



Cocoa plantation in Atiwa West Ghana

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Policy instruments for enhancing tree commodities

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Highlights

- African policymakers struggle to balance four main policy objectives in tree commodities sub-sectors (such as cocoa, coffee and oil palm): i) Increasing production and productivity, ii) Ensuring fair and equitable market infrastructure, iii) Adding value, iv) Ensuring sustainability.
- Common policy instruments have been deployed across the continent including input subsidies for many commodities, pricing policies, national boards or councils for cocoa and coffee, biofuel expansion policies in oil palm, and out-grower schemes in rubber and oil palm.
- Some unique policy instruments worth considering have also emerged such as the commodities exchange and auctions for coffee, and import taxes for palm oil in Nigeria.
- Zero-deforestation, biodiversity and climate-related policy instruments at the global level have also impacted domestic policies, especially in the cocoa and oil palm sub-sectors.
- Countries need to choose policy instruments based on evidence and combine an appropriate set of instruments (policy-mixes) for their context.

1. Introduction

Tree commodities, including cocoa, coffee, oil palm, rubber, cashew and others are an important part of African economies. They help sustain the livelihoods of millions of farmers and workers in the value chains- up to 400 million people indirectly. Tree commodities are also important foreign exchange earners for many economies, playing a central role in the Balance of Payments, and therefore influencing the abilities of countries to service debts, etc. Rapid growth in tree commodity portfolios and areas in Africa have also come at the expense

of several ecosystems including forests and savannahs. This growth has also impacted climate change dynamics. These diverse impacts on the economic, social, cultural and environmental aspects of life in these countries impose a policy attention imperative, to ensure balance, equity and efficiency.

The history of policies on tree commodities in Africa has been dynamic. In many African countries ‘tree crops’ were promoted during the colonial period, with many existing policies still dating back to that time. After independence, agricultural exports remained as important as before, but in many countries, marketing shifted to centralized institutions under national control such as the Cocoa Board (COCOBOD) in Ghana, the Conseil Café-Cacao (CCC) in Côte d’Ivoire and coffee marketing boards in various other countries. This led to national policy instruments that form the axis of their utilization, ensure food security, market access and value addition. As financial controls were inadequate, the export income earned was not effectively transferred back to farmers – with payment delays, causing farmers to lose interest in some of the crops. Also, the lack of agency and control within these systems of farmer organisations contributed to a loss of interest in the export crops. At various points in time, countries switched to other marketing arrangements, but the degrees of ‘tax’ remained high. In contrast, agricultural inputs are often subsidised for such crops, and rules for land access favoured an influx of external labour, e.g. for cocoa production in West Africa. Another set of issues ensued within countries over policy coherence in pursuing ‘product quality’, and controls were put in place to protect the national brands to be compliant with international standards.

When the critique on social and environmental impacts of tree commodity expansion and production increased, voluntary standards and certification of the production process came up – with countries often initially being defensive that these were external intrusions to national sovereignty. Over time, national policies and institutions moved towards guarantees for ‘living wage’ opportunities in cash crop production.

These shifts have targeted/ navigated four policy objectives for tree commodities, namely 1) increasing production and productivity, 2) ensuring fair and equitable market infrastructure, 3) adding value and 4) ensuring sustainability. Consequently, policy instruments have become the norm in governing tree crops and responding to the concern (‘issues’) that they try to address. The current set of policy instruments can be grouped under four categories; 1) legal and regulatory instruments; 2) rights-based instruments; 3) economic and financial instruments; and 4) social and cultural instruments, often building on customary norms. Commonly these instruments are used in combination, as a policy mix to govern natural resources, including tree commodities. The instruments have usually evolved to influence the quantity and quality of ecosystem service provision (Schröter-Schlaack & Ring 2011; IPBES 2020).

Legal and regulatory instruments are compulsory (within stated domains of application) and involved in regulation, public enterprises and direct provision of the commodities. *Rights-based instruments*, on the other hand, can be binding or non-binding and used to fit socio-ecological systems and foster resilience. *Economic and financial instruments* include subsidies, taxes, charges spending, incentives and fiscal transfers. They can reflect social costs or benefits of the conservation and use of commodities. Financial instruments are often extra-budgetary and can be financed from domestic sources or foreign aid, external borrowing, debt for nature swaps, and the like. These instruments may also represent conditional and voluntary incentive schemes. Particularly in commodities, they are commonly used for the policy or/and market failures and reinstate full-cost pricing. *Social and cultural instruments and customary norms*, however, emphasize the intertwined relationships between ecosystems and sociocultural dynamics for the management of natural and cultural assets, such as heritage sites as indigenous and community conserved areas. Social instruments go beyond economic and financial instruments and depend on the applicable territorial jurisdiction (e.g., regional, national and local). They may include (i) information-related instruments -- environmental education, eco-labelling, pollutant release and transfer registers, biodiversity registers, awareness-raising and award schemes, information dissemination, community right to know; (ii) self-regulation, voluntary agreements, corporate social responsibility, buyer-supplier relations; (iii) participation and (iv) development of collective action of indigenous peoples, local communities, and local resource users (IPBES 2020; Howlett 2005).

Although relevant regulatory frameworks and policy instruments are designed and implemented by public authorities, there is an increase in the recognition to embrace broader understanding to include policy support tools and methodologies. It also contains related decision-making institutions (public institutions, groups, organizations, indigenous and local communities, entities and stakeholders) undertaking activities relevant to tree commodities (IPBES 2020). For instance, economic incentives are law-based, and information instruments support laws; thus, monitoring is frequently needed to ensure compliance with other instruments for their implementation. Consequently, enforcement mechanisms are also part of the policy toolkit that should fit the social and cultural context—many of the instruments in this chapter fall in at least one of the categories mentioned above.

This chapter examines policies that are in use within three tree commodities to provide insights and lessons on how best to improve performance. It presents policy instruments deployed in three commodities (cocoa, coffee and oil palm) with examples at the country level as a way of enhancing understanding. Discussions focus on emerging instruments and the need for policy mixes that ensure synergy and minimize trade-offs.

2. Overview of policy instruments in tree commodities at the country level

Most developing countries derive at least 60 per cent of export earnings from tree commodities (TCs) such as coffee, tea, cocoa, and oil palm, among others. The significant commodity dependence of these countries affects the development processes and economic performance (UNCTAD 2019) which are governed by a set of policy instruments. Table 22.1 below summarizes the set of instruments primarily used in each of the commodities in various countries in Africa.

Table 22.1: Examples of policy instruments used in tree commodity subsectors in African countries

Commodity	Policy instruments	Producing country
Cocoa	Pricing policies for cocoa	Cote d’Ivoire, Ghana
	Policy for forest preservation, rehabilitation for cocoa	Cote d’Ivoire, Ghana
	Child labour in cocoa production	Ghana
	Seedling subsidy	Nigeria
Coffee	Pricing policy	Cote d’Ivoire
	Coffee development strategy and regulations	Cameroon, Kenya, Uganda, Rwanda, Tanzania
Oil palm	Trade and export policy	Nigeria, Liberia
	Expansion for biofuel policy	Ghana, Cameroon, Tanzania, Angola, Togo, Madagascar
	Out-grower opportunities policy	Uganda, Sierra Leone
	Zero-deforestation in oil palm plantations (encapsulated in Forest policy and REDD+ (Reducing Deforestation and (forest) Degradation))	Democratic Republic of Congo (DRC), Liberia
	Import taxes and duties for imports policy	Nigeria

Most instruments for cocoa and coffee are regulatory and market-based aimed at organizing farmers, increasing the efficiency of production and quality of export commodities, value addition (branding and certification), improving marketing infrastructure (such auctions and commodity exchanges), and consequently enhancing the traceability of products (Ton et al 2008; Nyemeck, Gockowski, and Nkamleu 2008; UNCTAD 2018). The bulk of cocoa instruments is on increasing producer prices, getting more per unit by reducing the costs of inefficient marketing and pricing systems as well as reducing on-farm deforestation (Nsabimana and Tirkaso 2020; Fountain and Hütz-Adams 2018). They also include the liberalisation of internal marketing, privatization of input distribution, reform of extension services and reorganization

of credit facilities (Fountain and Hütz-Adams 2018; IITA 2012). On the other hand, coffee instruments advance market infrastructure and value addition by improving local production systems, providing economic incentives for production and processing, trademarking and seeking agreements to register and promote locally branded coffee for export (Nsabimana and Tirkaso 2020; UNCTAD 2019). Oil palm instruments focus on the export commodities, out-grower agreements/ schemes and bioenergy instruments involving a more significant emphasis on the expansion of a plantation system that is deforestation-free. The instruments fall into four instrument domains, as shown in Table 22.2.

Table 22.2: *Examples of instruments in tree commodities*

Instrument Domain	Cocoa	Coffee	Oil Palm
Regulatory	<ul style="list-style-type: none"> • Trade rules • Tax breaks for domestic grinders • Pricing policy 	<ul style="list-style-type: none"> • Value addition for exports • Quality planting material policy 	<ul style="list-style-type: none"> • Forest policy & REDD+ towards zero deforestation • Import Taxes and duty
Rights-based	<ul style="list-style-type: none"> • Land tenure agreements • Avoidance of child labor 	<ul style="list-style-type: none"> • Strengthening producers' bargaining power 	
Market and incentives	<ul style="list-style-type: none"> • Marketing reforms • Credit facilities • Subsidies • Certification 	<ul style="list-style-type: none"> • Branding and certification • Availability of credit and pre-financing investments • Early purchase contracts • Exchange 	<ul style="list-style-type: none"> • Out grower schemes and Contract farming • Certification
Norms/ Behaviour etc	<ul style="list-style-type: none"> • Reducing deforestation in cocoa farms • Promoting domestic consumption 	<ul style="list-style-type: none"> • Reinforcing good agricultural practices • Inputs to replace and replant old plantations 	<ul style="list-style-type: none"> • Zero deforestation
Institutional	<ul style="list-style-type: none"> • Cooperatives (local) • Cocoa Boards (national) 	<ul style="list-style-type: none"> • Cooperatives (local) • Coffee Boards (national) 	<ul style="list-style-type: none"> • Roundtable on sustainable palm oil (RSPO) - (international levels)

Even though all coffee and cocoa instruments are distributed across the four domains, oil palm has not caught up with the rights-based domain. As compared to coffee and cocoa, oil palm instruments are geared towards sustainability and zero deforestation. With growing competition between forests and more significant economic interests such as plantation agriculture, international interests in shaping forest policies (Minang, van Noordwijk and Duguma 2017)

which influence the oil palm are profoundly taking center stage in the sustainable development agenda. The Reducing Emissions from Deforestation and forest Degradation (REDD+) and Intended nationally determined contributions (INDCs), and Nationally determined contributions (NDCs) are examples of international instruments that are shaping tree crop policies at global and national levels. Besides, certification is among mechanisms that have grown and continue to grow in the TCs field.

2.1. Instruments in the cocoa sector

With over 70 per cent of the world's production of cocoa in Africa, policy instruments play a significant role in equity and economic sustainability in national and cross-border as well as in complex cocoa commodity chains. For the producing countries, intergovernmental commodity agreements, national policies and public organizations, such as marketing boards, actively shape the dynamics in the cocoa chains, and, consequently, the conditions for enhancing sustainability (Ton et al 2008). Intergovernmental agreements such as the Abidjan Cocoa Declaration signed jointly in 2018 by the Presidents of Côte d'Ivoire and Ghana, seek to harmonize their policies and thus maximize their profit (World Bank 2019). National marketing boards such as Café-Cacao (CCC) in Côte d'Ivoire and coffee board manages all activities of the sector in terms of quality, operators, and negotiating international agreements regarding marketing to ensure their effective implementation. Also, Ghana's Cocoa Board (Cocobod) fixes the buying price for cocoa in Ghana (Box 22.1). In both countries, cocoa constitutes a significant share of total export value (over 50%).

Besides, the countries mentioned above and others such as Cameroon and Nigeria, instruments have been successful reforms in the sectors' local production systems by promoting local consumption. They provide incentives for local processing including tax breaks for grinders, awards and bonuses, subsidies, inputs and fertilizers, the access and development of high quality and clean planting materials using improved breeding techniques, planting material, and others. They also build capacity, training, and the introduction of new farm enterprises to ensure that cocoa farmers are gainfully and fully engaged (IITA 2012). Some of the instruments are further modified to local contexts such as Cote d'Ivoire's policy to combat land tenure and deforestation issues in cocoa farms (Fountain and Hütz-Adams 2018). Whereas, Ghana's Cocoa Board pricing policy primarily protects and guarantees prices directly to farmers from world's market volatile prices and provides transparency which negates the need for go-betweens. For all actors within the cocoa sector, price levels are a significant incentive to produce, with the predictability of the price during the year being an important factor in entrepreneurial decision making by farmers, traders, exporters, and even government financial policy. A volatile world market price characterizes the cocoa sector during the year, varying between weeks and months without any seasonality (Abbott, Wilcox and Muir 2005).

Box 22.1

‘Guaranteeing living wage opportunities’ - Minimum pricing for cocoa in Ghana and Cote d’Ivoire

Accounting for most of the world’s production of cocoa, Cote d’Ivoire (56%) and Ghana (26%), farm gate prices do not reflect the fluctuating world market prices, unlike other producing countries. Cocoa’s world market prices are determined as an average price for cocoa futures in the New York and London commodity exchanges. They are historically subject to volatility and shocks ranging from oversupply, weather patterns, pests and disease, and civil unrest. Both CCC and Cocobod pre-sell part of their harvest the year before the harvest season starts by determining a fixed price around October 1st when the main crop season begins. Cocobod pays farmers 70% while CCC fixes a 60% farm gate price of the value of the pre-sales. For example, in June 2019, both countries proposed a floor price of USD 2,600/ton for the 2020/2021 season, as the price paid to traders. However, farmers receive a lower price than this after additional fees and costs are taken into account. Though, this was revised following consultation with Cocoa & Forests Initiative (CFI) signatories Mars, Hershey, Blommer, SucDen, Cemoi, Olam, Touton, Barry, Cargill, Callebaut, Ecom and Mondelēz. The proposed revision saw buyers paying a fixed premium of 400 USD/ton, called a “living income differential” when cocoa prices fall between 2,600 – 2,900 USD during the season. The premiums would be redistributed to farmers as bonuses. The goal is to attain bonus payments of at least USD 1,820/ton and a minimum farm gate price. It is estimated that an average cocoa farmer in West Africa produces roughly 400 kg/hectare and may own between 2-4 hectares of land. Under the projected scheme, the average farmer would earn between 1,456 – 3,640 USD per year, which falls short of proposed living income levels (Bakhtary et al 2020).

At the same time, some instruments have led to obstructing the management of cocoa. For instance, the liberalisation policies in West African countries, negatively affect the rural banking and credit facilities that could help to support future tree crop development, including cocoa (Nyemeck, Gockowski and Nkamleu 2008). Similarly, except for Ghana, smallholder cocoa farmers’ income declined by as much as 30%-40% within a couple of months between 2016 – 2017, since cocoa prices are not subsidized. Thus, farmers are bearing the risks of volatile world market prices (Fountain and Hütz-Adams 2018). For instance, the Cameroon government was forced to reduce its involvement in the domestic and external marketing of agricultural commodities, and the marketing board dissolved leading to the vanishing of credit facilities, the abolishment of input subsidies, diminished information and extension services and eventual crumbling the rural infrastructure. Combined with a dramatic decline in cocoa prices in the world market, producers, therefore, paid less attention to cocoa cultivation and processing and lowered their fermentation standards (Dada 2007). Also, Nigeria’s suspension of the export incentive rebate program, Export Expansion Grant (EEG), to encourage non-oil exports in 2012, has discouraged local cocoa processing (GAINS 2014).

2.2. Instruments in the coffee sector

Similarly, for coffee, an estimated 80% of green bean production is exported. The green coffee bean is one of the major cash crops in East and Southern African countries (Ethiopia, Burundi, Uganda, Kenya, Malawi, Rwanda, Tanzania, and Zambia), mainly produced for export purposes while creating substantial employment and income generation opportunities for the farmers (Nsabimana and Tirkaso 2020). Instruments in this sector have been successful reforms in promoting local production systems, capacity building and training on efficient processing methods, incentives to replace and replant old plantations and availability of quality planting material. However, there has been a significant shift geared toward restructuring the performance of the coffee export sector trademarking and seeking agreements to register and promote local branded coffee and value addition to export products (UNCTAD 2018). For example, in Ethiopia from December 2008 onwards it became mandatory for private traders to sell their coffee through the Ethiopian Commodity Exchange (ECX), a new modern commodity exchange. ECX trades standard coffee contracts, based on a warehouse receipt system, with standard parameters for coffee grades, transaction size, payment, and delivery leading to essential changes in the structure of the coffee value chain (Ruben and Heras 2012). The ECX also regulates coffee marketing by streamlining hoarding, revoking licenses and banning of coffee exporters who do not adhere to the set standards (Nsabimana and Tirkaso 2020).

Uganda's coffee policy instruments have enabled capacity building on good quality coffee processing practices, creating a Sustainable Robusta Coffee Value Chain through increasing production and quality improvement. There are schemes aimed at correcting the Ugandan coffee market failures, demand and value addition such as branding and certification. However, over the years, there is evidence of these instruments targeting only price and quality control at the expense of the quantity produced (Bamwesigye and Pomazalová 2015). In Kenya, the establishment of different coffee boards in 1992 and the industry policy reforms in Kenya (such as the coffee Act in April 2002) aim to incentivize coffee production (Karanja and Nyoro 2002). Also, the market liberalisation in Kenya in the 1990s reinvigorated its internal coffee market in the privatised auctions, permitting international participation in the Nairobi Securities Exchange (NSE) and smallholders to choose which factory to sell their coffee cherry, and restraining the role of the Coffee Board to regulation rather than marketing. The marketing in the auction plays a role in setting a minimum price, determining the physical grade, and even deciding who may bid on the coffee (Wanjiru et al 2015).

Despite these successes, some instruments have led to impeding coffee management. They have resulted in low productivity that favours competing commodities, weak market structures, unfair trading practices and trade systems for the boards. For Uganda, the marketing chain is poorly structured, leading to a decrease in the exporting firms and an increase in the number

of small coffee traders deemed as an unnecessary layer of trading activity in the industry (Bamwesigye and Pomazalová 2015, Ahmed 2012). This is due to the industry being primarily unavoidable due to the decreasing coffee exporting firms and the increasing numbers of small coffee traders involved in the sector are seen as a leading cause of oligopsonistic behaviour thus adding excessive costs to the industry. As well, liberalisation of the coffee subsector which aimed at reversing the already noted declining coffee production, therefore, boosting incomes among the millions of people who depended on coffee and generating increased foreign exchange earnings for the country did not achieve its set objectives. In Kenya, the collapse of the International Coffee Agreements in 1989 discouraged farmers and led to a decline in coffee production policies, and consequently, a drastic decline in the coffee sector between the period 1987/88 to 2010 (Karanja and Nyoro 2002).

2.3. Instruments in the oil palm sector

Even though Indonesia and Malaysia contribute 86% of the global production of oil palm, Africa is seen as a vital frontier area for the expansion of large-scale oil palm cultivation (Semroc et al 2015). Africa stands as a net importer of palm oil, with an estimated 7.5 million acres of land under palm oil production and 25 countries classified as producers. These countries include Angola, Cameroon, Benin, Burundi, Central African Republic, DRC, Equatorial, Congo, R., Cote d'Ivoire, Guinea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mozambique, Madagascar, Nigeria, Senegal, Sao Tome and Principe, Sierra Leone, Tanzania, Togo and Uganda. Predominant traditional systems of production are declining, with the uptake of industrial oil palm plantations for agrofuels (Carrere 2013).

DRC and Liberia, among the largest producers in the continent, have made efforts in moving toward a zero-deforestation palm oil sector. Liberia adopted the 2006 National Forestry Reform Law (NFRL) and National Forest Strategy to the approach of giving equal balance to the community, commercial, and conservation aspects of forestry, including oil palm. DRC's instruments are encapsulated within the National REDD+ Strategy that recognises the potential of palm oil to spur economic development and cause deforestation. However, both countries currently lack government capacity to develop, implement, and enforce policies that promote sustainable oil palm development and are concerns about the long-term security of investments (Semroc et al 2015).

Nigeria, on the other hand, has policy instruments to meet the domestic demand while reducing imports in quest of making the palm oil sector more competitive in the international market. Since 2008, it imposes a 35 per cent duty and an array of fees and taxes on oil palm imports (Carrere 2013). In 2016, Sierra Leone passed 'The Sierra Leone Local Content Agency Act, 2016' which requires companies investing in agriculture to create out-grower opportunities for

small farmers, including for oil palm. Whereas, in Liberia, the focus is on building public and private stakeholder partnerships that optimise palm oil production that explicitly links forest conservation and social inclusion. Out-grower schemes also referred to as contract farming, are defined mainly as binding arrangements in which an institution ensures its supply of agricultural products by individuals or groups of farmers (Rothschild et al 2017). In this case, concession agreements between companies (concessionaires) and farmers require concessionaires to establish out-grower contracts. The development of an out-grower scheme is supported with approximately 1 ha of the scheme for every 5 ha of company oil palm (Rothschild et al 2017). These schemes are considered attractive models for agro-food companies to ensure access to local markets while at the same time, control and ensuring a consistent supply. Unlike cocoa and coffee, instruments such as trade agreements and commercial relations are coordinated directly by producers, processors, and traders. They also result in a vertical integration of the agricultural value chain for oil palm (Carrere 2013). While instruments in this sector are still at infancy stages, most countries anticipate/are in the process of developing instruments that focus on certification, access to financing, technology transfer, and infrastructure development from the farm to markets, as well as marketing and pricing mechanism for oil palm.

3. Emerging policy instruments

3.1. Commodities exchange

Commodity exchanges have mainly been in agricultural commodities (coffee, wheat, maize, sugar, oil and cocoa) rather than manufactured products. They operate on spot prices, forward prices, as well as options on future contracts which offer farmers consistency and stability of prices for their produce and protect against drops in prices. This centralised trade is regarded as a vital tool of commodity exchanges as it enables title transfer, price discovery and market transparency (Kawuma 2015). While historically commodity exchanges were generally restricted to the industrialised nations, liberalisation of markets in the 1990s, the rise in affordable technology as well deregulation enabled the growth of commodity exchanges worldwide (Kawuma 2015). In SSA, they pioneered in Uganda, Zimbabwe, Kenya, Zambia and South Africa with relative success. South African Futures Exchange (later Johannesburg Stock Exchange) succeeded while Zambia and Zimbabwe both initially successful, collapsed due to successive government intervention and subsequent unprecedented increases in prices of commodities. Uganda and Kenya were unable to generate sufficient trade volumes obliging the Uganda Commodity Exchange (UCE) function as a regulator of some warehouses only on behalf of the government. At the same time, the Kenyan Agricultural Commodity Exchange (KACE) operated as a provider of information on prices (Rashid, Winter Nelson and Garcia 2010).

By the mid-2000s, most of the world's functional commodity exchanges existed in Europe, North America, Asia and Latin America while Africa lagged in the adoption of commodity exchanges. However, a new wave of commodity exchanges had Nigeria set up the Abuja Securities and Commodities Exchange (ASCE), Zambia created the Zambia Agricultural Commodity Exchange (ZAMACE), Malawi, the African Commodities Exchange (ACE), and Ethiopia's ECX (Kawuma 2015, Rashid, Winter Nelson and Garcia 2010). The ECX has rapidly grown to be a model for other African countries. Africa is predominantly dependent on tree commodities, and thus countries stand to benefit from an increase in involvement in commodity exchanges on the continent and worldwide, especially the majority of which constitute their exports. However, the price discovery mechanism remains a significant challenge with at times farmers opting to sell coffee produce at a price that depends on how strapped for cash at the time and not the market price.

3.2. Auctions at commodity origins

Arguably, amongst the intricate ways of trading tree commodities, auctions are the very first means used for purchasing green coffee and tea from several nations. Kenya, third-largest tea producer and the leading producer of black tea in the world exports with over 99% of black tea, of which 88% is exported in bulk form while the rest is value-added tea (Wanjiru et al 2015). The processed tea is traded through three marketing channels, namely, direct sales, factory door sales, and the tea auction in Mombasa. The Mombasa Tea Auction serves as a regional auction centre for the tea producing countries such as Tanzania, Uganda, Burundi, Rwanda, Congo and Malawi, thereby serving as a leading tea trade centre. The Mombasa auction (formally the Nairobi Coffee Exchange) also caters for green coffee bean trade for Kenya and Tanzania, while maintaining the promotion of high-quality branded tea (micro-lots). The auction, mostly seen as a success, has promoted high prices for coffee in Kenya and buffered the volatility of the prices fluctuating in future markets. It also ensures that the coffee is graded before the auction and is traceable to the local washing station usually operated by a cooperative. Even though there are such strict set of regulations that controls who can warehouse, mill, trade, market and bid on coffee, not everything works as it should. There are limitations in execution, as the self-governing marketing agents who take coffee from the cooperative factories to the auction directly often work towards the interest of millers or bidders at the auction, who may be agents for importers, despite rules prohibiting this practice. In some cases, creating a conflict of interest and placing smallholder farmers at a disadvantage who have limited access to keeping track of how their coffee is handled in a complex system. Despite this, coffee auctions in Tanzania and Kenya, have been shown to provide better differentiation and traceability than the ECX (Kawuma 2015).

3.3. Import and export fees, taxes and duty

Import and export fees and taxes for both crude and processed palm oil are becoming common, especially in the oil palm sub-sector to safeguard the local production, thus buffering the local producers. Countries such as Nigeria are raising taxes on imports of oil palm to boost local production (Carrere 2013) while Malaysia raised its export tax for crude palm oil to boost exports and expand into new markets. Being the world's second-largest producer and exporter of palm oil, Malaysia had last imposed an export tax of 4.5% in August 2018 before lowering it to zero (Chu 2020). It then placed a tax-free exemption on crude palm oil from May to December 2019 in a move envisioned to increase the export of more refined products. The anticipated export levy decision of Indonesia has seen a higher imposed export duty on crude palm oil and substantially lower duty on refined palm oil which also throws light on the government's 30% biodiesel implementation as well. On the other hand, in 2020 India lowered the tax on almost all crude (40% to 37.5%) and refined (50% to 45%) palm oil imports to improve from Indonesia and Malaysia. However, there are arguments that the duty reduction difference between crude and refined palm oil may promote the import of refined palm oil more as an attractive option and adversely affect the domestic refining industry (Madhvi 2020). Indian producers fear the import of refined palm oil may increase and capacity utilization of the industry resulting in potential loss of employment.

3.4. Climate-related policy at the global level

Most international and governmental-led momentum around INDCs, NDCs, REDD+ and forest policies have impacted domestic policies, especially in TCs. The zero-deforestation, biodiversity standards and other certification mechanisms for target-setting are rising to support efforts aimed at reducing deforestation, both for supply chains and at the national scale (FAO 2017). Rather than bypassing existing standards, there seems to be an impetus to build on prevailing standards, such as the addition of components addressing zero deforestation. Certification has become necessary for the verification and measuring zero-deforestation pledges. Other initiatives monitor production areas directly, for example, public-private-community forest protection governance in Liberia through production protection agreements (PPAs) (Carrere 2013). PPAs are centred on incentives to communities and companies for effective forest conservation while building the community's capacity for oil palm management. Despite certifications and zero-deforestation concessions having the potential to engage communities directly and increase traceability, companies do not normally have legal enforcement beyond their concession areas, thus may open up opportunities for deforestation outside its immediate control (Carrere 2013). Compounded by the fact that the move towards zero-deforestation is still in its infancy stages in Liberia and DRC, zero deforestation production

almost entirely relies on commitments to invest from international financiers. Indonesia and Malaysia independent smallholders (who are rarely organized in cooperatives) sell to local collectors that in turn sell to palm oil mills, or they sell to local collectors or intermediaries that in turn sell to cooperatives that finally sell to palm oil mills. However, these seem to be favorable to large plantations and smallholders organized schemes or cooperatives. Hence, farmers have difficulties monitoring through current traceability systems, receive little to no support, and often depend on informal support, input, and offtake markets (FAO 2017, Bakhtary et al 2020). This poses a critical barrier to their certification as cooperatives usually offer better opportunities to develop economies of scale and distribute compliance costs among cooperative members. Like in Liberia, not all certification standards for TCs the Asian context are considered sufficiently strict about prohibiting deforestation (Bakhtary et al 2020) effectively, and common traceability systems concerning chain-of-custody may not be sufficiently robust (FAO 2017). Though the potential exists, some feel that achieving positive outcomes and securing long-term societal impacts requires approaches going beyond the level for oil palm.

4. Towards Effective, Efficient and Equitable “policy mixes”

From the above, it is clear that no single policy instrument provides solutions or enables the levels of effectiveness, efficiency and equity required in multiple tree commodity policy objectives. Therefore, policymakers need to establish a set of instruments that would best enhance complementarity, and synergy and manage trade-offs in a given context (Belletti, Marescotti and Touzard 2017, Neilson and Wright 2018). For example, the struggle whether to diversify production (i.e., increase tree type and other crops on farm), and intensification of production of a single crop is real. Each has different impacts. Farmers may be more exposed when there is a dip in prices and or when pests or diseases strike in less diversified systems (Hou-Jones and Macqueen 2019). On the other hand, productivity of the principal crop could drop overall with the diversification of the farm. A second case can be made that zero deforestation policies are unlikely to succeed without complementary conservation enforcement, tree planting and certification policies.

These multiple considerations need to be encouraged and practised, if policymakers are to balance between multiple objectives required to achieve green and sustainable tree commodities. There is literature that can help inform choices of instruments. Cost-effectiveness, economic efficiency, equity (distribution of costs and benefits across groups) and political feasibility are considered important variables in instrument choice (Goulder and Parry 2008). Performance data, evidence and ease of application are also important to consider (Minang, van Noordwijk and Duguma 2019).

5. Conclusion

This chapter set out to examine tree commodities policies in Africa, with a view to providing insights and lessons for improving performance. For tree commodities in Africa, policy instruments have been both beneficial in governing and controlling human influence along cocoa, coffee, and oil palm value chains. However, these instruments are very export-oriented and slightly limited in the processing stage of the value chain. Generally, they are set at the national and some instances at global levels, with their implementation strongly influenced by local factors. Tree commodity policies have relied on a set of policy instruments including input subsidies, pricing policies, national boards, or councils and more. The emerging instruments: commodities exchange, auctions at commodity origins, import and export, taxes, and duty on TCs, and climate-related policy have promising potential. Policymakers often struggle to balance enhancing production and productivity, ensuring fair and equitable markets infrastructure, adding value, and ensuring sustainability. The national priorities often overshadow this balance for agricultural commodities, and the current set of policies reflects a history of ‘issues’ – often without sufficient attention to overlaps and contradictions. For instance, such as the case of coffee in Ethiopia and cocoa in Cameroon and Nigeria, where the ‘winners’ are domestic market promotion and value addition as opposed to the ‘losers’ the export performance and equity in the commodity value chains. However, countries would need to contextualize the policy instruments based on evidence and combine the right set of instruments. In order to balance the multiple objectives and enhance performance we recommend the following:

- i Deliberate mixes of policy instruments that are flexible, innovative, effective, efficient and equitable.
- ii Further, explore emerging instruments as well as new instruments such as “geographic indications” that have worked elsewhere.
- iii To domesticate and adapt international instruments in ways that serve the best interests of national stakeholders; and
- iv Lastly, pursue investments in research, performance data and evidence on policy instruments as part of an adaptive policy-making process.

These steps if well done could help usher in policies that can catalyze a transformative tree commodity sub-sector.

References

- Abbott P, Wilcox M, Muir W. 2005. *Corporate social responsibility in international cocoa trade*. West Lafayette: Purdue University.
- Ahmed M. 2012. *Analysis of incentives and disincentives for coffee in Uganda*. Rome: Technical notes series, MAFAP, FAO.
- Bakhtary H, Matson E, Mikulcak F, Streck C, Thomson A. 2020. *Company progress in engaging smallholders to implement zero deforestation commitment in cocoa and palm oil*. s.l.: Climate focus and Tropical Forest Alliance.
- Bamwesigye D, Pomazalová N. 2015. *Assessment of the economic effects of liberalization of coffee sector in Uganda*. s.l.: MendelNet 2015, pp. 289-294.
- Belletti G, Marescotti A, Touzard JM. 2017. Geographical indications, public goods, and sustainable development: The roles of actors' strategies and public policies. *World Development* 98:45–57.
- Carrere R. 2013. *Oil palm in Africa: past, present and future scenarios*. s.l.: World Rainforest Movement.
- Chu M. 2020. *Reuters: VEGOILS-Palm oil climbs on firmer soyoil, weaker ringgit*. [Online] Available at: <https://uk.reuters.com/article/asia-vegoils/vegoils-palm-oil-climbs-on-firmer-soyoil-weak-ringgit-idUKL4N29P130>. (Accessed 26 May 2020).
- Dada L. 2007. *The African export industry: what happened and how can it be revived? case study on the Cameroonian cocoa sector*. Rome: Agricultural Management, Marketing and Finance Service (AGSF).
- [FAO] Food and Agriculture Organization. 2017. *Zero deforestation initiatives and their impacts on commodity supply chains*. Rome: Food and Agriculture Organization of the United Nations.
- Fountain A, Hütz-Adams F. 2018. *Cocoa barometer 2018*. Netherlands: Cocoa Barometer - VOICE Network.
- [GAINS] Global Agriculture Information Network. 2014. *Nigeria hikes target on cocoa production*, Lagos: Global Agriculture Information Network, USDA Foreign Agricultural Service .
- Goulder LH, Parry IWH. 2008. Instrument choice in environmental policy. *Review of Environmental Economics and Policy* 2(2):152–174.
- Hou-Jones X, Macqueen D. 2019. *Thriving in diversity: smallholders organising for climate resilience*, United Kingdom: IIED, Briefing.
- Howlett M. 2005. What is a policy instrument? tools, mixes, and implementation styles. In: *Designing government: from instruments to governance*. s.l.: McGill-Queen's University Press, pp. 31-50.
- [IITA] International Institute of Tropical Agriculture. 2012. *IITA to backstop Nigeria's national cocoa transformation initiative*. Issue No. 2104, 23-27 January.
- [IPBES] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. 2020. *Policy instruments*. [Online] Available at: <https://ipbes.net/policy-instruments>
- Karanja AM, Nyoro JK. 2002. *Coffee prices and regulation and their impact on livelihoods of rural community in Kenya*. Nairobi: Tegemeo Institute of Agricultural Policy and Development, Egerton University.
- Kawuma F. 2015. *An overview of commodity exchanges in Africa*. Abidjan: Inter-African Coffee Organisation (IACO).
- Kolavalli S, Vigneri M. 2012. Cocoa in Ghana: shaping the success of an economy. In: *Yes, Africa can: success stories from a dynamic continent*. s.l.: The World Bank, pp.201-217.

- Madhvi S. 2020. *Economic times bureau: palm oil import duty reduction disappoints industry*. [Online] Available at: <https://economictimes.indiatimes.com/markets/commodities/news/palm-oil-import-duty-reduction-disappoints-industry/articleshow/73057337.cms> (Accessed 23 May 2020).
- Minang PA, van Noordwijk M, Duguma LA. 2019. Policies for ecosystem services enhancement. In: *Sustainable development through trees on farms: agroforestry in its fifth decade*. Bogor, Indonesia: World Agroforestry (ICRAF) Southeast Asia Regional, pp.361-376.
- Minang P, van Noordwijk M, Duguma L. 2017. Policies for ecosystem services enhancement. In: *Co-investment in ecosystem services: global lessons from payment and incentive schemes*. Nairobi: World Agroforestry Centre (ICRAF).
- Neilson J, Wright JAL. 2018. Geographical indications and value capture in the Indonesia coffee sector. *Journal of Rural Studies* 59:35–48.
- Nsabimana A, Tirkaso W. 2020. Examining coffee export performance in Eastern and Southern African countries: do bilateral trade relations matter? *Agrekon* 1(59):46–64.
- Nyemeck J, Gockowski J, Nkamleu G. 2008. *The role of credit access in improving cocoa production in West African countries*. Accra, Ghana: African Association of Agricultural Economists (AAAE), pp.105-114.
- Rashid S, Winter Nelson A, Garcia P. 2010. *Purposes and potential for commodity exchanges in African economies*. s.l.: International Food Policy Research Institute.
- Rothschild D, Karinen M, Kluth A, Stam N. 2017. *Oil palm and forest protection with Golden Veroleum Liberia*. s.l.: EFRN News 58: June.
- Ruben R, Heras J. 2012. Social capital, governance and performance of Ethiopian coffee cooperatives. *Annals of Public and Cooperative Economics* 4(83):463–484.
- Schröter-Schlaack C, Ring I. 2011. *Instrument mixes for biodiversity policies*. s.l.: Policymix.
- Semroc B, Thomas M, Ward J, Buchanan J. 2015. *Incentivizing no-deforestation palm oil production in Liberia and the democratic Republic of Congo*. Washington, DC, USA: USAID-supported Forest Carbon, Markets and Communities Program.
- Ton G, Hagelaars G, Laven A, Vellema S. 2008. *Chain governance, sector policies and economic sustainability in cocoa: a comparative analysis of Ghana, Côte d'Ivoire, and Ecuador*. Markets, Chains and Sustainable Development Strategy & Policy paper #12.
- [UNCTAD] United Nations Conference on Trade and Development. 2018. *Commodities at a glance - special issue on coffee in East Africa*. Geneva: United Nations Conference on Trade and Development.
- [UNCTAD] United Nations Conference on Trade and Development. 2019. *Commodities development report 2019: commodity dependence, climate change and the Paris agreement*. Geneva: United Nations Publications.
- Wanjiru M, Wangare W, Muchina S, Kimani P. 2015. *Tea trade in Kenyan markets: effects of marketing strategies on sustainable domestic market and return to the smallholder tea enterprise*. s.l.: s.n., pp.212-221.
- World Bank. 2019. *Cote d'Ivoire economic update*. Washington, DC: World Bank Group.