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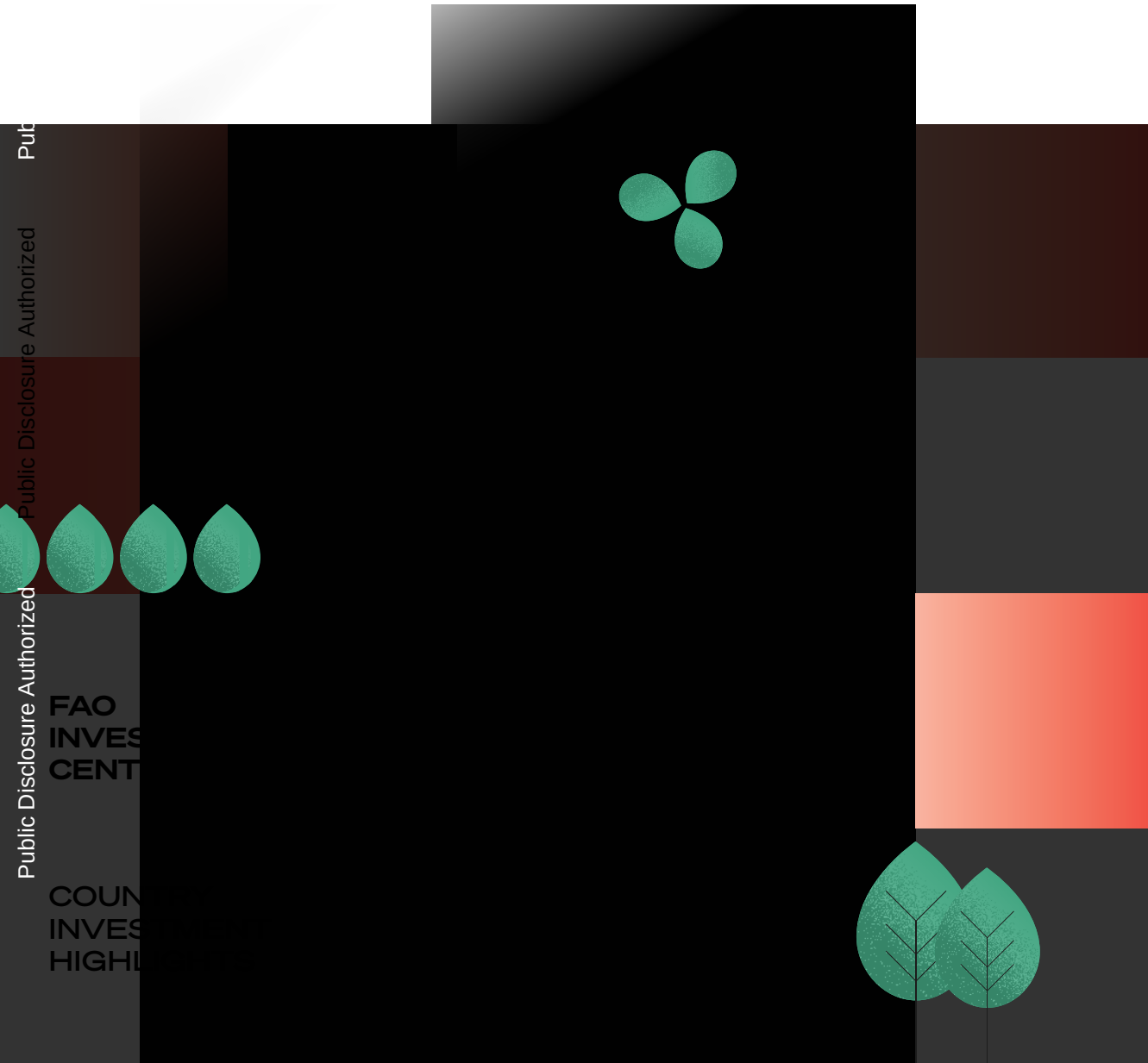
CAN SMALLHOLDER FARMERS IN HONDURAS AND GUATEMALA EXPORT DEFORESTATION-FREE COFFEE TO THE EUROPEAN UNION?



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CAN SMALLHOLDER FARMERS IN HONDURAS AND GUATEMALA EXPORT DEFORESTATION-FREE COFFEE TO THE EUROPEAN UNION?

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Abbreviations and acronyms

ADEC	Asociación de Exportadores de Café/Coffee Exporters Association Guatemala
ADECAFEH	Asociación de Exportadores de Café de Honduras
AGEXPORT	Asociación de Exportadores de Guatemala/Guatemalan Exporters Association
AHICAFE	Asociación Hondureña de Comercializadores de Café
AHPROCAFE	Asociación Hondureña de Intermediarios del Café
ANACAFE	Asociación Nacional del Café (Guatemala)
ANACAFEH	Asociación Nacional de Caficultores de Honduras
CAMARAGRO	Cámara del Agro de Guatemala (Guatemala)
CAR	Cadastro Ambiental Rural
CECAFE	Conselho dos Exportadores de Café do Brasil
Copernicus	Earth Observation Component of the European Union's Space Programme – European Earth Observation Programme
DICTA	Dirección de Ciencia y Tecnología Agropecuaria (Honduras)
EU	European Union
EUDR	European Union Deforestation Regulation
FAO	Food and Agriculture Organization of the United Nations
FAOLEX	FAO Legislative and Policy Database
FEDECOAG	Federación de Cooperativas Agrícolas de Guatemala
FEDECOCAGUA	Federación de Cooperativas Agrícolas de Productores de Café de Guatemala
FEDECOVERA	Federación de Cooperativas de Servicios Múltiples la Verapaz (Guatemala)
FICCI	Federación Integral de Comercialización de Cooperativas de Ixcán
FUNCAFE	Fundación de la Caficultura para el Desarrollo Rural (Guatemala)
FMS	Farm Management Software
FOLU	The Food and Land Use Coalition
FONAFIFO	National Forest Financing Fund
GIMBOT	Grupo Interinstitucional de Monitoreo de Bosques y Uso de la Tierra/ Interinstitutional Group for Monitoring Forest Cover and Land Use (Guatemala)
ICF	Instituto Nacional de Conservación Forestal (Honduras)
ICO	International Coffee Organization
IHCAFE	Instituto Hondureño del Café
IILA	Organizzazione internazionale italo-latino americana
INAB	Instituto Nacional de Bosques (Guatemala)
La Central	La Central de Cooperativas Cafetaleras de Honduras
LANDSAT	Earth Observation Satellite Program
MAGA	Ministerio de Agricultura, Ganadería y Alimentación (Guatemala)
MARN	Ministerio de Ambiente y Recursos Naturales (Guatemala)
MiAmbiente	Secretaría de Recursos Naturales, Ambiente y Minas (Honduras)
OECD	Organization for Economic Co-operation and Development
OFI	Olam Food Ingredients

PROMECAFÉ	Programa Cooperativo Regional para el Desarrollo Tecnológico y Modernización de la Caficultura (Guatemala)/Regional Cooperation Program for the Modernization and Technical Development of Coffee
SAG	Secretaría de Agricultura y Ganadería (Honduras)
SENASA	Servicio Nacional de Sanidad Agropecuaria (Honduras)
SERNA	Secretaría de Estado de Recursos Naturales y Ambiente (Honduras)
SIGMOF	Sistema de Información para la Gestión y Monitoreo Forestal (Honduras)
SMEs	Small and medium-sized enterprises
SOILFER	Soil mapping for resilient agrifood systems in Central America and sub-Saharan Africa - Soil Fertility Partnership
SPOTT	Sustainable Palm Oil Transparency Toolkit
TOSCAFEH	Asociación de Tostadores de Café de Honduras
UNDP	United Nations Development Program
UNCCD-SPI	Science-Policy Interface of the United Nations Convention to Combat Desertification
UNIOCOOP	Unión de Cooperativas de Servicios Agropecuarios Limitada (Honduras)
USAID	United States Agency for International Development
USDA	United States Department of Agriculture

Executive summary

The new Regulation of the European Parliament and of the European Council on "the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010" (henceforth "EUDR") that was adopted by the EU Parliament on 19 April 2023. Given the strong linkages between the expansion of agricultural land use and deforestation, and the fact that the European Union is one of the largest importers of agricultural products causing deforestation, the European Union Deforestation Regulation (EUDR) contains specific rules intended to halt global deforestation and forest degradation through responsible sourcing of agricultural products. EUDR requires that products derived from certain commodities (cattle, cocoa, coffee, oil palm, rubber, soya, and wood), which are sold on the EU market or exported from the European Union, do not cause deforestation or forest degradation during their production.

EUDR mandates that the products covered by the legislation can only be placed on the EU market or exported from the European Union if they are:

- deforestation-free: produced on land that has not been subject to deforestation after 31 December 2020; and
- legally produced: produced in accordance with the relevant legislation of the country of production.

Coffee is a major export crop for Central American countries, accounting for 14 percent of the value of agrifood exports in Guatemala and a staggering 52 percent in Honduras. Furthermore, it is a key sector for generating incomes in rural areas where poverty rates are high, contributing to employment and economic growth. While coffee is exported to many countries, the European Union is a key destination market for both Guatemala and, in particular, Honduras where over half of total coffee exports are destined for the European Union. The coffee sector in these countries is therefore likely to be substantively affected by the new rules, and all actors – from producers to cooperatives, traders and exporters – will need to undertake actions to strengthen collection and the exchange of information along the value chain to enable importers to document and verify the deforestation-free status of the coffee they import.

To confirm that the products imported satisfy these requirements, operators (importers in the European Union) are required to undertake a due diligence process and imported products should always be accompanied by a due diligence statement. The key elements of the due diligence systems that importers will need to have in place include collection of information, risk assessment and risk mitigation measures. Operators will be obliged to comply with the provisions starting 30 December 2024 (30 June 2025 for small enterprises).

The responsibility for the due diligence process and the corresponding statement rests with operators (in this case, coffee importers in the European Union). While no specific requirements apply directly to coffee growers or exporters in the producing countries, for operators to be able to undertake the analysis necessary for the due diligence process they will need to receive quantitative and qualitative information from their suppliers.

Coffee importers in the European Union are already preparing for the entry into force of EUDR and are analysing the sources of data that could be used to verify that the imported coffee is produced legally and is deforestation-free. However, given the novelty of the regulation and its unprecedented nature, at present there is little clarity in the exporting countries about its practical aspects and possible impacts on agricultural exports and farmers. In many of these countries, especially where value chains are complex, with a multitude of diverse small-scale actors and a high degree of informality, the implications for the sector and in particular smallholder farmers remain unclear, generating preoccupation for the future of the affected sectors. In Latin America and the Caribbean, coffee producers face a polycrisis of worsening climactic conditions, rising production costs, volatile international prices and low profit margins. A large share of these producers operates at a loss in economic terms, with significant implications for the sustainability of the agro-forestry landscapes that they maintain. Public and private sector reactions to the EUDR must respond to the vulnerable situation of coffee growers and small-scale intermediaries, while reducing the risks of deforestation and maximizing their opportunities to access the EU market.

Guatemala and Honduras present unique institutional environments that contain both numerous challenges and opportunities that will contextualize any comprehensive response to the EUDR. In both countries the coffee sector is dominated by small producers who face critical financial constraints. In Guatemala, sectoral coordinating institutions and service providers such as the Asociación Nacional del Café – Guatemala (ANACAFE) have made an effort to develop digital tools and promote information sharing in the sector. However, many farmers at the geographic and productive margin have not yet benefited from any of the services and tools that could be provided by the public or private sectors. At the same time, producers' organizations and intermediaries have not yet developed financially sustainable models for universalizing tools for information-sharing and traceability, and there is a need to expand the range of services and modalities for deepening information-sharing in the coffee growing and export process. In Honduras, coffee exports continue to flow through a complicated web of formal and informal intermediaries. The institutions and organizations in the coffee sector have not yet developed a plan that would facilitate information-sharing across the supply chain; there is a lack of a unified understanding on how to develop digital tools and in-person services for this purpose. Furthermore, there is a lack of information-sharing and coordination between the Instituto Hondureño del Café (IHCAFE), the sectoral coordinating institution, and the public services that could be used for monitoring land use, and for providing extension services and other types of support to coffee sector stakeholders.

Despite these challenges, the institutional environments for coffee production in Guatemala and Honduras have fostered important repositories of information and technical expertise for coffee production, as well as techniques for sharing information among key actors. Simultaneously, given the recent patterns of deforestation within the areas used for coffee cultivation, it is unlikely that coffee significantly contributed to deforestation after the EUDR cut-off date. The importance of coffee production to rural livelihoods, and the opportunities presented by the EU market merit a closer look at potential policy responses towards compliance with the EUDR.

In particular, public and private actors should examine the viability of targeted investments towards facilitating access to verifiable information about land use and deforestation through public or public-private sector-wide systems and reducing, through collective action, the burden of generating evidence on

individual farmers, traders or exporters. These investments must consider two important realities for the implementation of the EUDR. First, rising climactic risks, falling profit margins and unstable incomes render it extremely challenging for smallholder producers to assume any additional production costs; the levying of additional costs may generate adverse impacts in further degradation of landscapes, farmers existing markets and growing poverty. Second, compliance with the EUDR ultimately lies with the operator-importer that introduces coffee to the EU market, supported by consumers who comprise the final link in the value chain. Consumers, operators, and public institutions, including in the importing countries, must find new ways to support a range of activities along the supply chain that demonstrate best practices in forest management and sustainable production. These activities are highlighted below across each distinct step of the chain.

Coffee producers will need access to digital tools, connectivity and developing technical capacities to store and share information that will be required by the buyers. More importantly, producers will need to establish geolocation information on their areas of production (coordinates for areas of less than 4 hectares, and polygons for areas larger than 4 hectares), and second, document the history of production of that plot. Producers' organizations and cooperatives can play a crucial role in centralizing and distributing knowledge and services to reduce costs of managing this information and providing technical assistance to farmers. Formal intermediaries should develop transparent management structures and digital systems for storing and transmitting data. Pre-existing linkages between private sector actors and public providers of information serve as a foundation for cost-effective public-private partnerships in each country.

Exporters, as the last point of handover for information, should proactively communicate with EU importers to understand the requirements for risk assessments and due diligence. They should conduct inventories of upstream suppliers, develop protocols for requesting and verifying geographic information, and collaborate with farmers, intermediaries, and cooperatives to ensure the traceability of coffee origins.

Governments in the exporting countries play a coordinating role in addressing deforestation challenges and enabling the coffee sector to be aligned with the requirements in EUDR. In both Guatemala and Honduras, the institutional environments for coffee production will greatly influence the accessibility and cost-effectiveness of information and services for traceability. Sectoral coordinating institutions in each country are already developing unified digital platforms that can be used for geo-localization and information sharing at the level of producers and producers' organizations. Sectoral coordinating institutions are also in a position to provide information about the existing traceability systems that can be adapted for generating information that importers will need to access to undertake due diligence as part of EUDR requirements. Registries of coffee farmers will enable the national institutions to track deforestation and production trends and at the same time strengthen the public systems for provision of technical assistance and extension services. More generally, to reduce the burden of generating evidence on individual farmers and intermediaries, governments should utilize the existing maps and information systems used by the authorities for monitoring land use and forest management to establish and communicate to exporters and the competent agencies in the EU, the deforestation-free status of all coffee-growing areas that are deemed compliant.

Importers in the EU market have the responsibility of undertaking due diligence processes and documenting deforestation-free imports. They should adapt their risk assessment processes, work closely with suppliers on traceability, nurture long-term relationships, engage with the competent authorities in the European Union to clarify procedures, and collaborate with other importers to develop common approaches and tools for due diligence.

At the same time, development cooperation between the European Union and Central American countries must take into account the particular needs of rural communities and most vulnerable households among coffee growers that may be affected by the new regulation, and collaborate with the exporting countries to support economic development and social protection within the concerned segments.

Compliance with EUDR is a collective effort that involves cooperation between coffee producers, cooperatives, traders, exporters, importers as well as governments. By strengthening multi-stakeholder processes and providing adequate technical support and facilitating investments into the sector, the key institutions (national or specific to coffee industry) can contribute to the protection of forests and at the same time enable farmers and small-scale traders that depend on coffee cultivation to remain competitive and derive income from the sector. A number of proposed actions are listed in Table ES.1.

Table ES.1

Action Matrix: Guatemala

Challenge	Recommended Action	Responsible Actor(s)	Timeline and Feasibility
Farmers face high costs in engaging with a fragmented market of services and tools that could be used to facilitate information sharing for European Union Deforestation Regulation (EUDR) compliance.	Development of a unified platform (including a mobile application) as a public service that could facilitate geo-localization and the sharing of information collected at the farm level.	Ministerio de Agricultura, Ganadería y Alimentación (MAGA); the Associación Nacional del Café (ANACAFE); the Fundación de la Caficultura para el Desarrollo Rural –Guatemala (FUNCAFE).	Short-term; high feasibility
Many farmers at the geographic and productive margin do not yet benefit from any of the services and tools that could be provided by the public or private sector.	Institutionalize the maintenance and extension of a unified digital platform for producers and producers' organizations.	ANACAFE; FUNCAFE; (Dirección de Coordinación Regional y Extensión (DICORER)-MAGA.	Medium-term; medium feasibility.
	Examine preparatory activities in geolocation and traceability in the African Palm sector as an example for the coffee sector in generating and transmitting information along the value chain.	Chamber of Agriculture (CAMARAGRO); ANACAFE.	Short-term; high feasibility.
	Expand ANACAFE's registry of coffee farmers to cover all producers; include information on land use at the farm level.	ANACAFE	Short-term; medium feasibility.
Producers' organizations and intermediaries have not yet developed financially sustainable models for universalizing tools in information-sharing and traceability.	Inter-institutional working group centered on facilitating the provision of information-sharing services to exporters, intermediaries, and coffee producers.	ANACAFE, Asociación de Exportadores de Café, (ADEC), Asociación de Exportadores de Guatemala (AGEXPORT).	Short-term; medium feasibility.
	Conduct stock-taking of the extent and activities of formal and informal intermediaries in the sector, including information on existing traceability measures.	ANACAFE; ADEC; AGEXPORT; prominent exporting companies.	Medium-term; medium feasibility.
Coordinating institutions in the coffee sector (CAMARAGRO, ANACAFE), in agricultural extension (MAGA), and in forest and land use monitoring (Instituto Nacional de Bosques [INAB]/ Monitoring Group on Forests and Land Use [GIMBUT]) that preside over a fragmented range of services and modalities for deepening information-sharing in the coffee export process.	Map out the current state of resources and activities towards monitoring and improving land management on coffee plantations, to avoid duplications in services and inform further coordination.	ANACAFE, DICORER-MAGA, INAB.	Short-term; medium feasibility.
	Strengthen the collection of land use and forest cover data, integrate them into the digital platforms that ANACAFE is developing and make data accessible to importers.	GIMBUT; MAGA; INAB; ANACAFE.	Medium-term; high feasibility.

SOURCE: Compiled by authors.

Table ES.2

Action Matrix: Honduras

Challenge	Recommended Action	Responsible Actor(s)	Timeline and Feasibility
Farmers face high production costs and high barriers to accessing key services and tools to facilitate information sharing; sale to informal intermediaries remains a competitive option for most.	Stock-taking of all capacity building activities and technical support provided by first-level trade associations, as a preliminary step to developing a plan for technology dissemination to coffee producers.	Instituto Hondureño del Café (IHCAFE), the Asociación Hondureña de Productores de Café (AHPROCAFE), the Asociatión Nacional del Café (ANACAFEH), the Unión de Coooperativos de Servicios Agropecuarios Limitada (UNIOCOOP), La Central de Cooperativas Cafetaleras de Honduras (La Central).	Medium-term; medium feasibility.
	Expand IHCAFE's registry to include all coffee producers; include more detailed information on land use at the farm level; develop low-cost services for geo-localization that can be provided to smallholders.	Segretaría de Agricultura y Ganadería (SAG), IHCAFE, AHPROCAFE, ANACAFEH, UNIOCOOP, La Central	Short-term; medium feasibility.
Private sector associations preside over a highly fragmented and informal market of intermediaries, through which information-sharing opportunities have thus been limited.	Comprehensive mapping of the intermediary sector to understand the distribution of formal and informal organizations, as well as the key barriers that exist against greater formalization and transparency.	IHCAFE, Asociación de Exportadores de Café de Honduras (ADECAFEH), AHIPROCAFE.	Medium-term; low feasibility.
	Coordination of efficient information-sharing systems between exporters and larger formal intermediaries.	ADECAFEH, AHIPROCAFE.	Short-term; medium feasibility.
CONACAFE and IHCAFE have not yet developed a plan for facilitating information-sharing across the supply chain; there is a lack of a unified and validated public sector managed registries / data platforms that can be used by the private sector.	Development of a unified digital platform that can be used for geo-localization and information sharing at the level of producers and producers' organizations.	Consejo Nacional del (CONACAFE), IHCAFE.	Medium-term; medium feasibility.
	Examine the traceability mechanisms in the timber sector as a possible precedent for generating information that importers will need to access to comply with EUDR.	IHCAFE, Instituto Nacional de Conservación Forestal (ICF), Secretaría de Estado de Recursos Naturales y Ambiente (SERNA).	Short-term; high feasibility.
There is a lack of information-sharing and coordination between IHCAFE, SAG, SERNA, and ICF in developing cost-effective public resources for monitoring land use and for providing technology-transfer services to private sector actors.	Proactive relationship between IHCAFE, SAG– Servicio Nacional de Sanidad Agropecuaria (SENASA) to incorporate deforestation-related information into existing protocols (e.g. those used for phytosanitary certificates).	IHCAFE, SENASA	Short-term; high feasibility.
	Proactive relationship between IHCAFE and SAG-Dirección de Ciencia y Technología Agropecuaria (DICTA) to avoid the duplication of extension services and technical support for implementing traceability schemes.	IHCAFE, DICTA	Short-term; high feasibility.

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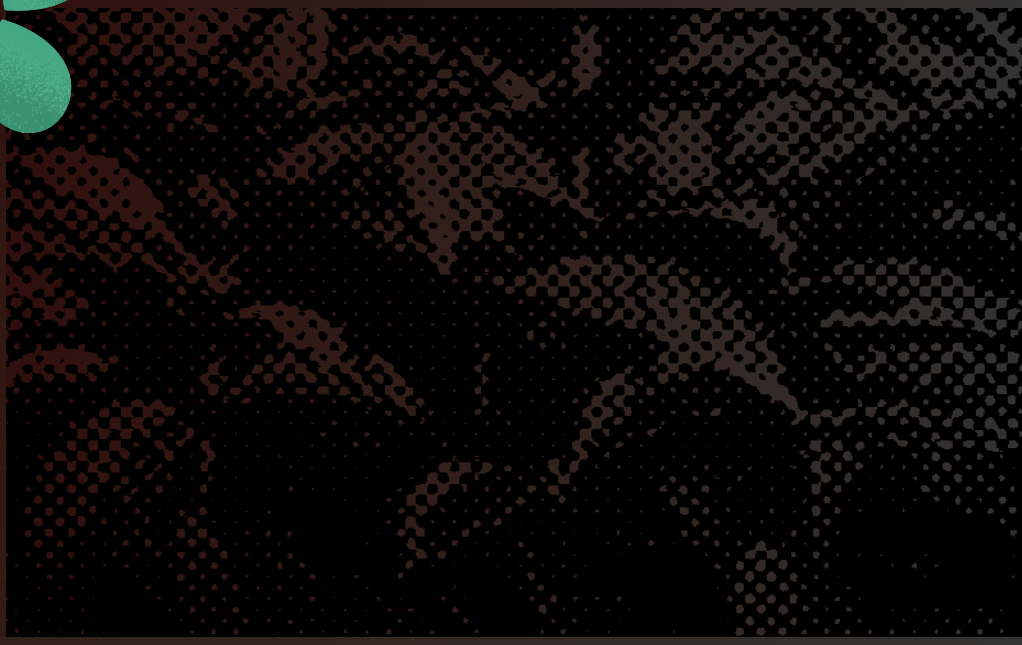

Chapter 1
Introduction

Forests are vital for life on our planet, providing a wide range of economic, social and environmental benefits. The current rates of deforestation pose a significant threat to our very existence, leading to disrupted natural ecosystems, intensifying global warming, soil degradation, disrupted rainfall patterns, loss of biodiversity and loss of livelihoods for local communities. Halting deforestation is therefore critical, and it is also one of the most cost-effective actions for mitigating climate change (FAO, 2022).

About 95 percent of the world's deforestation occurs in the tropics: 59 percent in Latin America and 28 percent in Southeast Asia (Ritchie and Roser, 2021). FAO estimates that between 2000 and 2018, almost 90 percent of deforestation globally was driven by agricultural expansion (52.3 percent from cropland and 37.5 percent from for livestock grazing). Palm oil and soy are the two crops causing most of the forest replacement, however the contribution of coffee production to deforestation is also significant, and caused 1.9 million ha of tree cover loss between 2000 and 2015 (Goldman *et al*., 2020). In Latin America, deforestation in the Amazon is driven primarily by the expansion of the livestock sector and soy production (Nepstad, Stickler and Almeida, 2006).

With agriculture as the main driver of forest loss, the origin and destination of agricultural production causing deforestation and the role of international trade come under scrutiny in some of the major importing countries, with consumers, private sector and increasingly governments taking steps to boost sustainable sourcing of agricultural commodities.

The European Union imported and consumed one-third of the globally traded agricultural products associated with deforestation between 1990 and 2008. Over that period, the European Union consumption accounted for 10 percent of worldwide deforestation associated with the production of goods

or services.[1] Coffee is one of the key cash crop commodities imported by the European Union from Africa, Asia and in particular Latin America, and it is therefore one of the products targeted by the European Union in efforts to reduce the risk of deforestation. Overall, seven commodities account for the bulk of the EU-driven deforestation: palm oil (34 percent), soya (32.8 percent), wood (8.6 percent), cocoa (7.5 percent), coffee (7.0 percent), cattle (5.0 percent) and rubber (3.4 percent) (Pendrill, Persson and Kastner, 2020). The European Union is also the largest importer of coffee globally, with 44 percent of the market share for all green coffee traded in 2021.

Through various proposals and initiatives within the Green Deal, the European Union is increasingly seeking to influence the way agricultural commodities are produced, through measures affecting domestic production and trade, to tackle the adverse environmental impacts generated in agrifood systems globally. In this context, the European Union Parliament adopted a new, first of its kind, regulation to curb EU-driven deforestation and forest degradation – the European Union Deforestation Regulation (EUDR). EUDR prohibits companies from selling to the EU market products that could be causing deforestation and forest degradation in the origin countries. This constitutes a fundamental shift from a model where sustainability standards are voluntary and are applied by importing companies as part of their efforts to promote sustainable sourcing, introducing instead a government-mandated and enforced rule that applies to all imports. The European Commission estimates that by regulating EU consumption and production of the relevant commodities these measures will result in at least 71 920 hectares of avoided deforestation and forest degradation starting in 2030. This would be an equivalent of reducing carbon emissions by 31.9 million metric tonnes every year, which could be translated into economic savings of at least EUR 3.2 billion annually.[2]

Coffee is a major export crop for Central American countries, accounting for 14 percent of the value of agrifood exports in Guatemala and a staggering 52 percent in Honduras. It is a key sector for generating incomes in rural areas where poverty rates are high, contributing to employment and economic growth. In Guatemala, the coffee sector employs approximately 500 thousand people out of a total labour force of 6.9 million, and in Honduras up to 1 million people out of a labour force of 4.6 million. In this context, the importance of the sector in each economy cannot be overstated. Moreover, over 90 percent of coffee growers in both countries are smallholder farmers; livelihoods surveys conducted in Guatemala and Honduras suggest that the majority of these farmers are beset by high costs and low profitability in coffee production and live at national poverty lines or below. Worsening climactic conditions and the rising intensity of extreme weather events add an additional layer of pressure

1 Proposal for a Regulation of the European Parliament and of the Council on the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010 https://www.europarl.europa.eu/doceo/document/TA-9-2023-0109_EN.html

2 European Commission. 2021. Commission staff working document. Impact Assessment. Minimising the risk of deforestation and forest degradation associated with products placed on the EU market. Proposal for a Regulation of the European Parliament and of the Council to make certain commodities and products associated with deforestation and forest degradation available to the Union market, as well as their export from the Union, and repealing Regulation (EU) No 995/2010. https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/730312/EPRS_BRI(2022)730312_EN.pdf

on the already fragile production systems in these countries. In the context of a "polycrisis" of rising costs, fluctuating international prices, and climactic pressures on coffee production, access to export markets has far-reaching consequences for poverty reduction and social development in these countries. The European Union is a key destination market for both Guatemala and Honduras, with over half of total coffee exports from Honduras destined to the European Union, while for Guatemala the share of the European Union is 22 percent. As such, any changes in the European Union's rules affecting imports of coffee could have important repercussions for export earnings, employment and producer incomes, unless accompanied by swift measures to assist farmers and other sector stakeholders to adapt.

The EUDR entered into force in June 2023, and operators will be obliged to comply with the provisions as of 30 December 2024 (on 30 June 2025 for small enterprises). Given the novelty of the regulation and its unprecedented nature, at present there is little clarity in the exporting countries about its practical aspects and possible impacts on agricultural exports and farmers. In many of these countries, especially where value chains are complex, with a multitude of diverse small-scale actors and a high degree of informality the implications for the sector and in particular smallholder farmers remain unclear, generating preoccupation for the future of the affected sectors. The majority of coffee producers in each country operate on land which, when using the latest available maps of productive areas, has not been deforested since 2020 (the cut-off date of the policy). However, providing evidence for their deforestation-free status will require additional analyses of the available information from multiple sources and strengthening data collection on the parts of both public and private actors. These actors must consider the precarious financial situations of the coffee producers that are involved when allocating costs for these activities across the supply chain.

This report explores the level of understanding and preparedness within the coffee sectors of Guatemala and Honduras in relation to EUDR, assesses the existing institutional and information systems of relevance to EUDR compliance in the two countries and provides suggestions of actions that would help farmers and exporters to adapt. This report contains a rapid assessment of the gaps and opportunities on the export side as well as the support needed for effective implementation of EUDR. The recommendations presented herein are intended as a starting point for a policy dialogue on the way and means for adapting to the regulation and the respective costs that producers, consumers and governments would need to bear.

The report is organized as follows. Section 2 provides an overview of the coffee sector in both countries, outlining its economic and social importance. Section 3 contains the key provisions of EUDR and the practical considerations around its implementation. The outcomes of field visits to Guatemala and Honduras are summarized in Section 4: i) focusing on the perceptions of key sector stakeholders; ii) existing institutional arrangements and systems that can support risk assessments; and iii) observed gaps in the sector level of preparedness and the possible actions that would be conducive to strengthening compliance with EUDR while supporting coffee producers and exporters in maintaining their access to the EU market. Section 5 provides details on the information that is needed for undertaking risk assessments, and the possible sources and examples of traceability systems that could be used for gathering this information. Finally, recommendations by category of stakeholders in the exporting countries are outlined in Section 6.

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Chapter 2
The coffee sector in Guatemala and Honduras

Guatemala and Honduras both contain extensive regions with higher-altitude land that is ideal for growing Arabica coffee. In each country, the sectoral coordinating institutions for the coffee sector (Asociación Nacional del Café (ANACAFE) in Guatemala, and the Instituto Hondureño del Café (IHCAFE) in Honduras have developed their own administrative subdivisions for coffee producing zones. In Guatemala, ANACAFE has identified eight important coffee-producing regions: Acatenango, Antigua, Atitlán, Cobán, Fraijanes, Huehuetenango, Oriente and San Marcos. These consist primarily of high-altitude (>1000 meters) zones of production in the Sierra Madre de Chiapas range of the south and centre of the country. An exception is the low-altitude (600 to 1100 meters) production in Alta Verapaz to the North (de León and Rodriquez, 2021). In Honduras, IHCAFE has defined six distinct regions for coffee production: Copán, Comayagua, Montecillos, Opalaca, Agalta, and El Paraíso. These are distributed across the western and central highlands of the country and are primarily characterized by higher-altitude (1100 to 1700 meters) production (IHCAFE, 2023a). In both countries more than 95 percent of coffee is shade-grown.

Table 1
Basic statistics on the coffee sectors of Guatemala and Honduras

Indicator	Guatemala	Honduras	Sources and Year
Cultivated area for coffee (% of agricultural area)	13.5%	12.1%	MAGA, 2020; SIGMOF, 2020
Area harvested for coffee (ha)	363 875	336 318	FAO, 2021
Coffee harvested quantity (metric tonnes)	226 700	400 674	FAO, 2021
Yields (hg/ha)	6230	11 914	FAO, 2021
Gross value of coffee production (2015 USD 1000)	473 729	837 279	FAO, 2021
Coffee production as share of total value of agricultural production (%)	5.5%	25.7%	FAO, 2022
Coffee production and peripheral activities as share of GDP (%)	3-3.5%	3.6%	ANACAFE, IHCAFE, 2021
Value added of agriculture as share of GDP (%)	9.5%	11.6%	FAO, 2021
Coffee as share of agricultural exports (%)	14%	52%	FAO, 2021
Registered producers (approx. No.)	125 000	120 000	ANACAFE, 2021; IHCAFE, 2021. Actual figures are likely higher.
Workers in coffee sector (approx. No.)	500 000	700 000 – 1.1 million	ANACAFE, IHCAFE, 2021

SOURCE: ANACAFÉ (Asociación Nacional del Café). 2022a. Memoria de labores 2021–2022.
FAO. 2023. Crops. In: FAOSTAT. Rome. [Cited 01 May 2023]. https://www.fao.org/faostat/en/#data/QCL
FAO. 2023. Value of Agricultural Production. In: FAOSTAT. Rome. [Cited 01 May 2023]. https://www.fao.org/faostat/en/#data/QV
FAO. 2023. Crops and Livestock Products. In: FAOSTAT. Rome. [Cited 01 May 2023]. https://www.fao.org/faostat/en/#data/TCL
IHCAFE (Instituto Hondureño del Café). 2022. Informe estadístico 2020–2021.
MAGA (Ministerio de Agricultura, Ganadería y Alimentación – Guatemala). 2021. Determinación de la Cobertura Vegetal y Uso de la Tierra a escala 1: 50,000 de la República de Guatemala, año 2020. Guatemala City.
SIGMOF (Sistema de Información para la Gestión y Monitoreo Forestal). 2023a. Cobertura Forestal y Uso de Suelo. Tegucigalpa. https://sigmof.icf.gob.hn/reportes/cobertura-forestal-y-uso-de-suelo-2/

Production trends in coffee have fluctuated in recent years: a new surge has occurred in **Honduras**, and a relative decline in **Guatemala**. In 2021, Honduras and Guatemala produced 400 674 and 226 700 metric tonnes of coffee, respectively. As shown in Figure 1, production in both countries decreased in 2013 following the Coffee Rust (Roya) epidemic. While harvested areas have increased in both countries over the decade 2011–2021, there is a widening gap between area and quantities produced in Guatemala, indicating a decline in yields. The Roya epidemic affected plantations in both Guatemala and Honduras. In Guatemala, the advanced age structure of many plantations made them particularly vulnerable to the disease, and low rates of plantation renewal since 2013 have hampered the recovery of production. By 2018, it was estimated that at least 50 percent of plantations were in dire need of renovation, which carried a cost of USD 5000 per hectare. This investment cost is perceived by both ANACAFE in Guatemala, and IHCAFE in Honduras, to lie above what most smallholder farmers can access in local financial markets (Bunn *et al.*, 2019; Aguilar, 2018)). In Honduras, both widespread renewal and the expansion of plantations occurred following the epidemic, allowing the sector to take

advantage of both higher yields and increases in harvested area (Bunn *et al.*, 2018). In the context of high costs to renewal, the relatively homogenous age structures of coffee plantations in each country pose a risk for maintaining aggregate levels of production.

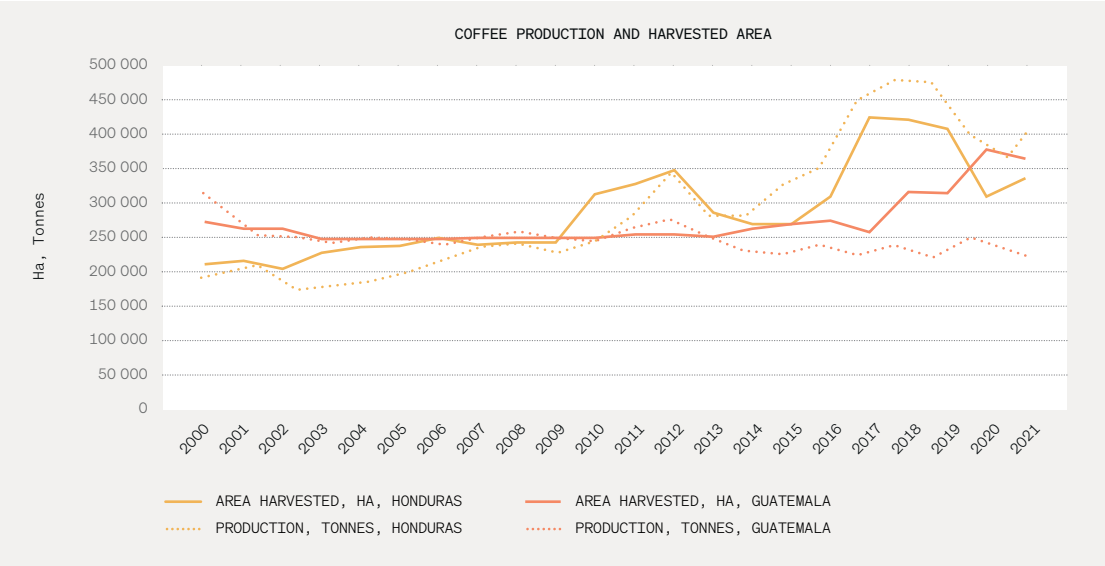


Figure 1
Production by volume and harvested area

SOURCE: FAO. 2023. Crops. In: FAOSTAT. Rome. [Cited 01 May 2023]. https://www.fao.org/faostat/en/#data/QCL

Despite annual variation, coffee production remains a vital driver of economic activity and employment. As shown in Figure 2, both Guatemala and Honduras have structurally transformed away from agriculture, but the sector still represents an important source of employment. Coffee production accounts for approximately 3.5 percent of the GDP of each country. The agricultural sector of Honduras is much more concentrated in coffee production than that of Guatemala, in terms of the relative shares of value added in the total agricultural value added. Both ANACAFE and IHCAFE maintain producer registries, suggesting that approximately 125 000 producers are currently operating in Guatemala and 120 000 in Honduras. However, it is likely that the actual numbers are slightly higher, and particularly so in Honduras, where recent estimates suggest that IHCAFE has registered only 85 percent of the total producing population (Bunn *et al.*, 2018). The number of people depending on coffee cultivation for livelihoods is much higher, however. Rough estimates suggest that up to 500 000 people in Guatemala are employed in some part of the coffee value chain, while 700 000 to 1 million people may be employed in the chain in Honduras, representing 20 percent of the rural labour force (Bunn *et al.*, 2019). Total associated labour forces vary greatly both on a seasonal basis (as many workers are hired temporarily during times of harvest), and annually in line with price-driven changes in production intensity.

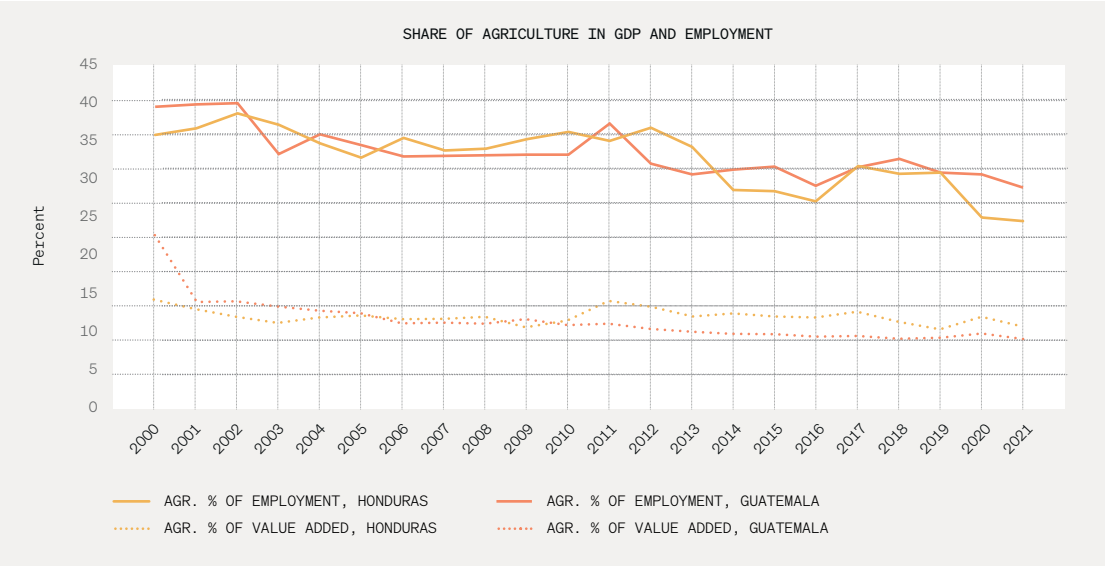


Figure 2
Trends in the structural transformation of agriculture in Guatemala and Honduras

SOURCE: World Bank, 2023. World Development Indicators. In: DataBank. Washington. [Cited 05 May 2023]. https://databank.worldbank.org/source/world-development-indicators

Coffee exports have risen sharply between 2002 and 2012 but have been fluctuating since in each country, with variations in destination. In 2021, Guatemala and Honduras exported approximately 226 000 and 388 000 metric tonnes respectively, amounting to USD 930 million and 1.29 billion in current terms (Figure 2). The export market for Guatemalan coffee is dominated by the United States of America and Canada, who received over 50 percent of tprimarily towards the European Union, whose countries received 60 percent of exported coffee that same year (Figure 3). As shown in Figure 5, the share of coffee sold to the EU28 market has remained relatively constant in Guatemala; in Honduras, it has declined consistently since 2019. Figure 6 demonstrates that annual green coffee exports undergo significant year-to-year fluctuations that respond to changes in farmgate prices – as measured by the International Coffee Organization (ICO). The Roya epidemic of 2013 led to both a spike in prices and a relative fall in export quantities in Guatemala and Honduras. Exported volumes have increased slightly in both countries since then, but falling farmgate prices suggest that these trends may continue to be tempered. A gap has emerged between falling farmgate prices and rising aggregate values of coffee exports in both countries. More research is needed to assess the extent to which rising export values correspond to profitability for producers.

The coffee sectors in both countries consist primarily of small producers, the majority of whom live around or below national poverty lines. Via national legislation, ANACAFE and IHCAFE define producer size by annual volume of production: ANACAFE defines small producers as producing less than 100 quintals per year (typically on 1 to 2 ha); IHCAFE defines them as producing under 50 (typically on 0.5 to 1.5 ha).[3] The vast majority of producers in both countries are small. In 2022, ANACAFE and IHCAFE estimated that 96.1 percent and 92 percent respectively of registered producers were small by their definitions (ANACAFE, 2022; IHCAFE, 2022). In terms of farm size, these estimates suggest that over 90 percent of Guatemalan producers and over 70 percent of Honduran producers operate less than 2 hectares each (de León and Rodriquez, 2021; Bunn *et al.*, 2018). In each country, shares of production and land ownership are deeply skewed across different categories of producers. In Guatemala, for example, a recent census shows that small producers operate an average of 1.2 hectares each; medium producers (3.9 percent of the registered total) an average of 25 hectares, and large producers (0.28 percent of the registered total) an average of 189 hectares (de León and Rodriquez, 2021).

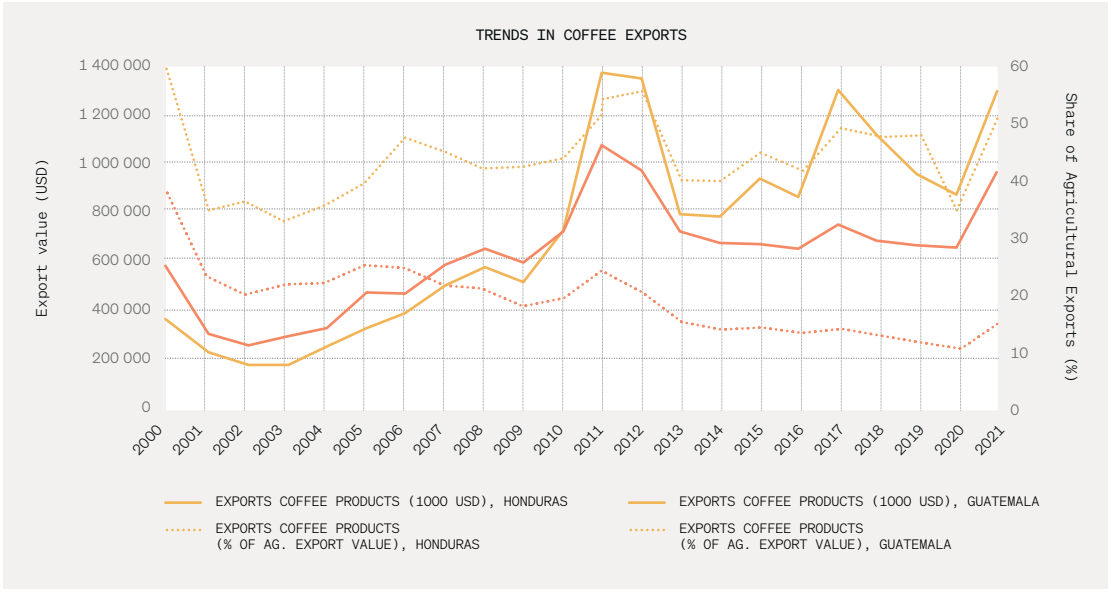


Figure 3
Exports in current USD terms and as a share of total agricultural exports

SOURCE: FAO. 2023. Crops and Livestock Products. In: FAOSTAT. Rome. [Cited 01 May 2023]. https://www.fao.org/faostat/en/#data/TCL

3 Ley Del Café, Pub. L. No. 19-69, Decreto Numero 19-69 (1969); IHCAFE. 2022. *Informe estadístico 2020-2021*.

With caveats of low frequency and comparability, data on farmers' incomes suggests that coffee producers in both countries exhibit high levels of poverty by national standards. Surveys from the mid-2010s suggest that 70 percent of coffee producers in Guatemala lived below the poverty line (with 20 percent in extreme poverty); in Honduras, 50 percent of producers and workers were estimated to live in extreme poverty (Bunn *et al*., 2018; Bunn *et al*., 2019). A joint study undertaken by Heifer International and IHCAFE in 2018 found that among small coffee producers in Honduras, 33 percent lacked access to electricity, 30 percent to indoor plumbing, and 28 percent depended primarily on subsistence cultivation of staple crops to fulfill immediate food needs (Álvarez Welchez, 2018). In this context, productivity and profitability in coffee production play a critical role in improving the livelihoods of poor rural producers.

Low levels of profitability for coffee farmers threaten the sector's potential to drive rural income growth and poverty reduction. Recent evidence shows that issues in farm-level profitability stem from fluctuations in prices, high costs to production, and vulnerability to environmental shocks. In terms of prices, the ICO's farmgate estimates suggest that farmers in both Guatemala and Honduras have received decreasing prices per kg in the last four years of measurement, as shown in Figure 4. Producer prices for coffee peaked in 2011 and exhibited a downward trend following an increase in the global supply of coffee on the market. While ICO producer price data extend only to 2019, measures in international prices have also trended downwards since then. The ICO suggests that the continuing increase in global supply means that this downward trend would have been experienced by producers as well (ICO, 2019). In June 2023, the price of coffee on the New York Stock Exchange was USD 1.90 per pound; it climbed from a low of approximately USD 1.01 per pound April-2019 to USD 2.40 per pound in 2022 and has since then decreased. Prices are expected to continue to fall through 2023 in response to the slowing global demand and rising levels of production in Brazil, Indonesia, and Vietnam (Business Insider, 2023).

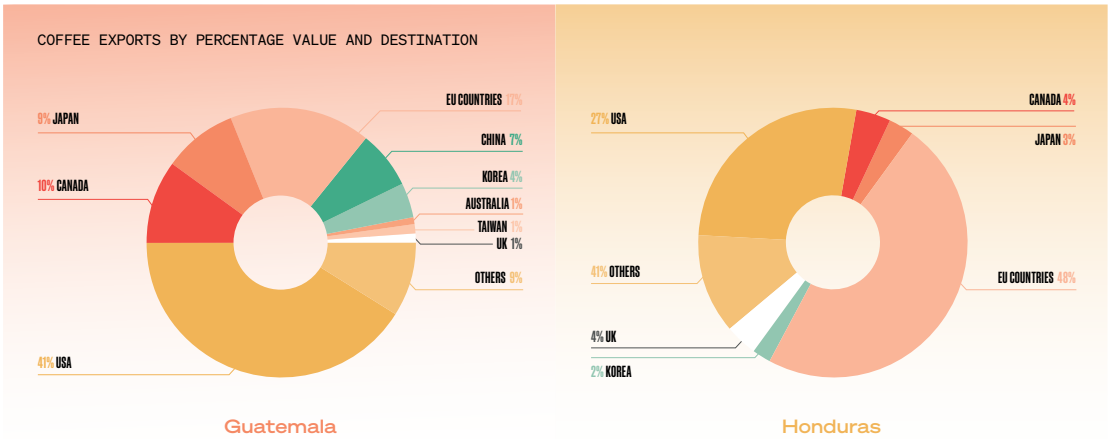


Figure 4
Coffee exports by destination, 2021

SOURCE: FAO. 2023. Detailed Trade Matrix. In: FAOSTAT. Rome. [Cited 01 May 2023]. https://www.fao.org/faostat/en/#data/TM

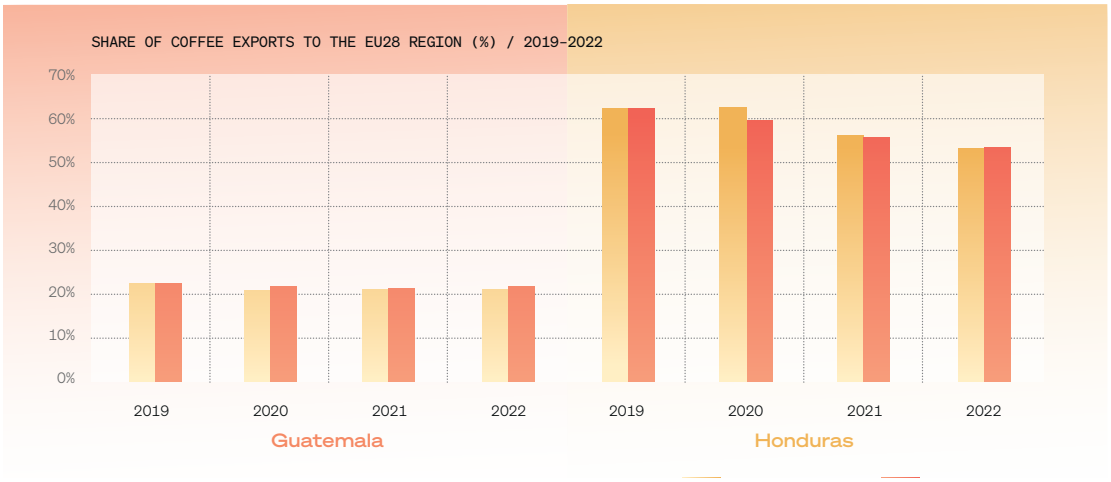


Figure 5
Trends in the share of coffee exports to the EU28 region by value and weight, 2019-2022

SOURCE: TDM. 2023. Trade Statistics. In: Trade Data Monitor. Charleston. [Cited 05 May 2023]. https://tradedatamonitor.com

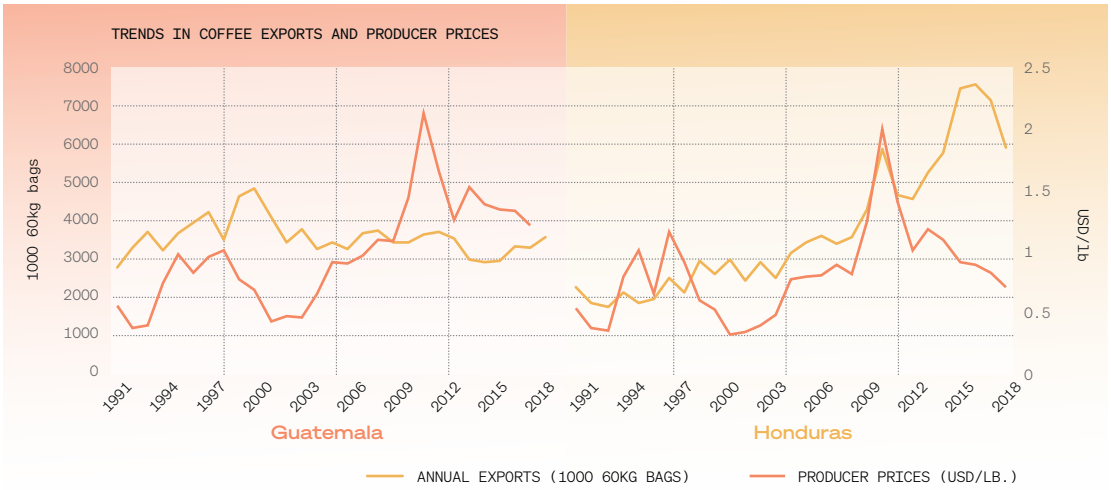


Figure 6
Trends in coffee exports and producer prices

SOURCE: ICO, 2023. World Coffee Statistics. In: World Coffee Statistics Database, London. [Cited 01 May 2023]. https://icocoffee.org/what-we-do/world-coffee-statistics-database/

In the context of fluctuating and decreasing producer prices, production costs for coffee contribute to smallholder vulnerability in two critical ways. First, costs to coffee production are concentrated overwhelmingly in manual labour and agricultural inputs, exposing farmers to high levels of risk when the prices of labour, fuel or agrochemicals rise. A recent diagnostic from ANACAFE estimated that labour comprised between 46 to 50 percent of total production costs for small and medium farmers in the country; inputs comprised 28 to 34 percent. Most of these costs are incurred during cultivation and the labour-intensive harvest period (de León and Rodriquez, 2021). A cross-country sensibility analysis suggests that a 1 percent rise in rural wages contributes to a 0.52 percent rise in production costs in Guatemala, and a 0.32 percent rise in Honduras; a 1 percent rise in input prices contributes to a 0.23 percent rise in costs in Guatemala, and a 0.43 percent rise for those in Honduras (PROMECAFE, 2018). In both countries, interviews confirm that labour shortages in rural areas, as well as fuel and fertilizer price increases during 2022 driven by the war in Ukraine, have significantly increased production costs and overall profitability on the parts of farmers. As a result, many are now seeking alternative means of income.

Second, analyses of nominal costs often fail to internalize important economic costs to production. When included, they cast doubt on the fundamental profitability of the sector in each country and provide rationale for observed trends in rural outmigration and plantation abandonment. A recent cross-country study from the Regional Cooperation Program for the Modernization and Technical Development of Coffee (PROMECAFE) found that farmers in Honduras and Guatemala reported nominal, per-quintal net incomes in the coffee sector of USD 92.55 and USD 60.79 respectively.

However, these nominal values do not account for economic costs to production such as taxes, opportunity costs to land use, and shadow wages for family labour. After internalizing these costs, the surveyors found that farmers in each country were producing at average losses of USD 71.67 per quintal in Guatemala (USD 128.80 in average incomes vs USD 200.47 in real average costs), and average losses of USD 70.04 per quintal in Honduras (USD 114.00 in average incomes vs USD 184.04 in real average costs) (PROMECAFE. 2018).

These findings corroborate in-country perceptions of the fundamental dilemma to staying in the coffee market. A parallel study from ANACAFE found that per-pound economic costs in Guatemala often reach as high as USD 3.50, which is notably superior to the nominal international and farmgate prices (Aguilar, 2018). A survey coordinated by Heifer and IHCAFE confirmed a similar set of findings in Honduras, noting that farmers often made production decisions based only on nominal costs. As a result, many continued to participate in the market while relying on family labour; an arrangement that was becoming more and more tenuous under increasing rates of rural outmigration. Rural outmigration, driven by the availability of and demand for work in urban areas and abroad, has thus contributed substantially to the unprofitability of coffee production in financial (rather than economic) terms (Álvarez Welchez, 2018).

Finally, coffee producers in each country remain critically vulnerable to environmental shocks from climate change, pests, and disease. In both Guatemala and Honduras, climate change is expected to prolong the dry season and to increase the intensity of rainfall during certain periods of the year, negatively affecting yields. Simultaneously, rising mean temperatures threaten the survival of plantations in lower-altitude zones of production. CIAT estimates that in Guatemala and Honduras respectively, 30 percent and 20 percent of the current production area for coffee will not remain viable without transformational investments and complete renewal, with another 50 percent and 33 percent requiring significant investments in adaptation (Bunn *et al*., 2018; Bunn *et al*., 2019). In the context of low existing levels of profitability and prohibitively high per-hectare costs to renewal, these trends present a bleak outlook for significant shares of productive area in each country.

2.1 THE STRUCTURE OF COFFEE VALUE CHAINS IN GUATEMALA AND HONDURAS

Both Guatemala and Honduras possess multilayered institutions and marketing arrangements for commercialization of coffee. A summary of these environments can be seen in Table 2 and Table 3. This section provides a brief overview of the value chains in each country, focusing on coordinating bodies at the national and regional levels, as well as actors at each stage of the production and commercialization process for coffee.

2.1.1 Guatemala

The **coordinating institution** that mediates activity in the coffee sector in Guatemala is the Asociación Nacional de Caficultores de Honduras (ANACAFE). Founded by law in 1960, ANACAFE has since evolved into a private institution that represents the coffee sector in government, facilitates exports (through the provision of licenses), develops and implements national policies for the coffee industry, and coordinates the provision of technical services through regional offices and extension initiatives. Its board of directors includes representatives from related ministries, first- and second-level cooperatives, and exporters who are primarily represented through the Association for Coffee Exporters (ADEC), a second-level federation. ANACAFE shares a close working relationship with the Centro de Investigaciones en Café in Guatemala (CEDICAFÉ), a research institute that focuses on improving methods and technologies in coffee cultivation, and the Fundación de la Caficultura para el Desarollo (Funcafé), an institute that funds social and economic development programmes among coffee producers. ANACAFE itself is also a member of the Chamber of Agriculture (CAMARAGRO), an umbrella institution that was founded to coordinate policies and activities for private sector actors in agriculture.

Coffee producers include small, medium, and large producers, with small producers classified as producing less than 100 quintals per year. Through interviews, ANACAFE estimates that approximately 96 percent of its 125 000 registered producers are small producers, operating on approximately 1.2 hectares of land each. ANACAFE does not publish statistics on the distribution of production by certification scheme, but interviews suggest that approximately 30 percent of producers may have sold coffee under one or more international certification systems in the past production season (ANACAFE, 2023).

Intermediaries include the formal and informal entities that purchase coffee from producers or cooperatives and then sell it to exporters. ANACAFE estimated that there were approximately 350 formal and informal companies operating in this space; they remain a popular conduit for sales because they often offer to buy directly in cash (Aguilar, 2018). Approximately 85 percent of coffee producers sell their coffee through an intermediary or cooperative (or both) to a domestically located exporter; while 15 percent sell directly to foreign buyers (ANACAFE, 2023). Many exporting companies buy from chains of one or more intermediaries who occupy a role in between the individual producer or local cooperative, and the exporting company.

Cooperatives and producers' organizations: these organizations exist on two levels in Guatemala: first-level organizations whose members are farmers, and second-level associations whose members are first-level cooperatives themselves. First-level organizations provide a collective platform for undergoing post-harvest processing, storage and sale; in particular, many act as collective bodies for exportation and negotiation with buyers. Second-level cooperatives provide a structure for financing, the provision of technical support and services, and for collective representation in government. 35 percent of registered coffee producers (approximately 43 000 people in total) are directly associated with a first-level producers' organization, through which they collectively negotiate for the sale of their coffee. Approximately

85 percent of these first-level organizations then belong to second-level cooperatives; the most prominent ones include Federación de Cooperativas Agrícolas de Productores de Café de Guatemala (FEDECOCAGUA) made up of 148 cooperatives; 20 000 coffee producers, and Federación de Cooperativas de Servicios Múltiples la Verapaz – Guatemala (FEDECOVERA), made up of 48 cooperatives with 15 000 coffee producers) (Aguilar, 2018).

Exporters: to export coffee from Guatemala, a company or cooperative must obtain a license from ANACAFE, to be renewed on an annual basis; this license is a legal requirement that also serves as a reference when ensuring compliance with phytosanitary and legal standards (ANACAFÉ, 2022). There are approximately 65 licensed exporting companies, from first and second level cooperatives to domestic private companies, to multinationals such as the Olam Group and Mercon. Twenty of these organizations are represented through ADEC, accounting for 75 percent of all coffee exports (ADEC, 2023). A subset of exporting companies and cooperatives are associates of the Guatemalan Exporters Association (AGEXPORT), an institution that specializes in facilitating exports for differentiated or certified products and was responsible for 25 percent of the country's total exports in the 2021-2022 period. AGEXPORT's associates include both exporters who are associated with ADEC, and exporters who are not. ANACAFE does not publish official statistics on the distribution of exports by exporter. However, interviews indicate that export volumes are comparatively less concentrated within companies than is the case in Honduras. ANACAFE maintains a digital platform (*CoffeeSearch*) that facilitates direct communications between farmer cooperatives and foreign buyers (IHCAFE, 2023a).

Finally, several public institutions play a role in articulating and implementing policies and programmes in the coffee sector from the perspective of land and forest management. The Ministry of Agriculture and Livestock (MAGA) acts as the primary originator of policies, standards and norms in agricultural production, and works with ANACAFE to validate data on land and soil use in coffee production zones. While MAGA is mandated to provide extension services in the agricultural sector, a number of coffee-specific technology transfer and extension services are instead provided through ANACAFE's regional offices. The Ministry of Environment and Natural Resources (MARN) acts as the coordinating body for policies towards land and natural resource management and collaborates with ANACAFE to define land and resource management guides and protocols. In coffee producing zones, the Instituto Nacional de Bosques – Monitoring Group on Forests and Land Use [INAB]) acts as the promulgator and implementer of the Forestry Law of 1996, which defines the protocol for forest use and for land conversion to and from forest. INAB provides key services and information to operators in the agroforestry sector, including coffee farmers, and requires a registry of tree use in agroforestry systems.

Table 2

The structure of the value chain in Guatemala

<table>
<tr><td rowspan="3">TRANSVERSAL SERVICES/ COORDINATION</td><td colspan="3">COORDINATING BODIES
Chamber of aAriculture (CAMARAGRO)</td></tr>
<tr><td colspan="3">APEX PRODUCERS' INSTITUTION
Asociación Nacional del Café – Guatemala (ANACAFE)</td></tr>
<tr><td colspan="3">SERVICE PROVIDERS
• ANACAFE
• Centro de Investigaciones en Café – Guatemala (CEDICAFE)
• Fundación de la Caficultura para el Desarrollo Rural – Guatemala (FUNCAFE)

RELEVANT GOVERNMENT AGENCIES/LINE MINISTRIES FOR TRANSVERSAL SERVICES:
• Ministry of Agriculture (MAGA)
• Ministry of Environment and Natural Resources (MARN)
• National Forestry Institute (INAB)</td></tr>
<tr><td>SECOND-LEVEL COORDINATION</td><td colspan="2">SECOND-LEVEL PRODUCERS' ORGANIZATIONS
• Federación de Cooperativas de Servicios Múltiples la Verapaz – Guatemala (FEDECOVERA).
• Federación de Cooperativas Agrícolas de Productores de Café de Guatemala (FEDECOCAGUA).
• Federación Comercializadora de Café especial de Guatemala (FECCEG).
• Agrijal Guatemala.
• Federación de Cooperativas Agrícolas de Guatemala (FEDECOAG).
• Federación Nacional de Cooperativas de Ahorro y Crédito Guatemala (FENACOAC).
• Federación Integral de Comercialización de Cooperativas de Ixcán (FICCI).</td><td>EXPORTERS' ASSOCIATIONS
• Asociación de Exportadores de Guatemala (AGEXPORT).
• Asociación de Exportadores de Café Guatemala (ADEC).</td></tr>
<tr><td>Value chain stage</td><td>Production</td><td>Processing →</td><td>Trade →</td><td>Final market</td></tr>
<tr><td rowspan="3">ACTORS IN EACH STAGE</td><td rowspan="3">Small Producers
Medium Producers
Large Producers</td><td>COOPERATIVE/ ASSOCIATIONS
168 in total</td><td rowspan="2">65 EXPORTING COMPANIES
• Bicafe
• Cafcom
• Café de Origen Guatemala
• Export Café
• Lux Café
• Olam
• Mercon
• Servex
• Others</td><td></td></tr>
<tr><td>INTERMEDIARIES
Approximately 350 actors in total</td><td></td></tr>
<tr><td>DIrect sales</td><td>DIrect sales</td><td>Importers</td></tr>
</table>

SOURCE: Authors' elaboration.

2.1.2 Honduras

Two sectoral **coordinating institutions** for production in the Honduran coffee sector were established by law in 1970. First, CONACAFE (National Coffee Commision – Consejo Nacional del Café) is the coordinating institution that, on the one hand, represents the interests of the coffee sector in government, and, on the other, develops and formulates national policies relevant to coffee production. Second, IHCAFE acts as an umbrella institution with a mandate to implement national policies and laws in the coffee sector, conduct and publish research, provide extension services, and advocate for producers internationally. IHCAFE was founded as a public institution in 1970, and by law was reconstituted in 2000 as a private nonprofit. It includes on its board of directors, representatives from the major cooperatives, trade associations, and exporters; it also maintains a registry of all official coffee producers in the country. Closely related to IHCAFE is the National Coffee Fund; Fondo Cafetero Nacional (FONDACAFE), a public financial institution that invests in infrastructure and value chain services for coffee production. This institution utilizes a tax of USD 1.50 per exported quintal of coffee to allocate funds for investment at the municipal level in transportation infrastructure, plantation renewal, land surveying and titling, and social projects such as public health initiatives (Ruben *et al*., 2018).

Producers: IHCAFE maintains a registry of approximately 120 000 producers, categorized by volume of production; during the 2020–2021 harvest year, they estimate that approximately 95 percent of these producers were categorized as small, each producing less than 50 quintals of coffee per year, growing it on an average of less than 2 hectares (IHCAFE, 2022). Estimates from the mid-2010s suggest that 15 percent of producers (corresponding to 25 percent of all exported coffee) had obtained an international certification to produce coffee, most commonly from Gourmet, Fair Trade or Rainforest Alliance (Ruben *et al*., 2018). By the 2020–2021 production season, however, IHCAFE estimated that over 55 percent of exported coffee corresponded to one or more forms of differentiation or international certification (IHCAF, 2022).

Intermediaries: according to IHCAFE, approximately 80 to 85 percent of coffee exported from Honduras passes through one or more formal or informal intermediaries before reaching a domestic exporter (IHCAFE, 2023b). Formal intermediaries are registered with either IHCAFE or with the Asociación Hondureña de Comercializadores de Café (AHICAFE), a second-level association that specializes in representing and supporting intermediaries. These two registries account for 580 and 400 formal intermediaries, respectively (Ruben *et al*., 2018).

Statistics on the distribution of sales to intermediaries vary, particularly because of the strong presence of informal operators. A survey coordinated by IHCAFE and Heifer International suggests that approximately 85 percent of small producers sold their coffee through one or more intermediaries to a domestically located exporter, while 14 to 15 percent sold to exporters through producers' organizations. In contrast to Guatemala, less than 1 percent of the coffee exported from Honduras passes directly from producers to foreign buyers, which represents a major challenge for introducing traceability in the sector (Alvarez Welchez, 2018).

Cooperatives and producers' organizations: the cooperative landscape in Honduras consists of a mixture of traditional cooperatives and trade associations (asociaciones gremiales) with different structures of organization and second-level hierarchies. 90 to 95 percent of all registered producers belong to one of two national-level trade associations, rather than cooperatives: The Asociación Hondureña de Productores de Café (AHPROCAFE), which represents 80 to 85 percent of all formal producers) and the Asociación Nacional de Caficultores de Honduras (ANACAFEH), which represents approximately 8 percent of all formal producers. Founded in 1967, AHPROCAFE organizes itself around a pyramidal hierarchy of 15 departmental boards, 210 municipal boards, and 3412 rural organizations, with 48 affiliated coffee cooperatives. ANACAFEH oversees a more direct arrangement of 175 municipal organizations. A remaining 5 percent of formal producers are instead registered with one of approximately 130 small independent cooperatives that are organized under La Central de Cooperativas Cafetaleras de Honduras (La Central), a second-level cooperative federation. Closely related is the Unión de Cooperativas de Servicios Agropecuarios Limitada – Honduras (UNIOCOOP), a second-level federation of 26 cooperatives that primarily provide extension services to rural producers, including coffee farmers (Ruben *et al*., 2018). In this manner, the structure of coffee production in Honduras is highly centralized under the hierarchy of AHPROCAFE, which provides less emphasis on the collective sale through the structure of the organization. Instead, sales to exporters occur primarily through intermediaries.

The landscape of **exporters** in Honduras displays a high degree of firm concentration. Export licenses are granted through IHCAFE and are renewed annually. In comparison to Guatemala, there are high barriers to foreign firms receiving an export license, leading to the dominance of a selection of domestic companies (Ruben *et al*., 2018). During the 2020–2021 production season, there were 73 licensed exporters who exported coffee from Honduras, but over 70 percent of all exports passed through ten companies. Of these ten companies, seven are of domestic origin, representing over 50 percent of total exports (IHCAFE, 2022). Of note, these companies often receive significant amounts of foreign investment from importers (Alvarez Welchez, 2018). The majority of exporting companies are represented in Asociación de Exportadores de Café de Honduras (ADECAFEH), a second-level federation. Domestic processors are represented through THE Asociación de Tostadores de Café de Honduras **(TOSCAFEH).**

Table 3
The structure of the value chain in Honduras

<table>
<tr><td rowspan="3">TRANSVERSAL SERVICES/ COORDINATION</td><td colspan="3">COORDINATING BODIES
Consejo Nacional del Café (CONACAFE)</td></tr>
<tr><td colspan="3">APEX PRODUCERS' INSTITUTION
Instituto Hondureño del Café (IHCAFE)</td></tr>
<tr><td colspan="3">SERVICE PROVIDERS
• IHCAFE
• Fondo Cafetero Nacional (FONDACAFE)

RELEVANT GOVERNMENT AGENCIES/LINE MINISTRIES FOR TRANSVERSAL SERVICES:
• Secretaria de Agricultura y Ganadería (SAG). Includes the Servicio Nacional de Sanidad Agropecuaria (SENASA) and the Department of Technology Transfer (DICTA)
• Secretaria de Recursos Naturales Ambiente y Minas (MiAmbiente)
• Oficina Presidencial de Cambio Climático
• Instituto de Conservación Forestal (ICF)</td></tr>
<tr><td>SECOND-LEVEL COORDINATION</td><td>SECOND-LEVEL PRODUCERS' ORGANIZATIONS
• La Central de Cooperatives Cafetaleras de Honduras (La Central)
• Unión de Cooperativas de Servicios Agropecuarios Limitada – Honduras (UNIOCOOP)</td><td>SECOND-LEVEL INTERMEDIARIES' ORGANIZATIONS
Asociación Hondureña de Comercializadores de Café (AHICAFE).</td><td>EXPORTERS' ASSOCIATIONS
• Asociación de Exportadores de Café de Honduras (ADECAFEH).
• Asociación de Tostadores de Café de Honduras (TOSCAFEH).</td></tr>
<tr><td>Value chain stage</td><td>Production</td><td>Processing → </td><td>Trade → Final market</td></tr>
<tr><td rowspan="3">ACTORS IN EACH STAGE</td><td rowspan="3">Small Producers
Medium Producers
Large Producers</td><td>COOPERATIVE/ ASSOCIATIONS
• Asociación Hondureña de Productores de Café (AHPROCAFE)
• Asociación Nacional de Caficultores de Honduras (ANACAFEH)
• Approx. 130 small cooperatives</td><td rowspan="2">65 EXPORTING COMPANIES
• Cohoncafe
• Becamo
• Olam
• Louis dreyfus
• Molinos de honduras
• Sogimex
• Boncafe
• Comsa
• Hawit-caffex</td><td rowspan="2"></td></tr>
<tr><td>INTERMEDIARIES
• 580 registered entities with IHCAFE
• 400 registered entities with AHICAFE
• Unknown number of informal entities</td></tr>
<tr><td>DIrect sales</td><td>DIrect sales</td><td>Importers</td></tr>
</table>

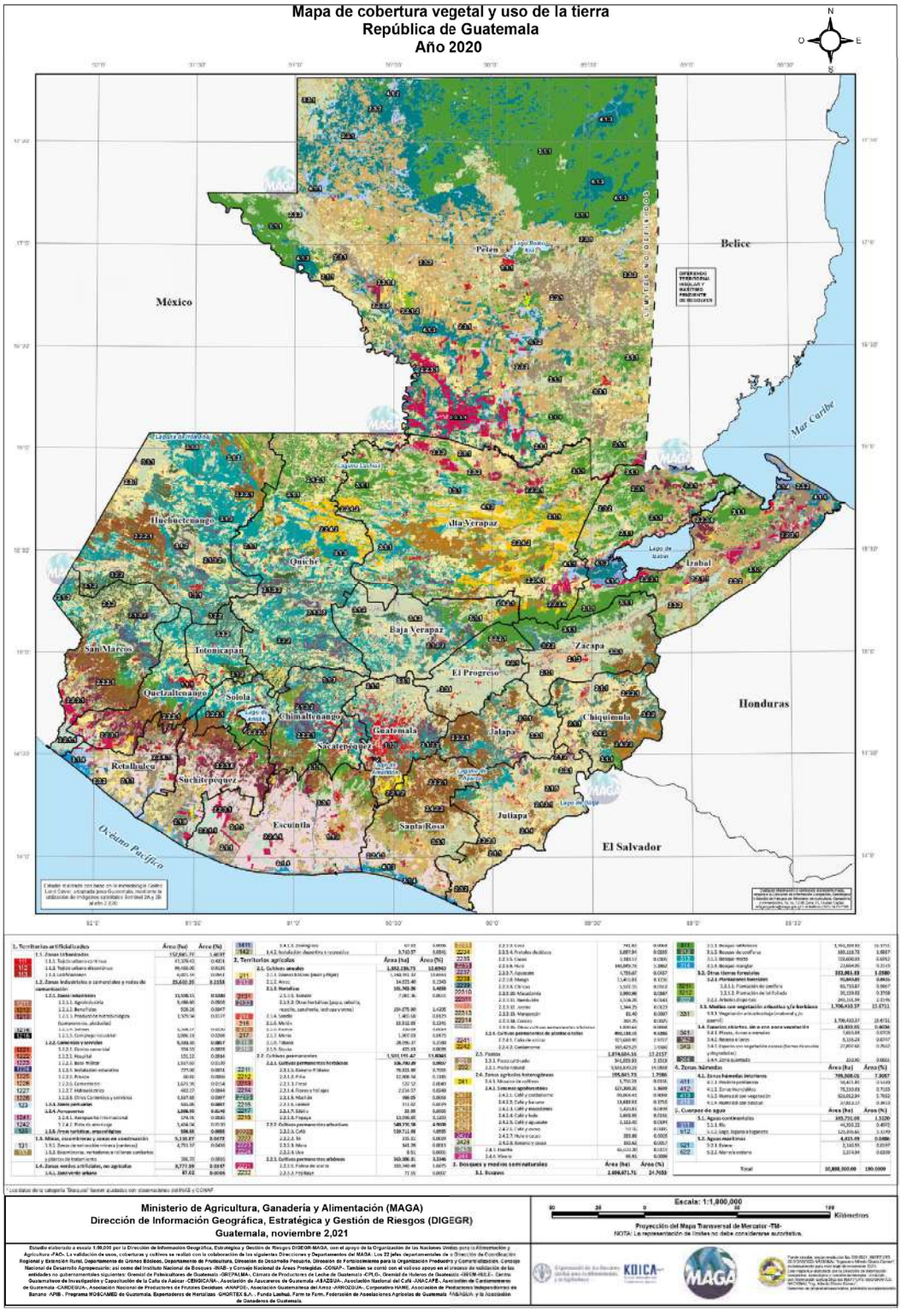
SOURCE: Authors' elaboration.

Finally, the institutional environment for land and natural resource management falls under the responsibility of two-line ministries: the Ministry of Environment (MiAmbiente), and the Secretariat for Agriculture and Livestock/Secretaría de Agricultura y Ganadería (SAG). MiAmbiente and SAG collaborate to develop and promulgate legislation and policies that govern and monitor land and water use as well as resource use specifically in the coffee sector. Within MiAmbiente, the Secretariat for Energy, Natural Resources, and Mines/Secretaría de Estado de Recursos Naturales y Ambiente (SERNA) is the primary developer and implementer of laws and monitoring systems for land and water use. Within SAG, two institutions are of relevance for coffee production. First, the office of agricultural science and technology/Dirección de Ciencia y Tecnología Agropecuaria (DICTA) acts as the primary conduit for extension services to agriculture, including the coffee sector. Second, the Servicio Nacional de Sanidad Agropecuaria in Honduras (SENASA) acts as the competent agency, through which exporters must certify that their coffee meets the necessary phytosanitary standards. Alongside MiAmbiente and SAG operates the National Institute for Forest Conservation/Instituto Nacional de Conservación Forestal (ICF), which acts as a transversal institution for implementing the National Forest Law (Ley Forestal), and for collecting information on the use and conversion of forested areas.

2.2 COFFEE CULTIVATION, LAND USE, AND DEFORESTATION

Fluctuations in cultivated and harvested areas suggest that coffee production may be a significant driver of changes in land use in both Guatemala and Honduras. Detailed information on changes in land use is available through mapping exercises conducted by the Monitoring Group on Forests and Land Use (GIMBUT) in Guatemala (MAGA. 2021) and an initiative led by the Forest Conservation Institute in Honduras (SIGMOF, 2023a).

In **Guatemala**, GIMBUT published comprehensive maps on forest cover and land use reflecting the state of each in 2003, 2010 (LANDSAT 20×20), 2014, and 2020 (LANDSAT, RapidEye 10×10; shown in Figure 7) (MAGA, 2021). These maps suggest that area cultivated for coffee production or coffee-based agroforestry systems has fluctuated in accordance with changes in overall levels of production: from 610 245 hectares in 2003, to 565 591 in 2010, to 667 196 in 2020. Simultaneously, they estimate that total forest cover declined from approximately 4.06 million ha in 2003 to 3.68 million in 2010, to 2.70 million in 2020 (MAGA, 2021). These findings are broadly validated by FAO's Global Forest Resources Assessment initiative, as well as information available through the Hansen Global Forest Change dataset (FAO, 2020).

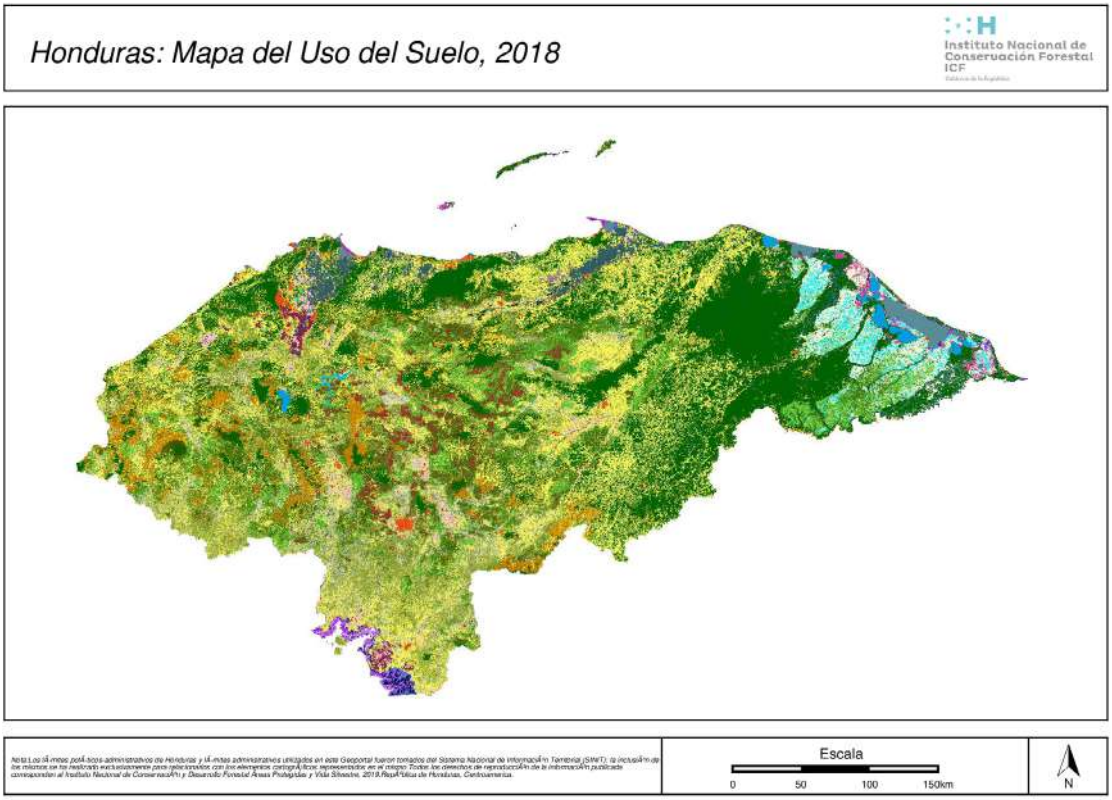


NOTE: Forested areas are highlighted in dark green. Coffee-producing areas are highlighted in brown.

Figure 7

Guatemala: Map of forest cover and land use, 2020

SOURCE: MAGA. 2021. Determinación de la Cobertura Vegetal y Uso de la Tierra a escala 1: 50 000 de la República de Guatemala, año 2020. Guatemala City.



NOTE: Forested Areas are highlighted in dark green; coffee producing areas a shaded in light brown (for mixed agro-forestry systems) and dark brown (for shade-grown coffee systems).

Figure 8
Honduras: Map of forest cover and land use, 2018

SOURCE: SIGMOF. 2023a. Cobertura Forestal y Uso de Suelo. Tegucigalpa. https://sigmof.icf.gob.hn/reportes/cobertura-forestal-y-uso-de-suelo-2/

In Honduras, SIGMOF has produced two phases of satellite maps that demarcate land and forest use: one in 2014 (LANDSAT, 20×20) and 2018 (RapidEye, 10×10; shown in Figure 8), which offer a comprehensive grid of land use, including forest cover. These maps suggest that between 2014 and 2018, the total area cultivated for coffee production grew rapidly from 243 432 to 414 361 ha. Longer term analyses of forest cover are only available using the Forest Resources Assessment, which suggests that total forest cover declined from 6.78 million ha in 2000 to 6.58 million ha in 2010, to 6.36 million ha in 2020 (FAO, 2020b).

Assessing the role of coffee cultivation as a driver in forest loss is complicated by issues of comparability within and across different mapping initiatives, particularly because methodologies have changed between each iteration of the mapping exercises conducted by national institutions. An internal analysis by the FAO team cross-referenced land use data compiled by national mapping initiatives with two sets of data on forest loss: aggregate forest loss as captured by FAO's Forest Resources Assessment Initiative in 2020, and specific areas of forest loss as developed by satellite data from the Hansen Global Forest Change dataset. This comparison allows for an estimation of the percentage of total forest loss that was localized to areas of coffee production as they were identified in the most recent national mapping exercises. The results suggest that within areas that were producing coffee in 2020 in **Guatemala**, approximately 56 900 ha of forest was lost between 2001 and 2020, an equivalent of 8.5 percent of the area where coffee is cultivated and representing 8.3 percent of the total forest loss at the national level during that time. Within areas of coffee production in **Honduras** in 2018, approximately 51 400 ha of forest was lost between 2001 and 2020, an equivalent of 12.4 percent of the coffee-growing area and representing 12.3 percent of total forest loss at the national level during that time. Within the areas where coffee was cultivated in Guatemala in 2020 and in Honduras 2018, the annual share of coffee-growing land where forest loss occurred in 2021 and 2022 has been around 0.5 percent (FAO, 2020a; FAO, 2020b; Hansen *et al*., 2013; MAGA, 2021; SIGMOF, 2023a).

These figures should be interpreted cautiously under two important sets of caveats. First, the data on land use and forest loss are not completely harmonized *vis-à-vis* their methodologies and time frames. Estimates on forest cover loss provided by the Hansen dataset are restricted to 30×30 resolution and may not properly identify certain cases of forest area change. While estimates for forest loss were compared across Guatemala and Honduras using the FAO-FRA, discrepancies exist between these estimates and the estimates collected through national mapping exercises, particularly for Guatemala. Finally, the national land use maps produced by Guatemala in 2020 and Honduras in 2018 are static and pending an update beyond the 2021 cut-off date established by the EUDR. The above analysis therefore does not consider any expansion of coffee cultivation that may have occurred beyond what was captured during the years of analysis for the land use mapping exercises. As such, these calculations are lower-bound estimates with high margins of error.

Second, country-specific characteristics may affect how forest and agricultural areas interact with one another over time, and deforestation is not always a permanent, human-led, or easily delineated process. Interviews with stakeholders in Guatemala and Honduras (In Guatemala: MAGA and INAB; in Honduras, FAO and ICF confirm the perception that coffee partially drives deforestation, but offer three important nuances to characterize any observed trends in land use as they appear in national mapping exercises:

- While coffee is a permanent agroforestry crop, frequent shifts in land use occur alongside changes in costs and commodity prices. In Guatemala, representatives of MAGA and the directory of forestry monitoring at INAB have observed that in upland areas in the south-central part of the country, forest is often converted to cropland for hardier crops with faster returns to cultivation,

such as maize. If coffee prices increase over the course of several consecutive years, this land may then be converted into an agroforestry system. Members of GIMBUT expect to observe deforested land under coffee cultivation even if it was not originally deforested for that explicit purpose (MAGA and INAB, 2023).

- Pests and disease can cause deforestation despite agricultural activity, which complicates the assessments of legality of changes in land use. In Honduras, an epidemic of the Southern pine beetle (gorgoja del pino) has transformed much of the forested landscape in higher-altitude forested areas; ICF estimates that from 2014 to 2020 over 500 000 hectares of natural forest had been either deforested or seriously degraded as a result of the epidemic (ICF, 2020). Both ICF and the FAO office in Honduras note that while specific numbers are not yet available, farmers in upland areas have been observed converting portions of this deforested area to production, including of coffee. In doing so, these farmers do not necessarily perceive themselves as taking part in deforestation or in working deforested land (ICF and FAO, 2023).

- Local and national legal systems are often slow to respond to reports of deforestation that occur in natural forests or protected areas. Neither INAB nor ICF possess the power to criminally charge those who violate the forest law in Guatemala or Honduras; instead, in each country, charges are brought by municipal offices of the Public Prosecutor's Office (Ministerio del Público), and require that INAB, ICF, or the public provide extensive evidence. Slow and uneven enforcement of the forest laws through these charges can complicate efforts on the parts of INAB or ICF to enforce boundaries between productive areas and natural forest (ICF and INAB, 2023).

This exercise highlights the need to develop more recent and comparable estimates of land use patterns, localized forest loss, and national forest resource estimates in the wake of the 2020 cut-off date established by the EUDR. However, the existing evidence implies that within the areas demarcated for coffee production under the latest national maps a large share of the cultivated area would be in compliance with the provisions in EUDR.

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Chapter 3
Key provisions of the EUDR: The due diligence process

The proposal for a Regulation of the European Parliament and of the European Council on "the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010" (henceforth "EUDR") was adopted by the EU Parliament on 19 April 2023[4] and the new regulation entered into force in June 2023.

Given the strong linkages between the expansion of agricultural land use and deforestation and the fact that the European Union is one of the largest importers of agricultural products causing deforestation, EUDR contains rules intended to halt global deforestation and forest degradation through responsible sourcing of agricultural products. EUDR requires that products derived from certain commodities (cattle, cocoa, coffee, oil palm, rubber, soya, and wood), which are placed on the EU market or exported from the European Union, have not caused deforestation or forest degradation during their production. The initial list of products covered by the legislation will be regularly updated.

4 It is important to note that the EUDR forms part of a wider system of international and EU regulations and voluntary standards that aim to reduce deforestation and forest degradation. The existing EU regulation governing business conduct includes the EU Corporate Sustainability Due Diligence (CSDD) and the Corporate Sustainability Reporting Directive (CSRD). International frameworks include the UN Framework Convention on Climate Change – REDD, then REDD+, New York Declaration on Forests (signatories now include over 200 national and local governments, companies, and civil society, community and Indigenous Peoples' organizations) and Forest, Agriculture and Commodity Trade (FACT) Dialogue Roadmap for Action (statement by 27 governments and the European Union, representing the largest producers and consumers of internationally traded agricultural commodities) at COP26.

The rule mandates that the products covered by the legislation can only be placed on the EU market or exported from the European Union if they are:

- deforestation-free: produced on land that has not been subject to deforestation after 31 December 2020; and
- legally produced: produced in accordance with the relevant legislation of the country of production.[5]

To confirm that the products imported satisfy these requirements, operators (importers) are required to undertake a due diligence process and imported products should always be accompanied by a due diligence statement.

3.1 DUE DILIGENCE

The rules require operators (companies that place relevant products on the EU market or export them from the European Union) to undertake a due diligence process with regard to all relevant products procured from each particular supplier. It should ensure with negligible risk that products are "legally produced" and "deforestation-free."

5 The "relevant legislation of the country of production" means the laws applicable in the country of production concerning the legal status of the area of production in terms of: (a) land use rights; (b) environmental protection; (c) forest-related rules, including forest management and biodiversity conservation, where directly related to wood harvesting; (d) third parties' rights; (e) labour rights; (f) human rights protected under international law; (g) the principle of free, prior and informed consent (FPIC), including as set out in the UN Declaration on the Rights of Indigenous Peoples; (h) tax, anti-corruption, trade and customs regulations.

The due diligence systems should be designed to provide access to information about the sources and suppliers of the commodities and products being placed on the market, including information demonstrating that the absence of deforestation and forest degradation and legality requirements are fulfilled, *inter alia*, by identifying the country of production or parts thereof and including the geolocation coordinates of relevant plots of land. Those geolocation coordinates that rely on timing, positioning and/or Earth observation could make use of space data and services delivered under the Union's space programme (European Geostationary Navigation Overlay Service–EGNOS/Galileo and Copernicus). On the basis of that information, operators should carry out a risk assessment. Where a risk is identified, operators should mitigate that risk to achieve no or only a negligible risk. The operator should only be allowed to place relevant products on the market or export them if the operator concludes, after exercising due diligence, that there is no or only a negligible risk that the relevant products do not comply with this regulation.

The rule mandates operators to establish and implement due diligence systems containing three key elements:

1 Information requirements

Operators shall collect information, documents and data which demonstrate that the relevant products comply with EUDR. The information collected and accompanied by evidence shall contain the type of product and quantities to be imported; the country (or region within a country) of production; the geolocation of all plots of land where the commodities and products were produced, as well as the date or time range of production; name, address and email of supplier and "adequately conclusive," and verifiable information that the relevant products are deforestation-free and produced in accordance with the relevant national legislation in the exporting country.

2 Risk assessment

Operators must verify and analyse the information collected to determine if there is a risk of non-compliance with EUDR in products they intend to import. Only if risk assessments reveal no or negligible risk of non-compliance can products be placed on the EU market. The criteria for the risk assessment include: country of production; presence of forests; presence of Indigenous Peoples; consultation with Indigenous Peoples; risk of deforestation or forest degradation; reliability of information and complexity of the supply chain; in particular difficulties in connecting relevant products to the plot of land where these were produced.

Certification or other third-party verified schemes can be used in the risk assessment procedure. They should not, however, substitute the operator's responsibility as regards due diligence.

3 Risk mitigation measures

if a risk assessment reveals a non-compliance risk, operators must adopt risk mitigation procedures and measures before importing the affected products. These procedures may include requesting additional information, conducting independent surveys or audits, and taking other measures related to information requirements. Operators should also have appropriate policies, controls, and procedures in place to effectively mitigate and manage non-compliance risks. These include risk management practices, reporting, record-keeping, internal control, compliance management, and the appointment of a compliance officer and an independent audit function for all non-SME operators. Operators must document their decisions on risk mitigation, review them annually, and provide them to competent authorities upon request, demonstrating how these decisions were made. Mitigation measures may also include supporting the operator's suppliers, in particular smallholders, through capacity building and investments, to reduce risks.

Operators are required to review their due diligence systems at least once a year, shall keep for at least five years all documentation related to due diligence and shall make that documentation available to the competent authorities upon request.

3.2 DUE DILIGENCE STATEMENTS

Operators are responsible for providing the competent authorities in the European Union with diligence statements when importing products covered by EUDR. The legislation adopted by the European Parliament in April 2023 does not yet contain a template for such statements, however upon entry into force of the legislation such templates shall be made available. However, due diligence statements shall be electronically available and transmittable, containing the information set out in the Annex 1.

Given that the responsibility for the due diligence process and the corresponding statement rests with operators (in this case, coffee importers in the European Union), no specific requirements apply directly to coffee growers or exporters in the producing countries.

Nevertheless, in order for operators to be able to undertake the analysis necessary for the due diligence process, they will need to receive quantitative and qualitative information from their suppliers (e.g. trading houses, exporters).

Exemption for SME operators*

Article 4 **Obligations of operators**	SME operators are not required to exercise due diligence products that have already been subject to due diligence and for which due diligence statement has already been submitted. The SME operators shall provide a reference number for these statements upon request.
Article 11 **Risk mitigation**	SME operators are exempt from having internal policies, controls and procedures to mitigate and manage the risks of non-compliance, such as appointment of compliance officer and independent audit function.
Article 12 **Due diligence systems, reporting and record keeping**	SME operators are exempt from annual public reporting, including via the internet, on their due diligence system.

*Additional exemptions apply to SME traders who are companies that sell coffee that is already placed on the EU market (e.g. coffee roasters and retailers). Operators supply traders in the European Union with the relevant products.

Exemption for microenterprises and natural persons

Article 6 **Authorized representatives**	Microenterprises and natural persons may mandate the next operator or trader further down the supply chain that is not a natural person or a microenterprise to act as an authorized representative to submit due diligence statements.

DEFINITION: Micro, small and medium-sized enterprises (SMEs) means micro, small and medium-sized undertakings as defined in Article 3 of Directive 2013/34/EU of the European Parliament and of the Council.[6]

6 EUR-Lex Official Journal of the European Union. 2013. Directive 2013/34/EU of the European Parliament and of the Council. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013L0034

3.3 EU INFORMATION SYSTEM

The European Commission will set up and manage an information system for presenting and accessing the necessary information on relevant products placed on the market. The operators should submit the due diligence statements through the information system which should be accessible to competent authorities and customs authorities. The system should be operational by the end of 2024.

The European Commission plans to produce clear and easy to understand guidelines for the compliance of operators, in particular SMEs, with the requirements of EUDR. Technical assistance and guidance shall take into account the situation of SMEs, including microenterprises, and natural persons, in order to facilitate compliance. For example, the EU authorities can assist with the conversion of data from relevant systems to identify the geolocation in the information system.

1 Checks

Competent authorities in the European Union will be responsible for carrying out checks on operators and traders. These will cover the due diligence systems and the compliance of the relevant products with EUDR.

The checks of the due diligence statements will follow a risk-based approach, with risk criteria including the risk of deforestation associated to relevant commodities in the country of production, the history of non-compliance of operators and traders and any other relevant information available to competent authorities. Specific conditions apply to SMEs.

Penalties for violating the rules established in EUDR include fines, confiscation and temporary exclusion.

2 The benchmarking system

The European Commission will establish a central benchmarking system that will categorize and assign risk ratings – low, standard, or high – for each country (or subnational region) producing the relevant commodities associated with deforestation. This system will guide the required level of due diligence, as simplified due diligence will be allowed for 'low risk' countries. The list of the countries that present a low or high risk shall be published by means of implementing acts to be adopted no later than 30 December 2024.

Countries classified as low risk by the country benchmarking system are subject to the simplified due diligence procedure, meaning that operators are exempted from carrying out risk assessment and risk mitigation on products originating from these countries, as long as they have assessed the complexity of the relevant supply chain and the risk of circumvention or the risk of mixing with products from other origins.

Obligations for national authorities to enforce the regulation and carry out checks will also vary according to the level of risk assigned to the countries of production. This means enhanced scrutiny by the competent authorities for high-risk countries and reduced for low-risk countries. Specifically, annual checks shall be carried out depending on the country category in the benchmarking system: Covering at least 3 percent of the operators (standard risk production area), 1 percent (low risk) or 9 percent (high risk).

The classification of producing countries by the level of risk will be based primarily on the following assessment criteria: (a) rate of deforestation and forest degradation; (b) rate of expansion of agriculture land for commodities

covered by EUDR; and (c) production trends of relevant commodities and of relevant products. However, the European Commission will also take into account the country's nationally determined contribution (NDC), other agreements between the country and the European Union and the existence of national laws against deforestation.

The classification of countries has not yet been published, and it is unknown what level of risk will be attached to countries in Central America.

Entry into force:

- 29 June 2023: entry into force;
- 30 December 2024: entry into application of obligations for operators (30 June 2025 for small enterprises).

3.4 OPERATIONAL GUIDANCE TO OPERATORS (IMPORTERS) AND SUPPLIERS OF COFFEE IN THE ORIGIN COUNTRIES

While the classification of countries according to their level of risk has not yet been published, and the practical aspects of risk assessments to be carried out by the operators will need to be worked out, some initial guidance based on the provisions of EUDR can be outlined. Specifically:

1 Operators (importers)

- assess the requirements for data and information for risk assessment and risk mitigation (e.g. using satellite monitoring tools and field audits);
- carry out a risk assessment to establish whether there is a risk that the relevant commodities and products intended to be placed on or exported from the Union market are non-compliant with the requirements of EUDR;
- establish the appropriate systems to facilitate collection and verification of relevant information (e.g. traceability systems);
- work with farmers and their organizations to develop capacities to comply with national laws, map the supply chain and establish traceability systems.

Although the rules in EUDR apply predominantly to operators (importers), operators will need to rely on information generated within the entire coffee value chain from the origin of production, and the immediate suppliers to importers (that is, exporters) will have a crucial role to play in gathering and sharing such information. Coffee growers, being at the forefront of the efforts to manage agricultural land use sustainably and combat deforestation, are also central to the efforts to establish the deforestation-free status of imported coffee. The following actions would therefore help with securing access to the EU market under EUDR:

2 Suppliers (e.g. cooperatives, traders, exporters)

- strengthen data collection along the supply chain and disclosure to buyers;
- collaborate with buyers on traceability and risk assessment and mitigation;
- collaborate with national authorities on deforestation risk assessment and information systems;
- engage with farmers and local communities on reducing deforestation risks;
- provide technical assistance to supplying farmers on deforestation-free production and management of farm-level information.

3 Coffee growers

- adopt production practices that avoid deforestation and adhere to national laws governing agricultural activities;
- establish geolocation of own coffee farms. For plots above 4 hectares, polygons are required;
- consider registering with available public or industry-led record systems for agricultural producers;
- participate in cooperative or association led initiatives to strengthen transparency and traceability within value chains.

Taking these broad directives as the starting point, the next section explores the existing mechanisms for monitoring the conditions under which coffee is grown and traded domestically in Guatemala and Honduras, and identifies priority actions to enable the coffee sectors in the two countries to adapt to the changing market conditions under EUDR.

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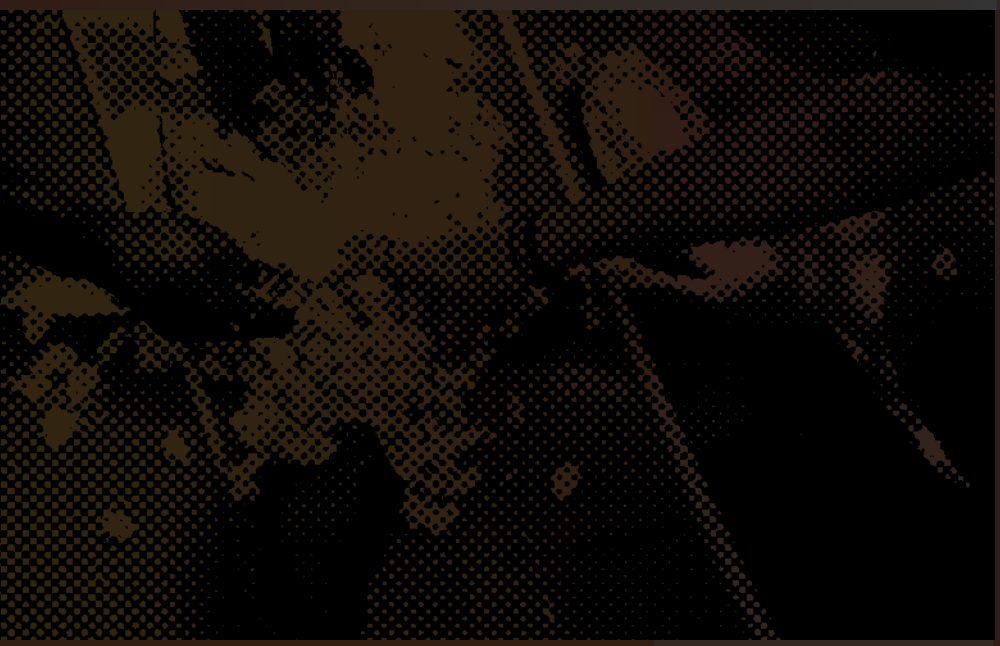

Chapter 4
Stakeholder preparedness in Guatemala and Honduras

This section summarizes the perspectives of key stakeholders in the coffee sectors of Guatemala and Honduras with respect to the EUDR and the challenges associated with conducting due diligence in the supply chain. It focuses on their perceived levels of understanding of the regulation, pre-existing mechanisms for monitoring and compliance, plans for future action, and key gaps in levels or measures of preparation. In doing so, it identifies several case studies that characterize the management structures and responses of commercial operators in the sector. Much of the evidence comes from field interviews conducted in Guatemala and Honduras during May 2023. For each country, stakeholder perceptions are defined first for key actors in the enabling institutional environment, and second, for key actors among producers and companies.

4.1 GUATEMALA

4.1.1 Institutional environment

In Guatemala, the enabling institutional environment for traceability in the coffee sector comprises two sets of institutions: government institutions that implement policies towards and collect information on natural resource use (INAB; MARN; MAGA) and institutions that coordinate policies and commercial activity among producers and private companies (CAMARAGRO; ANACAFE). As the coordinating institution for activity in the coffee sector, ANACAFE is positioned to draw upon resources in the public sector to assist producers, traders and other stakeholders with collecting and managing information that can facilitate the due diligence process in the EUDR. Below, we offer a short outline of these resources and perceived levels of readiness for supporting compliance.

The relevant government agencies: INAB, MARN, and the Ministry of Agriculture (MAGA) – share a close working relationship through the Grupo Interinstitucional de Monitoreo de Bosques y Uso de la Tierra/Interinstitutional Group for Monitoring Forest Cover and Land Use – Guatemala (GIMBOT). The constituent GIMBOT teams within each institution are thus viewed as entry points for understanding how to effectively use land use information to facilitate compliance with regulations against the importation of deforestation-free products. The perceptions and familiarity, existing mechanisms, and challenges identified by these teams are outlined below:

- In terms of perception of the EUDR, government agencies (INAB, MARN, and MAGA) see efforts to prevent natural forest conversion as one output of their overall programmes to effect better land and forest use. Producers in higher-altitude regions make decisions on establishing or removing coffee plantations in line with perceived trend in prices and costs over the course of several planting cycles. In many cases, land may be deforested for the purposes of planting a crop with faster returns (such as maize), to be used as plantation land for coffee when prices improve. In this context, these institutions view their imperative in terms of the promotion of better practices in agroforestry management for the reforestation of degraded land. Any policy aimed at solidifying the boundary between productive land and natural forest would have to consider the incentives that producers face when making decisions regarding agricultural land use.

- In terms of existing mechanisms for monitoring forests and deforestation: GIMBOT has developed a transparent and comprehensive process to validating land use around forested areas. They have published comprehensive maps on forest cover and land use reflecting the state of each in 2003, 2010 (LANDSAT 20×20), 2014, and 2020 (LANDSAT, RapidEye 10×10) (MAGA, 2021). Each constituent institution is responsible for defining different land use in different macro-categories. With respect to coffee production, MAGA validates the relevant satellite information by cross-referencing it with a registry of producers that is maintained and annually updated by ANACAFE, and then by conducing site visits.

- Each institution identified technical and managerial limitations to using their services in new due diligence processes. First, they note that current land use maps do not easily distinguish between natural forest and agroforestry systems, implying that direct, in-person supervision (as has been coordinated between MAGA and ANACAFE) would be needed to verify instances of natural forest conversion. Second, the on-site validation process is limited by the availability of human, technical and financial resources, and the model would have to receive significant investment to be scaled to the level of the sector. Finally, there exists a perceived disconnect between the ability to monitor conversions of natural forest and the speed at which unlawful conversions can be successfully pursued by the Public Prosecutor's Office (Ministerio del Público).

Coordination and implementation of policies and support programmes in the coffee sector occur on two levels. First, the Guatemalan CAMARAGRO is an umbrella organization responsible for coordinating activities among sectoral institutions such as ANACAFE. In this capacity, it reviews and advises on policies and programmes to support the growth of value and exports in major agricultural sectors. Second, ANACAFE, as the institution responsible for implementing policies and support programmes in the coffee sector, coordinates its activities under the umbrella of the CAMARAGRO; particularly with reference to complying with export regulations. ANACAFE offers a range of services and includes on its management committee the major cooperative federations, the Association of Coffee Exporters (ADEC), and a research institution specific to the sector, Centro de Investigaciones en Café – Guatemala (CEDICAFE).

- The level of understanding of the EUDR is strong on the part of the CAMARAGRO, which has already begun an extensive dialogue with the EU delegation to understand how the regulation will be introduced; together, they have identified the palm oil and coffee sectors as those that will require significant steps to enable the sector to supply deforestation-free products to the European Union. The board of directors of ANACAFE has received basic information on the EUDR but has not yet developed a comprehensive action plan to coordinate the responses of exporters and producers. Both institutions view the EUDR as a condition for accessing a lucrative market but emphasize that substitution to other markets (such as those in East Asia and the Middle East) will likely occur alongside efforts towards compliance.

- Both the CAMARAGRO and ANACAFE have identified existing mechanisms that could be adapted to assist importers with undertaking the due diligence process. The palm oil industry in Guatemala has already undergone a systematic process of geo-localization, with information on land use stored for use in due diligence processes, setting a precedent for other sectors. Within the coffee sector, ANACAFE has acted as a strong coordinator for existing mechanisms in traceability and in the promulgation of good land management practices among coffee farmers. It grants export licenses to individual companies and cooperatives of

farmers, publishes guides and resources to facilitate compliance with phytosanitary and certifying standards, and maintains a digital platform (*CoffeeSearch*) to facilitate direct sales to foreign importers (ANACAFÉ, 2022). Simultaneously, it is developing a suite of digital applications that record information on farmers' locations and agroecological characteristics, calculating a carbon balance for their activities.[7] As of mid-2023, approximately 4000 out of the 125 000 registered coffee farmers are piloting this application, using polygonal information on production areas. ANACAFE is currently coordinating with cooperative federations to understand how these tools can be integrated into parallel traceability initiatives for up-scaling to the entire registered population.

- However, the CAMARAGRO and ANACAFE have identified significant gaps to the scaling-up of existing initiatives. A lack of clarity on the procedures and protocols for preparing risk assessments and due diligence statements has prevented the adoption of a unified plan for rolling out cost-effective services for geo-referencing and for utilizing GIMBOT's maps of land use and forest cover. They emphasize that to reach all producers, they must develop a single accessible platform for communicating the requirements from exporters or importers and for collecting the necessary information; the scale of financial resources needed for this is not certain, but likely to exceed what is available from ANACAFE, the Fundación de la Caficultura para el Desarrollo Rural –Guatemala (FUNCAFE) and exporting organizations. Simultaneously, the process of mapping producer needs, recruiting service providers to develop capacities of growers, and communicating with producers would require extensive technical support that goes beyond current staffing capacities.

4.1.2 Commercial organizations and producers

The coffee supply chain in Guatemala is a complex network consisting of 125 000 registered producers, over 350 intermediaries, over 200 cooperatives, and 65 licensed exporting companies. Perceptions and readiness for the EUDR vary with the role of each actor in the supply chain; this section explores these.

As described in Section 2, the coffee sector in Guatemala contains a strong network of export federations and cooperative federations. Federations of exporters include the Guatemalan Association of Exporters (AGEXPORT) and ADEC. The two largest cooperative federations – FEDECOCAGUA and FEDECOVERA – also coordinate the consolidation and sale of coffee for their constituent producers' organizations. These institutions thus carry the potential to facilitate the collection of information needed for operators in the European Union to perform due diligence among their first-level organizations and constituent producers.

- Perceptions of the EUDR were clearest on the sides of ADEC and AGEXPORT, who have entered discussions with both importers and authorities in the European Union. As the primary facilitator of

7 ANACAFÉ – Anatech (Guatemala). 2018. https://www.anacafe.org/coffee-tech/

differentiated and certified coffee exports, AGEXPORT is currently working to understand the extent to which information collected under voluntary certification schemes can be used to enable importers to comply with the EUDR. FEDECOCAGUA and FEDECOVERA have not yet been sensitized to the new regulation, but are also beginning to coordinate the transformation of existing traceability mechanisms.

- Each federation coordinates a pre-existing mechanism of due diligence or traceability for a share of its producers, but these do not cover all producers or all export standards. Primarily a service provider, AGEXPORT conducts trainings and capacity building with farmers to enable them to comply with phytosanitary standards and third-party certification; it is also developing a risk assessment for land degradation and a plan for harmonizing its trainings with those supported by ANACAFE and the cooperative federations. FEDECOVERA oversees a traceability scheme that it implements across 26 coffee-producing cooperatives, centered on registering the productive areas of groups of producers. This registration process results in polygonal information on their land, involves annual site visits and trainings, and cross-references forested areas and the information collected by INAB. In theory, all registered members of FEDECOVERA should be captured in this process, albeit at the communal level. FEDECOCAGUA, as one of the largest federations, has piloted a United States Agency for International Development (USAID)-funded value chains project that has used GIMBOT's maps to cross-reference the productive areas for approximately 12 000 producers (60 percent of the federation's total), made accessible to third-party certifiers.

- Each of these initiatives faces a set of shared limitations. First, they are acknowledged to be costly in terms of financial and technical resources. AGEXPORT's coffee desk asserts that many of its farmers have been operating at losses in recent years, and they perceive market substitution as the main short-term response to the imposition of further due diligence requirements at the farm level. FEDECOCAGUA relies on external funding for traceability, the expiration of which threatens the continuity of their digital platforms. Second, their effectiveness and accessibility are hindered by the fragmentation of policies, platforms and extension services across the sector. The parallel existence of similar tools and services prevents a more efficient scaling of costs; high costs then work to the disadvantage of individual producers.

Two exporting companies – OLAM and Mercon – have provided models for how risk assessments and traceability models can be introduced to the supply chain at the point of export, rather than through federations of domestic actors. In doing so, however, they also demonstrate the risks that an unequal distribution of resources and market power within the value chain could have for low-income producers.

- Both companies possess clear perceptions of the regulation, having anticipated it through early dialogue with authorities and downstream companies in the European Union, and having developed internal planning mechanisms for minimizing social and environmental risks to production. Olam Food Ingredients (OFI) has provided direct feedback to the European Commission during the drafting of the regulation, in part based on their experiences in the region. OFI and Mercon both view the regulation as a condition for accessing the EU market and are structuring the due diligence processes to sell their final products at competitive prices.

- Both companies have partially applied mechanisms for traceability in their supply chains and rely on internal risk assessments to define protocol in their sourcing countries. OFI and Mercon export approximately 30 percent and 25 percent of the coffee that they purchase in Guatemala to markets in the European Union, respectively. OFI utilizes the AtSource platform as a means of certifying best practices for farmers within its supply chain. As part of this process, it has developed a proprietary system of land use monitoring, utilizing layers of satellite imagery to estimate forest cover changes and carbon balances based on polygonal areas of production. Levels of scrutiny for individual farmers depend on the perceived risk of forest loss that this system projects in each zone of production. Through direct sales and formal intermediaries, they then require farmers who sell to the European Union to adhere to training and capacity building regimens that prepare them to be able to improve their practices.

- Mercon, through its Lift programme, has inducted approximately 30 percent of its sourcing farmers in Guatemala into a 3-year curriculum of on-site technical assistance and extension services, the completion of which prepares farmers for almost all forms of third-party certification. Key information about farmers' characteristics, activities, and needs is communicated through a unified digital platform. As part of this process, Mercon cross-references polygonal information on productive areas with data from Global Forest Watch; they then identify farmers who are at risk of deforestation and tailor their curriculum specifically to mitigate these risks.

- These practices reflect a common limitation in the scope to which OFI and Mercon can apply capacity building programmes for farmers with respect to land use: the availability of financial and technical resources. Both companies intend to scale-up their procedures for preparing farmers for third party certification and geographic traceability requirements but face a key constraint in their ability to hire agronomists and technicians who can implement the programmes at the local level. Simultaneously, the share of their farmers that have already matriculated into their capacity building programmes is large enough to satisfy the medium-term requirements of their European buyers under the new regulation. Both companies still rely on formal intermediaries to source up to 50 percent of their coffee; there is potential to implement further

traceability measures through this medium, but no specific action plan exists to do so comprehensively. In this context, reliance on the selective application of corporate resources for traceability may exclude marginal producers whose activity presents the greatest risk of forest conversion.

A small sample of farmers and first-level cooperative organizations demonstrate the potential to develop traceability measures in the absence of support from cooperative federations or exporting companies. However, in doing so, they remain vulnerable to market conditions that ultimately determine choices in production and land management. Two cooperatives: Cooperativa Nueva Esperanza del Bosque, and Unión Cerriteña, operate in the Santa Rosa department of Guatemala. Representing 45 and 26 small producers respectively, they offer post-harvest processing services, consolidation points, and collective direct sales to importers in the United States, Germany, and Italy.

- Both cooperatives have a limited perception of the new regulation and had not received extensive information either from ANACAFE or from their European buyers. However, they possessed a strong line of communication with the local INAB office, through which they coordinated the process of registering parcels of forested land. None of the producers have worked on land that experienced natural forest conversion within the past twenty years, but almost all actively register the location and use of hardwood trees in their agroforestry systems. This process of interaction with INAB sets the context for how they understand the measurement of forests and forest loss, but they acknowledge that both INAB and the local public prosecutor's office lack the personnel to effectively police logging in the area.

- Two sets of pre-existing mechanisms exist for developing traceability measures in each cooperative. First, the cooperatives receive one export license each; they register the geographic information of each participating farmer and then collectively apply for it. This predicates the relationship that they maintain with foreign buyers, and they have basic coordinate-based information on each individual participant available upon request. Second, they participate in a spectrum of information-sharing practices with each foreign buyer: at a minimum, they host in-person site visits to determine the quantity and varieties of coffee that are demanded each year. At a maximum, approximately 50 percent of the members of each cooperative have participated in third-party certification schemes each year, requiring polygonal geographic information and annual updates on agroecological conditions for production.

- These mechanisms present significant limitations for the roll-out of information systems that can document land use. First, the cooperatives' experiences with third-party certifiers have been costly, requiring approximately 14 000 Quetzals (USD 1800) annually per producer. In the past three years, fuel and labour costs have risen significantly, while the price premium in Europe for certified

coffee declined to approximately 15 percent over the price of undifferentiated coffee. As a result, very few cooperative members have maintained their certifications over the past year, instead opting to sell at more competitive prices in the United States. None expressed interest in adopting new information sharing practices unless their cost structures were transparent and were reflected in the price. Second, the technical requirements to be able to provide information for risk assessments as part of the due diligence process required by the EUDR were perceived as prohibitive for the cooperatives, in the absence of further public resources on definitions and extents of forest cover. It is not clear to them how maps of forest cover and land use will be cross-referenced with the information that they provide. In the absence of clear procedures for this process, they have expressed concerns over how their forested land would be classified and monitored as part of the information sharing process.

4.2 HONDURAS

4.2.1 Institutional environment

The enabling institutional environment for the coffee sector consists of three groups of institutions: the institute for Forest Conservation (ICF) as the main implementer of laws governing forest use; line ministries for the design and promulgation of agricultural and natural resource use laws (MiAmbiente and SAG); and the coordinating institutions of the coffee sector (IHCAFE and CONACAFE). As the top-level coordinating institutions for implementing policies and investments in the coffee sector, CONACAFE and IHCAFE are positioned to draw upon resources in the public sector to enable the coffee sector to become more sustainable, comply with national laws and adapt to the evolving demands in the import markets. Below, we offer a short outline of the current state of the systems that can enable streamlining information needed from the sector to comply with the EUDR.

The ICF is the main promulgator of the Forestry Law (Ley Forestal) of 2007, which establishes the norms and conventions for defining, monitoring and managing areas of natural forest in the country. In this capacity, the ICF regulates and controls the use of public and private forested areas, implements land management plans and reforestation projects, and oversees the protocol for managing the timber sector and forested areas within agroforestry systems. At the time of publication, the ICF was not familiar with the specifics of the EUDR and had only collaborated in a limited capacity with IHCAFE to cross-reference the activities of approximately 14 000 farmers with information on forest cover.

However, two existing initiatives within the ICF could enable the sector to provide information on land use and the geolocation of farmers adjacent to forested land. First, the ICF operates the Information System for Forest Management and Monitoring (SIGMOF, 2023b). SIGMOF maintains two phases of satellite maps that demarcate land and forest use: one in 2014 (LANDSAT, 20×20) and 2018 (RapidEye, 10×10), which offer a comprehensive grid of land use, including forest cover. Second, ICF plays a strong coordinating role in facilitating compliance with EU regulations for the importation of sustainably harvested timber. In 2021, the government signed a Voluntary Partnership Agreement (VPA) with the European Union to define the terms for applying

due diligence processes to timber harvesting and exports. In particular, the VPA establishes an assurance system that interfaces with preexisting departmental offices and programmes within the ICF and SERNA (ICF, 2021).

SAG and the Ministry of Environment (MiAmbiente) also carry potential to provide services and support for compliance with the EUDR. Within SAG and MiAmbiente, three institutions hold relevance:

The Servicio Nacional de Sanidad Agropecuaria (SENASA) is deeply familiar with the EUDR as it pertains to coffee exports, having been briefed by the EU delegation in Honduras. Likewise, they have also received external support (primarily from the United States Department of Agriculture [USDA]) to implement phytosanitary compliance processes that could serve as models for streamlining the pathways for coffee production and export, including rudimentary sampling methods for geographic origins. SENASA relies on third parties (such as ICF) to coordinate the referencing of geographic information and has not yet undertaken any systematic review of what is needed to verify the geographic origins of all coffee that passes through intermediary suppliers. However, SENASA is a key participant in two initiatives that may hold elements that can be useful for establishing traceability: first, the World Bank-financed the Rural Competitiveness Project (COMRURAL),[8] through which the institution received support to refine and streamline export certification processes, and second, through the roll-out of digital monitoring tools via the Regional Organization for Agricultural Sanitary Standards (OIRSA – Trazar-Agro).[9]

- The Dirección de Ciencia y Tecnología Agropecuaria (DICTA) is the primary agency for agricultural technology transfer and extension services, and has thus far not been involved in the discussions on EUDR implementation. Its members defer to IHCAFE and SAG for guidance on the implementation of national and international regulations for production. However, they have anticipated participating in a sub-secretarial group for coffee exports; the details on this proposal remain in the early stage.

- SERNA acts as a coordinator for the collection and distribution of laws and information on land and soil use. They are in the process of coordinating the implementation of a comprehensive land and soil mapping program (under the Soil mapping for resilient agrifood systems in Central America and sub-Saharan Africa - Soil Fertility Partnership [SOILFER] partnership) that could be used to validate and enhance the forestry maps that have been developed by the ICF. However, they emphasize that there are disconnects between the availability of land use information, its use by public and private operators in the supply chain, and the legal system (as administered by the Public Prosecutor's Office) that can be used to denounce improper land use practices.

8 Honduras Agricultura y Ganadería-Política de Estado del Sector Agroalimentario de Honduras (PESAH) 2023-2043. https://comrural.hn/

9 Trazar-Agro+. https://trazaragro.oirsa.org/?lang=es-HN

As the coordinating body for policies and investments in the coffee sector, IHCAFE is in the position to better enable compliance with the EUDR, utilizing services that are provided by the above public agencies. However, discussions with the board of directors for IHCAFE (including representatives of CONACAFE, AHPROCAFE, ANACAFEH, UNIOCOOP, ADECAFEH, TOSACEH, and FUNCAFE) show that there are several key limitations to their preparedness for introducing due diligence measures among producers, intermediaries, and exporters:

- First, there is a low level of sensitization that has occurred among the research institutes, trade associations, cooperatives, and exporters that make up the board of the organization. In March-2023, the EU delegation conducted meetings with ANACAFEH and CONACAFE, but had not yet held comprehensive discussions with IHCAFE and ADECAFEH (the federation of exporters) that could clarify the modalities for compliance with the due diligence processes of the EUDR.

- Second, IHCAFE's pre-existing traceability measures are limited in the breadth and depth of information that they collect. IHCAFE maintains a registry that includes locational information for approximately 100 000 coffee producers. However, this information is limited to one coordinate per producer, without accounting for the production of other crops or the potential cultivation of disconnected plots. IHCAFE and ICF confirm that they have collaborated to geo-reference the data of approximately 14 000 farmers using the 2018 forest cover map, and that in theory, approximately 40 percent of the producing population should be able to provide more detailed information as part of the international certifications with which they comply. However, many farmers continue to sell their coffee through formal and informal intermediaries, and there remain approximately 20 000 to 30 000 farmers who are not registered with IHCAFE and have not provided any geographical information at all.

- Third, IHCAFE has not yet developed a comprehensive planning mechanism for rolling out guidelines and resources for a unified due diligence process on the part of exporters and producers' organizations. The participating export federation, ADECAFEH, the predominant trade association, AHPROCAFE, and the union of cooperatives, La Central, each confirmed that they had differing internal procedures for collecting geographic information and for establishing traceability systems, none of which have been extended through all exporting companies or organized groups of farmers. As of May-2023, it is not clear how the planning process will unfold for harmonizing their activities under the umbrella of IHCAFE.

4.2.2 Commercial organizations and producers

As summarized in Section 2, the coffee supply chain in Honduras is structured around a complex system with more than 120 000 small rural producers, at least 1000 formal (and an unknown number of informal) intermediaries, a centralized network of cooperatives and trade associations, and a relatively concentrated market of domestic and foreign exporters. This section summarizes perceptions and levels of readiness across a subset of actors among exporters, producers' organizations, and farmers.

The primary federation of exporters, ADECAFEH, is working with IHCAFE to understand the scope of the EUDR and its implication for continued exports to the European Union.

- Currently, ADECAFEH's members have a mixed perception of the EUDR. Multinational companies such as Mercon and OFI can communicate efficiently with authorities in the European Union to adapt pre-existing due diligence measures, but domestic firms have not received a comprehensive briefing on their role in information collection and risk assessments. The EU delegation in Honduras confirmed that extensive discussions on the operational implications of the EUDR for exporters and ADECAFEH will not occur until Mid-2023 at the earliest.

- As such, pre-existing mechanisms for mapping sourcing and assessing deforestation risks vary between exporters. Exporting members of ADECAFEH maintain their own proprietary systems for assessing environmental risks and for managing traceability data with producers. For the subset of producers that sell differentiated coffee, exporters collect and reference the data that is collected and presented for a necessary certification. This includes detailed information on location and land use, which in theory can be cross-referenced with existing maps on deforestation. However, undifferentiated coffee (comprising almost 60 percent of exports in 2020–2021) carries less stringent requirements under current national law. Exporters are required to collect only rudimentary information (including producer names, quantities, product characteristics) from the intermediaries that sell them undifferentiated coffee. In a chain of two or more intermediaries, it is common for this information to be poorly encoded and communicated; particularly if one or more intermediaries operates informally.

- In this context, a significant gap exists as effective data and information management strategies on land use are lacking. There is a significant producing population that remains separated from exporter-led traceability initiatives because of the anonymity under which intermediaries operate. Intermediaries continue to operate in this environment because of their ability to offer competitive prices (in cash) to risk-averse farmers. Domestic exporters, local chapters of AHPROCAFE, and farmers themselves lack the tools to properly capture and transmit information.

There are cases in which larger domestic exporting cooperatives have proactively enabled their producers to comply with traceability and information-sharing requirements in the context of third-party certification schemes. Café Orgánico Marcala (COMSA) is a company located in the department of La Paz, consisting of 1500 farmers. In the 2020–2021 production period, they exported 105 800 quintals of coffee (3 percent of the national total), over 50 percent of which was sold to countries in the European Union. As both a producer organization and an exporting company, they maintain a linkage between international certifiers and import market requirements, and the capacities of their farmers that require trainings and the dissemination of information on the prerequisites for certification and traceability.

- COMSA has basic knowledge and understanding of the due diligence process required by the EUDR; this has been communicated briefly via focal points in the Latin American and Caribbean Network of Fair Trade (CLAC) and the Spanish Agency for Development Cooperation (AECID). Their perception of land and forest management does not completely align with the preoccupation with natural forest conversion, as almost all of their producers operate on land that has long been converted. Instead, they attempt to promote a set of land and forest management practices that organize farmers into units according to existing landscapes and watershed requirements. An initial impetus for forming the company was to minimize negative spillovers from poor land use across individual producers.

- Existing mechanisms and initiatives to promote due diligence centre mainly on voluntary certification requirements. Approximately 1000 producers operate under a voluntary certification scheme that involves the transmittal of detailed agroecological information and the annual engagement with third party certifiers. The remaining 500 farmers still provide basic geographic information that is stored in computers maintained by COMSA alongside the information required for certification. This process entails site visits and trainings on the part of COMSA on land and water management techniques, emphasizing the registry of all changes made to forested areas and trees in coffee plantations with ICF. Included in their regular reviews and communications of land use practices is an internal evaluation of the risks of improper resource use and a set of mitigation measures meant to address external risks that will affect their producers as a whole. They believe that this risk assessment process can be adapted to the due diligence requirements of the EUDR.

- The primary perceived gaps for complying with new due diligence requirements lie with the systemic unprofitability of coffee production. COMSA notes that there has been a 100 percent increase in labour costs during the past three years, with the current average daily wage rising to HNL 700. This rise is driven by a perceived rural labour shortage and is compounded by rising fuel and fertilizer prices. Simultaneously, existing certification measures offer a modest price premium that varies between 5 percent and

40 percent, with most premia offered at the lower bound. Annual variation in premia often deters risk-averse farmers from paying the annual costs to employing third-party certifiers. In the context of highly variable coffee prices and rising input costs, coffee production has not been an economically or financially profitable activity for many farmers over the past three years. COMSA has not yet published an estimate of the costs to compliance with the EUDR and does not yet understand how costs, risk management practices, and the burden of information sharing will be distributed to producers. They emphasize that on the side of the producer, there is almost no financial space for assuming additional costs.

Figure 9
The global price of coffee

SOURCE: IMF, 2023. The Global Price of Coffee. In: FRED, Federal Reserve Bank of St. Louis. St. Louis. [Cited 05 June 2023]. https://fred.stlouisfed.org/series/PCOFFOTMUSDM

Interviews with 21 producers in the department of La Paz confirmed many of the perceptions and levels of readiness that were communicated by COMSA. Producers represented three cooperatives (CAFESA, COMUCOP, and HONDULENCA) which act as conduits for extension services. On average, each of them produced coffee on approximately 1.8 hectares of land; 18 were independently certified, with certifications primarily given via Rainforest Alliance.

- Each farmer had a varying perception of the requirements of the EUDR. Those who were certified via Rainforest Alliance had received detailed information on the forthcoming rules; independent certifiers spend up to 15 days annually with groups of farmers, collecting information and communicating export requirements. As part of the certification process, farmers have registered specific parcels of productive land, and share an understanding that any production beyond these parcels would be flagged as a significant risk for deforestation. However, non-certified farmers emphasize that no information on changing EU import requirements has reached them, either from intermediaries or their cooperatives. There exists a significant informational gap between those who certify their production and those who do not.

- Existing mechanisms for gathering supply chain information are based solely on pre-existing voluntary certification schemes, which have enabled participants to improve and adapt their collection of information to the needs of importing markets. Both certified and non-certified members have strengthened their ability to comply with requirements via the adoption of land management plans, utilizing services offered at competitive rates via their cooperatives. However, geo-localized information on existing parcels of land only exists at the behest of independent certifiers; none of the producers received financial support from an external party in undertaking this process. In this context, all farmers – certified or not – emphasized that the market contained a glut of intermediaries who were willing to offer cash-based and competitive prices for coffee, differentiated by quality. Adopting and recording good land management practices is not a necessary step to sell coffee at competitive prices.

- As is the case with COMSA, each producer identified significant gaps in their ability to properly react to the new requirements due to the unprofitable nature of coffee production and the availability of competitive intermediaries. Traceability schemes are perceived as costly, and the perceived absence of IHCAFE and SAG-DICTA in the facilitation of traceability does not encourage farmers to pursue such initiatives.

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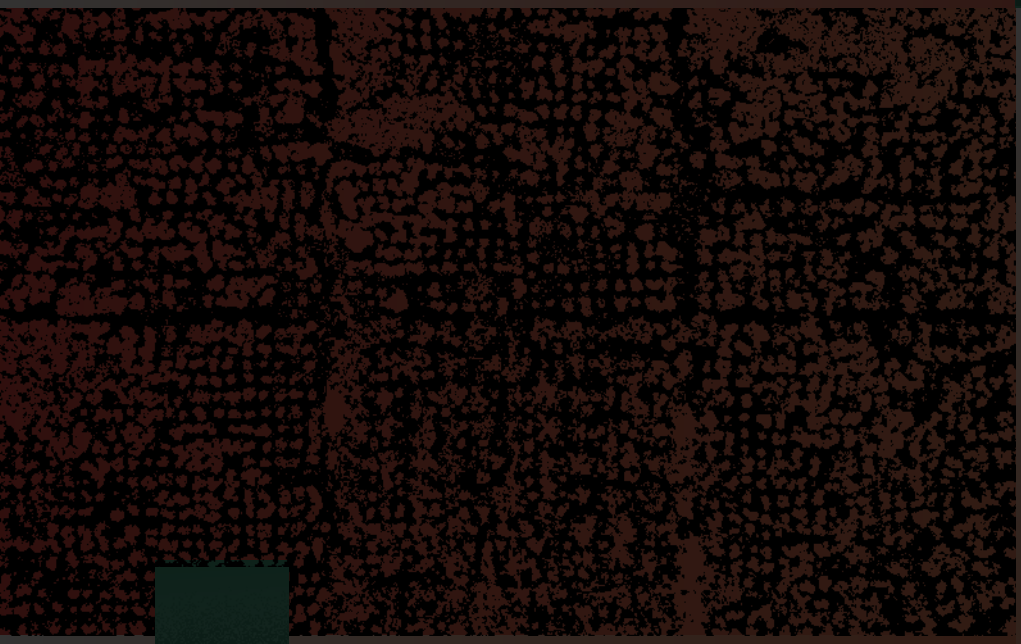

Chapter 5
Sources of information to assess deforestation risks and traceability systems

Coffee importers in the European Union are already preparing for the entry into force of EUDR and are analysing the sources of data that could be used for verifying that the imported coffee is produced legally and is deforestation-free. The major European companies involved in coffee importing, roasting, and retailing include:

- Nestlé is a Swiss multinational food and beverage company. The company owns several coffee brands, including Nescafé, Nespresso, and Starbucks (under license). It is one of the largest coffee importers and roasters globally.
- Jacobs Douwe Egberts (JDE) is a Dutch company active across Europe within a range of coffee brands, including Douwe Egberts, Jacobs, Tassimo, Senseo, and L'OR.
- Lavazza is an Italian coffee company with a long history in the coffee industry. Lavazza is known for its high-quality coffee blends and has a significant market share in Italy and other European countries.
- Tchibo is a German coffee and consumer goods company. Tchibo has a strong market presence in Germany and other European countries. As others, the company offers a wide range of coffee products, including whole beans, ground coffee, and coffee capsules.

These and other major coffee roasting and retail companies in Europe – the operators as per EUDR – typically procure coffee from six to seven trading houses that operate as buyers in the coffee-producing country. Importers (operators) are taking steps to enhance the quality of information about the origins of coffee that they import, working closely with these traders. For example, Illy, one of the market leaders in Italy, follows a sustainable procurement process established by the company, to assess the sustainability of its sourcing relations. It intends to adapt the company's existing processes of sustainability-related risk management and traceability systems to comply with the due diligence requirements in EUDR.

As outlined in Section 2, importers will need to strengthen the way they collect and analyse information regarding the origins of procured coffee. The table below summarizes the information requirements and possible sources of information that can be used in the due diligence process.

Table 4

Types and potential sources of information for operators in the European Union to map the supply chain and assess deforestation risks

Type of information	Potential sources
Name, registered trade name (or trademark), address, the email address of suppliers.	Supplier questionnaires, including their sub-suppliers, previous purchase orders, invoices or contracts.
Geolocation of all plots of land where coffee was produced.	• Geolocation obtained from farmers and possibly managed centrally by cooperatives, associations, traders or national registry systems. • Private or public remote sensing providers.
Verifiable information that the relevant products are deforestation-free and produced in accordance with national legislation.	• Purchase orders and invoices, batch numbers of commodities and products. • On-site visits to production, transformation and storage areas. • Specific tools monitoring and assessing deforestation risk, e.g. Global Forest Watch.
	• Sectoral, association or cooperative-level initiatives or programmes. • Land registries, and other sources of land data such as land matrix or open land contracts. • FAOLEX (a comprehensive legislative and policy database).
Additional information	
Mapping of value chain and commercial transactions.	• Commercial or government traceability systems. • Farm mapping and registration databases. • Supply chain mapping and transparency tools, e.g. Transparency for Sustainable Economies (Trase) and Sustainable Palm Oil Transparency Toolkit (SPOTT).
Information about certification schemes (type of certification, volumes and origins of certified products).	Voluntary certification and legality verification schemes and certified farmers or suppliers.
Average production volumes of farms or supply area, in order to detect possible leakages between production areas with different deforestation risks.	Agriculture and trade statistics from national or international databases.
National production and trade data for coffee to help detect possible unregistered re-exports from a third country.	Agriculture and trade statistics from national or international databases.

SOURCE: Adapted from the OECD-FAO Business Handbook on Deforestation and Due Diligence in Agricultural Supply Chains, 2023.

Traceability systems can be an important tool for boosting transparency about the origin of a product and any transformation or transaction downstream from the production site. The existing traceability systems in agrifood trade typically aim to enhance transparency and compliance, control disease outbreaks, improve product quality, and ensure food safety throughout the supply chain. Some coffee importing companies already apply some elements of a traceability system, with the primary goal to ensure quality and single origin of the green coffee they import and contribute to environmental, economic and social sustainability of the sector. However, these rarely trace all the transactions from farm to importer. For example, Lavazza, one of the leading coffee roasting companies globally, visits coffee growing locations and decides with the major traders what coffee they will procure for any given year, however there is no system that can track the movement of coffee. Rather, the certainty about the origin comes from a decades long business relationship with the trading house.

While the mandatory nature of the EUDR provisions related to imports of deforestation-free products constitutes a major departure from the voluntary sustainability schemes and quality management protocols applied by the coffee industry thus far, the existing systems and relations along the value chain provide a good basis for conducting value chain mapping and risk assessments adapted to the new requirements of EUDR. The ICO and other industry associations are also developing tools and data systems that can be utilized in a coherent manner across countries and companies to foster a unified approach.

Developing traceability systems will be useful for validating the deforestation-free status of coffee imports by documenting physical and commercial movement of coffee, however it requires a good mapping of the value chain, motivated suppliers and the right technology to enable recording and storing of information on transactions. Transparency and verification determine the credibility of traceability systems. It is crucial to have all processes, findings and resulting actions documented systematically (INA, 2023). This may require considerable investment and the cost will inevitably pass on to consumers. The informality of coffee growing and commercialization until the border and the complexity of the supply chain in Honduras and Guatemala are a big limiting factor in this process. As discussed in Section 2, coffee farmers operated at low profit margins, and therefore at the producer and intermediary level, incentives in the form of higher prices should compensate the extra time spent on training, registration, audits, segregated handling and documentation of supply chain transactions.

In Latin America, well-established traceability systems are developed within the livestock sector and the meat industry, where animal disease prevention and control and compliance with food safety norms are paramount. These typically use radio frequency identification tags and official identification numbers to track animals and capture information about animal movements, veterinary treatments, and farm management practices. These represent important tools for tracing the origin of livestock products that could potentially be used for deforestation-related due diligence in this value chain, however these traceability systems are susceptible to diversion of cattle between different farms before they reach the slaughterhouse. A similar concern exists with regard to mixing coffee from multiple origins within the same area in a country or even across borders before the first commercial transaction is registered.

In the coffee sector, traceability solutions with complete information about the commercial transactions and physical movement of traded coffee batches are rare. In some cases, importers or exporters implement projects that aim to develop a traceability system, but these are at their early stages, limited to specific growing regions or producer organizations and can be classified as pilots. The boxes below present two of such cases, both with strong focus on developing the capacity of farmers to improve environmental and social sustainability of the coffee sector.

Box 1

CAPACITY DEVELOPMENT FOR TRACEABILITY: MERCON

The Mercon Coffee Group is a vertically integrated firm that was founded in 1952. They engage in a range of activities across the supply chain, including the sourcing of coffee from Brazil, Guatemala, Honduras, Nicaragua, and Vietnam. To interact with farmers in these countries, Mercon has developed a sustainability framework that includes the LIFT programme: an intensive curriculum of technical assistance, extension services, and certification that focuses on improving social, environmental, and commercial practices at the farm level.

The LIFT programme was started in Nicaragua in 2016 and was rolled out in Guatemala in 2017. As of 2023, approximately 1300 farmers in Guatemala have participated in the programme, representing 30 percent of the producers from which Mercon sources in the country.

- Upon being enrolled into the programme, farmers must comply with Mercon's social policy, which aligns with national laws and labour standards.
- The programme includes a 3-year technical assistance curriculum comprised of trainings around three pillars: sustainable growth, social development, and environmental stewardship.
- Best practices in environmental, productive, and social practices are developed through this curriculum. Mercon maintains a cohort of agronomists who carry out the trainings on-site and who conduct six or more follow-up visits per farmer each year.
- Mercon maintains a digital platform that includes information, training material, and a registry for farm-level characteristics and practices that is used to diagnose key issues and to provide follow-up communication with agronomists.
- Mercon maintains a detailed registry of geographic data on producers, including polygonal information for approximately 80 percent of the enrolled cohort of farmers.
- To mitigate risks of deforestation, Mercon cross-references the geographic information of enrolled farmers with data collected by Global Forest Watch. This allows them to identify farmers who are at a higher risk of infringing on natural forest.
- For producers who are identified as presenting high risks of deforestation, Mercon adapts their curriculum and conducts extensive on-site trainings.
- At the end of the curriculum, farmers are equipped to comply with almost every form of third-party certification.

One example is Selo Verde in Minas Gerais, Brazil, which plays an important role in monitoring compliance with national forest law and would require operational modules to allow tracking commercial transactions in the coffee value chain.

Box 2

SELO VERDE MINAS GERAIS, BRAZIL

The Brazilian programme Selo Verde, or Green Seal, is an environmental certification system developed by the Ministry of Environment. It is designed to promote sustainable practices by recognizing companies that comply with specific environmental criteria related to waste management, water and energy consumption, greenhouse gas emissions, biodiversity conservation, and other types of environmental legislation. Of relevance to EUDR, Brazil is implementing the Environmental Regularization Program/Programa De Regularização Ambiental (PRA): its objective is to promote the regularization of properties and obtain the owner's commitment to maintain, recover or recompose protected areas. PRA hinges on the information available through registrations of rural properties in the Rural Environmental Registry/Cadastro Ambiental Rural (CAR), One of the key challenges in this process is data validation which requires time and resources and is not yet complete for the whole registry.

A beta version of a Selo Verde platform that gathers, stores and extracts geospatial develop information was developed by the State of Minas Gerais to facilitate monitoring of compliance of farmers with environmental regulation (Selo Verde MG). Launched in May 2023, in its initial release version the platform tracks information on the sustainability of coffee production in Minas Gerais. It integrates data from CAR, forest monitoring data from the State Institute of Forests and a high-resolution mapping of the coffee plantations in Minas Gerais using geospatial information from Copernicus earth observation programme. CAR is the main tool at the federal government's disposal for checking compliance with environmental legislation. In 2022, 6.48 million entities were registered in the system, including farms and local communities, with a combined area of 616.3 million hectares, however many of these registries remain unverified.

Selo Verde MG monitors agricultural land use, tracks deforestation and observes adherence by farms registered in CAR to environmental laws such as the Brazilian Forest Code. The Forest Code requires that all privately-owned rural landholdings maintain a certain percentage of native vegetation known as legal reserves, and mandates that Areas of Permanent Preservation (APPs) such as riparian forests along watercourses, steep slopes, mountain tops etc. also be maintained by landowners. Finally, the Forest Code also obliges landholders to register their landholdings in the CAR.

The system provides access, free of charge, to compliance information, while maintaining protection of personal and commercial data. Authorized users can obtain geolocation and property perimeters, maps and satellite images and information about occurrence of deforestation.

Minas Gerais is the biggest coffee-producing region in Brazil, accounting for roughly half of the national production. The platform, which includes all registered coffee plantations, can therefore be used as a valuable source of information to assess the deforestation risks by operators in the European Union, especially if the tool is scaled up at the national level and all the relevant CAR data – at the moment gathered primarily through self-declarations – are verified.

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While the current scope of this tool is limited to land use and production and does not record sales or other transactions throughout the coffee value chain, it is a promising initiative since it is a free, public information system that is open to all coffee growers. The next step is to develop protocols for how to utilize information contained in Selo Verde MG as an input to the due diligence process by importers.

To complement the efforts by the government, the coffee sector is developing actions to enhance the flow of information related to trade. An example of a private sector traceability platform is one developed by the Brazilian Coffee Exporters Council (CECAFE). It represents the Brazilian coffee exporters sector with 122 members that together account for 96 percent of total green coffee exports from Brazil. As with Selo Verde, the CECAFE system is geared towards the implementation of the Brazilian Forest Code and utilizes CAR to obtain information about geolocation of coffee producers and deforestation. It uses artificial intelligence and performs data cross-checks across databases and maps using imaging technology to monitor sustainability of coffee growers by calculating an ESG (Environmental, Social and Governance) indicator for each.

SOURCES: Call with the Organizzazione internazionale italo-latino americana (IILA), CECAFE presentation to the International Coffee Organization (ICO). https://seloverde.meioambiente.mg.gov.br/; https://www.gov.br/pt-br/noticias/agricultura-e-pecuaria/2022/02/brasil-contabiliza-6-48-milhoes-de-cadastros-rurais-por-meio-do-car; http://www.ief.mg.gov.br/selo-verdemg

International organizations are also developing initiatives and projects to assist the sector with incentivizing more sustainable practices and enabling coffee growers to expand access to remunerative foreign markets. One example in support of deforestation-free coffee and cocoa exports from Ecuador is shown below.

Box 3

DEFORESTATION-FREE COFFEE FROM ECUADOR

UNDP is implementing a "deforestation-free coffee" project in Ecuador with funding from the Global Environmental Facility, partnering with Lavazza. The aim of the project is to incentivize the production of sustainable coffee, both from an environmental and social point of view, generating a better distribution of benefits amongst the different stakeholders in the supply chain, while protecting forests and landscapes. UNDP provided technical support for this initiative through Ecuador's PROAmazonia programme, working with Lavazza and local producers to develop a model to deliver premium quality, deforestation-free coffee.

The government counterparts for this initiative are the Ministry of the Environment and Water, MAGA and the Ministry of Trade. The goal was to establish a policy mechanism to stimulate and monitor deforestation-free production, and to certify it using digital technologies to provide assurances to importers. This initiative advances Ecuador's climate mitigation commitments and provides proof of concept for a model of deforestation-free exports.

The project was launched in 2019 to develop deforestation-free supply chains for coffee and cacao, and Lavazza supported the country with defining the standards for deforestation-free coffee, supported growers to improve coffee quality and executed a sale contract to import the first batch of the "deforestation-free" coffee in February 2022.

This pioneer deforestation-free certification scheme uses Ecuador's national forest monitoring system, with carbon assessment methodologies validated by the United Nations Framework Convention on Climate Change (UNFCCC), together with digital traceability systems, like quick response (QR) codes, to verify that production is free from deforestation. The certification is traceable along the commercial chain, from the participating farmers up to the individual consumer.

Ecuador launched its national certification scheme for deforestation-free coffee and cocoa production at the UN Climate Change Conference (COP27) in November 2022, featuring the first samples of certified, commercial, deforestation-free coffee and cocoa. Such a scheme provides a good example of a public-private partnership that aims to reduce the information gaps along the value chain to provide assurance to coffee importers on deforestation-free status of coffee shipments.

SOURCE: Lavazza presentation to the International Coffee Organization (ICO). https://www.undp.org/es/ecuador/noticias/ecuadors-new-deforestation-free-certification-scheme-turns-coffee-and-cocoa-trade-ally-forests-and-climate

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Chapter 6
Summary of challenges and recommendations

This section outlines the key challenges within the coffee production and marketing systems in Guatemala and Honduras that will shape the ability of their coffee exports to adjust to the EUDR, as well as the recommended actions that can be taken by stakeholders to facilitate compliance.

Existing maps of coffee production and datasets on forest loss suggest that zones of coffee production in Guatemala and Honduras contain observable but non-dominant shares of land that has recently undergone deforestation. While further work must be done to verify rates of land use change, these trends suggest that the majority of coffee-producing zones in each country remain broadly compliant with the requirements of the EUDR for now. In this context, public sector and private sector reactions to the EUDR must consider the vulnerable situation of coffee growers and small-scale intermediaries and exporters while maximizing their opportunities to continue exporting to the European Union. The institutional environments in Guatemala and Honduras exhibit several key challenges and limitations to doing so, but also contain important repositories of data and technical capacity that could facilitate low-cost investments towards traceability mechanisms for private sector actors. Identifying key challenges and opportunities across these institutional environments helps to contextualize entry points for further actions and investments in the public and private sectors.

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6.1 KEY CHALLENGES

In **Guatemala**, the coffee sector remains dominated by small producers who face serious financial and technical constraints in maintaining and improving current levels of coffee production. Annual production of coffee has stagnated since the Roya crisis of 2012–2013, and the advanced age structure of many plantations could lead to a crisis in enacting an effective programme for plantation renewal, given its high per-hectare costs and large fluctuations in coffee prices. ANACAFE possesses a strong institutional presence as the developer and promulgator of productive policies in the coffee sector, assisted by the research institute CEDICAFE, and operationalized by the social development institution FUNCAFE. In particular, their efforts have culminated in the development of digital tools for extension and geo-referencing that are being rolled out. The range of avenues for coffee export are more diverse: many exporting companies are active and represented through ADEC; a range of services to promote differentiated coffee exports are offered through AGEXPORT. In addition, producers themselves collectively export, as parts of cooperatives or independently. The web of commercial intermediaries is relatively more transparent and accessible in comparison to Honduras. In this context, the following key challenges emerge:

1. Farmers face fluctuating coffee prices leading to high income variability and generally low profit margins, exacerbated by worsening climactic conditions that threaten to reduce coffee production areas.
2. Farmers also bear high costs *vis-à-vis* engaging with a fragmented market of services and tools that could be used to facilitate information sharing to enable importers to comply with EUDR.
3. Many farmers at the geographic and productive margin do not yet benefit from any of the services and tools that could be provided by the public or private sectors.

4 Producers' organizations and intermediaries have not yet developed financially sustainable models for universalizing tools in information-sharing and traceability.

5 Coordinating institutions in the coffee sector (CAMARAGRO, ANACAFE), agricultural extension (MAGA), and forest and land use monitoring (INAB/GIMBUT) preside over a fragmented range of services and modalities for deepening information-sharing in the coffee growing and export process.

In **Honduras**, the coffee sector is likewise dominated by small producers who face critical financial constraints. Since the Roya crisis of 2012–2013, there has been an extensification and intensification of coffee production across many small producers. It has been difficult to document this process because of the existence of unregistered producers.

CONACAFE acts a coordinating institution for policy, and IHCAFE possesses a strong coordinating role for commercial activity and the provision of key services, but neither has developed a systematic policy for deepening information-sharing in the supply chain. As such, coffee exports continue to flow through a complicated web of formal and informal intermediaries. Certification processes have been developed by ICF in timber, and SENASA in livestock; there is a dedicated service within the Secretariat for Agriculture (SAG-DICTA) that has the potential to promote information-sharing technologies. However, a lack of coordination between these institutions and IHCAFE has also prevented the development of a digital platform that could provide crucial input to a due diligence process (e.g. traceability systems that could be extended to coffee producers). In this context, the following key challenges emerge:

1 Farmers face high production costs and high barriers to accessing key services and tools to facilitate information sharing; sale to informal intermediaries is one of the only competitive methods of remaining profitable.

2 Producers' organizations are largely centralized under AHPROCAFEH and ANACAFEH, while exporters are represented through ADECAFEH. However, these institutions preside over a highly fragmented and informal market of intermediaries, through which information-sharing opportunities have thus been limited.

3 CONACAFE and IHCAFE have not yet developed a plan for facilitating information-sharing across the supply chain; there is a lack of a unified understanding on how to develop digital tools and in-person services for this purpose.

4 There is a lack of information-sharing and coordination between IHCAFE, SAG, SERNA, and ICF in developing cost-effective public services for monitoring land use and for providing extension services and other types of support to coffee sector stakeholders.

In broad terms, any recommended responses to these challenges should consider the fact that as of the most recent national mapping exercises, a relatively small percentage of coffee-producing areas in each country have coincided with recent instances of forest loss. Policymakers must therefore identify and support already-compliant producers by facilitating access to verifiable information about land use and deforestation through public or public-private sector-wide information systems and reducing, through collective action, the burden of generating evidence on individual farmers, traders or exporters. Coffee producers that supply differentiated, premium coffee and in particular those that are certified for sustainable agricultural practices will bear a lower cost associated with EUDR implementation. Smallholder farmers with high degree of informality and undifferentiated coffee will face a higher cost of adapting to the new regulation and will require technical assistance. However, both types of producers on average lack the financial space to invest in new practices, including those associated with traceability. Rising input costs, variable coffee prices, and worsening climactic conditions drive a polycrisis that threatens their operations and may already be driving a shift away from production and the sustainable management of agro-forestry landscapes.

In this context, coordinated investments are needed on the part of the public and private sector actors in both importing and exporting countries that are most equipped to assume and share the costs associated with compliance with the EUDR. To better understand potential avenues for coordination and cost-sharing, this paper identifies a series of immediate actions and lines of investigation that can be undertaken on the parts of (1) private sector actors in each country; (2) importers in the EU market; and (3) policymakers and public service providers at the national level. A full summary of these actions in Guatemala and Honduras can be found in Table ES.1 and Table ES.2.

6.2 PRIVATE SECTOR ACTORS

The private sector actors in Guatemala and Honduras that face the greatest pressure to respond to the requirements of the EUDR are coffee producers, producers' organizations/intermediaries, and exporting companies. Each category of actor possesses a different set of needs, imperatives, and capacities for effecting change within the value chain.

Coffee producers stand as the most vulnerable stakeholder in the changing policy environment for coffee trade with the European Union. Low profitability and a high degree of market uncertainty limits their capacity to independently gather and share the type of information that EU importers will levy upon the coffee supply chains in each country (as outlined in Section 5). Pending any coordination of technical and financial support from the national public sector, importers or development cooperation, the actions required for coffee producers to be an effective part of the EUDR implementation and to ensure continued access to the EU market should focus on the following:

- increasing the connectivity of farmers through access to digital tools and through thorough communication with sectoral institutions such as ANACAFE and IHCAFE. Producers face the imperative of managing two different flows of information at the farm level: first, geolocation information on their areas of production (coordinates for areas of less than 4 hectares, and polygons for areas larger than 4 hectares), and second, documentation on the history of production of that plot. Many poorer producers will experience technical limitations to generating, storing and communicating this information. At the most basic level, policymakers should prioritize increasing digital connectivity for producers at the margin to facilitate further training and capacity building;

- increasing the technical capacity of smallholders to store and share the information needed for EUDR compliance. Both of the above sets of information should be stored digitally, to be communicated upon request by a downstream buyer. At a minimum, geographic information could be referenced using Google Earth and a mapping application on a smart phone; information on the history of land use could be verified with a local municipal office; forested land could be registered and verified with INAB in Guatemala, and ICF in Honduras. Modalities for capacity building and technology integration will depend on how a producer relates to other actors in the supply chain:

    - Producers who are unaffiliated with any producers' organization or certification scheme may require support through local cooperatives or trade associations that offer technical assistance.

    - For producers that are part of a cooperative or trade association, it is imperative that these organizations clarify and improve how information on geolocation and plot history are stored centrally, if at all.

    - Producers who have participated in third-party certification schemes are best benefited by the development of procedures for communicating information included in the certification process to other downstream actors.

    - For producers who are in direct contact with the last point of export within the country, or with the first point of import in the European Union, an important entry point for further support is the importer themselves, communicating the exact requirements of the EUDR and collaborating to collect the information needed for due diligence.

Producers' organizations and intermediaries act as conduits for the flow of information needed for risk assessments required by the EUDR. By centralizing and distributing knowledge and services, they have the potential to increase efficiency, reduce costs for farmers that cannot yet implement practices individually, and act as mechanisms for coordinating the provision of greater support from downstream (in the European Union) and public sector actors.

- First-level cooperatives (and in the case of Honduras, trade associations) face two key imperatives. First, they can facilitate the due diligence process by maintaining internal systems for collecting and storing data on the locations and activities of each member. This may involve one person who annually verifies and updates geolocations and land use, and stores the information digitally so that it can be shared upon request. This is particularly relevant if, as is often the case in Guatemala, coffee is sold by the organization collectively in lieu of individual sales from each member. Second, they could work with producers who are prepared to engage in the information-sharing practices that importers will require. This could imply that producers' organizations work with second-level affiliates (if appropriate) and the relevant source of extension services in the country to provide training and capacity-building.

- For formal intermediaries, it is critical to develop transparent and well-organized management structures to account for the locations and activities of upstream suppliers; this also involves the development of a digital system for storing and transmitting data. While intermediaries historically have not provided key services or technical support to farmers in Guatemala or Honduras, they stand to benefit from better facilitating the flow of information and support from exporters to farmers (and vice versa). To that end, greater transparency in structure and operation are critical for attracting the interest and trust of both parties.

- Second-level cooperatives (such as FEDECOCAGUA and FEDECOVERA in Guatemala, and La Central in Honduras) face the imperative of developing new systems of technical support that can facilitate the above activities for first-level producers' organizations. Historically, they have faced critical financial and technical limitations in doing so. Overcoming financial limitations in the short term may require a shift in the business model of the federation: FEDECOVERA's model serves as a successful example of using differentiated and premium products to subsidize the provision of key services and resources to first-level cooperatives, made more efficient by the communal registration and management of land. Alternatively, FEDECOCAGUA has overcome this limitation by proactively seeking external sources of funding for traceability platforms (most notably from USAID). However, long-term financial and technical solutions may depend on resources provided by top-level coordinating institutions such as IHCAFE and ANACAFE, as well as innovative models in public-private partnerships (PPPs).

As such, these organizations must be prepared to engage with the national authorities to communicate strongly for the needs of their members at the level of the sectoral coordinating institution.

Exporters act as the last point of handover for information that is needed to satisfy the requirements for importation under the EUDR, and therefore face the obligation to streamline the collection and communication of information on the origins of their products.

- All exporters should proactively communicate with their importing partners in the European Union to understand the information needed for risk assessments that they will be carrying out and the ways in which they will request information to undertake due diligence. The modality for requesting and sharing data related to coffee production will become clearer within the 18 months prior to the application of the EUDR and could be accelerated via proactive communication.

- Exporters should undertake three important preparatory exercises in internal management:

    - first: conduct a thorough inventory of existing upstream suppliers, in terms of how they are organized, how many intermediaries they sell through (if any), and what level of capacity they possess to collect and transmit geolocational information. A starting point in this exercise is to identify which actors possess third-party certifications, and which do not.

    - second: take an inventory of any existing registries of farmers or companies as well as risk assessments or mitigation plans as they pertain to land management and the minimization of deforestation.

    - third: develop comprehensive protocols for requesting and verifying geographic information with different types of upstream suppliers. Sourcing directly from farmers requires an understanding of what resources those farmers can access in order to provide localized information and land use history; sourcing from intermediaries requires an assessment of their transparency and organizational capacity to transmit information; sourcing from cooperatives or larger groups of farmers requires an understanding of the services that these groups consolidate and distribute to their members.

6.3 IMPORTERS IN THE EU MARKET

While this report focused on EUDR preparedness in the exporting countries, it is important to recall that the responsibility for undertaking the due diligence process and documenting deforestation-free imports into the European Union rests with operators (importers). As the primary interface between exporting countries and the domestic markets of the European Union, these entities also assume the greatest responsibility for assuming and sharing the costs of the traceability services that are required to comply with the EUDR. The tasks for the coffee importing companies are therefore to:

- adapt the existing risk assessment processes at the company level to meet the new due diligence requirements for deforestation-free imports;
- work closely with suppliers on documenting the origins of coffee they procure and establishing new or strengthening the existing traceability systems;
- nurture long-term relationships based on trust to enhance the flow of information and develop, together with suppliers, workable solutions for obtaining reliable information about the origins of coffee;
- engage proactively with the competent authorities in the European Union to clarify the practical aspects of regulation and related procedures, for example, what adequately constitutes conclusive and verifiable information that the imported coffee is deforestation-free;
- collaborate with other coffee importers to develop common approaches and tools for due diligence. A comprehensive risk-based due diligence framework for companies which source or use products that may be associated with deforestation or forest degradation is outlined in the recent *OECD-FAO Business Handbook on Deforestation* and *Due Diligence in Agricultural Supply Chains* (OECD and FAO, 2023).

6.4 NATIONAL AUTHORITIES

Governments in the exporting countries play a crucial role in addressing deforestation challenges and enabling the coffee sector to be aligned with the requirements in EUDR. Already possessing a strong foundation in data collection and technical capacity, sectoral coordinating institutions in each country are key focal points for the development of low-cost data and services for traceability. In broad terms, public institutions in both countries should develop and manage national forest monitoring systems, cadasters and farm registries that can provide reliable maps and real-time assessments of the scale of deforestation, land use and location of coffee plots. Such systems should be used, as the first line of response to EUDR, to establish and communicate to exporters and the competent agencies in the European Union, the deforestation-free status of all coffee-growing areas deemed compliant.

This will reduce the burden of generating evidence on individual farmers and intermediaries and instill a uniform approach at the national level, benefitting the whole coffee sector (and possibly all commodities affected by EUDR). The structure of the sector in each country presents a unique set of constraints and potential ways forward.

In **Guatemala**, an analysis of the institutional environment of the coffee sector implies the following key recommendations:

1. ANACAFE continues the development of a cost-effective unified platform (including a mobile application) that could facilitate geo-localization and the sharing of information collected at the farm-level;

2. ANACAFE, CEDICAFE, and FUNCAFE collaborate to develop new avenues of financial and technical support that can be used to roll out a unified digital platform for producers and producers' organizations. ANACAFE itself is funded via public resources, including a 1 percent tax on all coffee exports. It is worth exploring what options exist in the public sector for devoting further resources towards the development of new services for coffee producers;

3. ANACAFE collaborates with MAGA (including DICORER, the Directory of Regional Coordination and Rural Extension) and INAB to map out the current state of available resources, to avoid duplications in services, and to collectively decide on the most efficient ways to deliver support. A critical activity here is the mapping of the current phytosanitary certification system for coffee exports, and the potential to incorporate new information sharing practices into pre-existing protocols;

4. ANACAFE, ADEC, and AGEXPORT develop a working relationship centered on facilitating the provision of information-sharing services to exporters, intermediaries, and coffee producers, focusing on lowering costs for producers at the margin;

5. ANACAFE and the CAMARAGRO examine preparatory activities in geolocation and traceability in the African Palm sector as a precedent for complying with the stipulations of the EUDR;

6. GIMBUT collaborates directly with ANACAFE and second-level producers' organizations to deepen the analysis of land use and forest cover and to integrate them into the digital platforms that these organizations are developing.

In **Honduras**, the above analysis of the value chain and institutional environment yields the following key recommendations:

1. IHCAFE coordinates and supports the development of a cost-effective unified digital platform that can be used for geo-localization and information sharing at the level of producers and producers' organizations;
2. IHCAFE and ADECAFEH undertake a comprehensive mapping of the intermediary sector to understand the distribution of formal and informal organizations, as well as the key barriers that exist against greater formalization and transparency;
3. ADECAFEH works with its members and with IHCAFE to coordinate and develop efficient information-sharing systems;
4. IHCAFE develops a more proactive relationship with SAG-SENASA to understand the potential avenues for synergizing deforestation-related information with existing protocols for phytosanitary controls;
5. IHCAFE develops a more proactive relationship with SAG-DICTA to avoid the duplication of extension services and technical support for implementing traceability schemes;
6. that IHCAFE and AHPROCAFE undertake a thorough stock-taking of all capacity building activities and technical support provided by first-level trade associations, as a preliminary step to developing a plan for technology dissemination to coffee producers;
7. IHCAFE and the ICF collaborate to examine the traceability mechanisms in the timber sector as a possible precedent for generating information that importers will need to access to undertake due diligence as part of EUDR requirements.

It is important to note that compliance with EUDR is a collective effort that involves cooperation between coffee producers, cooperatives, traders, exporters, importers as well as governments. By strengthening multi-stakeholder processes and providing adequate technical support and facilitating investments into the sector, the key institutions (national or specific to coffee industry) can contribute to the protection of forests and at the same time enable farmers and small-scale traders that depend on coffee cultivation to remain competitive and derive income from the sector.

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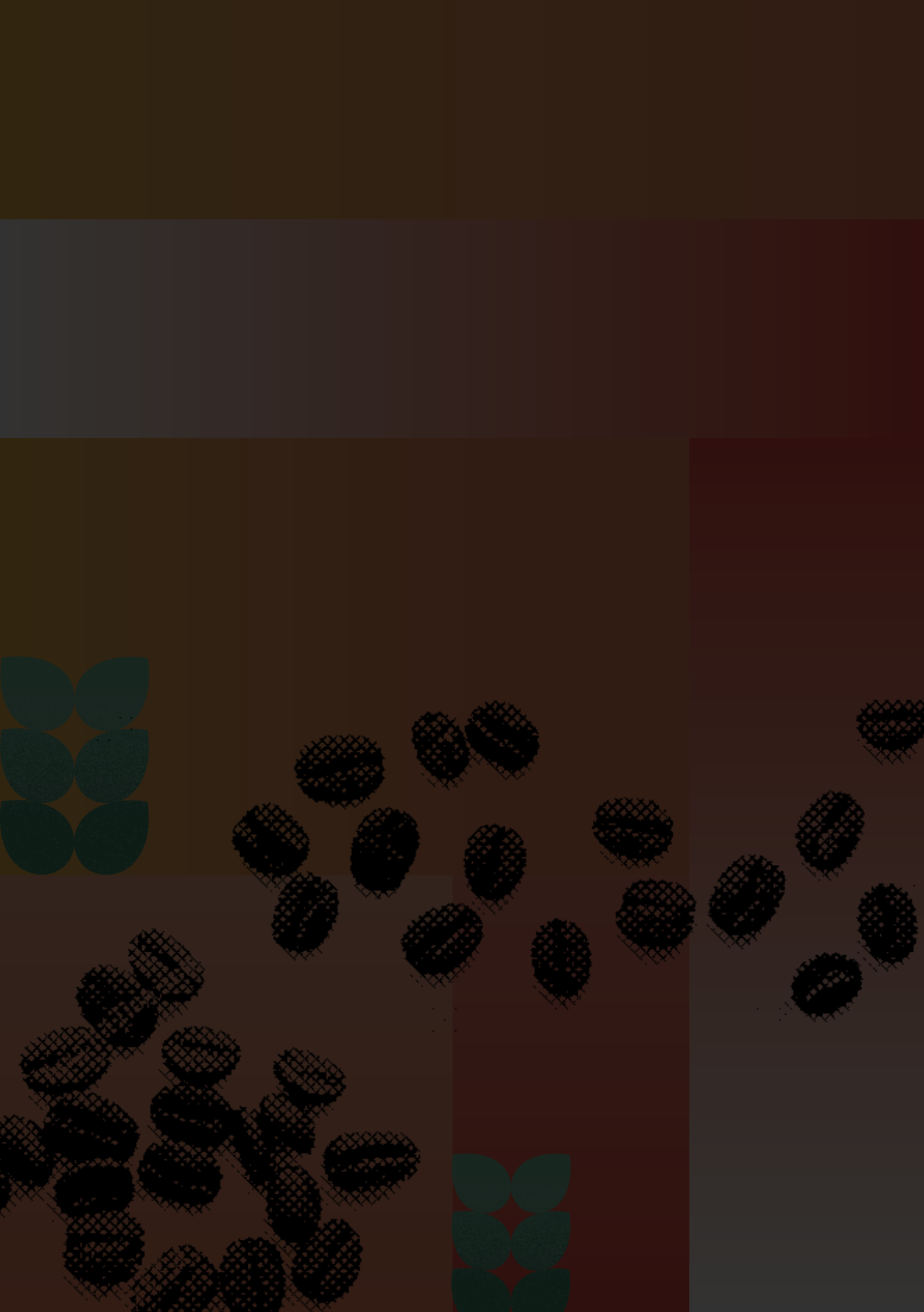

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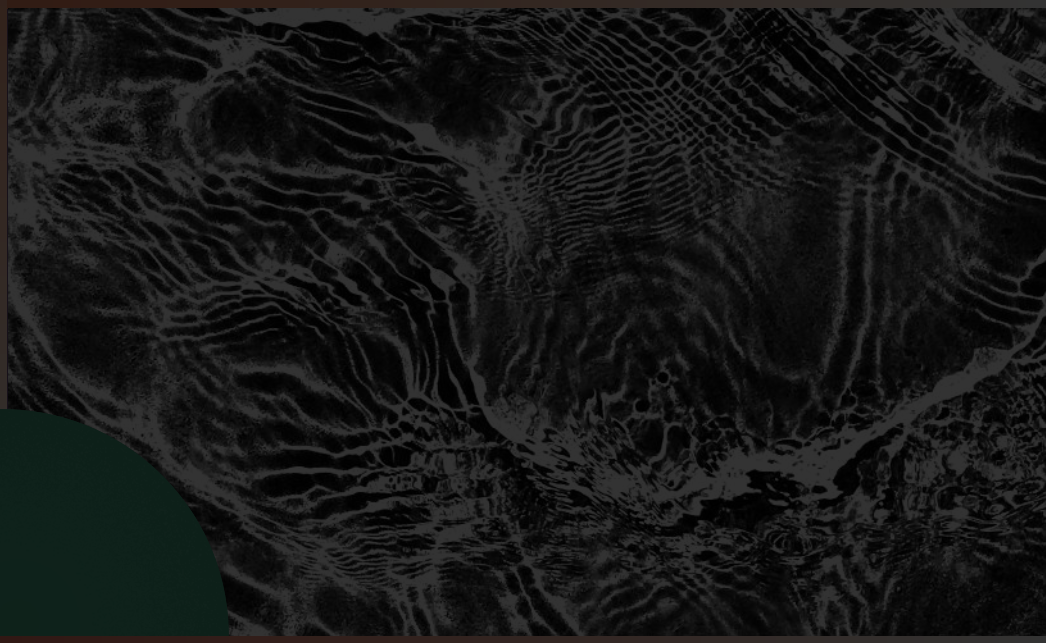

Annexes

Annex I
Information to be contained in the due diligence statement

Information to be contained in the due diligence statement in accordance with Article 4(2) of EUDR:

1 Operator's name, address and, in the event of relevant commodities and relevant products entering or leaving the market, the Economic Operators Registration and Identification number in accordance with Article 9 of Regulation (EU) No 952/2013.

2 Harmonized System code, free-text description, including the trade name as well as, where applicable, the full scientific name, and quantity of the relevant product that the operator intends to place on the market or export. For relevant products entering or leaving the market, the quantity is to be expressed in kilograms of net mass and, where applicable, in the supplementary unit set out in Annex I to Regulation (European Economic Community [EEC]) No 2658/87 against the indicated Harmonized System code or, in all other cases, expressed in net mass specifying a percentage estimate or deviation or, where applicable, volume or number of items. A supplementary unit is applicable where it is defined consistently for all possible subheadings under the Harmonized System code referred to in the due diligence statement.

3 Country of production and the geolocation of all plots of land where the relevant commodities were produced. For relevant products that contain or have been made using cattle, and for such relevant products that have been fed with relevant products, the geolocation shall refer to all the establishments where the cattle were kept. Where the relevant product contains or has been made using commodities produced in different plots of land, the geolocation of all plots of land shall be included in accordance with Article 9(1), point (d).

4 For operators referring to an existing due diligence statement pursuant to Article 4(8) and (9), the reference number of such due diligence statement.

5 The text: "By submitting this due diligence statement the operator confirms that due diligence in accordance with Regulation .../...+ was carried out and that no or only a negligible risk was found that the relevant products do not comply with Article 3, point (a) or (b), of that Regulation." + OJ: Please insert in the text the number of this Regulation.

6 Signature in the following format:
"Signed for and on behalf of, date, name and function, signature:"

Annex II
Schedule of Interviews in Guatemala

Date	Time	Meeting	Location	Participants
15/05	08:00	Briefing: FAO Representative	Oficina FAO (Virtual)	Ricardo Rapallo, FAO Representative, Guatemala.
15/05	09:30	FAO Agroforestry Team	Oficina FAO (Virtual)	Marco Moncayo, Oficial de Políticas FAO-GT. Manuel Rodas, especialista en café, FAO-GT Mario Cano López, coordinador temático, FAO-GT. Erwin Winter, coordinador regional, FAO-GT. Walter Augustín, especialista en organizaciones productivos, FAO-GT. Ligia Castañeda, especalista en alianzas, FAO-GT. Julio Martínez, técnico agrícola, FAO-GT/INECIN. Lisandro Morales, especialista en sistemas anticipatorios/ emergencias, FAO-GT. Ogden Rodas, especialista en sistemas agroforestales, FAO-GT.
15/05	14:00	OLAM	OLAM Offices 13 Calle 3-40 Zona 10 Ed Atlantis, Oficina 1004	Byron Holcomb, Specialty Coffee Manager.
16/05	08:30	Cooperativa Nueva Esperanza del Bosque	Departamento de Santa Rosa	Obed García and farmers of the cooperative Enrique García, miembro Nery Campos, miembro Gladys Campos, miembro Claudia Ramirez, miembro Elsa Campos, miembro Isabel C., miembro Amado C., miembro
16/05	11:30	Cooperativa Agrícola Integral Unión Cerriteña de Caficultores Guatemala (UCCAFE) Cooperative Field Visit	Edificio Municipal, Fraijanes, Departamento de Guatemala	Dina Monterroso, gerente de comercialización. Hector Zentino, gerente general.
16/05	18:30	Associates of IDB LAB	Alta Loma II, Zona 16, Ciudad de Guatemala	Oscar Hernandez, especialista en café, sistemas agroforestales.
17/05	09:00	Asociación Nacional del Café, ANACAFÉ	Edificio ANACAFE 5a Calle 0-50 Guatemala, 5A Calle 0-50, Cdad. de Guatemala 01014	Luisa Fernanda Correa Mancía, Gerente General Mario David Recinos España, Coordinador Fortalecimiento Organizacional Marco Fernando Rodríguez Barco, Especialista GIS Marjorie Bosque Domínguez, Coordinador Departamento Legal Marta Ileana Villagrán Ramírez, Coordinador Gestión Estratégica Yessenia Mariza Navarro Vásquez, Especialista en café Orgánico y Certificaciones Ligia Mariela Meléndez Pérez, Especialista Ambiente, Cambio Climático y Energía Renovable Sulema Marisol Castellanos Sarti, Oficial de Proyectos Mauricio Alejandro Alvarado Rodríguez, Asesor Técnico en Ambiente y Cambio Climático Beatriz Moreno, Coordinador de Proyectos

Date	Time	Meeting	Location	Participants
17/05	15:00	Delegation of the European Union in Costa Rica	Oficina FAO (Virtual)	Jan Bock, GIZ-SV. Kathrin Renner, EEAS-San Jose.
18/05	08:00	Ministerio de Ambiente y Recursos Naturales	Oficina MARN	Kenset Rosales, Jefe del Departamento de Sistemas.
18/05	10:30	AGEXPORT	Oficina AGEXPORT	Yolanda Mayora, Gerente de Sostenibilidad
18/05	14:30	Ministerio de Agricultura, Ganadería y Alimentación (MAGA)	Oficina FAO	Rafael López, DIGEGR-MAGA.
18/05	16:00	Mercon Coffee, Guatemala	Oficina MERCON Zona Pradera Torre I	Adolfo Lugo, Gerente de Origines. Ricardo Morales, Jefe Comercial Guatemala. Erick Moreno, Jefe de asistencia técnica.
19/05	**08:00**	FEDECOVERA	Virtual	Gabriela Delgado Hermenegildo Leal, especialista agroforestal. Hugo Moran, especialista agroforestal. Juan Villatoro, Gerente general.
19/05	09:00	Instituto Nacional de Bosques (INAB)	Lugar: 7ª. Av. 6-80 zona 13	Adelso Revolorio, Dirección de planificación, monitoreo y evaluación forestal. Danger Gómez, Jefe del Departamento GIS. Rosa Sunún – especialista cambio climático Nancy Lopez – especialista registro forestal.
19/05	10:30	Cámara del Agro de Guatemala	Oficina FAO (Virtual)	Carla Caballeros, gerente general. Marlene Mazariegos, Gerente Área Jurídica y Laboral.
19/05	12:00	Briefing: FAO Representative	Oficina FAO	Ricardo Rapallo, FAO. Ligia Castaneda, FAO.

Annex III
Schedule of Interviews in Honduras

Date	Time	Meeting	Location	Participants
08/05	08:00	Representante FAO	Oficina FAO, Tegucigalpa	Fátima Espinal Mercedes, Representante FAO Honduras.
08/05	08:30	Equipo de Apoyo FAO	Oficina FAO, Tegucigalpa	Marla Melendez, FAO. Leopoldo Zuniga, FAO.
08/05	10:30	Dirección de Ciencia y Tecnología Agropecuaria (SAG-DICTA)	Oficina Secretaría de Agricultura y Ganadería - Tegucigalpa	Lindbergh Zavala Santso Cristino Borjun Arturo Galo Ricardo Salgado Arturo Varela Marta López Alba Leticia Ochoa Elizabeth Santacreo
08/05	11:30	Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SAG-SENASA)	Oficina Secretaría de Agricultura y Ganadería - Tegucigalpa	Emilio Aguilar, Director Jorge Ramirez, Director Técnico
08/05	14:30	Heifer International	Oficina de Heifer Interational - Tegucigalpa	Jorge Crúz, gerente de proyectos en café y cacao. Cecilia Pineda, especialista de café. Julio Chinchilla, especialista de café. Kessel Rosales, coordinador de proyectos. Alex Borjas, gerente de proyectos, especialista en trazabilidad.
09/05	09:00	Equipo agroforestal de la FAO	Oficina FAO, Tegucigalpa	Khamila Oreilly Becerra, especialista forestal. Jairon Castellanos, especialista técnica/agroforestal. Omar Orellana Diaz, especialista forestal
09/05	10:30	Secretaria de Estado de Recursos Naturales y Ambiente (SERNA)	Oficina FAO, Tegucigalpa	Scarlett Inestroza, analista ambiental.
09/05	13:00	Instituto Hiondureño de Conservación Forestal (ICF)	Hotel Plaza San Martin - Tegucigalpa	Alejandra Reyes, Jefe Departamento de Areas Protegidas.
10/05	08:00	Banco Mundial Honduras	Oficina del Banco Mundial, Tegucigalpa	Francisco Bueso, responsable en agricultura.

Date	Time	Meeting	Location	Participants
10/05	10:00	Instituto Hondureño del Café (IHCAFE)	Oficina IHCAFE, Tegucigalpa	Alexander Nuñez, IHCAFE Karol Lara, ICF Manfredo Villanueva, AHPROCAFE Carlos Galvez, AHPROCAFE Karen Rico, Serna Victor Barahona, UNIOCOOP Miguel Pan, ADECAFEH Jose Ordona, AHPROCAFE Adilson Avila, IHCAFE Pedro Monoloza, AHPROCAFE Ever Rodriguez, Foro Cafetero Jorge G. L. Ruiz, ANACAFEH Dagoberto Suazo, La Central Danilo Zavala, UNIOCOOP Osmar Matute, IHCAFE Nestor Meneses, IHCAFE Setfany Coca, FCN Javier Flores, FCN Javier Vásquez, FCN Marlon H. Rodríguez, UNIOCOOP
10/05	13:30	RIKOLTO Honduras	Oficina RIKOLTO, Tegucigalpa	Napoleon Molina, gerente de proyectos en café. Francisco Molines, especialista en café y cacao. Raul Pinel, coordinador de proyectos en sistemas alimentarios.
10/05	15:30	Centro Internacional de Agricultura Tropical (CIAT)	Oficina CIAT, dentro de la Oficina Secretaría de Agricultura y Ganadería - Tegucigalpa	Diego Obando, Ingeniero Forestal, Asociado de Investigación. Federico Ceballos, especialista agroforestal.
11/05	10:30	Field Visit: Café Orgánico Marcala Sociedad Anónima (COMSA)	Planta/sitio de exportación COMSA, La Marcala, La Paz	Nery Gonzalez, coordinador de proyectos. Marco Rosano, especialista en exportación. Rommel Meljin, especialista en recursos humanos. Rodolfo Penalva, Gerente general.
11/05	13:00	Field visit: Mancomunidad de Municipios del Centro de la Paz	La Marcala, La Paz	Representatives and farmers of 3 producers' organizations: CAFESA, COMUCOP, HONDULENCA (full list of participants being attached).
12/05	11:00	Delegación de la UE en Honduras	Virtual	Alfredo Gadea, Economic Governance Programme Manager.

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The new EU Regulation for Deforestation-Free Imports (EUDR) stipulates that by 2025, certain commodities may only be imported to the European Union if it can be proven that they have been produced on land that has not been subjected to deforestation or forest degradation. One of these commodities – coffee – is a source of income for farmers in Guatemala and Honduras, representing 14 percent and 52 percent of these countries' agrifood exports respectively. In 2023, one-fifth of all Guatemalan coffee and half of the coffee exported from Honduras was destined to the European Union, and the majority was produced by smallholders whose livelihoods face significant threats from climate change and rising production costs. In this context, the public and private actors who manage and govern the coffee supply chains in these countries must develop cost-effective traceability systems that can help farmers verify the deforestation-free origin of their coffee without worsening the economic pressures that they currently face. This report examines the economic and political structures of the coffee supply chains in Guatemala and Honduras with respect to potential traceability systems that could satisfy the requirements of the EUDR. This publication is part of the Country Investment Highlights series under the FAO Investment Centre's Knowledge for Investment (K4I) programme.

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