



Barriers to Sustainability of Alternative Livelihoods

A Case Study of a Forest Reserve in Ghana

Eric Nutakor, Brefo Sparkler Samar,
Emmanuel Marfo & Kwame Antwi Oduro

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TABLE OF CONTENTS

LIST OF FIGURES	
LIST OF TABLES	
ACRONYMS	VII
ACKNOWLEDGMENT	VIII
EXECUTIVE SUMMARY	IX
1 INTRODUCTION	1
2 LITERATURE REVIEW	3
2.1 Alternative livelihoods, practice and sustainability	3
2.1.1 Possible alternative livelihood activities	4
2.1.2 Success factors	6
2.1.3 Key challenges	7
2.2 Theory of sustainable livelihoods	8
2.3 Study area, methodology and analytical framework	12
2.3.1 Study area	12
2.3.2 Data collection	13
2.3.3 Analytical framework	13
3 RESULTS	15
3.1 General background of respondents	15
3.2 General performance of project	19
3.2.1 Performance assessment of alternative livelihoods implementation	19
3.2.2 Barriers to sustainable livelihoods	22
3.3 Weaknesses and threats	25
3.4 Illegal chainsaw milling operatives and alternative livelihoods	26

4 DISCUSSION	28
4.1 Challenges to sustainable livelihoods	28
4.2 Financial capital	29
4.3 Social capital	32
4.4 Institutional capital	33
4.5 Human capitals	34
4.6 Physical capital	35
4.7 Natural capital	36
4.8 Political dynamics	37
4.9 What level of income would make operatives desist from illegal chainsaw activity?	38
5 CONCLUSIONS AND RECOMMENDATIONS	39
5.1 Conclusions	39
5.2 Recommendations	40
REFERENCES	42
APPENDICES	47

LIST OF FIGURES

Figure 1: Activities accounting for respondents' participation.	16
Figure 2: Assessment of skills transfer to respondents.	19
Figure 3: Assessment of technical support from project sponsor.	20
Figure 4: Assessment of Financial assistance by sponsors. 20	
Figure 5: Assessment of Forest Service involvement and support.	21
Figure 6: Assessment of forest service follow-up after project termination.	21
Figure 7: Reasons given by respondents for not sustaining the group income generating and green belt activities by males and female.	22

LIST OF TABLES

Table 1:	Selected communities for assessment of sustainability of livelihoods	12
Table 2:	Income generating activities in which participants had made financial investments during the project. (PAFORM report, 2008)	17
Table 3:	Reasons for not investing in income generating ventures	18
Table 4:	Relative importance of capitals posing as challenges to sustainability of alternative livelihoods	24
Table 5:	Respondents' perception of challenges as "weaknesses" or "threats" to livelihood activities	26
Table 6:	What level of sustainable income will keep you from illegal operations?	27

ACRONYMS

AL	Alternative Livelihood
CARE	An International NGO
CF	Community Facilitator
CSIR	Council for Scientific and Industrial Research (Ghana)
DFID	Department for International Development (UK)
ECOSOC	Economic and Social Council (United Nations Organisation)
FORIG	Forestry Research Institute of Ghana
GBA	Green belt Activity
IGA	Income generating Activity
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German institution for international collaboration)
NGO	Non-governmental Organization
NTFP	Non-Timber Forest Products
OXFAM	International NGO (UK)
SL	Sustainable Livelihood
SWOT	Strengths, Weakness, Opportunities and Threats
UK	United Kingdom

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May the Wind of Change rise higher!

EXECUTIVE SUMMARY

This report presents the results of a case study of barriers to alternative livelihoods in Ghana. It assessed forestry related alternative livelihoods that were introduced within some communities fringing Nsemire forest reserve located in the Brong-Ahafo region of Ghana.

The objectives of the study were to:

1. Identify barriers to developing viable alternative livelihoods for forest-fringe communities and chainsaw operatives.
2. Identify measures that can facilitate the removal of barriers to sustaining alternative livelihoods in forest fringe communities.

The study used questionnaire surveys, key informant and stakeholder interviews as well as focus group discussions within the communities to address the objectives. Literature was extensively searched and field observations were also undertaken to ascertain status of livelihood activities. Data was assessed using the sustainable livelihoods approach as a framework, which is explained in the methodology section of the report.

The main conclusions from the study were that;

1. The introduction of ALs may not be a guarantee to improving livelihoods and thus reversing illegal or undesirable activities in forest fringe communities; primary existing activities in which people have invested more capitals and are more familiar with, if supported could perhaps better channel limited resources to improve the quality of life and prevent people from falling into illegal ventures.
2. Outside the scope of the capitals there are exogenous psychological and socio-cultural attitudes that have influence on sustainability of alternative livelihoods. Cynicism and pessimism, mental attitudes, and expectation, opportunistic tendency, social values and norm are crucial underlying elements that can influence inviolability of the essential capital requirements for sustainability of ALs.
3. The implementation of the ALs project in the study area was true to the book but sustainability was not ensured due to lack of diligence to enhance capabilities, mitigate vulnerability and sustain

access to relevant capital assets by the participants in the various livelihood activities. This is because the relevant stakeholders did not ensure continued facilitation for the target communities. Institutional support was weak in sustaining ALs in terms of policy and structural commitment.

4. Access to funding and credit has been identified as a major barrier to sustainability farming communities have very limited access to credit facility as a result of the risky nature of farming and the operational requirement of financial institutions and credit providers. Additionally, the process of access is overwhelming for rural folks. It is cautioned however that financing may not inherently be the overriding factor as it seems that limited capability is always attributed by communities to lack of funds to do anything.
5. Marketing and market peculiarities, structure and nature are areas where local people have very little leverage and control or knowledge to excel in.

Recommendations:

1. It is recommended that for AL projects workshop/dialogue process be initiated with the communities/stakeholders to discuss their SWOT positions within the 'Capitals' framework and find enhancements and mitigations for them.
2. Social psychological and cultural considerations should be integrated into project preparation process to ensure that only participants in real need for alternatives and who have high level of capability are selected, no matter how few.
3. Market access and some guarantees for fledgling products and even into the long term must be provided to make activities sustainable and not to be seen as only demonstrations of production and profitability.
4. Handing over projects to the District Assembly should be considered and explored as an option to ensuring the integration of project-trained facilitators to support the activities.
5. The terms of intervention should be clarified to target communities in future to guard against wild expectations from local people in terms of incentives, benefit sharing and specific roles to be played. This will ensure that ALs are effectively integrated into the larger

community, regional and national development and poverty reduction agenda.

6. There is a need to review the group approach to implementation of ALs and adopt the family or individual enterprise method. By ensuring that a very few and well managed starters are successful, other members in the community would be attracted to invest and sustain ALs when they see profits rather than pursuing wild expectations from development agents.
7. Legal issues with access to resources need to be clearly defined and promulgated to prevent conflict and litigation.

1 INTRODUCTION

A livelihood, by definition, is regarded as the capabilities, assets (stores, resources, claims and access) and activities required for a means of living (Chambers and Conway 1992). A livelihood is regarded as being sustainable when it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long-term. Failing to meet the above description suggests that there must be alternative livelihoods that would either supplement or even entirely replace a primary livelihood depending on situational dynamics. These new alternatives are therefore logically also required to be sustainable.

Some studies and reports on Ghana indicate that alternative livelihood (LA) projects have failed to be sustainable after project interventions have put them in place with communities. Most literature have dealt with mining communities (Temeng 2009; Hilson 2007) where livelihoods or communities have been displaced either economically or geographically and there have arisen the need to provide alternative livelihoods for those affected. Elsewhere, there are examples of coastal fishing communities (GIZ 2013) or areas converted to conservation and illegal drug related farming areas (Palau 2012) where ALs have been introduced with varying degrees of success and accompanied with some debate. According to Hilson (2007) most of the economic activities being promoted in Ghana have proved highly unpopular with target groups. He asserts that the adopted policy approaches reflect how little in tune the organizations championing AL activities are with the mindsets and ambitions of rural populations. It is reported that in Asia many examples of LAs have been sustainable (ECOSOC¹ news 2011/12/15). But the cases on Ghana, particularly in the forest sector, have proved to be difficult to sustain and there are few to cite as examples (Darko-Obiri 2013, Pers. Comm.).

1 The Economic and Social Council, under the overall authority of the General Assembly, coordinates the economic and social work of the United Nations and the UN family of organizations. As the central forum for discussing international economic and social issues and for formulating policy recommendations, the Council plays a key role in fostering international cooperation for development. It also consults with non-governmental organizations (NGOs), thereby maintaining a vital link between the United Nations and civil society.

Reviews of ALs in mining communities (Hilson 2009; Temeng 2009) and forest fringe communities, (Inkoom 2005) have indicated the presence of challenges and barriers to sustaining alternative livelihoods in rural communities. The key problems enumerated are access to finances, markets, raw materials, and secure land tenure. Other issues such as gender inequality in access and control of the means of livelihood and benefit sharing, group dynamics (Cleary 2003; Warren 2002; Yankson 2010,) and institutional commitment are seen as deterministic to the sustainability of livelihood projects. According to Temeng (2009) stakeholder opinions indicate that some of the possible flaws in project development that may lead to project failure are: a large project start-up gap, the psychological perceptions of those involved, project concept generation and project appropriateness and targeting.

Generally, experience has shown that inasmuch as many projects have succeeded in the pilot or infant stages, many challenges remained when institutional support was withdrawn from the communities, and individuals and groups had to cater for themselves. Hilson and Banchirigah (2009) suggest that organizations promoting ALs have not seriously accounted for local peoples' needs and aspirations leading to a failure of many of the interventions offered to them. In Ghana, sustainable livelihood (SL) programs in forest fringe communities have been promoted specifically for forest protection and conservation management purposes. In order to ensure sustainability of forest sector ALs it is important to systematically assess the operational framework using the Sustainable Livelihoods Approach that is the benchmark for practitioners in ALs. This study assesses the 'sustainability capitals' and the extent to which the project has been able to adhere to their application. It also goes beyond this to introduce influence of exogenous processes which impact on performance of the capitals. The objectives of the study were to:

3. Identify barriers to developing viable alternative livelihoods of forest-fringe communities and chainsaw operatives
4. Identify measures that can facilitate the removal of these barriers

2 LITERATURE REVIEW

2.1 Alternative livelihoods, practice and sustainability

Governments, donor agencies, non-governmental organizations and individuals have been promoting alternative livelihood schemes, especially in forest fringe communities to reduce poverty and unsustainable dependence on forests. They believe alternative livelihoods or supplementary livelihood activities have a role to play in sustainable forest management, be it direct or indirect. As a result, Governments and some NGOs have embarked on alternative livelihood activities for the purpose of reducing people's dependence on forests and also alleviating rural poverty. However, only a few of these activities have been sustained with the success rate in terms of reducing rural poverty or weaning people from the forest not known. The promotion of Alternative Livelihoods (ALs) is seen by many as a viable way to improve rural livelihoods and reduce dependence on the forests.

In the particular case of chainsaw milling the activity in Ghana has been criminalized since 1998, but the operation has survived. One reason that has been identified is that it serves as the primary supplier of timber to the domestic market (Odoom 2005; Asamoah *et al.* 2007; Marfo *et al.* 2009). This has provided job opportunities to rural folks as well as urban timber brokers. The debate is on how to deal with the issue in policy and in practice. It has been argued that chainsaw milling provides livelihood to many people and even if the ban is effectively enforced, it will throw many people out of jobs. Others argued whether illegal operation should be entertained just because it provides jobs for some people.

Governments traditionally have tackled illegal activities with force, calling upon national security forces to forcibly deal with offending people (Asamoah *et al.* 2007) However, these have generally done little to deter illegal operations. These approaches have had the opposite effect, unifying groups of people to operate in a more organised way, making it difficult for security forces to deal with the situation (Nutakor *et al.* 2011; Hilson 2009, Hiller 2004). Lack of livelihoods and poverty are thus seen as the driving forces behind illegalities. Therefore, ensuring that rural livelihoods are sustainable,

and are contributing to protecting and improving the management of the environment, are keys to eradicating poverty. Several organisations including CARE International and OXFAM have followed DfID's lead, developing their own SL frameworks in an attempt to establish a connection between local realities and the level at which policies intended to change these realities, are formulated (Shankland 1998).

2.1.1 Possible alternative livelihood activities

The major alternative livelihood activities identified in literature can be grouped into three main categories, namely forest-based livelihoods, forest-related livelihoods and other 'footloose' activities that may not be related to the forest at all (Inkoom 2005). Activities identified under the forest-based activities include Taungya schemes, rattan and bamboo collection, medicinal plants gathering, establishment of woodlot/nurseries, and forest enrichment planting. The potentials in this category include eco-tourism and creation of sanctuaries for flora and fauna. Feasibility studies on the identified activities were however not conducted.

The second category, identified activities for boundary cleaners, plantation developers, (private & public) load bearers, and stock survey labourers, fire volunteers, licensed chain-saw operators and temporary forest guards among others.

The third category can be considered as 'footloose' activities that may not have linkages to the forest, including soap making, bead-making, pottery, aquaculture, snail rearing, piggery and the rearing of small ruminants (grasscutters, guinea pigs), batik/tie and dye, Kente weaving & cloth making, and poultry farming. Some of these may be limited to specific geographical areas as a result of raw material availability (pottery) and tradition (Kente weaving), while others can be carried out everywhere (Batik/tie and dye, soap making, etc).

The experts observed two key experiences with forest-based livelihoods. Firstly gathering activities are important during periods in the farming calendar when agricultural tasks diminish, or when the need for cash is acute. Therefore considerable seasonal fluctuations occur in the degree of involvement, mainly as a result of changes in farm labour requirements, the increased need for cash during hardship periods, the seasonal availability of raw materials and some Non Timber Forest Products (NTFPs) and fluctuations

in demand. The majority of forest-based cash earning activities usually decline during planting and harvesting periods, when farm labour requirements are high, but increase during the hunger season when people need money to buy staple foods. This seasonality is to be noted as individuals may use these activities as coping strategies.

Secondly, it was reported that plantations, woodlots, trees on crops and Taungya systems, provided both economic and ecological benefits. There are examples of individuals and communities engaging in woodlot establishment for charcoal production, poles for electrification and construction, among others. Others include provision of commercial and subsistence value from trees such as fuel wood, fruits and/or timber, income from sale of food crops (plantain, cassava, cocoyam, yam) and vegetables (tomatoes, pepper, garden eggs), food supply for the rural household and soil fertility restoration by use of tree species that fix nitrogen and add litter through leaf fall to the soil.

Forest-related activities appear to benefit mainly forest-edge communities who, as a result of government forest policy of collaborative forest management, are engaged in the provision of various services in the forest reserves for the Forest Authorities. Though these provide regular streams of income, they may be seasonal, and remuneration may be low, compared with other activities that community members may have engaged in (both legal and illegal), and in spite of the fact that some of these activities sometimes pose a threat to the sustainability of forest resources.

Alternative livelihoods that may not have anything to do with the forest are many and varied, and experiences with these options indicate that much as they can be successful, there is the need for training and credit before engagement. Many of these activities, like snail farming and grass-cutter rearing require specialist training to ensure that the activities are successful. There have been instances where communities have lost large numbers of grass-cutters due to cold weather, for example. The need for training and large capital outlay can be said of other activities as soap making, batik/tie and dye production, Kente weaving, among others. In addition to these requirements, it appears as if this category of livelihood requires the greatest amount of initial capital inputs, which, for rural communities, where the incidence of poverty is high, may be difficult to come by.

2.1.2 Success factors

Several factors have been identified as reasons for the successful implementation of particular livelihoods in the three categories mentioned; forest-based livelihoods, forest-related livelihoods, and ‘footloose’ activities. Broad government policies that seek to reduce poverty in the rural areas appear to hold the key to successful implementation of ALs. This is particularly the case if the policies find expression at the lowest levels of government and are exemplified by specific actions like the provision of credit and market access to those engaged in the activities. Many sub-Saharan African countries have undertaken Poverty Reduction Strategies and with proper targeting, these strategies could support ALs to reduce poverty and minimize dependence on the forest. Again, the conceptual shift in the management of forests in favour of collaborating with local communities in sustaining the forest allows community members to engage in ALs with good returns. Forestry Services, as in Ghana, for example employ reserve-fringe community members in formal temporal and permanent employment in the forest reserves.

In addition to the above, other success factors identified include: the ease with which people enter the particular alternative livelihood (this finds expression in access to training and capital in the form of micro-financing); incorporation of sustainability issues right from the start; putting in place institutional structures that provide for self-monitoring (or a form of peer review mechanism) together with a technical back-up support; the availability of ready markets or market development for the products is another key factor. Livelihood schemes associated with traditional and festive occasions also tend to succeed, since such occasions tend to provide a captive market, even though this may be periodic in nature. Again, local supply and the availability of the raw material do help ensure the success of the activity.

Finally, the role that organisations have played in popularizing and sustaining ALs is also crucial. Bi-lateral development organizations, Non-governmental organizations, educational institutions, community-based and civil society organizations, farmer-based organizations and key individuals have all played crucial roles in ensuring the success of ALs. For instance CARE International ensures that there is participatory planning, gender consideration, communication linkages, training, and monitoring of factors and processes in the engagement framework and after to build strong leadership and ownership among community members

2.1.3 Key challenges

Most of the ALs mentioned above, particularly grass-cutter rearing, snail farming, mushroom cultivation, as well as soap making, batik/tie and dye production have been championed by bilateral organizations and NGOs as projects with specific time frames. Experience has shown that inasmuch as many projects have succeeded in the pilot or infant stages, many challenges remain when institutional support is withdrawn from the communities, and individuals and groups have to cater for themselves. Hilson and Banchirigah (2009) suggest that organizations promoting ALs have not seriously accounted for local peoples' needs and aspirations leading to a failure of many of the interventions offered to them.

Again, it is important to ensure that ALs provide a steady stream of cash flow, because of the fact that most of the communities that engage in the alternative livelihood activities have to grapple with how to cope in the lean or off season periods of their current economic activities. The challenge still remains as to how ALs that individuals engage in can complement other economic activities to ensure a steady flow of income to those engaged in them. Long gestation Alternative Livelihoods, like plantation development have to be supported with short-term income generating activities so as to cushion individuals and groups.

There is also the challenge of ensuring that livelihood activities reduce adverse impacts on seasonality, because some livelihoods may lead to lower agricultural productivity, and eventually cause food prices to increase (Hilson and Banchirigah 2009). For forest based activities in particular, the challenge is how to ensure that the activities are carried out on a sustainable basis, to allow the resource to regenerate, and ensure a steady stream of benefits. Another key challenge is the availability of ready markets for the products. There have been instances of difficulty in finding markets for mushrooms and shea butter, for example, and this gives reason for concern, especially when the activity has benefited from credit financing.

Finally, there is the challenge of public attitude to some of the products of the Livelihoods (Oberndorf et al. 2007). There is for example the perception that the meat of animals (grass-cutter and snail) from the wild is tastier than the meat from domesticated sources, and thus domesticated animals do not meet the quality standards preferred. There are however no scientific

basis to prove that this is the case. This perception, however, can affect the marketing of domesticated ruminants.

Some identified organisations into livelihoods and technical assistance are listed in appendix 1.

2.2 Theory of sustainable livelihoods

Sustainable livelihood (SL) is used interchangeably with ‘Alternative Livelihoods’ (Labonne 1999). The goal is the economic diversification of rural communities, which are over-reliant upon illegal or resource damaging activities for sustenance.

Exploring alternative livelihoods implicitly suggests that existing livelihoods are either not producing enough benefits for the individuals or communities engaged in them, or that current activities are in contravention of existing legislations, or pose a danger to the sustainability of other resources.

Alternative livelihoods are therefore thought of in the context of providing livelihoods that may replace or supplement existing livelihoods that are in danger as a result of resource constraints, or those livelihoods that do not generate sufficient incomes to enable those engaged in them live decent lives or that current activities are in contravention of existing legislations.

Sustainable livelihood concept has been extensively dealt with since the early 1960’s to the present, evolving through the notion of integration of sectors, (integrated rural development) to the current focus on ‘assets’, referring to stores, resources, claims and access (Chambers and Conway 1991) The concept of ‘barriers’ to alternative livelihoods pertains to the fact that many AL interventions have eventually failed due to the presence of a number of challenges that they have faced (Temeng 2009). Challenges and threats to livelihoods are complex and numerous, especially in a situation where communities live in basic conditions, have few capital reserves and thus rely extensively on their surrounding natural resources, some of which are seasonal and affected by climatic variability. Such communities are also vulnerable to political change, natural disasters, disease, drought and famine and often have few means to combat or cushion themselves against unforeseen events (Harrison 2007).

The sustainable livelihoods concept is typified by the Department for International Development (DfID) as assets “which poor individuals, households and communities deploy to maintain well-being under changing conditions” (Norton and Foster 2001). Within the framework, a livelihood is defined as “the capabilities, assets (including both material and social resources) and activities required for a means of living”. Thus a livelihood is sustainable when it can cope with, and recover from, stress and shocks while not undermining the natural resource base (Carney 1998).

Chambers and Conway (1992) define SL as;

“A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living; a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long-term.”.

Even though McLeod (2001) proposes the addition of two new assets, institutional knowledge and institutional or political capital in an urban context, these may still be relevant for our mainly rural or otherwise peri-urban situations. It is believed that information, knowledge and skills in the human asset base do not receive the prominence they warrant.

The SL approach nevertheless offers both a conceptual and programming framework for sustainable poverty reduction. Unlike more traditional approaches that have sought to tackle poverty by identifying and addressing needs of poor people, the SL approach seeks to improve their lives by building on what they have – their assets . As expounded by Morse (2009) the SL approach;

- i) captures the importance of the micro-level institutional context in mediating the impacts of the macro-level economic and institutional environment on the well-being of particular individuals and social groups;
- ii) situates assets in their broader context, focusing on their contribution to realizing the livelihood outcomes of the poor; and

- iii) encapsulates the dynamics and multiple dimensions of poverty, ill-being and deprivation (both material dimensions such as low income/consumption levels, and non-material dimensions such as powerlessness and social exclusion).

Alternative livelihoods are therefore thought of in the context of providing livelihoods that may replace or supplement existing livelihoods that do not adequately support the needs of families as a result of resource constraints and other circumstances and therefore do not generate sufficient incomes to enable those engaged in them to live better lives. In theory therefore the sustainable livelihoods approach is a holistic method of addressing development issues that centres the discussion on people's livelihoods. It is a chameleon-like concept that can serve many functions: it is at once an established development objective, an analytical tool used to understand the factors influencing a community's ability to enhance their livelihoods, and a method of eradicating poverty (Hanstad 2004).

The approach seeks to increase the sustainability of the lives of poor people through promoting among others, secure access to, and better management of, natural resources; more secure access to financial resources; a policy and institutional environment that supports multiple livelihood strategies and promotes equitable access to competitive markets; better nutrition and health; improved access to high quality education, information, technologies, and training. It seeks also to ensure access to more supportive and cohesive social environment as well as basic and facilitating infrastructure.

The livelihood approach groups individuals into different livelihoods (activities) according to their access to assets (including both material and social resources) and their capabilities to combine them to livelihood strategies for a means of living. (May *et al.*, 2009) The model breaks access into the five 'capitals':

1. human capital (e.g. education, health);
2. natural capital (e.g. land);
3. financial capital (e.g. access to credit);
4. social capital (e.g. community networks); and
5. physical capital (e.g. infrastructure like markets and roads).

The ability (capability) to combine these assets to livelihood strategies is influenced by the prevailing transforming structures and institutions and the vulnerability context.

The transforming structures and processes are the institutions, organizations, policies and legislation which determine access to the five different types of capital, terms of exchange between the different types of capital and the economic and other returns from livelihood strategies. The vulnerability context presents three main categories of vulnerability: trends, shocks and seasonality which affect assets and livelihood strategies and determine the level of vulnerability. A livelihood therefore is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.

The underlying theory to the sustainable livelihood approach concept is that people should draw on a range of capital assets or poverty reducing factors to further their livelihood objectives. Various vulnerability factors over which people have little or no control (such as environmental disasters and political unrest) impact the assets. Assets are also filtered through policies, institutions, and processes that determine the degree to which the people's livelihood objectives are realized. (DFID 2001; Jiwa & Wanjau 2008)

Within this context access to resources such as land, and other raw materials, capital, markets, education or training/technical information and other issues such as local management structure and processes, gender and non-local institutional support can play multiple roles and have decisive influence on sustainability of livelihoods that local people adopt and practice. For instance secure access to land can be a livelihoods objective. Land is also a natural asset through which other livelihood objectives, such as gender equality and sustainable use of resources, may be achieved. In addition, land can be a route or opportunity through which a multitude of other assets become accessible. (Baumann , 2002)

In practice, captured within the framework of small enterprises, there are a number of key services that must essentially be provided to ensure that AL activities are successful and sustained (Jiwa, & Wanjau 2008). These services include market access, input supply, technology and product development, training and technical assistance, infrastructure, policy / advocacy and alternative financing mechanisms. (Appendix 2).

2.3 Study area, methodology and analytical framework

2.3.1 Study area

The study was conducted in four (4) communities namely, Pepewase, Ahwene, Kofi Twumkrom and Kobedi (Table 1). The communities fall within the Wenchi Municipal Assembly and fringe the Nsemire forest reserve under the jurisdiction of the Sunyani forest management district in the Brong Ahafo Region of Ghana. The study area is located in the moist semi-deciduous forest zone of Ghana. Cocoa and food crops farming are the predominant economic activity in the study area. Maize, plantain and cassava are important food crops. Illegal logging and forest encroachment are some of the undesirable activities reported in and around the Nsemire forest reserve in the study location. Conflict between locals and the Forestry Commission staff have also been reported frequently leading to general mistrust and tension between the two parties.

Table 1: *Selected communities for assessment of sustainability of livelihoods*

Communities	Frequency	Percent
Pepewase	23	40.4
Ahwene	15	26.3
Kofi Twumkrom	12	21.1
Kobedi	7	12.3
Total	57	100.0

PAFORM, Participatory Forest Management project in Tain 1, Nsemere and Yaya Forest Reserve in the Transition Zone in the Brong Ahafo Region of Ghana has sought to introduce income generating activities (IGAs) and green belt (GBs) production areas to mitigate forest degradation by providing alternative and sustainable livelihoods for local people. As such various IGAs with improved innovative approaches to production were introduced in 2007 in selected communities around the target forest reserves. In addition green belt (GB) production activity was introduced as livelihood initiative. Local communities were offered training in the IGAs and provided with

training and demonstration materials to promote the initiatives. Community Facilitators (CFs) were trained and assigned to the communities to facilitate and monitor the process of training, demonstration and adoption of the IGA in the target communities.

2.3.2 Data collection

Data were collected through questionnaire administration and focus group discussions to capture information on adoption, income and sustainability of alternative livelihoods (AL) initiatives. The key alternative livelihoods, in which community members had invested, otherwise known as income generating activities, were investigated. Focus group evaluation was carried out by open discussions. Interviews were carried out with the community facilitator and other leading members of the communities. As a follow-up 30 chainsaw operators identified in the EU chainsaw project currently participating in the multi-stakeholder dialogue (MSD) process were interviewed. This was done to determine levels of income that will ensure sustainability of preferred AL activities in order to desist from illegal chainsaw activities.

In each community respondents who had participated in activities were targeted. All respondents had participated in the two different strategies: income generating activities and green belt production, and were subjected to simple random sampling depending on their availability in the community. In all 57 questionnaire respondents were interviewed. Overall, about 70 people also participated in focus group discussions including some who had not participated in the project.

2.3.3 Analytical framework

Exploring alternative livelihoods implicitly suggests that existing livelihoods are either not producing enough benefits for the individuals or communities engaged in them, or that current activities are in contravention of existing legislations, or pose a danger to the sustainability of other resources. Alternative livelihoods generally are providing livelihoods that may replace or supplement existing livelihoods that are in danger as a result of resource constraints, or those livelihoods that do not generate sufficient incomes to enable those engaged in them live decent lives or that current activities are in contravention of existing legislations.

The data was reviewed using the 'capitals' framework (AFC, 2009) based on theoretical conception espoused in literature. The various challenges recorded were grouped under the relevant categories. This enables us to see the relative importance or weakness of any category to the extent which it constitutes a barrier to sustainability of ALs within the case study context. Relevant tabulations relating to activity, gender and social status are also presented. Essentially responses are subjective but are presented by objective analysis and supported in discussion with narrative responses to explain their nature.

3 RESULTS

Several queries were addressed during the studies at community, household and institutional levels. The most important ones that pertain to sustaining livelihoods that were addressed at the community level identified a number of challenges or barriers to SALs. Measures to remove them were also identified both from interviews and from literature. These have been presented separately for clarity. Insights from Focus Group Discussions and interviews with key respondents such as Facilitators and other officials of institutions and civil corporate organizations are presented in narrative form to explain the challenges encountered in the study. For instance the problem of access to finances is explained by asking various persons why that is so; the Forest Service Division's position, leadership problems and issues with group dynamics are also dealt with in the narratives. In order to address the objectives, a few key questions were posed to the respondents as a means to determine activity status of respondents, assess the project implementation process, and identify challenges and reasons for these problems and then how to overcome them.

3.1 General background of respondents

Fifty-seven JICA/PAFORM participants were interviewed. Females constituted 53% and male 47%. About 84% of respondents got training in, and participated with various groups to undertake income generating activities (IGA) shown in Figure 1. The most popular activity was Soap production (26%) followed by soya (18%) bean and tiger nuts (12%).

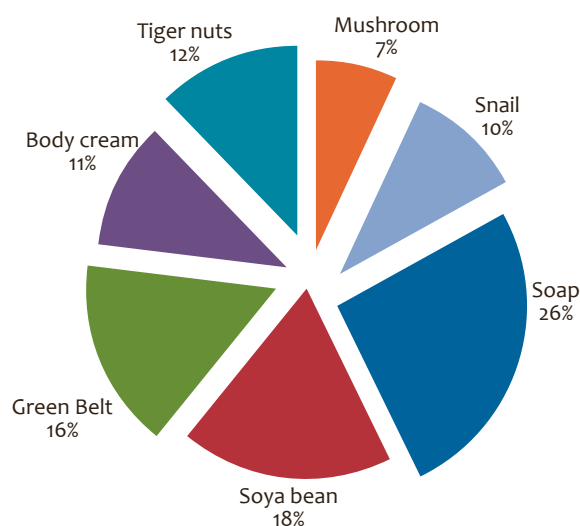


Figure 1: *Activities accounting for respondents' participation.*

About 16% of respondents also participated in the Green Belt production activities (GBA), but only occasionally, as a communal activity to protect the forest near them.

In the survey 63% of respondents claimed they still identify with the various IGA and GB groups even though 95% agreed that the groups had stopped production. Some 37% of respondents claimed they were no longer active with their groups. After group training and demonstration of selected activities, only 33% of the respondents said they made investments to produce items on their own, such as soap, body cream, honey and tiger nuts for income. One respondent also ventured into snail farming and livestock and soya bean production. Only three (3) respondents were still actively undertaking their IGAs. One respondent was only intermittently active due to marketing problems and post-natal issues. Also, only the leaders of the GBAs were active with the farms in the communities on a regular basis. According to key informants a few community-spirited individuals help to maintain them regularly. Table 2 indicates activities in which participants had invested during the project in 2008. Soap making, livestock rearing, soya bean and snail production were the most popular items. Participants appear to have generally preferred agro-based products.

Table 2: *Income generating activities in which participants had made financial investments during the project. (PAFORM report, 2008)*

Income generating activities	Frequency	Percent
Livestock(sheep/goat/grass cutter)	12	15.4
Honey making/Bee keeping	1	1.3
Fowl	4	5.1
Grass cutter	1	1.3
Soap making	14	17.9
Cream making	4	5.1
Maize	7	9.0
Soya beans	12	15.4
Groundnut	6	7.7
Tiger nut	6	7.7
Snail rearing	11	14.1

Respondents were asked if they made any investments to produce the items they were trained to produce. In response 61% said they had made some investments in various activities after the group stage of learning and demonstration of profitability (Table 2). The remaining 39% did not and gave various reasons for not investing in the IGAs (Table 3). Topmost in importance was financial constraint or lack of capital to invest. Others (13%) felt that the training given was not adequate to enable them produce effectively, while the same proportion also attributed their position to doubts about profitability of the ventures. Some were also discouraged from investing in the activity only because at the group level no profits were made after production.

For those who had invested, 96% of them claimed they had stopped the production. The most cited reason was lack of capital or access to credit to continue production, purchase raw materials and hire labour. Respondents were asked whether they quantified profitability of their invested IGA or not. Not all respondents (60%) who had invested in income activities were

able to quantify profitability. For those able to do so, majority of them (76%) indicated that the selected activities were profitable.

Table 3: *Reasons for not investing in income generating ventures*

	Frequency	Percent
Due to financial constraints	21	55
The training was not adequate	5	13
Not sure of the financial gains from the activity	5	13
Did not realize any gains from the group activities	3	8
The knowledge on soya beans was not enough to enable investment	1	3
Our primary activities were better than those introduced	1	3
Found it difficult to even market the oranges from the group farm	1	3
Don't have any reasons	1	3

3.2 General performance of project

3.2.1 Performance assessment of alternative livelihoods implementation

Respondents were asked to give their assessment of the PAFORM project during its implementation phase (Figures 2 to 6). They were asked to give their assessment on effectiveness of skills transfer, technical support, financial assistance, FSD involvement and support, and follow-up by the FSD after implementation. To begin with, most respondent felt that skills transfer (training) was generally good, with about 70% of the respondents rating this factor from “good” to “excellent” (Figure 2). Technical support (Figure 3) during implementation was rated by most respondents (over 50%) from “fairly good” to “excellent”. Financial commitment by project implementer (JICA/PAFORM) was a major concern for participants, with 70% of respondents (Figure 4) rating this factor as “poor”. The poorest assessment (96% said poor) related to the FSD’s involvement and follow-up after implementation (Figure 6). This is followed by expected follow-up by FSD, after termination of intervention, which was rated by about 93% of respondents as “poor” (Figure 5).

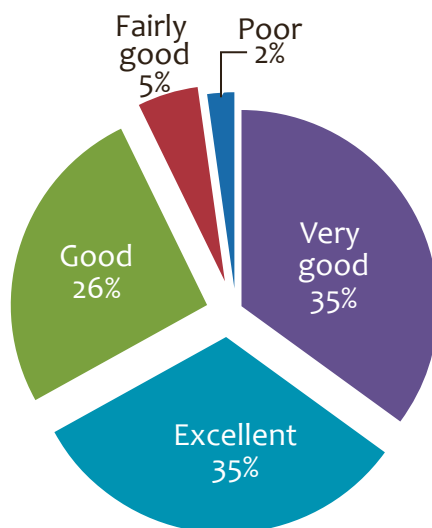


Figure 2: Assessment of skills transfer to respondents.

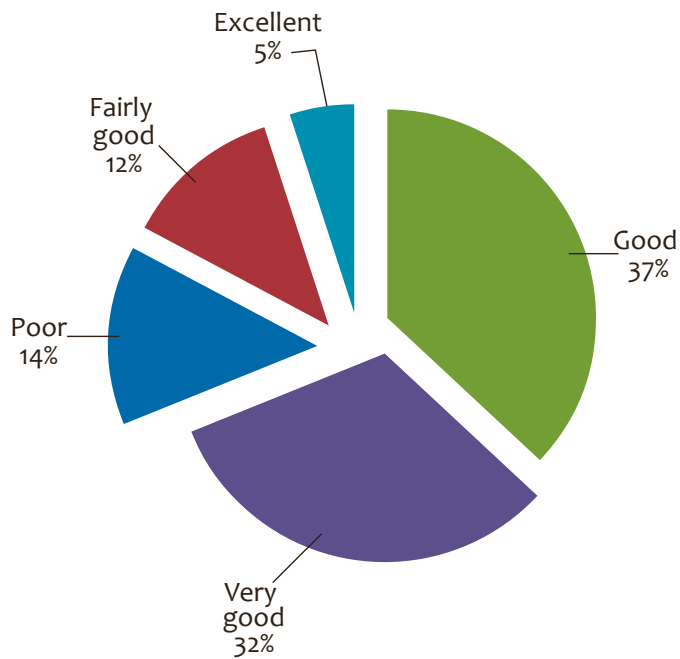


Figure 3: Assessment of technical support from project sponsor.

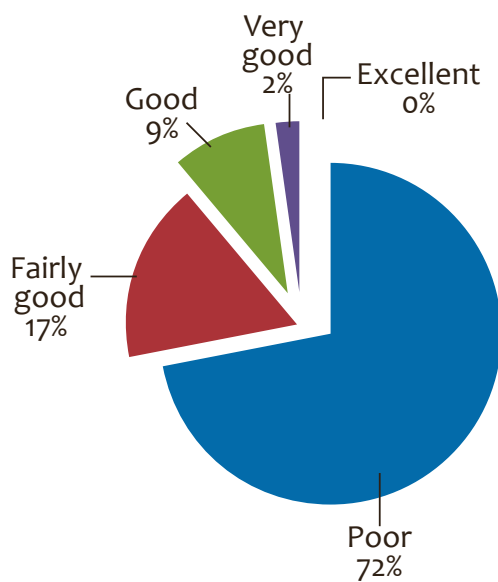


Figure 4: Assessment of Financial assistance by sponsors.

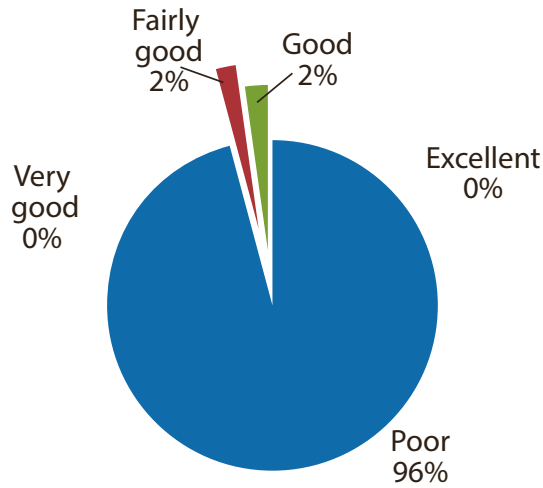


Figure 5: Assessment of Forest Service involvement and support.

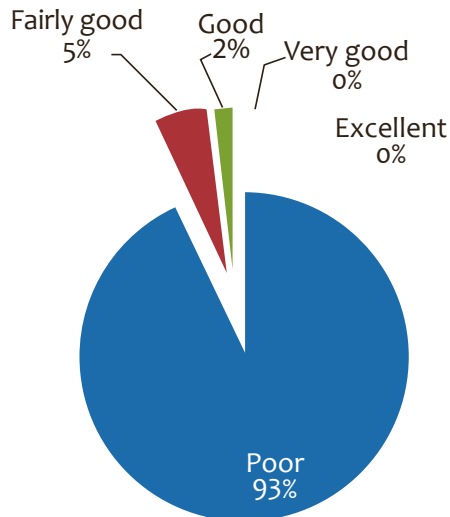


Figure 6: Assessment of forest service follow-up after project termination.

Respondents were asked why the IGA groups that were formed to train and also demonstrate profitability of activities could not be sustained. Figure 7 illustrates the responses given. The vast majority (72%) felt that the groups did not benefit from financial and technical support to enable them perform

and sustain the activities. More males felt that this was the case as opposed to females. More males also felt more concerned with slow progress made by the groups and also lost interest more than females. Other reasons why respondents could not sustain the group activities were; poor leadership and lack of transparency (52%) and past negative experience leading to disillusionment (16%). Gender vulnerability of women was indicated by at least 34% of female alone claiming they did not gain access to inputs or benefits from the group activities. More women also felt that the activities conflicted with their primary activities (17%), as against 10% of males. It could be that women's traditional role of the family hindered them from participating effectively in a group dominated by males whose schedules are quite different from that of their female counterparts..

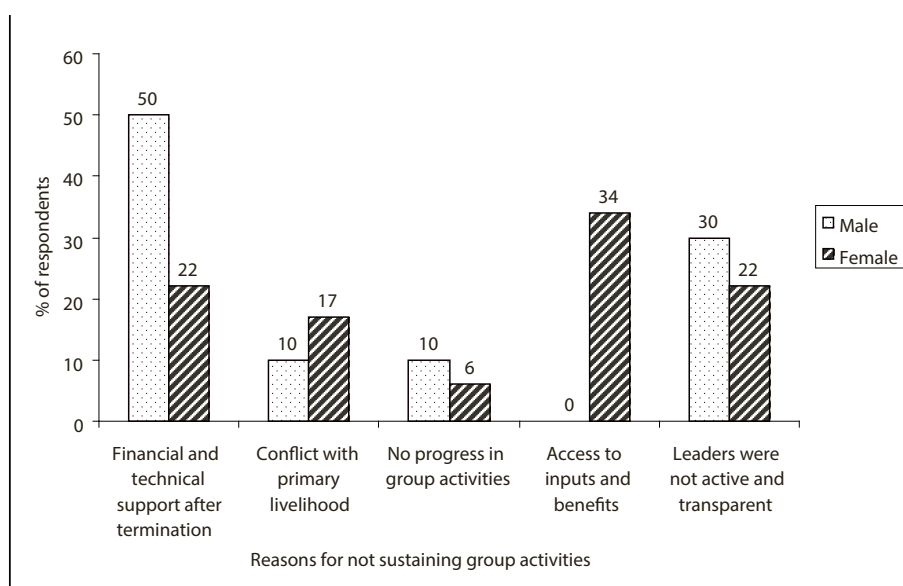


Figure 7: Reasons given by respondents for not sustaining the group income generating and green belt activities by males and female.

3.2.2 Barriers to sustainable livelihoods

Respondents were asked to enumerate problems or challenges that they found in engaging with the ALs introduced to them. This question was generally posed for both IGA and GBA activities even though the respondents indicated that they were more interested in the IGAs for personal gain in the future. The barriers that were identified by evaluating both focus group responses and interviews are presented in Table 4. This is interpreted as

extent to which respondents felt they were limited in accessing the relevant capitals which could have enabled them to develop and sustain the income generating and green belt activities. Column 3 of Table 4 depicts relative importance of the combined set of variables that constitute the ‘capitals’ listed in column 1. the presentation indicates that the ‘capitals’ scoring highest was the least accessible and therefore was perceived as being the most serious barrier to sustainability of the ventures. The table is constructed with data from questionnaire survey and additional insights from the focus group discussions. Within the categories items are presented in order of importance from focus groups validation (Column 2).

The most important challenge category was financial capital (35%) in terms of adequacy of financial support to run the group activities so as to demonstrate profitability at the group stage. Access to start-up capital or credit to invest in and sustain the activities on individual basis after group stage was also a component of this category. The next most important category was that of social capital (25%) pertaining to networking, leadership strength, conflicts, gender and social status vulnerabilities. Institutional knowledge and human ‘capitals’ followed respectively in order of importance. In the institutional category the complaint was that facilitators were not integrated to support the activities after project termination and also the main leading institution, the FSD, did not show commitment as expected. The challenges of the physical capital category came 5th on the list relating to market and access roads, storage and some other essential infrastructure such as water and electricity. Respondents complained particularly about poor nature of roads, lack of transport to carry produce to market and storage for their produce.

In one community (Pepewase) land conflict manifested in the GBA activity while in another, Kofi Twumkrom, one individual complained about terminal access to land for cultivating tiger nuts under the Taungya system. This situation seriously affected livelihood sustainability for both cases.

Category 7, political, was quite marginal manifesting only as attempts to break the resolve of participants in the ALs’ formation stages by imputing negative experiences of the past from sceptical community members. Institutional personnel were perceived by respondents to harbour feelings of mistrust towards the communities and their ulterior motives and thus sustaining under-currents of tension and conflict between the FSD and community; its extent of attribution and impact may be clearer in category 3 where the institutional level of commitment comes into force.

Table 4: *Relative importance of capitals posing as challenges to sustainability of alternative livelihoods*

Capitals	Specific barriers or problems identified	%
Financial capital *	Start-up support, Credit, (for equipment and replacement, raw materials, labour	35
Social capital (networks);	Group dynamics, leadership, conflicts (transparency and accountability), gender, social status	25
Institutional knowledge	Government institutional dynamics and relationships, roles/commitments (especially FSD, indicted by both participants and facilitators). Market structure and forces	15
Human	Training, technical skills (e.g. packaging), technical supporting skills (e.g. making of bee hives, repair of equipment follow-ups (extension services), flow of information, Level of education, management skills and record keeping	13
Physical capital	Roads, markets, transport, shelter and storage, equipment (and replacement)	7
Natural capital	Land, raw materials, shelter	3
Political institutional dynamics	Community and governmental relationships/ local politics (expression of scepticism by non-participants with political bias), past negative experiences	2
Total		100
<p>* We may discount the relative importance of this factor as it appears to be the norm for respondents under such contexts to always complain of lack of cash to do anything. It is the normal thing to do if one is expecting some assistance from donor interventions. Many times when respondents are asked for reasons why they are unable to pursue, sustain an activity or solve a problem they attribute this to lack of cash.</p>		

3.3 Weaknesses and threats

At focus group discussions most participants admitted that the income generating activities could not be sustained by the groups and individuals. They mentioned several problems as being the cause of failure. Among them are lack of credit, limited access and knowledge of market conditions for IGAs and land litigation that has led to collapse of communal green belt conservation activities around Nsemire Forest Reserve. The discussions, which were conducted with the inclusion of one remaining facilitator assisting voluntarily, revealed a number of issues worth consideration. According to the participating facilitator, the project was severely time bound. It is claimed that training of participants was still in progress when the project came to an end. The technical nature of some activities also overwhelmed the participants who later invested in them. As a result, poor quality control and packaging in soap production made it difficult for the producers to meet customers' specifications.

The issues reported which indicated weaknesses and threats to the activities are presented in Table 5. Following from these, the recommendations have been tailored as a means of mitigating the identified barriers to sustainable livelihoods in the final section of the presentation.

Table 5: Respondents' perception of challenges as “weaknesses” or “threats” to livelihood activities

Challenges	Seen as a weakness	Seen as a threat
Poor financing of income generating activities	X	X
Leadership skills	X	
Crop yield losses (pre – and post-harvest)		X
Financial mismanagement (transparency and accountability)	X	X
Stealing of farm produce		X
Group cohesion	X	
Lack of institutional commitment		X
Management and accounting skills	X	
Land access and conflict	X	X
Production skills (packaging etc)	X	
Market knowledge and competition	X	X

3.4 Illegal chainsaw milling operatives and alternative livelihoods

As part of this study, 25 chainsaw operators were interviewed in two illegal chainsaw endemic forest districts (Kade and Begoro in the Eastern Region of Ghana). They were asked if they would desist from illegal operations if an alternative source of income was sustainable, but much lower, just lower, necessarily equal to, or higher than that of illegal chainsaw operations. Majority of these respondents stated that they carry out illegal operations because they have no other jobs, no land for farming or very low income from their present farming occupations. Table 6 indicates responses to the primary question of when to desist from illegal operations.

Table 6: *What level of sustainable income will keep you from illegal operations?*

	Frequency	Percent
Much lower but sustainable (50% less)	2	8.0
Just lower (25% less)	14	56.0
must be the same	8	32.0
Should be more profitable	1	4.0
Total	25	100.0

Fifty-six percent (56%) of the respondents thought that if the alternative activity was sustainable they would stop illegal operations even if it yielded about 25% less income. This is followed by 32% of respondents indicating that they would desist (only) if the alternative livelihood yields the same amount of income as the illegal operations.

4 DISCUSSION

4.1 Challenges to sustainable livelihoods

A number of challenges have been identified that are structurally categorized under their relevant capital groups. Discussions with key professionals at the FSD suggest that even though financial assistance, which is usually cited as the most inaccessible factor, had been provided to the fullest extent for AL participants in a number of sector projects these have failed nonetheless. There is thus the possibility of attributing failure to other deeper underlying socio-cultural factors that are necessarily outside the ‘capitals’ framework.

Furthermore, in spite of the fact that access to credit was most mentioned as a challenge, it is actually probable that the other capitals could be more crucial in determining sustainability. In the view of Mansfield, (2009) markets niching is most crucial for sustaining alternative income generating activities. Leadership skills and group dynamics, transparency and accountability (Asiamah 2007, DFID 2001), gender considerations and mainstreaming of ALs into regional development agenda (Schilderman, 2012)), are also crucial issues to pay critical attention to. Well defined land rights (Labonne, 1999, Hanstad *et al.*, 2004, Cotula 2002) have also been found to be fundamental to ensuring that land based ALs are successfully implemented and sustained. For instance in this study undefined land title lead to either dispute or total loss of land for cultivation, both in GB activity and IGA activity for groups and individuals respectively.

In economic theory an income activity is pursued for profit. In the same sense it should be at least reasonable to expect ALs to be more, or nearly as, profitable as the primary activity, holding all other variables (the capitals) constant to make illegal or undesirable alternatives unattractive. Again depending on variations of these capitals over time and space, the ALs may be supplementary to existing primary livelihoods to raise living incomes and divert interest from undesirable alternatives. Hypothetically, and within the specific context of forest conservation, strong law enforcement would provide effective disincentive to illegal alternatives as sources of livelihood.

Some schools of thought posit that providing the right market conditions and forces and controlling its forces in favour of ALs (such as it were for the illegal

alternatives) would equally make AL products profitable, sustain them and convert people over to their production (Mansfield, 2009, Kuhn, 2009). By this stretch of the argument, if marketing strategy and forces are harnessed to favour LA products it should be encouraging for the providers since they would find themselves in good profit making position on a sustainable basis.

A number of questions thus arise (Hilson and Banchirigah 2009) that pertain to expectations, values, social psychological disposition of local people and their greater world view in terms of relationships with donor interventions; do people feel they must inextricably be attached to donor patronage for AL assistance? Are local people really looking for ALs or are they taking opportunistic advantage of these incidentals? What are the socio-cultural facts and processes within our communities that make people pass over opportunities, or are unable to take full and sustained advantage of them? How deep is our desire to change our living standards and how pervasive are the forces of cynicism, both at the community and institutional level, with regards to these initiatives and engagements with diverse cultures working for transformation. Are the expectations from ALs by communities under or over rated?

In short, is the whole concept of alternative livelihoods a myth or can it be a reality? Can we really say that the capitals framework is in and of itself sufficient to identify and remove barriers to ALs, especially when the textbook approach is strictly used by project management as was observed in this study? Are these sufficient indications of success or failure? This study hesitated to suggest, in the light of these queries that these indicators alone can serve to seriously improve on the issue of sustainability of ALs. Sections 4.2 – 4.9 provide some insights into the findings.

4.2 Financial capital

Financial capital relates to households' access to money, which may be through savings or credit (AFC, 2009). A desire to move away from the undesirable condition (be it poverty or illegal business) suggests that participants are willing to invest some form of capital into ALs. But what are their capabilities to do so? Do they have access to the requisite capitals? In this study even though respondents (over 90%) were willing to invest in IGAs after obtaining training, most of them complained about limited access to credit for financing their IGAs. There are a number of reasons for this. Mensah (2004) indicates

that the nature of farming and its attendant natural and logistical risks in poor rural communities is the primary reason why farmers have limited access to credit, including savings. According to Mensah, again most farmers also have very little knowledge of financing opportunities that exist beyond their immediate environment. For instance they know little about schemes relating to small and medium scale enterprises financing (Mensah, 2004). According to him some assessments of the sector have shown lack of higher education and the tendency to undertake one-person economic ventures are factors that make it difficult to develop small businesses.

It is thus concluded that a major barrier is a shortage of both debt and equity financing. Typically the entrepreneur possesses little formal education, has limited access to and use of new technologies and market information. It is thus emphasized that without a holistic approach covering the key developmental constraints of SMEs, SME financing schemes implemented in isolation may not be sustained.

Traditionally, commercial banking approaches to micro-finance delivery often do not work Asiana, (2007). According to traditional commercial banking principles, the credit methodology requires documentary evidence, long-standing bank-customer relationship and collateral, which most micro and small businesses do not possess. Discussion with a Rural bank official in Sunyani which serves the study catchment area reveals that where the risk of poor yields and even total destruction of crops due to environmental and climatic vagaries are a common occurrence, credit givers and also takers are very reluctant to venture into credit negotiation.. *“Farmers have very low credit rating for us.... If they can provide strong internal monitoring and collection mechanisms then they may be able to access credit as groups, particularly if they are facilitated by some Non-Governmental Organization (NGO). But this is not usually the case. They do not seem to be organized and individuals cannot be trusted with large amounts. We prefer to deal with salaried workers, some of who are also farmers”,* says the banking official.

Again non-governmental sources of assistance in many cases have also found that loans to farmers, especially male folks are not repaid regularly, if at all. This makes the extension of credit to farmers a problem. Coupled with this high expenditure on health, education and other incidental expenses make it difficult for farmers to open savings account to facilitate access to loans in the rural banks. Community focus discussions revealed that farmer associations are poorly organized in the communities due to mistrust and dishonesty. In

many cases some members are unable or unwilling to fulfil their obligations when it is time to service group loans. Reasons such as crop failure and low prices for produce are cited for inability to honour group loan obligations.

By and large, small and medium scale enterprises (SME) are reported to have not taken full advantage of government-sponsored business support services such as the National Board for Small Scale Industries (NBSSI), which operates in the 10 regional capitals under the Ministry of Trade and Industries and the Ghana Regional Appropriate Technology and Industrial Service (GRATIS), a foundation that provides skill training and basic working capital tools for start-ups (Mensah, 2004). This is so because of the very limiting characteristics of small businesses and the inherent structure and conditions for accessing the credit schemes. According to Mensah (2004) the single most important factor constraining the growth of the SME sector is the lack of finance, and this is due to factors such as relatively undeveloped financial sector with low levels of intermediation, lack of institutional and legal structures that facilitate the management of lending risk, the high cost of borrowing and rigidities of interest rates. Even though many strides have been made over the years the ministry of finance enumerates similar challenges facing the sector. Among them is the fact that access to the market is limited and many small businesses are unable to take advantage due to high rate of interest and cumbersome procedures (MOF 2013). The ministry lists them specifically as follows:

1. The current strategies for credit delivery by some microfinance institutions are not adequately diversified or efficient as they fail to fully meet the varying demands of the market and different categories of end-users.
2. In most cases the interest rate charged by the microfinance institutions are higher than the formal banking institutions due to the default risk which form part of the interest rate build up. This drives away potential costumers and makes microfinance products/ services too expensive sometimes.
3. There is lack of funds to run microfinance sufficiently as the demand for microfinance assistance keeps on increasing.

Certainly, with the ascendancy of rural banks following the reports cited above, things may have improved to some extent especially with the

introduction of the small-holder ‘susu’² mobile banking system. But, the fact still remains that, rural farmers still complain about limited access to credit. Most farmers in focus groups however claimed they access loans from established buyers or agents, but this is very exploitative and takes at least some 30% off their produce as interest. This can be very discouraging, they claim. *“You need to pay school fess, buy essential items, take care of the family and wait for the harvest to come. Labour is also expensive, not to mention the chemicals we use.”* they say. It is quite conclusive and logical to indicate that, for investor confidence to grow in the promotion of sustainable ALs, strong institutions and other ‘capitals’ base must be established.

4.3 Social capital

Social capital pertains to attitude towards reciprocity within the community, between households or individuals, based on the confidence formed through social links (Ellis, 2004). Social capital assets were next in importance. Key problems were related to group dynamics, leadership, conflicts (transparency and accountability), gender vulnerability, and social status of some respondents. Previous evaluation in the case study area by Marfo and Nutakor (2008) found that many respondents were confident that the group nature of activities would bring community members closer together due to the opportunity and this should help sustain the initiatives involving people from all social backgrounds as well as transcending gender. Contrary to these high expectations some members of groups, be they IGA or GB were reported to be absenting themselves from work but being interested only in the expected benefits that accrued. This is a problem that can have destabilizing effects on the groups.

Even though the IGA groups were intended to simulate profitability and eventually provide some resources to finance individual initiative on a rotating basis some members appeared not to have appreciated the long term benefits of the arrangement and could not take advantage of the process. This may have led to the collapse of the groups as many respondents suggested (20% males and 24% females respectively). One model observed by the researcher is the practice where a well positioned farmer for instance

2 A popular daily savings scheme enjoyed by many individuals in small enterprises such as market women artisans and other workers who are unable to access the traditional banking system due to small capital turnover, or location and inability to travel to a bank on daily basis.

is facilitated to develop a project such as woodlot. When this is successful and beneficial to the focal farmer, other farmers notice this and call for introduction and training to replicate the model. By this volition, genuine and enterprising initiatives prove to be more productive and sustainable, as compared to mass induction and group activities which are fraught with many difficulties. Thus, the focal persons pursuing viable initiatives better attract the entrepreneurial initiatives of other persons to take up or become assimilated into profitable ventures when they see results.

The problem was more pronounced with the GB activity since there was expressed doubt about benefit sharing. “Who should work for others to come and eat?” asked a participant. There is indication that the family may prove to be more effective in sustaining livelihoods since they are more socially cohesive; “I could not continue the mushroom business but because I trained my children they can produce the mushrooms for sale in the market at Sunyani town. We make some money to get by” says a participant who trained in the activity. Due to ill health and age he had handed over the mushroom business to his children and, according to him, things were not so bad as a result of involving his children.

4.4 Institutional capital

Hilson and Banchirigah (2009) suggest that organizations promoting ALs have not seriously accounted for local peoples’ needs and aspirations resulting in failure of many of the interventions offered to them. The findings of this study appear to confirm this assertion vividly. Since the groups were not adequately supported by formalizing the integration of the facilitators into the FSD, and since the FSD itself could not commit financial and other institutional resources the participants felt let down at a very fledgling time. Needed assistance in finance, production maintenance and marketing as well as legal access to land were lacking, making the morale of the groups and individuals very shaky. Apparently, it was not the policy of FSD to support the IGS; they were rather more interested in the greenbelt activities that directly supported the agenda of forest conservation. Even though the indirect benefits of IGA to this goal could be appreciated, the FSD nonetheless essentially remained noncommittal. Thus as observed by AFC, (2009) policies, institutions and organizations that could influence the access to necessary livelihood resources and enhance production processes

by creating conditional factors such as laws or services were largely absent at the local, regional and national levels.

Why did this happen? Most participants claimed that there was FSD–community suspicion and mistrust as FSD staffs’ attitude and commitment were poor because they, as an institution, felt left out or slighted by the project implementation process. At the end of the project, contrary to expectation (as had been “agreed”), the facilitators were not engaged by the FSD on substantive basis as the FSD could not integrate them into their system, asking, “Where is the money to pay them?” Even though one Facilitator had formed an NGO to help the communities, he reports that he had been frustrated by FSD officials in soliciting resources and technical assistance for the groups. According to him he was mockingly advised by the FSD officials to look for a better job if he was hungry, or establish his own IGA instead of concerning himself with other people’s businesses. Even follow-up cash sourced by the determined Facilitator and some community members including a chief was alleged to have been diverted and misapplied. A series of letters had been exchanged and these could serve as proof of the solicitations.

4.5 Human capitals

Human capitals relates to the ability to work and the labour capacity of a family unit or individual. In this study low level of education can be cited as a factor that limited respondents from fully exploiting their human capital potential. Since it is generally known that levels of education are low in particularly rural areas it was quite unnecessary to present data to corroborate the fact that majority of respondents had very low level of education and that this put them at a disadvantage even in accessing and taking advantage of the other capitals. Even though training was provided, many respondents still felt that they could do with further refresher programs. The study showed that management skills are weak, thus inhibiting the development of a strategic plan for sustainable growth as farmers usually are unable to recollect past records. The Focus Groups complained about poor record keeping and consequently lack of accountability and transparency.

Even though training had been given in basic production, down streaming issues like packaging of products and handling in the case of soap making, for instance, was a reported problem in which the Facilitators could have

been of much assistance to the Groups and individuals. The lack of technical know-how and inability to acquire skills and modern technology impeded growth opportunities.

Many non-financial constraints inhibit the success of such enterprises. SME owners are reluctant to be transparent or open up involvement of their businesses to outsiders. According to Mensah (2004), small scale actors seem to be unaware of or unresponsive to, among others, the need to acquire or seek support for technical services like accounting, management, marketing, strategy development and establishment of business linkages. Also, management and support services are perceived to be cost prohibitive and non-value adding.

These are some of the areas in which participants expected that Facilitators would be helpful in leading them to enhance skills, forage into markets and develop good packaging and presentation of products.

4.6 Physical capital

The participants, numbering about sixty (60) altogether from the target communities said that marketing and knowledge of market attitude and expectations, as well as price competition, were problems to them. In the expert opinion of the Facilitators there was not adequate research and technical assistance and support for product development to meet market standards and opportunities for export. For instance soap packaging for export can be done with bamboo material, which is an eco-friendly approach. There was also no adequate starter packs in materials and cash for participants – they were to use products from the training as seed capital to continue activities. Since they could not sell enough for profit, the groups failed to continue working together for much longer.

Road development has a positive impact on household income by increasing income from other sources besides crop income (Nkonya 2002), even though this may have a negative impact on crop production as people tend to migrate towards non-farm activities. Roads, market, transport, shelter and storage, equipment (and replacement) are the important assets that respondents complained about. The local markets are perceived as too small for the products selected and are seen to be larger-markets oriented if they are to be sold in large quantities. The problem of roads and transport exacerbated this

issue. Additionally poor knowledge of market conditions and forces militated against the initiatives. Adequate shelter for equipment and produce such as tiger nuts and maize and the lack of local skills for repair and maintenance of equipment were also issues overlooked by project management for instance in the case of bee hives.

4.7 Natural capital

Conflicts over access to land have also manifested and affected the ALs. After establishment of GB activities, neighbouring villages have claimed ownership and access to produce on GB farms, asserting that it was part of Nkoranza stool lands to which they had customary rights. The Chief therefore was reported to claim royalties for the lands being put to economic use while communities also claimed the right to freely share in the produce even though they had not participated in the project. It was claimed that GB production agreements with stakeholders were not legitimized by law to enable relevant stakeholders to adhere to any specific terms of land use as for green belt production.

Participants cultivating tiger nuts on taungya plots found that they could not continue this activity after canopy closure. Serwah, a native of Kobedi community explained bitterly that *“I have very little land now and I cannot move to another place to continue the farming. Land is scarce. This work is very profitable but the land is now covered by trees...what else can we do?”* She feels disillusioned by this experience. The residents of Pepewaase community complained about land litigation with their Nkoranza neighbors, the reason being that, since there were no serious agreements over the land, conflict over produce and sharing of benefits had stalled the green belt activity. They claimed that people from the opposing villages had intentionally put fire to the orange trees to destroy them. In this area it was clear that the relevant institutions were not properly integrated into the project at the operational and legal levels leading to this situation.

4.8 Political dynamics

This concept pertains to community and governance relationships or local politics (expression of power rivalry and cynicism by segments of society) that can sway against popular objectivity in dealing with issues of otherwise mutual benefit to all concerned. It is described as “cynicism” which is pessimism aimed at society’s potential for change, (Federman, 2013). Within a community, leadership opinion and popular attitudes and beliefs and cynicism can affect the behaviour of individuals and minor groups (if they so perceive themselves). Thus group dynamics are controlled by what the popular opinion is (Timacheff, 1967).

It has been suggested by respondents that whenever there is a project in the communities the focal person, usually the Assembly man, tends to politicize the process of induction and controls the implementation to favour the dominant political influence in incumbency. Thus opposing members tend to stay away from the projects and may even do things to frustrate the initiatives. Perhaps, in recent times this trend may be waning as people are becoming more discerning. Nonetheless it may be part of the undercurrents of emotions that have influence on the direction that initiatives for local development could take. Thus AL projects are vulnerable to political dynamics (Harrison, 2007) as cited in literature earlier.

In this study community members who were not part of the groups were said to have been cynical in their utterances about the project as a whole, expressing fears and reservations about the profitability and marketing of products. Such cynics would usually say as follows: *“We have seen many of these things before. It will not work. As soon as the white people go away people will lose interest in the work and go back to their old ways... they think there is money in it...”*

Participants thought that the institutional attitude was to take undue advantage of the JICA project within a limited time space but not to think about the long term. Therefore, there was “lack of interest and support from FSD staff who are more interested in chasing illegal lumber to make income”, alluded a respondent.

Thus in the study there were some indications of social cynicism, power wrangling and determination to take political credit and favour through controlling the means of production. There were reports of a group leader

who virtually confiscated items meant for production, did not give proper accounts to the group members and chose to distribute the items to enrolled favourite members of the group. Naturally if this is the case then within the groups one could logically expect that very little or only marginal expression of counter sentiments should manifest. Random selection however turned up with some indications that the phenomenon persisted around the AL activities.

4.9 What level of income would make operatives desist from illegal chainsaw activity?

Past studies have shown that a multitude of factors go to influence illegal chainsaw operations. These range from pure economics of demand and supply (Obiri & Damnyag, 2011) to poverty and corruption by public officials (Nutakor *et. al*, 2011, Asamoah *et. al*. 2007). In this study 56% of the respondents involved in illegal chainsaw operation thought that if the alternative activity to illegal operations was sustainable they would desist from the latter even if it yielded 25% less income. This is followed by 32% of respondents indicating that they would desist if the alternative yields the same amount of income as the illegal operations. There could be reasons such as risk and stress fatigue, economic pressure and even age of respondents that influence the results as they stand.

In the face of declining resources, increasing pressure from law enforcement with loss of capital and disillusionment about the future of illegal operations, and even due to new opportunities for illegal and more profitable gold mining as well as relatively easier portability of product (also easy to conceal in transit), the focus could be changing for the illegal operatives. Perhaps it would be expedient to also make attempts, expeditiously, to regularize and control the mining sector's opportunities as viable alternative livelihoods options to illegal forest activities. The effects of uncontrolled mining could just as well be destructive to forests, though, if not properly managed.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Clearly, the alternative livelihoods that were assessed have not been sustainable in the sense that they have not coped with the stresses and shocks i.e. weaknesses and threats (Carney, 1998) that is a necessary condition for sustainability by conceptual definition (Temeng, 2009; Chambers and Conway 1992). The weaknesses are indication of limited capability of participants and the threats about conditions which they can do little except to be resilient and innovative to face them. The stresses and shocks are also many and complex in nature (Harrison, 2007) and appear to have overwhelmed the participants.

The implementation of the AL projects was true to the book but sustainability was not ensured due to lack of diligence to enhance capabilities, mitigate vulnerability and sustain access to relevant capital assets. Relevant stakeholders have not ensured continued facilitation for the target communities. Institutional support was weak in sustaining ALs in terms of policy and structural commitment.

Access to funding for business establishment and development was identified as a major barrier to sustainability. Farming communities have very limited access to credit facility as a result of the risky nature of their enterprise in the face of unfavourable operational requirement of financial institutions and credit providers. Additionally, the process of accessing finances is overwhelming for rural folks. It is cautioned however that financing may not inherently be the overriding factor, as it may seem that, limited capability is always attributed to lack of funds by communities to explain their shortcomings.

Marketing and market peculiarities, structure and nature are areas where local people have very little leverage and control or knowledge to excel in.

The introduction of alternative livelihoods may not be a guarantee to improving living standards and thus reversing illegal or undesirable activities in forest fringe communities; primary existing activities in which people have invested more capitals and are more familiar with, if supported could

perhaps better channel limited capitals to improve the quality of life and prevent people from falling into illegal ventures.

Outside the scope of the capitals, there are exogenous psychological and socio-cultural attitudes that have influence on sustainability of alternative livelihoods. Cynicism and pessimism, attitudes (opportunistic tendency) and expectation, social values and norm are suspected to be crucial underlying elements that can influence inviolability of the essential capital requirements for sustainability of ALs.

5.2 Recommendations

- It is recommended that for AL projects workshop/dialogue process be initiated with the communities/stakeholders to discuss their SWOT positions within the 'Capitals' framework and find enhancements and mitigations for them.
- Social psychological and cultural considerations should be integrated into project preparation process to ensure that only participants in real need for alternatives and who have high level of capability are selected, no matter how few. In this way greater chance of success will be assured and this would in turn attract other members to emulate such examples of minded and well positioned members of the communities.
- Market access and some guarantees for fledging products and even into the long term must be provided to make activities sustainable and not to be seen as only demonstrations of production and profitability.
- Handing over project to the District Assembly or any local institution should be considered and explored as an option to facilitate the integration of project-trained Facilitators to support the activities.
- The terms of intervention should be clarified to target communities in future to guard against wild expectations from local people in terms of incentives, benefit sharing and specific roles to be played by all stakeholders to ensure that ALs are effectively integrated into the larger community, regional and national development and poverty reduction agenda.

- There is need to review the group approach to implementation of Als and adopt the family or individual enterprise method. By ensuring that a very few and well managed starters are successful, other members in the community would be attracted to invest and sustain Als when they see profits rather than pursuing wild expectations from development agents.
- Legal issues with access to resources need to be clearly defined and promulgated in order to reduce conflict and litigation.
- Capacity building to improve access to non-financial capitals and institution strengthening, are to be taken as crucial areas that will enhance investor confidence in sustainable Als and protect credit resources.

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APPENDICES

Appendix 1: Organizations promoting alternative livelihoods and their activities

Organization	AL promoted	Where promoted
Centre for Biodiversity Utilization and Development (CBUD)	Snail farming, grasscutter rearing, Prekese (a tree fruit), indigenous leafy vegetables	Goaso, Sunyani, Dormaa Ahenkro and Bechem Forest Districts
Brong-Ahafo Regional Grasscutter Farmers' Association (BARGFA)	Grasscutter rearing	Sunyani Forest District
Rural Development Youth Association (RUDEYA)	Grasscutter farming, mushroom farming, bee-keeping, snail farming	Goaso Forest District
Tropenbos International-Ghana (TBI-Gh)	Grasscutter farming	Goaso Forest District
Action Aid International, Sunyani	Grasscutter rearing	Sunyani Forest District
World Vision International, Atebubu	Grasscutter rearing	Atebubu Forest District
German Technical Cooperation (GIZ)/Market Oriented Agriculture Programme (MOAP)	Grasscutter rearing	Sunyani, Goaso, Bechem Forest Districts
Ministry of Food and Agriculture	Grasscutter rearing, snail farming, mushroom farming, bee-keeping, fish farming, etc	All Forest Districts

Organization	AL promoted	Where promoted
Others		
Mining companies	Various activities	
Care international	Various activities	
Peace corps	Various activities	
A DAROCHA GHANA	Various activities	
JICA	Various activities in forestry	

Appendix 2: SEEP³ Guide to Business Development Services

Types of Business Development Services

The SEEP Guide to Business Development Services identifies seven BDS categories: market access, input supply, technology and product development, training and technical assistance, infrastructure, policy/advocacy, and alternative financing mechanisms. Examples of services under each category are provided below.		
Market Access:	<ul style="list-style-type: none">• marketing business• market linkages• trade fairs and product exhibitions• development of samples for buyers• market information• subcontracting and outsourcing	<ul style="list-style-type: none">• marketing trips and meeting• market research• market space development• showrooms• packaging• advertising
Infrastructure:	<ul style="list-style-type: none">• storage and warehousing• transport and delivery• business incubators• telecommunications• courier	<ul style="list-style-type: none">• money transfer• information through print• internet access• computer services• secretarial services
Policy/Advocacy:	<ul style="list-style-type: none">• training in policy advocacy• analysis and communication of policy constraints and opportunities	<ul style="list-style-type: none">• direct advocacy on behalf of SEs• sponsorship of conferences• policy studies

3 The SEEP Network is an organization of more than 60 international private and voluntary organizations that support micro and small business and microfinance institutions in the developing world. www.seepnetwork.org

Input Supply:	<ul style="list-style-type: none"> • linking SEs to input suppliers • improving suppliers' capacity to provide regular supply of quality inputs 	<ul style="list-style-type: none"> • facilitating the establishment of bulk buying groups • information on input supply sources
Training and Technical Assistance:	<ul style="list-style-type: none"> • monitoring • feasibility studies and business plans • exchange visits and business tours • franchising • management training 	<ul style="list-style-type: none"> • technical training • counseling/advisory services • legal services • financial and taxation advice • accountancy and bookkeeping
Technology and Product Development:	<ul style="list-style-type: none"> • technology transfer/commercialization • linking SEs and technology suppliers • facilitating technology procurement 	<ul style="list-style-type: none"> • quality assurance programs • equipment leasing and rents • design services
Alternative Financing Mechanisms:	<ul style="list-style-type: none"> • factoring companies that provide working capital for confirmed orders • equity financing • facilitating supplier credit 	

Source: May *et.al.* (2009).

This report was produced within the framework of the EU Chainsaw Milling Project “Supporting the integration of legal and legitimate domestic timber markets into Voluntary Partnership Agreements”. The project aims to find sustainable solutions to the problems associated with the production of lumber for local timber markets by involving all stakeholders in dialogue, information gathering and the development of alternatives to unsustainable chainsaw milling practices. In Ghana, the project is being carried out by Tropenbos International (TBI) in collaboration with the Forestry Research Institute of Ghana (FORIG) and the Forestry Commission (FC).

