

# FOREST RECLAMATION, REDD READINESS AND COMMUNITY LIVELIHOOD SUSTAINABILITY: ASSESSING THE VIABILITY OF MODIFIED TAUNGYA SYSTEM AS A DECENTRALISED NATURE GOVERNANCE STRATEGY

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## ABSTRACT:

*For centuries, nature governance was assumed to mean man's interaction with natural assets and the need to safeguard nature-given resources from destructive practices. This conceptualization of nature governance as man verses nature often led to the management responsibility of natural assets as the preserve of environmental scientists in the past. However, as the world continually becomes more and more complex web of people with varying socio-cultural and economic background that depend on the natural milieu, environmental governance has gone beyond human-nature relationship to comprise human-human inter-relationships living and working within an environment that ought to be sustained if the complex and diverse components of the life-web would thrive healthily. This paper represents the summary and discussion of the many stories that were told by some 150 respondents in four forest-fringe communities in the Offinso Forest District of Ghana about their own forest and how it is governed. It highlights how the Modified Taungya System (MTS), a collaborative natural resource governance strategy impacts the reparation of degraded forest reserves and community livelihoods as well as the implications the strategy has on REDD. It thus, uses largely qualitative techniques supported with descriptive statistics to address the effectiveness of the MTS as nature governance initiative in climate change mitigation and community livelihood sustainability. The paper concludes that community participation in forestry decisions through the MTS enhances community resilience to combat climate change through improved community forest cover and livelihood security.*

**Key words:** Decentralized forestry, Modified Taungya System, Livelihoods, Poverty reduction, Forest Reparation

## 1.0 INTRODUCTION:

Environmental concerns including deforestation and forest degradation, climate change and environment-based livelihood insecurity continue to receive global attention. It is estimated that, the rate of global forest loss has hit 13 million hectares per annum in the last decade (2000-2010) (FAO, 2010). In the case of Africa, even though most tropical African countries had considerable

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forest cover at the beginning of the 20<sup>th</sup> century that ensured environmental stability, the need to increase food production, high demand for wood products and rapid increase in infrastructural development to satisfy growing population has resulted in a rapid increase in deforestation and forest degradation (Forestry Commission, 2011). Over the last century for example, forest cover in the African region has been under intense pressure from human activities in the name of livelihood sustainability and development. This perhaps explains why Africa now has the second highest rate of deforestation worldwide with 3.4 million hectares of forest loss per annum (FAO, 2010). Thus, the need to seek remedial measures through community, national and global initiatives such as Reducing Emission through Deforestation and Forest Degradation (REDD+) has been well received by many policy makers and governments towards environmental sustainability and green development, as enshrined in the goal seven of the Millennium Development Goals (Karsenty et. al., 2012).

Over the last few decades, policy makers have advocated and applied forestry decentralization as an appropriate means of environmental protection and sustainability (Andersson, 2006). This has often been done with the motivation to increase the involvement of forest-based communities and local institutions in forest resource management. Their assumption is that, local people's involvement in forest resource governance is the most appropriate means of ensuring sustainable forest-resource management and green development (see Ribot and Larson, 2005; Ribot and Oyono, 2006). In pursuit of its commitment to reverse the degradation of forest for example, the government of Ghana, in 1996, launched the Forestry and Wildlife Master Plan to reverse deforestation between 1996 and 2020 which is estimated at 65, 000 ha per annum (Forestry Commission, 2011). Against this background, the forestry sector in Ghana has implemented a number of decentralized schemes (see Marfo, 2004). One of them for which the issue of livelihood development and forest reclamation are so crucial is the Modified Taungya System (MTS). In 2001, the government of Ghana launched the MTS as a decentralized mechanism to halt and reverse degradation of forest resources as well as build community resilience for enhanced rural livelihoods and poverty reduction. The MTS is a decentralized forest management strategy in which communities are given portions of degraded forest reserves to inter-plant food crops with trees, and further nurture trees into maturity under an agreement in which roles and benefit sharing are specified. In this arrangement the Forestry Commission-Ghana transfers responsibilities to selected forest fringe community members and established

local authorities as partners both in managing and drawing benefits from forest reserves to ensure local communities' commitment to sustainable forest governance. After over a decade of the MTS implementation, its viability to achieve or deliver livelihood security, forest resource recovery, and poverty reduction at the local arena require monitoring and verification.

The paper presents answers to how the MTS has delivered green development through livelihood security and forest resource improvement, which informed the central question of this work. A systematic study of the impact of the MTS on sustainable forest resource conservation, rural livelihoods and reforestation can inform emerging initiatives such as REDD+ and other related green development measures. This is because the design and implementation of REDD+ requires the participation of local communities whose livelihood sustainability is key to operationalising environmental protection interventions for the initiative to function, hence, necessitating this study. The paper uses the experience of farmers from selected forest fringe-communities in the Offinso forest district involved in the MTS to assess the impact decentralized forestry makes on forest restoration and community livelihood sustainability in the local arena.

## **2.0 DECENTRALIZATION, LIVELIHOODS AND POVERTY: A THEORETICAL REVIEW**

In this section the authors provide a theoretical and empirical review of decentralization and livelihood sustainability towards defining the conceptual framework used for the study of the livelihoods outcomes of the MTS as a decentralized forestry intervention in the study area.

### **2.1 Conceptualizing the MTS in the Context of Decentralization**

Decentralization has been used by politicians, policy makers, academics and development practitioners sometimes to mean different things to suit peculiar circumstances (Adjei and Kyei, 2011). The variety of usage of the term in more specific ways explains the diverse forms that decentralization can take. In more general terms however, decentralization involves the transfer of public functions and resources from higher tiers of government to lower tiers which may take administrative, political and fiscal forms (Jutting et. al., 2005; Ribot 2008; Rondinelli and Cheema. 1983). Ribot and Larson (2005) have noted that, decentralization involves the transfer of power from central government to actors and institutions at lower levels within the political-administrative hierarchy of the state. Further, Rondinelli and Cheema (1983) use decentralization to represent the transfer of the responsibility of planning, decision making or administrative

authority from central government to its field organization. Following Ribot and Larson (2005), Rondinelli and Cheema (1983) in this paper, decentralization has been used to represent the transfer of managerial and/or forest-sector decision-making functions from central administrative bodies (for example forestry commission of Ghana) to local actors and their representatives (forest-fringe communities) through the MTS. Decentralized forestry in Ghana takes the form of collaborative forest governance through interventions such as the MTS. Under the MTS, local actors receive managerial powers and resources from the Forestry Commission of Ghana over portions of degraded forest reserves. Local actors are empowered to demonstrate commitment and control over degraded portions of reserved forestlands to inter-plant food crops and trees over a period of time under a defined benefit sharing agreement for the purposes of improving local people's livelihoods and at the same time reclaiming the lost forest resources. The effects decentralization in Ghana's forest-sector governance has had on local people's livelihoods and forest resource restoration have been focused on in this work.

## **2.2 The MTS in the context of Sustainable Livelihood (SL) Approach**

Poverty and vulnerability are often linked to people's livelihood sustainability. Livelihood sustainability may mean different things to different people due to the variety of forms that livelihoods can take. According to Chambers and Conway (1992) for example, a *livelihood* comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living; and a livelihood is *sustainable* if it is able to 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 also contributes net benefits to other livelihoods at the local and global levels in the long and short terms (see also Majale, 2002). Livelihood indicators used were adapted from the sustainable livelihood (SL) framework advanced by the DFID (DFID, 1999) which establishes relationship between identifiable livelihood assets, mediating institutional arrangements or actors and defined livelihood outcomes.

In the SL framework, assets that are recognized are the Natural/Environmental capital e.g. land, water, wildlife, biodiversity, environmental resources. Physical capital which comprises access to basic infrastructure such as adequate water and sanitation, affordable energy, transport, communication, housing and the means and equipment of production that support livelihoods.

Human capital which comprises health, knowledge, skills, information, ability to labour etc. that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. Social capital which include the relationships of trust, membership of groups, networks, access to wider institutions and other social resources upon which people draw in pursuit of their livelihood targets. Financial capital comprises financial resources available such as regular remittances or pensions, savings, supplies of credit and other financial resources that are used to achieve livelihood objectives. Thus access to required assets generates livelihood outcomes in the form of more/adequate income, increased well-being, reduced vulnerability, improved food security, more sustainable use of natural resource base which enhances people's living conditions or enable them escape poverty (Kollmair and Gamper, 2002; Krantz, 2001; Majale, 2002; DFID, 1999). The SL approach has been criticized as being rigid and 'over-elaborated' with its feasibility and applicability as an appropriate livelihood analysis tool in all spatial circumstance being in doubt (see Morse et. al., 2009). In this regard, when using the SL approach, the uniqueness of specific spatial context within which it is applied ought to be taken into consideration due to areal variations in terms of livelihood assets (resources) required and their corresponding livelihood outcomes (see Morse et. al., 2009). Other scholars have suggested modifications to the assets given recognition within the SL approach. Mclean (2001 cited in Majale, 2002) for example suggests the addition of two new assets-institutional knowledge and institutional or political assets. However, Majale (2002) has emphasized that, the sustainable livelihood framework provides a holistic and humanistic approach which attempt to capture and create understanding of the fundamental causes and dimensions of poverty without collapsing the focus onto only some few factors (cf. DFID, 1999).

Hence, when studying the livelihood outcomes of the MTS as a decentralized forest governance intervention for rural poverty reduction and forest reparation, the SL approach provided an appropriate guide to ascertain the kinds of livelihood assets the MTS as an environmental governance strategy transfers to the local actors and the livelihood outcomes delivered to the local people involved in the MTS.

### **2.3 Does Decentralized Forestry Impact Local Livelihoods?**

Whether decentralized environmental management enhances livelihoods of local people has attracted research interest recently with a body of literature being generated. Larson et. al. (2007) for example, observed in their study of decentralized forestry and forest users' livelihoods in some selected countries including Bolivia, Nicaragua and Guatemala that, decentralization in the forestry sector has not improved local people's livelihoods. Moeliono and Dermawan (2006), however, observed mixed effects of decentralization on the livelihoods of communities in and around forest regions in some parts of Indonesia. Whereas the livelihood outcomes of decentralization has been positive at least in the short-term for some local people through for example acquisition of small-scale logging permits received from district governments leading to financial benefits; in other instances, few entrepreneurs, community elite and local government officials capture profits from district forests and forest conversion permits which adversely affect the livelihoods of masses of the people who mostly depend on the forest for their livelihood. The negative effects of decentralization on local people's livelihoods is further exacerbated by lack of effective law enforcement and control over the activities of timber, mining, and plantation companies which have often led to environmental degradation according to Moeliono and Dermawan (2006) in their study. Somehow contrary to initial findings in other spatial settings, Chen et. al., (2012) finds a positive impact of decentralized forestry in the forms of community-based co-management (CBCM) on local people's livelihoods in Gansu Province in Northwest China. They observed in their study that, generally, CBMC of forest resources significantly improved local residents livelihoods, their forest conditions as well as their attitude towards forest resource conservation, even though levels of improvement are not uniform across their study region. The study of the MTS as a decentralized forest governance strategy and its effect on local people's livelihood, poverty situation and forest reparation in the Offinso Forest District of Ghana sought to contribute to this body of knowledge on environmental governance and livelihood development.

### **3.0 RESEARCH METHODS AND SITE DESCRIPTION**

The research was based on a case study design with focus on selected communities in the Offinso Forest District. The Offinso Forest district (OFD) lies between latitude 7<sup>o</sup> 30' and 6<sup>o</sup>45'

north and longitude 1° 2' and 2° 15' west covering approximately 470000 hectares (4,700km<sup>2</sup>) of spatial extent. The OFD lies north of Kumasi, the capital of the Ashanti region of Ghana within the semi-deciduous forest vegetation type. The OFD comprises nine forest reserves including the Afram Headwaters and Opro River forest reserves which were the focus of this study. However, following years of excessive logging, wildfires and illegal farming conditions, these forest reserves have over time been degraded with large portions of the forest cover reduced to open secondary forest or replaced with grassland with average condition score between five and six for most of the reserves which has necessitated the implementation of the MTS for the past decade in the district (OFD profile, 2010). A case study design through both qualitative and quantitative techniques have been used to draw experiences from some 150 respondents in selected forest fringe-communities in the Offinso Forest District of Ghana to examine the linkages between the MTS as a forest decentralization intervention and green development in the context of livelihood security, poverty reduction and environmental reparation in this study. A purposive non-probability sampling technique was used to select five communities where the MTS was being implemented to ensure accuracy of data. Forest-fringe communities included in the study were Nkwankwaa, Asempanaye, Asuoso, Ada and Ankaase which fringed the Opro and Afram Headwaters forest reserves. In all 150 respondents were involved in the study, 140 of them were farmers who belonged to the community-level Modified Taungya Groups (MOTAGs) operating within the selected communities that participated in the MTS, and 10 were staff of the District's Forest Service Division supervising the implementation of the MTS at the community level. Data collection was done using focus group discussions, semi-structured interview guide, observation and questionnaires which were supported with documentary review. The use of the mixed-methods for data collection was necessary for triangulation of findings. Descriptive statistics and transcription of data have been used to analyze both quantitative and qualitative data collected.

## **4.0 RESULTS AND DISCUSSION**

### **4.1 The MTS as a Participatory Forestry Intervention**

The Modified Taungya System (MTS) is a local people led forest reparation and management strategy designed to simultaneously enhance community livelihood outcomes and combat forest

degradation. In the 1990s, the taungya system had been rebranded and reintroduced in Ghana in the form of the MTS following modifications to the old taungya of the 1960s which had become unpopular and later abandoned as a result of its associated failure to achieve anticipated reforestation. Under the MTS as a decentralized forest management strategy, farmers are given portions of degraded forestlands within forest reserves to inter-plant food crops with trees with the primary responsibility of nurturing trees into maturity under an agreement in which roles and benefit sharing are specified. Under the implementation processes of the MTS, the Forestry Commission of Ghana which is the central governing body of the country's forest resources transfers managerial responsibilities to selected forest fringe community members and established local authorities as partners both in managing and drawing benefits from forest reserves to ensure local communities' commitment to sustainable forest governance. The MTS aims at supporting resilient forest ecosystem that is able to adapt to climate change and provide for the livelihoods of forest-dependent people and communities seen as partners for sustainable forest governance. Under the MTS, participating farmers are expected to play active role in forestry decisions through their membership of community level Modified Taungya Groups (MOTAGs). MOTAGs are expected to have democratically selected local authorities (executives) that are broad-based with fair representation (Forestry Commission 2011; Agyemang et. al. 2003). One of the basic elements of the MTS is improved land tenure security and benefit sharing arrangement in accordance with an agreement signed between the Forestry Commission and representatives of participating farming communities.

Since 2002, the OFD has been supporting the implementation of the MTS in its nine forest reserves including Afram Headwaters and Opro reserves which were identified for this study. Hence, the OFD was an appropriate site to examine the viability of the MTS in terms of its forest reparation and livelihood outcomes because of its substantial experience for the implementation of both the old and Modified Taungya Systems. Further, a number of forest-fringe communities in the OFD have also been key pilot sites for implementing the MTS under the Community Forest Management Project and the National Plantation Development Programme. The Forestry Commission of Ghana for example selected the Afram Headwaters Forest Reserves to experiment the new benefit sharing arrangements under the Modified Taungya Agreement with active communities' participation. This was particularly interesting for the research because it provides a good case to examine how a decentralized forestry scheme plays out in terms of



benefits sharing for livelihood development and for the reparation of degradation of forest resources. Table 1 shows benefit sharing arrangement under the old and the Modified Taungya Systems (MTS).

**Table 1:** Benefit sharing arrangement for MTS implementation

<b>Stakeholder</b>	<b>Old taungya system (%)</b>	<b>Modified taungya system (%)</b>
Public agencies	-	-
Forestry Commission	60	40
District Assembly	20	0
Administrator of tribal lands	4	0
<b>Subtotal</b>	<b>84</b>	<b>40</b>
Local community groups	9	8
Tribal landowners	7	7
Forest-adjacent community	0	5
Farmers	0	40
<b>Subtotal</b>	<b>16</b>	<b>60</b>
<b>Total</b>	<b>100</b>	<b>100</b>

#### 4.2 The MTS and Forest Reparation

Table 2 shows results on degraded forestlands transferred (DFTs) to local farmers (MOTAGs) through the MTS for the re-establishment of tree plantations to recover the lost forest. From 2002-2007, a total of 1130 hectares of degraded forestlands resulting from excessive logging, fire and illegal farming were restored with *tectanus grandis* plantations by community MOTAGs in the five communities chosen for this study. Significantly too, in every particular year in all five communities studied, local farmers (MOTAGs) demonstrated their ability to repair all portions of degraded forestlands given out to them to replant tree-crops interspersed with foodstuffs for their sustenance. This was evident in the sizes of degraded forestlands transferred to the local people by the District Forest Service Division (DFSD) that oversees the implementation of the MTS, and the actual sizes of degraded forestlands that the local farmers were able to re-establish (DFRs) (see Table One).

At *Nkwankwaa* for example, all 326 hectares of degraded forestlands received by the local farmers from the DFSD from 2002 to 2007 were regenerated; whereas the 190ha, 292ha, 178ha and 152ha of degraded forestlands in the protected forest reserves transferred to local people in *Asempanaye*, *Asuoso*, *Ada* and *Ankaase* communities under the MTS project have been re-established with tree plantations. The commitment of local people to participate in the regeneration of the forest is influenced by the livelihood gains associated with the MTS. Thus, effectiveness of forest reparation measures lies in its ability to adequately support local people's livelihood security on sustainable basis. Other factors that have ensured the high impact of the MTS on forest re-establishment and management are public education on environmental benefits of forest resources and supervision by local people's representatives in forestry decisions.

**Table 2:** Re-established Forest Resources under the MTS in the Study Communities

<u>Communities</u>							
<i>Nkwankwaa</i>							
YEAR	2002	2003	2004	2005	2006	2007	Total
DFT (in hectares)	25	55	82	48	86	30	326 ha
DFR (in hectares)	25	55	82	48	86	30	326 ha
Number of Farmers involved	50	72	183	130	264	245	944
<i>Asempanaye</i>							
DFT (in hectares)	30	63	31	24	32	10	190 ha
DFR (in hectares)	30	63	31	24	32	10	190 ha
Number of Farmers involved	46	62	50	32	55	26	271
<i>Asuoso</i>							
DFT (in hectares)	40	48	44	40	70	50	292 ha
DFR (in hectares)	40	48	44	40	70	50	292 ha
Number of Farmers involved	35	74	47	45	76	42	319
<i>Ada</i>							
DFT (in hectares)	30	40	44	14	40	10	178 ha
DFR (in hectares)	30	40	44	14	40	10	178 ha
Number of Farmers involved	53	52	74	14	75	18	286

*Ankaase*

DFT (in hectares)	21	15	20	24	32	40	152 ha
DFR (in hectares)	21	15	20	24	32	40	152 ha
Number of Farmers involved	17	21	16	27	37	47	165

Source: OFD Report, 2012

*DFT: Degraded Forestland Transferred to Communities for re-establishment*

*DFR: Degraded Forestland Re-establishment by Community MOTAGs*

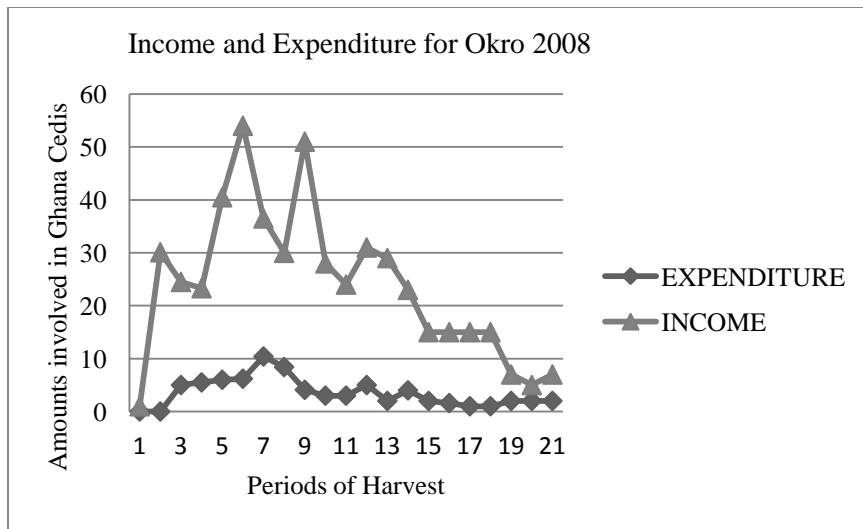
The restoration of forest resources in the hitherto degraded portions of the forest reserves which is an outcome of local people's participation through the MTS intervention implies the acceleration of *biosequestration* and climate change mitigation. In this regard, local people's participation in the design, implementation, monitoring and evaluation of REDD+ programmes at national and regional levels is essential for such programmes to yield their desired positive environmental impacts.

#### **4.3 The MTS, livelihood assets transfer and poverty reduction outcomes**

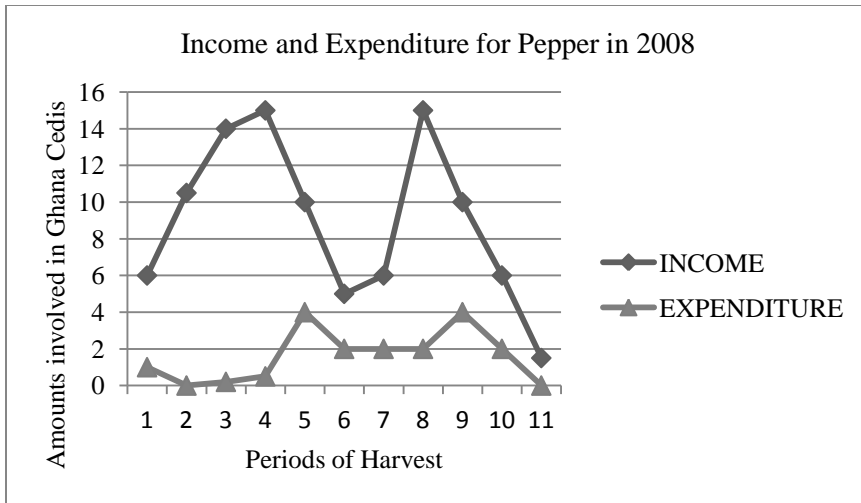
Under the MTS, local people receive some livelihood assets as means of ensuring the sustainability of their livelihoods and for reducing household poverty. In the five communities studied, land was the basic natural asset that local people received through the MTS intervention for both food crop cultivation and the establishment of tree plantations to regenerate the degraded forest. In virtually all the communities, almost all their lands are covered with protected forest resources making access to land for food crop farming practically difficult, hence affecting livelihood security of households. Thus, the dearth of arable lands for subsistence and commercial farming by the local inhabitant makes the MTS an attractive intervention as people are granted portions of degraded forestlands not only for tree plantation establishment but also for food crop cultivation at least until the tree crops begin to form canopy closure, when food crop cultivation becomes impossible. Land acquisition through the MTS brings relief to majority of the local dwellers due to the very scarce nature of available land in the communities for farming purposes. In this regard, the MTS addresses the difficulty of local people to obtain fertile land for food crop cultivation.

In addition to land, other livelihood assets transferred to local people involved in the MTS are human capital built through training on forest establishment and maintenance; and social capital

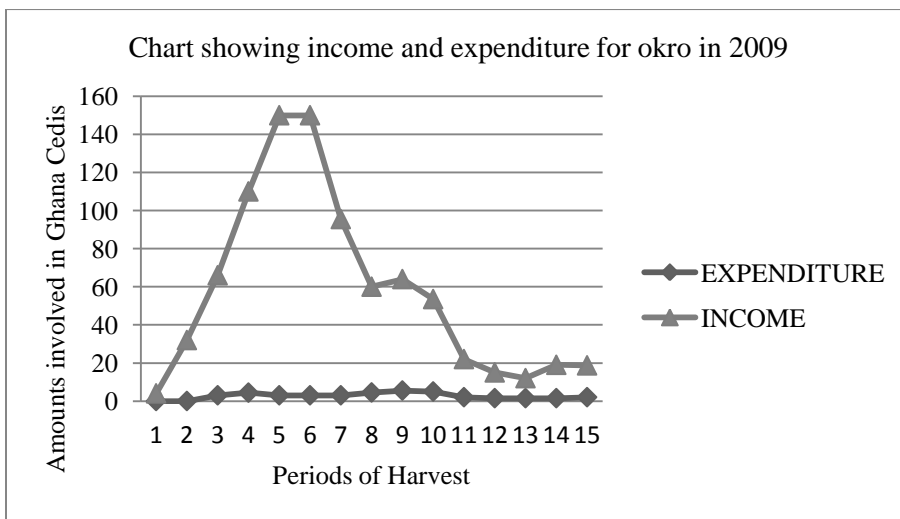
which comes along with the formation of Modified Taungya Groups (MOTAGs) and associations with officers of the District Forest Service Division on community forestry matters as well as livelihood development. Apart from successes observed through the MTS in the regeneration of degraded forest resources (see Table 1), the livelihood assets received by local people through the MTS intervention have led to significant increase in food productivity, income levels and general well –being of most households in all the communities studied. Within the five communities studied, improvement in the productivity of food crops such as cassava, plantain, pepper and okro and the corresponding increase in farmers’ incomes have been some livelihood outcomes resulting from the transfer of degraded forestlands to local people for their active involvement in community forestry and food crop cultivation. Results presented in figures 1, 2, 3, 4 and 5 show the investment and returns records of a MOTAG member in Okro and Pepper farming in 2008 and 2009 following acquisition of livelihood assets through the MTS.



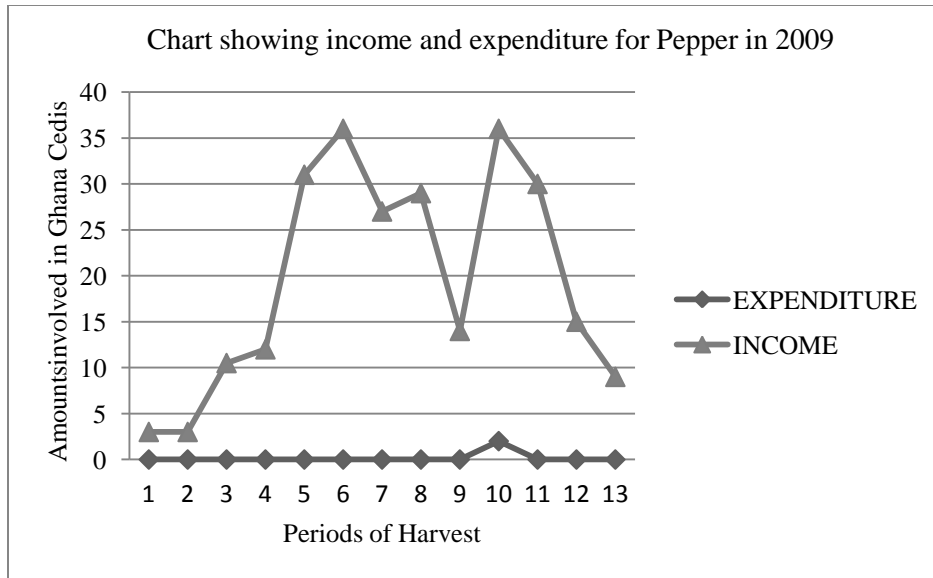
**Figure 1:** Income and Expenditure of a MOTAG Member from Okro Cultivation in 2008



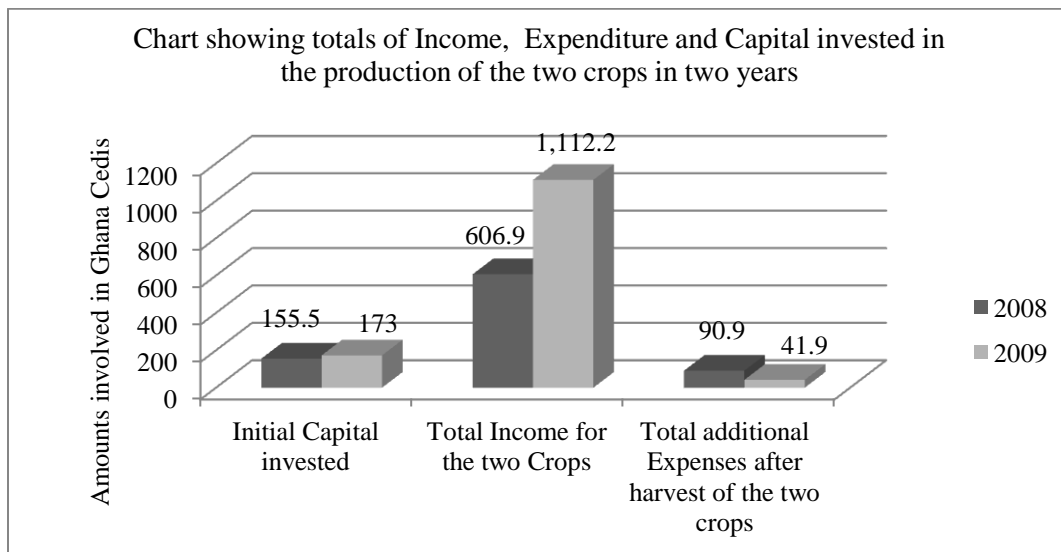
**Figure 2:** Income and Expenditure of a MOTAG Member from Pepper Cultivation in 2008



**Figure 3:** Income and Expenditure of a MOTAG Member from Okro Cultivation in 2009



**Figure 4:** Income and Expenditure of a MOTAG Member from Pepper Cultivation in 2009



**Figure 5:** Investment and Returns of a MOTAG Member from Okro and Pepper Cultivation for 2008 and 2009.

The income chart shown in Figures 1, 2, 3 and 4 identifies a MOTAG farmer’s revenue from sales of outputs from Okro and Pepper cultivation for each farm visit during harvesting periods of food crops planted alongside tree crops on the degraded forestlands received in 2008 and 2009. Whereas the expenditure charts present cost of labour for harvesting and transporting food

crops from the farms to the market at each harvesting time. Figure 5 shows a summary of the farmer's initial capital, total revenue from Okro and Pepper harvests and additional expenditure after harvest in 2008 and 2009. From Figure 5, the results show significant income gains from the farmer's participation in the MTS intervention even for food crop cultivation alone which is aside their long term gains from the cultivation and management of the tree plantations the MOTAG farmers re-establish. It is observed that, the farmer's total financial investment (initial capital and other additional expenses after harvest) for the cultivation of Okro and Pepper alone for 2008 and 2009 amounted to GH¢ 461.3; whereas revenue from the two crops totaled GH¢ 1,719.1, leading to financial gains of GH¢ 1,257.8 based on the records of the respondent. Unlike the respondent whose records were found accurate, hence captured in some detail in this paper, most of the MOTAG farmers in the communities studied fail to keep documented farm records. However, results from focus group discussions and interviews revealed that, for majority of the local people, the MTS intervention explains their ability to keep their children in school, meet household food requirements on sustainable basis, save some money for unforeseen circumstances and register under National Health Insurance Scheme for meeting their healthcare needs. In an interview with the Chief of Nkwankwaa, one of the study villages, he asserted,

*“the MTS has been of immense benefit to the entire community, I could find majority of the youth in senior high school because their parents are now able to afford. Food shortage which used to be a burden several years ago is now a thing of the past because with the MTS every hard working member of the community has access to land for tree and food crop cultivation no matter how small. Almost every member of this community involved in the MTS is able to grow more foodstuffs for their households' consumption and for sale to earn some money to take care of their households. As for the trees, we are willing to plant more and manage them well; all we need from government is for us to have land released to us on annual basis. Because we know that when trees are well taken care of, they protect ourselves and the 40 percent benefit to MOTAG farmers who manage the trees well until maturity can support our children in the future even when we are not alive.”*



Figure 6: MTS Farm with trees inter-planted with food crops



Figure 7: Respondent showing a repaired forest through the MTS

Figures 6 and 7 show a mixture of food crops inter-planted with trees on an MTS farm and a fully grown MTS forest on a hitherto degraded forestland respectively. The implication is that, forestry decentralization that goes along with transformative participation of local inhabitants has the potential of creating new opportunities for empowering local people towards sustainable



forestry. Empowered local people are able to sustain their livelihoods by taking advantage of new employment and livelihood development opportunities that do not undermine community forest cover but rather improve it. In this regard, decentralized forestry ought to improve local people's capacity through adequate power and assets transfer to yield desired green community development that holds prospects for livelihood sustainability, poverty reduction and improved forest resources. Interventions such as the MTS reveal that, central governing agencies alone cannot have adequate capacity to combat deforestation and forest degradation or even monitor it. Local people's participation becomes a necessity for the implementation of the REDD+ intervention and related climate change mitigation measures to be effective.

## **5.0 CONCLUSION**

Evidence from the Offinso Forest District shows that, forest reparation which ensures that local people's livelihoods are not undermined is possible through decentralized forestry interventions such as the MTS. However, the extent of success of decentralization reforms in forestry and other natural resource management is dependent on the level of commitments of both central and local decision making and implementation bodies to halt deforestation and protect the natural environment for climate change mitigation. On the part of local people whose participation is central in this process, adequate provision of their required livelihood assets to meet their own livelihood needs is a single most important factor for maintaining this commitment that could bring the effective forest reparation and sustainable forest management about.

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