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## The hurdles of service delivery integration in a pluralistic landscape: the Cameroonian cocoa sector

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### ABSTRACT

**Purpose:** We investigated the existence of mechanisms to achieve integrated service delivery aimed at fostering changes in farming practices and increased sustainability in the Cameroonian cocoa sector, and whether integration is effectively achieved.

**Design/Methodology/Approach:** In-depth key informant interviews, focus group discussions, and a survey were conducted with innovation service providers and cocoa farmers. Social network analysis, thematic analysis, and descriptive analysis were performed.

**Findings:** Results showed a pluralistic landscape with few actors that could be intermediaries in a loose network. Formal and informal spaces of interaction resulting from public or private initiatives exist. Yet, service integration remains low due to limited coordination, cooperation and collaboration, a weak regulatory framework, and a context where service delivery mostly occurs as part of externally funded projects and programmes. Consequently, there is an overlap in interventions while some services are missing, many farmers are excluded from service delivery, and the long-term sustainability of the services provided is not guaranteed.

**Practical Implications:** To accelerate the transition to sustainable cocoa production systems, it is necessary to develop holistic and integrated solutions, and to increase synergies and inclusiveness in service delivery.

**Theoretical Implications:** The research suggests distinguishing between the mechanism leading to integration in service delivery and the resulting outcomes.

### ARTICLE HISTORY

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### KEYWORDS

Africa; agricultural innovation; cocoa; innovation support services; pluralistic extension system; stakeholder analysis

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**Originality/Value:** We propose a framework to examine the effectiveness of service delivery by examining service integration at two levels: the existence of mechanisms to ensure that service integration takes place and the outcomes of the integration process.

## Introduction

The economic crisis of the late 1980s and the subsequent structural adjustments led to a decline in national and international support for agricultural extension, and state withdrawal from service provision to farmers in many developing countries (Birner et al. 2009; Nederlof, Wennink, and Heemskerk 2011). This resulted in an evolution toward pluralistic service delivery (Blum, Cofini, and Sulaiman 2020; Mbo'o-Tchouawou and Colverson 2014; Wongtschowski et al. 2016) with the emergence of new actors on which high expectations were placed in terms of taking over functions previously under States' responsibilities (Achancho 2013; Nederlof, Wennink, and Heemskerk 2011). These new players include civil society organisations (CSO) such as non-governmental organisations (NGOs), farmers' organisations (FOs), for-profit private companies such as traders and processors, and commercial associations of extension specialists among others (IDH 2016; Rivera, Quamar, and Crowder 2001). Furthermore, in countries such as Cameroon, structural adjustments culminated in the total liberalisation of previously heavily controlled sectors like the cocoa sector (Achancho 2013; Fouda 2003; Lescuyer and Bassanaga 2021). Consequently, at the farmer level, there was a significant increase in production costs worsened by the currency devaluation (Fouda 2003) which resulted in a decline in product quality and the price received by cocoa farmers (Lescuyer and Bassanaga 2021; Mathé et al. 2023). In the agricultural policy that followed liberalisation, progressive privatisation of agricultural development activities and increased empowerment of farmers, among others, were the central objectives (Fouda 2003). Nevertheless, since the early 2000s there has been a new interest for public investment in the agricultural sector. At present, the government has not completely withdrawn from the cocoa sector where it still intervenes through several public organisations (Lescuyer and Bassanaga 2021). The Cameroon government's will to continuously support the cocoa sector through new mechanisms aligns with most African countries' efforts to restore their agricultural extension service delivery systems to improve productivity and develop their agricultural sector (Abdu-Raheem and Worth 2016).

Agricultural sector development takes place in a complex and evolving setting, and includes change and innovation at different levels in agricultural value chains and systems. Smits (2002) defines innovation as 'a successful combination of hardware, software and orgware, viewed from a societal and/or economic point of view'. The hardware represents the technological innovations (e.g. a new practice); the software is the tacit knowledge or symbolic innovation (e.g. changing in mindset and attitude) and the orgware represents the organisational and institutional conditions that influence the innovation and its functioning (e.g. a new organisational arrangement) (Kilelu, Klerkx, and Leeuwis 2013; Leeuwis and Ban 2004; Smits 2002).

The ability of farmers and other agricultural sector stakeholders to innovate demands capacities and conditions which can be built and strengthened through the provision of

innovation support services (Faure et al. 2019; Mbo'o-Tchouawou and Colverson 2014). Moreover, the supply of and demand for innovation involve several actors who interact in multiple ways (Klerkx and Leeuwis 2008; Seifu et al. 2022; Yongabo 2022). In a pluralistic providers landscape, it is not automatic and self-evident that these services become well aligned, and result in full coverage of services for all regions and categories of farmers. Thereby, when individuals have complex needs and receive multiple services from multiple sources, service integration becomes essential (King and Meyer 2006). In the cocoa sector, improving cocoa farming practices has been at the centre of many interventions in the past years (Fountain and Huetz-Adams 2018). In Cameroon, until the early 2010s, cocoa sustainability issues received little attention (Fabre et al. 2022). However, the trend has changed with the multiplication of sustainability initiatives at the global level and the launch of certification schemes which increased farmers access to services (Fabre et al. 2022; Lescuyer and Bassanaga 2021). Accordingly, while certification only covered 3% of cocoa production by 2016 (Fabre et al. 2022; Nlend Nkott, Mathé, and Temple 2019), during the 2023–2024 season, 146,364 tons (~ 55% of the total cocoa sold (266,725 tons)) were sold as certified under the Rainforest Alliance (78.2%) and Cocoa Horizons (21.8%) labels (ONCC 2024).

Yet, in Cameroon, despite interventions from the various actors in the sector, little has been achieved in terms of changes in practices, increasing cocoa productivity, and improving beans quality and rural livelihoods (Lescuyer and Bassanaga 2021; Mathé et al. 2023). Consequently, to contribute to the debate around the explanation of the minor impact obtained on the ground, this study pays attention to opportunities and challenges for an integrated service delivery landscape in the Cameroonian cocoa sector, a topic that has received little attention in research so far. More specifically, we first identify the key actors supporting innovation for the sector's development. Secondly, we explore the existence of mechanisms to facilitate cooperation, collaboration and coordination among stakeholders, and potential tensions and contradictions in the system. Thirdly, we discuss the completeness of service delivery in terms of the types of Innovation Support Services (ISS) offered, their geographical scope, and target audiences.

## Conceptual and analytical framework

Innovation is an important driver for the agricultural sector development (Yongabo 2022) and requires a wide range of interdependent support services provided by a diversity of actors with different approaches/perspectives (Audouin et al. 2021; Blum, Cofini, and Sulaiman 2020; Sulaiman et al. 2022). ISS typologies are defined based on the strategy supporting their provision, their content, the functions they support or the timeline in the innovation process in which they are offered (Mathé et al. 2016). For instance, based on their contents in terms of what they consist of, Albert (2000) distinguishes agricultural research, agricultural information services, education and training, rural financing and insurance, input delivery, regulatory services provided by governments and technical services. Moreover, a generic typology comprising seven types of ISS has been provided (Figure 1).

To solve the problems for which innovation is required, interactions between various service providers and beneficiaries around activities aimed at supporting innovations play a key role (Faure et al. 2019; Mathé et al. 2016). These interactions are important to improve individual and collective capacity to innovate, and develop the institutional

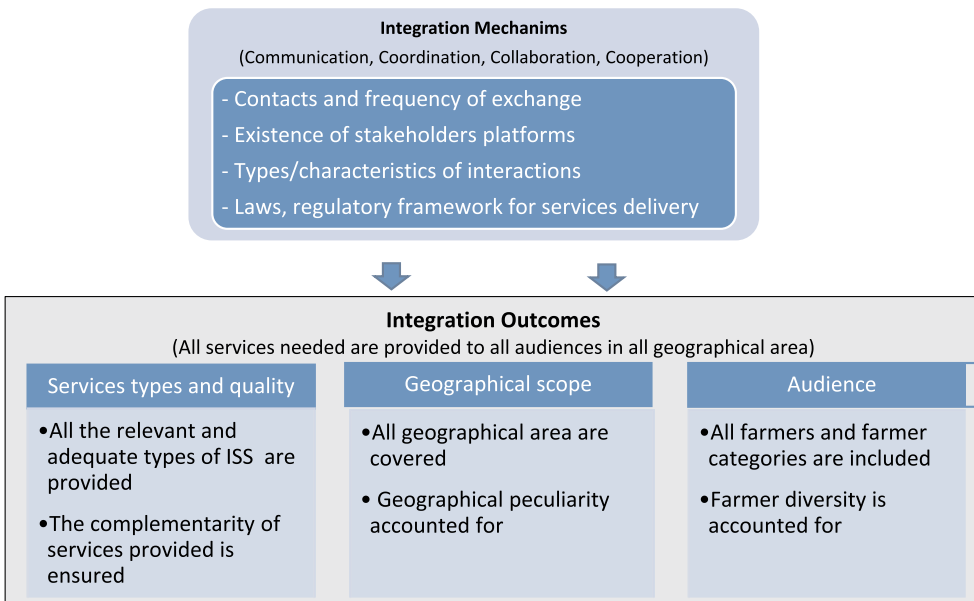
Institutional support for niche innovation and scaling mechanisms stimulation (ISS1)	Services to support the design and enforcement of norms, rules, funding mechanisms, taxes, subsidies, etc. that facilitate the innovation process or the diffusion of innovation.
Enhancing/Supporting access to resources (ISS2)	Provision of tangible services (funding, fertilisers, equipments etc.) to support the innovation process
Capacity building (ISS3)	Services aimed at increasing innovation actors' capacities in order to be fully equipped to play their roles in the innovation process. It can be at individual or organisational level.
Networking facilitation and brokerage (ISS4)	Services to help organize or strengthen networks, to improve the relationships between key actors and to align services, it also includes all activities aimed at strengthening collaborative and collective action.
Demand articulation (ISS5)	Services targeted to help actors to express clear demands to other actors (research, service providers, etc.).
Advisory, consultancy and backstopping (ISS6)	Advisory, consultancy and backstopping-targeted supportive activities aimed at solving complex issues Provision of advice (technical, legal, economic, environmental, social etc.) during the innovation process based on farmers' demands and coconstruction of solutions
Awareness and exchange of knowledge (ISS7)	Awareness raising on knowledge and technologies for innovation and dissemination of scientific knowledge or technical information

**Figure 1.** A typology of innovation support services (ISS). Source: Adapted from Faure et al. (2019) and Mathé et al. (2023).

and infrastructural preconditions for inclusive sustainable development (Seifu et al. 2022). Further, these interactions can be characterised by elements of competition, coordination, collaboration and cooperation (Nederlof, Wennink, and Heemskerk 2011), all of which can affect the extent to which farmers have access to services and their quality. Following Castañer and Oliveira (2020), we distinguish between coordination, cooperation and collaboration. Coordination refers to the 'joint definition of common goals' to be achieved, cooperation to the 'joint implementation of actions' to achieve common goals, while collaboration involves 'voluntarily helping others' to achieve common or individual goals (Castañer and Oliveira 2020). When there is competition, this can enhance or decrease the quality of the services provided. For instance, competition could lead to better service delivery when service providers compete for the same individuals, especially when there is some accountability toward their clients (Ozbekler and Ozturkoglu 2020). On the other hand, the scarcity of services can easily lead to the exclusion of regions and farmers that may be less attractive from the point of view of service providers. For instance, in the Cameroonian cocoa sector, Kenfack et al. (2024) found that, when available, the chances of accessing services were not equal among farmers. This depended among other factors, on service providers' intervention logic, farmers' socioeconomic, sociodemographic and farm characteristics, such as membership of certification schemes, leadership position in farmers' organisations (FO), seniority in FO, location, and cultivated land. They also found a mismatch between the services cocoa farmers received and those they demanded. These farmers sometimes received the same services from several providers, while other services they needed were missing. These findings suggest a lack of effectiveness and efficiency in

service delivery systems. There is therefore a need to put in place mechanisms to increase communication, coordination, collaboration and cooperation between service providers for greater service integration, such that farmers receive, independently of their profile and location, services that match their needs.

Integrated service delivery has been investigated in different disciplines for a while, yet, there is a lack of consensus about what it entails (Wouters et al. 2023). King and Meyer (2006) argue that service integration is not an outcome, but a process aimed at the formation of a comprehensive and complementary range of services in a geographical area. In practice, service integration is essential to meet the multiple and complex needs of individuals as it intends to improve the delivery of services by addressing issues of availability and efficiency (King and Meyer 2006; Van Duijn et al. 2018; Wouters et al. 2023). Thus, integrating services requires paying attention to (i) reduce service fragmentation, fill service gaps, and ensure a smooth continuum of services for clients/beneficiaries; and (ii) increase efficiency and decrease duplication of services among others (King and Meyer 2006). This integration can be achieved through several processes and mechanisms. It requires that service providers interact and communicate with each other and somehow coordinate their activities, or even engage in forms of collaboration (Hasse and Austin 1997; Van Duijn et al. 2018). This implies the need for formal or informal spaces of communication, coordination and collaboration that may or may not be supported through regulations, policies, rules and authority (Park, Krause, and Hawkins 2021). For instance, multi-stakeholder innovation platforms have the potential to create such conditions from an agricultural innovation system perspective (Aremu et al. 2023; Seifu et al. 2022). Programmes, projects, but also specialised bodies equally constitute spaces where these interactions can happen. Finally, the outcome sought through service integration would be



**Figure 2.** Theoretical model to analyse integration mechanisms and outcomes in a pluralistic service delivery landscape. Source: Authors conception.

ensuring complementarity in actors' interventions such that all the services needed, in quantity and quality, are provided to diverse audiences/categories of farmers in all geographical areas (Figure 2). Focusing on the Cameroonian cocoa sector, we investigate whether there are mechanisms in place to achieve integrated service delivery for the sake of fostering changes in farming practices and increased sustainability, and whether indeed integration is achieved. For this purpose, three questions guided the research:

- (a) Who are the key actors delivering services in the cocoa sector?
- (b) What mechanisms are in place to ensure/advance service integration, if any?
- (c) What is the actual level of service integration achieved in terms of services offered, and their geographical coverage and target audiences?

## Methodology

### *Research design and data collection*

We adopted a mixed approach to attain our objectives. The choice of methods was guided by the explorative nature of the research questions and resources availability. To increase validity and reliability, and reduce subjectiveness, we combined a variety of data collection tools and used triangulation to improve the fineness of ideas (Tata and Ndikumagenge 2013). Data were obtained through desk reviews, key informant interviews (KIIs), Focus Group Discussions (FGDs) with cocoa farmers, an online survey, a stakeholder workshop, and personal observations. Table 1 presents details of the research participants.

The desk review covered websites, flyers, reports, and other documents, and provided additional information on stakeholders' mission, activities, and intervention approaches. KIIs was used to identify the range of services offered to cocoa farmers and understand how interventions to support farmers were designed and delivered. Key Informants (KI) were purposively selected to include staff likely to contribute to the definition of the organisation's strategic orientation and who had decision-making power and authority over the activities to be conducted by their organisations. We discussed their vision for the cocoa sector, how to best support farmers, their role in the process, partnership with other actors, and service delivery strategy. Ten farmers' organisations (FOs) in the Cameroon Central region, purposively selected to cover multiple service providers were identified and one FGD was held in each. Thus, a total of ten FDGs (6–12 participants each) lasting 1–2 h were conducted. The FGDs served to identify the services received by farmers and the main providers, and to discuss their cooperation and collaboration with service providers. FGD participants were purposively selected to include a balance of men and women who are members and non-members of the cooperative management committee and who are involved in the interactions between the cooperatives and service providers.

The information gathered through the online survey and during the stakeholder workshop were used to perform the social network analysis and complement some of the information from KIIs. Due to covid restrictions still in place during the data collection period, an online questionnaire was emailed to 105 individuals working for 83 organisations identified through the attendance lists of previous cocoa stakeholders' meetings organised by CIFOR-ICRAF, our prior knowledge of the sector and discussions with KIs. After one



**Table 1.** Summary characteristics of research participants.

Category	Gender		Total (n)	Education level (%)			Profile	Data collected
	Male	Female		PhD	MSc	<BSc		
FGDs	78	25	103	NA	NA	NA	Cocoa farmers	Services received by farmers, Main service providers, Nature interactions with service providers
Online Survey	18	7	25	24	72	4	Public institutions, research and education, private organisations, CSOs and development agencies, CSOs, funding agencies, and farmers' organisations (FOs)	Organisations' domains and geographical area(s) of interventions; Roles and responsibilities within the organisation; Partners, frequency and nature of interactions
Workshop	40	6	46	NA	NA	NA		Validation stakeholder mapping from online survey, identification of missing stakeholders and links.
Key Informants	9	3	12	8	92	/	<b>Seven organisations targeted</b> <b>Cocoa-buying companies</b> Sustainability manager (2); Programme managers (2) Monitoring and Evaluation Officer (1) Field Coordinator (1) <b>Certification body</b> Head of programme (1) <b>Umbrella FOs</b> Director (1); President (1) <b>Inter-professional council</b> Operational Manager (1) <b>Public administration</b> Senior Project Manager (2)	Vision for the cocoa sector and how to best support farmers, organisation's role in the process, partnership with other actors, and service delivery strategy.

NA: Not Available

reminder and a second round of responses, a total of 25 valid responses were obtained. The online survey helped to collect information about the organisations' domains and geographical areas of intervention; roles and responsibilities; partners, the frequency of their communication and the nature of the existing interactions. Considering our non-exhaustive sample, the results obtained from this survey were presented and discussed in December 2021 during a one-day workshop with 46 participants including representatives of the public and private sectors, civil society, farmers' organisations, and financial and technical partners. The workshop helped validate and complete the stakeholder analysis resulting from the online survey by unravelling missing actors and links.



## **Data analysis**

A thematic analysis of the interviews and focus group notes and transcripts was used where relevant. Based on the main themes of analysis (service delivery, interaction, communication, collaboration, partnerships, etc.), portions of text were extracted, and differences and similarities in responses were synthesised and discussed. Furthermore, the social network analysis (SNA) was conducted to identify the most important actors and assess the level of contact and exchange between them (Aremu et al. 2023; Scott 2012), in order to highlight those that may be crucial in steering the integration process. SNA is a method for analysing relationships that integrates qualitative and quantitative data. SNA is used as a research or evaluation method to understand how different actors work together, share resources, or communicate in a network. SNA is characterised by nodes (individuals, organisations, systems, countries), and edges/links (interactions or connections between nodes) that are either directed or undirected (Grandjean 2015). We conducted an organisational network analysis where nodes represent organisations. For this purpose, we constructed a database of actors and the relationships between them using edge (connection/relationship between two nodes). Edge weights were determined by directly asking respondents to rate their frequency of interactions with other organisations on a scale of 1–5; five denoted very frequent interactions (at least once a month); four, frequent interaction (once every six weeks); three, average interaction (once every quarter); two, rare interaction (once every six months); and one, very rare interaction (once a year). Further, to identify the main actors, we computed the network centrality (degree, weighted degree, and betweenness), which is indicative of the importance or influence of each actor within the network and density (Aremu et al. 2023). The degree represents the number of connections of a node; the weighted degree accounts for the weight of each interaction; the betweenness measures the extent to which a node can act as an intermediary in the network, and the density refers to the relative connectedness of the network (Aremu et al. 2023; Grandjean 2015; Scott 2012). The network statistics were computed and connections were visualised using the Gephi software (v0.1) (Grandjean 2015). In the following sections, actors are referred to as organisations delivering services to cocoa farmers. Unless a specific (group of) actors is specified, the finding or discussion applies to all service providers.

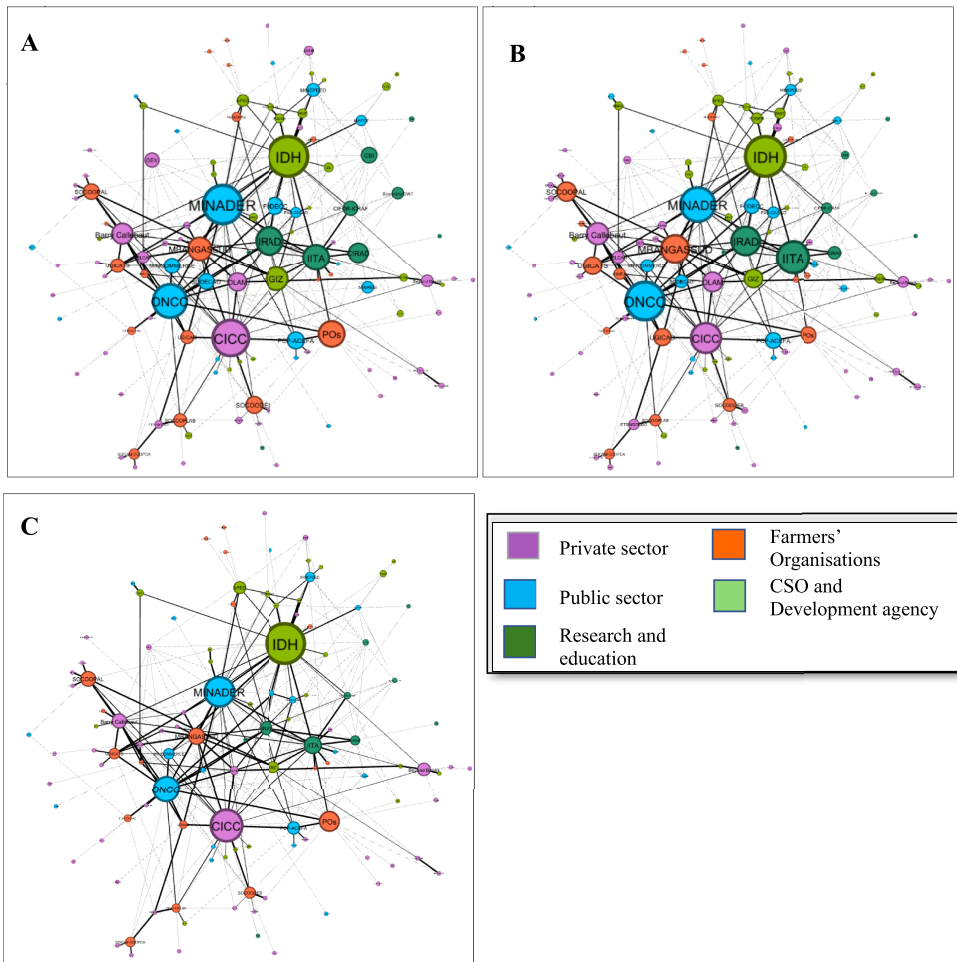
## **Results**

### **Actors and mechanisms for integration**

#### **Actor mapping and network analysis**

We identified 180 actors unevenly distributed between the private sector (54%) i.e. CICC, and cocoa traders and processors, the public sector (13%), FOs (12%), Civil Society Organisations (CSO) and development agencies (15%) among which NGO, and research and education (6%). Furthermore, the SNA showed differences in actors' centrality and highlighted key actors in each type of organisation (Figure 3, Annexe 1).

The interviews and workshop discussions indicated a bidirectional flow of information between actors. The computed degree and weighted degree centrality underlined the Sustainable Trade Initiative (IDH), National Cocoa and Coffee Board (ONCC), Ministry of Agriculture and Rural Development (MINADER), Interprofessional Council for



**Figure 3.** Mapping of the cocoa sector actors based on Degree (A), Weighted degree (B) and Betweenness (C) centrality.

the Cocoa and Coffee (CICC), Institute of Agricultural Research for Development (IRAD), International Institute of Tropical Agriculture (IITA), German Agency for International Cooperation (GIZ), French Agricultural Research Centre for International Development (CIRAD) and a large cocoa farmer cooperative (MBANGASSUD) among others as the actors with the highest number of connections in the network. However, ONCC, CICC, IDH and MINADER appeared as the actors with the highest potential to play an intermediary role and connect the rest of the network actors (Annexe 1). The network density was low (0.041) denoting missing connections between several actors. This could be due to the low response rate of the online survey and the non-exhaustive nature of our sample. The multiple village associations and informal buyers that play a role in innovation by facilitating farmers' access to credit and inputs were not captured by the SNA. Nevertheless, the stakeholders' workshop concluded that the most important actors were mapped, and their centrality reflected the reality (Figure 3).

IDH is a Dutch-based international NGO supporting the achievement of sustainable development in commodity value chains by fostering and encouraging public-private partnerships across the globe. IDH has supported the formulation of a roadmap to deforestation-free cocoa in Cameroon. MINADER oversees the implementation of agricultural policies and conducts several projects aimed at increasing cocoa productivity and improving farmers' livelihoods. The ONCC is the public organisation responsible for coordinating the sector, cocoa marketing regulation and the promotion of sustainable cocoa while guaranteeing that the cocoa quality responds to international standards and market demands. The CICC is a private organisation whose key role is to ensure the professionalisation of the cocoa sector in collaboration with ONCC. IRAD is the national agricultural research institute which in collaboration with a range of international research organisations and universities, but also private companies, works to generate and disseminate new knowledge and promote innovations. GIZ provides financial and technical assistance to FOs, but also public organisations and other CSOs. MBANGASSUD is one of the largest national cocoa cooperatives. It is noteworthy that, the Société de Développement du Cacao (SODECAO) whose mission is to develop the cocoa sector through support services, such as the production and distribution of plant material, orchard protection, soil fertilisation, agricultural advice, the structuring of small producers and the opening up of production basins, is forced to limit its activities to the production of seedlings today (which are insufficient to meet the demand) (SODECAO 2019).

### *Regulatory framework for service delivery and stakeholder platforms*

From KIIs and grey literature reviews, we identified formal spaces of interactions among cocoa sector actors. They were set-up by the government (CICC, ONCC, FODECC, Coordination Unit Prime Ministry), the cocoa industry (Exporters Union) or resulted from public-private partnerships (Sustainable Cocoa Committee, agroforestry research platform). However, the latter were usually established, facilitated, and funded by non-state actors. Besides, regardless of their initiator, these platforms coexist and pursue complementary and sometimes similar goals.

In June 1991 (ordinance n° 91/007), the government created ONCC and CICC to replace the National Cocoa and Coffee Marketing Board. Their organisation and roles were defined later in July 1995 (law 95/11) (Annexe 2). In December 2004 (law 2004/025), the government created the Cocoa and Coffee Subsectors Development Fund (FODECC), an endogenous financing body for these sectors. For their functioning, ONCC, CICC, and FODECC receive royalties on exports. The CICC is made of four colleges: FOs (24 delegates), exporters (24 delegates), processors (6 delegates), and processing factories (6 delegates) and plays a consultative role. Its members meet at least once annually to discuss the value chain orientation. The ONCC represents Cameroon in international discussions around cocoa and together with CICC ensures that actors in the value chain abide by the rules that regulate cocoa commercialisation to maintain quality standards. The main role of FODECC is to ensure the financing and payment of services, programmes and projects submitted by its four authorising officers which are the Ministers in Charge of: Research, Agriculture, Trade, and Industry and Technological Development (FODECC 2022). Furthermore, the management committee of FODECC comprises a representative of ONCC and six from CICC (including one for each of its colleges). The Coordination Unit lodged at the Prime Minister's office oversees

the cocoa and coffee sub-sectors and ensures transparency of the various operations in these sectors. Nevertheless, not all the cocoa sector actors are aware of its existence.

Following the announcement of the EU Regulation on Deforestation-free Products (EUDR), to guarantee access to its products in the EU market, the Cameroonian government with other cocoa sector actors signed a roadmap to sustainable, deforestation-free cocoa (Fabre et al. 2022; IDH 2021; IDH 2023). Building on this roadmap and the EU-led Cocoa Talks, the Ministries of Agriculture and Trade jointly decided in November 2022 (Decision MINADER/MINCOMMERCE No. 0390) to create a Sustainable Cocoa Committee whose objective was to (i) lead consultations with representatives of civil society, the private and public sectors, cocoa producers, and research organisations involved in the cocoa value chain, and (ii) coordinate the implementation of Cameroon's commitments to sustainable cocoa production and marketing. These consultations resulted in the National Action Plan for Sustainable Cocoa 2023-2025, which includes 11 main actions covering forest protection and restoration, sustainable production and marketing, and community engagement and social inclusion (MINADER and MINTRADE 2024). Annexe 2 presents an overview of ONCC, CICC, FODECC and the sustainable committee official mandates. The other active platform identified is the Cameroon agroforestry research platform coordinated by CIRAD which brings together researchers from academia and research institutes working on cocoa-based agroforestry systems for joint research and knowledge exchanges. The ONCC usually represents Cameroon in international bodies such as the World Cocoa Foundation and the International Cocoa Organization. However, it is noteworthy that, unlike Ghana and Côte d'Ivoire, these organisations only conduct a limited number of actions in Cameroon.

### *Characteristics of actors' interactions: tensions and contradictions*

Despite the existence of platforms and the regulatory framework discussed above, the survey, interviews and the stakeholder workshop underscore a lack of coordination and collaboration among actors, and the existence of institutional battles which hinder the cocoa sector development. For instance, an interviewee from a CSO did not understand why the CICC was engaged in planting material production and distribution or competing with them for funding when these were not part of its mission (see Annexe 2). A senior staff from the CICC acknowledged CICC's limitations in achieving its mission due to limited financial, material, and human resources to do so. The time lag between problem identification, policy formulation and implementation was also identified as a barrier to the sector development. The state's function and limit to involving other actors in its reflection was also criticised by actors from all sectors. In this regard, one informant notes that

we are member of the PAD-Cacao project steering committee but have no knowledge of the existence of a project document, or at least it has not been disseminated [...] We were neither involved in the design nor the validation of the project.

Besides, MINADER with its partners, and more recently IITA designed 'harmonised manuals' for training, yet few actors, including those who collaborated in the design processes, use them. Finally, SODECAO, a public agency recently elaborated an ambitious strategic plan for the cocoa sector development (2020-2027) (SODECAO 2019). Instead of building on this, the Prime Ministry Unit in charge of the cocoa sector development has preferred to consult with ONCC to develop another plan (ONCC 2022a).

When organisational collaborations exist, they mainly take place in the form of services outsourcing such as private companies hiring FOs and CSOs to implement part of their activities. Interactions between actors frequently take the form of attendance to meetings to ‘exchange’ ideas on future collaboration. However, all interviewees highlighted the unwillingness of other actors to share all that they do and their ideas out of fear of competition in securing farmer loyalty, but also because of information privacy. Besides, when services are outsourced, monitoring and evaluation is not systematic. Other limits to collaboration identified were related to the cost and timing. When organisations collaborate, conflicting agendas and activity planning can in some cases unnecessarily prolong the decision-making process. The nature of interactions among actors and the limitations in coordination and collaboration are likely to influence the types of services farmers receive as well as their geographical and audience reach.

### *Status of integration in service delivery*

#### *Types of services provided*

The online survey showed that, in decreasing order of importance, the predominant ISS delivered to farmers were related to awareness and knowledge exchange (offered by 96% of the 25 organisations surveyed), followed by capacity building (80%), advisory, consultancy and backstopping (76%), enhancing access to resources (60%), demand articulation (40%), networking facilitation and brokerage (20%), and institutional support (16%) (Table 2). Although the number of actors who participated in the survey is limited (25), these findings are similar to those from the FGDs, which highlighted the dominance of capacity building, awareness and knowledge exchange through training and coaching, and enhanced access to resources through inputs and credit by service providers. We also found that, across all categories, ISS related to networking facilitation and brokerage were the least offered by the organisations surveyed.

Furthermore, concerning training, despite efforts for a consolidated training manual on good agricultural practices and a legal provision for training in general, each organisation is usually free to design its material with contents guided towards its intention and ambition. As a result, the training sessions become repetitive and less informative as mentioned in all FGDs. Moreover, in some cases, conflicting information is passed on to farmers. This is because farmers and their organisations play a limited role in the identification, prioritisation, implementation, and monitoring of these interventions. Besides actors’ final decisions on what services to offer depended primarily on fund availability and the organisation’s goals.

#### *Geographical and audience target*

The online survey showed heterogeneity in the geographical scope of the surveyed organisations’ interventions. Some of these organisations worked in one or more than one administrative region while others covered the whole national territory. 44% covered the national territory while 52%, 48%, 42% and 20% respectively covered at least the Centre, South, East and South-West regions (Table 3). The political unrest in the South-West region, which has been relegated to the second largest cocoa-producing region, has pushed many organisations to relocate their staff elsewhere and cancel their activities for some time. Unlike the other organisations which mostly covered 1–

**Table 2.** Number (n) and frequency (%) of the organisations surveyed (n = 25) according to the types of services delivered.

Type of ISS	CSO and development Agency (N = 10)				Private Sector (N = 5)				Public Sector (N = 6)				Research and education (N = 4)				Total (N = 25)			
	N	n	%		N	n	%		N	n	%		N	n	%		n	%		
Institutional support for niche innovation and scaling mechanisms stimulation	2	2	20		1	1	20		1	1	17						4			16
Enhancing access to resources	5	5	50		4	4	80		3	3	50		3	3	75		15			60
Capacity building	8	8	80		4	4	80		5	5	83		3	3	75		20			80
Networking facilitation and brokerage	1	1	10		1	1	20		1	1	17		2	2	50		5			20
Demand articulation	5	5	50		1	1	20		2	2	33		2	2	50		10			40
Advisory, consultancy and backstopping	7	7	70		4	4	80		4	4	67		4	4	100		19			76
Awareness and exchange of knowledge	9	9	90		5	5	100		6	6	100		4	4	100		24			96

Source: Survey Data

**Table 3.** The number and frequency of each category of the surveyed organisations active in the different geographical areas (n = 25).

Geographical areas	CSO and development Agency (N = 10)				Private Sector (N = 5)				Public Sector (N = 6)				Research and education (N = 4)				Total (N = 25)			
	n	%			n	%			n	%			n	%			n	%		%*
Adamaoua	/	/			/	/			1	100			/	/			1			4
Centre	5	38			3	23			2	15			3	23			13			52
East	3	38			2	25			2	25			1	13			8			32
Littoral	/	/			3	60			2	40			/	/			5			20
North-West	/	/			/	/			1	100			/	/			1			4
South	5	42			3	25			2	17			2	17			12			48
South-West	1	20			1	20			2	40			1	20			5			20
West	/	/			2	67			1	33			/	/			3			12
National territory**	3	27			2	18			5	45			1	9			11			44

\* the % in the total column represents the proportion of all organisations intervening per region  
\*\* Some organisations intervene in the whole national territory  
Source: Online survey Data

3 regions, at least 60% of public organisations surveyed covered all the regions where cocoa is produced.

This geographical coverage is not the result of discussions between stakeholders. Each organisation decides for itself where to intervene. The definition of target areas, especially for private companies, responds first to an economic logic. Their support is primarily targeted at locations where they can source large quantities of cocoa. However, on the ground, there is an unwritten but apparent delineation in the area where private companies intervene, each of the three biggest cocoa buyers being dominant in at least one area. Regarding CSOs, public organisations, and research institutes, where activities take place depends primarily on resource availability and donors or organisation interests. In the public sector, we also observed a lack of coordination which may reduce efficiency, geographical cover, and thus potential spillover effects. For instance, the CICC with government support is implementing a programme targeting youths (New Generation). Simultaneously, MINADER is running two similar projects with little to no communication and collaboration between these projects, as reported by a senior staff of one of these projects.

Service providers apply different procedures, including typologies (especially in the cocoa industry), to target the farmers they provide services to. Depending on the scope of the programmes implemented, this is done based on geographical area (degraded, non-degraded area, etc.), gender (youths, women, etc.), production capacity, or areas' accessibility among others. Consequently, some farmers, especially the poorest and most vulnerable have fewer chances to access services, especially those supplied by the cocoa industry. These services are offered primarily through cooperatives. The selection of these cooperatives by service providers is often biased by geographical, political, or social considerations. Cooperatives located near urban centres, in accessible areas, and which benefit from political elites' (mayor, deputy, Minister etc.) presence in their locality, have more chances to benefit from public interventions, while cooperatives with acceptable levels of structuring and producing high volumes of cocoa are more likely to be targeted by private companies. Thus, some cooperatives and their members end up with multiple benefits from several categories of service providers, while in the same or neighbouring areas, other cooperatives are left out purposely. Similarly, within the cooperatives, there is sometimes an opacity in the selection of beneficiaries which does not necessarily obey written and objective rules. Even when services are considered 'free' such as training or meeting attendance, they often entail costs (transportation, accommodation, nutrition) that not all farmers can cover. Even when these costs are (partly) covered, the same producers ('leaders') usually take part as revealed in FGDs, and the transfer of acquired knowledge to their fellow farmers is not always guaranteed. More communication and collaboration among service providers could reduce this duplication. There are also biases when it comes to supporting CSO that collaborate with farmers. Some organisations, because of their status and network, are more likely to access funding than others, even though they might not have the highest impact or level of reach on the ground.

## Discussion

The findings highlighted poor cooperation, coordination and collaboration among actors as the main barrier to integration in the service delivery landscape which is also characterised by the lack of a strong regulatory framework and its enforcement, the lack of



continuity in service financing, limited skills for the facilitation and leadership of the integration process, the diversity of organisations' interests and their strategic behaviour, and an unfair access to ISS for all farmers.

### *Regulatory framework in a pluralistic landscape*

The findings showed a pluralistic landscape with multiple public and private actors exhibiting various levels of centrality and interacting in a loose network. In extension, pluralism has become the norm with multiple service providers whose scope of activities differs in terms of clientele, quality and types of services provided (Audouin et al. 2021; Nyathi and Even 2022). However, pluralism raises issues of coordination, roles, collaboration and competing interests among actors (Bitzer, Wennink, and de Steenhuijsen Pitors 2016; Chowdhury and Kabir 2024; McNamara 2014). Hence, States have a key role to play in creating an enabling environment for sustainable and inclusive systems through dedicated investments, coordination mechanisms and quality assurance (Nyathi and Even 2022; Sajesh, Padaria, and Sadamate 2018). The centrality of public actors (MINADER, ONCC, IRAD) and the mandate of the 'Sustainability Cocoa Committee' suggest that the Cameroonian government is keen to play this role with active support from all cocoa sector actors. But, in practice, the law does not make provision for what types of services actors can or should offer, where, when and to whom. Consequently, as observed in India (Nikam, Ashok, and Kale 2023), each actor, especially in the non-public sector intervenes solely based on its interests with little to no accountability towards farmers. This contributes to the exclusion of some farmers from the service delivery stream, duplication, and poor quality of services (Chowdhury and Kabir 2024).

### *Continuity of services funding*

The services provided are defined by international trends and the strategic orientation of each actor and often give little room to integrate farmers' voices in their design, implementation, monitoring and evaluation. There are two different but complementary reasons behind private companies' interventions: securing their supply and increasing their reputation as contributors to sustainable food systems (IDH 2016). Besides, for all actors, service provision occurs within projects/programmes with time boundaries. Consequently, they offer what they have rather than what is needed. Similarly, some multistakeholder platforms cease to exist after the project that established them ends. Additionally, compared to Ghana and Côte d'Ivoire, Cameroon hosts fewer donor projects and receives less cocoa companies' investment in sustainability initiatives (Hütz-Adams et al. 2016). This raises concerns about the continuity of the services provided and the existing mechanisms for their coordination (Nyathi and Even 2022).

### *Facilitation and leadership of the integration process*

We noticed the coexistence of multiple spaces and platforms of exchanges. Still, as previously reported, issues of coordination and collaboration remained (Hütz-Adams et al. 2016; Les-cuyer and Bassanaga 2021). Even when there are regulations to ensure coordination in actors' interventions such as with farmers' training, they are rarely enforced. For instance, there are two units in MINADER responsible for coordinating farmers' training.

However, because of a ‘laissez-faire’, lack of resources and the lengthy process, training providers rarely consult them. The potential of multistakeholder platforms to facilitate communication, coordination, and collaboration among stakeholders in a system is acknowledged (Kilelu, Klerkx, and Leeuwis 2013; Seifu et al. 2022; Yongabo 2022). Yet, the identified platforms and spaces of interaction in Cameroon seem to be failing in this regard, as demonstrated by the overlap in the types of services provided while some services, geographical areas and farmers are left out (Kenfack et al. 2024). At the same time, all interviewees pointed to resource limitation as an explanation for the limited scope (services, geographical and audience) of their interventions. It is plausible that the dominance of private players is a limitation to coordination since they fight for the same market share and perceive each other as competitors (Chowdhury and Kabir 2024).

The goals of service integration efforts are, first, to attain a better match between services needed and supplied, and, second, to create a more coordinated system for delivering those services (Waldfoegel 1997). This has the potential to improve the whole system’s effectiveness and efficiency in the long term (Van Duijn et al. 2018; Wouters et al. 2023). The recent establishment of the Sustainable Cocoa Committee constitutes an entry point for more integration in service delivery. This could also promote demand-driven and participatory service delivery, which enhances the likelihood of success of interventions by facilitating the identification of farmers’ needs and the tailoring of services to context specificity (Mbo’o-Tchouawou and Colverson 2014; Nederlof, Wennink, and Heemskerk 2011). Nonetheless, achieving integration will strongly depend on the state’s capacity to lead and facilitate the process by creating rules, incentive systems, and other measures that will encourage all the stakeholders to integrate their services. We currently note strong linkages between private companies and FOs and CSO. This is opposite to what Nikam, Ashok, and Kale (2023) observed in India. However, it shows that there is already some convergence among these group of actors while more efforts are needed to strengthen the linkages between private companies among themselves, and between private companies and the public sector.

### *Priority for organisations’ individual interests and strategic behaviours*

Actors often discussed and shared results, but rarely planned what they could do together. Besides, within an organisation, different individuals interact with other actors outside without necessarily sharing information with their colleagues. Efforts to integrate services should be simultaneously within and between organisations (Hasse and Austin 1997; King and Meyer 2006). This implies a need for continual communication and updates among individuals within organisations. Therefore, people should know why they need to collaborate and coordinate their activities. We observed that actors are willing to meet and discuss but refrain from sharing some sensitive information or are cautious to engage in common activities, especially in the cocoa industry. This obeys a market protectionist strategy. Each actor wants to keep a hand on the farmers it provides services to, although this is in principle not allowed by law and neither guarantees farmers’ loyalty. People attend meetings and joint platforms, not necessarily because they want to coordinate or collaborate, but to stay updated with what is going on and fulfil some ‘moral obligations’. This can be seen for instance in the non-implementation of collective decisions such as the use of a harmonised training manual.

### *Towards sustainable service integration*

Service integration is not a panacea for more effectiveness and efficiency. It often implies extra costs and can only produce positive outcomes if implemented with a long-term vision and realistic intermediary goals (Hasse and Austin 1997). The integration process requires leadership and commitment from all actors. This commitment can be achieved by (i) building trust and relationships between all actors, ensuring they understand why integration is important, and (ii) securing agreements which define the goals to achieve and the role of each actor (Van Duijn et al. 2018).

The Sustainable Cocoa Committee and its Action Plan provide a starting point for achieving long-term integration in service delivery. The action plan identifies the organisations responsible for each of the eleven actions and the partners with whom they will work to implement them. The plan also recognises that there is a medium risk of poor coordination, which could lead to duplication of effort and conflicts of competence. Hence, it emphasises the need for a permanent animation and reinforcement of ONCC resources for coordination (MINADER and MINTRADE 2024). This committee has already produced some positive results, such as the agreements signed between the CICC and six cocoa exporters for cocoa farm mapping (Reuters 2024), and a collective agreement to set up a national traceability system in which the ONCC would provide guidance and a minimum cahier de charge for private companies' traceability programme, CICC would carry out a census and registration of cocoa producers with the financial support of private companies, and the final database would be managed by the ONCC (EFI 2024; Fern 2024). However, there are already a few criticisms of this committee, such as the fact that decisions are not inclusive and the CSO seat is currently occupied by an international organisation rather than a national group (Fern 2024). This highlights the need for the State and other stakeholder to provide this committee with the necessary powers and tools to legitimately regulate and coordinate service delivery in the sector.

Furthermore, there is room for non-regulatory governance to foster service integration. Awareness raising, information sharing, and the provision of incentives can contribute to increasing service integration. For instance, raising farmers' awareness and capacity building around advocacy and lobbying would improve their knowledge and decision making, hence enabling them to demand more accountability from service providers. As well, if service providers are made aware and become conscious of the potential benefits resulting from an integration of their services, it could encourage them to review their intervention strategy and how they interact with other actors. Furthermore, introducing reward systems (e.g. in the form of tax levies or public recognition) for service providers who undertake joint actions and perform high in terms of quality of services delivered against assessment criteria predefined collectively could also play a positive role.

### **Conclusion**

To understand the limited impact observed on cocoa productivity despite significant public and private investments in service provision, this study paid attention to opportunities and challenges for an integrated service delivery landscape in the Cameroonian cocoa sector. We identified multiple actors and several platforms and spaces of interactions among actors that coexist. However, we identified different drivers of the service integration extent. The sector suffers from a lack of communication, coordination, cooperation, and collaboration among

actors to address the multiple and complex challenges faced by farmers. Hence, the poor integration of service delivery limits its effectiveness and efficiency. This lack of coordination and collaboration exposes the sector to high risks of tensions and contradictions and lead to the discontinuation/absence of some services or the exclusion of certain target groups and geographical areas. The high dependency on external funding is problematic, threatens the continuity of services, and limits providers' accountability to beneficiaries/clients. Furthermore, the findings showed that pluralism of actors does not guarantee pluralism in the types of services provided, nor greater coverage of the target population. Greater coordination and collaboration among the actors in the system would reduce unnecessary duplication of services, increase consistency, inclusiveness, and quality of services, and thus improve the overall effectiveness and efficiency of the system (Chowdhury and Kabir 2024). However, this requires actors' commitment to a shared vision and permanent communication. To ensure service integration, we recommend building strong public-private partnerships and encouraging coordination between donors who fund service delivery. The 'Sustainable Cocoa Committee', given its mandate and composition, has the potential to foster service integration in the cocoa sector. However, its success will depend on all actors' endorsement and commitments to its action plan, its legitimacy, and the means put at its disposal. Therefore, we recommend strengthening ONCC's capacity to coordinate and facilitate the committee. This implies providing the committee with the tools, legitimacy, and required resources needed to regulate and coordinate service providers' interventions. This study provides useful insights into the service delivery landscape in Cameroon's cocoa sector. However, given the low response rate to the online survey (25 out of 105), further research with a larger and more diversified sample of actors could provide a more comprehensive understanding of the landscape and the types of services offered by the different categories of actors and their geographical and target audiences. Moreover, an analysis of the importance of coordination as perceived by the different categories of actors, including farmers as service users, and the factors that influence their decision to coordinate their actions with others or not would help to better understand the dynamics at play and provide some levers to define adapted options to address the problems of poor coordination, cooperation and collaboration that hinder the effectiveness of most pluralistic systems.

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## Consent to participate

Verbal informed consent was obtained before the interviews.

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## Annexes

**Annexe 1.** Shortlist of organisations with at least six connections identified regarding the number (degree) and frequency (weighted degree) of annual interactions with other stakeholders. Ranked by decreasing number of partners in the network

Label	Organisations/Actors	Type*	Centrality		
			Degree	Weighted degree	Betweenness
IDH		2	29	84	1560
Ministry of Agriculture and Rural Development (MINADER)		1	28	71	1108
Interprofessional Council for the Cocoa and Coffee (CICC)		5	26	61	1204
National Cocoa and Coffee Board (ONCC)		1	24	80	935
Institute of Agricultural Research for Development (IRAD)		4	20	58	401
Farmers' Organisations (POs)		3	18	29	679
IITA		4	18	46	555
German Agency for International Cooperation (GIZ)		2	16	34	308
MBANGASSUD		3	16	56	525
Barry Callebaut		5	14	42	444
CIRAD		4	13	21	231
OLAM CAM		5	12	37	181
PCP-ACEFA		1	11	28	365
SOCODEB		3	11	22	311
Cocoa and Coffee sub-sector Development Fund (FODECC)		1	11	26	57
CBI		4	10	10	81
MINCOMMERCE		1	10	22	284
SOCOOPAL		3	10	36	465
SODECAO		1	10	21	34
CIFOR-ICRAF		4	9	16	115
GEX		5	9	9	51
UGICATS		3	9	34	288
MINEPDED		1	8	17	239
SOCOOPLAB		3	8	18	195
UGICAO		3	8	31	170
APED		2	7	17	346
Beyond Beans		5	7	17	376
Bioversity/CIAT		4	7	7	39
Ministry in Charge of Scientific Research and Innovation		1	7	7	34
TELCAR		5	7	20	71
MINFOF		1	6	9	43
PAD-CACAO		1	6	18	119
SOCAM COOPCA		3	6	15	244
AGSIE		5	5	5	51

\*Types of organisations: 1. Public 2. CSO and development agency; 3. Farmers' organisation, 4. Research and education, 5. Private.

Source: Survey Data.

**Annexe 2.** Summary function and mandates of ONCC, CICC, FODECC and Sustainable Cocoa Committee.

Organisations/ Actors Type	ONCC Public	CICC Private	FODECC Public	Sustainable Cocoa Committee Public-Private platform
Function	Consultative body	Consultative body	Public funding agencies	Consultative body
Institutional attributions/ mandates	Regulatory, supervisory, product certification and coordination body	To give its opinion or present its proposals on any issue or reform of the coffee and cocoa production and marketing system;	Support the revival of the cocoa and coffee sectors (including through direct subsidies to farmers (organisations))	Ensure the harmonisation and coherence of stakeholders' activities towards the establishment of a cocoa production and marketing value chain that meets international requirements for environmental, social, and economic sustainability.
	Control and guarantee the quality of cocoa and coffee;	To determine the criteria for the exercise of the coffee and cocoa marketing professions and to provide a moral guarantee for the smooth running of operations;	Support applied research on cocoa and coffee and for improving their quality	
	Monitor exports statistics along with the cocoa and coffee trading seasons.	To ensure the application of rules that ensure healthy and fair competition between operators, members of professional organisations affiliated with the CICC;	Support training and information programmes for operators in the cocoa and coffee sectors	Monitor the implementation of the 'Roadmap for a sustainable, deforestation-free cocoa
	Defend and promote the brand image of Cameroon origin;	To manage the 'Caisse Mutuelle de Cautions et de Garanties Professionnelles' and to design a system of professional insurance and reinsurance;	Promote local processing and consumption of cocoa and coffee	regarding fair income for cocoa producers and curb the worst form of child labour in the cocoa value chain.
	Take measures to streamline and valorise the marketing of produce, and their derivatives as well as promote the marketing process;	To provide assistance and services to all the professional organisations of its various constituent colleges, to increase the efficiency of the professional organisation as a whole;		Strengthen climate change adaptation and carbon emission reduction potential of the cocoa sector.
	Oversee the dissemination of information and guarantee the smooth functioning of all activities in the sector;	To represent the professionals of the Cameroonian sectors in international cocoa and coffee organisations		Make recommendations on issues related to the evolution of international regulations on sanitary and phytosanitary measures.
	Assure adequate training of sector operators to enhance professionalism;			Contribute to the promotion of transparency and traceability in the sustainable cocoa value chain.
	Monitor international cocoa and coffee agreements and represent Cameroon in international cocoa and coffee organisations (ICCO, WCF etc.)			Develop, regarding national and international standards, a guide to sustainable cocoa in Cameroon.
				Promote best practices in the development and management of projects related to the sustainable production and marketing of cocoa in Cameroon.
				Study and propose necessary measures and guidelines for the implementation of these commitments at the national or international level for sustainable cocoa production and marketing.

Non-exhaustive list of annual activities	Undertake actions to positively differentiate Cameroon's origin on the international market (fight against fraud, stimulate synergy between the different actors involved in marketing);	The organisation of forums for meetings and debates between the different professional categories; Provide technical support for professional categories: the rise in power of producers encouraged by the permanent, Structuring of FOs	Provide funding to relevant ministries to perform their undertake their activities aimed at developing the cocoa and coffee subsectors
	Supervise the implementation of group sales and sales under agreement in collaboration with FOs, the CICC, and administrative authorities;	Representation of the 'private sector' vis-à-vis the public authorities: Participate in the reflection and debates on the sector revival and its financing	Engage in consultations with the prime minister's office for the development of a new Cocoa-Coffee Recovery Plan;
	Gathering, treatment and publication of cocoa export and internal trade statistics;	Defence of Cameroon's Origin, at the international level.	Participate or jointly organise meetings, ceremonies, and fair events with CICC, MINCOMMERCE, ONCC, and the
	Guidance and supervision of export cocoa quality control by mandated societies.	Dissemination of information	Organise capacity-building sessions for civil servants,
	Represent Cameroon at the international level in debates related to cocoa,	Participates in the elaboration of all texts on the cocoa and coffee sectors; Farm mapping and farmer identification; Implements programmes to develop a new generation of farmers,	Organise awareness-raising, information, and training sessions for stakeholders
	Participate in the formulation of policy at the national level,	Develop strategies to adapt to climate change, support farmers in getting access to finance, promote good agricultural practices, etc. to improve yield and cocoa quality	Meeting to evaluate the 2020–2021 cocoa season and prepare for the launch of the 2021–2022 cocoa season or organise events or review reports on cocoa quality
	Organise the launch of the cocoa campaign in collaboration with other actors.		Partnership with a consultancy firm to finalise the design of the Producers' Desk applications and to test them in small samples

Source: Compiled from (CICC 2017; FODECC 2022; IDH 2023; Inter-reseaux 2008; ONCC 2022a, 2022b)