

Review

Effects of stakeholder interaction in REDD+ implementation: The case of two forest districts in Ghana

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The study adopted a qualitative approach and relied enormously on primary data obtained through interviews and focus group discussions to assess the type of interaction and its effects in the implementation of the REDD+ initiative in two forest districts in Ghana. The country's involvement in REDD+ began in 2008 and received approval in 2010. Many partners from civil society, private sector, government, communities, and traditional leaders have contributed to its evolution and efforts towards realization of its goals in its pilot projects located in two forest districts in the Western and Ahafo regions, respectively. Both projects are being managed through a collaborative governance arrangement among the Forestry Commission (FC) of Ghana and other public agencies, local farmers, community groups, and interested non-state actors/non-governmental organizations (NGOs). Picking from the literature, this study adopted a framework which combines trust among collaborators, leadership, and social learning for relevant sections of the analysis. Responses were analysed using inductive thematic analysis based on issues that emerged from the observations and data gathered. An appreciable level of interaction between the communities, regulatory agencies, CBO/CSOs, local farming communities and other stakeholders was observed. What seems to engender constant interaction between the groups is the level of trust established among them and the seemingly effective facilitating and coordinating role being played by the Forestry Commission of Ghana.

Key words: Ghana, Forestry Commission of Ghana, REDD+, stakeholder interaction, social learning, sustainable livelihood, environmental resources, collaborative governance.

INTRODUCTION

Stakeholder involvement in forest management is evolving and has been accepted globally, leading to a

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number of initiatives. Prominent among these initiatives is code-named REDD+, which refers to mitigation actions in developing countries to reduce emissions from deforestation and forest degradation, with the “plus” signifying conservation, sustainable forest management and carbon stock enhancement (Luttrell et al., 2013). Indeed, reduced emissions from deforestation and forest degradation (REDD+) is a globally accepted strategy to mitigate climate change (UNFCCC, 2011). In the non-industrial regions, trees are inextricably woven into the rural and household economies. Hence, the depletion of the forest and its resources create disequilibrium in rural economies. Notwithstanding the critical role of the forest in the effective functioning of society at large, deforestation especially in the tropics, is assuming greater proportions. The implementation of the REDD+ which involves collaborative efforts is therefore timely and laudable.

REDD+ emerged in global climate change negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) in 2005. In 2013, in Warsaw, a Framework for a REDD+ mechanism was formulated to provide guidance for its implementation. To generate experiences regarding local institutional building, a series of REDD+ pilots have been established in many countries, including Ghana. Ghana began its engagement in REDD+ in 2008 and received approval in 2010. Since 2008, numerous partners from civil society, private sector, government, communities, and traditional leaders have contributed to its evolution and efforts towards realization of its goals. This paper focuses on Ghana’s pilot projects located in the Asankragwa and Bechem forest districts in the Western and Ahafo regions, respectively. Both projects are being managed through a collaborative governance arrangement among the Forestry Commission (FC) of Ghana and other public agencies, local farmers, and community groups, and interested non-state actors/non-governmental organizations (NGOs).

The second schedule of the Local Governance Act, 2016 (Act 936) of Ghana establishes eleven departments for a District Assembly (DA), thirteen for Municipal Assembly and sixteen for a Metropolitan Assembly. Heads of these decentralized departments serve as ex-officio members on the sub-committees of the Assemblies, thus providing technical and professional inputs into the decision-making process. The relevant decentralized department for this study was the Natural Resources Conservation, Forestry and Game and Wildlife Department (NRCFGWD) of the two forest districts, respectively. Though not officially assigned responsibility and roles in the implementation of REDD+, the DAs in both districts, through their respective NRCFGWD, offer support and encouragement for the implementation process.

The Forestry Commission (FC) is the principal agency for the whole REDD+ project in Ghana and is directly

involved in the two districts. Other public sector agencies actively participating in its implementation are Ghana Cocoa Board (COCOBOD), Produce Buying Agency of COCOBOD and Ministry of Food and Agriculture (MA). In addition to these public agencies, there are a number of Non-governmental Organizations (NGOs)/Civil Society Organizations (CSOs), and private cocoa buying companies that operate in the two districts and have been effectively collaborating with the others to promote the implementation of the REDD+ strategy. Prominent among them are those listed in Appendix ‘A’. Data was collected on the activities of these organizations.

The main objective of the study was to assess the type of interaction among these stakeholders and its effects in the implementation of the REDD+ initiative in Asankragwa and Bechem forest districts in Ghana.

PROBLEM STATEMENT

One sector which calls for collaborative governance is the environment and its resources because of its complexity and the demand for expertise and knowledge from different sectors and professions. Ghana has experienced a high degree of environmental degradation and depletion of natural resources during the past five (5) decades or so. The country loses about 2% of its forest annually whilst illegal mining activities continue to cause serious environmental consequences, including land degradation, deforestation, pollution of water bodies, destruction of flora and fauna, social and political destabilization, and so on (Forestry Commission, 2015). This has necessitated a move towards collaborative governance in environmental policymaking and implementation in the aforementioned areas. Ghana’s involvement in REDD+ is thus justified since it has attracted the involvement of different stakeholders to work towards addressing the problems and challenges identified above. Most studies on REDD+ have concentrated on changes in organizations and institutions for land management, evaluation of the process involved in the introduction of the initiative, identification of tradable carbon, and the extent to which local communities are involved in REDD+ implementation (Irawan and Ring, 2017; Loft and Luttrell, 2014). In all, most studies on REDD+ have concentrated on the costs of its implementation rather than its benefits (Irawan and Ring, 2017). Indeed, no study has been done on non-monetary and indirect benefits and that ignoring them has obviously created a gap in the literature. This paper focuses on this gap and attempts to address it. On collaborative governance in the forestry sector, studies show also that the relationship between stakeholders is either functional or adversarial in nature with most of them identifying bitter adversarial relations being the norm (Westerink et al., 2017; Turyahabwe et al., 2012). This research attempts to contribute to this debate.

THEORETICAL FRAMEWORK

The literature on collaborative governance as pertains to forest management is huge and diverse (Vodden, 2015; Bidwell and Ryan, 2006; Margerum, 2011). Picking from the literature, this study combines trust among collaborators (Stern and Coleman, 2015), leadership (Williams, 2002), and social learning (Koontz, 2014; Vangen, 2017) as a framework for relevant sections of the analysis.

Trust among collaborators

Within the collaboration process, trust between members as well as trust in the process has usually been noted to be essential to the success stories of collaboration and its subsequent impact on forest management. Stern and Coleman (2015) explain trust to mean a mental state whereby one actor or stakeholder accepts some form of vulnerability based upon positive expectations of another entity. The authors highlight four typologies of trust which remain crucial to the collaborative process in forest management context. These are: dispositional, rational, affinitive, and procedural trust.

Dispositional trust relates to one based on an individual or group's inclination or pre-disposition to trust others. In that regard, it usually depends on the prevailing characteristic of an individual or group, rather than an element which is profoundly affected by the actions of other partners within the collaborative process. *Rational trust* comes from a coherent calculation of the possibility of a positive outcome based on the predictability of another partner or entity's action. This happens when one stakeholder or actor has sufficient evidence to prove such a calculation. For instance, a local community could repose its trust in a state agency because the latter has always performed consistently in the past. *Affinitive trust* is based on an empathy and attraction for another partner or stakeholder. It may emerge from many angles including shared social experiences, assumptions of similar values, meaningful relationships, membership in common groups and communities. Finally, *procedural trust* involves the situation where partners have confidence in the processes, procedures, and/or rules (Stern and Coleman, 2015). For example, procedural trust could be fashioned out in a collaborative process through the design of ground rules for collective decision-making which is equitably enforced. The ground rules should clearly stipulate behaviour at meetings, membership guidelines as well as win-win package for all collaborative partners. According to Stern and Baird (2015), rational, affinitive, and procedural trust are all actionable. In other words, they can be grown over time or crumbled depending on actions and inactions. They maintain that those three typologies of trust are crucial for the long-term operationalization of collaborative

governance in the forest management context.

The gradual decline of public trust in central government control has stirred up a shift from the top-down hierarchical decision-making in forest management to one based on collaboration, as contained in the REDD+ initiative; one which actively engages the local people in decision-making processes. Building and sustaining trust in the collaboration process requires the peculiar role of facilitators and coordinators (Margerum, 2011). Leach and Sabatier (2003) explain "facilitator" to mean an individual or entity who is responsible for nurturing dynamic dialogue and decision-making. Facilitators carry out important roles including crafting and enforcing ground rules, proposing and brokering compromises, designing and moderating interactions, and training stakeholders in listening and collaborative skills. "Coordinator," on the other hand, is used to mean an individual or entity who assumes administrative or secretarial duties, such as arrangement of meetings, setting agendas, recording and disseminating minutes of meetings, and serving as a contact person for the general public (Leach and Sabatier, 2003).

Leadership

The particular role of leadership has been expressed by many other scholars. For example, a strong case has been made for the importance of facilitative leadership which is defined to mean those people with the abilities and skills to nurture and manage interpersonal relationships (Williams, 2002). Leadership has the responsibility for the promotion of participation, helping make decisions, and creating trust among stakeholders. In this regard, leaders serve as both coordinators and facilitators of collaborative governance. Leadership is therefore an essential driver of collaborative governance which is a pre-requisite for capacity for joint action.

Social learning

Collaborative governance presents both opportunities and risks. It offers to enhance inter-organizational capacity and civic engagement, increase the resources and expertise available to public officials, and improve programme performance (Bryson et al., 2006; Huxham and Vangen, 2008). Notwithstanding the many findings, studies of collaborative governance have not cohered around a common theoretic framework, and many lack grounding in an established theoretical tradition (Vangen, 2017). Several analyses construct their own frameworks using a mélange of constructs (Bryson et al., 2006; Ansell and Gash, 2007; Emerson et al., 2012). This variety of intellectual discourse on the theory of collaborative governance encompasses a range of concepts and entry points for research. Among the range of concepts and

models, the theory of social learning is gaining currency in this area of research (Pahl-Wostl et al., 2007; Schusler et al., 2003; Koontz, 2014; Vangen, 2017). Social learning is defined by Schusler et al. (2003) as “learning that occurs when people engage one another, sharing diverse perspectives and experiences to develop a common framework for understanding and basis for joint action”. Muro and Jeffrey (2012) also define social learning as changes in relational, cognitive, or technical outcomes resulting from communicative action processes engaging multiple stakeholders. *Relational changes* is defined as the development of new or strengthening of existing relations, *cognitive changes* as the generation of new knowledge or transformation of existing views, and *technical changes* as transformation in technical skills or competencies. Similarly, Koontz (2014) conceives of social learning as a transfer of knowledge among individuals or as improvements in the relational elements of individuals’ interactions, for example, increased network connections and the development of shared goals or agreement regarding a vision for dealing with salient issues. This paper conceptualizes social learning as gains in knowledge or interpersonal relations resulting from social interaction and shall be applied as such in the discussions.

METHODOLOGY

The study adopted a qualitative approach and relied enormously on interviews and focus group discussions. REDD+ initiative is relatively new in Ghana with the two selected areas featuring prominently; implementation being piloted there. It was therefore appropriate to use purposive sampling method to select respondents not only to contain elements that have the most characteristics or typical attributes of the populations but also directly engaged in the implementation of the policy and have accumulated the necessary experiences with institutional and practical memory. Among those purposively selected were relevant officials of the Forestry Commission (FC) from the Head Office, Asankragwa and Bechem offices, NGOs/CSOs, three (3) opinion leaders in ten communities, and others. In all, 39 such individuals were interviewed. This position falls in line with Grix’s (2004) proposition that between thirty and fifty (50) interviews are appropriate for a study of this nature.

Additionally, snow-ball sampling technique was used to get additional relevant actors who were identified at any point in time to participate in the process through referrals. This is because the REDD+ policy, like similar policies, is iterative and involves a learning process that has no specified end point. In some instances, group interviews that were more deliberative were undertaken in focus group discussions (FGDs). This helped to identify how the collaboration process is, indeed,

influencing the life and economic activities of the respondents.

Selection of sample from the communities was largely influenced by those benefiting from forest intervention programmes (FIPs) under REDD+. Under the FIPs, five (5) main activities are being implemented in each district and spread among a number of communities. Two communities were selected for each activity from each district – making a total of 10 communities from an estimated number of about thirty (30).

With the help of Ministry of Food and Agriculture extension officers, beneficiary individuals were identified in the FIP communities. Ten (10) such individuals were randomly selected from each community to constitute the focus group. FGDs have become popular in recent years because “they can provide quick results” (Bloor et al., 2001). For this research, it was suitable for the farmers many of whom could not “articulate their thoughts easily and therefore provided them collective power” (Bloor et al., 2001). One FGD was organised in each of the ten communities selected for this study with each lasting between forty-five minutes and one hour. Ten (10) FGDs were sufficient for this research; in fact, Grix (2004) proposes a minimum of six (6) and maximum of 12 for what he terms as a “serious” research work.

In this research, all interviews and interactions with participants were transcribed into words which were organised into relevant themes and used in the analyses. Data were analysed using “inductive thematic analysis based on issues emergent from the observations and data gathered as common to people-centred studies” (Yeboah-Assiamah, 2018). The study analysed and examined the responses noting similarities and differences. A further step was to identify specific topics or themes in the narratives. In the course of presenting the analysis, participants’ narratives have been used where necessary to emphasise a particular point being expressed.

Finally, the study was sensitive to the issues surrounding the research with the respondents and recognised how their participation could cause potential distress. Consequently, ethical clearance was sought and approved by the appropriate authorities at Ghana’s National REDD+ Secretariat. The next two sections are dedicated to the analyses and discussions of the data to respectively identify the type of interaction between the stakeholders and the benefits/effects of the interaction.

INTERACTION AMONG STAKEHOLDERS

For clarity, it should be emphasised that the stakeholders in the REDD+ initiative are categorised into three groups: primary, secondary and tertiary depending on their level of involvement. Primary stakeholders are those that the FC as the coordinator and facilitator interacts with on day-to-day basis, including farmers and traditional

Table 1A. Institutional Interaction (Bechem Forest District).

Actors	KU	AM	KO	EC	ND	TP	CC	PB	DA	LC	FC	MA
KU			a		a	a	a	a	a	a		
AM	a		a				a	a		a		
KO							a, b			a	b	a, b
EC					a, b	a, b	b	b	a, c	a, c	a, b	a, b
ND				b		b	b	b	a	a, c	a, b	a, b
TP				b	b		b	b			b	b
CC		a	a, b		a	a, b	a, b		a			b
PB							a			a		a
DA				a, c	a, c		a			a	a	a
LC	a	a	a, b	a	a	a	a	a	a		a	a
FC			b, c	a	a, b	a	a	c	a, c	a, c		a, b, c
MA			a, b	b	a, b	b	b, c	a	a, c	a, c	a, b, c	

Table 1B. Institutional Interaction (Asankragwa Forest District).

Actors	KU	AM	KO	EC	ND	TP	CC	PB	DA	LC	GF	AE	CO	FC	MA
KU			a		a	a	a	a	a	a	a	a	a		
AM	a		a				a	a		a	a	a	a		
KO							a, b			a				b	a, b
EC					a, b	a, b	b	b	a, c	a, c				a, b	a, b
ND				b		b	b	b	a	a, c	a	a	a	a, b	a, b
TP				b	b		b	b						b	b
CC		a	a, b		a	a, b	a, b		a		a	a	a	a, b	a, b
PB								a			a				a
DA				a, c	a, c		a			a	a, c	a, c	a, c	a	a
LC	a	a	a, b	a	a	a	a	a	a		a	a	a	a	a
GF				a	a	a	a, b	a	a	a		a	a	a, b	a
AE				a	a	a	a, b	a	a	a	a	a		a, b	a
CO				a	a	a	a, b	a	a	a	a	a		a, b	a
FC			b, c	a	a, b	a	a	c	a, c	a, c	a, c	a, c	a, c		a, b, c
MA			a, b	b	a, b	b	b, c	a	a, c	a, c				a, b, c	

a. Flow of information; b. Common field(s) of operation; c. Cooperation. KU- Kuapa, AM – Amajaro, KO- Kodatech, EC- EcoCare, ND- Netherlands Development Organization, TP- Tropenbos Ghana, CC- COCOBOD, PB- Produce Buying Company, DA- District Assembly, LC-Local Community, GF- Green Fortland, AE- Agro Eco, CO- CODESULT, MA-Ministry of Food and Agriculture, FC- Forestry Commission. Source: Field Survey, February 2021.

leaders since the relevant by-laws are based on traditional laws. Secondary stakeholders are met from time to time, while interaction with tertiary stakeholders is done occasionally, for example charcoal sellers association to find out how much charcoal is being produced and sold over a period of time. In this study, the focus is more on the primary and secondary stakeholders, whose activities and programmes are more formal and well consolidated to capture as data for analysis.

The study observed a close working relationship between the FC, DAs and these agencies. As a governmental agency responsible for the protection of the

forest and its resources, FC has been helping the organizations and local communities in the areas of planning, technical support, monitoring and evaluation, and reporting functions. It provides extension services to the farmers. In the provision and management of forest resources, FC works in active cooperation with COCOBOD, DAs, and to a limited extent, other public sector agencies (secondary stakeholders) when the need arises.

There is a degree of interaction and collaboration between and among the different stakeholders as depicted in Tables 1A and 1B. The parameters used in assessing the degree of interaction were: the flow of

information; common field(s) of operation; and cooperation.

Flow of information

There is a cross functional information flow between and among the various agencies. For example, Ministry of Food and Agriculture (MA) receives information from FC about ineffective agronomic practices among crop and vegetable farmers. Conversely, FC keeps track of the activities of MA, and maintains an up-to-date record of the job experience and as well manages other factual data about not only its own employees but that of MA's.

Within FC itself, the hierarchical structure is the fundamental framework around which the information system is organized. The information system is organised to communicate upwards along the lines of the hierarchy. Information also flows downward along hierarchical lines in the form of directives, policies and action guidelines. In addition, inter-community communication and that between the districts and the regional capital is very effective and perhaps efficient because of the use of mobile telephony and the availability of internet facilities, albeit not totally reliable.

Intra-information flow within other agencies follows the same trend. In all cases, the down flows constitute an important part of information and communication system because they channel and direct activities of managers at each lower level. On the average there is greater intensity in the communication and resource flow between FC and communities, compared with other linkages. Communication and resources flow between DAs and local communities also show similar degree of intensity.

One reason assigned for the intense flow of communication among the stakeholders was attributed to trust among them. As noted by Stern and Coleman (2015), within collaboration process, trust between members as well as trust in the process has usually been crucial to the success of collaboration and its subsequent impact on forest management. A respondent from the Collaborative Unit of FC, thus explained:

We have been able to win the confidence of the farmers and the other community groups since we strive to keep our word and meet their legitimate demands. In fact, they have come to trust us... we also trust them.

This impression was further confirmed by an opinion leader in Bechem Forest District who reiterated thus:

.... unlike the Ministry of Food and Agriculture Extension Officers in the 1980s who were only interested in receiving favours in the form of tubers of cassava or basketful of cocoa yam (from farmers), FC officials show commitment, and we trust them.

Similar sentiments were expressed by various individuals

and groups, except in one case when some level of pessimism was expressed. In a focus group discussion, a participant with apparently no support and encouragement from her other colleagues, asserted:

They brought the trees (nurseries) to us, but I did not collect them. I told them that I have nursed some of the trees myself and I prefer mine to theirs. I did not collect their trees because I don't trust that the trees will indeed be mine when they mature. Besides, I did not like the type of tree ("ofram") they brought.

The dissenting voice here clearly demonstrated a dispositional trust (Stern and Coleman, 2015) as she was predisposed to take that position partly because of the "type of tree" being distributed for planting. On the whole however, the level of trust that exists among the stakeholders is highly appreciated by most of them. To borrow the words of Leach and Sabatier (2003), the FC during the research proved that it was playing its "facilitating and coordinating" roles effectively by nurturing dynamic dialogue and decision-making and also playing its administrative duties diligently.

Common field(s) of operation

The FC, MA, COCOBOD, and all the CSOs/CBOs have a training component in their operations. For example, Tropenbos Ghana and COCOBOD have regularly been organizing training activities to build the capacity of famers to adopt best farming practices and as well understand and practice the concept of climate smart agriculture – that is, the inclusion of trees in cocoa farming and cocoa rehabilitation. Kodatech on its part trains famers and relevant extension officers in the use and application of agro-chemicals in order to maintain ecological stability as well as the health of the users. In addition, FC, Netherlands Development Organization (SNV), MA, and local communities are engaged in the promotion and production of agricultural and/or tree planting activities.

The FC and the DAs together with the CSOs/NGOs are all involved in making sure water bodies are not polluted, especially through the activities of illegal miners. The FC, EcoCare, SNV, DAs, COCOBOD, CODESULT, Green Fortland, Agro Eco, and the cocoa buying companies also assist in community mobilisation for self-help rural infrastructure development with focus on environmental sustainability. With the assistance of the Water Resources Commission (secondary stakeholder), the DAs and FC are also involved in the identification of stock water points, soil and water management and conservation and erosion control. Indeed, the interaction processes rely on compromises and consensus building to arrive at decisions. FC as the "facilitator" and "coordinator" has adopted an approach that dilutes power

inequalities and rather enhances the promotion of equitable stakeholder involvement and inclusion.

By operating in common areas, the analysis shows that both districts have made progress in the area of social learning. The actors engage one another, share diverse perspectives and experiences in order to develop a common framework for joint action. Consistent with the literature, both cognitive and relational learning (Ospina and Saz-Carranza, 2010) are taking place. Representatives from the stakeholder groups interact on regular basis leading to collective learning in a shared domain of human endeavour. It should however be reiterated that collaboration does not necessarily provide condition for optimal gains for all parties.

Cooperation

On the initiative of the FC and the Ministry of Lands and Natural Resources, a forum has been created for the agencies which operate in the forestry sector in the two forest districts to discuss trends and strategies in the sector, especially the generation of alternative livelihoods to local communities; for example nursing of tree seedlings and engagement of community members as gangs to support forest protection measures. The forum is also used to update data on activities of NGOs in the districts, share information on resource potential with the aim of sharing these resources whenever necessary. Some farmers, SNV, EcoCare, CODESULT, Green Fortland, Agro Eco and DAs have so far been participating together with a limited number of tertiary stakeholders in the two districts.

An official in the Plantations Unit in Bechem forest district expressed his opinion on the level of cooperation in these words:

“The groups meet quarterly to take stock of progress made in implementing REDD+ in the district and offer guidance on key technical elements of REDD+.”

Put together, the stakeholders' responses reveal genuine desire and commitment on their part for deliberation and consensus-building to arrive at mutual outcomes, even though there could be divergent and conflicting interests.

Other forms of interaction

In both Bechem and Asankragwa forest districts, like elsewhere in Ghana a traditional chieftaincy structure operates alongside the District Assemblies. The two systems are complementary, each having its own area of jurisdiction in the best interest of the community. One significant observation of the research regarding the relationship between the traditional leaders on one hand and public officials and NGO/CSOs on the other is in

terms of cognitive learning on the part of the educated professionals and technocrats involved in the implementation of REDD+ both at the district and national levels. They, in unison, pointed to the existence of indigenous knowledge systems which are being applied in agriculture and other related areas to keep equilibrium with nature. There is sufficient research on indigenous knowledge systems (IKS) to show that Ghana and the rest of Africa possess a rich repertoire of knowledge based on their cultures, environments, natural resources, political, social and economic institutions that may be the key drivers for poverty reduction, livelihood improvement and attaining sustainable development (Boon and Hens, 2007; Domfeh, 2007).

EFFECTS OF REDD+ IMPLEMENTATION IN THE FOREST DISTRICTS

REDD+ is a recent initiative in Ghana and therefore it may be unrealistic to expect measurable impacts or even trends at this point in time. In fact, this research hardly came across any significant information suggesting yields in terms of direct monetary benefits and indirect monetary benefits. Nonetheless, it has made some progress in the areas of direct non-monetary benefits and indirect non-monetary benefits in its relatively short implementation period. The following subsections attempt to examine some of these benefits.

Environment and resources

The level of influence of the REDD+ initiative on the environment within the study area cannot be measured or even postulated. It is too early in its implementation to judge its impact. However, within the communities where pilot initiatives were undertaken, the programme has enhanced the general awareness of the people on the importance of the forest resource. Consequently, it has influenced their attitude towards it. Communities have developed and are implementing management schemes to enrich the resources on and off forest reserves. This is better captured in the words of FC in Asankragwa, thus:

We have embarked on tree tenure reforms where farmers are responsible for managing trees on their farms (naturally growing trees) to bring them additional benefits instead of destroying the trees on their farms. Hitherto, farmers would set trees on their farms on fire because they did not benefit from these trees when they matured. Under REDD+, farmers will receive benefits for maintaining the trees on their farms.

In attempting to describe the type of environmental stewardship practiced since farmers were introduced to REDD+, an opinion leader in Bechem District

philosophically put it this way:

Through FC and the other collaborators, we have come to realise that the best definition of conservation is not written with a pen, but with an axe. It is a matter of what a man thinks while chopping or deciding to chop a tree.

Similar sentiments were rehashed in an observation in a focus group discussion by another participant in Bechem who emphasised that:

In anticipation of economic returns in the future, the sustainable harvesting of trees [timber] has brought us an aesthetically pleasing forest, spiritual rejuvenation and a sense of pride in being associated with REDD+.

The respondent referred to “spiritual rejuvenation” because many indigenous communities did not in the past need any prompting from global agencies and external interventions to appreciate the importance of effective and efficient natural resource management. According to Domfeh (2007), community protected forests contained an extraordinary specific wealth of numerous endemic species. Most of the relics in the forest survived because they were considered to be sacred. A sacred forest is a place that is venerated and reserved for the cultural expression of a community. Access and management were governed by traditional powers. Once found dotted throughout the different vegetation zones of Ghana, their presence ensured that endemic species restricted to respective zones were protected from extinction (Domfeh, 2007). Only a few of these reserves remain today.

In an interview with a respondent from the Collaborative Unit of FC regarding environmental benefits of the initiative, he optimistically pointed out that,

Already Ghana is reaping the benefits of the various interventions over the years. Significantly, we planted ten million trees two years ago (2019); this is huge and its impact will be enormous. Even though we are still felling trees, the rate of planting is higher than the rate of felling; felling is estimated to be less than 10% of that planted.

When pressed to know how many of the trees have been specifically planted in the two forest districts under the study, he estimated about 1.2 million and 1.1 million for Asankragwa and Bechem, respectively; the difference being explained in terms of size of coverage and extent of forest degradation. Table 2 illustrates forest intervention programmes (FIP) in the two districts.

Activities which have been undertaken under the REDD+ sponsored FIP in both districts include planting of trees on boundaries of forest reserves to make out the extent of forest reserves, planting of indigenous tree species to increase forest tree stocking, planting of certified indigenous tree species to provide quality seeds

for planting in the future, and cultivation of a mixture of exotic and indigenous tree species. The rest are the planting of degraded sacred groove and degraded watershed, respectively.

The study attempted to find out how the timber trade has been affected since the pilot phase of the REDD+ was initiated in both districts. The measures taken to control the felling of trees seem to have contributed to relative reduction in the supply of illegal timber in the affected communities. The use of the word “seem” is deliberate since none of the respondents was able to provide facts and figures to support the claim. They were however in a near unanimity in both districts that timber supplies from within has been curtailed and that even casual observers from the communities could affirm that. In a qualitative study such as this, unanimous information provided by competent observers as well as ordinary respondents cannot be treated lightly and ignored. In this instance, the respective District FC Managers, FGDs, opinion leaders, and more importantly, representatives of sellers of processed timber were assertive that the supply of timber products has relatively reduced over the past five years in both districts. Obviously, the initiative seems to have reduced the activities of illegal timber operators.

According to an official in the Asankragwa forest district, illegal felling has been reduced since REDD+ was introduced in the district “due to greater action on the part of communities to patrol and protect the forest”. This was corroborated by a participant in an FGD at Nsuapem in Bechem district, who explained that,

We the local people have now come to accept the importance of the forest in protecting our water bodies as well as the provision of non-timber forest resources. We will therefore move heaven and earth to prevent chain-saw operators from their selfish activities.

Ghana’s forest degradation and depletion of its natural resources are the end-result of a long deterioration in the country’s ability to manage them effectively. As Timberlake aptly put it some three decades ago, Africa (Ghana) has taken too much from its land; has “overdrawn its environmental accounts”, and the result for much of the continent has been “environmental bankruptcy” (Timberlake, 1991). This bankruptcy has come about as a result of intricate land degradation and over-exploitation of natural resources, which threaten life support systems. Data from the study shows that the collaborative arrangement under the REDD+ in both districts has the potential to address the “environmental bankruptcy”.

Technical situation

As explained by Muro and Jeffrey (2012), social learning results in technical changes, that is, transformation and

Table 2. FIP activities in Asankragwa and Bechem Districts.

Activity	District	Location/River	Communities
Enrichment plant in Degraded Compartment	Asankragwa	Tonton, Angoben Bura	Wassa Mampong, Subinso Attakrom, Ananekrom Aserewadi, Kofiekrom, Obrakyere, Nkwatanang Supouso, Sureso, Nyamennae
	Bechem	Bosomkese Forest Reserve	Dwenase
Planting of forest reserve boundaries	Asankragwa	Bura	Sopouso, Nyamennae
		Mamiri	Hiamatuo, Sureso, Kamaso
	Angoben	Aserewadi, Kofiekrom, Nkwatanang	
Bechem	Fure River	Prestea Nkwanta	
	Tonton	Wassa Mampong, Attakrom, Anaekrom, Subinso	
	Totua	Sompre, Kokodei Amoanda	
	Forest reserves in the listed communities	Dwenase, Ahyiyem, Rubi, Ntotroso, Acherensua, Apesika, Bomaa Dwenase, Ahyiyem, Rubi, Ntotroso, Acherensua, Apesika, Bomaa	
Seed orchard	Asankragwa	Tonton	Ananekrom
	Bechem	Bosomkese forest reserve	Nsuapem, Ahyiyem
Planting of degraded watershed	Asankragwa	River Kama	Kamaso, Sureso, Meteamba
		River Sure	Sompre, Dwete, Gonukrom
		River Aboabo	Koduakrom
		River Subri	Nkwantanum
		River Samire	Obeng
		River Dokore	Dokore
Planting of degraded sacred groove	Asankragwa	Wassa Saa Kwabeng	Wassa Saa, Kwabeng
Model plantation	Bechem	Aparapi Shelter Compartment	Nsuapem
Establishment of small to medium sized plantation	Bechem		Mansin, Kwasu

Source: Author's Compilation, February 2021.

competencies. It is important to state that the collaborative elements are integrated and built from existing technical (traditional) forest management systems both on and off forest reserves in the two districts instead of traditional and collaborative approaches providing their respective techniques. The strategy has also contributed significantly to the design of the new concession allocation procedures, which ensure through social responsibility agreements that local communities benefit more from naturally grown timber harvested on their land, and that timbermen adopt more responsible attitude towards famers in particular and the resource owners in general.

New initiatives for plantation development by individuals and groups have been adopted. These would lead to developing programmes to encourage commercial plantations outside reserves, as well as developing approaches for involving communities in small scale forest rehabilitation. In the Bechem forest district for example, small and medium-size plantations have been established by rehabilitating degraded forest in Mansin and Kwasu. In the Asankragwa district, similar projects

are underway in Wassa Mampong, Attakrom, Ananekrom and Subinso, respectively (Table 2).

Cocoa farmers in the research communities have also been taught to undertake farming activities that seek to reduce carbon emissions that result from cocoa expansion into forests through the promotion of appropriate climate-smart cocoa production, including intensification and yield enhancement. They have been trained to understand and appreciate the importance of incorporating shade trees in cocoa systems to help “build climate-resilience for cocoa sector in order to secure rural livelihoods and sustain national development” (Ghana COCOBOD, 2017).

It was realised that key among the climate smart cocoa prescriptions adopted by cocoa farmers is the intensification of production through appropriate agronomic practices such as weed, pest and disease control; appropriate application of nutrients; artificial pollination and grafting; high-yielding planting stocks; and row planting.

An opinion leader (also cocoa farmer) at Attakrom (Asankragwa District) in an interview said:

... Among the things I have learnt from COCOBOD and MA officials through REDD+, the most significant is the row planning, which makes maximum use of the land. I am also very happy that I am learning about appropriate shade regime, by using suitable tree species.

Sustainable livelihoods

Non-timber forest products (NTFPs) are a dominant economic and livelihood activity for both men and women within both districts, as in other rural communities in Ghana. Just like beekeeping, NTFPs production suffers from a lack of organisational structures as well as poor, rudimentary and unsustainable harvesting and production technology.

NTFPs exclude, as the name suggests, commercially exploited timber but include all other products garnered from forests for whatever purposes (Falconer, 1992). Animals, leaves, building materials, and sponge fibres are all examples of NTFPs, according to Falconer (1992). In both Asankragwa and Bechem forest districts, as in other rural communities in Ghana and other tropical regions, they are very important among the poor who have access to few resources beyond the common forests.

Throughout the Bechem forest district, people interviewed discussed how their surrounding environment had changed over the years and were worried by the degradation of their environment. Many said that the dry season water supply had become a serious problem, and some believe this is a result of clearing in the river watersheds, which has led to a decline in supply of NTFPs. In the Asankragwa forest district people also remarked on changes in rainfall patterns. But in this area, it is the widespread clearance of cocoa farms which has led to changes in NTFP use and supply. These changes have rendered NTFPs more inaccessible especially in fallow areas; and currently forests are increasingly providing goods which were once gathered from farm fallow.

The study observed that some very sound NTFPs enterprises are already being demonstrated in some of the communities through the support of SNV and its collaborators. Beekeeping has emerged in both districts as a way to drive the sustainable management of honey production within the communities. Honey has an important livelihood, economic, medicinal and cultural function for the indigenous forest communities. A Ministry of Food and Agriculture extension officer in Asankragwa expressed his satisfaction with the support for promotion of NTFP under the REDD+ strategy thus,

Although the subsistence value of NTFPs has long been recognised, these resources did not receive sufficient attention in forest management planning in the past. I am happy we have recognised our mistake and decided to

do the right thing. In fact, NTFPs provide the main link between communities living near forest reserves and the Forestry Commission... Management systems which sustain and develop the value of forests for those living in them will help to ensure an active local interest in the forest's long-term management.

One important effort to win the support for the implementation of the REDD+ affected forest areas is empowerment of the communities to participate in forest conservation as well as to provide benefits, especially economic benefits. An activity promoted by REDD+ to achieve this goal is mushroom cultivation by some of the communities, especially around Tonton and Angoben in Asankragwa and Bosomkese Forest Reserve in Bechem. Again, a Ministry of Food and Agriculture extension officer in Bechem explained:

A lot of organic wastes are generated in this area through the activities of the agricultural, forest, and food processing industries. With the application of appropriate technology, we have assisted the communities to turn the waste into valuable resource for the production of mushroom...

The production and sale of mushroom to empower local communities and as well assist in implementing the REDD+ initiative is contributing to sustainable livelihood in both districts and helping to provide "high-value dietary supplements (mushroom nutraceuticals), which have potential therapeutic applications" (Beyer, 2017).

CONCLUSION

This paper attempted to examine interaction among the stakeholders involved in the implementation of the pilot phase of REDD+ initiative in Asankragwa and Bechem forest districts in the Western and Ahafo regions of Ghana, respectively. It also examined the effects/benefits derived from the implementation. A key motivation for the research was the fact that most studies on REDD+ have concentrated on the costs of its implementation rather than its benefits and that no study has been done on non-monetary and indirect benefits. Furthermore, on collaborative governance in the forestry sector, studies show also that the relationship between stakeholders is either functional or adversarial in nature with most of them identifying bitter adversarial relations being the norm. This study was interested in both dimensions of the research agenda. An important observation regarding stakeholder interaction was the realisation that the process had not been captured by the elite, and that decision making is very participatory and enjoys the blessings of the local community members. There is appreciable level of interaction between the communities, regulatory agencies, CBO/CSOs, local farming

communities and other stakeholders. What seems to engender constant interaction between the groups is the level of trust established among them and the seemingly effective facilitating and coordinating role being played by the FC. As explained earlier, in the environmental policy arena, bitter adversarial relations between stakeholders are the norm, whether in terms of business versus environmentalists, business versus government, and even within a community, there are intra-community adversarial challenges. This study has shown that real collaboration can take place among and between these groups. Stakeholders of varied and diverse groups are connected in a network that has allowed them to develop the capacity and trust needed to learn from each other; and that both cognitive and relational learning have taken place. The stakeholders have developed the capacity and trust needed to learn from each other and that cognitive, relational and technical changes have taken place. Even among the intellectually sophisticated participants a community of practice has emerged among them in acquiring new knowledge and insights.

Another major contribution of this research is its observation concerning REDD+ benefits in the two forest districts. In view of the relatively short period of its implementation in both districts, not much was expected regarding benefits. However, the study observed gains in the form of direct non-monetary benefits and indirect non-monetary benefits in terms of environmental resources, technical capacity, and sustainable livelihoods. Thus, this paper proposes that once the stakeholders have agreed to work on a common project, they should be able to shed their cultural identities that may affect their coherence and the process of attaining their common objectives and goals. The collaborative phenomenon should be seen as a pragmatic attempt by participants in environmental politics to do away with their individual differences to resolve the complex dilemmas found in a traditionally adversarial policy arena. In the words of Weber (2012), the participants should not be “driven by starry-eyed romanticism; rather, by hard-nosed realism wary of collaboration and its pitfalls”.

LIMITATION AND FUTURE RESEARCH

Ghana's REDD+ Strategy agrees with relevant national policies, strategies and development priorities. In fact, some specific sections of some of these policies overlap such that they seek to attain similar, if not the same objectives. For example, the Forest Law Enforcement, Governance and Trade (FLEGT) Initiative (as part of the Voluntary Partnership Agreement (VPA)) provides channels for addressing the major drivers of deforestation and degradation and moving forward in a performance-based and climate-smart manner. The VPA which is a legally binding trade agreement between the European Union (EU) and timber-producing countries outside the EU, seeks among other things, to ensure timber and

timber products exported to the EU come from legal sources. It also aims at helping timber producing countries stop illegal logging by improving regulation and governance of the forest sector. It will therefore be intellectually and academically stimulating and legitimate to conduct research combining two or more of these policies to identify which policy or combination of policies is/are contributing to what, how, and why. An empirical study that interacts with the same set of respondents seeking their views on the respective effects of more than one initiative would be a project worthy to undertake, which will definitely enrich the extant literature. The major limitation of this study is its inability to scientifically confirm whether the benefits of REDD+ as observed are solely attributable to the strategy or whether other policy initiatives played a role, and if yes, to what extent. Further studies are needed in this regard.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interest.

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APPENDIX “A”. Primary Non-Public Sector Organizations in REDD+ Activities (Asankragwa and Bechem Forest Districts).

Bechem Forest District	Asankragwa Forest District
Kuapa*	Kuapa*
Amajaro*	Amajaro*
Kodatech**	Kodatech**
EcoCare***	EcoCare***
Netherlands Development Organization****	Netherlands Development Organization****
Tropenbos Ghana****	Tropenbos Ghana****
	Green Fortland***
	Agro Eco***
	CODESULT***

Source: compilation by Author, February 2021.

*Cocoa Buying Company; **Agro Chemical Company; ***Civil Society Organization/Non-Governmental Organization.