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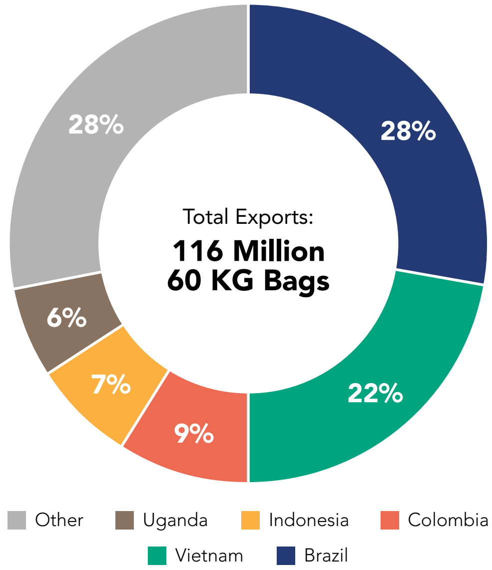
Coffee Briefing Note

Overview of the Global Coffee Supply Chain

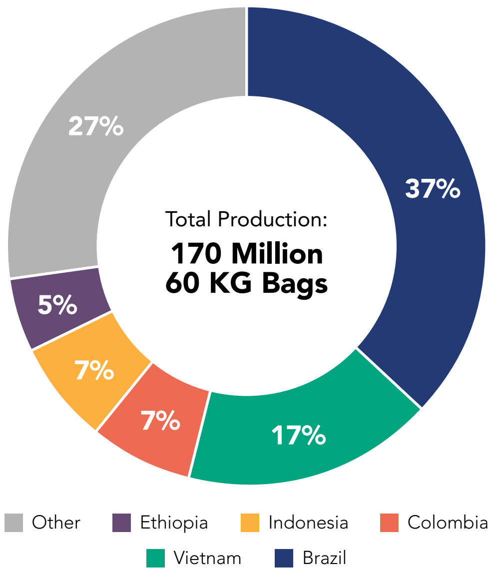
Coffee is one of the most widely traded commodities in the global market (FAO, 2023). Brazil, Vietnam, Colombia, Indonesia, and Ethiopia are the top coffee producer countries (Figure 1). The main coffee exporting countries are Brazil, Vietnam, Colombia, Indonesia, and Uganda while the top importing countries are the EU, USA, Japan, Russia, and Switzerland (Figure 2 and 3). In recent years, coffee production has been expanding rapidly in certain regions around the world. Uganda, for example, saw a 27% production increase between 2010 and 2018 (Treanor and Saunders, 2021). Global demand for coffee is forecasted to grow between 50% to 160% by 2050, largely driven by increasing consumption in emerging markets and stronger interest in specialty coffee in developed economies (Treanor and Saunders, 2021 & FAO, 2023). While coffee has not historically been considered a major driver of deforestation, rising production levels, global demand for coffee, and impacts from climate change put forests at risk of future deforestation to maintain productive farming.

FIGURE 2 • **Global Coffee Bean Exports in 2022**



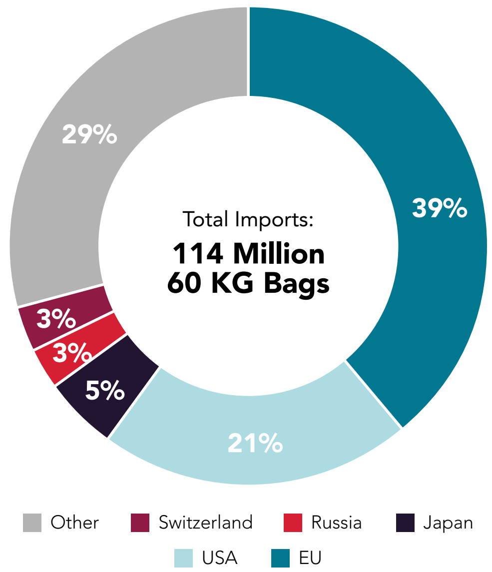
Source: USDA, 2023.

FIGURE 1 • **Global Coffee Production in 2022**



Source: USDA, 2023.

FIGURE 3 • **Global Coffee Bean Imports in 2022**

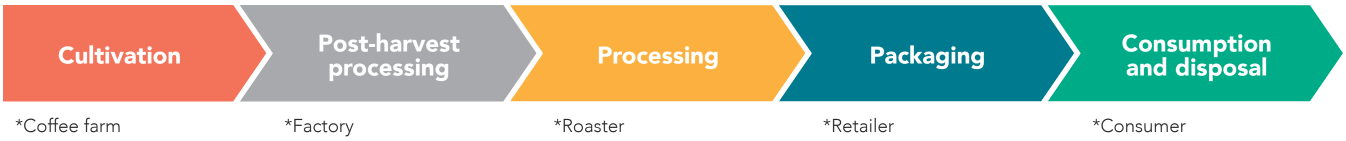


Source: USDA, 2023.

Up to 70% of the coffee is produced by smallholder farmers (at least 25 million globally), for whom coffee is a primary source of income (Ingram, 2020). 60% of the global coffee produced is Arabica while the rest is Robusta (ICO, 2020). The processes of coffee roasting and packaging typically occur in consumer countries, thereby shifting the financial benefits distribution in their favor. However, consumer countries are increasingly investing in the downstream processing and value addition (specialty coffees) in coffee supply chains. Coffee is predominantly an internationally traded commodity (over 70%). It is either sold on the commodity market – where price sensitivity, high volumes and standard quality are the key factors -- or on the specialty market, characterized by higher prices, low volumes and high quality. Coffee is also often shipped as a raw commodity called green coffee (ICO, 2020).

Photo: Samantha Beaty

FIGURE 4 • **An example of the coffee supply chain**



Source: ICO, 2020.

Existing Theories of Change Regarding Halting Deforestation in the Coffee Supply Chain

Various initiatives have emerged to address sustainability challenges including deforestation associated with the coffee supply chain (Appendix I). Some of them have developed complete theories of change (TOCs) while others have mainly laid out their objectives and activities regarding efforts to halt deforestation in the coffee supply chain.

Multi-stakeholder partnerships

These are partnerships typically between all or an assortment of producer or consumer country governments, private sector actors, research institutes, civil society groups, and local actors (e.g., smallholder farmers, cooperatives, and local NGOs) that work to form a shared vision and coordinated efforts to address deforestation and other sustainability challenges in coffee supply chains. For example, Coffee & Climate aims to support smallholder coffee farmers in adjusting to a changing climate and providing them with the means to sustainably farm, be climate resilient and restore and protect their land (Coffee & Climate, 2023). The Sustainable Coffee Challenge convenes companies, governments, NGOs, and research institutions to address sustainability challenges including deforestation risk in the sector. The Coffee Public-Private Task Force of the International Coffee Organization builds consensus between the coffee industry and governments to promote sustainable production and consumption in global coffee supply chains.

Producer country policies and initiatives

Coffee producer countries can strengthen their policy and regulatory framework, law enforcement, and national research capacity to facilitate the transition to sustainable coffee production. For example, the Ethiopian Coffee and Tea Authority in collaboration with the Ethiopian Institute of Agricultural Research and TechnoServe developed the Comprehensive Ethiopian Coffee Strategy and Implementation Roadmap (2019 to 2033). The goal of the Strategy is to increase Ethiopia's coffee export and value chain incomes while addressing environmental degradation including deforestation through good agricultural practices (Ethiopian Coffee and Tea Authority, 2022).

Consumer country policies and initiatives

Consumer countries play a role in strengthening public policies, promoting knowledge exchange, convening relevant stakeholders, and supporting producer countries to address deforestation in the coffee supply chain. The European Union Deforestation Regulation (EUDR) came into effect in June 2023 to prevent commodities and products linked to deforestation and forest degradation, including coffee, from being sold in the EU market. Similar legislative processes focusing on illegal deforestation are also underway in the UK and the U.S. is considering regulatory and policy options as well. The European Coffee Federation (ECF) has developed an initiative focusing on dialogue, knowledge transfer, and collaboration around food safety and compliance, responsible sourcing and consumption, and international trade (European Coffee Federation, 2023).

Private sector commitments and initiatives

Private sector actors employ commitments or company-led initiatives in their sourcing areas to address sustainability in their supply chains. These TOCs focus on better sourcing practices, farmer and community support and wellbeing (e.g., education and training, living income), climate health (e.g., soil, water, and emissions), and forest conservation. Private sector commitments can build on company sustainability initiatives such as the Nestle Forest Positive Strategy, Starbucks C.A.F.E. Practices, Sucafina 2030 Sustainability Strategy, JDE Peets Common Grounds and Olam Coffee LENS program.

Certification schemes and sectoral standards

Third-party certification schemes and sectoral standards set environmental, social, and economic criteria for producers and have the potential to address deforestation in the coffee supply chain. These include 4C (The Common Code for the Coffee Community), the Rainforest Alliance 2020 Certification Program, the Fairtrade International Standards, and the Starbucks C.A.F.E. These schemes and standards focus on risk assessments, traceability and monitoring, smallholder support and capacity building, and standards regarding living incomes, farmer rights and protection, and environmental protection.

Photo: Shelby Murphy Figueroa

Gaps in TOCs

Limited TOC outcomes and pathways related to deforestation and traceability

When addressing environmental issues, TOCs in the coffee supply chain focus heavily on emission-based climate change monitoring and less on deforestation and supply chain traceability. Due to the impact of climate change and loss of arable land in lower-level terrains, many coffee plantations and farms will potentially move to higher ground, which poses future deforestation risks (Bilen et al., 2022). In complex coffee supply chains, traceability is a current gap in understanding where the coffee comes from and which actors the coffee passes through before the production of processed products.

Lack of cohesion between Monitoring, Evaluation, and Learning (MEL) frameworks

While many TOCs incorporate some form of monitoring, such as progress tracking and via satellite-based systems, there is limited cohesion between these frameworks when it comes to deforestation. This makes drawing comparisons and checking claims harder, because company programs or initiatives are monitoring different metrics or using different systems. Combatting deforestation requires collaboration between all actors, and while actors have different roles and areas of focus, there should be greater alignment in what they seek to address, the indicators they monitor, and the feedback and learning mechanisms they use.

Photo: Shelby Murphy Figueroa

Lack of outcomes directly addressing co-development with smallholder farmers, farmer organizations, and Indigenous Peoples and Local Communities (IPLCs)

While some TOCs directly address inclusion of local communities and farmers in the creation and development of programs and initiatives, there is still a lack of co-generation of these sustainability plans. Many TOCs have plans for engaging with farmers and farmer groups through good agricultural practices and financial support programs, but these actions are often not generated within these communities.

Lack of involvement from the financial sector

The 2023 Forest 500 report from Global Canopy assesses companies and financial institutions on their commitments and actions to address deforestation. However, none of the financial institutions assessed in the report, which provide finance to companies whose supply chains contain deforestation-risks, have coffee-specific policies or commitments (Thomson and Fairbairn, 2023).

Assumptions in TOCs

Reliance on market-based solutions

Many TOCs rely on market-based solutions to promote sustainability in coffee supply chains; however, price premiums, certification programs, and other mechanisms within existing market tools do not guarantee deforestation-free production. This is due to the continuous demand for commodities, leakage, whitewashing, and corruption – which cannot be fixed through technical means and market instruments.

Continuation of good agricultural practices post training

Many TOCs include training in good agricultural practices to increase productivity of land in a sustainable manner, but there are limited data on whether these practices persist post trainings. While sustainable intensification practices can temporarily satisfy growing demands, land will still need to be cleared due to climate change and expanding demand from economic growth in the long run (ICO, 2020). Therefore, it is important to understand the drivers of deforestation in the coffee supply chain and the sustainability of good agricultural practices.

Balanced power dynamics

Smallholder farmers, farmer organizations and IPLCs are often assumed to have an equal voice in co-developing supply chain initiatives in the coffee sector. The involvement of farmers and local communities in the relevant initiatives is a necessary step to address drivers of deforestation and improve the livelihoods of farmers. While some initiatives have begun to integrate farmers integrate farmers into the creation of sustainability programs and initiatives, the implementation and outcomes are still to be studied.

Successful youth engagement

TOCs that contain training and engagement of younger farmers assume that younger generations would like to go into coffee farming. Research on younger coffee farmers in Latin America found that low incomes and the perceived hard work in coffee growing make it unattractive for young people to stay in their communities to continue in the business (Hivos, 2014). This assumption needs to be further studied in designing supply chain initiatives to address deforestation in the coffee sector.

Photo: Helena Coffee Vietnam

Recommendations

Further recognize the importance of addressing deforestation in the sector

TOCs to address sustainability in coffee supply chains must prioritize addressing deforestation and forest degradation. Global coffee demand is projected to grow rapidly over the coming decades, with coffee production increasingly replacing subsistence farming as a key economic activity for rural farmers and communities (Pacheco et al., 2021; Treanor and Saunders, 2021). Initiatives should consider both global trends and local drivers of land-use change and focus on promoting deforestation-free and conservation-free supply chains. Alignment with demand-side policies, such as the EUDR, which will become applicable in December 2024, is essential.

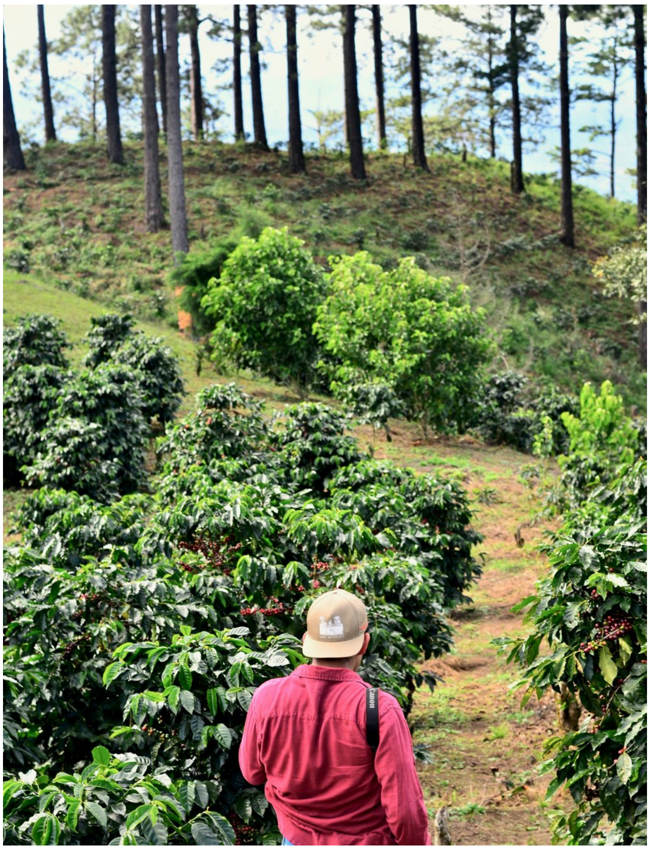


Photo: Austin Park

Include financial institutions to strengthen incentives for zero-deforestation

The Finance Sector Roadmap highlights 5 phases that financial institutions should follow to address commodity-driven deforestation; however, it currently does not include coffee as one of the five commodities. The Roadmap acknowledges that moving forward more attention needs to be paid to policy (Phase 2), monitoring (Phase 3) and engagement and disclosure (Phase 4) of other commodities such as coffee (Thomson and Fairbarin, 2023). Financial sector initiatives to address deforestation in commodity supply chains should also include coffee in their TOC scope.

Promote and support horizontal coordination of smallholder farmers

Horizontal coordination among smallholder farmers can bring benefits such as reducing entry costs to new farming techniques, increasing bargaining power and market access, and providing a space for building support systems and knowledge sharing (ICO, 2020). Smallholder farmers can build on existing social structures or establish new coordination mechanisms among farmers. An example of this approach is the Uganda Coffee Farmer Alliance, where coordination of Ugandan coffee farmers notably increased their incomes. Through the establishment of a cooperative, the community bolstered local leadership and governance, assuming a more substantial role in the national coffee sector (UNDP, 2022). Additionally, active engagement of smallholder farmers in the development of sustainability TOCs is crucial to understand drivers of deforestation and empower farmers to identify intervention points to halt deforestation—such as ensuring secure land tenure and improving market accessibility. By integrating their perspectives and priorities into sustainability strategies, these farmers become key partners in efforts to address deforestation in coffee supply chains.

Convene stakeholders to agree upon shared standards and metrics for MEL

Several sustainability frameworks for coffee, such as the Global Coffee Platform Baseline Coffee Code and the Delta Framework, include valuable indicators for progress (Rusillo, 2021). However, reporting does not always lead to tangible results, and over-investment in measurement can divert resources from more impactful interventions, such as regulations and corporate actions (Pucker, 2021). Convening stakeholders to agree on shared, regionally aligned standards will enhance the effectiveness of MEL efforts and ensure accountability in driving deforestation-free coffee supply chains.

Strengthen traceability systems based on learnings from other commodities

Enhancing traceability systems beyond direct suppliers allows greater accountability among companies regarding their deforestation-free commitments. These efforts could build on lessons from other commodity sectors that are developing similar efforts to streamline information sharing and to connect various actors along the supply chain. Currently, traceability systems operate primarily through private sector programs, but future TOCs should emphasize cooperation between private initiatives and national authorities to scale up these efforts. This collaboration will ensure greater transparency and accountability in the coffee supply chain.

Photo: CIFOR-ICRAF

Looking Ahead

National coffee plans and policies in producer countries can significantly influence the transition to sustainable farming practices and forest protection, playing a critical role in TOCs to address deforestation in the coffee sector. Some countries are already working on these plans. The Coffee Private-Public Taskforce (CPPTF) set a commitment to developing or strengthening five National Coffee Sustainability Plans by 2025 and supporting policy alignment in producer and consumer countries (Rusillo, 2022). In Peru, the government and the United Nations Development Programme (UNDP) collaborated on a National Action Plan for Peruvian Coffee, which addresses low productivity—a key driver of deforestation and ecosystem degradation (UNDP, 2023).

Demand-side measures, such as the EUDR, play a crucial role in addressing deforestation associated with coffee supply chains since the EU is the largest global coffee importer. The EUDR requires private sector actors in the coffee supply chain to strengthen their capabilities in traceability, monitoring, and supply chain management to eliminate deforestation. The partnership between the EU and producer countries has the potential to align policy measures from both the demand and supply sides to improve the effectiveness of supply chain initiatives.

In addition, enhancing the inclusion of women and youth while strengthening climate resilience remains a key focus in TOCs for sustainable coffee. Programs like the *Mujeres CAFÉ* initiative, a partnership between the Starbucks Foundation, TechnoServe, and USAID, empower women in Peru's coffee farming communities. This initiative builds women's skills and promotes their involvement in farming and decision-making, particularly focusing on resilience to climate change (TechnoServe, 2023). Similarly, the *Burundi Better Coffee Initiative*, led by TechnoServe, the USDA, and the Burundi Development Agency, focuses on increasing sustainable coffee production and processing capacities, emphasizing support for women and youth, the most economically vulnerable groups (TechnoServe, 2022). These initiatives demonstrate the potential for gender and youth inclusion to drive climate-resilient, sustainable coffee supply chains.

Photo: Shelby Murphy Figueroa

Appendix I

Examples of TOCs halting deforestation in the coffee supply chain

Types of Initiatives	Examples
Multi-stakeholder	• Coffee & Climate • Sustainable Coffee Challenge • The Coffee Public-Private Taskforce • Global Coffee Platform • UNDP Green Commodities Programme (GCP) • Partnerships 4 Forests • International Coffee Partners
Private sector	• World Coffee Research • Nestle Forest Positive Strategy • Starbucks C.A.F.E. Practices • Sucafina 2030 Sustainability Strategy • JDE Peets Common Grounds • Olam Coffee LENS Program • Lavazza Foundation • Nespresso AAA Sustainability Quality Program • TechnoServe
Producer Country	• African Fine Coffees Association (AFCA) • National Action Plan for the Future of Peruvian Coffee • Ethiopia FOLUR Project • Comprehensive Ethiopian Coffee Strategy • USAID Coffee Enterprise Resilience Initiative (Indonesia)
Consumer Country	• EU Deforestation Regulation • European Coffee Federation • UK Environmental Act • U.S. FOREST Act
Certification	• 4C (The Common Code for the Coffee Community) • Rainforest Alliance 2020 Certification Program • Fair Trade Certified • Fairtrade International

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