Sustainable cocoa production in Cameroon: policy integration analysis around forest issues

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ABSTRACT

The cocoa bean (*Theobroma cacao*) is one of the world's most important non-timber forest products in production volumes. Cameroon is the world's fourth largest producer, where it is the main agricultural commodity and the source of income for around 500.000 smallholder farmers. Cocoa's economic and social importance is confronted with its being a commodity-linked to deforestation. The country has seen an increase in deforestation in the last 20 years and among other drivers, agriculture expansion, including cocoa production has been related. Considering that tighter market regulations for the import of zero-deforestation products are coming soon, the Cameroonian government needs to ensure that the regulations governing cocoa production are aligned with the market demands to continue to benefit from the export revenues.

As the current framework governing cocoa production in Cameroon is a mix of tools, this research explores the level of integration between public, private and mixed governance tools and how they are influencing the production of zero-deforestation cocoa. Field data collection was done through semi-open interviews about current interactions and ideal synergies among diverse stakeholders. Data analysis was done under concepts of policy integration and coordination plus a theory of change approach following the upcoming EU zero-deforestation regulation.

As a result, two main points were identified. First, Cameroon´s governance framework for cocoa production could improve towards a stronger policy integration, in terms of a shared vision, information exchange, and coherent policy goals. Second, to comply with the upcoming EU regulation, private and public sectors, plus producers need to be coordinated in terms of responsibilities and law enforcement. The multistakeholder governance tool currently in place could be an efficient and effective strategy to foster policy integration for cocoa sustainability, as long as there is will and real commitment from all stakeholders.

ACKNOWLEDGMENTS

Researching on a topic as complex as policy in a country few others are familiar with, where you don't speak the language, can be challenging. In fact, it was, but I could say that it was one of my bravest decisions and I am very proud of what I accomplished. Since deforestation and policymaking are among my major interests, doing this research while learning about one of my favorite commodities and visiting for the first time an amazing continent was truly a pleasure.

I want to thank first and foremost my supervisor Dr. Verina Ingram for her continuous support and advice during these eight months, especially during my stay in Cameroon. I also want to thank everyone that I met in Cameroon, all the interviewees without whom this thesis would have not been possible; to the people at the Congo Basin Institute, thank you for making me feel at home during those two months. I also want to thank Wageningen University and the Erasmus Program for supporting me to do my master's thesis abroad. This was truly a once-in-a-lifetime opportunity. Last, enormous thanks to all my friends (almost family) in Wageningen who cheer me up and accompanied me during my endless weeks at the library. Also, to my lovely family and friends back home, who from the distance always give me the strength to continue.

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1. INTRODUCTION

The cocoa bean (*Theobroma cacao*) is one of the world's most important non-timber forest products in production volumes. The production is mainly localized in West Africa (70%), with Côte d'Ivoire, Ghana, and Cameroon as the top three producers in the region, who occupy worldwide first, second and fourth place respectively (Vogel et al., 2020). In these countries, cocoa is the main agricultural commodity, mainly grown by small farmers who rely on it as their main income source. Cocoa's economic and social importance is confronted with its being a commodity-linked to deforestation. Low productivity and a switch to full-sun cocoa production systems, among other causes, demand the clearing of a wide area of tree cover (Sanial et al., 2019a; Wessel & Quist-Wessel, 2015). This issue is critical for Cameroon as the forest cover (near 42% of its territory) where cocoa is currently grown is mainly comprised of the tropical humid forest zone within the Congo Basin rainforest, the second-largest rainforest in the world (Vancutsem et al., 2021).

Multiple studies have reported an increase in deforestation in the Congo Basin, mainly associated with human settlements and livelihood activities (Fobissie et al., 2014; Meli Fokeng et al., 2020). Specifically in Cameroon, according to Global Forest Watch (2022), from 2001 to 2020 the forest cover in the country has decreased by around 5%, the Central and East regions are the locations with the highest forest cover loss. Among the country´s main drivers for deforestation, agriculture expansion, including cocoa production has been related (Tyukavina et al., 2018 as seen in Lescuyer & Bassanaga, 2021; Vancutsem et al., 2021).

The cocoa sector in Cameroon represents the largest agricultural commodity. Between 300.000 to 500.000 households produce cocoa beans, with an annual production of close to 250.000 tons, in 2020(Lescuyer & Bassanaga, 2021). Around 70% of its production is exported to Europe, and the United States is a growing market (Lescuyer & Bassanaga, 2021). Around a quarter of cocoa production is third-party certified as sustainable (Rainforest Alliance, 2021). Both these destination markets are planning to implement tighter regulations for the import of deforestation-risk commodities such as cocoa (Ropes & Grey, 2022). Then, the Cameroonian government needs to ensure that the regulations governing cocoa production are aligned with the market demands to continue to benefit from the export revenues. Even more considering that the country has

projected to double cocoa production by 2030, which could represent a threat to forest conservation if not sustainable production is fostered.

Sustainability in the cocoa value chain (CVC) involves environmental, social, and economic issues that, although context-specific and addressed differentially by governance tools (GT), can be defined by the following common subjects. As Fountain & Huetz-Adams (2020) point out, environmental sustainability in the cocoa sector primarily targets deforestation and forest degradation, followed by the use of agrochemicals and adaptation to climate change; social sustainability refers to the protection of human rights concerning labor conditions, no child labor and gender inclusion (Fountain & Huetz-Adams, 2020; Sanial et al. 2019b); and economic sustainability is primarily related to ensuring a fair and stable income for cocoa farmers (Sanial et al., 2019b). In this research, the scope will be mainly on the environmental issues around cocoa production, without neglecting the connection with social and economic issues.

In that sense, it becomes relevant to analyze the governance framework relating to cocoa and forest issues in the country. A **governance framework** is referred to here as the set of rules and traditions among the major institutions and the way authority is exerted in the CVC (Kaufmann et al., 2000; Obeng, 2022) The governance framework for sustainable cocoa production in Cameroon can be said to be a combination of state, market-driven, mixed, and customary regimes, each one with its GT **(Figure 1).** Since Cameroon liberalized the cocoa sector at the beginning of the 1990s, various non-state actors now intervene in its regulation (Vogel et al., 2020) such as the private sector, and public-private associations as well as regulation in main destination markets. Each GT present will be described next.

Following the order depicted in **Figure 1**, two governance tools are present as part of market-driven regimes promoted by the private sector. Voluntary sustainability standards (VSS) or also called certification systems are a set of standards and rules including monitoring instruments, validated by a third-party organization and with non-mandatory compliance (Witte, 2017). The main VSS currently in place in Cameroon is the Rainforest Alliance standard, which merge with the UTZ standard in 2018. Fairtrade and the European Union Organic standard are also in place but represent a very small proportion. Another marked-driven tool is the sustainability programs developed by (each) cocoa trade company operating in the country such as Telcar, Barry Callebaut,

and OLAM. For example, the Cocoa Horizons program from Barry Callebaut aims by 2025 to lift 500.000 farmers from poverty (aggregated for all its partner countries) and source 100% sustainable ingredients (Barry Callebaut, 2021).

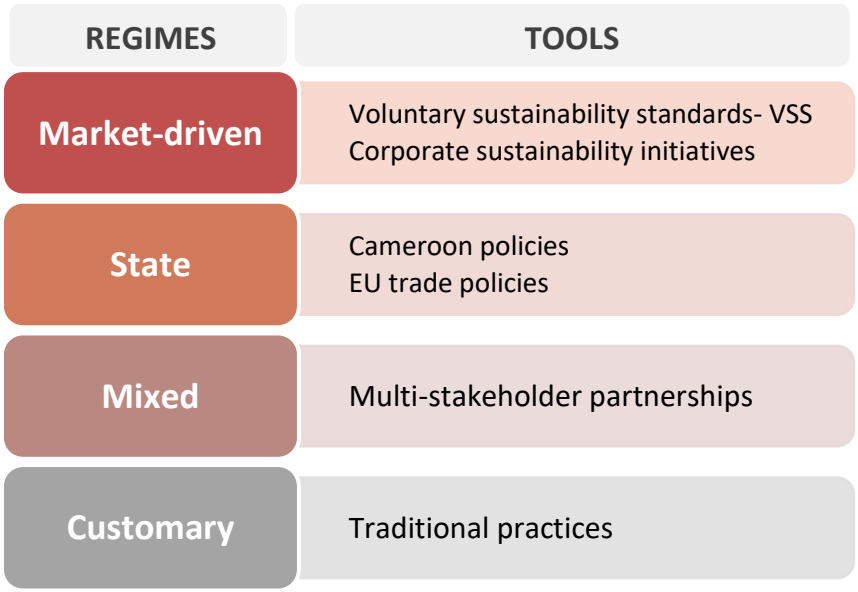

Figure 1. *Governance framework for cocoa production in Cameroon, with a combination of regimes and tools*

Regarding state regimes, first comes the national regulation related to forest protection and agricultural activities. The current national policies governing cocoa production in Cameroon are mainly comprised of two laws: the 1994 Forestry Law and the 1996 Law on Environmental management. The first one, on the regime of forests, wildlife, and fisheries, defines the types of forests and the rules for their protection and utilization (République du Cameroun, 1994). The second law establishes the REDD+ mechanism as one of the tools for emissions reduction related to deforestation and forest degradation. Sustainable cocoa production, under agroforestry practices, is then included as a key activity to the REDD+ mechanism (Carodenuto, 2019). Regarding national entities, the National Cocoa and Coffee Board (ONCC) is the only specialized state institution, which role is to oversee exports and conduct quality control of cocoa beans and sub-products (Stoop et al., 2021). This state regulation alone sets minimal conditions for legal cocoa production, failing to meet the international requirements for legal, sustainable, and (upcoming) deforestation-free cocoa (Lescuyer & Bassanaga, 2021; Sanial et al., 2019b). Then,

additional governance tools are currently in place supporting the production of legal and sustainable cocoa production.

Regarding state regimes, international regulation also plays a role in defining the rules of play for the CVC. The main export market for Cameroonian cocoa beans is the European Union, which accounts for nearly 70% of annual production (Stoop et al., 2021). Then, cocoa traders must comply with the European regulations on agriculture-commodities trade. New to this matter, the European Commission delivered in November 2021 a legislative proposal aiming "*to curb deforestation and forest degradation driven by EU consumption and production of specific agricultural commodities and derived products, thereby reducing the EU contribution to greenhouse gas emissions and global biodiversity loss"* (Halleux, 2022). The proposed regulation targets cocoa, since is a commodity often associated with deforestation and forest degradation, meaning that cocoa traders and manufacturers should perform due diligence to demonstrate that a 'no or negligible risk of non-compliance exists. This new regulation builds on the previous Forest Law Enforcement, Governance and Trade (FLEGT) from 2003. Among novelties, geo-localization of plots and a country risk-categorization will imply changes in current corporate programs that in parallel should be aligned or promote tighter policy requirements in countries of origin, such as Cameroon (Halleux, 2022).

Mixed regimes via multi-stakeholder initiatives are also GT in place in Cameroon. The Sustainable Trade Initiative (IDH) is an organization working on bringing sustainable business models for a variety of commodities worldwide by building public-private partnerships (IDH, 2021). It has developed the Cocoa & Forests Initiative (CFI) for Côte d'Ivoire & Ghana, which launched in 2020. In Cameroon, IDH has become a facilitator in bringing multiple stakeholders to define a common action plan for cocoa, in what has been called the Roadmap for Deforestation-free Cocoa in Cameroon (2020). This partnership is aligned with the upcoming European Union regulation on the import of free-deforestation and free-forest degradation commodities (IDH, 2021).

Finally, customary regime refers to the set of traditional or hereditary practices that cocoa farmers do. This is especially seen for land property rights and subsequent inheritance. In Cameroon, land property is mainly by customary practices than formal land right acquisition, which is recognized by a community chief (Sanial, 2019). Regarding land conversion, small farmers tend to acquire

extra land to set up new plantations to pass on to their children (Masselot, 2020). These are cultural dynamics with social, and economic environmental implications for cocoa production.

In terms of the impact that different GT have on the overproduction of sustainable cocoa, the monitoring and reporting are primarily shown by market-based tools, which have shown mixed results in terms of sustainability. This could have to be first with poor market incentives and second mismatches with national regulation. Regarding the former point, cocoa bean buyers, referring to traders and manufacturers, place a limit on the volume of cocoa purchased as certified, according to market demand. This results in just a proportion of the cocoa beans with the potential to be certificated being sold as such (EU REDD Facility, 2021). In 2020 in Africa (consolidated), the proportion of estimated certified cocoa sold as certified was 57% for Rainforest Alliance and 68% for UTZ (Rainforest Alliance, 2020). This gap could discourage farmer participation in VSS programs, adding that for Cameroon, there is a competence for market share against Côte d'Ivoire and Ghana as the top two producers. Also, regarding mismatches with national regulation, VSS and corporate programs are not usually country-specific, meaning possible limiting particularities such as what stands for forest or with 'legal' production. For example, the Forestry Law/94 does not define or use the term deforestation; or poor law enforcement in rural areas in Cameroon results in 'illegal' cocoa that in contrast could be valid for VVS, sometimes meaning that certified cocoa does not necessarily mean legal cocoa (Sanial et al., 2019b).

These points raise the question of the rules of play that each governance tool is playing inside that governance regime. The tools are constantly influencing one another and in fact, they overlap in practice, e.g., multi-actor partnerships have been used to launch VSS and support private schemes and farmers can participate in more than one certification program (Ingram et al. 2018). Although no clear results have been obtained on the effectiveness of mixed regimes, it is suggested that the combination of elements of the state and market-driven regimes could deliver a wider array of direct and indirect positive impacts (Lambin et al., 2014). For example, as D'Hollander and Tregurtha (2016) suggest, the effectiveness of the VSS could be improved by enhancing the regulation and promoting the role of the state. Indeed, as land use protection and value chain sustainability are intersectoral and multilevel issues, a combination of instruments is required to

reinforce and endorse each other by enabling conditions or filling governance gaps one other (Lambin et al., 2014).

An ideal governance framework should aim for a power balance and coordination among stakeholders, increasing citizens' involvement (Vogel et al., 2020). In the case of Cameroon, limited participation is given to small producers' actors in the CVC. In multiple scenarios, cocoa farmers in Cameroon have expressed that their preferences and economic needs often failed to be considered (EU REDD Facility, 2021; Nkouedjo et al., 2020; Mithöfer et al., 2017). As a highly globalized commodity, the biggest traders and buyers are the main actors driving the decision-making for sustainable cocoa, imposing conditions mainly for marketing and export rather than for sustainable production (Sanial et al., 2019b). As Vogel et al (2020) suggest, a defined mixed (public-private) governance structure in Cameroon (instead of only certification or state-driven regime) could bring more actors' interest to a common point, which should also provide agency to actors currently poorly involved, such as civil society and farmers. Actors in Cameroonian CVC agree on improving the sustainability of the cocoa sector, but there is a lack of coordination among stakeholders in the expectations as well as the transition pathway that should be taken towards such improved sustainability (Vogel et al., 2020).

In Cameroon, the mechanism closer to this integrative approach could be the *Roadmap to Deforestation-free Cocoa,* an initiative launched by IDH and onwards referred to as the Roadmap. This initiative aims to bring together all the stakeholders, from the public and private sector agents, farmers' organizations and civil society organizations, research institutions, and development partners in Cameroon and abroad under an action plan for a sustainable transition (IDH, 2021). However, it is not clear if this mixed GT will constitute a regime that brings together also the different governance regimes (including customary), meaning not only bringing stakeholders to the decision-making process but also aligning relations of power roles and rules between regimes and among regimes. In practice, this kind of initiative could end by reinforcing patterns of non-coordination by failing to address coordination among actors of the same level, such as non-state systems, as among certification programs (Fransen, 2015). For example, the implementation of a similar multistakeholder partnership in Côte d'Ivoire shows no clear or low results in the impact on environmental issues and farmer capacity building (Ingram et al., 2014).

In a mixed governance framework of a highly globalized commodity such as cocoa, it is interesting to dive into how the sustainability of cocoa production is being addressed from a policy integration perspective among the different stakeholders, including international regulations. Recently, the principle of integration gained big attention with the Sustainable Development Goals from the 2030 Agenda, where a sustainable policy integration will aim to coordinate environmental sustainability, social development, and economic growth (Azizi et al., 2019). Multiple definitions and approaches have been used to define policy integration, but in general, it refers to a multi-dimensional institutional process of change toward the incorporation of individual concerns into a frame to achieve shared goals (Candel & Biesbroek, 2016). Integration is wanted as issues such as incoherent or antagonistic objectives, overlapping activities, competing interests, or unclear roles under hierarchic systems may result in an effective and inefficient governance framework (Candel & Biesbroek, 2016). In the commodity value chain, for example, poor integration can negatively affect product production and trade and therefore the livelihood of those dependent on it (Ingram, 2017).

As the current framework governing cocoa in Cameroon is a mix of regimes, each one concerned with improving cocoa sustainability as demanded by the market**, it is interesting to evaluate the level of policy integration that could lead to real action**. For this thesis, the focus will be on those GT mainly addressing the environmental issues of cocoa production, and the related stakeholders. Attention will be set to the goals of zero deforestation or forest degradation (forest cover) since these are common environmental indicators, but other issues such as the use of chemicals will be discussed.

In this sense, this paper addresses the question of **How is the current policy framework of multiple tools governing the cocoa value chain in Cameroon is expected to eliminate cocoa-driven deforestation?** The research objective is to understand the level of coordination between public, private and mixed regulatory initiatives and how are they influencing the production of no-deforestation cocoa. The main question would be approached by the following sub-questions:

- ***SQ1: How do governance tools interact and integrate among them to improve the sustainability of cocoa production, especially around forest issues?***
- ***SQ2: In which ways is the new EU no-deforestation directive expected to change the coordination of the governance tools currently in place?***

Alongside these questions, there would be mentioned **improving opportunities** regarding the integration of the different policy tools to address environmental issues currently in cocoa production.

This thesis builds on previous studies made on the governance regimes for sustainable cocoa production and deforestation in Cameroon. Carodenuto (2019) & Ingram et al. (2020) analyzed the interaction between national REED+ policies and business commitments for cocoa production in West Africa, while Masselot (2020) applied discourse analysis surrounding voluntary sustainability initiatives in Cameroon. Besides, two major GT tools have emerged after those publications: the multistakeholder partnership Roadmap to Deforestation-free cocoa, launched in January 2020, and the proposed EU deforestation-free regulation on zero-deforestation commodity imports, from November 2021. Then, this research intention is to present a more holistic approach to the cocoa governance framework in Cameroon by giving an understanding of the interactions among current GT, focusing on the environmental aspect of cocoa production.

2. THEORETICAL FRAMEWORK

2.1. Policy integration

When describing the relationship among actors from different domains towards solving a problem multiple concepts and terms appear, such as policy interaction, integration, coordination, and alignment, among others. This depicts the complex task that is to describe analyzing the how, why, who, and when in a governance framework the different norms, policies, rules, and actors intermingle. The framework for this research will consider the concepts of interaction, coordination and integration following Pacheco et al., (2017), Cejudo & Michel (20,17) and Candel & Biesbroek (2016) respectively, as they approach multi-level policy frameworks that can be used over for the case of study in place.

From the outer level of the collaboration among actors, **interaction** comes as an initial concept. It is possible to identify levels of **interaction** between GT according to the interdependence that one governance tool has over another. To illustrate this, for example (Pacheco et al., 2017) identifies three interactions between private initiatives and government actions for achieving zero

deforestation commitments under a jurisdictional approach: co-existence, alignment, and orchestration. For the authors, an interaction of co-existence is when public and private initiatives work independently although aiming for similar goals; alignment can be described as when some coordination with the other part is necessary to implement their commitments; the orchestration is an interaction where the actions are integrated (e.g., joint planning or monitoring) (Pacheco et al., 2017). In practice, these types of interactions are not perfectly distinguishable and can vary over time. Still, this classification is found useful to initially identify interdependencies among governance mechanisms.

When applied to a governance framework, the level of interaction can be further analyzed by characterizing the cooperation and integration among the GT. Although there is a lack of conceptual order with this array of terms, the concepts can be distinguishable (Cejudo & Michel, 2017) to use to describe relations.

Policy coordination can be briefly defined as how the actions of some actors are adjusted to the actions of others (Pedersen et al., 2011). In most definitions, policy coordination is characterized as being a process where stakeholders define tasks, responsibilities, and ways of sharing information (Cejudo & Michel, 2017; Posthuma & Rossi, 2017). The basic purpose of having a coordination action among actors is to ensure that the actors' actions do not undermine each other's actions, and better if they reinforce each other's (Pedersen et al., 2011). Coordination could be said to be a type of interaction where the actors decide upon actions and roles stirring direction toward a common goal.

In a governance framework, coordination can be assessed from multiple points. It can be pointed out from the level of coordination, the instruments used, or the stage of the policy process where it happens. To illustrate the first case, the level of coordination can be evaluated for example at the public governance level (Intra and inter-organizational) (Cejudo & Michel, 2017; Pedersen et al., 2011; Tosun & Lang, 2017) as well as multilateral international agreements (Azizi et al., 2019). At a supranational level, for example in global value chains, coordination between public, private, and other stakeholders entails agreed and complementary efforts towards a common goal (Cejudo & Michel, 2017; Posthuma & Rossi, 2017). Regarding instruments, coordination can be facilitated through legislative settings, overarching programs, intersectoral groups, or facilitator figures, to name a few (Candel & Biesbroek, 2016). Lastly, regarding the stage of the policy or program process, coordination can be promoted during the agenda-setting or implementation (Cejudo &

Michel, 2017). Posthuma & Rossi (2017) illustrate this approach in the case of international labor standards, where international labor organizations (coordinating actors) help to mediate among governments, the private sector, and NGOs (supranational level) the adoption of basic labor standards in the different agendas (agenda setting).

However, coordination alone is not enough for an effective governance system. Several authors point out it is not only by collaborating with a view or sharing information to have an operational system among the multiplicity of actors. As Pedersen et al. (2011) explain, coordination can be as simple as not getting in each other's way or as ideal as moderating actions toward common goals. But this moderation should lead to the actual incorporation of targets and goals into the existing institutions (Azizi et al., 2019). In other words, by the integration of goals into the practices and decisions process of the actors or tools in place.

There are multiple definitions of the relation between coordination and integration. Part of the literature consulted points out coordination as a necessary step for successful policy integration (Azizi et al., 2019; Candel & Biesbroek, 2016; Cejudo & Michel, 2017; Fransen, 2015) while others consider coordination as an outcome of integration (Perri 6 2004 as in Cejudo). It is the case, for example, of policy integration without coordination. With coordination, actors are aware of the responsibilities and activities that lead to certain goals, but when activities are incorporated into their operating systems (e.g., historical or imposition) without previous coordination, challenges may occur in terms of unstable communication channels or lack of support among actors during implementation (Cejudo & Michel, 2017) leading to ineffective action.

Policy integration refers to a multi-dimensional institutional process of change toward the incorporation of individual concerns into a frame to achieve shared goals (Candel & Biesbroek, 2016). Those concerns steer concrete actions with outcomes that directly affect over-arching goals that tackle the common issue. Then indeed, integration demands policies and organizations to *prioritize the new common goals and make their decisions based on the needs and priorities defined* (Cejudo & Michel, 2017).

Policy integration has been widely accepted as a process rather than a specific outcome (Tosun, Cejudo, Pedersen, Azizi, Candel & Biesbroek (2016). Addressing integration means not only focusing on outcomes but also on the processes and mechanisms behind those results (Lambin et al., 2014) to identify causal links between different tools. An outcome of policy integration can be a decision-making body with authority over all of the GT but its operationalization depends on

other processes that need to be integrated too. As Candel & Biesbroek (2016) referred to, policy integration also requires adjustment of institutional conditions, such as hierarchies and dominant policy belief systems.

The integration between public regulatory systems and market-based initiatives can result in hybrid instruments, where a combination of elements proper for each type of governance tool can result in innovative and effective results. In the cocoa sector, for example, a hybrid system could be when a VSS scheme requires compliance with state policy to grant certification. This change in policy variables could be labeled on what Lambin et al. (2014) classify as *complementarity, substitution, and antagonism*. Two GT can be *complementary* when they reinforce each other and remain independent but aim for the same goals. *Substitution* can be identified when one system replaces or overshadows another, i.e., the official adoption of the African Cocoa standard, while *antagonism* is shown when there are conflicting practices that limit the operation of another tool.

2.2. Theory of Change

The **theory of change approach** (ToC) refers to, in simple words, how and why an intervention is expected to lead to a certain result. Addressing the *how* means studying the outcomes and impacts as well as the avenues through which they will be achieved (Weiss, 1995 as cited in Connell & Kubish, 1998), meaning the activities and pathways expected to be implemented to reach the outcomes. While the *why* question considers the rationales and motivations affecting the program implementation. By studying the links between activities, outcomes, and context underlying an intervention, a bigger picture of the process of change can be defined (Connell & Kubisch, 1998).

The ToC approach can be both a tool and an output for studying a desired social change (Guijt & Retolaza, 2012 Stein & Valters, 2012). As Stein & Valters, (2012)reviewed, ToC can be used for a description purpose, meaning to make explicit to others the roadmap expected but also for progress evaluation, as ToC provides a logic framework by tracking whether the intervening steps in the process of change do take place (Weiss, 2000). One of the challenges while designing and implementing an intervention is to connect short-term results with longer-term outcomes. For this, this approach helps to identify the sequence of steps that will produce the outcomes based on the current baseline scenario and also to define when these steps should occur. In this way, the evaluation could be applied in retrospect, by providing answers when the expected actions do not

happen or unanticipated outcomes appear; or prospectively, by mapping out assumptions, identifying existing gaps of resources or possible obstacles that should be addressed for goal achievement (Stein & Valters, 2012; Weiss, 2000).

3. ANALYTICAL FRAMEWORK

Following the governance framework defined for cocoa in Cameroon (Figure 1), a set of GTs was chosen for this thesis **(Table 1).** The tools were identified based on literature and then reaffirmed as the more relevant ones during data collection, bearing in mind that the main issue to be addressed is cocoa-led deforestation and forest degradation (more about this in the results section).

Table 1. Main governance tools analyzed for the CVC in Cameroon

REGIMES	TOOLS	NAME
Market-driven	Voluntary sustainability standards	Rainforest Alliance
	Corporate sustainability initiatives	Barry Callebaut: Forever Chocolate strategy Telcar: Cocoa Promise Program Olam: Cocoa Compass Program
State-oriented	Government policies, programs, decrees	Various policies, and programs related to agriculture and forestry
	EU policies	EU (upcoming) regulation on deforestation-free commodities
Mixed	Multi-stakeholder partnerships	IDH Roadmap to Deforestation-free cocoa
Customary	Traditional practices	Various related to land acquisition and planting

The research sub-questions will be addressed following a policy integration framework and a theory of change approach. The framework will be used to answer sub-question 1, which operationalization is explained in the next Section 3.1. Theory of change is applied to sub-questions 2 and will be applied following the logic of expected change to comply with the upcoming EU deforestation-free regulation. Alongside these questions, recommendations would be provided regarding improving the integration of the different governance tools.

3.1. Policy integration

The policy integration framework defined by Candel & Biesbroek (2016) will be used to answer research sub-question one. This framework entails four dimensions: policy frame, subsystem involvement, policy goals, and policy instruments, each one with a set of attributes or indicators. To operationalize the framework, the authors propose a series of guiding questions that help the researcher describe the presence of such attributes. The analysis of policy integration of the CVC governance framework in Cameroon was done following the questions in **Table 2.** It is important to highlight that not all the dimensions proposed by Candel & Biesbroek (2016) were applied to this research; the dimension *policy instruments* were not used since it applies to a different governance system configuration than this case.

Table 2. Analytic framework use (Candel & Biesbroek, 2016; Cejudo & Michel, 2017)

DIMENSION	INDICATOR	GUIDING QUESTIONS
Policy frame	-	- How is the issue defined? - Is it recognized as cross-cutting?
Subsystem involvement	Governance tools involved	- Which GT is involved in the governance of the issue?
	Density of interactions	- Do GT share information? - Do organizations establish rules and responsibilities for coordination?
Policy goals	Range of policies in which the issue is embedded	- Which are the concerns related to the issue? - Which are the policy goals within each GT related to the issue? - Are policy goals aligned with those concerns?
	Degree of coherence	- Do the goals serve the overarching issue? - Do the goals overlap across GT? - Do the goals reinforce each other?

To sum it up, the concept of integration will be evaluated through dimensions, consisting of attributes that will be approached by a set of guiding questions, which in turn will let to assign a level of integration: strong or weak. Following the table, it is necessary to briefly define each attribute, mainly according to Candel & Biesbroek (2016), to better relate it to the guiding questions and the case of the study:

i) Policy frame

Even though this is a dimension with no attributes, it is necessary to describe it in terms of the case of the study. The policy frame refers to how the issue is defined and if it is considered common governance. In this study, the cross-cutting issue targeted in Cameroon's CVC is the deforestation and forest degradation associated with the activity.

Then the guiding questions for this attribute will help to identify how the issue is perceived and defined by individual actors and in general as well as the dominant narrative about who bears the responsibility for taking actions.

Regarding the level of integration, a policy frame is highly integrated when the issue is recognized by the actors as cross-cutting and there is a "holistic approach" to it, a narrative that can be seen in coordination among all GT. Contrary, a poorly integrated policy frame is seen when the issue is perceived as a responsibility of one specific governance tool and no awareness of the influence of individual efforts.

ii) Subsystem involvement

A subsystem is defined as an *actor configuration, each of which is characterized by specific sets of associated interests, belief systems, and problem perception (*(Candel & Biesbroek, 2016, p.2). The term subsystem is what has been called in this thesis a *governance tool (GT)*, and so will continue to be referred to as such for the sake of clarity and coherence in the document. Only at the dimension level, the term *subsystem* will be kept for coherence with the authors.

a. Governance tools involvement

As the name suggests, this indicator refers to which GT is involved in the governance of the issue. This means, in which ones the issue has been incorporated as a driver for policymaking and strategy definition.

Then, the involvement is highly integrated when all the relevant GT recognize their part in dealing with the issue and have defined (or in the way to) activities, and roles for actors. While a poorly integrated involvement depicts just one GT dealing with the issue, independently.

b. Density of interactions

The GTs involved should coordinate actions with one another. Consideration has to be taken on the context and hierarchy affecting the governance framework as well as actors, directly and indirectly, involved in approaching the issue since not all actors involved are equally responsible. For this case of study, for example, it is

to be considered the nature of a free market, where the national Government has a limited voice in establishing rules of play in CVC.

For this indicator, the guiding questions were defined following Cejudo & Michel' (2017) concept of policy coordination and guiding questions. A highly integrated policy will depict a high level of interactions among the GT, such as the exchange of information and spaces for coordination.

iii) Policy goals

a. Range of policies in which the issue is embedded

Each GT approaches the cross-cutting issue from different concerns according to its interests and scope. Then, the policy (or initiative) goal(s) defined for each GT should aim to solve the specific concern. This indicator evaluates to which extent a GT adopts the issue (or its concerns) as the goal. Thus, a high integration in policy goals refers to concerns being addressed by all GT, while low integration a being addressed by one (dominant) GT.

b. Degree of coherence

Within a governance framework, it is important that the array of policy or initiative goals do not undermine each other but rather reinforce each other. To achieve a high level of coherence and hence integration, GT and its actors should work together to coordinate the scope and relations among goals. For this, it is relevant to have a common policy frame, where the issue is indeed recognized as cross-cutting and where the actors recognize the impact of each other's actions.

For this indicator, the guiding questions were taken from Cejudo & Michel (2017), who also conceptualized policy coherence and propose guiding questions that can be applied at the level of policy goals.

Alongside these questions, there would be mentioned improving opportunities regarding the integration of the different policy tools to address environmental issues currently in cocoa production.

3.2. Theory of change approach

The theory of change approach will be used for the sub-sub-question to analyze how the current governance framework could change under the upcoming regulation. This will be evaluated considering some key elements of the upcoming EU deforestation-free regulation, as it is the main international state governance tool that will impact the value chain dynamics in Cameroon.

As multiple GT are governing the Cameroonian CVC, multiple ToC is in place and then it is important to how they will be working together under a driver o change. As Kornell and Kubish (1998) suggest, complementarity between multiple theories of change means analyzing the way different assumptions, activities, timeframes, and even outcomes articulate or even compete.

Stein & Valters (2012) propose a set of 14 components that should be used for mapping the sequence of steps in a process of change**.** Although the components should be used together to have a deep understanding of the roadmap expected, in this research only five components were used to describe a possible ToC for the case of study: 1) the overall goal and how its achievement is measured; 2) the change process, meaning how intended inputs could lead to short-long-term outputs; 3) change-makers, referring to those milestones that can suggest adequate change; 4) actors involved in the entire transformation process; and 5) assumptions considered for each step of the process of change. The selection of the components was made after the data collection, considering which components could be answered with the information gathered on the field; It was also sought that the components were aligned with the concepts referred to in the policy integration framework, in order to build a coordinated history.

4. METHODOLOGY

4.1. Study site

The main area of study will be the central region of Cameroon, as it is one of the main cocoa-producing areas in the county (IDH, 2021). Data collection mainly took place in Yaoundé, the political capital where more national entities and organizations are located (**Figure 2).** For the farmer interviews, the municipality of Ntui was chosen for two reasons: i) it has a high concentration of cocoa plantations, and it is a main buying point for the cocoa traders, and ii) it is a location where WUR and CIFOR-ICRAF are currently conducting research, with certified cocoa

plantations that are also part of IDH initiatives. Also, some interviews took place in Doula, the economic capital situated in the Littoral Region, as two organizations are placed there.

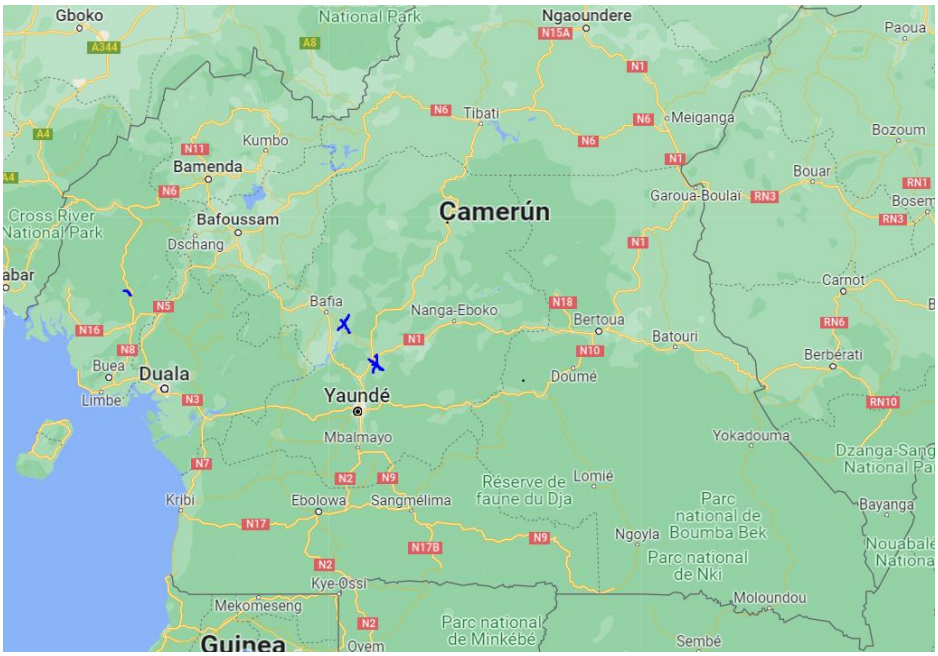

Figure 2. Map with the data collection points in Cameroon. Source: Google maps, 2022

4.2. Literature review

Documentation and academic literature review were done first to have a general context and map relevant actors (T**able 3**). Special attention was given to references to the type of interventions, timeframes and monitoring systems around activities focus on environmental sustainability for cocoa production. The documents were retrieved online from the official web pages.

For the private sector, the sustainability guidelines and reports from the main three traders were consulted. For certification standards, general guidelines and annual reports were consulted. Since the UTZ program in Cameroon merged with Rainforest Alliance, the Code of conduct and guidelines were obtained from the later official page. For the public sector, the 1994 Forestry Law and the 1996 Environmental Policy REDD+ were included for their relevance in the agroforestry sector.

For international regulators, only the European Union will be considered as it is Cameroon's main destination of cocoa beans (70-80%) (Stoop et al., 2021). In November 2021, the European Commission submitted the regulation proposal on deforestation-free cocoa, which was taken as the reference document defining the upcoming trade framework. As the regulation is still in its

legislative life, working documents and amendments were constantly consulted with a cutoff date of 8th October 2022.

Following the interviews, new documentation was added as it was mentioned or given by the actors. This was the case for documentation from the Ministry of Agriculture and Rural Development (MINADER) as well as two just-released consultancy reports related to the traceability of the CVC. The second review of documentation was made focusing more on the reference to other actors to map how the programs could relate to each other.

Other highly relevant documents were two reports from consultancies related to Cameroon's traceability system, each one financed by different actors. The first, financed by the EU Commission focused on the state of play of public/private initiatives in terms of traceability and transparency of the sector (Nitidæ & EFI, 2022) and the second financed by IDH aimed to model a nationwide cocoa traceability system for Cameroon, from farmgate to port of exit (van Heerden et al., 2022).

Table 3. List of relevant documentation by governance tool by GT and actor

GT	Actor	Document for review	Relevance
State-driven (Cameroon)	Goverment of Cameroon	1994 Forestry Law	Policy governing forest, including definitions and prodcutive activities
		1996 Environmental Policy REDD+ Strategy	Policy that considers agroforestry project relevant for national commitments on reduction in deforestation and forest degradation
		Rural Sector Develpment Strategy/ National Agricultural Investment Plan 2020-2030	Instestment Plan for Cocoa sector in the middle term
	ONCC	Guidelines for high-quality cocoa	Review the criteria for quality, in terms of environmental sustainbility
Market-led	Barry Callebaut´s	¬Forever Chocolate strategy outline ¬Forever Chocolate Progress Report 2020/21	Corporate program from 2018, includes Farmer Schools
	Telcar-Cargill	¬Cocoa Promise Program outline; ¬Cocoa & Chocolate Sustainability Progress Report 2020	Corporate program from 2018
	Olam Cocoa Compass	¬Cocoa Compass Program Action Plan ¬Impact Report 2019-2020	Corpote program from 2019, with action milestones in 2020 and 2024
	Rainforest Alliance-UTZ	¬Rainforest Alliance Sustainable Agriculture Standard: ¬ UTZ Guidelines ¬ Policy for Farm and Supply Chain Certification in Cocoa 2021 ¬ RA-UTZCocoa certification Data Report 2020	Biggest certification program for cocoa in Cameroon, covering nearly a fourth of the production volume
Mixed	IDH	Roadmap to Deforestation-free Cocoa in Cameroon	Signed in January 2021. Private, civil society partnership that aims to end cocoa-related deforestation in Cameroon, with 3 pillars: forest protection, sustainable production and social inclusion
		Consultancy report 2022	To model a nation-wide cocoa traceability system for Cameroon, from farmgate to port of exit
	IDH & WWF Cameroon	Green Cocoa Landscape Program	Signed in 2019. Private-Public partnership focus at muicipality level.
State-driven (EU)	European Comission	2021 Policy draft: Regulation on deforestation-free product	It defines stronger regulation on the trade of deforestation-free cocoa and realted products, which includes conditions for due dilligence process
		2020-2021 Reports of Cocoa Talks meetings	The EU Multi-stakeholder Dialogue for Sustainable Cocoa (Cocoa Talks) to discuss standards, deforestation and sustainable practices in the cocoa sector. Six meetings were hold between October 2020 and July 2021
		Consultancy report 2022	transparency of the sectors

4.3. Interviews

The interviews were made using a semi-structured questionnaire (See section 9. AAPPENDI). This is preferred over structured questions since it allows the respondent to open up and also gives space to the interviewer to ask follow-up questions to better understand the answer. In general, the questionnaire had three sections:

- Questions related to interactions among actors, including joint work which each actor, influencing actors, and spaces of coordination. Mostly answering sub-question 1
- Questions related to the perception of a traceability system and future challenges, to answer question 2
- Questions related to the perception of environmental issues challenges to comply with the new regulation and current roles, to answer questions 1 and 2.

A total of **16** semi-structured interviews were conducted with representatives from the different GT, lasting on average 1:15-1:30h. The questionnaire done to the farmers was slightly different for simpler questions. The intention was to identify their views on their work with other actors in the CVC, as well as future challenges in face of the EU deforestation-free regulation. **Table 4** presents the list of interviewees by type of actor. The actors were initially selected by literature review and later expanded during fieldwork, by i) contacts made during two Cocoa Talks that occurred attended during the fieldwork, and ii) referred by interviewees (or so-called snowballing sampling), especially ones from civil organizations.

Table 4. Actors interviewed

Type of actor	Actor or program	No. Participants
Cameroonian Government	ONCC -National Cocoa and Coffee Board	1
	MINANDER- PADCACAO, Programme de Developpement de Cacao et Coffee au Cameroon	4
Private sector	Telcar Cocoa Ltd: Cocoa Promise Program	1
	Barry Callebaut (Sic Cacao): Forever Chocolate strategy	1
	Olam: Cocoa Compass Program	1
	Rainforest Alliance	1
Multistakeholder partnership	IDH Roadmap to Deforestation-free cocoa	1
Cocoa producers	CONAPROCAM- Confédération Nationale de Producteurs de Cacao et Café du Cameroun	1
	ANPCC -Association Nationale de Producteurs de Cacao et Café	1

	Farmers	8
EU partners	EU Delegation– DEPP	1
	GIZ	4
Others	IITA- International Tropical Institute of Agriculture	1
	CIFOR-ICRAF	1
	WWF	1
	FERN- European NGO	1

From the Cameroonian public sector, a group of (4) representatives from the Programme de Developpement de Cacao et Coffee au Cameroon - PADCACAO were interviewed. This program, led by the Societé de Developpement du Cacao et Coffee au Cameroon- SODECAO, which is affiliated with MINADER, is the national program that comprises all the activities for the development of the cacao sector. Attempts were made to contact someone from the Ministry of Forest and Wildlife (MINFOF) but without success.

In the private sector, the sustainability directors from the main three trade companies were interviewed. The type of actors referred to as implementing organizations included Rainforest Alliance, IITA, and CIFOR-ICRAF as research institutes, WWF and GIZ, and the German cooperation, reaching representatives with different roles. From civil society organizations, a representative (from the South region) from the National Association of Cocoa & Coffee Producers (ANPCC) and one from the National Confederation of Cocoa and Coffee Producers (CONAPROCAM) were interviewed, important organizations as they represent a large group of cocoa cooperatives. The former has as affiliates confederations from all over Cameroon, while the latter comprises cooperatives from the Central region. As for the farmers, a group of 8 farmers participated in the interview which was more focused on customary practices, technical assistance received, and their view on challenges in face of regulations limiting deforestation. The farmers were active cocoa farmers including a chief of the village, who was invited through an English-speaking farmer that has a strong collaboration with CIFOR. He served as a translator during the interview rather than as an interviewee.

Finally, regarding actors related to the upcoming EU deforestation-free regulation, the EU representative for the agricultural sector for cocoa projects was interviewed. As an external actor, FERN, a European NGO was contacted about their strong participation in the public discussion around the regulation, mainly advocating for farmer rights and inclusion.

All but 2 interviews were recorded, having previous consent by the participants. Notes were taken for all of them, especially for the not recorded interviews (Telcar and Barry Callebaut). Only two interviews were accompanied by a French translator (farmers and ANPCC).

Additionally, information was gathered by assisting to two Cocoa Talks and one Ministerial meeting. The Cocoa Talks are a series of events led by the European Commission, GIZ, and IDH to bring stakeholders to dialogue and propose actions around certain thematic. The themes of the Talks attended were i) *price and living income* and ii) the *traceability system*. The Ministerial meeting was from MINADER and a Canadian consultancy to present a joint project for technical assistance in the detection of the black widow pest, affecting cocoa plantations in Cameroon.

The main aim was to identify how stakeholders envision the interaction between public, private, and multi-stakeholder initiatives under a cocoa governance framework, for which the data will be expected to help in the identification of 1) key points of intersection between GT and actors; 2) challenges facing for more environmental sustainability; and 3) ideal synergies, referring to linkages and norms needed for better results facing EU regulations.

4.4. Data analysis

The interviews' transcripts and the documentation were coded using Atlas.ti software. Transcripts were grouped by type of actor to reveal patterns within and across groups. An initial set of codes was developed based on the literature review, prior to data collection, to be later expanded and defined deductively after reading all the transcriptions. A set of 65 codes were used for the data analysis (see section **9. Appendix),** which could be grouped into categories such as i) references (positive and negative) to other actors in the CVC and the types of support among them, and ii) references (positive and negative) to the traceability system and challenges currently facing. Examples of the most common codes used: are coordination target, lack of communication, traceability challenges, traceability goals, lack of funding, cocoa price, and poor Government role.

Based on that, a second part consisted of analyzing the policy integration of the multiple GT considerer. As shown **in Table** 5**,** the indicators were categorized according to the level of integration, in a range from weak to strong also considering in-betweens as medium-low and

medium-strong. This evaluation plus the answers related to the traceability system and environmental concerns helped to complement the rest of the analysis.

Table 5. Levels of policy integration are defined by indicators, following Candel & Biesbroek (2016)

Dimension	Indicator	Levels of integration	
		Strong	**Weak**
Policy frame	-	The issue is recognized by actors as cross-cutting and there is a "holistic approach" to it, already integrated with policy instruments	The issue is perceived as a responsibility of one specific GT and no awareness of the influence of individual efforts.
Subsystem involvement	Governance tools involved	All the relevant GT recognize their part in dealing with the issue and have actively taken action.	Just one GT dealing with the issue, independently.
	Density of interactions	Variety of and constant interactions among the governance tools, such as the exchange of information and coordination	Lack of interactions
Policy goals	Range of policies in which the issue is embedded	All potentially relevant policy or initiative goals aimed to solve the cross-cutting issue	Only one GT has goals related to the issue
	Degree of coherence	All goals across GT are coordinated toward addressing the cross-cutting issue	Goals not attuned across GT, generally sectoral goals

Regarding the impact that the EU deforestation-free regulation could have on the current governance framework, the interviews will be used to collect data on challenges and opportunities ahead as perceived by the actors. The guiding components chosen to build a ToC approach were not answered one by one but rather used to build a coherent story of possible changes ahead.

4.5. Limitations

i) Language

- There is an advantage of doing the interviews in English as it left more time to properly discuss the questions. In comparison, the two interviews where a translator was present included fewer questions than the rest.
- There was limited fluency in the answers. Sometimes the interviewees struggle to find the words to properly express themselves; sometimes they mixed verbal tenses (present and future) which was confusing to distinguish between current or future(ideal) situations or decisions. Also, some questions were misinterpreted, so several follow-up questions had to be made to properly understand the point.

ii) Selection of topics

- As the regulation is recent and still under discussion, there was limited quality in the answers received. First, not many participants knew about it. Also, at the moment of

the interviews, there was uncertainty about some contrasting definitions, date of implementation, or opportunities for producing countries to receive EU funding.

- Since the research was mainly focused on environmental issues, the interviews were limited to other relevant topics for the interviewees such as price setting, market dynamics, corruption, and income distribution, which were mentioned by interviewees as challenges.

iii) Selection of participants

- Roles of the participants varied a lot, meaning that answers did not necessarily show the entire stakeholder position. Also, some of them a had short time in the organization, so had mixed information or couldn't answer many questions.
- For the Public sector, it was not possible to have interviews with high-rankedd participants from MINADER and MINFOF. This would have brought a more holistic view of how the Government envisions the sector. To cover these information gaps, specific questions about the specific role of these two ministries were done to all the actors and detailed notes were taken during their participation during the Cocoa Talks attended.

iv) Positionality

- Explanations about choices for data capturing and analysis are given to help the reader with the rationale behind them. The impact of the researcher's interpretation for coding and analysis is minimized by following a systematic approach for the interview guide based on the research questions. Also, the analytical framework was the most operational one to evaluate such an open concept as policy integration.
- Coming from Colombia, a country with to some extent similar sectorial and political challenges, could have made the researcher highlight and relate or dismiss some aspects that could be less relatable than others.

5. RESULTS

This chapter includes first, a subsection describing the predominant environmental approach among the stakeholders around cocoa production in Cameroon, with the issues and strategies that

are guiding the decision-making process. Subsequently, two subsections directly related to the sub-research questions about policy integration and challenges of the EU regulation on zero deforestation.

5.1. Environmental issues surrounding cocoa production

5.1.1. The common narrative around reducing cocoa-led deforestation production

This section describes the environmental issues recognized by the actors as well as the associated practices surrounding them. The starting point was to point out the most pressing environmental issue followed by the narrative of the measures that should be taken to reduce or prevent it.

Deforestation is recognized as the main environmental problem in cocoa production. Most of those interviewed identified deforestation as the highest-priority environmental problem. It should be noted that none of them placed particular emphasis on the concept of forest degradation, even though it is mentioned jointly in almost all the documentation consulted. This could suggest that in practice, there is ignorance of the definitions of these two concepts. For example, one of the farmers highlighted that cocoa agroforestry in the forest gives them more benefits than the forest itself "*since we are equally planting tress equally as cocoa, it equally producers some water, and that have not to impact the ozone layer, no problem here''* (farmer, personal interview, May 2022). But it is well documented that agroforestry has an impact on forest biodiversity, having more biodiversity than agricultural land if certain conditions are met (Schroth & Harvey, 2007).

The open question on the environmental issue sought to explore whether the participants mentioned other environmental issues related to cocoa production, such as the use of chemicals or others. Among the answers, almost all actors mentioned the use of chemicals such as fertilizers and insecticides as normal practice without much environmental concern. Farmers and traders, for example, refer to it as a necessary practice, especially for pest control (such as black pod) but which use should be limited; IITA was the only one showing concerns: "*There are not good practices with using chemical compound, about throwing chemical or empty contents of chemical compounds and polluting water, it is also a health issue*" (Jonas Ngouhouo, personal interview, June 2022). The documentation also does not refer to the use of chemicals as a concerning issue for environmental damage but instead as a tool for low yield (as will be explained later in this

section). Then, the issue of deforestation and forest degradation is the environmental issue to be discussed without neglecting that other environmental issues are present as part of sustainability.

In response to questions on deforestation, all participants mentioned the regulations in the National Forest Law of 1994, referred to as Forest Law/94. This regulation defines two types of forests, permanent and non-permanent, where agricultural activity is allowed only in the second category. When the participants agree that no-deforestation cocoa, is the one coming from no permanent areas. This matches the finding (Masselot, 2020) showing little knowledge of the difference between being legal and being (environmentally) sustainable.

Despite the seriousness of the problem, participants, in general, do not see deforestation as a current alarming problem but as one that should be foreseen. The first is due to the high forest cover and agroforestry as the main method for growing cocoa. In Cameroon, two-thirds of the plantations are under agroforestry (Lescuyer et al., 2020), where cocoa alternates with avocado, banana, orange, or wood trees. The farmers themselves, for example, state that agroforestry brings more benefits for them than the forest itself "*we actually put away the forest (…) but since we are equally planting trees, the negative impact is not that great as compared to the advantages that we have from doing it''* (farmer, personal interview, May 2022). However, even though there are some advantages to shade plantation as humidity maintenance and product diversification, water retention and productivity can be lower in these systems (Wessel & Quist-Wessel, 2015). Likewise, they express concern about considering any tree cutting to be deforestation, since all plantations inherently entail cutting, either to replace it with fruit or shade trees or new cocoa plants. This reflects the inappropriate use of the term deforestation and the stigma associated with managing plantations.

However, deforestation does happen, and its increase must be prevented. There is a general sentiment of concern that increasing cocoa production by 2030 could bring a rise in deforestation. Cocoa traders note that Cameroonian cocoa has a high reputation given the low rates of deforestation compared to Ghana and Côte d'Ivoire. These two countries are taken as a reference to avoid high rates of deforestation since most are full-sun plantations.

The shared narrative to reduce and prevent deforestation and forest degradation is the increase in productivity in existing plantations. Currently, the average yield is low, accounting for 300-400 kg per ha when estimates show it could be around 700-800 kg per ha (Wessel & Quist-Wessel, 2015a). Thus, all participants agree on the potential on doubling production by increasing productivity in the existing area. There, with higher production, it is assumed that farmers would not need to expand to new areas if they can make more from existing plots of land and increase yield. This is explained by capacity limitations *"Even if they want to expand, it is a matter of capacity. Maybe no able to employ so many people to come work for you."* (Jonas Ngouhouo, personal interview, June 2022).

Among the strategies that enhance productivity, three stand out: 1) replacement of old trees, 2) improvement of soil quality and 3) use of best practices. In their initiatives, different actors consider and address these issues, which will be explained as follows.

First, in Cameroon, one of the main yield-limiting factors is aged cocoa trees. Plantations are on average 30-40 years old, the same as the considered economic lifetime of cocoa trees. When asked about current challenges, all actors mentioned this situation as one of the main difficulties in plantations. Indeed, this point is found in corporate programs, GIZ interventions, and PADCACAO programs as underlying causes of current low productivity and hence drivers for assistance on plant material. Old plantations have negative implications on yield and so, could be a factor influencing farmers to expand to adjacent areas (Wessel & Quist-Wessel, 2015a). That is why one of the main actions is replanting cocoa trees.

Replanting seems to be the strategy where most of the efforts are put, by the government, companies and implementing organizations such as WWF and IITA are involved. This matter is primarily addressed by MINADER through the PAD-CACAO program. This program aims to *increase the national production of quality cocoa to guarantee the sustainability of cocoa economies* and one of the two main missions is to produce and distribute high-quality vegetal material (Ministerial Order No.00006 MINADER from 14/ Feb/2022). This is made by having cocoa tree nurseries in areas close to producing municipalities and then delivering it to cooperatives or directly to farmers. Despite the relevance of the mission, it is not clear the potential and goal for restitution, the criteria for selecting farmers, or a monitoring plan for plant survival. When asked PAD-CACAO

about these points, the answer was they will be working on that later this year (Participant 4, PAD-CACAO personal communication, August 2022). Other actors working on cocoa replanting and rehabilitation are IITA and WWF.

Another issue affecting productivity is low soil fertility. Research has shown there is a relationship between aged cacao plants and poor soil quality in existing plantations (Wessel & Quist-Wessel, 2015b). Some actors such as research institutions and Rainforest Alliance recognized the benefits of agroforestry in soil improvement but in general, it is not a topic yet widely named across actors as a key issue for productivity. Although Cameroon doesn't have a detailed baseline of soil quality or concrete estimation of the potential of soil improvement for better yield. That is why the topic is on the agenda of research institutions such as IITA and CIFOR-ICRAF and yet, no concrete actions have been defined.

Lastly, implementation of better practices to increase productivity. This mainly includes training on the use of fertilizers and treatments for pest and disease control. Regarding the first one, 7/16 actors mention the need for technical assistance and material supply to improve plantation management. As some research has shown, mature cocoa yields can increase up to 50% with the use of fertilizer (Wessel & Quist-Wessel, 2015b). Also, fungicides are widely used for the black pod, a fungus-induced pest that affects share cocoa plantations in Cameroon and can destroy entire yields (Weser). *"we have training in mix fertilizers and how to better use it (…) and that is always better for the plantations"* (Farmer 3, personal interview, May 2022). Another management practice mentioned by IITA, CIFOR, and OLAM is the densification of cocoa plantations, focused on cocoa agroforestry. For agroforestry to be considered as such, for example, there is a suggested range of tree density of 15-18 shade trees per ha (Kaba et al., 2020)

However, all the efforts to increase productivity could be short to minimizing or tackling deforestation if the cocoa bean price (at the farm gate) does not increase. This is an issue widely discussed by all the actors. As pointed out by producers, their earnings are limited, usually getting less than what they need. Even with certification, *"companies usually buy the beans but mixed. So, we don't get a good price"* (Geraldine Sonkone, CONAPROCAM, personal interview, June 2022). Followed by the private sector, which recognizes that the price should be an incentive for farmers to invest in productivity and conserve forests instead of expanding (OLAM). Price is defined by buyers, meaning cocoa manufacturers (like Mars, and Nestlé) who are engaged in the

international discussion about this topic. The EU has led the debate globally about fair cocoa prices and the living income gap, which is defined as the income sufficient for the producer to cover the basic standard of living for the entire family(The Living Income Community of Practice, n.d.). Environmental sustainability is deeply intertwined with social and economic issues.

5.2. Perceptions of integration among actors

This section presents the results of the interviews by type of actor (as in Table 4). For each type, the description consists of topics such as their work with others, their perception of the roles and coordination, actors they consider leaders as well as actors with whom they need to strengthen links. A summary of participants' perceptions is presented in **Table 6**, in which actors (columns) indicate the degree of collaboration with other actors (rows), and the actors with whom they might like to have closer ties (presence of + signs).

Table 6. Summary of perceptions of actor-actor relationships. The shades of color represent how strong is the joint work, while the + shows the actor with whom they would like to have a stronger relationship

	Government	Privates	IDH	Producers	EU partners	Others
Government				+		
Privates	+		+	+		+
IDH	+			+		
Producers	+				+	
EU partners	+			+		
Others	+	+	+			

- **Cameroonian Government**

This includes ONCC and the program PADCACAO from MINADER. Starting with the joint work, both actors identified producers as their main external partners. As the nature of ONCC is to oversee exports and quality control, it is mainly on the field with cooperatives, checking conditions for the cocoa beans after harvesting. Their main relation with producers in is terms of sensibilization and watching out for best practices for the best quality of the beans but in physical terms. "*My job is after you cut the fruit, how to get the good beans. When you want to do the planting, it's not my job. Minader has to do that job*" (Ellie Bertrand Mutngi, personal interview, June 2022). In terms of quality, it could be said that no-deforestation is also part of the (non-physical) quality of the beans.

For this issue, ONCC agrees and does sensibilization on this topic, encouraging farmers to certify, but doesn't stand a monitoring role on cocoa bean origin. It is not its role. ONCC directly works with privates on keeping a record of buyers and cooperatives to tax proportionally; environmental assessment is done through audits made to the Rainforest Alliance certifications.

In the case of PAD-CACAO, they work closely with farmers and cooperatives, as it gives technical assistance and vegetable material. For training, they mostly rely on the CICC- Commission Interprofesionel du Café et Cacao and GIZ as technical partners to give the training and funding from the former.

When asked about the coordination, both actors express that it could be heavily improved. For ONCC, high expectations are put on IDH Roadmap to better align and have a coordinated view, even referring to it as "*the Bible of coordination of sustainability activities*" (Ellie Bertrand Mutngi, personal interview, June 2022). However, they are not aware of the current stage of the Roadmap or what will be their role in this.

On the other hand, the representatives of PAD-CACAO first referred to a need for internal coordination or synergies at the Government level, especially within the same MINADER. They recognized that efficiency could be improved with more funding, planning, and fewer administrative processes. *"we don't have enough funding or not proper planning (…) we planned to double production, but we need 40.000 million CAF for that and no idea where they are coming from"* (Edima Ninon PADCACAO, personal interview, July 2022). The National Agricultural Investment Plan 2020-2030 defines cocoa as the commodity with the highest increase in production for 2030, with an estimated cost of 40.000 million CFA. But FODECC- Fonds de Developpement des Filieres Cacao et Cafe, a national fund for the cocoa and coffee sector seems to have a limited amount. Just in 2021, the investment of the Fund for the PAD CACAO program was only 569 mill CFA (FODECC, 2021).

Despite the relevance of the Program for the Government, it is not clear the potential and goal for restitution, the criteria for selecting farmers, or a monitoring plan for plant survival. When asked PAD-CACAO about these points, the answer was they will be working on that later this year (Participant 4, PAD-CACAO personal communication, August 2022).

- **Private sector**

This includes cocoa traders and the VSS Rainforest Alliance. As for the three cocoa traders, they have a very clear individual agenda as interaction with the public sector is limited. They recognize as key partners of MINADER and MINCOMERCE but express a lack of communication or spaces for discussion. The production goal defined by the Government suggests interventions on productivity which in turn will positively affect the size of their business. However, there is reluctance in how the goal will be achieved with the current state of the sector. As mentioned by Austin Kidseru "*no concrete actions have been carried on the ground by Government for that (double production). One could argue that FODEC and SODECAO have projects that intend to boost productivity, but their impact is not visible*" (OLAM, personal interview, June 2022). The privates need the public sector to promote the growth of the sector, and for that technical and financial assistance is needed from both parties.

Privates agree on the strategy of improving productivity from existing farms to limit the risk of deforestation, but technical, financial, and monitoring assistance is needed. They mentioned collaboration with research institutions such as ICRAF on improving productivity and promoting agroforestry, as well as GIZ and WWF on farmer training. But the number of farmers requires joint efforts for a bigger scope. Privates support farmer certification but have mixed feelings about its scope. On one side, they recognized its added value for the market but the high costs for farmers and themselves could not be financially feasible for both. Also, as Austin expresses "*certification is limited as it only serves farmers that can afford it, while the majority cannot*" (OLAM, personal interview, June 2022).

On the other hand, privates express that support from the Government is required for law enforcement. As Roland Besong "*we do not need more rules but rather more control, to assure the implementation and monitoring*" (TELCAR, personal interview, June 2022). Land property rights, conflicts in land use, and lack of detailed delimitation of areas for agricultural activities are the main issues. For this, privates argue more coordination among related ministries for better planning and potentially farmer mapping. This relates precisely to the upcoming EU deforestation-free regulation in terms of effectively showing deforestation-free cocoa. More on the coordination needed for traceability will be described in the next Section 2.3.

Especially for this point of coordination and concerning increasing the yield, traders recognized the role of IDH in helping to define a common vision. However, OLAM differs on the potential of IDH initiative as the funding is limited, *"no point joining a project where is not funding (…) other initiatives as CFI in Ghana and Côte d'Ivoire are working as for donors" (Austine Kidzeru, personal interview June 2022)*. While TELCAR did sign the Roadmap and has already allocated resources for future implementation. It sees the platform with benefits for reaching markets and improving its business.

- **IDH**

IDA Cameroon facilitates the commitment to a common vision and goals for the CVC as defined in the Roadmap. As this actor has detailed awareness of the roles, interests, and concerns of the rest, the interview gave insight into the process as well as the challenge of serving as a facilitator for coordination among actors.

As a context, the first step of IDH was to mobilize actors from the private sector, government, civil society, and producers to be part of the Roadmap. A framework of Action was signed in 2020 by 26 actors, who agreed on 9 general commitments related to farmers' well-being (living income, farmers' rights) and environmental sustainability (legal compliance, traceability, and forest restoration) (IDH, 2021). The current stage is setting up the governance structure, meaning a Committee for coordinating the implementation. Then, an Implementation Framework will be created based on an individual plan defined by each actor.

By consensus, the governance leadership is given to the MINADER, to be official by a ministerial Decree to define a proper Committee. The motivation lies in the fact that, although Cameroon has a liberalized cocoa sector, their overseeing the future of the sector lies on the country, hence on the Government. As Elvis Ngwa said *"you need to bring in the government, they need to have ownership of the process. The companies tomorrow could leave Cameroon. Technical and financial partners too (…) So who is left? Then the Government"* (Elvis Ngwa, IDH, personal interview, June 2022). IDH's work will be completed once the Implementation Framework is formulated and enough funding is secured; then implementation coordination will rest with the government.

However, Government commitment has varied among Ministries. MINADER has been active in engaging cooperatives and unions on signing the Roadmap but has been very passive in promoting the Decree or defining its role as leader. MINFOF along with MINEPDED (Ministry of Environment,

Nature Protection, and Sustainable Development) oversee setting up a forest monitoring system for accurate deforestation tracking but defining the terms of reference for its design has taken more time than expected. ONCC, only mentions the allocation of resources from tax revenues to operationalize the governance body, but nothing about its performance in taking on new responsibilities.

IDH mentions efficiency as one of the main benefits of this coordinated platform. To illustrate the case, two examples were mentioned: first, avoiding duplicate farmer training by sharing farmer information or setting a proper baseline; second, by conducting a baseline household survey the government could define the living income for cocoa farmers, which could use and improve the privates' farmer register and mapping process; second, a farmer register could help to better target farmers training and avoid duplicating assistance. The main concern raised by privates is on disclosing their baselines on farmer location since they consider it as part of their business models. This issue of data transparency will be discussed in the next section.

Lastly, an example of improved collaboration is the Green Cocoa Landscape Program, which consists of pilot interventions in two municipalities on policy reforms and participatory co-creation (IDH, 2021). For this, one pilot project counts with the support of TELCAR, which will join the local government, research institutions, and cooperatives to define specific solutions for one (of two) municipalities prioritized. This is the first step in bringing to real action the process of coordination for cocoa sustainability that could enhance further collaboration in the Roadmap.

- **Cocoa producers**

This includes farmers, cooperative CONAPROCAM, and the association ANPCC. Producers coincide in having the Government and private sector as their main partners. With the former, their activity is supported by technical assistance primarily from the program SODECAO and in general MINADER. They express receiving training on the use of fertilizers, plague control, and soil management. Also, importantly the supply of vegetable material as well as support for replanting; fertilizers are also sometimes provided. They also mention strong sensibilization on the topic of deforestation and soil management, provided again by the same actors.

However, such technical assistance is not enough as the funding is limited. They expressed that before the liberalization, the support from the government in terms of tools, and the material was

impressive and now they rely on several other actors that are not enough to reach all. As said by the Director of CONAPROCAM *"the Government gives very low funding but helps them with high prices in comparison with other countries. The Gov is very committed, but the impact is low. PAD CACAO program impact is very limited*" (Geraldine Sonkone, CONAPROCAM, personal interview, June 2022). They especially require more assistance to increase productivity.

The private sector also gives them technical and financial assistance. Producers mentioned that the three main cocoa traders support them with technical assistance, and even sometimes they have more than two training on similar issues. They state that bigger support can be received from the privates to have better prices since the price sold to intermediaries or directly to buyers sometimes is lower than the costs. The role of cooperatives in representing farmers or being trade intermediaries is not very present.

There is a feeling of dissatisfaction with the current level of support from both actors. In fact, CONAPROCAM and ANPCC express strong interest in looking for assistance from other actors. As Nicaise Assiga mentioned *"cooperatives would like to work directly with these international organizations so they can both see the impacts. The NGO works directly with cooperatives and in the field. They can give money to distribute at different levels*" (ANPCC, personal interview, July 2022). Also, the insufficient support has resulted in low trust in the Government and private commitments to increase the production and sustainability of the sector.

Lastly, landownership was the only traditional practice mentioned. Village chiefs are the ones granting and validating land property, where land can be inherited or assigned to (only) locals that need to expand. Chiefs keep an ownership record recognized by locals, but it is not an official, legal ownership right. On another hand, there is no such thing as traditional cocoa production practices, since cocoa plantations were installed during colonization times (the 1950s) and practices have been always taught.

- **EU Partners**

This includes de EU Delegation and GIZ, the German development agency. About their roles, the EU Delegation endorsed Cameroon as an observer for the Cocoa Forest Initiative, a program for cocoa sustainability developed for Ghana and Côte d'Ivoire. This created a political dialogue that

open the door for the Government to receive technical and financial assistance from the EU Delegation and GIZ towards sustainability in the cocoa sector. An example of this support is financing the study to *model a nationwide cocoa traceability system for Cameroon, from farmgate to port of exit* (van Heerden et al., 2022) well as the development of the Cocoa Talks. This result-based cooperation makes the EU Delegation an ally (and pusher) for the Government's commitments to improving conditions.

GIZ is an implementing agent, working more on the ground with actors like the program SODECAO, ONCC, cooperatives, and farmers. With MINADER, they have supported the setting and maintenance of tree nurseries as well as training in agricultural practices and finance; with ONCC, they have been training their staff to be trainers for cooperatives in sensibilization and agroforestry practices. With these two partners and with cooperatives, they give technical and in-kind assistance, targeting areas to avoid duplicating training. Although they recognize themselves as the biggest technical agents, they only reach 55.000 cocoa farmers out of the more than 500.000 existing. To avoid duplicating assistance efforts, partnerships with traders are crucial, but no official ones have been formed.

Regarding coordination, EU Delegation highlights the lack of national political will to commit to concrete actions. Some key issues to be addressed are the lack of a farmers' database to properly make projections, as well as a proper land tenure system with secure property rights. Although complex issues, they need to start being approached. As an example, "*Ghana take the political commitment of having a data-based and in a couple of months did a rural census*" (Silvanie Jardinet, EU Delegation, personal interview May 2022). Also, a lack of commitment and coordination is pointed out as not all the Ministries directly involved in the sector were in the Cocoa Talks (like MINFOF). GIZ also points out the lack of leadership, and a missing national framework to give direction to the cocoa sector.

Both actors have direct communication with a diversity of actors and referred to the relevance of creating spaces of dialogue. The Cocoa Talks are relevant in bringing actors not only to thematic dialogues but to set recommendations for key actors. This will also feed the activities of IDH, which is seen as having a coordination role by bringing the Government as well as farmers to the table. However, neither actor is aware of which stage it is going or the real commitment for real

action. As Silvanie reflects "*I wonder if (the Roadmap's main objectives) are a priority for the Government if there is real political will. If so, the Prime Minister would have already confirmed the priority and there the ministries would work together"* (EU Delegation, personal interview, May 2022).

Besides their perception of coordination, fair cocoa pricing was frequently raised. Although Cameroon has the highest price in Ghana and Côte d'Ivoire, both actors highlight the necessity of setting a price enough to fill the living income gap. The EU Commission has taken this as a priority point to assist the government because it may be an incentive for farmers to reduce their area expansion.

- **Others**

This includes research institutions such as IITA and CIFRO-ICRAF as well as WWF. The NGO Fern was asked about the EU deforestation-free regulation, the reason why it will be a reference here but in the next section.

In terms of common work, research institutions share inputs with a wide variety of actors: from the Government to traders, to GIZ, or directly to farmers. They align with the need of increasing productivity to reduce deforestation, under agroforestry systems and ensure farmers' sensibilization in that regard. Their research focuses on topics such as soil quality, biodiversity in agroforestry plantations, plague control, and seed improvement, all of which hold promise for increasing productivity.

Soil is a subject where these three actors agree on its relevance. There is a knowledge gap about soil fertility in Cameroonian cocoa plantations, reason what is a priority in research. The CocoaSoils project between IITA and IDH is precisely to have a baseline to decide upon action. But with productivity, also comes the need to ensure property rights, as ownership is an incentive to work on the land: "*in Cameroon land rights are different from tree property rights. The Forest Law 1994, where tree property is granted to the one who plants the tree, but for cacao, the property is not for the producers, since they are very old*" (Jean Michael, CIFOR, personal interview, May 2022).

Concerning coordination, they agree on the need for more spaces for dialogue. In one part, IITA considered it necessary to focus on an integrative approach to farmers "*(there is the need of) optimization of the inputs (…) targeting many more farmers, not duplicating efforts and expanding and enriching the interventions for more impact*" (Jonas Ngouhouo, personal interview, June 2022). On the other hand, WWF also promotes spaces for coordination but at a regional scale through the Green Landscape Cocoa Program. This initiative works on two municipalities to bring actors to discuss and agree on particular changes or actions in the area towards improving sustainability in cocoa plantations. For this, they have partnered with IDH, and have brought together Rainforest Alliance, big cocoa traders, local government, and especially communities to the spaces. For WWF, these pilots are an enabling environment for more participation of local government and especially communities, and in turn, improve coordination along CVC.

Considering the above descriptions and some of the documentation reviewed the guiding questions proposed on the Method were followed to analyze the policy integration. Thus, **Table 7** summarizes the level of policy integration for the cocoa governance framework in Cameroon.

Table 7. Policy integration evaluation for the cocoa governance framework

Dimension	Indicator	Levels of integration			
		1 (weak)	2	3	4 (strong)
Policy frame	-			- Deforestation is recognized as a cross-cutting governance issue. - GT recognized they do have a role to play but not sure which one it is	
Subsystem involvement	Governance tools involved			- GT align their strategies with the issue but individually - Low information exchange	
	Density of interactions		- Infrequent information exchange and coordination, not cross-cutting communication systems.		
Policy goals	Range of policies in which the issue is embedded		- GT set goals related with tackling deforestation but not a clear implemenetation plan		
	Degree of coherence		The GTs have included goals that may address the issue at some extent. No coordinated goals.		

5.3. Perceptions of integration challenges ahead of the EU no-deforestation regulation

The referred regulation proposes to prohibit the import of commodities such as cocoa if there were produced on deforested land after December 2019[1]. To prove that products are not linked to deforestation or forest degradation, traders putting commodities on the EU market must carry out an effective and continuous due diligence statement. For this, products should be traced from point of production by geo-referencing the plot(s) of where the commodity was produced. All the data collected along CVC will constitute a traceability system accessible to EU authorities and the general public (anonymized for the latter). The EU Commission would have to classify the countries according to their risk of deforestation, where a high-risk labeled country would result in tighter due diligence obligations. These two points of traceability system and country risk benchmarking were brought in the interviews, together with some definitions related to forest and forest degradation to get the participant's perception of challenges and opportunities that the current framework will face under this upcoming regulation.

Challenges ahead

The first challenge identified by participants is the transparency that comes with a national traceability system. Traders express concern over sharing all their producers' data into one system, as this information is part of their business assets. As Roland states ''*we don't want to share all the locations because that meant an investment, it is part of our business*'' (Roland Besong, TELCAR, personal interview, June 2022). There is a sentiment of resistance to moving along a national traceability system and privates prefer to move along with their procedures for geolocating farmers and they have made progress on this. However, the quality, reliability, and detail of their data are unknown, and making it public will require standardizing it. As Silvanie expressed "*the challenge will be to define the interoperability between systems, data exchange, the collection of personal data*" (Silvanie Jardinet, EU Commission, personal interview, May 2022).

Part of the concern about sharing data could be related to transparency resulting also in financial transparency, and as ONCC mentioned, this could mean more taxes. It is well known by various

[1] The initial proposal set a cut-off date for plantations after December 2020, but on October 8th, 2022, the European Parliament passed on an amendment, where among other tighter restrictions, set back the limit to 31 December 2019.

actors the practice of sourcing beans from countries such as Gabon to mix them with local production. Then, having every transaction registered with a receipt will affect some of this sourcing. However, in turn, this is precisely one of the advantages that ONCC sees in setting up a system since more data could be triangulated among traders and hence a more efficient monitoring role.

Tracing all the actors and transactions along the way will come with some individuals being left out. Middlemen a.k.a. coxeaurs are responsible for more than half of the transactions made directly to farmers. An authorized buyer holds an ID and licenses granted by CICC and arranged by traders; however, they cannot cover all and access to all the farmers in remote areas and that is where coxeaurs come in. These middlemen are not registered nor employed by trade companies, as it is an informal job that has not been regulated. As Austin expresses "*these coxeaurs provide a service which nor companies or government can provide. They even become part-financer to farmers to buy materials. We would need to give licenses, to make them official" (*Austin Kidzeru, OLAM, personal interview, June 2022). As seen during the Cocoa Talk attended about traceability, the need to formalize and capacitated coxeaurs is an issue heavily discussed by almost all the actors, as it will have social implications and will be time-consuming.

Other actors that will need to adjust are farmers. Cooperatives and government expressed concern over the challenges that traceability will imply for farmers, as some farmers would be left out of the market by not complying with the criteria. As Geraldine from CONAPROCAM commented, those farmers in remote places will take more time to geolocate and then won't be able to sell. Also, as the regulation sets cut-off dates for new cocoa plantations, this will affect farmers that don't cut as well as new ones. The impact of small farmers is what NGO as Fern have been calling for the EU Commission to ''*look at the smallholders and do a sort of comprehensive assessment of what are the needs of smallholders to comply and then put a support package to make sure those needs are meet"'* (Julia Christian, FERN, personal interview, June 2022). Sensibilization, as well as technological and training, will be needed, and it is not sure who can provide this to the urgency which is needed.

Time and funding are common concerns to comply with the EU regulation. Based on the current stage of the EU regulation, traders and countries will need to have traceability systems in place by

2025. Then, all the actors express concern over time constraints for all the activities needed for georeferencing farmers and mapping and upgrading forest cover. Currently, ONCC and private companies are carrying pilots for traceability systems using different technological methods, which seem not that easily scalable for costs and time. Privates alone can not do the investment to achieve these tasks, and then the most frequent question arises: "*Who is going to pay for setting all of this? The EU, the buyers and manufactures like Nestlé, or the consumers? Is the price going to rise?*" (Roberty Pamphile, WWF, personal interview, June 2022).

Apart from the farmer registry, active deforestation monitoring is also needed. Currently, Cameroon doesn't count with a deforestation alert system. Rainforest Alliance helps the Cameroonian Government to yearly upgrade the national forest atlas, which contains the forest coverage, but more frequent and detailed data on land use change must be pursued to effectively control legality. The private sector has foreseen this weakness and has stepped forward with investing in monitoring systems also necessary to prove that their sourcing comes from legal plantations, as explained by OLAM and TELCAR. As privates move forward with their farmer databases and forest monitoring systems, the concern appears again on the necessity of interoperability as a national traceability system is put in place.

In line with the deforest inventory, another concern mentioned by actors is possible mismatches with national regulations regarding deforestation and forest degradation and what the EU regulation will define in this matter. According to the last version of the regulation proposal[2], agroforestry is considered an agricultural activity and then a type of forest degradation, meaning that no compliance can be reached. As the farmers expressed "*You cannot plant or manage cocoa without cutting down some tree, so is the EU bringing any technical solution for that*?" (farmer, personal interview, May 2022).

6. DISCUSSION

6.1. Integration in the cocoa governance framework

[2] According to the public version of the proposal published in July 2022. Aversion with amendments was approved in September but at the moment of finishing this document, it was not publicly available yet.

The policy framework is rated medium-strong due to the issue of cocoa-driven deforestation and forest degradation being recognized as an environmental issue that requires intervention. There is a widely accepted narrative of how deforestation could be minimized and greatly prevented by raising current land productivity, plus having better farmers' databases and monitoring tools. Thus, it could be said that three concerns stand out: an increase in productivity, the creation of a national traceability system, and the establishment of a fair price, and I will come back during this discussion. Within each GT, these concerns are addressed under its competencies and interests, while acknowledging its complexity and the need for more joint action. For example, IDH pushes for establishing a traceability system where the Government gains more leadership, while the Government is more focused on raising productivity or the producers, demanding better prices and more assistance to rise productivity.

Among all actors, deforestation is always defined in terms of the Forest Law/94. The basic understanding of cocoa-led deforestation is for plantations occurring in the permanent forest, meaning those in the non-permanent forest are considered to have a low impact on the forest. But even in non-permanent forests, legality does not equal sustainability, and that is when the discourse of productivity for protection is relevant. For the private sector, productivity is desirable and compliance with social and environmental standards is necessary for market access. Then, it has pushed forward the discourse now also acquired by the Government. As Masselot (2020) reflects, there has been an institutionalization of the discourse around deforestation-free cocoa where the actors have adopted a similar narrative of the issue (Hajer & Versteeg, 2005)

This narrative has been the same as the one present in Ghana and Côte d'Ivoire. Under the Cocoa Forest Initiative, there is also a push forward productivity and social engagement toward improving holistic sustainability, namely *more cocoa ones less land* (CFI National Secretariat Ghana et al., 2021). This strategy of intensification makes sense from a deforestation perspective, especially in countries with high deforestation rates, but it cannot leave apart issues such as prices or even climate change adaptation. These countries have a push in the international agenda for the right of a living income and higher cocoa prices, relating those as drivers to reduce land expansions. Other topics such as climate change resilience should also be considered, for example by encouraging farmers to remain in more productive plantations it could be more difficult for them to shift to other crops as climate change could affect cocoa production (Kennedy, 2021).

In terms of subsystem involvement, policy integration is marked as medium-strong. Each GT has recognized that deforestation affects its interests and has incorporated it into its objective actions aimed at forest conservation (which also includes issues of deforestation and degradation). What varies between actors is which of the three concerns mainly steers the actions toward sustainability. For example, the EU demands nationwide traceability systems while the government is focused on increasing production and productivity.

The main policies acknowledged by the Government are the definition of zones for agriculture and sector promotion. The national policy regarding the definition of permanent and no permanent (the Forest Law/94) is widely recognized as the regulatory base defining deforestation. However, there are no precise mapping tools to actively monitor plantations and allowed zones, meaning that compliance could be questioned. Regarding promotion, the focus has been on replanting and technical assistance in agroforestry, but also, neither a monitoring plan has been defined. Considering the importance of cocoa (the second export commodity) in the national economy and the livelihood of farmers, it is enough for the Government to assume a greater leadership position regarding the future of the sector.

The sector governance is led by market-led GT, with a Government poorly involved in sector development. The fact that it is a market system has limited Government commercial regulation, but it has also weakened its participation in sector development over the last 30 years. The goal to increase productivity is left alone with no roadmap to actively reaching it, leaving not a clear idea of the role the Government is taking. In just two years, with PADCACAO program cocoa became the only commodity with a proper program but where no clear targets and activities are defined to reach the sector sustainability. The market-led initiatives on the other hand are the ones pushing the development of the sector, with more active assistance and closeness to the producers.

In the customary regime, deforestation is not the driver defining their activities. Traditional practices are limited to land ownership, where traditional village chiefs grant and validate land tenure. This is out of a legal frame for land titling as there is not a cadastral system or state monitoring for the land property. Important to note that these traditional land rights are different from the colonial land property, from which land tenure was defined during European rule without acknowledging natives' occupation. For cocoa plantations, we could say that customary regimes affect deforestation depending on the location and size of the lands assigned. However, the interviewees did not provide enough information to determine whether forest presence is a

criterion for land allocation. Even more, they could follow an interpreted definition of what is considered a forest or permanent forest area. Then, for CVC, the customary regime does not integrate deforestation as a driver for their processes.

Regarding the density of interactions among GT, the governance framework in Cameroon is considered medium-low. Based on Pacheco et al., (2017) classification of interactions, the GTs are currently co-existing and moving towards alignment. This means that market and state GT are working with relative independence from one another, but are looking to align towards shared sustainability goals, understanding that more actors like NGOs and producers are important for success. However, currently, there is limited interaction among the GT to discuss how their competencies and objectives overlap and reinforce each other to better plan activities. In Cameroon, governance regimes are still working independently of each other, and just until recently have dialogue spaces been frequently promoted for action commitment, such as Cocoa Talks and Roadmap roundtables.

It could be said that the Roadmap has helped on defining a common vision, with general commitments and goals but the challenge remains in integrating individual action plans. The next step of the Roadmap is to establish an Action Plan, for which each actor will define an individual Action Plan whose general alignment will be facilitated by IDH. This alignment strategy has been also carried out by IDH in the Cocoa Forest Initiative in Ghana & Côte d'Ivoire, where 35 companies have signed defined individual actions plan to increase cocoa sustainability. As the CFI was signed in 2022, no progress regarding articulation on implementation has been reported (CFI National Secretariat Ghana et al., 2021) but since the three traders in Cameroon are signatories of the cfi, it promises a good response in coordination and commitment from the private sector.

By commonly deciding on having the Government as the implementation leader, the Roadmap pushes the public sector's commitment towards being an active actor on matters of its interference in a free market system. Balance of power relations is also in place. First, it gives a clearer role to the Government, an issue that nobody seems to currently differentiate. Also, by being aligned with the upcoming EU deforestation-free regulation it puts in front the necessity of collaboration and alignment among these two main stakeholders.

Additionally, the current information flow is very limited, and no common tools are identified to feed information coming from other GTs. Among the public and private sectors, ONCC is already the figure centralizing information of common interest (producers and buyers), but it is only used

for the commercialization registry. A basic database is owned by ONCC and traders independently, but no cross-checking or sharing is done, meaning that nobody can ensure the quality and veracity of the entire info (although both sides ensure checking producers on the field). As a quality control body, it calls attention to the fact that ONCC has not pushed for a farmer database to verify producers' data instead of mostly relying on declarations from traders. In this line, for example, a cocoa farmer census could support national planning and assistance targeting, as well as benefit traders by cross-checking and upgrading farmer information.

Finally, the integration among policy goals is considered medium-low level. Forest conservation goals are included in market-led, mixed, and state-driven GT according to their interests and roles, but gaps in traceability and land use remain.

The market-led GTs incorporate the issue of forest protection in their corporate programs. They aim to have zero deforestation in their CVC and include actions regarding traceability, agroforestry promotion, or implementing deforestation monitoring systems. For example, OLAM´s Cocoa Compass goal is 100% traceability and TELCAR is already georeferencing farmers, reaching up to 30% of their producers (Roland Besong, personal interview, June 2022). Still, information is not entirely disclosed (geolocation data is not public) so the quality or level of detail cannot be determined. By contrast, private entities approach fair prices from a social standpoint rather than directly associating them with environmental protection. This is a common issue around VSS as certifications, which present mixed results on preventing plantations from reserved areas in part, but it alone does not have influence in the policymaking and depends greatly on private financing alone (Lescuyer & Bassanaga, 2021). Environmental standards are monitored and guaranteed by Rainforest Alliance certificates, despite their high costs and low market demand.

On the other hand, the national government addresses the issue of cocoa sustainability in a sectoral manner, distributed among MINADER, MINFOF, MINCOMMERCE, and MINEPDED. The leading Ministry is undoubtedly MINADER, who through the PADCACAO program lead interventions focused on productivity under the production goal set for 2030. The other ministries deal with the cocoa sector in a sectoral manner. MINCOMMERCE integrates cocoa marketing and access to markets, stages only post-harvesting. In the Forest Investment Plan 2035, MINEPDED mentions forest protection goals, including soil mapping, tree rehabilitation, and assistance with land access which seems to align with what the cocoa sector needs. However, the uneven participation and poor recall of other Minister's outputs show low coordination at the public level.

In terms of policy goals coherence, rated as medium-low, certain mismatches appear within and among GT. The Government has established an ambitious production target for 2030 without a corresponding roadmap or action plan. Nor coordination between the main Ministries involved in the cocoa sector to define and share actions that lead to the possible fulfillment of this goal. On the other hand, each cocoa trader pursues 100% traceability, and it is active in developing private traceability systems to comply with European regulations in less than 5 years. Georeferencing will not be enough to guarantee market access if production decreases or if the definition of land use is not agreed upon and updated.

Although IDH mixed GT brings stakeholders to discuss and coordinate policy goals, governance integration still has a way to go. As mentioned before, governance considers relations of power and rules that also influence the implementation of the beforementioned initiatives (Keane 2008 as shown in Ingram et al., 2018), meaning that governance integration should also address power imbalances along the CVC. By giving a leadership role to the Government, it balances the decision-making that the private sector has had. But it remains to coordinate and integrate Ministries and agencies, as well as give more participation to the producers. The figure of cooperatives could be strengthened to have more control of farmer information and demand affiliation of middlemen into national registries.

Also, even though several actors mentioned the issue of land use and tenure as key for productivity and no deforestation, no GT have incorporated this in their policies. As Carodenuto (2019) states, the interventions leading to productivity increase will not be sufficient to tackle deforestation without land governance measures, such as land enforcement. This is relevant for productivity efforts as land ownership gives the farmers more security to take care of and invest in the land. "*Ownership plus better soil quality could result in higher productivity and less stress on the forest areas. "farmers need to survive, they need money and if the land is not productive, they will go to plant in the forest"* (Roberty Pamphile, WWF, personal interview, May 2022). Then, this issue is a matter of national regulation enforcement, which should be addressed in the Implementation Pans to be developed by each GT under the Roadmap.

6.2. Potential changes in policy coordination ahead of the EU deforestation-free regulation

As a benchmarking risk assessment at the country level will be done by the EU, compliance with the upcoming regulation would require more involvement from the public sector. According to the currently available version of regulation[2], the main criteria to rank a country as the high or low risk would be *the rate of deforestation/forest degradation, and the country's initiatives to tackle it*. In the case of Cameroon, the level of deforestation has increased in the last ten years (Global Forest Watch, 2022) and so far, there is not an overarching, effective national plan to monitor and tackle the issue holistically. The sector of agriculture, as the main driver of deforestation, would need to be addressed in joint with other drivers such as mining and land grabbing. Even inside agriculture, other deforestation-related commodities in Cameroon such as palm oil and timber would need their respective action plan to reach environmental sustainability (Fabre et al., 2022). Besides the fact that defining a national plan to reduce deforestation will require enormous political will, time, and articulation, the current state of the issue suggests that the country would likely not be ranked low risk, so companies would face stronger due diligence duties.

As the obligations for privates would vary according to the risk assigned to the country, stronger coordination among private and public GT would be needed. This joint articulation needs to be mainly in terms of information sharing and policy goals. According to Pacheco et al (2017) orchestration is a type of interaction between corporate efforts and national regulations where the public and private interventions are fully integrated across diverse dimensions. In the case of CVC, this is already being pushed by IDH Roadmap, where a national traceability system will require cross-reference with the current databases and geolocation maps owned by cocoa traders.

To prove that cocoa beans do not come from deforested areas, it would be necessary for all actors to know the location data on three main topics: forests, cocoa plantations, and areas of tree cover loss; this information would also allow to identify potential risk areas and ideally take measures. For a national traceability system to work, both private and public sectors must gather this information.

About forest inventories, upgrades and level of detail should be on point. Currently, MINFOF with the support of external actors such as WWF, and Rainforest Alliance, keep Cameroon's forest state atlas updated. This atlas illustrates the land use allocation for permanent and non-permanent forests, depicting the former protection categories and for the later community forest and other uses (MINFOF & WRI, 2016). The map is public, but actors agree more detailed, interactive, and frequent updates are needed. A good level of detail for example could be to distinguish

agroforestry areas from non-permanent forests, which would be useful to identify cocoa plantations and potential areas of expansion. Traders could prove the legality of cocoa plantations more easily by knowing land use distribution in detail and analyzing changes over time.

Regarding plantations, there is no national census o registry of where and who are the current cocoa farmers. To build a national registry, cooperatives, MINADER, and traders should collaborate on information crossing and verification, as they already have some farmer lists. Also, cross-checking information among actors would eliminate double counting, help to standardize data, and identify information gaps. This is especially relevant for privates who, heading to geolocation efforts, could be more efficient in this task by avoiding overlapping farmers (as one farmer can be outsourcing to many companies), better targeting farmers, and distributing efforts to reach more plantations. On the other hand, the Government is in arrears to carry out a farmer census for data-driven policymaking. Having a complete cocoa farmer registry could optimize the monitoring role of ONCC as well as agricultural development and environmental protection efforts. As extensive and expensive as this task will be, shared responsibility could optimize the efforts to build what would be a national cocoa inventory, the basis of a national traceability system.

Last, tree cover monitoring is key for preventing and responding to land changes. Mapping and monitoring cocoa plantations and forest cover will enable both parts to identify areas where expansion into the forest is more likely. Currently, the frequency with which the tree cover is monitored and reported remotely is unclear, but some actors have suggested that the costs of satellite imagery limit the amount of detail and periodicity. Therefore, traders such as OLAM and TELCAR have stepped forward by investing in their forest monitoring systems, especially using satellite imagery. On the state side, MINFOF needs to reinforce alert and control strategies to reduce deforestation, for example by identifying risk areas by overlapping agroforestry plantations with settlements and permanent forest areas. In fact, previously the Ministry partnered in a similar endeavor with WRI to identify areas with potential logging activity by overlapping forest maps with logging roads and mining concessions (Araujo Barbosa et al., 2018). To verify the origin, it would be essential to coordinate among state, private, and cooperatives collection and data sharing, without neglecting that this tracking is incomplete without the government developing intervention and prevention strategies for areas being deforested or likely to be.

The three points mentioned before are the basis for a traceability system, as they are the core information needed to prove zero-deforestation origin. For that system to work, clear rules on data content and interoperability should be defined. Currently, there are some traceability pilots deployed by ONCC, TELCAR, OLAM, and CICC geo-referencing with different technologies. Although some of the interviewees mention the importance of data transparency, no cross-referencing geo-location info has yet taken place or is even planned to be done. As Fabre et al., (2022) point out, data sharing would enable testing the quality of geo-referencing data and standardizing the information data points. This transparency would bring public and private actors to check and feed the common database, bringing mutual benefits in terms of costs, data availability, and reliance on data-driven decision-making.

The EU regulation puts pressure on actors' alignment and IDH´s Roadmap plays a crucial facilitator role there. As pointed out in different studies, the main cocoa governance issue in Cameroon is the lack of a common vision for the future of the sector (Fabre et al., 2022; Basse et al., 2019). Then, committing stakeholders to a multi-stakeholder partnership for the sustainable growth and competitiveness of the cocoa sector (IDH, 2021) contribute to building governance through two main points. First, the Roadmap brings stakeholders together to agree on (6) commitments aligned to the EU regulation, later to be integrated into individual implementation plans and funding. As the only shared strategy for the Cameroonian cocoa sector, this defines common goals around deforestation legality and farmer livelihoods. Also, by assenting the leadership to the government (through MINADER), it states a concerting authority with the potential to manage effective communication, joint work, and power relations between different stakeholders, along with procuring long-term continuity (Basse et al., 2019; Rodriguez-Ward et al., 2018).

As the Cameroonian Government intends to strengthen its role in the development of the cocoa sector, some of its institutions will need to bear more responsibility. As suggested by Basse et al., (2019) ONCC's weaknesses in quality control and SODECAO's failure to support producers may be a major reason for a decline, or better no improvement in cocoa quality. ONCC must improve its efficiency as a quality control agent as, among other factors, competitiveness in a market is determined by the quality of the product. To improve traceability, for example, ONCC must strengthen vigilance against the practice of mixing grains of different quality and origin (i.e. certified and non-certified; local or from neighboring countries) (Fabre et al., 2022). On the other

hand, is the scope of the PADCACAO program. This program has been limited to the production and free distribution of seedlings, without having a monitoring and control mechanism for the interventions. Stronger monitoring of productivity and the distribution and creation of new plots could enhance its role in the field. Also, it could consider financial alternatives, as replanting it's an enormous endeavor that currently is funding limited; other alternatives could make the program a more cost-efficient strategy to increase production sustainably

If coordination and integration are achieved, the implementation of a national traceability system would bring shared benefits to the government, privates, and producers:

- For the government, a cocoa farmer registry and mapping could bring more efficient and effective policy-making and budget distribution; besides more efficient quality control resulting in better produce. Also, the system would bring accurate and frequent forest monitoring and nature conservation, that in sum helps to secure a space in the EU market and hence national and farmers' cocoa revenues.
- For privates, the national system could be more effective than private ones and would also secure the market; targeting assistance could be more effective for the goal of increasing production.
- Finally for producers, having a registry could mean more assistance and hence better productivity; better control of deforestation will prevent future conflict with land use, as the delimitation of permanent and non-permanent forests could be better defined and controlled. Also to note, the regulation is including in indirect labor conditions and human rights which could accelerate the discussions on living income and rising prices, issues also influencing producers' practices.

7. CONCLUSIONS

How is the current policy framework of multiple tools governing the cocoa value chain in Cameroon is expected to eliminate cocoa-driven deforestation?

The policy framework is approaching the issue of deforestation in the cocoa sector mainly by aiming to improve productivity. Independently, both state-led and market-driven governance tools have strategies regarding replanting, promoting better practices, and improving soil quality, as there is a high potential for yield in existing farms. The public sector, through its normativity,

defines areas for forest protection or the development of economic activities, which gives a general framework for legality. Around 4 ministries and one agency are directly related to the productivity and competitiveness of the cocoa sector, but there is not a single unified strategy for curving Agri-driven deforestation. Legality doesn't not equal sustainability, and in this sense, the private sector (cocoa traders) with their corporate programs play an important role. By appealing to certification standards and ensuring (more and better) produce, traders support a niche of more sustainable farmers. However, the market lacks incentives to scale up these strategies, so the reach is limited. Finally, producers agree with the productivity storyline, but highlight factors such as low cocoa prices, low financial support, and insecurity over land ownership that could lead them to expand into forest areas.

In a free market as in Cameroon, the privates have had a lead role in the production, transformation, and commercialization of cocoa, but the state should recover its sovereign role in defining a vision and strategy for sector development. Otherwise, the national potential for increasing production and strengthening the farmer's livelihood would be limited to private interests, dependent on the global market and not on the national context. A more integrated framework in terms of activities, goals, and instruments needs to be defined for more efficient and effective goals toward reducing and preventing cocoa-lead deforestation. In that sense, the recently introduced IDH's mixed governance tool of multi-stakeholder partnership possesses the potential to define a better environmentally sustainable strategy for the sector. The Roadmap to Deforestation free-cocoa facilities the conditions for dialogue, coordinated activities, commitment, and funding needed to achieve integral sustainability.

Lastly, the rationale behind focusing on increasing yield assumes that producers won't need to expand to new areas as they make more from existing plots, mainly for a limited working capacity. However, this should be looked at carefully as, as seen in any other business, higher sales increase the financial opportunities to enlarge their farms.

SQ1: How do governance tools interact and integrate among them to improve the sustainability of cocoa production, especially around forest issues?

The Cameroon governance framework for cocoa production could improve towards a stronger policy integration. In terms of the policy frame, the issue of deforestation is acknowledged by all

the tools as a shared and concerning issue, along with the strategy of increasing yield and recently, aligning for traceability. However, the tools work mostly in an independent way, and they do not have clear indications of the role they can and could potentially play in approaching the issue. Regarding coordination among the GT, there is a low exchange of information, spaces of dialogue and common mechanisms to articulate efforts and progress. Lastly, the integration of policy goals among GT is weak, since there is limited coherence among goals established, in terms of timeframe, approach, and dependence on other tools.

The IDH Roadmap is facilitating the conditions to improve the integration of policy in the face of the new regulation. First, it helps to define a unified vision for the sector. Second, it contributes to the stability, monitoring, and continuity of commitments by assigning the coordination role to the Government. Finally, it creates bridges between the diversity of actors, power balance, and spaces for decision-making.

SQ2: In which ways is the new EU no-deforestation directive expected to change the coordination of the governance tools currently in place?

The EU regulation is expected to drive more integration among the public and the private cocoa sector in Cameroon. As a benchmarking risk assessment at the country level will be done by the EU, there is a push to establish a national traceability system available for all actors to be consulted and contribute. Then, traders will be urged to prove deforestation-free cocoa while supporting Government regulation and law enforcement to curve deforestation. The basis of this system relies on a reliable, detailed and geo-referenced farmer and plantations database, a well-defined and limited land use regulation and a functioning forest monitoring system; both sectors, according to their responsibilities and interest should work together to contribute, verify and update such information. In parallel, as the Cameroonian government listens to strengthen its role for the development and sustainability of the sector, some of its institutions need to bear more responsibility in forest monitoring and quality control of cocoa beans. Having a national traceability system would bring shared benefits to the government, privates, and producers along with producing free-deforestation cocoa.

Lastly, some considerations for further studies. It would be beneficial to interview several representatives, from different roles inside an organization, to gain a more holistic and complete understanding of perceived challenges and future paths for the organizations they represent. The

actors considered were limited to actors directly present in CVC in Cameroon, then big cocoa buyers such as Nestlé were not included; further studies could include their perceptions as they indeed have strong decision power in the sector. A policy integration analysis of environmental, social, and economic factors should also be conducted since deforestation is a multisectoral issue. It was evident, for example, that cocoa prices have an influence on producers' practices, but that was not fully addressed in this study due to time and scope limitations.

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9. APPENDIX

9.1 Questionnaires for all stakeholders except producers

General questions:

1. What is your role in the organization you represent?
2. Can you name all actors/ programs/ organization that influence cocoa production?
3. Which are the actors/ programs that influence your organization?
4. Which role does customary (traditional) practices in the sustainable cocoa VC?

First part: Environmental issues

5. Whatich are the main environmental concerns in cocoa production in Cameroon?
6. Which are (private/ public) actors, programs or policies that influence the most what happen with environmental issues in the cocoa sector?
7. About environmental issues, How is your organization **working together** with other actors? (in terms of funding, fieldwork, system, information sharing)
8. How is your organization **affected** (positively or not) by the implementation of other programs, policies, or initiatives?
9. Which elements of the different programs or policies do you consider **could be limiting** your activities/ impacts?
10. Do you consider that all the actors/ programs work or take decisions in a coordinated way?
11. Do you work together with the government, Specifically with MIANDER and MINFOF? And how is the collaboration?
12. How can the role of the Government/ Ministries be improved?
13. Do you work together with traders? And how is the collaboration?
14. Do you work together with the EU? And how is the collaboration?
15. Do you work together with the farmers? And the cooperatives? And how is the collaboration?
16. Do you work together with IDH? And how is the collaboration?
17. Do you work together with research institutions or NGO?
18. Name Other actors your organization usually work with
19. How would you describe the **articulation** among national, private, and international (EU) actors to address the environmental issues of cocoa production?
20. Which are the spaces/ actors that bring together cocoa stakeholders to discuss the sector?
21. Does your organization frequently share information or data with other actors?

Second part: EU regulation

The EU Commission is working on a new legislative proposal aimed at curbing deforestation and forest degradation by limiting the import and export of commodities linked to deforestation. Cocoa is one of the commodities targeted, which means that the stakeholders involved in the cocoa value chain in Cameroon will have to adapt to comply with this new regulation.

1. Are you aware of the main points of this new EU regulation?

This regulation is still being developed, but from the published drafts some changes can be inferred. The novel activities to be introduced are due diligence requirements for companies to show that cacao beans do not have the risk to be related to deforestation or forest degradation. This will require a traceability system to track at the farmer level if the plantation could be associated with some risk of deforestation or forest degradation. This means that more information about where the beans come from will be available.

a. Were you (or other people/organizations representing your interests) consulted during the definition of this regulation?
b. To comply with the traceability system, which will be the main 2 challenges for Cameroon?
c. What do you think will need to change in your organization?
d. Which actor could help you to comply with that regulation?
e. What do you think about the role of IDH? How would your organization benefit for the Roadmap?
f. Do you know if the Roadmap is aligned with the regulation?

9.2. Questionnaire for producers (farmers and cooperatives)

First part: Environmental issues

In my research, I will focus on the environmental issues of the cocoa value chain

7. Do you consider cacao production can have a negative impact on the environment?
8. What are the impacts that cocoa production can have on the natural environment?
9. Which programs or standards do you know that promote a more environmentally friendly cocoa production?
10. Which government actors have standards/ regulate/influence the way you produce more environmentally friendly cocoa?
11. Which private (companies) have standards / regulate/influence the way you produce cocoa a more environmentally friendly cocoa?
12. Have you need to change your production to comply with the environmental norms (customary, market, legal)?
13. Which (private/public) actors or programs, or standards have assisted you to change your production into more environmentally friendly cocoa?

14. Which customary (or traditions) practices do you use in your cocoa production?
15. Do the actors you mentioned before affect how you implement the customary practices?
16. Do you think there is coordination among all the actors and standards influencing a more environmentally friendly cocoa?
17. How do you define sustainable cocoa?

Second part: EU regulation

The EU Commission is working on a new legislative proposal aimed at reducing deforestation and forest degradation by tracing the exports of cocoa to show it's not linked to deforestation. This means that the stakeholders involved in the cocoa value chain in Cameroon will have to change some practices to comply with this new regulation.

18. Are you aware of the main points of this new EU regulation?

This regulation is still being developed and expected to be implemented in 2024 but from the published drafts some changes can be inferred. The novel activities to be introduced is that the big company buyers (mention them) will have to prove that the cacao beans do not come from plantations where deforestation or forest degradation has occurred since probably December 2020. If they can prove it, then the cocoa beans can be placed in the EU port, if not, they can't be shipped there. This will require that the companies should track at the farmer level if the plantation could be associated with some risk of deforestation or forest degradation. This means that more information about where the beans come from will be available.

19. Do you think these new rules coming from the EU could impact the way cocoa is produced?
20. How do you think the regulation would change the way you produce the cocoa?

21. What are the main 2 challenges you could face to prove that your cocoa has not caused deforestation or forest degradation?
22. Which private actors(s) or program(s) do you think should/could support you to adapt to the new rules?
23. Which government actors(s) or program(s) do you think should/could support you to adapt to the new rules?
24. What are your biggest concerns considering for verifying that the cocoa was not produced in deforested areas?

9.3. List of codes used for data analysis

- benefit from IDH
- better use fertilizer
- cocoa price
- coordination
- customary
- deforestation definition
- farmer inclusion
- friction
- gives technical assistance
- Gov initiative
- important actor CICC
- important actor coop
- important actor Gov
- important actor IDH
- important actor NGO
- important actor ONCC
- important actor priv
- individual interest
- Inefficiency Gov
- lack of funding
- lack of Gov leadership
- lack of technical assistance
- lack of transparency
- land use issue
- living income
- more Gov assistance
- more responsibility of Priv
- more work with countries
- more work with Minader
- need for common goal
- no collaboration
- no communication
- no responsibility of Gov
- not clear impact IDH
- own role
- participation goal
- priv initiative
- production goal
- receives technical assistance
- replanting
- space for dialogue
- synergies
- traceability challenge
- traceability goal
- track deforestation
- work with ANPCC
- work with CICC
- work with coop
- work with farmers
- work with FODEC
- work with GIZ
- work with ICRAF
- work with IDH
- work with IITA
- work with Minader
- work with ONCC
- work with priv
- work with RA
- work with SODECAO
- work with UNEP
- work with WWF
- yield goal