

Climate-smart cocoa governance risks entrenching old hegemonies in Côte d'Ivoire and Ghana: a multiple environmentality analysis

Abstract

Smallholders in Côte d'Ivoire and Ghana supply over 60% of the cocoa to the \$120bn global chocolate industry. Like colonialists and multilateral banks before them, foreign chocolate corporations today attempt to govern the behaviour of smallholders in Ivorian and Ghanaian forests via a recent proliferation of 'climate-smart' cocoa (CSC) schemes. In this article, we seek to understand what is new and different – if anything – about contemporary, climate-smart governance of cocoa and forests. To do this, we apply and temporally extend Fletcher's 'multiple environmentalities' framework to classify the various techniques by which smallholder behaviour has been steered throughout the history of cocoa and forest governance, comparing the cases of Côte d'Ivoire and Ghana by drawing on interviews with 200 smallholders and documentary analysis. This framework parses diverse 'techniques of government' used to shape subjects' behaviour, including: sovereign (imposing laws), disciplinary (internalising norms), neoliberal (constructing material incentives), and liberation (emancipatory self-rule). We show that across all eras and in both countries – despite divergent political economies – smallholder behaviour has been predominantly governed by overlapping neoliberal and sovereign governmentalities, whose legitimacy has increasingly relied on reframing smallholders as environmental subjects. We demonstrate how smallholder voices remain marginalised and argue that corporate-led CSC schemes build upon and re-employ past sovereign powers (e.g., threatening to evict smallholders from protected forests), thus entrenching long-standing power asymmetries and overlooking critical differences between countries. Notably, cross-border corporate governance schemes ignore, and thereby (unwittingly) inflame, Ivorian violence and ethnoreligious strife.

Keywords: environmentality; cocoa; forests; neoliberal; Côte d'Ivoire; Ghana

1. Introduction

Cocoa thrives in the understorey of tropical forests (Asare et al., 2019; Asare and Ræbild, 2016; Rice and Greenberg, 2000). Accordingly, the chocolate industry has always depended on tropical forests and drawn on low-cost local labour to cultivate cocoa. Yet more than a century of extensive cocoa cultivation has contributed to widespread deforestation in Ghana and Côte d'Ivoire (Gockowski and Sonwa, 2011; Kouadio and Desdoigts, 2012; Ruf et al., 1996), with at least 80% of West Africa's original rainforest extent now an agriculture-forest mosaic (Hansen et al., 2020; Mayaux et al., 2003; Norris et al., 2010).

Ghana became the world's largest cocoa producer in 1911 (Asuming-Brempong, 2003), and was surpassed by Côte d'Ivoire in 1978, which has remained the leading producer since then (Assiri et al., 2015; Ruf, 1995). Today, an estimated 900,000 Ivorian smallholders supply 40-45% (Mota et al., 2019; Sanial and Ruf, 2018; Smith Dumont et al., 2014) and 800,00 Ghanaian smallholders (Akoto et al., 2017; Danso-Abbeam et al., 2014) supply ~20% of cocoa (ICCO, 2017; ICCO, 2016; Ingram et al., 2018) to the \$120-billion-dollar global chocolate industry (Zion Market Research, 2018). A typical smallholder tends to 2-5 ha (Morel et al., 2019; WCF, 2009) family smallholdings or rented parcels of land (Tsiboe et al., 2016). In both of these neighbouring countries, the chocolate industry is approaching cocoa's ecological ceiling determined by availability of abundant, fertile, exploitable forests (Léonard and Oswald, 1996; Odijie, 2019, 2018, 2016; Ruf, 2015; Ruf and Zadi, 1998; Sanial, 2018). Climate change now poses an additional pressure, since higher temperatures and erratic rainfall – particularly droughts – threaten cocoa yields (Läderach et al., 2013; Schroth et al., 2016).

To sustain cocoa supplies in the face of deforestation, land scarcity, and climate change, multinational chocolate corporations (often in partnership with governments) are developing climate-smart cocoa (CSC) schemes seeking to increase cocoa productivity without new deforestation. In 2011, a cross-sectoral CSC working group was formed which included Ghanaian government (Forestry Commission and Cocobod), private sector (Touton), and NGO representatives (Nature Conservation Research Centre). Although CSC began as a multi-stakeholder process in Ghana (Asare, 2014), Odijie (2018), Nasser *et al.* (2020), and Krauss and Barrientos (2021) have argued that foreign corporate interests have since come to dominate the agenda in the world's top two cocoa-producing nations, as chocolate corporations are attempting to address environmental and reputational threats to future cocoa supplies. Precisely the same corporate actors responsible for environmental destruction are now rallying to save forests (Fletcher, 2012; McAfee, 1999), positioning themselves as “the answer to their own ecological contradictions” (Büscher, 2012: 30).

Despite the new biophysical pressures of climate change and declining availability of cocoa-suitable forests (Schroth et al., 2016), cocoa cultivation remains predicated, as it has done since the colonial era, on two long-standing productive factors: access to tropical forests and low-cost rural labour (Allaire and Daviron, 2018; Daviron and Losch, 1997). This paper traces how these crucial productive inputs have been governed in Côte d'Ivoire and Ghana from the colonial years of forest abundance to the current conditions of relative land scarcity. Our intention is to identify how those imbued with power in the cocoa value chain attempt to steer Ivorian and Ghanaian smallholders' behaviour with

regards to their use of local forests, and how this compares (i) across each of the five eras outlined in Table 1, and (ii) between the world’s two largest cocoa-producing countries.

This comparison takes advantage of many similarities between the countries, which share similar resource endowments. Both countries have grown and exported essentially the same forest commodities for more than a century, and face the same biophysical threats with respect to climate change and deforestation. These similarities provide a natural experiment for exploring the effects of striking historical and socio-political differences between the countries, and the degree to which these differences are, or are not, being addressed in contemporary cocoa governance. In particular, we highlight differences in the level of centralised state control, ethnic strife, and trade liberalisation within each country’s cocoa sector. We elucidate the ways in which multinational chocolate corporations have tended to overlook these differences in their quest to sustain cocoa supplies.

Era	Ghana	Côte d’Ivoire
Colonial	1870s – 1957	1890s – 1960
State building following independence	1957 – 1983	1960 – 1981
World Bank & International Monetary Fund Structural Adjustment Programmes	1983 – late 1990s	1981 – late 1990s
Increasing corporate governance	Late 1990s onwards	
Climate-smart cocoa (CSC)	2011 onwards	

Table 1: the five eras we identify and consider when analysing cocoa and forest governance. The eras’ dates are not universally recognised, but broadly reflect the literature.

With chocolate corporations increasingly involved in driving the conduct of cocoa smallholders through ‘climate-smart’ and ‘zero-deforestation’ cocoa schemes, we seek in particular to understand what is new and different – if anything – about contemporary governance of cocoa and forests in the world’s top two cocoa-producing nations. Our analysis uses Fletcher’s multiple environmentalities framework (2017) which identifies distinct ‘techniques of government’ shaping human behaviour (Dean, 1996; Foucault, 1994: 93-94; Lemke, 2004) to create environmental subjects. We extend the temporality of Fletcher’s framework to compare governance in the contemporary, climate-smart era with past eras. Fletcher’s framework includes a bottom-up liberation environmentality which we use to help shed light on more socially-just alternative pathways for the future of cocoa cultivation, such as considering smallholders’ livelihood struggles and how they can be meaningfully embedded into CSC schemes.

2. Theoretical foundation

2.1 Foucauldian governmentality

Governmentality is a portmanteau concept combining governing (*gouverner*) and modes of thought (*mentalité*), which Michel Foucault developed in his *Collège de France* 1977-8 lectures to describe procedures and techniques used to guide and control others' behaviour (Dean, 1996: 47). Foucault wished to dispel the notion that state governments are the central institutions in power, since he deemed government to be broader than what sovereign states manage (Lemke, 2007). He considered states merely a 'symptom of government' (Nagy, 2018; Stenson, 2005) and that genuine "exercise of power consists of driving conduct (*l'exercice du pouvoir consiste à conduire des conduites*)" (Foucault, 1994: 237), i.e., any "form of activity aiming to shape, guide or affect the conduct of some...persons" (Gordon, 1991: 2).

Although the use of the term "neoliberal" has expanded manifold and been applied to myriad theoretical and disciplinary contexts (Venugopal, 2015), this paper adopts Foucault's view of neoliberal governmentality as constituting a single "*art de gouverner*" (Hache, 2007; Laval, 2018; Lemke, 2007, 2001) whereby one group of actors encourages another to act in accordance with the former's priorities through material incentive structures rather than through discipline, punishment, or sanctions (Foucault et al., 1991; Svarstad et al., 2018). This paper uses the term "neoliberal" in conjunction with "governmentality" and "environmentality", as Foucault and Fletcher have done. That is, it is used in the relatively narrow sense of using monetary and material incentives in contrast to other forms of social steering.

Foucault's posthumously published *La Naissance de la biopolitique* further distinguished neoliberal governmentalities from both sovereign (imposing laws and regulations) and disciplinary (fostering ethical norms for subjects to internalise) (Foucault, 2008). Sovereign and disciplinary governmentalities entail *internal* subjugation (whereby an individual must adhere to social norms or risk discipline and punishment), as opposed to a neoliberal governmentality, which leverages *external* material incentives (Lloro-Bidart, 2017).

2.2 Environmentality as behavioural influence within environmental governance

Although Foucault afforded no special weight to the environment as a realm of rule (Choi, 2020; Darier, 1999), or to non-human species (Fletcher and Cortes-Vazquez, 2020), the potency of Foucault's concept of governmentality is evinced by its wide adoption by environmental social scientists seeking to understand how pro-environmental behaviours are born, enacted, and how they either proliferate or are resisted. Building on Foucault's original governmentality concept, Luke (1995), Agrawal (2005a, 1999), Rutherford (2007, 2016), Cepek (2011), and others used the term 'environmentality' to denote efforts to influence behaviour with the aim of protecting environmental resources.

Agrawal (2005a&b) applied governmentality to environmental subjecthood to examine how, and why, rural Indians across 150 years “come to care about, act in relation to, and think about their actions in terms of something they identify as ‘the environment’” (2005a: 162). Agrawal’s 2005 work explicitly departed from Foucault’s preoccupations with control, discipline, and punishment by not engaging with “the friction and heat that discussions about Foucault’s ethics often generate” (2005a: 180), instead focusing only on Foucault’s disciplinary definition; the resulting behaviour detected by Agrawal was thus voluntary (rather than coerced) pro-environmental behaviour. Agrawal’s environmental subjects *internalised* environmental discourses, repurposed them into their own narratives, and voluntarily changed their behaviours. Such an optimistic expectation that a complete moral conversion to conservationism is possible (Poppe, 2012) has attracted criticism for ‘misreading ontologies of environmental subject formation’ (Cullen, 2020: p.424). Recently though, Foucauldian notions of power as producing “reality, ...domains of objects, and rituals of truth” (Foucault et al., 1991: 194) have gained prominence across environmentality literature (Ahlborg and Nightingale, 2018; Neimark et al., 2019; Svarstad et al., 2018). Rather than considering the environment only as a biophysical entity, environmentality scholars increasingly illuminate how the environment is also construed as a site of power (Rutherford, 2016; Zhang, 2018) where narratives are formed, pedalled, and reimagined (Luke, 1995) to exert influence over environmental subjects.

2.3 Multiple environmentalities

It is increasingly recognised that there are various possible reasons for an individual to change their behaviour towards nature, going beyond disciplinary internalisation. Accordingly, Fletcher (2017) formulated a framework that explicitly encompasses multiple environmentalities. These include three ‘techniques of government’ tracing how subjects are incentivised which were originally identified by Foucault, *viz.*, neoliberal, sovereign and disciplinary, with the addition of a liberation environmentality to denote environmental governance that prioritises social justice (Fletcher, 2010: 172). Liberation environmentality refers to locally-led environmental movements across the Global South often “more concerned with social and environmental justice than biodiversity preservation” (Guha, 2014: 178). Foucault’s governmentality analytic potentially overlooks cases in which subjects emancipate themselves as agents of self or collective governance (Cepek, 2011; Fletcher, 2019; Ostrom, 2010); although Foucault did allude to the possibility of emancipatory governance, adding that it did not exist in the mainstream, and that it “must be invented” (2008: 94).

In contemporary environmental governance literature, a sovereign environmentality is interpreted as the imposition of formal rules and regulations, with possible threats of punishment (Chambers et al., 2019). A disciplinary environmentality promotes compliance through a diffusion of ethical norms and values (Fletcher and Breitling, 2012), i.e. it attempts to normalise ‘doing the right thing’ (Lloro-Bidart, 2017: 1183; Luke, 1995).

In contrast, under a neoliberal environmentality, the conduct of subjects is manipulated by altering external material conditions (Chandler and Reid, 2016; Lemke, 2001) e.g. modifying cost-benefit ratios (Fletcher, 2010; Fletcher and Breitling, 2012; Schubert, 2017). In recognition of the meanings associated with the terms neoliberal, neoliberalism, neoliberalisation, we debated renaming this as a “material” rather than “neoliberal” environmentality, but ultimately chose to remain faithful to

Fletcher’s and Foucault’s terminology. Additionally, Fletcher’s neoliberal environmentality resonates with pervasive definitions and critiques of neoliberal conservation as ‘selling nature to save it’ (Apostolopoulou and Adams, 2017; McAfee, 1999) or Nature™ Inc. (Arsel and Büscher, 2012), i.e. applying market-based incentives to conserve the environment (Allen, 2018; Apostolopoulou, 2020; Matulis, 2017). Table 2 outlines a typology that serves as this paper’s analytical device for tracing differences in how smallholders change their behaviour in relation to surrounding forests.

Environmentality	Description
Sovereign	Subjects are compelled to obey sovereign will by abiding by rules or risk punishment
Disciplinary	Subjects comply following the internalisation of ethical norms and values
Neoliberal	Subjects’ behaviour is manipulated through material incentives
Liberation	Subjects emancipate themselves with the aim of achieving locally-led social justice

Table 2: Summary of the four Fletcher environmentalities that form this paper’s analytical body.

The intersection of multiple forms of environmentality within a single context was previously overlooked, although recent research has emphasised diverse governing logics being leveraged simultaneously (e.g. Anand and Mulyani, 2020; Bluwstein, 2017; Chambers et al., 2019; Choi, 2020; Cullen, 2020; Lloro-Bidart, 2017). However, Collins (2019a) points out that academics using Fletcher’s multiple environmentalities paradigm have thus far focused predominantly on i) a single timepoint, and ii) how a single contemporary intervention introduces “new forms of environmentality, overlooking the pre-existing, context-specific approaches to governance” (p.1) on which any new intervention builds. One clear merit of temporally-comparative perspectives is their ability to trace connections between contemporary environmentalities and those leveraged by actors imbued with power during previous eras. Following Collins (2019a), we expand the temporality of Fletcher’s multiple environmentalities paradigm to provide an in-depth examination into what is novel about contemporary, ‘climate-smart’ governance of cocoa and forests. Such historical application of the multiple environmentalities paradigm permits the illumination of precedents and facilitates the identification of “colonial residue” (Collins, 2019b) in governing tactics and of cases where colonisation processes are advanced rather than reversed (Dunlap and Sullivan, 2019).

This paper builds on the multiple environmentalities literature not only by temporally expanding Fletcher’s framework but also by situating the Foucault-inspired ‘conduct of conduct’ within site-specific contexts – namely the Ivorian and Ghanaian cocoa sectors – and comparing behavioural control within these contexts. We adopt this spatio-temporal comparison of multiple environmentalities to deepen understanding of how smallholders’ behaviour is shaped in the climate-threatened cocoa sector, and more generally to contribute to environmentality analyses.

3. Methods and materials

Our historical analysis draws on English- and French-language peer-reviewed literature, archived material, corporate documents, and NGO materials. For our appraisal of contemporary CSC, we gathered primary data and reviewed grey literature (given a dearth of peer-reviewed literature on nascent CSC) such as chocolate companies' documentation, CSC pledges, cocoa conference proceedings, and Ivorian and Ghanaian newspapers. Continuous online appraisal of relevant CSC materials provided additional data, as did insights and updates from colleagues in Ghana, as well as conversations at, and following, 2019's World Agroforestry Congress.

Our review of published and grey literature is complemented by primary data gathered by the lead author during five months of fieldwork in Côte d'Ivoire and Ghana. These data support our in-depth analyses in Sections 4.4 and 4.5 which probe recent and contemporary environmentalities *sensu* Fletcher (2010, 2017) as enacted and experienced in particular local contexts. Our sample included 200 cocoa smallholders of varied socio-economic profiles across six districts in two of Ghana's major cocoa-producing regions: the Central and Ashanti Regions; and four departments in two of Côte d'Ivoire's major cocoa-producing regions: Gôh and Nawa. Our research design included both smallholders who participated in sustainable cocoa interventions and non-participants to explore typical socio-economic profiles of each group (see: Chambers et al., 2019; Li, 2007; Svarstad and Benjaminsen, 2017). A subset of cocoa smallholders who farmed close to Kakum National Park in Ghana and Park Taï in Côte d'Ivoire was purposively sampled so we could learn about their experiences of living and farming nearby large intact forests, since avoiding deforestation is a key aim of CSC strategies.

Semi-structured interviews, household surveys, and focus-group discussions asked smallholders about their perceptions of shade trees, agroforestry, and (where applicable) intact forests; who or what had informed these perceptions; whether they derived benefits from forests; what they knew about sustainable or 'climate-smart' cocoa farming practises and if they implemented these, etc. We collated 200 different smallholders' lived experiences and heard from their standpoints how more powerful actors leveraged incentivising processes *in situ*. These empirical data shed light on the complex, situated, and power-sensitive nature of multiple environmentalities (Choi, 2020: 83). The lead author also made observations on cocoa farms and in adjacent villages, and conducted ten key informant interviews with actors higher up the cocoa value chain to understand which aspects of sustainable cocoa and CSC they prioritised, and how they attempted to disseminate sustainability practises to smallholders.

4. A spatio-temporal analysis of (environmental) governance in Côte d'Ivoire and Ghana

This section details salient episodes in the history of cocoa and forest governance in Côte d'Ivoire and Ghana, demonstrating how varying regimes have made little improvement to the livelihoods of cocoa-cultivating smallholders. Each subsection focuses on one era in Table 1, parsing the 'techniques of government' (as outlined in Table 2) leveraged to steer smallholder conduct, specifically regarding forest use.

4.1 Colonial era

The roots of contemporary state institutions for governing cocoa can be traced to the colonial era, when Europeans assumed roles at the top of the cocoa global value chain. Both Ghana (then the Gold Coast) and Côte d'Ivoire were colonised by foreign powers, who used a variety of means to assert their external authority over forest-dwellers and smallholders. The respective British and French colonialists even named these countries after some of the natural resources they extracted from them: gold and ivory. While literature (and indeed school curricula) has often highlighted the distinction between benevolent British 'indirect rule' versus the more centralised and authoritative French rule in their African colonies (Bivona, 1997; Bivona and Daniel, 1998; Etherington, 1976; Mantena, 2010; Robinson, 2019), an analysis of the origin of cocoa production and subject incentivising processes reveals a more complex and nuanced picture.

Cocoa was first established in the Gold Coast in the 1870s. Swiss missionaries of the Basel Mission at Akropong wanted to produce chocolate by shipping cocoa beans to Switzerland to mix them with milk from cows reared on Alpine pastures (Acquaah, 1999; Cidell and Alberts, 2006). These Swiss missionaries¹ constructed a cocoa cash economy as a material incentive (resembling what Fletcher would later classify as a neoliberal governmentality) to steer forest-dwellers into cultivating cocoa. In her seminal studies on Gold Coast cocoa farmers, Polly Hill deemed them not as peasants but rather as displaying "more in common with capitalists" (Hill, 1961: 209) since they invested capital, labour, and other resources in their farms attempting to increase yields. Our analysis, however, nuances studies which portray farmers as the primary drivers of cocoa expansion into forests by demonstrating how their conduct is driven by actors higher up the cocoa value chain. Despite the monetary incentives and legal frameworks favouring forest exports, foreign sovereign powers stifled the civil rights and choices of forest-dwellers and smallholders. In this way, various forms of both neoliberal and sovereign governmentality coexisted during colonial-era Ghana.

In Côte d'Ivoire, French colonial administrators first introduced cocoa to their colony some 15-20 years after its first commercial cultivation in neighbouring Gold Coast (Chauveau and Léonard, 1996). Cocoa was first cultivated on Ivorian territory by forced labourers on plantations (Banégas, 2006; Chappell, 1989); thus a sovereign governmentality – in the form of enslavement and forced

¹ Ghanaian folklore attributes Ghanaian cocoa's origins to Swiss Basel Mission apprentice, Tetteh Quarshie, who in 1879 brought cocoa seeds from Fernando Po.

labour – prevailed. From the 1920s onwards, French colonists finally ceased to practice slavery, after which material gain incentivised forest dwellers to cultivate cocoa. Despite the advent of this neoliberal governmentality², the rights and basic freedoms of Ivorian smallholders remained suppressed by French colonists' sovereign enforcement.

In contrast to early French authoritarianism, the prevalence of a neoliberal governmentality in the Gold Coast was complemented by Britain's assertion of a disciplinary governmentality through indirect rule. This system of indirect rule appeased some local chiefs and rewarded opportunistic chiefs who complied with the demands of colonial authorities (Asuming-Brempong, 2003). These state-chief relations were 'marriages of convenience' whereby the recognition of chiefly land rights was granted in exchange for unrestricted capitalism upon 'British African' territory (Grove, 1997: 152). In the Gold Coast, many forests were also vested in chiefs (Amanor, 2007: 212) and customary land tenure arrangements were legalised by British colonisers, enabling government-approved Gold Coast chiefs to retain certain forms of customary and tenurial authority.

In Côte d'Ivoire, however, French colonists considered that affording too much opportunity to locals threatened French authority, so remained deaf to indigenous attempts at self-rule (Colin et al., 2011, 2007). The French deemed an Ivorian holding traditional political authority, such as that of a King, to have nothing more than an honorary title; any real authority had to be delegated to him by a colonial administrator (Cercle d'Assinie, 1911). French colonisers claimed ownership of all unoccupied Ivorian land, overriding indigenous landholdings (Mitchell, 2011).

Yet is important not to overstate these differences between British and French colonial rule. Despite legalising customary land rights, the British colonial administrators also relied heavily on sovereign power to crush local opposition. For example, the British immediately shut down formidable indigenous opposition to British forest policies (Grove, 1997). One such set of attempts towards a liberation environmentality was the failed cocoa hold-ups by Gold Coast smallholders in the 1930s, where local struggles for fairer cocoa prices were quashed by British sovereign powers' command-and-control response (Beckman, 1976; Squicciarini and Swinnen, 2016).

4.2 State building following independence

The first country in sub-Saharan Africa to achieve independence from their colonisers was the Gold Coast in 1957 when Pan-African socialist Dr Kwame Nkrumah declared Ghana a new country. The excitement attending the birth of an independent African country was palpable not only in other colonised countries, but even in the United States where the civil rights movement was ascending (Du Bois, 2014). Nkrumah's struggle inspired other colonised nations to push for independence (Adotevi, 1973; Biney, 2008; Hodgkin, 1973). Just three years later, neighbouring Côte d'Ivoire broke from French rule.

² Throughout, we use neoliberal to denote an approach to manipulating behaviour through material incentives. We do not claim that these events in the 1920s onwards to be connected to broader processes of neoliberalisation with started later.

As both Ghana and Côte d'Ivoire embarked on building institutions as independent republics, these new republics drew on the existing sovereign and neoliberal governmentalities to govern forests and expand cocoa production into forests. Boundaries, regulations, and organisations guiding forest usage were now set by new indigenous political elites, instead of colonial administrators (Chauveau and Léonard, 1996; Haruna, 2018). Forest demarcation and protection were governed through sovereign authority, while market incentives were applied to the cultivation of forest commodities in both countries. Thus, despite post-colonial optimism as Ghana and Côte d'Ivoire created themselves as new independent states, the governmentalities leveraged in the colonial era persisted, while liberation in the form of smallholder rule remained absent.

In newly-independent Côte d'Ivoire, all state functions, including forestry, became heavily centralised (Boone, 1998). Newly-appointed Ivorian statesmen governed by offering material incentives before Ghana did (Bayart, 1989; Boone, 2007), positioning Ivorian territory as a ready market and “empty land” for opportunistic farmers to “make their fortune”: a “colony in reverse” (Crook, 1990: 28). President Félix Houphouët-Boigny governed rural behaviour through his 1963 ‘land enhancement’ decree, stating ‘land belongs to anyone (including migrants) who can enhance the value of that land’ (*la terre appartient à celui qui la met en valeur*). Houphouët-Boigny’s government repeated (and accelerated) the French colonial administration’s prioritisation of exploiting forests for exportable products rather than supporting subsistence crops (Banégas, 2002; Chappell, 1989), thereby marginalising rural people and jeopardising their food security. The Ivorian economy thrived, largely driven by the export of three forest commodities: cocoa, coffee, and timber (Koné, 1993). Over time, more farmers – Ivorian as well as migrants from Burkina Faso, Mali, and Guinea – were incentivised by material benefits they could earn from cocoa, and thus moved into Ivorian old-growth forests and began planting in the understorey. This culminated in 1978 when Côte d'Ivoire became the world’s largest cocoa producer (Assiri et al., 2015; Ruf, 1995): a position it has retained for 43 years.

Côte d'Ivoire’s first President remained loyal to France until his death in 1993. Félix Houphouët-Boigny served the former coloniser’s needs through a *Françafrique* policy by employing French technicians to help him administer his government and encouraging French investment (Diarra, 1997). McGowan et al. (2020), Taylor (2019), Verschave (2006) and others have labelled *Françafrique* policies and praxis which actively attracted and favoured the business interests of the former coloniser country as neo-colonialism: a concept abhorred by Ghana’s first Prime Minister Kwame Nkrumah whose seminal book lamented that neo-colonialism is “*foreign capital ... used for the exploitation rather than the development of the less developed parts of the world*” (Nkrumah, 1965).

Across the border upon Ghanaian territory, Nkrumah aspired to reverse all forms of imperialism and show the world that Africans could thrive independently. Nkrumah intensified agriculture, substituted imports with domestic production, and encouraged subsistence agriculture under the ‘Grow what you eat’ policy (Kuu-Ire, 2009). Nevertheless, intensifying agriculture increased the use of fertiliser and hybrid seeds which needed to be imported. Financing these imports necessitated foreign currency earnings; accordingly, cocoa production and exports were promoted. By the late 1960s, the same government that had earned enormous popular support by championing self-sufficiency was now

pursuing an export-oriented, agro-extractivist model. This new Ghanaian administration, per the colonial administration before them, prioritised producing industrial crops for European manufacturing by neglecting non-commercial and staple food crops (Asuming-Brempong, 2003), despite their rhetoric of no longer serving former colonialists. Local needs remained subordinate to macroeconomic management seeking to balance unfavourable global trade terms, which all came at the expense of forests as cocoa production expanded.

Steadfast to Nkrumah's intention of finding "an African solution to our problems" (Nkrumah, 1961), the replacement of foreign bureaucrats with locals was particularly fervent and popularly known as 'Africanisation' with Ghanaian nationals assuming roles in the civil service's upper echelons (Adu, 1965; Haruna, 2018). However, Africanisation only benefited Ghana's elite upper class of administrative clerks, and failed to advance rural cocoa smallholders' self-governance. Even though Ghana was ruled in this period by socialist, emancipatory, and anti-colonial rhetoric and policies, with respect to our area of study – socially-just governance in the cocoa sector – there were only piecemeal improvements.

Whereas decolonised Ghana was first led by a socialist emancipator, Côte d'Ivoire was first led by a French loyalist. Yet irrespective of the divergent ideologies guiding their macroeconomies, both countries continued to produce the dominant proportion of global cocoa, while cocoa smallholders continued to be denied self-determination through a liberation governmentality (Losch, 2000). With respect to smallholder livelihoods, the situation deteriorated in both countries as the terms of trade gradually worsened and cocoa's global market price declined (Mitchell, 2012). By the late 1970s, the Ghanaian and Ivorian rural economies were struggling with high inflation rates, low global cocoa prices, and new competition from Indonesia and Brazil who had entered the market as significant cocoa producers (Afoakwa, 2014; Kaplinsky, 2004).

4.3 Structural Adjustment Programmes (SAPs)

In a struggle to slow this economic downfall brought about by declining global cocoa prices, the Ivorian government was first to succumb to pressure from multilateral banks in 1981 by incorporating several SAPs (Faure, 1992). The Ghanaian government followed suit shortly after by initiating an SAP Economic Reform Programme in 1983 (Asuming-Brempong, 2003) to curb inflation rates above 100% (Konadu-Agyemang, 2000). The era of the World Bank and International Monetary Fund's (IMF) Structural Adjustment Programmes (SAPs) is often characterised as the onset of a deepening and increasing 'neoliberalism' ideology of 'free trade', characterised as the rollback of sovereign authority to increase finance, goods, and services across borders in the service of economic growth.

Any government wishing to acquire loans from these multilateral finance institutions had to adhere to the SAP condition of privatising their economies. Amo-Agyemang posits that the conditionality of loans embedded in these SAPs is best captured as a neoliberal governmentality (2017: 12). Yet SAP conditionality also functioned, to some extent, through a disciplinary governmentality, because participating governments had to foster and share the multilateral lending banks' economic

ideologies. The Ghanaian and Ivorian governments exhibited such discipline by relinquishing some domestic regulatory authority and agreeing to be administered and reformed.

The resulting governmentalities and governance outcomes were broadly similar across both Côte d'Ivoire and Ghana in this era, because the SAPs were mandated from the same multilateral lending banks whose homogenised reforms and enforcements included: removing agro-input subsidies; privatising agro-input suppliers; liberalising exchange rates (Asuming-Brempong and Breth, 1994); discontinuing guaranteed farmgate prices; and reducing agricultural extension staff (Asiedu-Saforo, 1989). Macroeconomic privatisation and market liberalisation rules enforced by the World Bank and IMF can be seen as a sovereign governmentality over both countries' governments.

However, there was one important defiance: Ghana retained control over cocoa's farmgate prices. Despite pressure from the World Bank and IMF, Ghana's cocoa sector was only partially liberalised because the Ghanaian government sought to retain some control over its principal agricultural export that provided foreign exchange earnings to the state (Williams, 2009). Despite sovereign threats of punishment, Ghana challenged the IMF and Bank's 'One Size Fits All' development model by refusing to dismantle their parastatal cocoa marketing board which they believed would enhance smallholders' output (Ofosu-Asare, 2011) and protect their incomes against international price fluctuations (Quarmin et al., 2014). To this day, the Ghanaian state – through its cocoa board, Cocobod – sets an annual pan-territorial and pan-seasonal cocoa price, thus commanding a monopsony on export (Laven, 2010; Vellema et al., 2016). Côte d'Ivoire, in contrast, adhered to SAP stipulations by dismantling their price-setting regulatory body, *la Caisse de Stabilisation*, in 1999 (Berthomé et al., 2003; Ul Haque, 2004).

However, price setting by Ghana's parastatal Cocobod has proved insufficient as a means of maintaining economic independence because SAPs have led to the loss of many other degrees of government control over cocoa, including decimation of state agricultural extension services; e.g. in Ghana, Cocobod staff were reduced by 90% in the SAP era (Roe et al., 1992). In both countries, liberalised exchange rates meant high costs of imported inputs (e.g., fertiliser, pesticides, seeds, and machinery), making it difficult for smallholders to acquire these essential inputs; consequently, cocoa productivity decreased. Beyond Cocobod's setting of a pan-territorial and pan-seasonal cocoa sale price, by the late 1990s all other interventions in Ghana's and Côte d'Ivoire's cocoa and forest sectors adhered to the World Bank's 'poverty reduction' strategies of improving commodity productivity, integrating into global markets, formalising property rights, and inculcating market logic into smallholders (Bernstein, 2002; Purcell, 2018).

Despite Côte d'Ivoire and Ghana taking divergent approaches to SAP-dictated market liberalisation by adopting different forms of price-setting, the net effect of cocoa and forest governance appears similar across both nations, ultimately shaped by the worldwide shift of governance from local and national to globalised commodity markets, which has resulted in an increasingly financialised cocoa value chain (Carodenuto, 2019; Losch, 2001). Following SAP mandates, state government power has continually diminished in both countries, ushering in new power structures and creating the institutional conditions for corporate power to intensify. The SAPs' market liberalisation facilitated vertical integration in the cocoa value chain whereby international cocoa traders took control of

operations further down, at the processing level (Ould, 2004). Liberalisation thereby enabled domination by an oligopoly of multinational corporations which disadvantaged local exporters against powerful corporations (Audibert et al., 2010) that additionally benefited from agro-commodity speculation (Salerno, 2017).

As World Bank stipulations to restructure economies through more privatisation and liberalisation of foreign exchange rates took effect, cocoa continued to expand into the forested areas of both countries. While definitive deforestation data are lacking (Leach and Fairhead, 2000), between 1980 and 1990, Côte d'Ivoire lost an estimated 1.1% of their forests annually while Ghana lost 1.5% annually (FAO, 1993). Adhering to SAP liberalisation has also been associated with greater competition for power and natural resources (Berry, 2009) including unintended and unexpected territorial effects, such as resurgence of Ivorian regional conflict and two civil wars. Boone (2007) argues that market liberalisation weakened the Ivorian central state's formerly strong distributive role, in turn causing territorial competition that exacerbated land disputes and ethnoreligious violence between migrant and autochthonous farmers (Chauveau and Bobo, 2005; Kassoum, 2019; Woods, 2003).

4.4 Increasing corporate governance and the birth of environmentalism

By the late 1990s, concerns were mounting over the threats to cocoa from climate change, deforestation, and declining availability of suitable lands (Krauss, 2018; Läderach et al., 2013; Schroth et al., 2016). Chocolate corporations responded by shifting towards a sustainability imperative, forging consent from West African partners to develop a more socially- and environmentally-responsible cocoa value chain (Muilerman and Vellema, 2017; Shapiro and Rosenquist, 2004). This required recasting cocoa smallholders' livelihoods as an environmental issue of mitigating further forest loss: a marked contrast to the previous two eras of anyone being allowed to use Ivorian and Ghanaian forests to make a livelihood cultivating a commodity. Steering smallholders' behaviour towards conservation required new eco-logic definitions of forests to emerge and gain sufficient recognition for an environmental citizenry to form (Peluso and Vandergeest, 2001). An apparatus was needed to inculcate new sustainability norms and values in smallholders – now framed as environmental subjects – so that they would regulate their use of forests for cocoa cultivation (Anand and Mulyani, 2020). Two such apparatuses leveraged increasingly since the late 1990s in both countries are voluntary, third-party certification and corporate 'sustainable cocoa' programmes (Ingram et al., 2018).

Regulations and requirements within third-party certification and corporate sustainability programmes are often homogenised across national borders and imposed from the Global North. Thus, both the preceding era and this increasing corporate governance era exemplify internationalised governance with accordant broadly similar outcomes across both countries. From this era onwards, there have been more attempts by global chocolate companies to harmonise cocoa and forest governance across the two countries. International certification programmes and corporate sustainability programmes seek to incentivise smallholders to cultivate cocoa in ways that are beneficial to i) forests, ii) the wider

ecosystem, and iii) the continued production of cocoa in West Africa³. Central to these apparatuses is the expectation that producers manage natural resources sustainably while seeking new ‘sustainable’ market opportunities (Bresnihan, 2019: 156). In our interviews and analyses of certification criteria and sustainable cocoa training manuals, it emerged that in order to steer smallholder behaviour in this way, these new governing institutions rely on a combination of: disciplinary appeals (i.e. educating smallholders about sustainable agriculture and agroforestry by making ethical appeals about the ‘right’ way to farm), neoliberal approaches (i.e. offering price premiums, loans, or gifts to farmers who comply with relevant criteria), and to a lesser degree sovereign threats (i.e. cautioning smallholders about penalties for breaking formal rules and national environmental laws). Thus, multiple environmentalities work in tandem to steer smallholder use of natural resources; however, a liberation environmentality remains absent.

A major corporate sustainability programme in both Côte d’Ivoire and Ghana was the Cocoa Livelihoods Program (CLP) which ran from 2009 to 2014, requiring participating farmers to complete the programme’s Farmer Business and Field Schools before granting them access to credit (Tsiboe et al., 2016), thereby echoing at a local level the neoliberal-governmentality conditionality of World Bank and IMF loans. Diegert *et al.* (2014) interviewed CLP participants and found no evidence that farmers who received CLP training experienced increased cocoa yields. However, the majority of farmers interviewed concluded that because of the training, they had learned improved production practices which could potentially lead to higher yields over time (*ibid.*). During our own fieldwork, we often encountered this motivating logic of *potential* productivity gains, with extension officers and training materials highlighting the value of conserving forests, practicing agroforestry, and practicing other sustainable agriculture practices for increasing cocoa productivity. Positioning forests’ value in terms of services they provide resonates with neoliberal logic and neoliberal environmentality by justifying environmental action “in terms of cost-benefit analyses” (Fletcher, 2015: 340).

Indeed, in a study of Rainforest Alliance cocoa in Côte d’Ivoire, Lemeilleur *et al.* argue that certification is perceived by smallholders mainly as a “productivity-enhancing tool” (2015: 310) rather than a system to achieve sustainability. This perception was echoed, for example, by an Ivorian smallholder we interviewed: “*I welcome productivity training and guidance against future pressures. I used to grow plantain for food, but now [after corporate programme] I see plantain’s use for shading cocoa. Hard work pays off.*” Such participation without internalising the intervention’s underlying environmental benefits may suggest only a partial success for disciplinary environmentality in conservation interventions, in that participants may fully comply yet privately debate the imposed intervention’s usefulness (Cepek, 2011; Poppe, 2012). Overall, our interviews found that farmers’ pro-forest and pro-shade-tree behavioural changes were less motivated by ecological discourse, and more by a neoliberal environmentality of the potential to increase yields and/or bolster their farm’s climate resilience. This is consistent with the ‘sustainable cocoa’ training manuals we consulted that position sustainable agriculture and agroforestry practices first and foremost as yield-enhancing, with wider, longer-term ecosystem benefits being secondary. In the manuals, disciplinary and neoliberal environmentalities are leveraged in concert: the discourse positions agroforestry as the ‘right thing to

³ Although some certification programmes’ primary focus is guaranteeing farmers a fair price, e.g., FairTrade.

do’ (which smallholders internalise as a new norm), while agroforestry is simultaneously externally rationalised as a potential source of increased income.

New subjectivities, behaviours, and discursive norms about the environment (specifically about forests and shade trees) emerged in this era, but only among smallholders participating voluntarily in certification or sustainable cocoa schemes. However, as it is estimated that the two countries combined lost a further 2.3 million ha of forest *to cocoa cultivation alone* between 1998 and 2007 (Gockowski and Sonwa, 2011; Kroeger et al., 2017), the global chocolate industry currently seeks a landscape-wide initiative enabling *all* Ivorian and Ghanaian cocoa farmers to become environmental subjects and forest protectors. It is to this ‘climate-smart cocoa’ that we now turn.

4.5 Climate-smart cocoa (CSC)

4.5.1 Defining CSC

Building on voluntary corporate sustainable cocoa programmes, climate-smart cocoa (CSC) is an umbrella term for supply-chain initiatives that seek to address sustainability challenges in cocoa production (Nasser et al., 2020). Many of the actions promoted under CSC – such as tree planting, training farmers, and promoting traceable cocoa – are similar to previous strategies. However, CSC departs from the preceding era’s certification and individual corporate schemes in at least two respects. Firstly, by coordinating governance at a landscape level, rather than at the individual farm level (Asare, 2014: 30), CSC eschews a singular focus on intensification that could promote further expansion and deforestation. Secondly, it attempts to create an ecological citizenry among the entire Ivorian and Ghanaian smallholder populations, whether by voluntary or coercive means. Global chocolate corporations’ imperative to arrest deforestation to secure cocoa supplies has risen to the top of CSC’s agenda (Camargo et al., 2019; Carodenuto, 2019; Nelson and Phillips, 2018; Odijie, 2018). Under the CSC narrative, forest significance is framed in terms of two tree functions: providing shade to cocoa and balancing ecosystem health in degraded cocoa landscapes. CSC’s zero deforestation target represents “ecosystem-service-focused conservation” (Collard et al., 2015: 324) rather than conservation for biodiversity’s sake.

While CSC does not refer to any single apparatus or initiative, the Cocoa & Forests Initiative (C&FI) is one of its flagship initiatives which launched in March 2017, when the Prince of Wales hosted 12 of the world’s leading cocoa and chocolate companies, along with a few Ivorian and Ghanaian senior government representatives, who agreed to together address deforestation in the cocoa value chain. Then in November 2017 at COP23 in Bonn, 34 corporations accounting for 85% of global cocoa production pledged to end deforestation and forest degradation in the cocoa supply chain. These two meetings are emblematic of how modern cocoa governance has become tightly spatially- and sectorally-centralised (Gallemore and Munroe, 2013) among an oligopoly of powerful chocolate companies from the Global North (Krauss, 2018).

An alternative pathway which could displace such corporate and foreign dominance by enhancing local participation and eventually smallholder voice has been proposed in Ghana. Their national

strategy for Reducing Emissions from Deforestation and Degradation (REDD+) aims to embed rule-making power in regional multi-stakeholder governing boards, including local government and community leaders, and to use the pre-existing CREMA (Community Resource Management Area) mechanism to implement local CSC interventions (GCFRP, 2017). Inspired by Elinor Ostrom's work on the effectiveness of collective governance by "users themselves" (Royal Swedish Academy of Sciences, 2009) who she theorised hold the strongest incentive to get the solution right (Mansbridge, 2014; Ostrom, 1990), Ghana's CREMA mechanism aims to devolve a degree of authority to communities to manage natural resources (Agrawal, 2005, 1999). Yet similarly to certification and the C&FI, over-arching Ghana's REDD+ strategy is an externally defined disciplinary environmentalism that aims to harness local participation to meet the global goal of reduced forest carbon emissions.

4.5.2 Sovereign environmentalism supplanting voluntary behavioural change

Despite the advancement of the CREMA model in Ghana which may potentially pluralise CSC's objectives away from the sole target of eradicating deforestation, the international C&FI in particular remains singularly focussed on its pledge to eradicate *all* new deforestation from the Ivorian and Ghanaian cocoa supply chains. In order to realise the C&FI's aim of a compliant ecological citizenry, Ivorian and Ghanaian cocoa smallholders will need to harmonise their behaviour with this zero-deforestation pledge. But today's 1.7 million Ivorian and Ghanaian cocoa farmers are not employed under the authority of any direct bosses (and never have been, although as noted in Section 4.1, some farmers were enslaved during the first decades of Ivorian cocoa cultivation). Increased self-policing diminishes the need for coercive governance (Dean, 1999); however, resources and infrastructure to deliver disciplinary environmentalism training via (state and corporate) extension programmes remain piecemeal in both countries. Although both postcolonial governments attempted to offer extension services at scale, the SAP privatisation reforms necessitated huge reductions in state extension officers (see Section 4.3) which has weakened the exercise of disciplinary techniques of government. Currently, state extension services are inconsistently delivered; instead, many smallholders attempt to rely on a bricolage of information from elsewhere (Maguire-Rajpaul et al., 2020; Tsiboe et al., 2016). But without adequate extension, blanket pledges to rid a commodity's supply chain of deforestation may rely on sovereign, exclusionary forest conservation in ways which risks imperilling the livelihoods of farmers dependent on forest access. As one Ivorian smallholder related to us: *"Cocoa is the main source of income round here [...] none of us have any other source of income. If I can't harvest my cocoa trees as before, I must find a solution to support my family. If I can't grow cocoa where I have before, then I must replant. But where? Land is not infinite."*

One emergent approach to implementing landscape-level CSC that dominates corporate communications is satellite monitoring of tree cover (particularly protected forests) to create cocoa traceability maps (Mars, 2020). However, this faces several issues. Tree canopies and the fine spatial scales of smallholder cocoa farming make it extremely difficult to differentiate from forest using remote sensing techniques (Moore et al., 2019; Ordway et al., 2017). As traders often buy cocoa beans already collected from varied sources, identifying producers and corresponding farms can be unfeasible. Nevertheless, in May 2021 the C&FI's Progress Reports state that Ghana has reached 82% and Côte d'Ivoire 74% traceability of direct cocoa sourcing (IDH, 2021a, 2021b; WCF, 2021).

Here again, Ghana's proposed alternative approach to CSC could potentially address some traceability issues more and make the process more inclusive by promoting the use CREMAs' peer-check systems and community-based reporting (Asare, 2014; GCFRP, 2017). While there is mixed evidence on the success of CREMAs thus far, especially with respect to the distribution of access to decision-making platforms, benefits, and elite capture (Ahmed and Gasparatos, 2020; Baruah et al., 2016), they do assign some sovereign environmentality enforcement to smallholders (Agrawal, 2005; Cepek, 2011). Rather than imposing external sanctions or threats of evictions, peer-check systems aim to make monitoring less intrusive and (given the imprecision of satellite imagery in cocoa agroforests) more accurate; shed light on smallholders' motivations for forest encroachment; and design locally-feasible solutions (Asare et al., 2013).

An additional issue impeding traceability of cocoa sourcing is unclear land tenure in both countries (Dieterle and Karsenty, 2020; Ruf and Varlet, 2017). Gaveau *et al.* (2017) impress the need for satellite data to be complemented with "extensive field investigations of de facto land ownership, claims and disputes" (p.257). Interventions to 'formalise' land and tree tenure laws since the SAP era have paradoxically reinvigorated highly localised traditional claims to land, authority (Berry, 2009), and in the Ivorian case to citizenship via the xenophobic Ivoirité (Ivorianness) narrative and policy that prioritises ancestral land rights to reinstate power and privilege to autochthonous Ivorians⁴ (Chauveau, 2000; Colin and Ruf, 2011; Woods, 2003). Intersecting tensions to simultaneously formalise land tenure and resurrect customary rule-making have resulted in each country's land being governed via a highly pluralistic legal framework (Asaaga et al., 2020; Woods, 2004). Moreover, ownership of cocoa farms (Asaaga and Hirons, 2019) and the timber trees shading them is complex (Hirons et al., 2018; Maguire-Rajpaul et al., 2020), meaning detecting who is responsible for felling trees is highly problematic. One anonymised Cocobod interviewee stated that "*a simple traceability map will never adequately reflect all the complexities on the ground*".

Despite myriad ambiguities, chocolate corporations are expanding their use of monitoring, reporting, and verification (MRV) technologies. Plans to produce traceability have side-lined smallholders and local communities; their imposition by outside actors thus contrasts with the previous era, when smallholders voluntarily signed up for MRV via certification and corporate sustainable-cocoa programmes. Without meaningful smallholder empowerment and representation, CSC governance risks repeating master-subordinate dynamics that began with colonial encounters and stretch into the present through sovereign environmentality practices, such as satellite supervision of forests and (in some cases) consequent eviction of smallholders from protected areas.

4.5.3 Exclusionary forest conservation in Côte d'Ivoire – a cautionary tale

One illustrative and very stark example of surveillance's adverse consequences by a strong centralised state government came in 2016 when the Ivorian forest management agency SODEFOR evicted 25,500 smallholders – almost all Muslim with Burkinabe heritage – from Mount Péko

⁴ Attempt to restore autochthonous power contributed to two civil wars, thousands of deaths (3000 in 2011 alone), and six aborted Ivorian elections.

National Park (Cissé, 2017; Pomarico, 2017). SODEFOR officers reportedly (RAIDH, 2016; Human Rights Watch, 2016) abused their authority, burning down entire settlements and plantations without sufficient warning or allowing smallholders to collect their belongings. Evictees suffered food shortages and malnutrition, and lost irreplaceable items such as ID documents, thereby hindering their post-eviction movements (WFP, 2017). The same farmers and their descendants who had been enticed to Côte d'Ivoire under Houphouët-Boigny's 1963 land enhancement decree have since been labelled "squatters" (Lyngass, 2016) cultivating cocoa "illegally" (Barima et al., 2016; Higonnet et al., 2017; Mitchell, 2014) following the reversal in 2000 of the 1963 decree, which was supplanted by xenophobic *Ivoirité* prioritising ancestral land rights. This left hundreds of thousands of principally Muslim cocoa smallholders – many of them second- and third-generation immigrants, whose parents and grandparents had enjoyed full voting rights – landless and stateless (Chauveau, 2008).

N'guessan et al. (2018), Pomarico (2017), and Wormington (2016) attest that the Mount Péko evictions violated basic human rights, since international law protects anyone who occupies land from forced evictions that neither provide adequate notice nor respect the dignity and rights of those affected, regardless of whether the land was occupied legally. Sovereign measures to safeguard the environment, including those undertaken in the name of CSC – e.g. designating areas as national parks or protected forests, whose origins lie in colonial 'fortress conservation' practices – may overlook social precarity, ethnic tensions, and underlying land disputes (Brockington et al., 2012; Buscher and Fletcher, 2020; Büscher and Fletcher, 2019; Hulme and Adams, 2001; West et al., 2006).

CSC's single cross-border policy to monitor supply chains, map, and threaten (deforesting, "illegal") smallholders results in very different outcomes across the two countries because of Ivorian ethnoreligious identity politics and fierce land disputes. This corporate governance directed from the Global North, involving a standardised set of prescriptions relating to intensification and law enforcement, ignores and thereby (unwittingly) risks inflaming Ivorian ethnic strife.

Even within Ghana itself and Côte d'Ivoire itself, legal pluralism means that existing land tenure arrangements deny many cocoa smallholders legal standing and full control over trees on their own farms. Multinational chocolate corporations focus on the global goal of eradicating deforestation from the cocoa supply chain, but individual cocoa smallholders face complex local conditions. Ruf and Varlet (2017) in Côte d'Ivoire and Nasser *et al.* (2020) in Ghana conclude that tree and land tenure insecurities represent key barriers for delivering the cocoa industry's commitment to end further forest encroachment. Producing zero-deforestation, 'climate-smart' cocoa hinges upon disseminating agroforestry's benefits and incentivising smallholders to retain shade trees on their farms, while addressing tenure insecurity (Hirons et al., 2017) which is what Ghana's decentralised, community-empowerment CREMA model aspires to deliver.

Luke (1995) and Cullen (2020) have argued that any system instigating – and then attempting to expand – power over individuals through threats of reprimand or displacement is unlikely to be effective and accepted in the long run. Foucault (1991) suggested that to avoid subjects' resistance, a policy is more likely to succeed when subjects internalise the prescribed behavioural logic and self-police. The smallholders we interviewed who believed and/or observed the benefits of intact forest and shade trees had internalised conservation values, such that the primacy of exclusionary policies

had faded in importance. They welcomed disciplinary counsel imparted by agronomists, e.g.: “*I let the experts tell me. I don’t know the new techniques*”, and “*I want climate change training and techniques to get through droughts*”. Thus, they appear to have internalised these norms via a disciplinary environmentality.

4.5.4 Seeds of a liberation environmentality

Corporate sustainable cocoa and CSC programmes are dominated by international actors and delivered on universalised objectives. Yet through our engagement with smallholders, we observed a fledgling liberation environmentality which could be “appropriated and channelled towards a more socially just” CSC (Bluwstein, 2017: 110). We learned of many locally-led innovations such as raising rabbits and grasscutter rats (*Thryonomys swinderianus*) for meat; hunting common game in permitted seasons; gathering mushrooms; growing avocados and garden eggs (*Solanum aethiopicum*); and intercropping with locally-valued trees, particularly oil palm and kola (*Cola nitida*). Agroecological innovations we repeatedly encountered included growing nitrogen-fixing legumes for subsistence and improving soil fertility, and producing organic fertilisers from waste and chicken droppings. Many such innovations have been separately reported in the literature (Asare, 2006; Jagoret et al., 2014; Khatun et al., 2020; Zanh et al., 2019). In our study sites, we found that extension officers rarely consulted smallholders on their own sustainable innovations and environmental stewardship knowledge, despite both being expertly tailored to local conditions. Sanial and Ruf (2018) argue that the cocoa industry limits its interest in agroforestry to securing production, and resists engaging with smallholders’ own agroforestry innovations and wider agroecology innovations which could diversify their income sources (Ruf et al., 2015). Without supporting agroecological innovations, crop diversification, and poverty alleviation, Odijie opines that CSC risks stifling a liberation environmentality, endangering food security, and perpetuating colonial patterns of producing benefits for Global North consumers “at the expense of development in West African countries” (2018: 215).

Ghana’s CREMA model potentially offers an alternative CSC pathway, one which may flatten power asymmetries along the global cocoa value chain. Yet, since CREMAs are usually instigated and bolstered by guidance and funding from NGOs external to communities, they do not embody a pure liberation environmentality per Fletcher (2010: 172) and Guha’s (2014) definition of grassroots leadership. Agrawal observed that while peers monitoring natural resources and subsequent intra-community sovereign enforcement may ultimately endow individuals to protect their environment, these actions are *not* “defined locally” (2005: 197). Through a disciplinary environmentality, forest dwellers and farmers may internalise behaviour changes “in pursuit of goals that they imagine as their own,” but the autonomy is “imagined” (*ibid.*). Smallholder conservation of trees and forests could be construed as the “product of active immersion in” CREMA programmes’ exogenous logic (Cepek, 2011: 504). In Anand and Mulyani’s search (2020) for progressive, liberatory environmentalities, they concluded that combined forest-livelihood benefits resulted in empowered subjects who “self-mobilised to act independently to improve the conditions of the ecosystem” (p.114). Witnessing how “context-driven biological interventions” transitioned into tangible conservation outcomes (*ibid.*: p.114) provided additional motivations.

Lloro-Bidart (2017), Fletcher (2017), and Chambers *et al.* (2019) also suggest that when multiple environmentalities seeking to achieve similar outcomes are leveraged simultaneously, they can prove to be mutually effective. However, in our study sites one environmentality that remains buried and underexplored by corporate cocoa programmes is a bottom-up liberation environmentality. Illustratively, despite their resourcefulness, resilience, and expert lived experience, the 200 smallholders in our study related how they were not aware of any opportunities for two-way communication with those delivering state extension, sustainable-cocoa, or CSC schemes, thus preventing them from shaping current or future CSC policy. If community-based management schemes emerge as central to the delivery of CSC, it is essential that they meaningfully empower smallholders and engage with the particular contexts in which they are adopted, rather than provide cover for the continued marginalisation of more liberatory environmentalities. The more power devolved to communities, the more communities could potentially influence CSC policy, thereby engendering more equitable outcomes and processes (Nasser et al., 2020; Zafra-Calvo et al., 2020).

5. Discussion

Throughout cocoa's history in the world's two foremost producer countries, forests have been categorised both scientifically as a land-use type and as a political terrain (Peluso and Vandergeest, 2001), initially to be exploited, then enhanced in economic value, and now conserved or restored. As forests were redefined politically, the struggles of Ivorian and Ghanaian smallholders managing local forests were accordingly reshaped. Since the late 1990s, the environment's increasing embeddedness in the global cocoa value chain has resulted in *environmentalities* and conservation interventions seeking to manage smallholder-forest relationships 'sustainably' and as 'climate-smart'. According to Luke (1995), Foucault's 'art of government' configures not only problems (such as deforestation) but also their interventions and solutions (such as sustainability programmes and certification followed by CSC schemes).

Our longer-term multiple environmentalities analysis allowed us to illuminate how CSC repeats the same 'techniques of government' (Dean, 1996; Foucault, 1994; Lemke, 2004) from past eras, and that Ivorian and Ghanaian tropical forests – and those working in them – have long been conditioned by the global chocolate industry's needs. Our spatio-temporal comparative analysis revealed that (i) sovereign governance via restrictions and threats, and (ii) neoliberal governance via material incentives have been repeatedly deployed to control smallholders. Reinforced dominance of sovereign and neoliberal governance concentrates power and wealth higher up the cocoa value chain, thereby continuing to preclude a bottom-up liberation environmentality.

In addition to ongoing use of sovereign threats, what *is* new is broad adoption of MRV technologies for monitoring smallholders' behaviour (Leach and Scoones, 2015) in the eras of increasing corporate governance and CSC. Whereas certification – which arose during the era of increasing corporate governance – is *voluntary* for participants, the contemporary era of CSC *imposes* exclusionary forest conservation policies and intrusive mapping on smallholders, with punishments as severe as human displacements. Surveillance conservation raises serious moral concerns, and threatens to undermine relationships on which successful conservation interventions could build (Duffy et al., 2018; Dunlap and Fairhead, 2014; Sandbrook, 2015; Sandbrook et al., 2018; Simlai, 2015).

In each era, those imbued with power positioned themselves as experts who produce (material, political, and discursive) environments and shape locals into subjects (Cullen, 2020), thereby "cementing particular views of landscape and social relations that ... bring real material consequences" (Leach and Scoones, 2013: 965). In the recent and contemporary eras, corporations have been imbued with increasing powers and have been taking over states' former roles. Certification, corporate sustainable cocoa schemes, and CSC reflect how state institutions in each nation have been effectively surpassed by oligopolistic chocolate corporations applying the same rules across a national border (Krauss and Barrientos, 2021). As Hansen and Stepputat (2006: 309) attest, previous "control over territory and bodies that marked the nation-state model of sovereignty is now supplemented by ... private companies".

This shift from state to corporate governance has also entailed shifts in the location and scale of power from national to international. While, in theory, Ghana's CREMAs could disrupt this shift through decentralisation, there is mixed evidence regarding their success and limited understanding of what drives their differing outcomes. This raises questions about their likely impact at scale, as does the equivalent Ivorian scheme, PNGTER (*Projet National de Gestion des Terroirs et Equipement Rural* - Rural Land Management and Community Infrastructure Development Project) being defunct, after its funder the World Bank deemed it 'unsatisfactory' (2011). As such, contemporary CSC governance remains spatially- and sectorally-concentrated, with significant direction from chocolate corporations' headquarters in the Global North. Foreign oligopolistic corporations enforce zero-deforestation, anti-expansionist policies uniformly in Ghana and Côte d'Ivoire, which obscures divergent development histories and stark disparities between the countries.

While Ghana has enjoyed peace and successful multi-party elections since 1992, Côte d'Ivoire's complex political tapestry is fraught with ethnic tensions, unresolved conflict, and disputed claims to land that complicate the implementation of internationalised, exclusionary forest conservation policy. CSC's single cross-border policy to monitor supply chains, map, and threaten deforesting ("illegal") smallholders could deepen cleavages between ethnicities, or even jeopardise Ivorian national stability. While much extant literature comparing recent cocoa governance in the two countries emphasises how Côte d'Ivoire followed the SAP programmes by fully liberalising its cocoa sector, with Ghana defying this to retain control of cocoa price setting, our spatio-temporal analysis shows that Ghana's state control over pricing did not radically change power dynamics. More significantly though, our cross-country environmentality analysis highlights that ongoing Ivorian ethnoreligious strife versus Ghanaian peace is one crucial factor that has been overlooked by powerful actors in cocoa's global value chain.

Côte d'Ivoire's ethnic fissures have not occurred "in institutional and historical voids" (Boone, 2007: 60); indeed, the cocoa trade has fuelled some armed conflict and political crises (Babo, 2010; Banégas and Losch, 2002; Chauveau and Bobo, 2005; Global Witness, 2007). Enduring tensions between indigenous and migrant smallholders continue to threaten Côte d'Ivoire's precarious peace (Mitchell, 2014) and aspired political recovery. Yet these factors are ignored by those promulgating CSC. Adherence to, and legitimacy of, policies are tenuous in most conflict-ridden or post-conflict states (Cullen, 2020). On Ivorian terrain, identity politics predicated on *Ivoirité* (and accordant land disputes) make CSC's single transnational zero-deforestation policy ill-fitted and could result in further human displacement from protected areas (as the Mount Péko evictions in 4.5.3 illustrate). Thus we purport that chocolate corporations today – per the World Bank and IMF before them – dangerously overlook ethnic strife and other localisms when applying similar cocoa and forest policies across two independent nations. Moreover, such exclusionary conservation policies especially in conflict and post-conflict states risk: undoing the desired aims of environmental subject-making (Duffy et al., 2019), and/or being met with resistance, conservation failure, livelihood loss, human displacement, etc. (Brockington, 2002; Brockington et al., 2012; Simlai, 2015; West et al., 2006).

Notably, though, the C&FI has since expanded to a third country, Colombia: another post-conflict, cocoa-producing nation fraught with ongoing tensions and threat of violence. Peace and

reconciliation efforts have been explicitly embedded into Colombia's C&FI; no such concession was made for ongoing Ivorian conflict. Much of Ivorian land tensions remain centred on the autochthonous/migrant dichotomy (Colin and Ruf, 2011), which has deepened since the 1990s under the divisive *Ivoirité* narrative (Colin, 2013). Intriguingly, our analysis found that Ivorian autochthonous/migrant land contestations are inconspicuous in CSC policy.

Our analysis also examined the long-standing power asymmetries in the Ivorian and Ghanaian cocoa value chains: we found that in both countries and throughout all eras, attempts at smallholder emancipation (i.e. liberation environmentalism) often failed (Beckman, 1976), petered out (Van Rensburg, 1981), or were quashed by centralised state authority (Boone, 2003a&b; Kenyon, 2018). Smallholder collective bargaining remains largely absent (Leissle, 2018) in a remarkably buyer-driven (Fold, 2002) commodity value chain. Ghana's CREMAs may result in a more socially-just CSC by enfranchising cocoa smallholders and considering a plurality of smallholder views; yet they could equally provide window-dressing and divert attention from ongoing corporate dominance. Agrawal's seminal environmentalism work (Agrawal, 2005, 1999) advocated devolving natural resource decision-making to local people for it can result in forming environmentally-aware subjects. Yet 'opening up spaces for transformation' (Eriksen et al., 2019) to realise a fully emancipatory liberational environmentalism for CSC would require interventions that truly reconfigure power. CREMAs attempt to do this by recognising and expanding smallholder rights over shade trees on their farms and co-ordinating greater collective bargaining power; however, land and tree tenure complexities "are not yet sufficiently embedded in CSC practice" (Nasser et al., 2020: 14). Overall, CREMAs' reach remains limited in Ghana and wholly absent in Côte d'Ivoire. Thus their outcomes are far from certain.

6. Conclusion

The formation of environmental subjects is a central concern of political ecology, and it is increasingly recognised that individuals change their behaviour towards the environment for multiple reasons. Using Fletcher's multiple environmentalities framework, we provided a historical and cross-country comparison of how cocoa smallholders' behaviour has been steered in the two countries that produce more than 60% world's cocoa in order to: i) decipher what is novel about contemporary CSC governance, and ii) generate insight into diverse incentivising processes that sustainability interventions can leverage to shape pro-environmental behaviours. Our article advances knowledge of multiple environmentalities concepts across space, time, and scale.

Throughout West Africa's history of cocoa cultivation, the behaviour of cocoa smallholders has been shaped by broadly similar 'techniques of government'. Whether in the name of Pan-African socialism (Nkrumah's Ghana) or supporting French business interests decades after colonisation (neo-colonial *Françafrique* in Côte d'Ivoire), sovereign and neoliberal environmentalities have persisted and dominated. Our analysis revealed that despite new corporate actors being imbued with power, and CSC rhetoric being laden with novelty, sovereign and neoliberal techniques of government persist, with liberation environmentality remaining largely absent in CSC policy.

Although Fletcher's multiple environmentalities framework has been widely used to study how conservation interventions shape behaviour, existing analyses typically consider a single intervention at one (usually recent) timepoint. Such inattention to temporality ignores the scaffold of past governing logics (and, in West African cocoa's case, stark power asymmetries) upon which new interventions build (Collins, 2019b: 18). We argued that climate-smart interventions seeking to sustain cocoa and forests for future generations are, in some respects, reaching backwards by rejuvenating earlier sovereign and power-asymmetric modes of steering smallholder behaviour. What is new, however, is: i) the rise of global corporate governance; ii) that corporations are expanding monitoring and surveillance as forms of sovereign control; iii) the shift from *voluntary* neoliberal environmentality to sovereign environmentality in the form of MRVs and subsequent enforcements; and iv) deepening cross-border governance focused narrowly on sourcing "zero-deforestation" cocoa without due attention to myriad local complexities.

We argued that multinational chocolate corporations treat two neighbouring countries with diverse histories as a single cocoa-producing unit, subsuming them into a single zero-deforestation, CSC agenda. Universalised corporate strategies obscure independent countries' histories and overstate the novelty of sustainability interventions. Per other schemes directed from the Global North intervening in economically-developing countries, CSC promises change, yet delivers continuity (Lund et al., 2017), leaving smallholders marginalised.

We found that smallholders' lived experience, highly relevant expertise, and livelihood concerns are not adequately embedded into contemporary CSC, not least because the schemes tend to be homogenised across the two countries. Rarely are place-based, context-specific alternatives or a plurality of values elicited (Zafra-Calvo et al., 2020). Through our engagement with cocoa

smallholders, though, we identified local innovations that move towards a socially-just liberation environmentality which could realise sustained and sustainable cocoa production without exacerbating inequity or poverty. These poverty-alleviating and agroecological innovations were led by smallholders themselves and thus could be feasibly replicated by other resource-constrained smallholders. Climate-smart and sustainability interventions, however, often foreground internationally prescribed technical-managerial adjustments (Cavanagh et al., 2017; Taylor, 2018) in ways that diminish smallholder resilience by decreasing livelihood flexibility, and constricting their access to resources (Clay and Zimmerer, 2020). Thus integrating community experiences and embedding locally relevant people-based strategies are increasingly advocated for landscape approaches (Carmenta et al., 2020; Reed et al., 2019, 2017).

Pursuing CSC and associated zero-deforestation mandates against a legally pluralistic backdrop that marginalises cocoa smallholders and denies them full control over trees on their own farms seem liable to perpetuate historical injustices. Creating interventions which are sensitive to local contexts and prioritise protecting and expanding the rights of cocoa farmers is fundamental to transitioning towards more emancipatory forms of governing the sector. Devolving more authority to smallholders – such as via Ghana’s proposed CREMA model for CSC – may help move tenure complexities higher up the agenda and pluralise CSC’s objectives away from the single target of eradicating deforestation to include livelihood and other smallholder concerns.

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