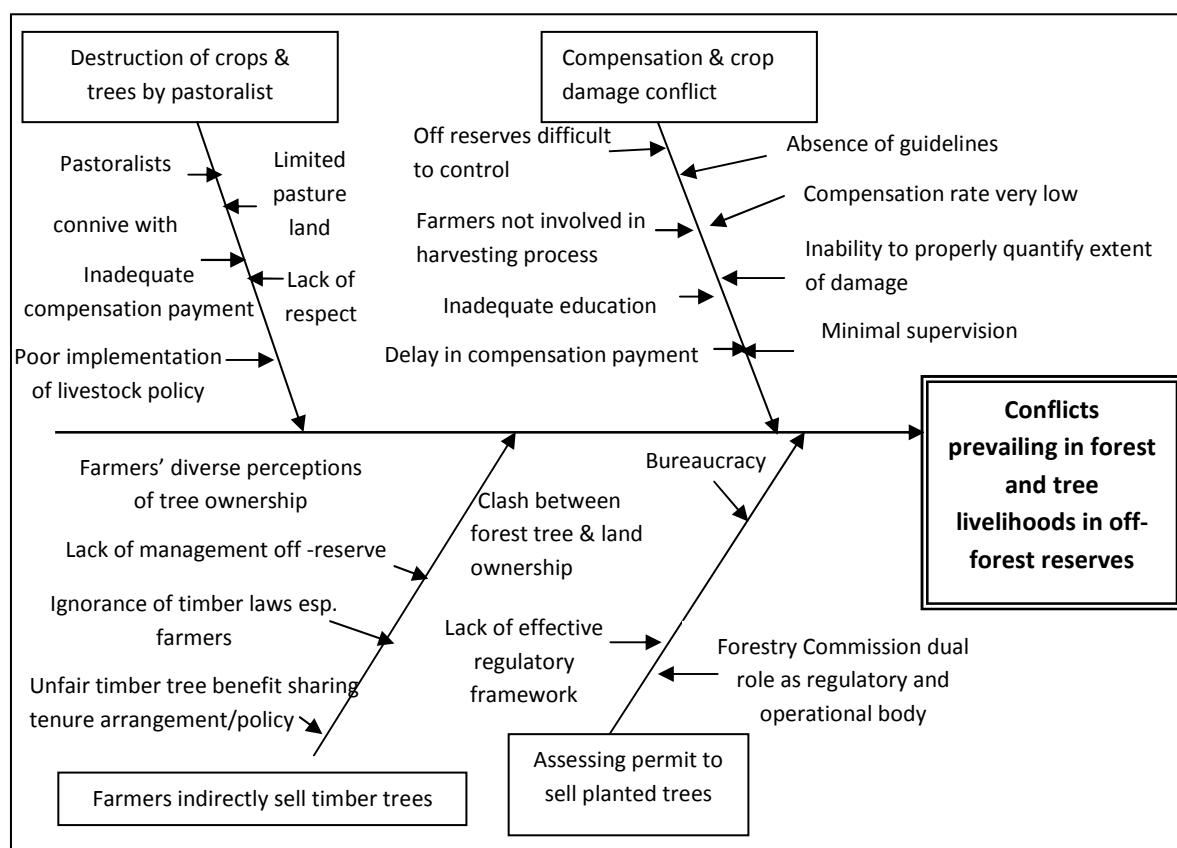


Figure 6: The Fishbone diagram depicts the different conflict types and causes prevalent in off-reserve forest areas of Ghana (Source: Fieldwork March – August 2009).

With regard to conflicts prevailing in both off and on management areas of the High Forest Zone, forest governors and experts identified three categories (Figure 7). These categories are also being triggered by multiple factors, with the underlining cause being

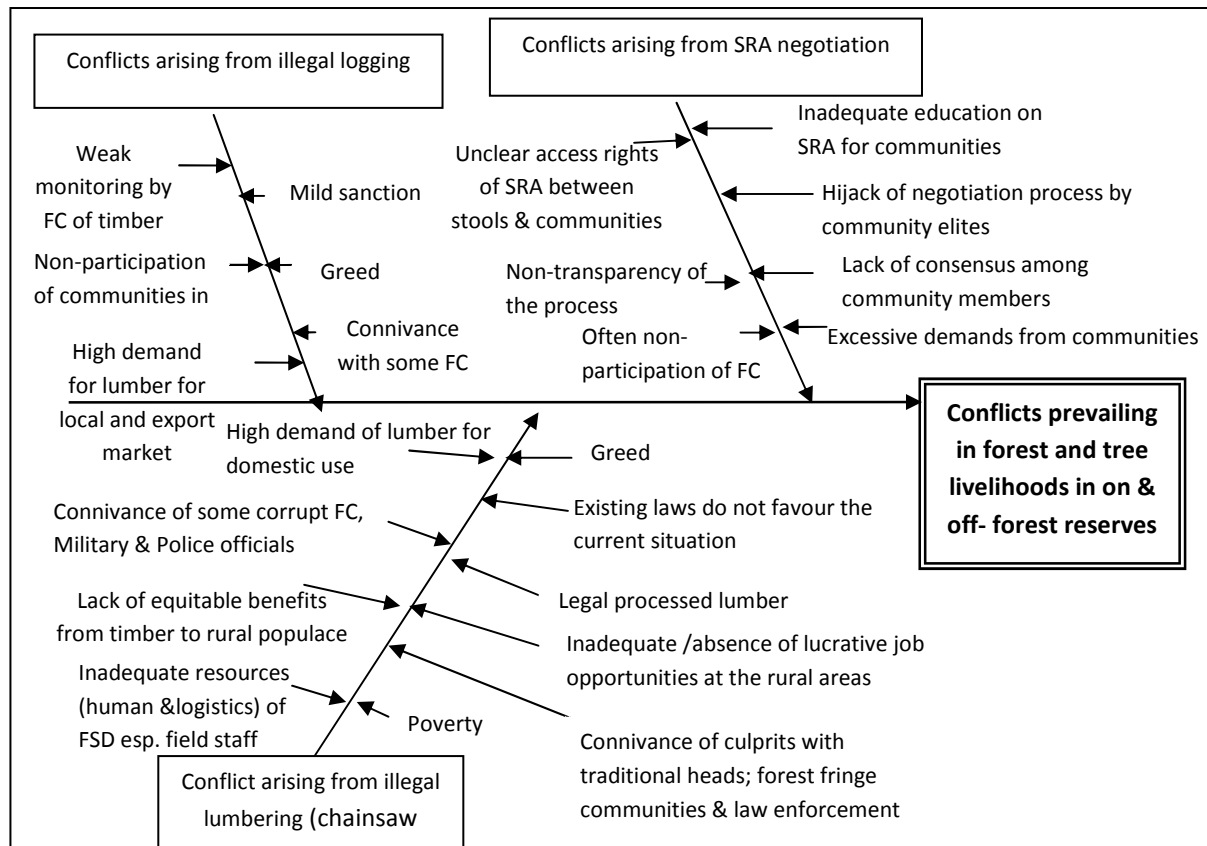


Figure 7: The Fishbone diagram depicts the different conflict types and causes prevalent in the on-reserve and off-reserve forest areas of Ghana (Source: Fieldwork March – August 2009).

their competing and differing interests between various actors engaged in timber exploitation. Among those identified are:

- Community members vs. community elites; communities vs. timber operators
- Chainsaw operators vs. farmers or Forest Services Division (FSD)
- Among chainsaw operators
- Timber operators vs. Timber Industry Development Department(TIDD)/FSD;
- Farmers vs. timber operators

With a view to the need to solve the numerous forest and tree-related livelihood conflicts, several case by case approaches of managing conflicts have been applied such as (i) administrative coping strategies by the FSD (coercion, committee setting, fines, destruction of illegal farms; military /police patrols);(ii) negotiation and mediation in SRA processes and (iii) applying the legislative framework negotiation, adjudication and arbitration). Despite these approaches, forest and tree-related conflicts are still ubiquitous.

Conclusions

The preliminary results outlined in this paper reveal several links between the 'Governance for sustainable forest-related livelihoods in Ghana's High Forest Zone'

programme under the TBI Ghana programme and the EU-Ghana Voluntary Partnership Agreement (VPA) to combat illegal logging. Both programmes focus on:

- ways to improve governance with a view to creating a conducive environment for sustainable and pro-poor forestry;
- ensuring conducive strategies (implementable policies and legislations) to improve people's livelihoods in forest-adjacent communities;
- ways to minimise conflicts based on advocating constructive mechanisms to minimise or resolve conflicts arising from competing claims to forest and tree resources (e.g. law enforcement, institutionalising constructive CRM in forest policy and legislations, building the capacity of forest governors and actors in conflict management, etc.);

One thing that is key to both improved livelihoods and improved governance is a reduction in forest and tree-related conflicts, the reconciling of interests and the creation of partnerships between the various actors involved in forest governance and management.

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