

# Reconfiguration of land politics in community resource management areas in Ghana: Insights from the Avu Lagoon CREMA



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## ABSTRACT

This study explores the reconfiguration of land politics in a poor rural area of Ghana following the development of a community-based resource management and market-based conservation initiative. In particular we focus on an eco-tourism site that was developed through the Avu Lagoon Community Resource Management Area (CREMA) in Ghana. We adopt a political ecology approach that combines qualitative and quantitative information from multiple sources to explain the nature, drivers and outcomes of this reconfiguration of land politics. In particular we track how different environmental and socioeconomic narratives were mobilized and utilised to justify the establishment of the Avu Lagoon CREMA, and how this gave rise to a series of unmet expectations. The restriction of access to fertile land fit for sugarcane production (a key livelihood activity in the area), combined with the underperformance of the ecotourism project, led to different land contestations, including illicit land transfers and silent repossession through encroachment. We synthesize the main findings through the theory of access and argue that these dynamics follow the reconfiguration of land access, and are reflections of the weak enforcement of CREMA regulations, elite capture of the process, and a lack of proper benefit-sharing mechanisms. From a policy perspective, it is important to give due attention to community participation, payment of compensation, proper benefit-sharing mechanisms and the balance of power between local elites, external organisations and the local communities. Only then would CREMA processes be able to deliver their dual objectives of biodiversity conservation and socioeconomic development.

## 1. Introduction

Academics and practitioners have long sought to understand and provide innovative solutions for the nexus of poverty and environmental degradation (Duraiappah, 1998). This is particularly important in poor rural areas of sub-Saharan Africa (SSA), where local communities rely extensively on natural resources for their livelihoods (IPBES, 2018a). In the past decades, participatory natural resource management schemes have been widely promoted, aiming to achieve effective management of natural resources by local communities (Binot et al., 2009; Vaidya and Mayer, 2014).

In order to reverse the increasing rates of land degradation, deforestation and biodiversity loss there is a need to combine different measures (Barton et al., 2017; IPBES, 2018b). Market-based initiatives such as payment for ecosystem services (PES), biodiversity offsetting, certification and eco-tourism are increasingly being promoted as

possible options to enable nature-based economic transitions and ensure sustainable development (UNEP, 2011). Indeed, market-based conservation approaches such as eco-tourism have proliferated globally during the past decades, based on the expectation that environmental and economic objectives can be simultaneously achieved (Castree, 2010, 2008). Often, such approaches attempt to link human-nature relationships with poverty reduction and socioeconomic development (Baruah, 2018; Benjaminsen and Bryceson, 2012). This is commonly pursued through land privatization and the deployment of narratives related to nature conservation and green economy (Benjaminsen and Bryceson, 2012; Fairhead et al., 2012; Green and Adams, 2015).

Several participatory community-based concepts such as community-based natural resource management (CBNRM), community protected areas (CPAs), and wildlife management areas (WMAs) have been used to find land for market-based conservation across SSA (Nelson and Agrawal, 2008; Dressler et al., 2010; Benjaminsen and Bryceson, 2012;

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Gardner, 2012; Green and Adams, 2015). This has catalysed the emergence of a new wave of discourses over land rights, access and control in the region (Benjaminsen and Bryceson, 2012; Gardner, 2012; Green and Adams, 2015; Igoe and Croucher, 2007).

At the same time, there have been concerns that market-based conservation approaches can underperform, both in terms of their conservation and socioeconomic outcomes (Fairhead et al., 2012; Holmes and Cavanagh, 2016). In fact, several scholars now perceive such practices as drivers of land dispossession and green grabbing (Fairhead et al., 2012; Benjaminsen and Bryceson, 2012; Green and Adams, 2015). Studies exploring the limitations of market-based conservation have focused on community resistance, new local forms of engagement and green-grabbing (Benjaminsen and Bryceson, 2012; Gardner, 2012; Green and Adams, 2015; Igoe and Croucher, 2007). In SSA, most of the existing literature has focused on Tanzania, South Africa and Ethiopia, critically examining issues related to power plays, resistance, and land dispossession (e.g. Benjaminsen and Bryceson, 2012; Green and Adams, 2015; Büscher, 2013).

Ghana is one of the countries in SSA that has experienced the proliferation of market-based conservation initiatives, especially following the adoption of the community resource management area (CREMA) policy in 1994 (Agyare et al., 2015; Asare et al., 2013; Baruah, 2018; Murray and Agyare, 2018). The CREMA policy has opened a new political space for market-based conservation through community-based initiatives and has led to the acquisition of extensive amount of land for private interests, often related to eco-tourism (Agyare et al., 2015; Asare et al., 2013) (Section 2). Some studies have already critically engaged with CREMAs including their desired and perceived outcomes, institutional structures, and the underlying role of traditional knowledge and beliefs (McPherson et al., 2016; Foli et al., 2018; Murray et al., 2018).

This study aims to contribute to this emerging literature by highlighting how local land politics have evolved, transformed and eventually re-configured through the mediating effect of the CREMA policy. In particular the study draws on political ecology (Peet et al., 2011; Robbins, 2012) and the theory of access (Ribot and Peluso, 2003) to highlight how new discourses and narratives related to market-based conservation have been mobilized to reconfigure land politics in community-based resource management schemes, leading to land conflicts, illicit land transfers, and eventually compromising local livelihoods.

The paper first introduces the politics and procedures underlying the operation of CREMAs in Ghana (Section 2). Subsequently we introduce the conceptual framework that guides the analysis (Section 3), the study site (Section 4.1) and the data collection and analysis methods (Section 4.2). Section 5 outlines key aspects of the Avu Lagoon CREMA, focusing on local dynamics prior to CREMA development (Section 5.1), during its development and early stages (Section 5.2) and during its maturation (Section 5.3). Section 6 synthesizes the main findings, while Section 7 concludes the paper and identifies the main implications and recommendations for policy and practice.

## 2. The politics of community resource management areas in Ghana

CREMAs are natural resource governance and planning mechanisms at the landscape level that authorize communities in Ghana to manage their natural resources (Asare et al., 2013). CREMAs share several similarities to the participatory community-based concepts prevalent in other parts of SSA (Section 1).

The origin of CREMA policies can be traced back to 1994, when they started being promoted as innovative solutions to sustainability challenges in wildlife-protected areas posed by biodiversity loss, pollution, and land degradation. At that time, the Ghanaian government recognized the need to manage effectively ecosystems in non-protected areas outside national parks and wildlife reserves, which posed complex sustainability challenges. Eventually, the government of Ghana

approved a CREMA-related policy in 2000, called the Collaborative Resource Management Policy, which was implemented by the Wildlife Division (Forestry Commission) and was justified through references to past examples of community-based natural resource management during the colonial and early post-colonial period (Wildlife Division, 2000). The policy assumed that proper incentives could catalyse the sustainable use of natural resources (and essentially poverty alleviation), but failed to consider the different prevailing socio-political conditions between the colonial and early post-colonial era, and the contemporary times (Wildlife Division, 2000).

Procedurally, the establishment of CREMAs requires the development of a Collaborative Resource Management Unit within the Wildlife Division (Wildlife Division, 2000). This unit, with the support of “Field Walkers”<sup>1</sup>, NGOs and other development partners,<sup>2</sup> is responsible for identifying intervention landscapes across Ghana (Wildlife Division, 2000). Once a promising area has been identified, the relevant actors are required to provide funding to mobilize the local communities and other key stakeholders (Wildlife Division, 2000). Following local consultations, a consensual agreement (i.e. a constitution) is developed between the different actors, and the district government that enacts a bylaw to support the CREMA establishment (Wildlife Division, 2000). The consensual agreement and the bylaw jointly form the CREMA constitution, which is then submitted to the Ministry responsible for lands and natural resource to issue a certificate of devolution of management responsibility and authority to the CREMA (IUCN, 2017). The entire process of CREMA establishment can last 3–5 years (Asare et al., 2013) and should follow the six steps outlined in the CREMA implementation manual (Wildlife Division, 2004a):

- Define and work with local communities to develop a CREMA governance structure;
- Develop and approve the CREMA constitution;
- Define the CREMA boundaries;
- Approve the CREMA through District Assembly bylaw;
- Recognition of the CREMA by the Wildlife Division;
- Devolvement of management authority to the CREMA by the Ministry of Lands and National Resources.

The processes behind CREMA establishment eventually led to the appropriation of communal, family, and common land, and the creation of a complex institutional landscape that sometimes facilitates the privatization, commercialization, and commodification of communal land and resources (Baruah, 2018; Eshun and Tagoe-Darko, 2015; Murray et al., 2018). Since 2000, over thirty CREMAs have been established covering many hundreds of thousands of hectares, with their number increasing over time (Murray et al., 2018; Baruah et al., 2016).

Many of these CREMAs establish market-based conservation initiatives through donor funding, with local NGOs and elites controlling the decision-making processes and capturing most of the benefits (Baruah, 2018; Murray et al., 2018). Indeed, several aspects of CREMA development and operation have attracted criticism regarding their

<sup>1</sup> This term is used in the policy document to describe people with significant local knowledge (Wildlife Division, 2000: 8). These can be chiefs or important members of the local community, who in a sense form a conservation elite within the local community.

<sup>2</sup> The term “development partners” is used in the original CREMA policy document (Wildlife Division, 2000), but was not elaborated or formalized in follow-up documents establishing CREMA processes (Wildlife Division, 2004a, 2004b). It is relatively ambiguous terms to denote other actors engaged in CREMA processes in a specific geographical context (e.g. private sector, international organisations). For the purpose of this paper we use the term “development partners” when referring to general CREMA processes (Section 2 and 6), and we name the specific actors engaged in the Avu Lagoon CREMA (Section 4–5).

potential to promote sustainable resource management and poverty alleviation.

Firstly, it can be argued that by making a strong call for the active participation of actors beyond the government, the CREMA policy essentially implies that the state cannot effectively promote ecosystem management in non-protected areas by itself (for a direct quote see CREMA, 2004b: 20). More importantly, the CREMA policy is quite vague in that it does not contain clear directives about the land acquisition process either by the state or the other development partners. Actually, it is vague altogether about who constitutes a legitimate development partner) (Wildlife Division, 2000, 2004a; 2004b). The implementation manual only indicates that the CREMA boundaries can be demarcated through the services of the community leadership and surveyors, without giving details on how the land rights of family or private parcels are to be transferred, and how those parties providing the land are to be compensated (Wildlife Division, 2004a). It can be argued that this, in itself, is a self-conscious invitation for land appropriation given that the development partners must provide funding that will be subsequently recovered through a benefit-sharing agreement ratio with the local community that often favours the partner (Asare et al., 2013; Wildlife Division, 2000). This essentially opens the door for market-based conservation approaches in areas that are not formally protected, including eco-tourism and schemes for reducing emissions from deforestation and forest degradation (REDD+) (IUCN, 2017).

Secondly, the underlying expectation that CREMAs will incentivize local farmers to adopt sustainable farming practices is not entirely justified. For example, CREMAs had negative sustainability outcomes in areas such as Bontori, Zukpiri, River Asuopiri, and Amokwasuazo (Agyare, 2013; Baruah, 2018; Murray et al., 2018).

Thirdly, the CREMA initiative is only weakly enshrined into the national legislation of Ghana.<sup>3</sup> Several efforts have been made to provide a stronger legal basis and pass a Wildlife Bill, but none has materialized thus far (IUCN, 2017). This implies that local communities and individuals that provided land for CREMA development will lose this land forever in the name of nature and/or 'communal interest'. However, as the state seems to play a very minimal role in the entire process (Baruah, 2018; Murray et al., 2018; Teye, 2011), the compensation mechanisms might not be properly conceived to address land loss. In fact, as mentioned above, the policy does not contain explicit directives for compensation for land loss due to CREMA through payment or other means (Wildlife Division, 2000, 2004a, 2004b). Whereas this might be seen as a limitation of the policy, it can also be argued that the same communities do not necessarily need to pay compensation to themselves as the CREMA is assumed to be a community asset. Within the CREMA policy, emphasis is placed on common resources rather than on private property (i.e. land) (Wildlife Division, 2004a).

Finally, the policy also stresses the need to devolve authority for issues related to the regulation of permits and licenses for hunting. The Wildlife Division exonerates itself from any responsibility by giving communities the right to issue hunting licenses for a fee, as a means of generating revenue (Baruah, 2015; Murray et al., 2018; Teye, 2011). A key issue here is that the devolution of hunting rights (and the revenue that comes with it) implies that these responsibilities are passed to the management of the CREMA, which can be an NGO or a private company (e.g. an ecotourism operator), and not necessarily the community. The policy subsequently allows for wildlife trading under a permit system, of which revenue is to be shared (Wildlife Division, 2000), which is a direct indication of a market-based approach to biodiversity conservation.

<sup>3</sup>Section 1 of the Wild animals Preservation Act 1961 Act 43 allows the Minister of Wildlife to appoint "honorary Game Officers" from the public (IUCN, 2017).

### 3. Conceptual framework

Our analysis employs a broad political ecology lens as it is ideal for eliciting how political factors shape resource competition and conflicts around nature (Peet et al., 2011; Robbins, 2012). Political ecology essentially focuses the "winners" and "losers" of resource management options, the underlying power dynamics, and how these reinforce inequalities between social actors (Robbins, 2012).

We also draw from the theory of access (Ribot and Peluso, 2003) to understand better how different mechanisms of access and participation in CREMA activities led to land contestations. We adopt the distinction between the different mechanisms of access, namely rights-based (legal access) and illicit (illegal access). Several structural and relational mechanisms mediate this access, with the former "sanctioned by law, custom and convention" (Ribot and Peluso, 2003: 161), and the latter referring to the "specific political-economic and cultural frames within which access to resources is sought" (Ribot and Peluso, 2003: 164). The theory of access, therefore, becomes a useful lens through which we can unravel (a) the nature of legal and illegal access to CREMA, (b) the mechanisms through which they manifest, and (c) the resultant effects on conservation outcomes.

To do this, we first identify how different environmental narratives are articulated, mobilized and used to justify the CREMA. Secondly, we document the processes of how the CREMA was created and the dynamics of participation without representation (Ribot, 1996). We also show how the failure of conservation outcomes and illicit land transfers constantly (re)produce encroachment and intensification of agricultural practices, leading to different land contestations within the landscape. For each phase of the CREMA development, we identify the associated land access and rights issues and how the failure of conservation promises has shaped land rights dynamics.

### 4. Methods

#### 4.1. Study area

The Avu Lagoon Conservation area is located in the south-eastern part of Ghana (Fig. 1). It covers 30,000 ha and encompasses 15 communities in the Keta, South Tongu and Akasi Districts (Asare et al., 2013). The landscape consists of a floodplain with several wetlands and connecting rivers. The major livelihood activities include fishing, smallholder-based sugarcane cultivation and artisanal ethanol production. The broader area is usually referred to as the Dabala sugarcane corridor. There is no conventional large sugarcane plantation, sugar mill or ethanol distillery in the area, but instead small producers grow sugarcane and undertake alcohol distillation locally. According to the most recent population census, approximately 1415 households from the estimated 3236 households in the area derive their main livelihoods from sugarcane production (Ghana Statistical Service, 2014).

Over the past decades, the landscape has undergone significant transformations. Dam building in the Volta River brought major transformations, threatening the wetlands (McPherson et al., 2016; Willoughby et al., 2001). These changes were further reinforced by extensive smallholder-based sugarcane production, driven by the increasing demand for local alcohol (Akyeampong, 1996). Apart from the actual land conversion for sugarcane cultivation, the landscape is also shaped by the extensive fuelwood harvesting for small-scale alcohol distillation and household use.

The land tenure system in the wider area is characterized by a hybrid of individual, family, and communal land ownership. Family and individual land is privately owned, while management of communal land is entrusted to the chiefs who act as custodians. However, due to poor land registration practices in Ghana (Abubakari et al., 2018; Mireku et al., 2016), the exact land size under these different tenure systems is not well delineated and documented. Plots for sugarcane cultivation are acquired through local chiefs or from individual families

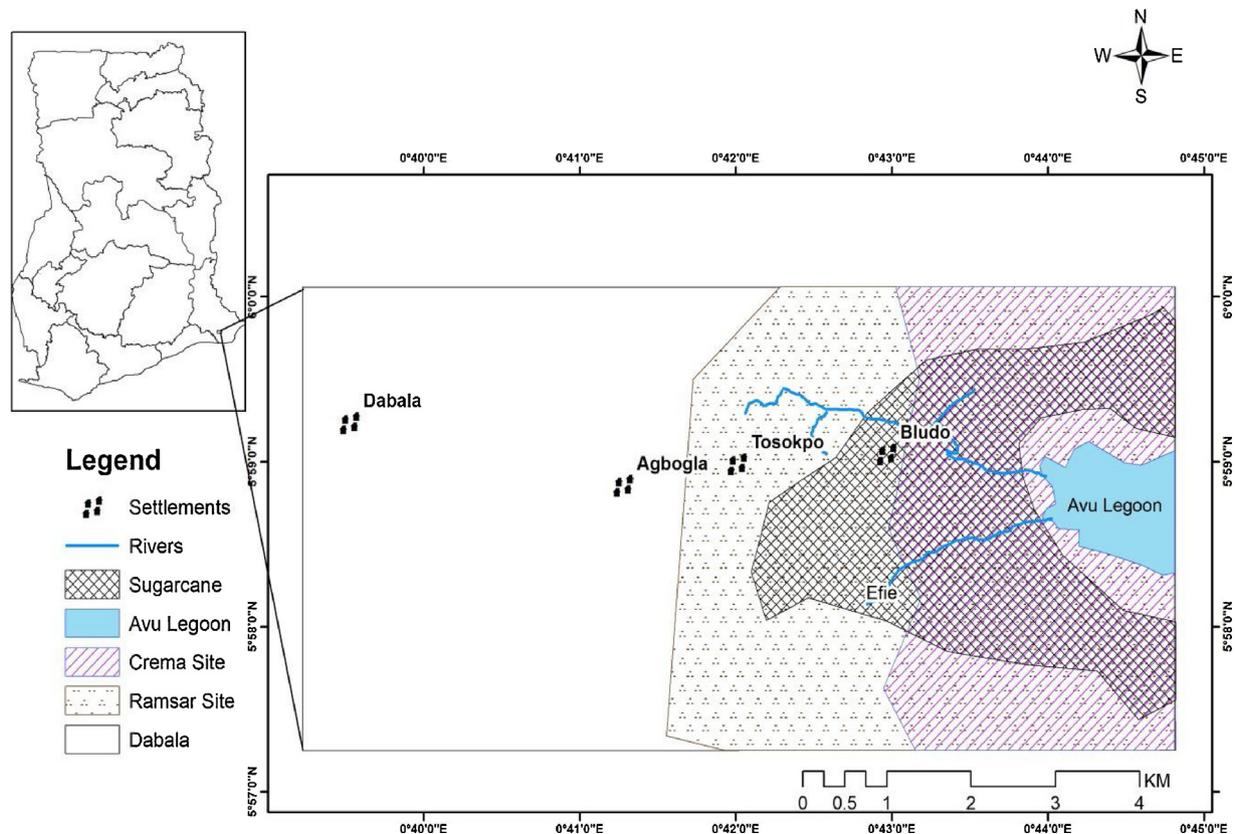


Fig. 1. Location of study site and different land uses within the landscape.

Note: The boundary of the sugarcane area was extracted from a land-use classification map (1987), and the boundaries of the Ramsar site and CREMA core zone from McPherson et al. (2016).

owning the land (usually through inheritance). Land rent is paid based on agreed rates between farmers and landowners, but these rates are not standardized or fixed, and largely depend on social networks and relations.

The Avu Lagoon is an important habitat for many aquatic bird species and the sitaunga or marshbuck (*Tragelaphus spekii*); a species of swamp-dwelling antelopes internationally classified as “least concern” by the International Union for Conservation of Nature (IUCN). The broader landscape has been under severe stress due to the rapid land-use change for sugarcane production, fuelwood harvesting and water pollution due to fertilizer and agrochemical use in sugarcane production. Motivated by these threats, the wider area was designated as a RAMSAR site under the Convention on Wetlands in 1992 (Government of Ghana, 1992).

Between the 1960s and 2000s, the sitaunga was thought to be extinct in the wetland (Brichieri-Colombi et al., 2017), but in the late 2000s it was “rediscovered”, motivating different stakeholders to advocate for establishing the Avu Lagoon CREMA (McPherson et al., 2016). The development of the Avu Lagoon CREMA started in 2006 through the combined efforts of the Nature Conservation Research Centre (NCRC), a Ghanaian NGO, and the Calgary Zoological Society, with support from the Wildlife Division of Ghana (which is part of the Forestry Commission) (McPherson et al., 2016). Sitaunga protection was a major justification for the development of the Avu Lagoon CREMA, which hints that the process was not entirely driven by local community demand, but rather by external conservation interests and actors. The CREMA was presented to the local community as a mechanism to generate jobs and income and to diversify livelihoods through ecotourism. Currently, the CREMA site is listed in different tourism sites that invite national and international tourists. However, the expected tourism benefits have not yet materialized (see Section

## 5.2.2).

The CREMA was developed through a process of land consolidation that entailed the pooling of agricultural plots (largely sugarcane) and common areas mainly used for sugarcane production and fuelwood harvesting. It is worth pointing that the establishment of the CREMA happened within a Ramsar site that was already under formal protection status.

## 4.2. Data collection and analysis

This study consists of four interlinked stages, aiming to elucidate the background, development, trade-offs and outcomes of the Avu Lagoon CREMA. To achieve this, we use a combination of qualitative and quantitative data collected in the Dabala area, namely in the Agbogla, Tosokpo, and Bludo communities. The data was collected through household surveys, focus groups discussions (FGDs), individual interviews, and expert interviews during two fieldwork periods (Table 1).

The first fieldwork period (January 2017) entailed a household survey about the livelihood outcomes (e.g. income) and agronomic practices (e.g. land size, yields, agrochemical use) of sugarcane production in the area. This predominately quantitative information is outlined in Section 5.1.1 and offers a background to understand what type of livelihood activities were compromised during CREMA development and were used as a justification of to create this CREMA. The survey targeted 200 households in the Dabala area, 100 of which were sugarcane smallholders who were selected randomly through transect walks<sup>4</sup>, and 100 were not involved in sugarcane production (control

<sup>4</sup> We divided each community into 4 zones using the main roads and started transect walks starting at the edge of the community and moving towards the center (Ahmed et al., 2019). We then selected 25–27 sugarcane households

**Table 1**  
Data collection methods and research issues covered.

Data collection method	Issues addressed	Community	Sample
Household survey	Agronomic practices Livelihood activities	Dabala	100 sugarcane growers 100 non-sugarcane growers (control group)
Individual interviews	Processes for the CREMA establishment Impacts/ outcomes of the CREMA	Dabala	20 sugarcane growers 15 non-sugarcane growers
		Agbogla	7 sugarcane growers 4 non-sugarcane growers
	Land tenure/rights Water rights Soil fertility	Tosokpo	8 sugarcane growers 4 non-sugarcane growers
		Bludo	5 sugarcane growers 5 non-sugarcane growers
Focus group discussions (FGD)	Processes for the CREMA establishment Impacts/ outcomes of the CREMA Land tenure/rights Water rights Soil fertility	Agbogla, Tosokpo, Bludo	- 6 in total (i.e. 2 in each community, of which 1 for males and 1 for female).
Expert interviews	Processes for CREMA establishment Impacts/outcomes of the CREMA	South Tongu District	5 experts

group) – see Ahmed et al. (2019) for more information about the questionnaire and sampling selection and randomization. The sugarcane growers cultivate their crops in the multi-purpose zone of the CREMA site. The household survey was analysed using simple statistical tests (Section 5.1.1), with the results serving as a background to understand the trade-offs associated with CREMA development.

The second data collection period (September 2017) was undertaken in the Dabala area, and other local communities (Agbogla, Tosokpo, Bludo) that constitute the CREMA. The data was collected through expert interviews, focus groups discussions (FGDs), and individual interviews with some of the households surveyed during the first fieldwork. Some of the issues included land tenure, sugarcane water rights, agrochemical use, perceptions of water quality, perceived changes in the presence of the *sitatunga* species, the processes followed during the creation of the CREMA, and the perceived impacts and outcomes of the CREMA to the local community (Section 5.2-5.3).

Individual interviews in Dabala (upstream) were conducted with some of the participants surveyed during the initial household survey (see above). In total, we targeted 25 sugarcane growers and 25 non-sugarcane growers for individual interviews, who were randomly selected through a random number generator from the original lists of 100 sugarcane and 100 non-sugarcane growers. However, 20 sugarcane growers and 15 non-sugarcane growers were eventually available and willing to participate in this individual interview. For downstream areas, respondents for individual interviews were selected from local communities within the wetlands (Agbogla and Tosokpo) and a community further downstream (Bludo). In particular, respondents were selected through transect walks and included in total 20 sugarcane growers and 13 non-growers (Table 1). All individual interviews were semi-structured and partly open-ended allowing the respondents to elaborate freely on their answers on the topics outlined above. In contrast to the household survey, these individual interviews collected solely qualitative information and were not analysed in any quantitative manner (see below).

Two FGDs were conducted in each of the three local communities within the wetland (Agbogla, Bludo, Tosokpo). In total we conducted 6 FGDs, each involving 7–12 respondents. In each community, one FGD was conducted only with males and the other only with females in order to obtain the differentiated perspectives and experiences associated with CREMA development and its outcomes.

(footnote continued)

and controls in each zone through such transect walks, selecting respondents every 3–4 households to allow for some degree of randomisation (Ahmed et al., 2019).

We conducted five expert interviews, including two respondents from the Ministry of Food and Agriculture (Directorate of Crop Services and Directorate of Agricultural Extension Services), the two chiefs of Agbogla and Tosokpo communities, and the chairperson of the CREMA Executive Committee (CEC). This was to obtain a better understanding of the processes leading to the establishment of the CREMA, as well as its impacts and outcomes. Similar to community interviews, these interviews were semi-structured and partly open-ended, allowing the respondents to elaborate freely on their answers.

Individual interviews, expert interviews and FGDs were transcribed and coded manually to identify common themes and repeated statements about the participation, processes, expectations, stakeholder roles, impacts and other issues related to the development and operation of the CREMA that participants explicitly mentioned as important (Section 5.2-5.3).

The information collected through the different mechanisms identified above is consolidated in the narrative presented throughout Section 5. We present the results across the different CREMA phases and use the theory of access (Ribot and Peluso, 2003) to show how rights-based access changed during the development and operation of the CREMA (Section 5.2-5.3). We acknowledge the multi-layered aspects of the issue that spans different scales (i.e. national policies, landscape dynamics and local priorities) and which involves (and affects) multiple stakeholders and community members. For this reason, to avoid providing a one-sided argument, we seek to consolidate and synthesize the information from multiple primary and secondary sources. We selectively use some direct quotes to emphasize the points made in the particular part of the manuscript through the voices of the different relevant stakeholders.

## 5. Results

### 5.1. Pre-CREMA situation and the case for conservation

#### 5.1.1. Main livelihood options and environmental pressures

Before addressing the processes and outcomes of the Avu Lagoon CREMA, it is important to elucidate the main livelihood options and environmental pressures in the area. These provide both a background to the economic activities affected by the CREMA and their effects on the local ecosystems, as well as to the narratives employed to promote CREMA development (Section 5.1.2).

The main livelihood options in the area relate to food crop, vegetable and sugarcane production and harvesting of natural resources (e.g. fishing, fuelwood, other forest products), sometimes simultaneously performed. Sugarcane agriculture accounts for a substantial

**Table 2**  
Basic characteristics of households in Dabala community (N = 200).

Variable	Sugarcane smallholders	Non-sugarcane growers	Statistical difference (p value)
Household size	5.1 ± 1.5	5.0 ± 1.9	0.551
Total land size (ha)	3.2 ± 2.6	2.9 ± 2.4	0.118
Cultivated lands (ha)	2.0 ± 1.7	2.2 ± 1.6	0.274
Uncultivated land (ha)	1.2 ± 0.7	0.7 ± 1.3	0.028**
Total household income (GH¢)	10648.1 ± 6488.1	6386.3 ± 3253.9	0.000***
Income per household member (GH¢)	2347.4 ± 1900	1415.9 ± 870	0.000***
Adult Consumption Equivalent (GH¢)	1103.9 ± 227.2	988.4 ± 318.6	0.000***
Fertilizer use (Nitrogen kg/ha)	125.4 ± 53.2	55.1 ± 17.3	0.000***

Note: \*\*\* p < 0.01; \*\* p < 0.05.

fraction of income generation and land use in the region. At least two different sugarcane varieties are grown in the area for alcohol production and for direct human consumption. Vegetable cultivation by women is also very prevalent within the wetlands due to the ready availability of irrigation during the dry season.

Sugarcane growers and non-growers do not have significant differences in terms of household size and cultivated land (Table 2). Sugarcane farmers, however, have a slightly higher amount of uncultivated land. Sugarcane farmers report significantly higher income and consumption than the control group, indicating that sugarcane production is a very important source of livelihoods for local communities in Dabala. Ahmed et al. (2019) provide an extensive statistical analysis of how engagement in sugarcane cultivation results in significantly better human wellbeing outcomes compared to other agricultural activities and livelihood options in the area.

However, most sugarcane farmers revealed that sugarcane income, although being the most lucrative livelihood activity in the area, has been steadily declining over time. This is due to the large amount of farmers, which suppresses prices; the precarious and limited market options; and declining yields due to excessive land use (Section 5.3.1). For example, an interview with an extension officer in South Tongu District District indicated that:

“The young people are no more interested in sugarcane farming because the income keeps declining every year due to the low price for sugarcane. Many people are now cultivating sugarcane throughout the district, but the demand from the alcohol producers is low. So there is more supply against low demand thereby affecting the market price of sugarcane” (Expert Interview, Extension officer, 9 September 2017).

At the same time, sugarcane production also affected local ecosystems directly and indirectly through (a) water and land appropriation, (b) water pollution, and (c) forest degradation due to increased fuelwood harvesting for alcohol production.

First, water and land appropriation due to sugarcane production refers to the conversion of extensive wetland areas for sugarcane production (Fig. 1). This has been identified as a major reason for habitat loss in the Avu Lagoon area, affecting iconic local species such as the sitatunga. Furthermore, sugarcane production requires irrigation, which affects water availability during the dry season. However, there is no strong formal or informal regulation of the amount of water that smallholders can extract for their own consumption and farming during the dry season, which has led to some contestations. In particular, downstream communities perceive that the amount of available water is decreasing each year during the dry season, and attribute this to the excessive water extraction by upstream communities for sugarcane cultivation. For example, during the FGD with females in Bludo, one participant indicated that:

“We hear Agbogla people are abstracting water with water tankers for sale to other people, which affects dry season vegetable farming and sugarcane. The drying up of the rivers also makes transportation difficult and conservation people are not coming again” (FGD, Bludo, 15 September 2017).

Other community members comprehend water contestations in terms of the abandonment and loss of the traditional customary practices in favour of modern institutions that govern human-nature relationships (e.g. the creation of the Ramsar site). For example a FGD participant from Agbogla argued that:

“Since we started cultivating sugarcane, water has never been a source of conflicts, because we relied on totems and taboos<sup>5</sup> to govern our water use. But today we have left all of that and depend on government laws” (FGD, Agbogla, 16 September 2017).

Second, water quality decline due to pollution is another environmental pressure directly linked to sugarcane production. In particular, the efforts to increase sugarcane yields have led to extensive use of fertilizers and agrochemicals by smallholders. All of the surveyed sugarcane smallholders use fertilizers and other agro-chemicals to increase yields, with sugarcane growers using significantly higher amounts of fertilizer compared to smallholders (Table 2) (i.e. 125.4 ± 53.2 kg/ha and 55.1 ± 17.3 kg/ha respectively) (N = 200).

Using high amounts of fertilisers and agrochemicals and/or opening new agricultural plots seem to be the only feasible options to boost production, as attested by many community members. For example a male FGD participant from Bludo indicated that:

“Yields are not better than before so we rely upon so much of fertilizer and agrochemicals because we do not practice ratooning<sup>6</sup> like we used to do, because of poor soil. So the only way to get better yields for sugarcane without using chemicals is to move to a new land area by renting it from the chief” (FGD, Bludo, 15 September 2017).

The link between water pollution due to sugarcane production and its effect on local communities and livelihood activities (e.g. fishing) was a common theme throughout all FGDs and interviews. For example, the rivers are the main source of drinking water for smallholders when they go to the farm, with many of the smallholders (especially those downstream) lamenting the effects that increasing water pollution has. However many respondents also touched on the negative impact of excessive fertilizer use on ecosystem health and biodiversity conservation. For example, an interview with the chairperson of the CREMA management indicated that:

“The sugarcane farmers in this area use a lot of fertilizer and all the rivers within the wetland are polluted. I think the pollution is one of the reasons why the animals (sitatunga species) are decreasing in this area. I think most of the animals are migrating to other places. Even though the conversation NGO undertook a sensitization exercise to alert farmers to reduce their fertilizer use, many of the

<sup>5</sup> Totems are sacred plants and animals that cannot be eaten or killed. Taboos are regulations regarding resource use and management based on customary law.

<sup>6</sup> Agricultural practice in sugarcane production whereby roots and shoot apices are left underground for production in the next season.

farmers are still using more fertilizers to increase yields” (CEC Chairman, 15 September 2017).

The third contestation relates to the increasing fuelwood harvest for alcohol processing. Of the surveyed households (N = 200), about 85 % of those growing sugarcane indicated that they harvest fuelwood every month, while 60 % of the non-sugarcane growers indicated that they harvest fuelwood for sale. Across the landscape, females from sugarcane-growing households collect fuelwood for the processing of alcohol. This suggests that fuelwood harvesting is the basis of important livelihood activities in the area, but also a major contributing factor to deforestation and land degradation.

### 5.1.2. Mobilisation of conservation narratives

It is not easy to maintain high yields of sugarcane without the use of fertilisers and agrochemicals. Furthermore, the declining sugarcane income had raised concerns in local communities about their long-term livelihoods.

The combination of these phenomena have formed the basis of two major narratives that were mobilized locally with the support of the Nature Conservation Research Centre (NCRC) and the Forestry Commission of Ghana to advocate CREMA development and ecotourism. These narratives essentially aimed to create a consensus of moving away from sugarcane production, using both cultural and pragmatic undertones. These narratives essentially articulated the need to (a) protect the sitatunga species as a priority for the local community, and (b) develop nature-based livelihood and income options.

The need to protect the sitatunga species as a priority for the local community was based on pre-existing traditional systems such as totems and taboos that the local communities have been using to facilitate a good coexistence with nature. The increasing pressure to boost sugarcane yields and the subsequent environmental impacts created a fertile ground to re-mobilize these traditional systems with a view to addressing the negative impacts of sugarcane production. A male respondent of the Tosokpo FGD stated that:

“Our people are not farming well these days. People are burning the bushes every year and that is chasing the sitatunga species away. If we protect the animals, our gods will bless us. But we are helpless because we need money and support from the government to protect the animals. We used to rely on our traditional practices, but these days, the young generations do not like these practices like taboos and totems” (FGD, Tosokpo, 15 September 2017).

This statement, apart from highlighting the cultural significance of sitatunga conservation, also conveys the need for external assistance. Such sentiments paved the way for the NCRC and the Forestry Commission to mobilize local support for the creation of the CREMA as discussed in Section 5.2.1.

Second, many community members were informed by the Forestry Commission that the conservation of the wetlands through a CREMA could bring diverse socioeconomic development to the area, especially for the youth. A male sugarcane farmer from Agbogla indicated that:

“...I like the idea of another activity in the area that will help the young people receive income and school scholarships. I cannot pay the school fees of my child only from sugarcane farming. But the people promised that there will be a school scholarships for our children. So we all support that idea of the Avu Lagoon project, since it will help develop our area especially for the young people who do not like sugarcane farming” (FGD, Agbogla, 16 September 2017).

Rural income needed to be diversified beyond solely sugarcane to meet the increasing household needs in the area. Ecotourism was touted from the beginning as the possible avenue to bring the highly desired jobs, income, and physical infrastructure in the area. For example the CEC Chairman noted that:

“We saw that the sitatunga species were threatened, but there is a

potential to make money through the species if we protect them. Our people need another way of making money and bringing development to the area... So I think the creation of Avu Lagoon project was a good idea to help protect the species, but also to use the species to bring development to the area through ecotourism” (CEC Chairman, 15 September 2017).

On a similar note, a female participant of the Bludo FGD indicated:

“We were told to support the Avu Lagoon project because it will help protect the environment and also bring development to the area such as roads, schools, money and ‘white people’. My husband once told me that if we do not support the project, all the sitatunga species will die and the rivers can dry up... So I may not be able to do my dry season okra farming again if the rivers dry up” (FGD, Bludo, 15 September 2017).

The above statements clearly indicate how cultural sensibilities, environmental impacts, and desire for income diversification and broader rural development merged to create powerful narratives to mobilize local support for the protection of sitatunga species as a means of boosting rural socioeconomic development. These narratives were used to advocate the development of the CREMA and ecotourism site, which had profound local impacts. These narratives reflect very well the dominant narrative expressed in the CREMA user manual on how to “sell” the concept to local communities, especially its advice towards initiators to package CREMA as a framework within which many development opportunities can materialize (Wildlife Division, 2004a).

## 5.2. CREMA development and early operation

### 5.2.1. Modalities of CREMA development and operation

The process for establishing the Avu Lagoon CREMA followed similar modalities to those indicated in the main CREMA policy documents (Section 2.1). We identify four distinct phases in the evolution of the CREMA, starting from its development and the prohibition of sugarcane production, subsistence agriculture and woodland exploitation within its boundaries (Phase I), followed by gradual encroachment (Phase II), zoning across a core zone and multipurpose area (Phase III), and encroaching of the core zone (Phase IV)

(Table 3). Phase I is discussed in more detail below, while Phases II-IV are discussed in Section 5.3.

During Phase I, the Nature Conservation Research Centre (NCRC) and the Calgary Zoological Society (a local NGO and development partner respectively) initiated the CREMA process to conserve the sitatunga species (CEC Chairman, 15 September 2017). The NGOs provided funding, and the government of Ghana provided technical support through the Wildlife Division. The CREMA management body (i.e. the CREMA Executive Committee, CEC) and a constitution containing CREMA rules, land area, and modalities of revenue generation and sharing were developed and implemented (CEC Chairman, 15 September 2017). The rules of the CREMA constitution are binding and any actions contrary to these rules (especially regarding land transfer, Section 5.3.1) may be illegal and subject to sanctions (Wildlife Division, 2004a). The Avu Lagoon CREMA NMRC included chiefs and other important community members who are seen as elected representatives by virtue of their social status and/or ability to read and write. Their main function is to:

- Manage the day-to-day activities of the CREMA;
- Enforce the rules, regulations, and sanctions of the CREMA;
- Represent the communities at the District assembly or Forestry commission;
- Undertake all negotiations/discussion with external partners on behalf of the CREMA and its communities;
- Collect the revenue from the ecotourism (i.e. the treasurer of the committee) and distribute accordingly within the community.

**Table 3**  
Development phases of the Avu Lagoon CREMA, changes in land access and underlying mechanisms.  
Source: compiled based on fieldwork and McPherson et al. (2016).

Phase	Activities	Rights-based access	Illicit access	Structural and relational mechanisms
I	Establishment of the Avu Lagoon CREMA in 2006 as a community protected area. The development of the CREMA meant a restriction of livelihood options related to sugarcane production, subsistence agriculture and woodland exploitation within its area. Restriction and growing land scarcity for farming	Legal and direct access to land following traditional tenure rules	-	Mobilisation of discourses and narratives
II		Transfer of land rights	Gradual encroachment of the CREMA site by sugarcane farmers.	CREMA policy and access to sitatunga species
III	The CREMA was demarcated into two zones to delineate an accessible multipurpose zone and a restricted core zone.	Receipt of CREMA benefits	-	Access to authority and negotiation through social relations
IV	Weak enforcement of CREMA regulations and growing perception that these areas are more fertile.	Receipt of CREMA benefits Legal direct access to land in the multi-purpose zone	Encroachment of the core zone for sugarcane farming	Access to authority and negotiation through social relations

When defining the CREMA boundaries, the NGO, jointly with some selected community members, undertook a boundary demarcation to formally delineate the CREMA land. However, no compensation was paid to affected farmers, considering that the CREMA policy does not contain any explicit directives on compensation (Section 5.3.2). According to one of the interviewees, the process for establishing the Avu Lagoon CREMA was all-inclusive (CEC Chairman, Tosokpo, 15 September 2017). However, according to local community members, the actual process was characterized by discrepancies in participation, with some communities having limited participation (especially for women). In fact, most community members were informed about all these activities through the local announcement system.

Phase I essentially signifies a major change in access to land. Essentially it shifts the power to control land (and related decision-making) from individual farmers or from the chief as custodian of the land to the CREMA management (i.e. the CEC) (Table 3). Even though based on local representation, the CEC signifies the formation of a new elite within the community that has power over the CREMA land. It also plays an important role in both the CREMA operation and the re-configuration of local land politics (Section 5.3).

*5.2.2. Underperformance of ecotourism and unmet community expectations*

Very early on it became obvious that the ecotourism site would not be able to catalyse rural livelihood diversification and access to infrastructure and social services as initially expected. This was obvious both by the inability to attract a steady number of tourists and develop ancillary touristic infrastructure. For example, interviews with the CREMA management committee indicated that fewer than 15 persons visit the site each year since CREMA's initiation in 2006 (CEC Chairman, 15 September 2017). Also the household surveys, local interviews and FGDs with community members indicated that the promises of livelihood diversification and socioeconomic development have failed to materialize. As indicated by an FGD participant in Bludo:

“We do not see tourists coming to the area and even natives do not go there. The NGO promised that the CREMA will bring better roads and water to use but we are yet to see these benefits since 2006 – 2007”. (FGD, Bludo, 15 September 2017).

According to FGD participants, the major reason for this apparent failure to attract visitors has been the lack of proper publicity of the site. The management committee members corroborated that the Avu Lagoon ecotourism site was not listed in many Ghanaian tourism websites for a long time, reducing its visibility to the public (CEC Chairman, 15 September 2017).

The second reason relates to the poor infrastructure at the site, which does not make it attractive to either local and foreign tourists (Agriculture extension officer, Dabala, 17 September 2017). Visiting the tourism site is hampered by non-dependable transport through the wetlands and polluted rivers. On-site facilities such as bird-watching areas and accommodation are of poor quality. Interviews suggest that the poor state of infrastructure is largely due to the lack of dedicated funding for the project over the years (CEC Chairman, 15 September 2017). What is even more worrying is that the CREMA seems to have also failed to deliver its actual conservation targets. As a respondent in Bludo stated:

“In our area, we are interested in protecting sitatunga because they are sacred and you will see in the shrines that we have the bones of sitatunga. However, other communities still hunt for the sitatunga to appease the gods and others are encroaching the core zone areas for farming since the project started. Therefore, in the end, only one side is protecting, but the others are still destroying the area and the sitatunga. We hear the stories but we cannot do anything about it” (School teacher, Bludo, 14 September 2017).

### 5.3. Maturation of CREMA and emergence of land contestations

#### 5.3.1. Land scarcity, encroachment and zoning

As outlined above, the development of the CREMA entailed an extensive land consolidation process, which included the appropriation of a substantial amount of land previously used for sugarcane production (Fig. 1). As a consequence, the area currently available for sugarcane cultivation is less than 30 % of the sugarcane area available in the 1980s. At the same time, the ecotourism project did not offer the expected socioeconomic benefits (Section 5.2.2). This culminated in a series of interconnected land contestations due to land scarcity, illegal transfer of land, and encroachment, collectively leading to illicit land repossession within the CREMA,

At the same time many smallholders intensified sugarcane production and increased agrochemical use to compensate for the lost land, putting a further strain on the ecosystems that the CREMA was supposed to protect. This intensification has had important ramifications for sugarcane production, which remains the main livelihood option in the area. For example, one of the interviewees noted that:

“The excessive use of the lands has reduced soil fertility because we do not have land to leave for fallow. Because of the poor soils we cannot also perform ratooning, but rather every year we buy suckers and this increases the cost of farming” (FGD, Sugarcane grower, Dabala, 13 September 2017).

Following the CREMA CEC rules and constitution, it can be argued that some of the subsequent community land transfers happened through illicit means. Many of the “more powerful” community members lobbied the CEC through their social networks and relations to regain access to a portion of CREMA land for sugarcane farming. For example, the FGD participants in all communities generally agreed that there are illegal land sales within the CREMA, as well as encroachment by people purported to be linked to the chiefs and key persons of the CEC. Many FGD participants alluded that some chiefs and CEC members use their privileged position to undertake illegal land sales within the CREMA core zone area. For example, an FGD respondent in Tosokpo poignantly reflected this point saying that:

“We see them sitting under that trees, sometimes claiming that they are discussing the CREMA and sitatunga, but these same people are selling the land for sugarcane farming to their relatives and friends” (FGD, Tosokpo, 13 September 2017).

Other “less powerful” smallholders are repossessing land by encroaching the CREMA core zone area. An interviewee pointed the current state of disorganization in the following statement:

“Every time we hear or see some of the villagers entering the core zone area to farm sugarcane or even maize. The sad thing is that some of the members of the management committee are selling the land to their friends and relatives” (Interview Sugarcane grower, Tosokpo, 13 September 2017).

Overall, the performance of the CEC that represents the community and mediates the benefit-sharing<sup>7</sup> is seen as controversial. The rules for the CEC constitution, powers and tenure are unclear and have been a major source of uncertainty and discontent within the community. Many respondents indicated that the committee often behaves as a “de facto owner” of the land, illegally giving access to selected community members for sugarcane growing.

When perceived through the lens of the theory of access, the land encroachment characterizing Phase II signifies one more change in land access mechanisms. While during Phase I previous landowners and farmers lost their lands to CREMA (i.e. legal access), during Phase II

they gained land access through encroachment (i.e. illegal access according to the CREMA constitution). The primary mechanism through which this encroachment manifested was the use of social relations as some community members were better connected to CEC (Table 3). However, as the CREMA area essentially remains under community control (i.e. not transferred to the state), there cannot be enforcement control from outside agencies such as the police<sup>8</sup>.

Phase III signifies efforts to address the effects of land scarcity and illicit encroachment. With help of the development partners, zoning was undertaken to develop a multi-purpose zone and a core conservation zone. Some level of sugarcane cultivation and livelihood activities were allowed in the multi-purpose zone, while the core zone remained off-limits to agricultural activities and woodland exploitation. This restored to some extent the legal direct access to land in the multi-purpose zone that was lost during Phase I. However, the CREMA constitution and the zoning made certain activities such as bush burning within the CREMA illegal.

During Phase IV (at the time of the survey) the demand for more fertile land further increased in the area. As a result, we observed both legal direct access to land in the multi-purpose zone (i.e., granted in Phase III) and new forms of illegal direct access to land in the core zone (similar to Phase II) (Table 3), rendering the zoning regulations ineffective. Again, the underperformance of and the unmet expectations of local communities have primarily fuelled the core zone encroachment characterizing Phase IV.

#### 5.3.2. The lack of compensation as an underlying factor

Many sources suggest that the lack of compensation might be a major underlying factor behind the land dynamics seen during Phase III-IV. Essentially, the affected community members cannot be compensated by the state for the land lost due to CREMA establishment. This is because the CREMA policy does not have compensation mechanisms in place. One of the justifications for not paying compensation is that the land was taken in the interest of the community, although the zoning process was considered to be unfair, as suggested in the following statement:

“Some of the people did not agree to the zoning in terms of why much of their land is taken relative to the size of land taken from the other neighbours. The zoning was done by the whites. I think the best way is that we compensate the affected people and the landowners and then register the land in the name of the CREMA” (FGD, Tosokpo, 13 September 2017).

It is worth noting that this lack of interest to uphold the CREMA rules might be stemming from the fact that the CREMA is NGO-driven, rather than driven by the local government (Agriculture extension officer, Dabala, 17 September 2017). The NGO, following CREMA regulations, did not put in place compensation measures, but the local communities overwhelmingly perceive that if the local government was fully involved, then adequate compensation should have been paid. The Chief of Agboglo recalled the issues of compensation in the following statement:

“I think one of the problems why people are not doing the right thing is because the government of Ghana and the ‘white people’ have refused to pay compensation to affected persons. If government pays compensation and the land belongs to the state, many people will not encroach the area and also government will bring more resources to development the CREMA” Individual Interview: Chief of Agboglo, 16 September 2017).

<sup>7</sup> See Section 5.2.1 and Murray et al. (2018) and Wildlife Division (2004a) for main responsibilities and functions.

<sup>8</sup> For the same reason there are no provisions for compensation when consolidating community and private land for CREMA development (Section 2.5.2).

## 6. Discussion

The Avu lagoon CREMA entailed the transfer of 30,000 ha of private and communal land to develop a conservation area and an ecotourism site, essentially using market-based rationales and narratives to appeal to the local communities and muster their support (Section 5.1.2). A large fraction of this land was under sugarcane production, which although it was the most rewarding land-based livelihood option in the wider area, its economic returns were diminishing over time (Section 5.1.1) (Ahmed et al., 2019). Following the land consolidation into the CREMA, land management passed to a standing committee that increasingly treated it as a lucrative commodity to further own interests (Section 5.3.1). This, combined with the underperformance of the ecotourism site (Section 5.2.3), resulted in the emergence of local contestations and the eventual illicit encroachment of parts of the CREMA (Section 5.3).

Much like the Avu lagoon case, the overall CREMA policy has opened a new political space for the acquisition of hundreds of thousands hectares of communal land for the development of participatory and community-led natural resource management initiatives (Agyare et al., 2015; Asare et al., 2013). Even though individual CREMA initiatives have aimed to strengthen the involvement of local communities in such decisions (Wildlife Division, 2004a, 2004b), the architecture and inherent weaknesses of the underlying CREMA policy have led to the emergence of new institutions for land access and control (Murray et al., 2018; Murray and Agyare, 2018).

In line with the theory of access (Ribot and Peluso, 2003), we argue that the CREMA process reconfigured rights-based access to land (Table 3), basically catalysing major changes in the land right dynamics (Table 4). Individual land rights were lost during the consolidation process and the rules governing access to land were constantly revised, mediated by different structural and relational access mechanisms. Essentially the process described in Section 5 implies the evolution from legal and direct access to land (and the benefits it provides) under the traditional tenure system, to an indirect access to land through the receipt of benefits from ecotourism (via the CREMA constitution), to illegal direct access to land through encroachment, to a hybrid state of legal and illegal direct access to land (via zoning) (Section 5.3.1, Table 3).

In particular, before the development of the CREMA, the community had direct and legal access to private and common land, following the traditional tenure system in the wider area (Section 4.1, Table 4). However, the CREMA constitution, which laid down the rules and responsibilities for the different players, essentially re-wrote the rules governing rights-based access to land and the way its benefits are reaped in the CREMA area. It reconfigured the direct access to land to an access to the benefits provided by land through the eco-tourism project (Table 4). Increasing land scarcity and the lack of any formal compensation subsequently led to illicit negotiations of some

community members with the CREMA committee or the blatant disregard of the CREMA rules. Zoning regulations then provided legal rights-based access to land in the multi-purpose zone, but prohibited access to the core zone. However, eventually ever-growing land scarcity and dysfunctionality of the entire process led to instances of illegal land access in the core zone (Table 4).

Perhaps the most controversial aspect of this process has been the opaque mechanisms underpinning benefit-sharing. The CREMA policy stipulates (under Article 5.7.4) the benefit-sharing between the CREMA, District Assembly and Wildlife Division through the issuing of permits (Wildlife Division, 2000). However, it does not indicate or prescribe the actual fractions for these benefit-sharing agreements. These are decided on a case-by-case basis between the main partners within each CREMA. While we could not find official documentation of the benefit-sharing agreement in the Avu Lagoon CREMA, expert interviews suggested that 75 % of the income generated through ecotourism stays with the private partner, and 25 % with the local community. It can be argued that this ratio does not favour the local community, especially considering the underperformance of the eco-tourism site and the lack of any formal compensation due to the provisions of the CREMA policy. Their combined effect is possibly reflected in the low satisfaction of the local community with the socioeconomic outcomes of the CREMA, even during its early stages (Agyare et al., 2015). More importantly, the lack of clarity over how to transfer and share the generated income within the community has had multiple implications related to illicit activities and community representation.

It is worth pointing to the similarities of the CREMA process in Avu Lagoon with broader issues of community based-resource management and neoliberal conservation in sub-Saharan Africa (Büscher, 2013; Castree, 2008, 2010). First, the reconfiguration of local land politics implies the representation of local communities in natural resource management decisions without their proper participation (Ribot, 1996). Similar points have been raised for many different community-based natural resource management projects in Western Africa (Baruah, 2018; Ribot, 2003). Second, despite key differences between the modalities of CREMA ecotourism sites and neoliberal conservation initiatives, there are also some commonalities including the (a) assemblage of discourses to facilitate changes in land use, (b) involvement of new actors in land governance, and (c) development of new institutions and practices that collectively broaden the processes of commercialization, decentralization and nature commodification (Holmes and Cavanagh, 2016). These points have been highlighted throughout the text and have been exemplified respectively through the (a) adoption of win-win discourses to achieve buy-in from the local community, (b) involvement of external actors to delineate the land and develop the eco-tourism site, and (c) development of the CREMA committee that has the overall control over CREMA land and its benefits.

**Table 4**  
CREMA phases and shifts in land rights.

Phase	Land rights
Pre-CREMA	Legal and direct use of land on the basis of inheritance and share-cropping arrangements. Individual and family land holdings were the major forms of land ownership. Usufructuary rights and shared tenancy arrangements were the main forms of land rights.
CREMA phase	<p>CREMA development</p> <p>Signifies move from direct access to land to access to benefits from land. The individual and family land (and rights) falling within CREMA boundaries were transferred to the CREMA. This land was designated as community land solely for conservation and for the benefit of the community, and was overseen by the CREMA management committee. The individual farmers lost their usufructuary rights and shared tenancy arrangements. Instead, they were entitled to ecotourism benefits that did not materialize. Land rights remained unchanged for the land outside the CREMA boundaries.</p> <p>Zoning</p> <p>Guarantees legal access to the multi-purpose zone designated to accommodate certain livelihood activities. The CREMA committee granted individual farmers access to this multi-purpose land, but usufructuary rights were not fully restored. The land in the core CREMA zone was still designated for conservation purposes.</p>
Post-conservation phase	Contestations over land scarcity led to illegal direct access to the core CREMA area through a quiet encroachment. Farmers illicitly use parts of the core CREMA zone land, but do not have usufructuary rights.

## 7. Conclusion

This study explored how local land politics have reconfigured following the development of a community resource management area (CREMA) and ecotourism site in the Avu Lagoon area in Ghana. It revealed the processes underpinning CREMA establishment and operation, the mobilised narratives, and the main CREMA outcomes. The CREMA establishment broadly entailed the transfer of private and common land to develop a community-based conservation scheme anchored in eco-tourism. This process altered drastically land rights and rights-based access to land, and has been characterized by a lack of meaningful local community participation. This has caused a trust deficit between the local community and an emerging conservation elite that manages this land following the CREMA constitution. Central to this situation has been the lack of clarity over benefit-sharing and land management, causing land competition for sugarcane cultivation, illegal land sales, and silent repossession through encroachment. These negative effects have been accentuated by the failure of the ecotourism project to catalyse livelihood diversification and deliver the expected positive socioeconomic outcomes.

The findings imply that before the current CREMA policy passes into law, proper mechanisms should be put in place to safeguard livelihoods and compensate affected people. These will most certainly require radical changes in land and natural resource governance, including paying due attention to community participation and the balance of power between local elites, external actors and local communities. Below we offer three recommendations to improve the effectiveness of CREMA processes and reduce their negative outcomes.

First, in order to prevent permanent transfer of control over community land to local elites and external interests (e.g. tourist operators), it would be necessary to create internal processes within the CREMA constitution to either provide alternative land to affected farmers, or compensate community members who lost land during CREMA development. Such compensation can possibly prevent illegal encroachment by those who lost their land. As the government is not liable to provide this compensation, part of the CREMA income should be redistributed to this end through some external overseeing both due to possible lack of capacity within community and the real possibility of elite community members manipulating compensation processes.

Secondly, the failure of CREMAs in delivering positive socioeconomic outcomes, suggest the need to both reconsider the possibility of allowing limited development activities within CREMAs from the onset (e.g. agricultural production) to ensure their successful operation, as well as putting in place appropriate exit strategies if CREMAs underperform. Dedicated funding and exit strategies could also assist planning and potentially ensure that CREMAs meet their multiple promises to local communities. Developing the capacity of local communities to both maintain the existing projects and finding new options would be instrumental in that regard.

Thirdly, there is a real need to enhance the inclusivity of CREMA processes by strengthening the relationship between the organisations involved in CREMA development and management, including the traditional authorities, community elites, management committees and local communities. In our view, this will require the formalization of those CREMA processes related to stakeholder coordination, communication, information-sharing and disclosure, benefit-sharing, as well as the strict enforcement of the CREMA constitution.

### CRedit authorship contribution statement

**Abubakari Ahmed:** Conceptualization, Methodology, Investigation, Software, Validation, Formal analysis, Data curation, Writing - original draft. **Alexandros Gasparatos:** Methodology, Resources, Writing - review & editing, Supervision, Funding acquisition.

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## Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.landusepol.2020.104786>.

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