The Political Ecology of Forest Management in Ghana: Actors, Interests and Practices in the Assin North Municipality.

Emmanuel Otutei

Organisation for Livelihood Enhancement Services, P.O. Box NB41, New Abirem, E/R, Ghana

* E-mail of the corresponding author: otuteiemmanuel@gmail.com

Abstract

The Assin North Municipality is endowed with forest resources that are used for economic purposes. This study focused on the interests of the actors involved in the management of off-reserve forests in the municipality and how their interactions influence forest management outcomes. The study collected primary data through interviews, Focus Group Discussions (FGDs), observations and photography using 8 weeks in the field between May to July 2012. The study conducted 35 structured interviews using questionnaires; 14 unstructured interviews; two (2) semi-structured interviews; and five (5) FDGs to gather data on forest actors, interests and practices from the study area. Participants in the study included farmers, staff of the Forest Service Division of the Forestry Commission, Bush managers of logging companies, staff of the Municipal Assembly and chiefs. Through the lens of political ecology, the study revealed that actors in the municipality are enmeshed in a competitive battle for the economic benefits accruing from the commercial exploitation of forest resources (timber). Again, actors do not have equal powers in such a competitive battle. Legal and regulatory instruments in forestry have conferred much power on state institutions (such as the Forestry Commission) and logging companies by creating a conducive normative haven from which they dominate and marginalise farmers and community members in actor-interactions such as benefit sharing, permit allocation and consent, timber tree usage and compensation payments. To have their way in such interactions therefore, these weaker actors dwell on hidden discourses to craft and use weapons of resistance such as illegal logging, deliberate tree destruction and arson – practices that impede sustainable forest management in the municipality. With this, the study concluded that failures in forest management in the municipality are inevitable outcomes of the politics of resource use and control (domination/marginalisation and resistance).

Keywords: Forest management, Political ecology, actors, interests, marginalisation, politicised environment

1. Introduction

The consistent failure of statist and scientific forest management in Ghana has called for increased participation of numerous actors with diverse interests in forest management. Management here refers to the regulation of the access, use and control of forest resources. Until the last two decades of the 20th Century, conventional explanations tended to employ deterministic approaches to blame deforestation on the supposed ignorance and overpopulation of local communities. Consequently, conventional management policies and practices relegated communities to socio-economic and political marginality. This resulted in vehement resistance by local communities leading to violent and non-violent socio-economic and eco-political conflicts.

To rectify the above situation, forest management in Ghana, though still maintaining statist control over trees, has been made more participatory – especially with respect to unreserved forests. This has brought on board numerous actors with diverse (and mostly conflicting) interests in the use, access and control of forest resources. The constant interactions of these actors and their interests therefore influence the outcomes of management through processes such as decision-making, compliance with rules and norms, law enforcement and forest practices.

Due to the dominance of scientific management in the past century in Ghana, earlier scholarly studies on forest management also tended to follow a similar trajectory, overly concentrating on forest reserves (Hall et. al 1973; Hall 1987; Asabere 1987; Parren *et. al.* 1995; Hawthorne and Abu Juam 1995; Hawthorne 2001; Ntiamoa-Baidu 2001; Treue 2001; see Jachman 2008) with few focusing on unreserved forests (Ntiamoah 1991; Amanor 1994; Dei 1993; Mayers *et. al.* 1996; Mayer and Kotey 1996). However, the advent of co-management has seen a recent surge in studies on unreserved forests in Ghana. A group of scholarly studies have focused on the significance of sacred groves in the management of forests in Ghana (Ntiamoa-Baidu 2001; 2008; Campbell 2005). A second category of these studies have also elucidated the effective but conventionally ignored forest management practices of local communities through the use of indigenous knowledge (Appiah *et. al* 2010; Colfer 2005). A larger category has however devoted much attention to the factors affecting forest management, usually from the perspective of political economy (Amanor 1994; 2004; Richards 1995; Afikorah-Danquah 1997;

Owubah *et. al.* 2001; Appiah 2002; Wiggins *et. al.* 2004; Hansen 2011; Hansen and Lund 2011; Damnyag *et. al* 2012). Finally, Marfo and Schanz (2009) have also looked at conflict as an outcome of lack of cooperation between farmers and loggers in off-reserve forests. The latter two categories shed light on how elites (politicians, foresters and loggers) affect management practices through rent-seeking and non-payment of compensation, with the reactive effects of local-level non-compliance and resistance.

Despite the increasing scholarly efforts in elucidating the factors influencing outcomes, much remains unexplored. For instance, these studies have ignored the diverse interests of forest actors and their complex interactions in the management process. Secondly, recent studies tend to occlude the role of power in actor-interactions and how interactions influence outcomes. The powerlessness of grassroot actors as portrayed in these studies oversimplifies the complexities of interactions and power itself. The exercise of power in forest management is not unilateral as assumed. It must be noted that even the least powerful actors have "weapons of the weak" (Scott 1985) they use to advance their interests and at the same time, in diminishing the relative powers of powerful actors such as state officials, foresters, social elites and loggers.

The scarcity in academic works that explore the interests of the numerous actors in off-forest management in Ghana; their complex interactions; and their effects on outcomes is regrettable since it is this sort of studies that can contribute to our understanding of the successes and failures of management regimes. In an attempt to fill this lacuna therefore, this study explored actor-interests and interactions in forests management in the Assin North Municipality and how these influence forest management outcomes.

2. Theoretical framework: Political ecology

The field of political ecology combines ecological concerns with "a broadly defined political economy" (Blaikie and Brookefield 1987:17). The approach posits that understanding human-environment relations demands an analysis of the politics of resource use. The use of a particular resource generates differing (and mostly conflicting) interests to various users. Thus, the way the resource (environment) is understood, used, controlled and environmental problems defined reflects the socio-economic, cultural and political interests of different environmental actors using it. As such environmental outcomes are a reflection of the complex interactions of these differing actors as they struggle to meet their interests. This is what is referred to as "the politicised environment" (Bryant and Bailey 1997). Thus, politics plays an important role in conditioning human-ecological actions and this needs to be appreciated and unpacked if one is to understand and solve environmental crisis. However, one must do a multi-scalar political analysis combining and linking global, national and local political economic forces to give a better explanation of what happens at the local scale (Rocheleau 2008).

Central to political ecology is the role of power in influencing the control of resources and interactions of actors who are placed on a platform of asymmetrical power relations (Escobar 1996). Thus in "Third World Political Ecology", Bryant and Bailey (1997) indicate that the unequal power relations among different actors dictates the patterns of resource use, human-ecology relations, actor interactions and environmental conflicts and management outcomes (see also Bryant 1997; Turner 2004; Robbins 2012). Here, power becomes the major tool for advancing ones interest in using and controlling a particular resource. By conceptualising actor-interests and unequal power relations as central to and shaping environmental outcomes, political ecology makes substantial theoretical claims around which this study is built. These include the following:

2.1. Forest use and control as a reflection of interests

One of the major theoretical positions of political ecology is the "centrality of human agency and structures" (Kalipeni and Oppong 1998: 1638) that play major roles in transforming the environment. Human agency here denotes the various actors that interact with the environment, whiles structures refer to the numerous ways through which the actions of agents are channelled (ibid). Though political ecologists acknowledge the fact that structures do constrain the actions of actors, they posit that actors are able to employ their agencies to manipulate these structures to meet their individual interests. Thus patterns of resource use and control, though constrained by structures such as laws, rules, and norms, in no small way reflect the interests of actors. *Interests* in this study denote the intrinsic goals and objectives of an actor (or the benefits he derives from a resource) that induces him to act in a particular way. *Actors* also refer to the individuals, groups, organisations and offices that benefit from forest resources. Each actor has a particular benefit (interest) he derives from the forest, be it material or immaterial. Thus any attempt to control a particular forest resource is in itself an attempt to prolong the extraction of such material or immaterial benefits.

A mechanism of achieving this is by environmental constructionism (Robbins 2012). Here accounts about deforestation and its causes are constructed by different interest groups to limit the access, use and control of forests of other actors. Firstly, claims about the occurrence of deforestation are by no means delinked from the interests of claimants (actors). For instance, in "Political Ecology", Robbins (2012) showed that the veracity of such claims does not reside in whether deforestation is "actually occurring": rather, it is contingent on what is

"held as true by....competing interests" (p. 127). Secondly, claims about the causes and control of *constructed* deforestation reflect the interests of some particular actors. Fairhead and Leach (1996; 1998) and Leach and Mearns (1996) indicate that accounts of deforestation in West Africa are deliberately constructed by state elites to serve their interests by blaming *constructed* forest loss on forest dwellers and their traditional practices. Through such a scheme, social elites are able to exploit and control forests resources at the expense of and by displacing and marginalising forest dwellers; and denying them access rights. The above illustration symbolises the fact that forest control is not driven by concerns for the "welfare" of forests but rather a desire for meeting one's interests. To this end, forest use and control then becomes a battle of interests, and the ability of an actor to meet his/her interest becomes a product of power relations. This leads to the next position.

2.2. Power as conditioning Actor-interactions and outcomes

Political ecologists emphasise the important role power plays in actor-interactions and their outcomes. Power permeates and circumscribes actor-interactions and determines whose interest is met in such interactions. Power to political ecologists, is the "ability of an actor to control his own interaction with the environment and the interaction of other actors with the environment. It is above all, the control that one party has over 'the environment of another party'" (Bryant and Bailey 1997:39). This includes material and immaterial power considerations (ibid.). The relative power of actors may be determined by socio-economic and political differences such as political positions, social positions, wealth, class and clan.

Power asymmetries among actors in the management of a forest ensure that powerful actors position their strategies to control resources at the expense of weaker actors. This is mainly done "through discursive means" (ibid). Here powerful actors such as state elites, foresters and loggers legitimise their control of forest resources through the use of the "public transcript" (Scott 1990). Public transcript here refers to the "'socially acceptable' version of events [such as (the causes of) deforestation] represented in public documents, legal political ideologies...and so on" (Bryant and Bailey 1997: 42). By controlling the public transcript, powerful actors are able to naturalise, justify and generalise the dominance of their selfish interests on a "society-wide basis" (Peet and Watts 1996; Escobar 1996).

It must be noted however that powerful actors are not indomitable in the management of forest resources as weaker actors also possess "weapons of the weak" to resist dominance. These weapons are usually informed by "hidden transcripts" – the alternative, dissident discourses or versions of phenomenon held exclusively by subordinate actors – that are contrapuntal to the "public transcript" (Scott 1990). One way of articulating this transcript is the use of "ancestral domains" – as an exclusive version of truth about forest ownership and boundaries – to "counter-map" state delineated forest boundaries (Peluso 1995). This provides an avenue for local populations to resist statist encroachment into local forests. Power then becomes "a matter of winning the battle of ideas over human use of the environment, since actors typically seek to legitimise the triumph of their interests over the interests of others through an attempt to assimilate them to 'the common good'" (Bryant and Bailey 1997:41).

Unequal power relations among actors also determine the outcomes of actor-interactions. The relative powers of actors dictates who gains access to resources, who benefits from participation, and who resists in forest management (Naidu 2011; Adhikari 2005; Coulibaly-Lingani *et. al* 2009; Adams 2009; Khan and Khan 2009; Larson *et. al.* 2010). In this case, unequal power relations in actor interactions lead to the triumph of powerful actors and the marginalisation of weaker actors. This marginalisation usually leads to environmental conflicts, since weaker actors resist such advancements (see Neumann 1998; Turner 2004). Conflicts (as a result of the marginalisation of weaker actors) have been reported in many Third World countries including India and Nepal (Adhikari *et.al* 2004; Iversen *et. al.* 2006), Indonesia (Siswanto and Wardojo 2005), Cameroon (Ezzine de Blas *et. al.* 2011) and Ghana (Marfo and Schanz 2009). This environmental conflict is then manifested in the environment.

2.3. Management outcomes and Forest practices as products of actor-interaction

The last position of political ecology considered for this study is the fact that forest practices or environmental outcomes are not natural, but are produced. They are produced by actor-interactions as explained above. In this sense, political ecology posits that actor-interactions collectively create environmental practices and conditions "beyond the capacity of any individual element" (Robbins 2012:53).

The outcomes of actor-interactions, be it peaceful cooperation or conflicts determine the successes and failures of forest management. Marginalisation of some actors in actor-interactions forces them to behave the way they behave – that is, to degrade the forest. In a study of forest commons in Rajasthan, India, Robbins (2012) found out that poor and marginalised actors constantly broke rules and used forests unsustainably due to dissatisfaction with management processes. He concludes that "degradation and marginalisation are interrelated, but mediated by local power relations" (ibid: 74).

Moreover, efforts by weaker actors to overcome (or resist) marginalisation leads to conflict. However these conflicts manifest in the forest through the adoption of unsustainable practices such as "illegal" logging, rampant slash and burn and arson (Bryant and Bailey 1997; Adams 2009). In Madagascar for instance, the use of fire for traditional agricultural farming has been branded as the source of deforestation by conventional wisdom. Thus, burning has been highly criminalised in an attempt to conventionally arrest deforestation, depriving local peoples of their sources of livelihoods (Kull 1999). To resist such criminalisation of their traditional practices, farmers set fires at night and blame it on "passers-by" and "evil people" making management of fire impossible (Kull 1999; 2004). Here, grievances in management regimes due to unequal power relations in actor-interactions "are inscribed in the environment" (Bryant and Bailey 1997:43). Thus actor-interactions explain why some forest practices such as "illegal" logging, arson, poaching and poisoning of games continue to persist.

3. Data and Methods

The Assin North Municipality is one of the 20 districts in the Central Region of Ghana. The Municipality lies in longitudes 1 0 05' E and 1 0 25' W and latitudes 6 0 05' N and 6 04' S. It shares borders with the Upper Denkyira District and the Ashanti Region to the North; the Assin South District to the South; the Twifo Heman Lower Denkyira to the West and the Asikuma Odoben-Brakwa and Ajumako Enyan-Esiam to the East (see Figure 4.1). It covers an approximate area of 1067.6 km^2 consisting of about 500 settlements, ranging from hamlets to towns [Assin North Municipal Assembly (ANMA) 2010; Ghana Statistical Service (GSS) 2012]. The population of the municipality according to the 2010 Population and Housing Census is 161,341 people, consisting of 80,254 males and 81,087 females (GSS 2012). It is estimated that in-migrants make up about 46.1% of the population due to the presence of economic pull factors such as farming and lumbering (ANMA 2010).
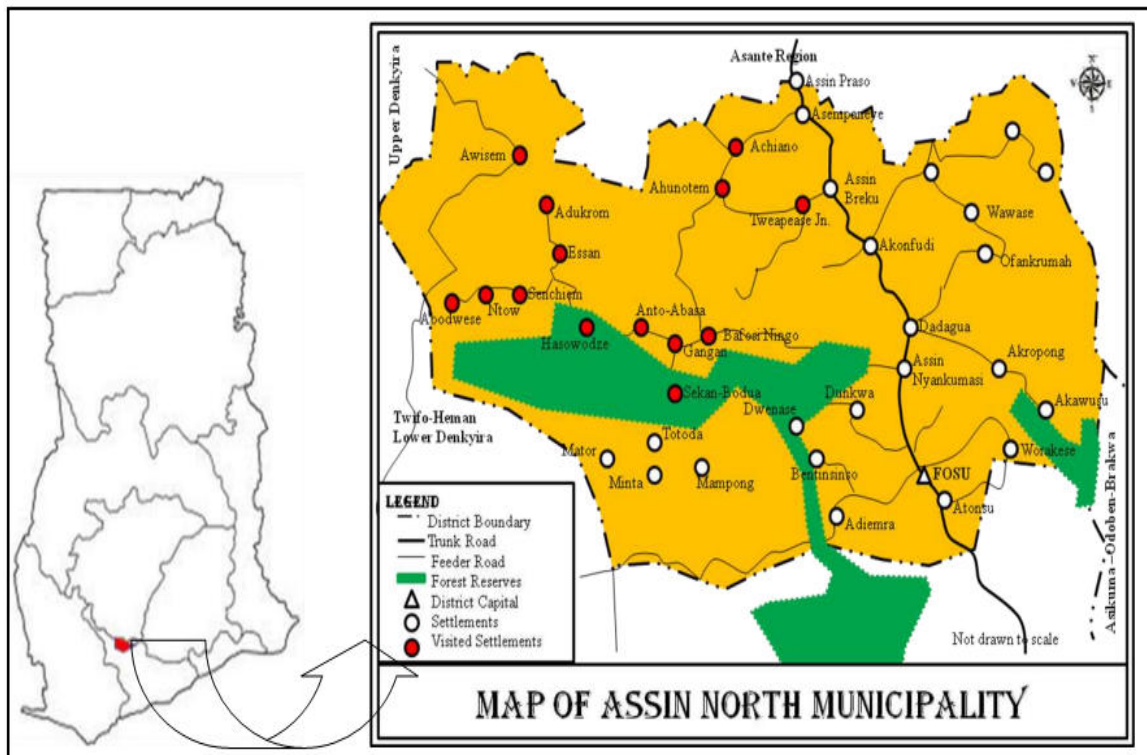

Figure 1: Map of Study Area adapted from the Assin North Municipal Planning and Coordinating Unit

The study used the qualitative research design to explore how actor-interests, interactions and power dynamics determine forest practices. The study collected primary data through interviews, Focus Group Discussions (FGDs), observations and photography using 8 weeks in the field between mid-May to mid-July 2012. The study conducted 35 structured interviews using questionnaires; including 30 farmers, the assistant manager of the Forest Service Division at Fosu, 3 Bush Managers for the three logging companies logging in the municipality and the Municipal Planning Officer. Two semi-structured interviews were also conducted with two divisional chiefs in the municipality using interview guides. Finally, 14 unstructured interviews consisting mainly of farmers and anonymous officials of institutions were conducted. Five FGDs consisting of 6 to 8 farmers each were conducted in Gangan, Abodwese, Sienchem, Kyerede and Anto-Abasa. Farms of some of the participants were visited to observe farming practices and damaged crops. Some scenes were photographed to back responses from interviews. Data from all interviews, FDGs and observations were transcribed and edited for analysis.

The study collected secondary data on forest management in Ghana and used it to support the empirical data. Secondary data reviewed include academic journals, books, the Assin North Municipal Medium-Term Development Plan (2010-2013), forest policies and regulations and other relevant documents. Except books reviewed and the Plan, all other documents were downloaded from the internet.

4. Results and Discussion

4.1 Forest management in the Municipality

The Assin North Municipality is endowed with a forest area of about 743.2 km^2 consisting of five forest reserves and off-reserve forests, with a rate of deforestation of 1.8% per annum (ANMA 2010; NDPC and UNDP 2010). The five forest reserves include the Bimpong Forest Reserve, the Supong Forest Reserve, the Assin Forest Reserve, Wawahi Forest Reserve and Krochua Forest Reserve, and Baku Forest Reserve with a total land area of 169.04 km^2 (ANMA 2010). The rest of the forest area constitutes off-reserve forests with a total area of 574.2 km^2, mainly occurring on farmlands and fallow lands. A large part of off-reserve forests with economic trees are found on cocoa farms. The forest is occupied by human settlements with mixed ethnicity. Most of the forest inhabitants are Akans (Fantes, Assin and Asantes), Krobos and Ewes.

Off-reserve forest management in the municipality comprises the nurturing and protection of forests, harvesting of forest products, the sharing of forest proceeds, monitoring and ensuring compliance with laws as well as dispute resolution resulting from conflict of interests. It was apparent in interviews that the Forest Service Division of the FC at Fosu takes primacy in such management activities with the exception of nurturing and protecting trees and harvesting of forest products in the municipality which is done by farmers and loggers respectively.

4.2 Actors, Interests and Strategies

Forest actors in the municipality are numerous, ranging from minor ones like snail gatherers and firewood gatherers to major actors such farmers and loggers. Here, the study will consider the major actors involved in the use and control of forest in the area. These have been grouped into six major categories comprising farmers, communities, chiefs, loggers, the Assin North Municipal Assembly (ANMA) and the Forestry Commission (FC). Thus this section will elucidate the varying interests and strategies of these actors.

4.2.1 Forestry Commission

The FC carries out less management functions in off-reserve forests in Ghana as a whole. In the Assin North Municipality, the FSD of the FC just carries out permit allocation. In ensuring compliance, the FSD occasionally patrols forests with forest guards, soldiers and policemen to impound and arrest illegal loggers. Officially, the FC is mandated to protect both on- and off-reserve forests in the municipality. However, the protection of off-reserve forests is of less interest to the FC. Instead, interviews with farmers, loggers, other community members and even the traditional authority indicated that the major interest of the FC is the stumpage and other economic rents accruing from the use of the forest. Aside from permit allocation and (sometimes) arresting illegal loggers, the FC does nothing in the management of off-reserve forests in the municipality. All its activities are propelled by and geared towards gaining access to and controlling the economic rents accruing from the exploitation of forest resources. As such, any other activity with little or no short-term economic incentive to the FC is less popular. For instance, it seldom patrols the off-reserve forest to regulate and control the commercial exploitation of forest resources. It mostly arrests illegal loggers upon tip-offs from aggrieved farmers. When such illegal loggers are arrested, the FC seizes only the logs and sets the perpetrators free. Such logs are later sold and the revenue kept as part of the IGF of the division.

Secondly, the FC sometimes conceals (or supports) illegal logging in the municipality for economic gains. For instance, in an interview with an ex-worker of illegal operations, it became clear that "the forest people [the FC] have 'connections' with illegal loggers. They have a fixed amount the illegal loggers pay [...], for the FC to allow them log with chainsaws without being arrested" (see also Hansen 2011). Similarly, an interview with the Krontihene (one of the divisional chiefs) in the municipality (who is an ex-forest officer) revealed that "the FSD deliberately conceals illegal logging so that it can seize such logs, sell them and share the proceeds with the illegal loggers without involving any other actors".

To be able to satisfy its *de facto* interests and at the same time act in a way to indicate its commitment to its *de jure* mandate, the FC adopts various strategies including those discussed below. Firstly, the FC adopts the public transcript to blame forest loss on farming and illegal logging. In the words of an FC officer in Fosu, "farming, illegal logging and chainsawing are the causes of deforestation in the Assin North Municipality". By using such a transcript, the FC justifies the seizure of logs felled illegally and the ousting of farmers in rent sharing in the municipality; and safeguards and perpetuates the activities of logging companies since they (companies) are the money-holders in forestry. This reiterates the postulations of Peet and Watts (1996) and Escobar (1996) (discussed earlier) that powerful actors control the public transcript to legitimise the dominance of their partisan interests over weaker ones.

Another strategy is by arresting illegal loggers in the municipality. Here loggers who have no official permit or who have not bribed forest officers are arrested and their logs seized. The FC has paid some aggrieved

community members to serve as spies of illegal logging and chainsaw activities in the various communities and report to them. Through such a strategy, they are able to impound illegal logs without regular patrol. These management strategies together with other corrupt practices as discussed above, give the FC the ability to appropriate much revenue into its coffers to satisfy its *de facto* interest.

4.2.2   The Assin North Municipal Assembly (ANMA)

The ANMA is the highest governance structure in the Municipality responsible for the administration and development of all areas and sectors of the municipality. It was apparent in interviews with traditional authority, some key informants and the Municipal Planner that the only interest of the ANMA in off-reserve management is the about 30% share of the stumpage accruing to it. This is because apart from receiving this amount, it performs no management function in the municipality. In an unstructured interview with the Municipal Planner, it became clear that "the forest is solely managed by the forest service division. The Assembly has no control over the forests in the municipality. When the FC impound illegal logs, they by-pass the Assembly to sell them and keep the revenue".

By performing no management function and bemoaning the inability to have a share in the sale of illegal logs, it can be argued that the Assembly's interest resides in the revenues it derives from the forest for no work done. In fact, receiving the stumpage is the only function the ANMA performs.

4.2.3   Chiefs/Stool landowners

Chiefs are the custodians of stool lands in the municipality. The Assinman has three paramouncies owning lands in the municipality. These are the Attadanso, Apimanim and Afutuakwa paramouncies. Traditionally, these chiefs are the representatives of the people and thus are major actors in forest issues. The interest of chiefs in forest management is the economic rent from logging. Interviews with logging companies and FGDs indicated that insofar as chiefs are consulted and duly paid by logging companies for rents and rituals, they have no issues with any other actor in the municipality. Again, in an interview with the Krontihene, the single most important factor that cropped up frequently was the issue of rent payments and the smallness of the stumpage indicating how vital the economic rent is to the landowners.

To be able to advance their interests and gain more revenue from logging activities in the municipality, chiefs employ a number of strategies. First of all, they enter into negotiations with logging companies on the rent to be paid and the charges for rituals to appease the gods and ancestors inhabiting the spiritual realm of the forest. Secondly, they sometimes dispute with other chiefs and the government on ownership of and the boundaries of forest lands. That is, in the words of one chief, "logging sparks chieftaincy and land disputes in the municipality". He indicated that a case in point is the land dispute between the chiefs of Assin Besease and the Paramount Chief of Assin Manso on consent agreements with a logging company near the north-eastern border of the municipality some few years ago.

Moreover, chiefs sometimes incite communities to resist logging when companies refuse to pay for rents and rituals in their permit zones. Chiefs also track the activities of loggers without consent agreements so as to demand the necessary economic rents. Again, they sometimes sell trees to logging companies and chainsaw operators without the permit of the FC.

4.2.4   Logging Companies

Logging companies are the officially recognised loggers in the municipality. They seek for licences from the FC and consent from chiefs and sometimes farmers to fell on-farm trees, haul them and transport them for processing or for sale. Logging companies are profit making enterprises mainly interested in logging timber to gain revenue. Thus all their activities are geared towards making profit and achieving their financial targets. There are numerous strategies used by logging companies to achieve their financial targets. Firstly, they seek for permits and consent from the FC and chiefs respectively and use that as a licence and yardstick for operating in various forest communities. Secondly, logging companies consult farmers and pay compensations when they perceive farmer resistance as a major threat to their activities (several interviews with farmers and FGDs). If farmers are seen as not powerful in threatening operations, logging companies by-pass them to be able to make more profit. Thirdly, logging companies obey or break legal, contractual and customary rules in forest management when necessary. Though the reasons behind the breaking of such rules were not obvious in interviews, it can be inferred that this is to enable them do away with rules that constrict their activities and reduce profits. The above assertion is based on the findings of Hansen (2011:575) that "the low compliance level [in Ghana] is attributed to a legislation, and enforcement, that provides huge financial incentives for non-compliance for [...] timber operators [...] both with and without legal permits".

4.2.5   Farmers

Almost every community member in the forest communities is a farmer. Farmers are particularly important in forest management due to their constant interactions with the forest. Farmers have a number of interests in forest management in the municipality. They need forest lands to grow crops such as cocoa, oil palm, tubers, citrus and maize by clearing the forest. However, in such clearance, they leave, weed around and nurture economic trees to grow with their crops. Farmers are interested in three things here: the use of trees to provide shade cover for

young cocoa plants; the personal use of the trees for building houses and the sale of such trees for money. Aside from the above, farmers are also interested in the compensation paid when their crops are destroyed through the logging of nurtured trees. Thus efforts in forest management are directed towards the satisfaction of the above interests.

To be able to clear the land for farming, farmers seek the assistance of chainsaw operators in their communities to fell some of the matured trees on the farmlands. This usually makes planting easier. Again, to have access to woods for future roofing, farmers nurture young economic trees on their farms. However, when such trees are competing with crops for sunlight, some of them are usually cut down to prevent shading. When these trees are matured, they sometimes sell them to chainsaw operators. Another strategy used by farmers is negotiations with contractors for the payment of compensations. When such negotiations are not successful, farmers usually resist on-farm logging through verbal confrontations and the use of cutlasses and guns; and tree destruction (several interviews with farmers; FGDs). Through these strategies, farmers are able to advance their interests in forest management in the municipality.

4.2.6 Communities

Though farmers make up forest communities in the municipality, I am treating communities as separate actors of the forest because farmers are individual actors of forests whiles communities are seen as a group of actors with collective interests, powers and strategies. The main interest of communities in forest use and control is Social Responsibility Agreements (SRAs) to be provided by logging companies. These SRAs are usually in the form of the provision of access roads, boreholes, building materials (cement and roofing sheets) for schools and furniture for community centres.

Community members adopt two main strategies in fighting for SRAs in their communities. First of all, they negotiate with logging companies before logging commences. Secondly, when SRAs are breached by companies, they resist logging by threatening company workers with guns and cutlasses and/or by blocking access roads, thereby preventing contractors from transporting their logs to their sawmills.

4.3 Analysis of Powers of actors in Forest Management in the Municipality

Forest actors in the municipality are characterised by power asymmetries in terms of forest use (especially logging). First of all, the determination of the use of forest mainly resides in the FC. The FC can thus be described as the most powerful actor in this regard. It is regarded by almost all other actors interviewed (except one farmer) as the most powerful actor in forest management in the municipality. Its power resides in the fact that no one can *de jure* fell trees without the permit of the FC and that various statutory legislations, laws and policies back its activities. It is also the major actor responsible for enforcing forest laws in the municipality.

Following the FC are the logging companies. Logging companies have high powers in forest management since they hold the capital pursued by almost all actors in forestry. In an interview with one farmer, it was apparent that logging companies are more powerful than all actors because "they pay all the other actors who are mostly interested in money". This finding is similar to that of Kantayal (2008) on the powers of contractors in the municipality. In a study on *"Stakeholder Conflicts and Sustainable Forest Management in the Assin North and South Districts"*, Kantayal finds that logging companies are "so powerful that they can cause not only resource management but also ministers to lose their jobs. They can influence judgements of the forestry administration and make the rules and regulations useless" (2008: p. 63).

Following the companies are chiefs who have medium powers in forest management in the municipality. By occupying the stools, they are the owners of the lands and sometimes take part in permit allocation. They also have the support of the FC, and can resist logging when terms and agreements are not favourable. Next to the chiefs is the ANMA which has medium powers in forest management in the municipality since it has a large share in the stumpage and it is the representative of the government at the local level. Even though most participants and key informants, including several farmers, traditional authority and even the FC ranked the powers of the ANMA as high, it can be said that this is slightly overrated since they have lesser control in forest issues in the municipality.

Farmers have less power in the municipality since they are ousted in most of the decisions regarding logging in the area. To one farmer, "farmers do not have powers because there are too many laws" restricting their use of forest products in the municipality. The only power they have is the tendency to resist on-farm logging. The last on the ladder are forest-fringed communities. Communities have less power in forest management because they are mostly ousted in all forest management activities in the municipality.

4.4 Actor-interactions and Outcomes

The various actors identified in the preceding sections interact in various forms in the municipality. This forms of interactions can be grouped into five namely, rent and stumpage sharing; permit allocation and logging consent; timber tree usage; compensation payments; and SRAs. Thus this section will discuss these forms of interactions and their results.

4.4.1 Rent and Stumpage Sharing

The sharing of economic rents accruing from the commercial exploitation of forest resources (timber) in the

municipality follows the pattern prescribed in the Constitution of the Republic of Ghana. The Forest Service Division deducts 40% of the stumpage as management fee, 6.0% goes to the Office of the Administrator of Stool Lands; 13.5% goes to the Stool landowner (s); 10.8% to Traditional Council; and 29.7% to the ANMA (see also Hansen and Treue 2009). The profit accruing from logging also goes to loggers, while loggers arrange and pay money to the stool landowners as rent during consent negotiations. These are treated as IGFs and are therefore not used for developmental projects (ibid.). Farmers and communities are however not partakers of the revenues accruing from logging in the municipality.

It was observed from the field that the ability to have a share in the stumpage and rent is contingent on the normative powers actors hold in the commercial exploitation of resources in the municipality. The less powerful actors (farmers and communities) are marginalised and relegated to the background though they (mostly farmers) are the major actors in protecting and nurturing trees. The other actors receive economic rents by virtue of their powers but not the actual protection and conservation of the forests – that is, for no work done. Thus here, the more powerful in the municipality have deployed their agencies to obtain much economic rents in forestry at the expense of the less powerful actors who are the actual managers of the forest. This marginalisation sometimes leads to vehement resistance.

4.4.2   Permit Allocation and Logging Consent

Permit allocation is *de jure* supposed to be an arrangement between the FC, logging companies, chiefs and farmers. However, only three powerful actors are involved in the process – namely, the FC, chiefs and loggers. Interviews with chiefs revealed that the FC sometimes uses its powers to by-pass chiefs in permit allocation. This usually leads to conflicts. Moreover, several responses from farmers indicated that some loggers seek their consent before logging. However, they indicated that loggers (with such enormous powers) proceed with logging even when farmers do not consent (see also Marfo and Schanz 2009). This marginalisation of farmers in permit allocation and consent agreements sometimes leads to riots and threats. Whiles the affluent and literate among them seek the assistance of the police and court, most powerless farmers use other unsustainable practices to retaliate.

4.4.3   Timber Tree Usage

The use of timber trees in the municipality is highly unfair, favouring only the powerful (the FC and logging companies) in the management process. Forest laws and policies have undermined the rights of farmers and community members to trees in the municipality. Only logging companies with legal permits are supposed to fell and process trees for the wood market. Thus farmers who toiled to nurture the trees are not even allowed to use them for building purposes – their main reason for nurturing trees. The FC usually arrest farmers who have employed the services of chainsaw operators to fell and saw logs for personal uses and seize their logs and machines. This unfair interaction usually leads to grievances and resistance as farmers strive to use defiant means to access timber trees, leading to conflicts and unsustainable practices.

4.4.4   Compensation Payment

Since off-reserve trees are mostly found on farms, logging activities usually destroy valuable crops such as cocoa, oil palm and plantain. Thus logging companies are required to compensate farmers for such losses. Logging companies, the FC and farmers are to arrange for the payment of such compensation. However, this was not the case in the municipality. Though the FC indicated in an interview that they do help farmers valuate damaged crops and help arrange for compensations, all farmers interviewed indicated otherwise. Contractors thus dominate in such negotiations since they hold the money and power and are the decision-makers on the amount to pay for the damaged crops. As one farmer indicated, "contractors do not make any arrangements with farmers to determine and agree on the compensation; they always come with their own price".

Moreover, after destroying a large part of farms, contractors mostly refuse to pay for compensations. Several farmers were encountered on the field who have been victims of non-payment of compensations. Contractors usually run away with compensations after logging on such farms. With their sawmills located faraway from logging areas and wielding much power in the field, farmers are unable to fight logging companies for such compensations. Questioning one farmer on what she does to get companies pay her compensation, she answered by asking: "how much money do I have to take such a big company to court or report them to the police? They will definitely emerge victorious. Or what is my level of education to be able to battle with such elites? The only thing is to keep quiet and farm". Again, no other powerful actor (including FC, chiefs or the ANMA) assists farmers in their fight for compensation from loggers. In the process, farmers end up losing their crops (livelihoods), on-farm trees and compensations and are therefore left with nothing than to resist logging in the area. The above confirms the assertion in the theoretical framework that power determines the losers and winners of actor-interactions.

4.4.5   Social Responsibility Agreements (SRAs)

Communities arrange with logging companies for SRAs before logging commences. However, many responses

from community members and chiefs indicated that logging companies usually breach such agreements. In the FGD in Gangan, participants revealed that "contractors deceive us by starting the provision of SRA projects whiles logging and abandon them the moment they are done logging in the communities". Communities are unable to get such companies to continue the abandoned project and therefore end up losing in such interactions.

4.5 Impacts of Actor-interactions and Power dynamics on Forest Management Outcomes

It has been established above that actor-interactions in forest management in the municipality is characterised by unequal power relations and marginalisation of less powerful actors. Marginalisation usually sparks and prolongs conflicts since weaker actors usually resist powerful actors to be able to satisfy their interests. These acts of resistance to domination include illegal logging, destruction of trees and arson – practices which degrade the forest environment in the municipality and lead to forest management failures.

It was realised from the field that illegal logging is the major act of resistance to marginalisation in the distribution of timber revenue and compensation payment in the municipality. Aggrieved farmers and community members together with some chiefs sell trees to illegal loggers for money. The illegal loggers themselves indulge in such acts as a form of resistance to the unfair distribution of logging benefits in the municipality. Aside from the sale of trees to illegal loggers, interviews I had with key informants indicated that community members and farmers are supportive of illegal loggers due to the fact that they gain some livelihoods from it. Illegal loggers employ community members to guard their operations and help carry beams to the roadside for transportation (see also Kantayal 2008). Illegal loggers also sell woods to community members at cheaper prices without transport costs. However, community members are denied such economic opportunities when timber is logged by legal contractors who bring their workers from outside the communities and transport logs to their sawmills. Furthermore, farmers are particularly in support of illegal logging due to the fact that it destroys less crops than legal logging (logging companies). In one of the FGDs, participants revealed that:

> "timber contractors destroy crops and forest more than chainsaw operators [illegal loggers]. Chainsaw operators fell trees and saw the logs at where the tree felled, so the crops destroyed are few and germinate quickly. However, timber contractors [logging companies] fell trees and make way into farms using bulldozers, tractors and timberjacks to skid the logs for transportation, thereby destroying more crops and young trees on the way" (see also Kantayal 2008).

The above clearly indicates that farmers prefer, support and promote illegal logging so as to have a way of protecting their crops as well as to enjoy some economic benefits from nurturing trees – benefits they are denied in legal logging. One old farmer asked:

> "my son, be objective. If you are presented with these two options, which one would you choose? Would you prefer contractors who will destroy your crops without compensation and employment to our own people [illegal loggers] who will destroy less crops, pay for rents and compensation instantly and employ the services of community members?"

Thus, it can be deciphered from all these that illegal logging prevails in the municipality due to the marginalisation of less powerful actors such as farmers and communities.

A second major act of resistance to domination and marginalisation in actor-interactions is tree destruction. Several interviews with farmers revealed that due to marginalisation in compensation payment and rent sharing, they usually cut down young economic trees when they are clearing their lands for planting to avoid future crop damage. Asked to give reasons for such a practice, one farmer questioned me by asking: "what is the essence of nurturing trees if they will eventually lead to the destruction of my crops without compensation?" Another responded that "if I am not allowed to use such trees for roofing my own house, there is no point in leaving them on the farm and weeding around them". Further on this same subject, a farmer indicated that he "cut[s] down economic trees on his farm because when they mature the government will claim absolute ownership of it thereby depriving [him] access to [his] own trees". All these responses are indications that farmers are cutting down economic trees due to the fact that there is no incentive to do otherwise (see also Owubah et. al. 2001).

In addition to the destruction of young economic trees, farmers usually set fire under matured trees to burn the stem and the roots thereby killing the trees in the process. Though most farmers did not admit that they personally engage in arson, they were able to confirm that it is a usual practice by other farmers to avoid crop destruction and compensation conflicts. This notwithstanding, in an interview with a recent victim of non-payment of compensation, she openly declared with rigour that "[she] will burn all the mature *onyina* [an economic tree species] on [her] farm to avoid further destruction of [her] cocoa crops". In so doing, these trees become useless to both the loggers and the FC.

Moreover, it was common in responses that communities sometimes block roads when contractors do not adhere to SRAs. To have access to their logs, logging companies are either compelled to meet the demands of communities or construct new access roads into the forest. Such roads are usually abandoned after transporting logs. However, the construction of new roads also degrades the forest and disturbs flora and fauna. In this case, the marginalisation of and resistance by weaker actors compels powerful ones (companies) to degrade the

environment. Moreover, it was revealed in an FDG that when contractors fail to consult farmers or forcefully log on-farm trees without the approval of farmers, they sometimes employ chainsaw operators to cut the logs into unproductive pieces. This usually leads to destruction of logs. By implication, contractors seek for replacement from other forest communities or farms, thereby leading to overexploitation of timber trees.

It can be followed from the preceding discussion that weaker actors in the municipality have been able to create invisible holes in the management system which assist in mobilising resistance to unfairness and marginalisation in forest use and control in the municipality. This helps them enjoy some economic benefits from forest management despite being victims of unequal power relationships. Thus here, powerful actors such as the FC, logging companies and chiefs do not have complete hegemony over weaker ones. This goes to reiterate Scott's (1990) argument in "*Domination and the Arts of Resistance: Hidden Transcripts*" that domination is neither complete nor a solid wall since weaker actors have their own ways of beating the system. Scott argues that subordinate actors have hidden discourses outside the gaze and domain of power-holders that are spoken offstage and inform practices used to negate domination. This offstage dissident subculture is what he terms as "hidden transcripts". It is this hidden transcript that provides the "infrapolitics" which serve as the underpinnings of everyday resistance – by weaker actors – to the public transcript and resultant inequalities and dominations. Subordinates accede to domination in pretence by putting on a mask of deference but privately upholding a defiant culture that creates "deniable" acts of resistance. And within this invisibility lies the effectiveness of subordinate groups even amidst powerful actors. As Scott asserts: "the circumspect struggle waged daily by subordinate groups is, like infrared rays, beyond the visible end of the spectrum. That it should be invisible [...] is in large part by design – a tactical choice of a prudent awareness of the balance of power" (ibid:183).

In the case of forest management in the Assin North Muncipality, the invisible acts of resistance discussed above are informed by the hidden transcripts of farmers and community members which can be identified in at least three areas. These comprise the issue of who has power in forestry; ownership of trees; and illegal logging in the municipality. In all these areas, farmers have their own versions of truths that contradict official discourses and inform their actions to beat the system. Firstly, responses from structured interviews with farmers indicate that farmers visibly accede to the normative notion that the state institutions and logging companies are more powerful in forestry. However, responses from unstructured interviews, FGDs and other behind-the-scene encounters with farmers countered this normative perception. In one of such encounters, a farmer said that

> "the trees are on our farms. We live in the forest whiles the forest officers and contractors live in far away towns. We are therefore better positioned to decide what to do with the trees. No forest officer or contractor can control our actions on our farms. We can cut the young trees down for charcoal or burn the trees if we so wish" (see also Treue 2001).

Thus here, farmers secretly believe that the power over the forest resides in their hands and are the major decision-makers when it comes to the fate of a tree.

Secondly, the ownership of trees is invisibly contested by farmers in the municipality. Though in deference to forest regulations farmers consent to the fact that trees are owned by the government, I realised that farmers in their private havens held a different view about the matter. One farmer asked that:

> "how can the government sit in the office and claim ownership of trees we have nurtured on our farms? Does the President know how these trees became matured trees? We toiled to raise them with no assistance from anybody and thus we have the entitlement to sell them to whoever we wish or fell them to roof our houses".

Lastly, interviews with farmers and chiefs showed that they are openly opposed to the activities of illegal loggers in their communities. They sympathise with the FC to blame illegal logging on the greed, selfishness and criminality of those who engage in it. However, this is done in disguise since they are the same people who support, promote and benefit from illegal logging in the forests. By so doing, they are able to have spaces to deny allegations of illegal logging whiles secretly perpetuating the act to satisfy their interests.

The above forms of hidden transcripts have created a platform for mobilising resistance in the municipality. This subversive discourse about power in forestry, ownership of trees and illegal logging creates an arena where farmers are able to discuss and craft defiant ways of halting "injustices" meted out to them by the state and logging companies. The outputs of such discursive encounters are the sale of trees to illegal loggers, illegal logging and the destruction of trees discussed above. Resistance, in this case, is often indirect. However sometimes, such subordinate discourse sparks open resistance such as violent confrontation between farmers and loggers, destruction of logs and blocking of access roads. Through these dissident means, farmers are able to satisfy interests which cannot be satisfied by only acceding to the normative public transcript. That is, through these means, they are able to have a share in the economic rents accruing from the forests and sometimes get logging companies to meet their demands

It must be noted however that this quotidian political struggle between the powerless and the powerful in forest management in the municipality is inscribed into the forest through unsustainable practices such as discussed above. The invisible acts of resistance to marginalisation such as illegal logging, destruction of young economic

trees, arson and destruction of logs practiced by farmers serve to destroy the forest and render futile, efforts towards sustainable off-reserve forest management in the municipality. To an old farmer therefore; "timber trees are no more due to the cutting and burning of trees resulting from non-payment of compensations". Thus here, resistance to marginalisation, benefit sharing, permit allocation and tree usage, non-payment of compensation and breach of SRAs are inscribed into the forest environment through unsustainable forest practices such as illegal logging, and destruction of economic trees. This finding confirms Robbins' argument that:

> conservation goals have failed to a certain degree, due to the fact that instruments of conservation have disenfranchised traditional land managers and enforced the goals, desires, and benefits of elite communities who hold little or no investment in or understanding of ecosystem process, landscape, or local people (2012:181).

In this case, to tackle conservation and management problems in the municipality and other developing countries is to enfranchise weak actors and ensure that their interests are satisfied in actor interactions.

5. Conclusion

The Assin North Municipality is endowed with forest resources good for farming and logging – the two main economic activities found in the forest area. The use and control of forest resources have generated several actors with unequal power relations and conflicting interests. Access to economic benefits from the commercial exploitation of forest resources in the municipality is the interest of most actors. Thus, the appropriation of the revenue from the forest takes precedence in forest management at the expense of the actual protection and conservation of the forest. Here, actors employ various strategies – from legal to illegal and licit to illicit – to pursue and advance their interests and outdo other actors. This confirms the assertion in political ecology literature that forest use and control is a reflection of actor interests.

The study discovered and discussed five major channels through which actor-interactions take place in the municipality. In all these interactions, powerful actors such as the Forestry Commission, the Assin North Municipal Assembly, logging companies and sometimes chiefs dominate and marginalise farmers and community members. To be able to have their way out of this marginalisation trap, farmers and community members adopt subtle and invisible forms of resistance such as the sale of trees to illegal loggers, illegal logging, destruction of trees and arson. These acts ensure that they also have access to both revenue and timber products coming from the forest. Here, there is a constant political struggle between the dominant groups such as the FC and logging companies who adopt more open and normative discourse and strategies to appropriate forest revenue; and subordinate groups like communities and farmers who use hidden and defiant means to beat the system to satisfy their interests. Domination and resistance have therefore become the two major acts which have characterised the politics of resource use and control in the municipality and both lead to the satisfaction of actor-interests – the former for the powerful; and the latter for the powerless.

However, this political struggle (marginalisation and resistance) breeds unsustainable forest practices in the municipality. Illegal logging, and destruction of trees used as acts of resistance to domination and marginalisation are practices that mostly destroy the forest landscape and counteract sustainable forest management. Therefore failures in forest management in the municipality are inevitable outcomes of actor marginalisation. It is the politics of resource use (domination and resistance) that are inscribed into the forest environment through indiscriminate tree felling and arson. Thus to arrest forest degradation in the municipality and Ghana, an in-depth study on the political ecology of deforestation in Ghana is needed. Following this should be a research on a workable management regime for forestry taking into consideration the political economy of forest management and the political ecology of deforestation. Such a management regime will protect both forests and the livelihoods of forest dwellers in the HFZ of Ghana.

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Emmanuel Otutei was born in 1987 at Akatakyiwa, in the Mfantseman Municipality of the Central Region, Ghana. He is a Commonwealth Scholar who graduated with MSc. in Africa and International Development with Distinction from the University of Edinburgh and a BSc. Development Planning (First Class Honours) from the Kwame Nkrumah University of Science and Technology. He is currently a Program Officer at the Organisation for Livelihood Enhancement Services (OLIVES), New Abirem, Eastern Region, Ghana. This study is an excerpt from his MSc. Dissertation submitted to the University of Edinburgh. The contributions of the Commonwealth Scholarship Commission, the University of Edinburgh and Professor Paul Nugent (Supervisor) to the success of this study are duly acknowledged.

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