



Drastic changes are needed in the cocoa sector to halt deforestation in Ghana

Overview

This policy brief analyses the underlying drivers of cocoa encroachment in the High Forest Zone of Ghana. It is based on literature review, analysis of satellite images in Krokosua Hills, Sui River and Tano Offin forest reserves; and participatory rural appraisal (PRA) in seven fringe communities. The three reserves, form part of the six Hotspot Intervention Areas (HIAs) under the Ghana Cocoa Forest REDD+¹ Program. The results showed that there has been massive deforestation in the three reserves (a seven fold increase) after 2010 compared to before 2010 (Figure 1). Agriculture expansion, especially cocoa encroachment in forest reserves, rising population, illegal logging, extraction of wood for fuelwood, mining and mineral exploitation have been identified as the key drivers of deforestation in Ghana (MLNR, 2012). Cocoa encroachment

in forest reserves are primarily driven by population growth, low cocoa productivity per unit area and inadequate cultivable land for cash crop and subsistence farming.

Past and present governments in Ghana have not had the courage to deal with cocoa encroachment in forest reserves due to the commodity's contribution to the economy and the extent of encroachment. Ghana will lose more forests to cocoa encroachment in the coming years if "a business as usual approach" in forest management/governance continues. The cocoa industry can help address the problem by supporting the Forestry Commission, financing reforestation programmes and supporting implementation of the National Resettlement Framework under REDD+.

¹ REDD+ stands for countries' efforts to reduce emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks.

Krokosua Forest Reserve



Area of deforestation

2001-2010	2010-2019
1,572 ha	15,066 ha

% of forest loss

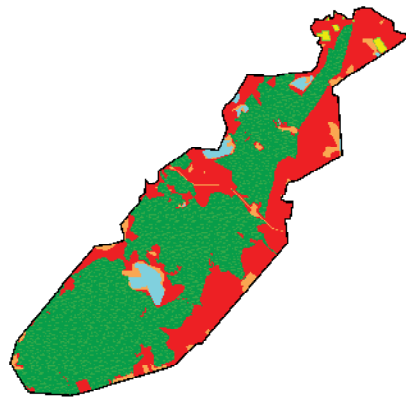
2001-2010	2010-2019
3.3	31.8

Annual def. rate

2001-2010	2010-2019
0.3%	3.5%

% closed forest remaining 2019
 ≈ 60%

Tano Offin Forest Reserve



Area of deforestation

2001-2010	2010-2019
1,694 ha	14,084 ha

% of forest loss

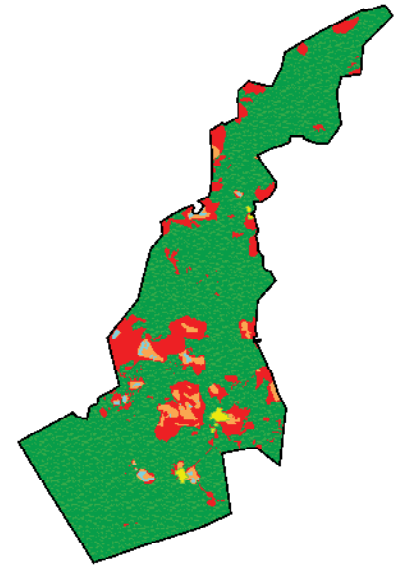
2001-2010	2010-2019
4.1	33.7

Annual def. rate

2001-2010	2010-2019
0.4%	3.7%

% closed forest remaining 2019
 ≈ 83%

Sui River Forest Reserve



Area of deforestation

2001-2010	2010-2019
956 ha	4,707 ha

% of forest loss

2001-2010	2010-2019
2.8	14

Annual def. rate

2001-2010	2010-2019
0.3%	1.1%

% closed forest remaining 2019
 ≈ 42%

Figure 1: Detected deforestation in Krokosua Hills, Sui River and Tano Offin Forest Reserves for the periods 2000, 2010 and 2019 respectively. Source: Najoui et al. (2019)

Background

Cocoa provides the raw material for chocolate, cocoa powder and other confectionery industries. It serves as an important source of income for an estimated five million smallholder farmers in cocoa-producing countries of Africa, Asia and Latin America (Cocoa Barometer, 2015). It contributes 30% to the gross domestic product of Ghana (GSS, 2019), and cocoa from Ghana represents 20% of globally produced cocoa (Bangmarigu and Qineti, 2018). Only US\$ 6 billion out of the estimated US\$ 100 billion total value of the cocoa industry went to the estimated five million smallholder farmers in 2014, while chocolate and cocoa grinding companies and retail received the greater share (Cocoa Barometer, 2015). Smallholder cocoa farmers have been left in abject poverty as a result of inequalities in the cocoa industry. Cocoa productivity per hectare has declined substantially in Ghana owing to ageing trees, poor farm management

practices, stressed cocoa stands resulting from removal of shade trees, the swollen shoot virus disease, ageing farmers with little or no training, inadequate investment in farms and insecure land tenure (Roth et al., 2017; Kroeger et al., 2017). Efforts to increase cocoa production in Ghana has therefore been at the expense of encroachment into forest reserves (Hansen et al., 2009). Areas outside designated forest reserves have mostly been converted to agriculture in general and to cocoa in particular (ibid).

In late 2017, the government of Ghana, through the MLNR, and 34 private sector companies jointly signed the Cocoa and Forests Initiative's "Joint Framework for Action" that states: "We, the Government of Ghana – through the Minister of Land & Natural Resources - and undersigned companies, commit to work together to end deforestation and promote forest protection and restoration in the cocoa supply chain in Ghana through this Joint Framework for Action". Despite these

good intentions, it is doubtful whether deforestation in Ghana's forest reserves was halted, motivating the need for a more detailed study on three selected forest reserves.

Although cocoa production is known to be the greatest contributor to agriculture expansion into forest reserves, knowledge on the context and drivers of its encroachment into forest reserves are limited. Such knowledge is prerequisite to review existing cocoa and forest policies and to inform and advocate for necessary reforms in the management of the cocoa forest nexus. This will also assist in the development of policy options to deal with expanding admitted and illegal farms in forest reserves and halting further encroachment.

Results of detailed studies in forest reserves

Drivers of cocoa encroachment into forest reserve

Cocoa encroachment into forest reserves are driven by proximate causes and underlying factors (Geist and Lambin, 2002). The proximate causes include low cocoa productivity per hectare, the need for cultivable land for food crop farming and the limited availability of land due to large area of land attributed to forest reserves. The underlying factors include demographic characteristics such as population growth, policy and institutional factors (e.g., lack of coordination among statutory agencies, insecure land tenure system, influence of chiefs, politicians and other elites,

non-enforcement of forest laws, and poor boundary markings of admitted farms) and technological factors (inadequate logistics and capacity of the Forest Services Division).

Low cocoa productivity

The results showed that cocoa productivity per unit area has reduced drastically over the years (Figure 2). Cocoa farmers members attributed the reduction in productivity to ageing cocoa trees, pests and diseases, exposure of trees to intense sunlight and inappropriate chemical application. An aged farmer at Kojina in the Juabeso Forest District of the Western North Region lamented that the 10 bags of cocoa beans he used to harvest on his 2ha cocoa farm in the late 1960s has reduced to three bags. Farmers therefore look for more land in forest reserves to compensate for decreasing productivity.

Lack of cultivable land

The number of forest reserves and total area of land put under forest reservation in a particular region or location has been blamed for agriculture encroachment into forest reserves. For example, a total of 33% and 59% of land area in the Sefwi-Wiawso and Juabeso Districts, in which Krokosua Hills and Sui River forest reserves are located. The off-reserve land has become inadequate due to population growth and influx of migrants (Figure 2) leading to forest encroachment for food crop and cocoa cultivation. The dominance of cocoa has resulted in insufficient land for food crops and this pushes some people to seek into forest reserves to plant both food crops and cocoa.

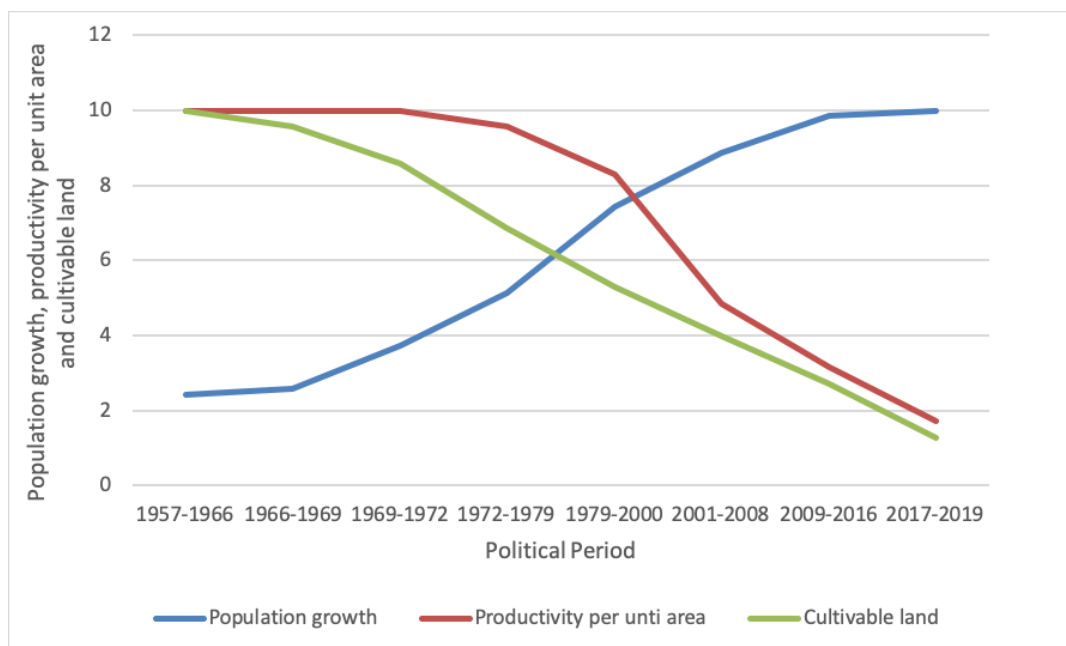


Figure 2: Perception on population growth, cocoa productivity per unit area and cultivable land obtained through PRA in seven study communities. Note: Figures on the vertical axis represent average perception of PRA participants on the three variables using a scale of 1-10

Population growth

The population of farmers in admitted and fringe settlements was limited during the creation of forest reserves, and that posed little or no threat to the sustainability of the reserves. The PRA exercises showed that the population of inhabitants of admitted and fringe settlements have increased by more than 500% in all the communities from the time of reservation to June 2019 (Figure 2).

Inadequate logistics and capacity of the Forestry Commission to monitor illegal forest activities

Illegal farming occurs both at the peripheries and deep inside forest reserves. Those deep inside the reserves are not easily detected by forestry staff who patrol the boundaries of forest reserves. An official of the Forestry Commission reported that the district offices of the Forest Services Division lack adequate transport and logistics to effectively patrol and monitor forest reserves.

Non-enforcement of forest laws

The laws banning farming in forest reserves are not enforced. Farmers whose farms have been admitted at the time of creation of the reserves and farmers from neighbouring communities do not strictly follow that legal provision as clearing happens regularly outside these farms. A Forestry Commission official lamented that court fines and sentences for illegal farming inside forest reserves are not deterrent enough. He stated that the fines do not prevent others from encroaching on forests.

Insecure land tenure system

The land tenure system in Ghana is complex and does not grant security of tenure to tenant farmers and indigenes without land. Many migrant farmers find the *abunu* and *abusa* share cropping system² to be cumbersome and demanding. They sneak into forests to plant food crops and cocoa although they consider their activities to be risky. They are motivated by unsatisfactory (re)negotiation of tenure agreement with chiefs (or landowners) and the failure by the state to evacuate previous culprits.

Influence of chiefs, politicians and other elites

Chiefs, politicians and other elites do not take action against, or even actively promote forest encroachment. Some chiefs in the Western North Region opposed the designation of their lands as forest reserves and openly sold demarcated forest reserves to migrant farmers in the 1960-70s (Amanor, 2005; England, 1993). Elites have been preventing and interfering in attempts by the Forestry Commission to arrest and prosecute forest encroachers. An official of the Forestry Commission recounted several instances where chiefs and politicians have pleaded not to prosecute arrested forest encroachers. Another official mentioned several instances where government ministers officials interfered in actions that sought to prevent encroachment.

The policy dilemma and its roots

Several interventions to halt cocoa encroachment in forest reserves in Ghana have failed due to their ad hoc nature and interference from politicians and other elites. In 1977, the Forestry Commission failed to use "Operation Halt" to stop cocoa encroachment in forests in the Western Region due to the decision by the Supreme Military Council to allow farming in forest reserves under its flagship programme, "operation feed yourself". England (1993) in a much-acclaimed study noted that the decision by past governments not to destroy matured cocoa farms has been identified as a loophole in the fight against forest encroachment.

The government of Ghana has committed to the CFI to halt further cocoa encroachment into forest reserves. The Forestry Commission has developed a Resettlement Policy Framework (RPF) under the REDD+ programme to resettle farmers and communities that may be displaced from forest reserves (FC, 2018). The RPF has been integrated into the National Implementation Plan of CFI but in effect not much has been done. Illegal cocoa farmers in degraded and highly degraded



2 A farmer after growing cocoa on a piece of land shares the produce equally with the landowner under the "abunu" system. The farmer takes one-third, while the landowner takes two-third under the "abusa" system.

forest reserves have been given a 25 years grace period during which their farms are to be integrated with trees using the modified taungya system (MTS)³. Interviewed representatives of CSOs, Research and Academia questions FC's ability to effectively implement this concession given that MTS has failed to restore some degraded forest reserves.

Discussion

Before 2010, encroachment in the three forest reserves existed but was under relative control. In the period since 2010 things clearly got out of hand and this study tried to understand what factors triggered this collapse. Through interviews with a wide range of local and national stakeholders this study has not been able to pin it down to one or two single direct or underlying causes. The general conclusion is that a complex set of

factors has led to the high degree of forest encroachment in a period of less than a decade. The policy recommendations are formulated through extensive informal consultation. However we don't think these recommendations by themselves will fix the problem.

Many of the underlying problems in the cocoa and forest sector are of a political, economic or cultural nature, including lack of clarity concerning land and tree tenure, corruption, as well as poverty, low productivity and demographic characteristics. Without addressing these problems, deforestation won't be tackled effectively. There is a great need for courage, determination, and strong incentives for change, to deal with conflicting interests to tackle these issues but without doing so the CFI will not be successful. To address underlying political and societal challenges it will require a willingness to create a deliberative process inclusive of all stakeholders.

Policy recommendations

1. The government of Ghana must openly recognise the extent of degradation of its forest reserves, assess their status and redefine management objectives and management regimes for the different categories of reserves.
2. Chiefs, politicians and other elites should be encouraged to lead the fight against cocoa encroachment in forest reserves. CSOs should lead the campaign to name and shame recalcitrant ones.
3. The private sector signatories to the Joint Framework for Action should finance forest restoration programmes in cocoa encroached forests.
4. The Forestry Commission should be equipped to enforce forest laws banning farming in forest reserves. The Commission should be provided with personnel and equipment to enable it undertake real time monitoring, patrol and enforcement of forest laws. CFI could provide financial assistance in this regard.
5. The government of Ghana must be bold in implementing the core actions in the national resettlement plan for admitted farms and settlement and take steps to mitigate social risks to minimize potential adverse social and economic consequences on farmers.

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3 The MTS is a forest plantation scheme that allows farmers to intercrop food crops with trees in degraded forest reserves.

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