

Making strides towards a smarter future

2023 ECOM Cocoa Sustainability Report

Welcome

to ECOM's annual Cocoa Sustainability Report

ECOM is one of the world's largest suppliers of cocoa beans and products to leading chocolate manufacturers and consumer food brands. In 2023, we sourced cocoa from 35 countries around the world, and our products offer options for a range of finished goods, including chocolate, ice cream, fillings, desserts, baked goods, creams, drinks and compound chocolate. Our extensive experience at producer country and along the rest of the supply chain provides us with in-depth knowledge of client needs paired with local insights into the operating context at origin.

ECOM's Smarter Cocoa Charter sets out our commitment to using cocoa trading as a force for good, for both communities and the environment. In our third annual Cocoa Sustainability Report, we share the progress and adjustments¹ we have made on the key performance indicators (KPIs) detailed in the Charter.

This Report covers our global cocoa operation's footprint, including origin sourcing countries, secondary sourcing regions, and our factories and offices, for the calendar year 1 January to 31 December 2023. All the activities reported are those of ECOM's Cocoa division, unless otherwise stated, and 'ECOM Cocoa' and 'ECOM' are used interchangeably throughout. When using 'ECOM Group', we are referring to our global operations and policies covering our Cocoa division, as well as our other commodities and operations.

The programmes, initiatives and actions referred to in this Report were undertaken in collaboration with a range of partners, including donors, clients, non-governmental organisations (NGOs) and issue-specific experts. Where possible, we have credited these partners in our disclosures.

We continue to follow the standards of the Global Reporting Initiative (GRI) and the Sector Standard for Agriculture, Aquaculture, and Fishing. This year, we have increased our transparency, reporting with reference to the GRI Standards at the Group level for the first time, versus for our Cocoa division alone. The GRI content index, as well as further details about ECOM Group's sustainability performance, can be found in our [ECOM Group Sustainability Report](#). External assurance has not been sought for this Report.

All financial figures are reported in US dollars (US\$) unless otherwise stated.

¹ Adjustments are due to the evolution in our thinking around sustainability as we achieve the indicators we set out for ourselves. These changes reflect new conditions and priorities within our sourcing origins and those of our stakeholders.

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1 Introduction

*growing a smarter
future for cocoa*



1.1

A note from our Cocoa CEOs

With a dynamic cocoa market and increasing need for sustainable change, we want to seize this opportunity to create value-led growth and a fair environment for every actor in the supply chain. We firmly believe in cooperation between us all, from farmers to chocolatiers, to support a strong collective vision for the benefit of our beloved industry.

In today's rapidly evolving global landscape, sustainability has become the cornerstone of our corporate strategy. This Report highlights our significant progress, underscoring our commitment to environmental and social stewardship amidst the complexities of modern supply chains. Our achievements not only align with increasing governmental regulations and consumer expectations but also position us as a leader in responsible business practices.

2023 brought its challenges. Not only have there been changes in regulations regarding cocoa, but we have also been faced with some of the biggest deficits of cocoa the market has ever experienced, and even bigger shifts in market prices this has caused. The deficits can be attributed to climate change and other factors such as the cost of production and inputs such as fertiliser, lack of improved material and disease, all of which mean that we have a responsibility to do our part in supporting farmers to build resilience. This responsibility drives our teams in the field, and it is what ensures that we all work towards protecting the planet for our children, their children and all the generations to come.

Our teams have worked towards meeting these challenges with determination and motivation as they continue to grow as innovators. Our Smarter Cocoa Charter has helped us push our limits to understand risks and also the opportunities that exist in our supply chain, as well as set us up for action in the coming years.

We invite you to read about our progress in the coming pages as we take a moment to celebrate our achievements while recognising the work that we still need to do. We cannot do this alone and continue to push for the spirit of partnership and collaboration.

Guus de Gruiter & Nicolas de Wasseige
ECOM Cocoa CEOs



1.2

About ECOM's Cocoa division

Where we operate

ECOM is one of the world's largest cocoa traders and processors, sourcing high-quality beans and products from more than 35 countries. We sell the beans directly to our clients or process them into cocoa mass, butter, cake and powder in our six factories across three continents. As part of the ECOM Group, our Cocoa division can draw on vast experience in agricultural goods.

2200+

Cocoa employees

1000+

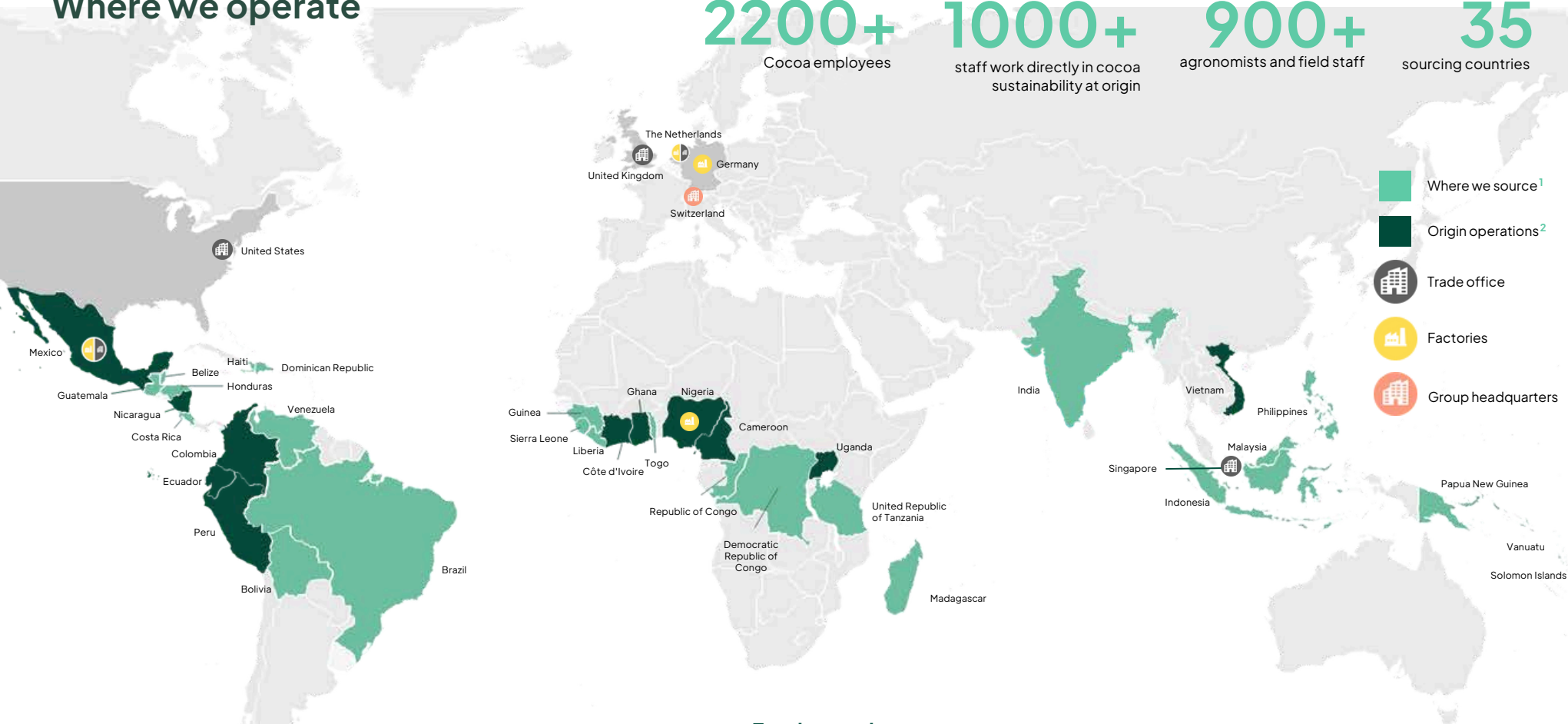
staff work directly in cocoa
sustainability at origin

900+

agronomists and field staff

35

sourcing countries



Total cocoa employees: 2,244

Male: 1,869

Female: 375

Employees by country

Number of employees

Cameroon	252	Indonesia ³	4	Peru	92	United States	10
Colombia	1	Liberia ³	7	Sierra Leone ³	3	Vietnam	3
Côte d'Ivoire	199	Mexico	391	Singapore	5		
Ecuador	62	The Netherlands	200	Switzerland	1		
Germany	144	Nicaragua	4	Uganda	5		
Ghana	666	Nigeria	173	United Kingdom	24		

¹ All origins we source from in our partner-sourced supply chain.

² All origins we source from in our origin-sourced supply chain. This refers to all volume purchased through a locally ECOM-managed operation (covering 11 countries).

³ Project staff, not sourcing staff. In-country sourcing is conducted via third-party exporters and does not fall under scope of origin-sourced operations.

1.3

The ECOM Cocoa value chain

ECOM operates at every stage of the global cocoa value chain, working with many stakeholders across the world to buy, process and trade high-quality, sustainable cocoa beans and products.

We partner with farmers on the ground to develop agricultural techniques designed to improve farm management and increase yields, tailored to their needs and carried out by our field technicians. We also work with farmers' communities to build resilience to climate change and champion social issues such as gender equity.

With our bean processing we continually seek to improve the efficiency and reduce the footprint of our factories. This enables us to supply cocoa beans and products to the world's leading chocolate manufacturers and food companies in more than 75 countries.

You can read more about ECOM's value chain in our [2023 Group Sustainability Report \(page 8\)](#).

Where we engage

We engage in meaningful partnerships across our value chain, including suppliers, clients, civil society, certification and accreditation bodies. We run a variety of programmes aimed at tackling challenges facing our industry, business and stakeholders to create positive impact. We regularly fund and co-fund these projects, as well as receive funding provided by clients and partners.

In 2023, our partners included the following:

- African Cocoa Funds
- Basic Needs
- Beyond Chocolate
- Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF)
- Child Learning and Education Facility (CLEF)
- Cocoa Research Institute of Nigeria (CRIN)
- Corus International Lutheran World Relief (LWR)
- Enveritas
- eProd
- Equal Origins
- European Cocoa Association (ECA)
- Farmerline
- Farm Radio International
- Federation of Cocoa Commerce (FCC)
- German Development Agency (GIZ)
- German Investment Corporation (DEG)
- Harvest Field
- International Cocoa Initiative (ICI)
- KIT Royal Tropical Institute
- Living Income Community of Practice (LICO-P)
- Nature Based Insights
- Netherlands Enterprise Agency (RVO)
- Proforest
- Propellerfish
- PUR Projet
- Rainforest Alliance
- 60 Decibels
- Solidaridad
- The Sustainable Food Lab
- The Sustainable Trade Initiative (IDH)
- Swisscontact
- Swiss Platform for Sustainable Cocoa (SWISSCO)
- Swiss State Secretariat for Economic Affairs (SECO)
- Technoserve
- Tetra Tech
- United Nations Development Programme (UNDP)
- United States Agency for International Development (USAID)
- United States Department of Agriculture (USDA)
- World Cocoa Foundation (WCF)
- World Resources Institute (WRI)

Certifications and verified programmes

We run globally recognised certifications and verified programmes to adopt and apply best practices.

We currently hold the following certifications:

- Fair for Life
- Fairtrade International
- Fairtrade USA
- Organic for EU, National Organic Program and Bio Suisse (CH)
- Rainforest Alliance
- Third-party assessments (e.g. EcoVadis and Sedex)

We also implement the following programmes:

- Cocoa for Good (Hershey's)
- Cocoa Life (Mondelēz)
- Cocoa Trace (Puratos)
- Fazer Cocoa Vision
- Ferrero Farming Values Cocoa Programme
- Lindt Cocoa Farming Programme
- Mars Cocoa for Generations
- Nestlé Cocoa Plan
- Nestlé Income Accelerator
- Smarter Cocoa LATAM



2 Sustainability at ECOM

"We aim to support farmers, their communities and the environment - all of which are intrinsically intertwined. Our Smarter Cocoa Charter acts as our guide, setting out clear pathways for us to take actions that have a positive impact throughout our value chain."

Ariana Carter
Global Cocoa Sustainability Lead



2.1

Our Smarter Cocoa Charter was introduced in our 2021 Cocoa Sustainability Report. It is a unified strategy for all our cocoa sustainability efforts, with clear time-bound targets to direct and track our progress. The Charter contributes to the Group's commitments by driving forward our mission to grow a smarter future for cocoa, increasing both our impact and our accountability.

Key

New

In progress

Completed

IMPROVE

farmer and worker
livelihoods

COMMITMENTS

- Empower farmers and their communities to optimise their profitability and ultimately remove poverty
- Eliminate breaches of human rights through proper risk identification and remediation

KPIs

- Assess the risks of child and forced labour in 100% of ECOM origin-sourced and partner-sourced supply chains by the end of 2023
- Roll out human rights and environmental due diligence process and assess risks for all tier one suppliers by the end of 2025 ⁵
- Train 100% of farmer communities in ECOM origin-sourced supply chains in child protection and the prioritisation of education by the end of 2025 ⁶
- Establish the living income baseline and roadmap to address the identified gap for all origin-sourced supply chains by the end of 2023
- Train 80% of farmers in our ECOM origin-sourced supply chains in improving agricultural practices annually, with an ambition of reaching 200k individual farmers by the end of 2025
- Provide access to farmer-centred services to 100% farmers in our ECOM origin-sourced supply chains by the end of 2025
- Have 100% of ECOM origin-sourced supply chains covered by the Gender Equity Index (GEI) and improvement plans by the end of 2025

PROTECT

and regenerate
nature

- Optimise our natural resource management practices
- Improve farmer resilience to the effects of climate change
- Become a Net-Zero company in our Scope 1, 2 and 3 emissions by 2050

- Carry out deforestation and biodiversity risk assessments in 100% of ECOM origin-sourced supply chains by 2023 to prioritise activities that mitigate deforestation and work towards zero deforestation in the supply chain by the end of 2023
- Identify and prevent deforestation, in respect of land that has been degraded or deforested since 2020, with the implementation of a strong monitoring, risk assessment, due diligence and remediation process in all our supply chains by 2025
- Establish agroforestry models and monitoring systems in 100% of ECOM origin-sourced supply chains by the end of 2023
- Carry out country-level climate change risk assessments in all cocoa origins by the end of 2023
- Establish a carbon reduction roadmap for cocoa by the end of 2022
- Quantify greenhouse gas (GHG) emissions for Scope 1 (direct operations), 2 (purchased energy) and 3 (indirect impacts) in our operations and supply chains by the end of 2022 ⁷
- Achieve Net Zero emissions in our entire value chain by 2050 following the Science Based Targets initiative (SBTi)
- Train 100% of farmers in climate-smart agriculture in ECOM origin-sourced supply chains identified as being at high risk of negative impacts from climate change by the end of 2025

MANAGE

change through
transparency and traceability

- Ensure transparency and responsibility in our supply chains

- Achieve 100% traceability to farmer organisation/community for all beans purchased through ECOM origin-sourced supply chains by the end of 2023
- Achieve 100% traceability to farm level for all beans and products by the end of 2025 ⁸
- Ensure 100% of beans purchased through ECOM origin-sourced supply chains are sustainable by the end of 2025 ⁹

⁵ This is an evolution of our previous KPI "commitment to implement monitoring and remediation systems for ECOM origin-sourced and partner-sourced supply chains at high risk of child labour", as justified in this report.

⁶ Likely to evolve in the future.

⁷ Not included in this report. Read more in our 2022 Cocoa Sustainability Report (page 39).

⁸ This is an evolution of our previous KPI "Achieve 100% traceability to farmer organisation/community for all beans purchased through ECOM partner-sourced supply chains by the end of 2025" as justified in this report.

⁹ Likely to evolve in the future.

2.2

What sustainability means to us

Throughout ECOM's long history as a merchant, innovation and permanence have been key to our success. Our decision making has always been driven by the central tenet of investing in long-term relationships that create value for the company, clients and, most importantly, our suppliers. As our knowledge and experiences have deepened, we have worked to refine our approach to conducting business responsibly and fostering mutually beneficial partnerships across our value chain.

Today, our sustainability team is the largest team in ECOM's operations. In parallel, over 85% of the cocoa teams at ECOM are based at origin. We derive a lot of pride from that fact. We rely on these colleagues to help us understand what each farmer needs to continue to do business with us in a way that is sustainable for them.

Over the last few years, the focus of sustainable premium programmes has shifted away from innovation towards meeting minimum requirements of compliance. This is due to consumers wanting more information on where their food comes from and governments responding by insisting on good business practices through regulation. Regulation requires our clients and ourselves to provide assurances around production practices, and, while not perfect and potentially difficult to implement, it is a welcome change that responsibly produced and traded cocoa is becoming the norm, rather than the exception. However, we strongly believe that innovation needs to continue to be at the forefront of change and we will strive towards leveraging our experience and knowledge to make sure sustainability does not become synonymous with compliance, but rather continues to go beyond.

At the time of writing, we have been experiencing unprecedentedly high prices in the cocoa markets. Despite the elevated market prices, many farmers continue to grapple with low incomes and uncertain futures. This paradox stems from the complex dynamics of the cocoa supply chain, where the benefits of high prices are often unevenly distributed, leaving farmers disproportionately impacted by external factors beyond their control.

This movement and some of the fundamentals in the market that caused it further strengthen the idea that sustainability should be at the core of everything we do. Climate change and other global factors have negatively impacted production in the two largest producing countries, making an already vulnerable population of farmers potentially even more so. In these regions, high prices alone cannot compensate for the lack of cocoa availability. Working towards sustainability for these farmers and the environments in which they work has never been more important. We must continue to collaborate with our partners to make sure regulation works in favour of sustainability and does not become an excuse for exclusion.

Through our work in the field and our efforts to understand drivers of change, our Smarter Cocoa Charter is ever evolving. We are confident that our commitment to a smarter future for cocoa will result in better conversations and better business every day.

Pamela Schreier, Global Head of Cocoa Sustainability



We are confident that our commitment to a smarter future for cocoa will result in better conversations and better business every day.

2023 highlights

100%

of sourcing countries assessed for contextual risks of child and forced labour

93%

of our origin-sourced cocoa supply chain is sustainable

Country-wide climate change risk assessments carried out in all origin-sourced countries

98%

of farmers in the origin-sourced supply chain had access to farmer-centred services

90%

of farms polygons mapped in the origin-sourced supply chain

80%

of farmers in the origin-sourced supply chain trained in improving agricultural practices

18%

female farmers in the origin-sourced supply chain

739,398

improved variety cocoa seedlings distributed

100%

of the origin-sourced supply chain was covered by a deforestation risk assessment

35%

of farmers across all the origin-sourced supply chain trained in climate-smart agriculture

52%

of farmers in the origin-sourced supply chain trained in agroforestry

Improve farmer and worker livelihoods
Manage change through transparency
Protect and regenerate nature



2.3

Materiality update

We conducted a comprehensive Group-wide materiality assessment in 2019. The priority issues identified were used to develop the Smarter Cocoa Charter.

In recognition of the evolving nature of sustainability topics and the guidance from regulations and best practice reporting frameworks such as the EU Corporate Sustainability Reporting Directive (CSRD) and GRI, we re-evaluated our material topics in 2023. We did this by applying the principles of double materiality, which cover both financial and impact materiality.

In 2024, we will be conducting a full double materiality assessment aligned with the EU CSRD European Sustainability Reporting Standard (ESRS). The process will involve identifying and engaging with all our key stakeholders as well as conducting a more comprehensive analysis and scoring process aligned to the requirements of the standards.

Read more about our recent materiality assessment in the [ECOM Group Sustainability Report \(page 12\)](#).

What this means for ECOM Cocoa

The outcome of the materiality assessment is reflective of the upcoming European Union Deforestation Regulation (EUDR), which comes into force on 31 December 2024. EUDR presents both challenges and opportunities for ECOM and our stakeholders, which is why deforestation and land use emerged as high-priority topics.

Regenerative agriculture has been added as a new topic and covers a number of issues previously listed separately, such as water stewardship, soil management, agroforestry and biodiversity conservation.

Our Smarter Cocoa Charter commitments and KPIs have been informed by the topics identified by our stakeholders as being the most material to our business. Our KPIs were designed to deliver impact against our most material topics. We continue to assess their impact and relevance, and intend to review these in line with the results of the full double materiality assessment.



2.4

Future-fit Cocoa KPIs

ECOM Cocoa employs a series of KPIs in our Smarter Cocoa Charter that align with our Group Sustainability Strategy. These have guided our efforts on the ground and in our global offices since its inception.

Since the introduction of our KPIs in 2021, we have made strong progress against them thanks to the dedication and efforts of our teams, suppliers, clients and partners across the world. We are proud to have already achieved all of our targets that were due to be completed at the end of 2023.

However, it is important to take into consideration the changes in material topics as well as the realities in our sourcing origins to reach a truly sustainable supply chain. Our objective with this Report is to transparently communicate our learning and showcase our efforts in addressing these challenges.

Based on the learning, expertise and evolving priorities identified in our recent double materiality assessment, we have revised and updated some of our KPIs to reflect these changes and achieve the highest potential impact on the ground. Now that we have a clearer understanding of the issues and how to tackle them, we are beginning our transition from assessing risks and building roadmaps towards implementation. We are also reviewing some of our key definitions, including what 'sustainable' cocoa means for us.

The details of these revisions are outlined throughout this Report.



2.5

Case studies overview

[Read more](#)

New ways to tackle child labour in Côte d'Ivoire

Better understanding the causes of and solutions for child labour

[Read more](#)

Lead For Ghana – improving education in cocoa-growing communities

Increasing access to high-quality education for young people

[Read more](#)

Improving farmer income and resilience

Helping farmers diversify their income streams

[Read more](#)

Working towards gender equity in Ghana

Providing skills and opportunities to empower woman and young people

[Read more](#)

Protecting land tenure rights in Côte d'Ivoire

Providing farmers with proof of land ownership

[Read more](#)

Developing ERDA, our deforestation analysis tool

Measuring historical deforestation more precisely

[Read more](#)

ECOM's carbon calculator

Measuring our GHG emissions more accurately

[Read more](#)

Using first-mile technology to improve data capture

Applying technology to improve traceability at farm level

3 Improving farmer and worker livelihoods



"By taking action to address the root causes of issues that affect people, we hope to make a real impact for good, helping individuals and communities to be more resilient and to prosper."

Emmanuel Baffoe-Bonnie
Assistant General Manager, SMS Ghana

3.1

Improving farmer and worker livelihoods: Overview

Our focus

Our focus at ECOM is to ensure that the farmers we work with, their families, communities and labourers see cocoa as a sustainable business that they want to invest in. These farming communities often grapple with multifaceted challenges that extend beyond environmental factors. Farmers, and other stakeholders along the supply chain, face challenges such as lack of economic opportunities, pervasive poverty, limited access to essential services and conflict that are often intertwined with social obstacles such as gender inequality and child labour. By collecting and analysing data to better understand contexts and providing solutions that address these difficulties, we aim to build farmer resilience and increase productivity, which is particularly relevant in today's cocoa climate.

By applying holistic approaches that consider the relationship between human rights, gender and economic resilience, we can implement strategies that improve child wellbeing and the prosperity of rural cocoa-growing communities. For example, this could be by facilitating the formation of women's farmer groups and providing them with resources, such as access to finance, agricultural training, and land ownership rights to enhance their economic independence and decision-making power within their communities. Read more about our work to improve farmer and worker livelihoods in our **ECOM Group Sustainability Report on page 16**.

Our commitments

- Empowering farmers, workers and their communities to optimise their profitability and ultimately remove poverty
- Eliminating breaches of human rights through proper risk identification and remediation

Our 2023 KPIs

KPIs	Status
Assess the risks of child and forced labour in 100% of ECOM origin-sourced and partner-sourced supply chains by the end of 2023	Completed
Establish the living income baseline and roadmap to address the identified gap for all origin-sourced supply chains by the end of 2023	Completed
Train 80% of farmers in our ECOM origin-sourced supply chains in improving agricultural practices annually, with an ambition of reaching 200k individual farmers by the end of 2023	Completed

See our full list of KPIs [here](#).

3.2

Child and forced labour

ECOM Group has zero tolerance for modern slavery within the organisation and its supply chains. Our Smarter Cocoa Charter sets goals and targets to address the challenges faced by the cocoa industry and improve conditions for children and adults that are at potential risk.

Addressing human rights in a manner that promotes both environmental and social benefits not only aligns with our and our peers' duty to source responsibly, but also brings about long-term practical advantages for the cocoa supply chain. This evolution in the cocoa industry represents an opportunity to drive positive impacts for suppliers and cocoa communities, while delivering responsible and high-quality cocoa for markets.

Unfortunately, even with increased industry efforts, child labour in the cocoa industry has increased by 14% over the past decade,¹⁰ meaning that the root causes, of which the dominant but not exclusive one is poverty, have not been adequately addressed.

In Côte d'Ivoire and Ghana, an estimated 1.56 million children aged 5 to 17 are involved in cocoa-related child labour.¹¹ Forced labour is far less prevalent, though its impacts can be more serious. According to estimates by the Walk Free Foundation, forced labour affects less than 1% of children working in cocoa-growing areas in Côte d'Ivoire and Ghana, and less than 0.4% of adults working in cocoa in these countries.¹²

The following characteristics of agricultural commodity supply chains bring higher levels of risk:

- Exploitative labour practices (i.e. regulations are weak or poorly enforced)
- Highly competitive industries with low margins
- Limited access to hired labour or dependence on migrant labour
- Seasonal or short product life-cycles
- Insecure employment contracts
- Occupational health and safety hazards (e.g. manual harvesting and maintenance of crops)
- Limited access to labour rights protections (i.e. limited awareness of their rights, lack of trade unions or labour organisations)
- Lack of supply chain transparency
- Lack of access to quality schools

These risks are highly contextual, and a commodity may be high risk in one country and low risk in another. Alternatively, two commodities in the same country may have different risk profiles, where one is high risk and the other is low risk.¹³

Addressing labour rights risks in agriculture, for children and adults, is crucial for ensuring sustainable and ethical supply chains, protecting workers' rights and mitigating human rights risks that ECOM faces.

ECOM's forced labour mitigation relies on community grievance mechanisms and education has shown them to be effective tools to reduce risk.¹⁴ However, the number of cases identified through these processes suggest that additional efforts would result in a more robust process – ECOM is therefore working on developments within cooperatives in Côte d'Ivoire and in the supply chain in Ghana.¹⁵

Within the origin-sourced supply chains, our Child Labour Monitoring and Remediation System (CLMRS) is currently the foundation of child protection programmes. It is a trusted system allowing for the identification and monitoring of child labour incidences, and reducing the cases found through that monitoring.

In 2023, ECOM's CLMRS enabled the monitoring of over 139,000 children across various regions. Through these efforts, the company identified and addressed more than 17,000 cases of child labour. The breakdown includes 13,090 cases in Côte d'Ivoire, 4,222 cases in Ghana, 134 cases in Cameroon, and 31 cases in Nigeria. This comprehensive monitoring and remediation process underscores our commitment to combating the persistent issue of child labour in cocoa-growing communities.

Child and forced labour are systemic issues, and resource-intensive interventions targeted at a small group level (i.e. farm-level approaches) are a stepping stone toward multi-stakeholder, system-oriented strategies that can drive change at scale. One way to do this is through collaboration with our suppliers. In 2023, we conducted a supplier self-assessment for our commodity suppliers in the partner-sourced supply chain. Read more in the **Traceability and transparency chapter**.

Read more about our approach to managing child and forced labour in our **2022 ECOM Cocoa Sustainability Report (pages 25–26)** and our **2023 ECOM Group Sustainability Report (pages 28–30)**.

¹⁰ Chocolate Scorecard <https://www.chocolatescorecard.com/>

¹¹ ICI <https://www.cocoainitiative.org/issues/child-labour-cocoa>

¹² ICI <https://www.cocoainitiative.org/issues/forced-labour-cocoa>

¹³ Rainforest Alliance (2021), Child Labor and Forced Labor Sectoral Risk Maps Guidance Briefing and Methods Note. <https://www.rainforest-alliance.org/wp-content/uploads/2021/07/Guidance-and-Methods-for-Child-Labor-and-Forced-Labor-Sectoral-Risk-Maps.pdf>

¹⁴ Ethical Trading Initiative <https://www.ethicaltrade.org/what-we-do/eti-initiatives/grievance-mechanisms-agriculture>

¹⁵ It is important to note that these identification processes, such as formal complaints and individual household monitoring systems, have limitations in their ability to prevent human rights abuses.

3.3

Progress against our KPIs

Assessing the risks of child and forced labour

- **KPI:** Assess the risks of child and forced labour in 100% of ECOM's origin-sourced and partner-sourced supply chains by the end of 2023
- **Status:** Completed

We successfully completed this KPI in 2023 by carrying out a desk-based risk assessment covering all 35 sourcing countries from both our origin and partner-sourced operations.¹⁶ We are using this information to design strategic interventions to prevent the risk of child labour and forced labour in our cocoa supply chain.

These findings will be used as part of the contextual risk assessment in our due diligence efforts to identify where the impact of ECOM's operations is at risk of being linked to breaches in human and labour rights, and where we can work together with our suppliers and farmers to prevent and mitigate these cases. For more information on how we conduct due diligence, read ECOM's [Supply Chain Due Diligence Policy](#).

Results

ECOM identified and used three risk maps specifically focused on child and forced labour risks from trusted organisations. These risk maps collate country-level data on different commodities and countries. The desk-based study relied on 42 indicators identified using The Fairtrade Risk Map,¹⁷ Verité's Responsible Sourcing Tool¹⁸ and Rainforest Alliance¹⁹ Risk Map.

Some of the indicators only have data for part of ECOM's sourcing countries. The team was limited by the available indicators per country and therefore had some countries with higher numbers of indicators and some with significantly fewer.²⁰ This was taken into account in the analysis.

As our Supply Chain Due Diligence policy outlines, actions taken to address the risks are based on the severity and likelihood of the risk materialising as per Organisation for Economic Co-operation and Development (OECD) Due Diligence guidance. The highest-risk countries irrespective of sourcing volume are: The Democratic Republic of Congo, Venezuela, The Republic of Congo, Nigeria and Guinea.

We want to emphasise that the priority ranking is intended to illustrate countries where there is a potential risk of forced labour and/or child labour. It does not present an exhaustive or determinative list of all indicators capturing all abuses that can occur in ranked countries. If a country or sector has a low-risk designation, this does not mean zero cases of child labour or forced labour occur there, but rather that the structural and inherent risks can be lower.

Given the challenging nature of studying labour rights abuses, particularly abuses such as forced labour or human trafficking, it is important to consider that gaps in country-based data may reflect a lack of authoritative research rather than lack of risk. Ultimately, we hope to expand the risk assessment to incorporate the prevalence and incidences directly from our supply chain. This will empower ECOM to account for the realities of the specific supply chain and tailor interventions accordingly. To do so, we will collaborate with external partners who have the expertise and resources to help mitigate child labour and forced labour within our supply chain and the communities around it.²¹



¹⁶ ECOM's origin-sourced supply chain refers to all cocoa procurement operations at producer country, whereas the partner-sourced supply chains are all indirectly sourced cocoa via international trade desks.

¹⁷ Fairtrade (2023). Fairtrade Risk Map. <https://riskmap.fairtrade.net/about>

¹⁸ Verité (2023). Responsible Sourcing Tool. <https://www.responsiblesourcingtool.org/>

¹⁹ Rainforest Alliance (2023). Using Risk Maps to Protect Human Rights. Accessed June 2023: <https://www.rainforest-alliance.org/in-the-field/manage-risk-with-the-rainforest-alliance-child-labor-and-forced-labor-sectoral-risk-maps/>

²⁰ The findings are neither comprehensive nor conclusive. Neither ECOM nor the map creators verified the external data that was used as part of this risk assessment. However, the data comes from very trustworthy sources, and most indicators coincide with each other, which increases the confidence level.

²¹ Kristy Leissle, quoted in Nestlé Child Labour Report. Source: <https://www.nestle.com/sites/default/files/2019-12/nestle-tackling-child-labor-report-2019-en.pdf>

Monitoring and remediation systems

- **KPI:** Implement monitoring and remediation systems for ECOM origin-sourced and partner-sourced supply chains at high risk of child labour by the end of 2025
- **Status: Evolving**

Currently, 54% of our high-risk origin-sourced supply chain is covered by CLMRS, including Côte d'Ivoire, Ghana, Cameroon and Nigeria. Although ECOM acknowledges CLMRS as an important and effective tool for detection and follow-up of child labour at individual farm and household levels, it is insufficient to tackle the intricate and systemic issue of child labour if used in isolation. The CLMRS process is extremely labour intensive and cannot single-handedly resolve a problem of such complexity at scale.

For ECOM, another important concern is that, in practice, the CLMRS can be perceived by farmers as 'policing' parents, caregivers and children, rather than supporting the wellbeing of their children, suggesting that farmers would deliberately put their children in danger.²²

- **New KPI:** Roll out human rights and environmental due diligence processes and assess risks for all tier one suppliers by the end of 2025

Our double materiality assessment highlighted human rights along with deforestation, agricultural productivity and regenerative agriculture as key focus areas. Child and forced labour do not exist in isolation from other issues, such as economic resilience and gender equality – there is a complex interconnectedness that links many of the challenges within our supply chain, which requires an integrated and scalable response.

We have therefore adapted and developed this KPI from focusing on CLMRS to rolling out human rights and environmental due diligence processes, as well as assessing risks for all cocoa tier one suppliers by the end of 2025. To do this, we will focus on creating guidance for our suppliers to use for their own capacity and relationship building. In the last 2 years, we have rolled out the supplier self-assessment with Sourcemap, a trusted third-party platform, which requests information about suppliers' human rights and environmental practices. This allows us to identify where our suppliers need more support to respond to human rights and environmental risks, and where we must address these risks most urgently. The information we request from our suppliers also helps us prepare for upcoming legislation.

Our aim is to help our suppliers to develop better internal policies and protocols as well as purchasing practices that will enable them to retain more sustainable suppliers of their own. Working together to enhance due diligence is more than a matter of ethical responsibility; it is also a strategic business decision. We want to create a space for capacity building for scaling impact and sharing our learning.

²² Kristy Leissle, quoted in Nestlé Child Labour Report. Source: <https://www.nestle.com/sites/default/files/2019-12/nestle-tackling-child-labor-report-2019-en.pdf>



Farming community training

- **KPI:** Train 100% of farmer communities in ECOM origin-sourced supply chains in child protection and the prioritisation of education by the end of 2025
- **Status:** In progress

Currently, 64% of our high-risk origin-sourced supply chain has been reached for awareness raising on child protection, including Côte d'Ivoire, Ghana, Cameroon and Nigeria. Given that awareness raising is measured on a household basis and the definition of 'community' is so fluid, we have encountered difficulties in measuring this in the way originally intended and are considering widening the scope of our focus as a direct result of programmes that are in place.

We are collaborating with independent experts to understand the root causes of child labour and forced labour in rural communities. We recognise that these issues can arise from various factors, including a lack of career opportunities for young people, poverty and seasonal labour patterns, as well as the lack of access to quality education. The knowledge gained from these collaborations is shared with clients to encourage investment in prevention strategies in the regions where we operate.

Our current approach to addressing child labour considers the economic and cultural realities of rural communities through activities that prioritise the long-term success of smallholder farmers, empowering communities and promoting activities such as crop diversification.

As we test solutions in various projects, and investigate how to evolve our strategy towards prevention of child labour and promotion of human rights in our communities, we are reviewing our approach. We expect to include an updated KPI next year.

Spotlight



3.4

New ways to tackle child labour in Côte d'Ivoire

In 2023, ECOM partnered with the RVO and its Fund Against Child Labour and innovation consultancy Propellerfish on a project to better understand how to keep children in cocoa communities out of hazardous activities. The project is co-funded by the Fund against Child Labour (FBK), part of RVO and in commission of the Dutch Ministry of Foreign Affairs.

The project had two parts. The first was a deep dive into causes of child labour, conducted through a human-centred design approach to refine our CLMRS based on conversations with cocoa-growing communities. A series of focus groups and interviews were held with communities in Côte d'Ivoire at medium or high risk of child labour. Interviewees included children and young people, farming families, cooperative groups, village leaders, teachers, medical professionals and women's groups. From these discussions, Propellerfish attempted to understand the experiences of children growing up in cocoa communities and what causes them to fall into child labour. The insights enabled us to understand what interventions that focus on keeping children out of child labour would need to succeed.

The underlying causes identified fell into four categories:

- **Access** – a lack of access to basics such as healthcare, education, sex education and identity documentation (such as birth certificates)
- **Capability** – insufficient support and a lack of skills training to diversify income, improve cocoa yields and combat declines in productivity
- **Opportunity** – a lack of job opportunities and loans
- **Economic** – incomes from cocoa farming were often too meagre to sustain farmers and their families

Moreover, as cocoa farming becomes less viable due to climate change, competing industry and diseases in cocoa trees, farmers cannot afford to hire workers and therefore rely on the help of their children even more.

Having completed this part of the project, we are now in the second stage, which involves developing and implementing effective solutions, in particular to address two key focus areas:

- Making cocoa farming a viable business
- Making farming families and communities more resilient, particularly through unlocking the potential of women to diversify families' income streams

Interventions to mitigate the risk on child labour are designed around seven activities better suited to farmers' needs. These are guidance and support, income diversification, skills and knowledge development, providing accessible finance, job opportunities, risk mitigation and access to markets.

Through these interventions, we are seeking the following three results:

1. Increased access to more sustainable and innovative technologies (labour-saving tools) and creating job opportunities for youth and career perspective while increasing farming skills and life skills
2. Establish and support school management committees for the improvement of management systems (financing, supply of school canteen, individual pupils support, etc.)
3. Grow women's entrepreneurship through access to microfinance

To help in the development and implementation of actions, we are identifying Change Champions from cooperatives and communities who will become leaders of change. While we acknowledge that there is much to be done, getting the implementation right will provide a strong platform for building more resilient communities in the future.

Spotlight

3.5 Lead For Ghana – improving education in cocoa-growing communities

Lead For Ghana (LFG) is a not-for-profit social enterprise established to help ensure that all children in Ghana have access to good education. LFG recruits young Ghanaian professionals to become Leadership Development Fellows. The LFG Fellows spend at least two years teaching and improving academic outcomes for students in rural and underserved communities in Ghana, after which they are inducted into the LFG network. Through the network, they work in both the private and public sectors to drive systemic changes to help ensure that all children in the country have access to an excellent education by 2050.

LFG, ECOM and Mars have joined forces on the Improving Educational Outcomes in Cocoa Communities Project, which aims to support education in cocoa-sourcing areas in the Ahafo, Central and Ashanti Regions. Through the project, LFG Fellows adopt a community-based approach to encourage ownership and collective action to influence key local stakeholders to improve teaching and learning outcomes. Together, our aim is to create enhanced educational opportunities for almost 1,500 children in Ghana while simultaneously addressing gender inequality and illegal child labour. The LFG Fellows also partner with ECOM to raise awareness around illegal child labour in cocoa farming communities, and work with the Ghana Education Service to ensure that teachers and headteachers in the selected schools benefit from the LFG model.

ECOM's Abdallah Bin Issah, Assistant Project Manager, recounts his personal experience of the project.

"I have been part of the project since its inception in January 2022. Since then, our field team has been visiting the communities and the schools to assess the real impacts on the ground.

We can see that there is a lot of participation in lessons. Typically, many students lack confidence, but in schools where LFG Fellows are present, children are confident and actively participate in class.

The project takes a holistic approach. We visit parents to help ensure children are using their time well at home. For example, a mother wanted her son to succeed, but he struggled in school. Thanks to the efforts of the Fellow, he is now excelling in science and has been chosen to represent his school in a science competition.

This project benefits the communities where it is implemented but could also help children in other districts. I hope we can develop better infrastructure and facilities, such as ICT labs, to help all schools achieve similar success, even those without LFG Fellows."

Read the full 'A day in the life' interview in our [ECOM Group Sustainability Report \(page 30\)](#).



3.6

Living income

Systemic poverty in cocoa communities contributes to social challenges such as gender inequality and child labour, as well as environmental challenges including deforestation and biodiversity loss. Recognising this and acknowledging living income as a basic human right, ECOM committed to measuring the living income gap in our origin-sourced supply chains in 2023. Having done so, we are now developing in-depth localised action plans to enable us to collaborate with partners and clients to develop tools and implement strategies to work towards closing the gap together.

A living income approach means not abandoning the most vulnerable by recognising that a range of strategies will need to be adopted, given the variety of farmers in our supply chains. ECOM and our peers have a responsibility to contribute to the living income and livelihoods of all the farmers we source from.

What is a living income and why does it matter?

World Bank poverty lines are commonly used to compare and assess poverty levels between countries. However, such poverty lines are not an indication of whether farmers have a decent standard of living. A living income can be defined as 'the net annual amount required for a household in a particular place to afford a decent standard of living for all members of that household'.²³ The concept of living income goes a step beyond traditional notions of poverty alleviation, which are concerned with basic subsistence and survival. It puts a strong emphasis on the idea of decency and earning enough income to live comfortably.²⁴

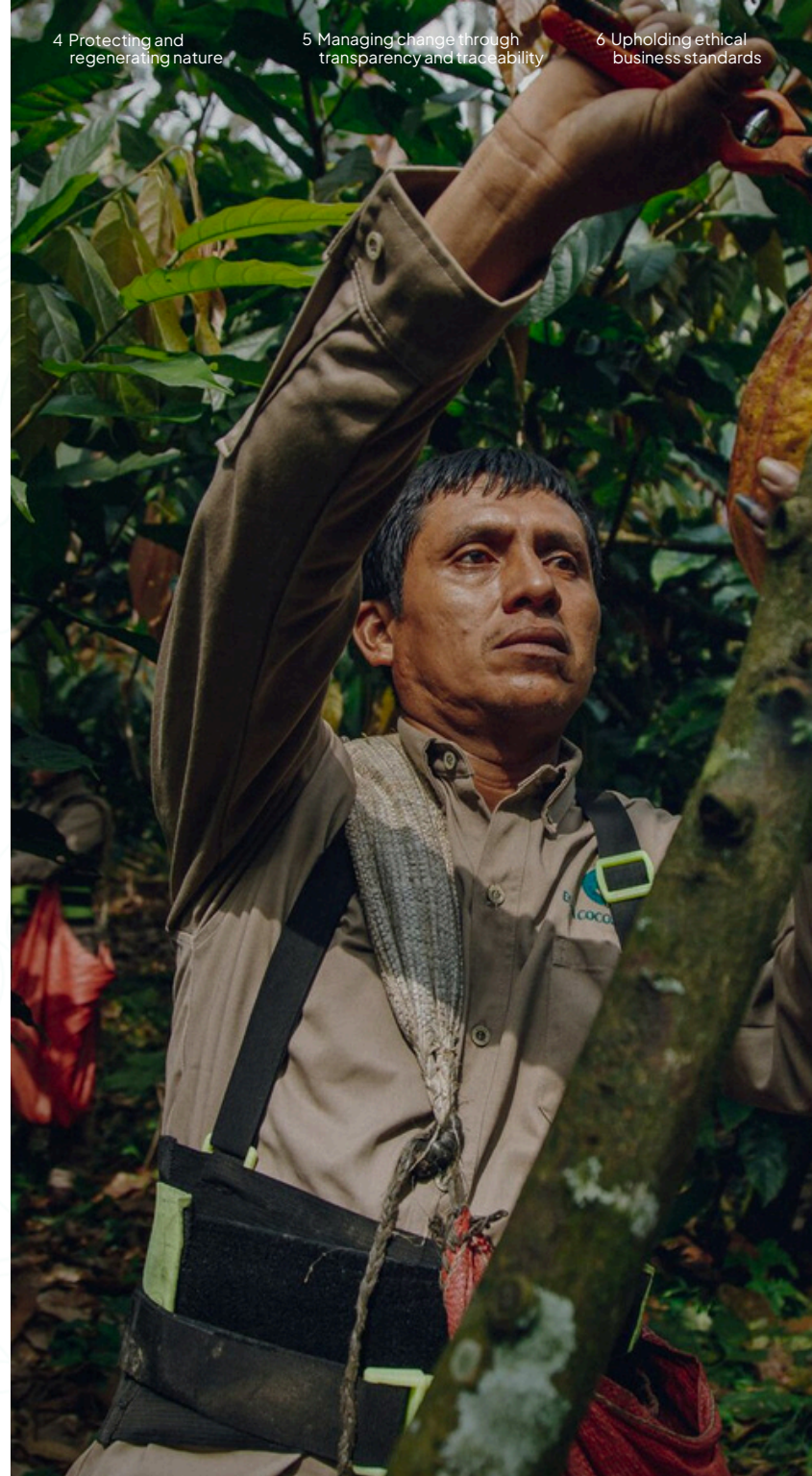
To estimate the cost of a decent standard of living, a living income benchmark is established for a specific country, or a region within a country. The Anker Methodology is considered the gold standard for living income benchmarks, based on scientific principles and international and national standards for decency.²⁵ The circumstances within a particular year or season, cost of living, price changes over time and inflation are considered.

Living income can be an aspirational concept and an ambitious target, and carries the risk of excluding those it intends to support. Our priority is moving the needle – improve income for all farmers. We want to emphasise that living income should not be used as a rationale to switch sourcing from 'high-risk' origins to those with large-scale farms and mature chains. We want to continue working towards living income for farmers and workers in all of the origins, and taking urgent action where it is most needed.

²³ Anker, R., and Anker, M. (2017). Living wages around the world: Manual for measurement. Edward Elgar Publishing.

²⁴ LICoP (2023). The Concept. <https://www.living-income.com/the-concept>

²⁵ Anker Research Institute (2023). <https://www.ankerresearchinstitute.org/>



3.7

Progress against our KPIs

Living income baseline and roadmap

- **KPI:** Establish the living income baseline and roadmap to address the identified gap for all origin-sourced supply chains by the end of 2023
- **Status:** Completed

In 2023, our ECOM SMS teams and local suppliers conducted field surveys with thousands of cocoa farmers across 11 countries where we have local operations. The Cocoa Economic Analysis survey, developed by the Global Cocoa Sustainability Team, aimed to comprehensively understand the revenue and costs associated with cocoa production. The survey consisted of approximately 60 questions, tailored to each origin's local specifications while ensuring comparable data collection. For survey details, please refer to [Appendix 1](#).

It is noteworthy that all data was collected between early 2022 and November 2023. However, the questions asked farmers to recall their experiences from the 12 months preceding the data collection period. In the 2023/24 crop year, a surge in cocoa market prices has resulted in a much higher farmgate price for a portion of farmers. Due to the rapid escalation of prices paired with varying inflation rates in the surveyed countries, the collected data may not represent current conditions. Nonetheless, the findings provide a valuable baseline for comparison and analysis.

After our data collection round concluded, the Alliance of Living Income in Cocoa (ALICO) developed the Cocoa Household Income Study (CHIS) for a standardised measurement of household income data in the cocoa sector. This open-source, scalable method enables the measurement of income intervention data, including data collection for the so-called 'invisible groups'. The CHIS method is now available for download ([click here](#)). We support collective action in the cocoa industry and encourage all companies to adopt and utilise the CHIS method to ensure consistent and comparable data collection across the sector.

Results

The Cocoa Economic Analysis survey aimed to estimate household income across: Cameroon, Colombia, Côte d'Ivoire, Ecuador, Ghana, Mexico, Nicaragua, Nigeria, Peru, Uganda and Vietnam. This data collection aimed to provide an in-depth assessment of cocoa revenue and costs to estimate net income from cocoa farming. However, the living income concept encompasses all household income sources. To address this, the survey asked farmers to estimate the percentage of their total income derived from cocoa versus other sources and extrapolated for the remaining household income. As compared with asking farmers about each additional income source independently, asking about the cocoa percentage reduces the survey burden on farmers, aligns with our team's expertise in cocoa and mimics other sector methodologies (this was independently consulted on by The Sustainable Food Labs).

The analysis did not include the value of food produced at home, which can significantly contribute to household income and living standards. For example, approximately half of the Côte d'Ivoire benchmark is allocated to food expenses. If households are producing around 20% of their own food (which is common in Côte d'Ivoire), that can potentially push them above the benchmark. Therefore, the results presented here may underestimate actual household income levels and thus overestimate the living income gap.

Across all 11 countries surveyed, cocoa accounted for an average of 68% of household income. For most farmers, the secondary income source after cocoa was other on-farm activities (e.g., other crops or livestock), followed by off-farm income (e.g., wage labour or self-employed activities).

Farmers in Ecuador, Cameroon and Peru reported the highest percentage of their total incomes from cocoa, while those in Mexico and Nicaragua reported the lowest (Figure 1). It is important to note that for households where cocoa income accounts for less than 50% of their total income, we did not extrapolate total household income from the survey. This decision was made because a small error bar around the cocoa income can manifest into a significant error bar when estimating total income. In other words, multiplying the cocoa income by a factor of 2 or more to estimate total household income would also multiply the error bar by the same factor.

Consequently, for Nicaragua and Mexico, where cocoa income accounts for less than 50% of total household income, we will discuss these two studies narratively but refrain from including any estimates of total income.

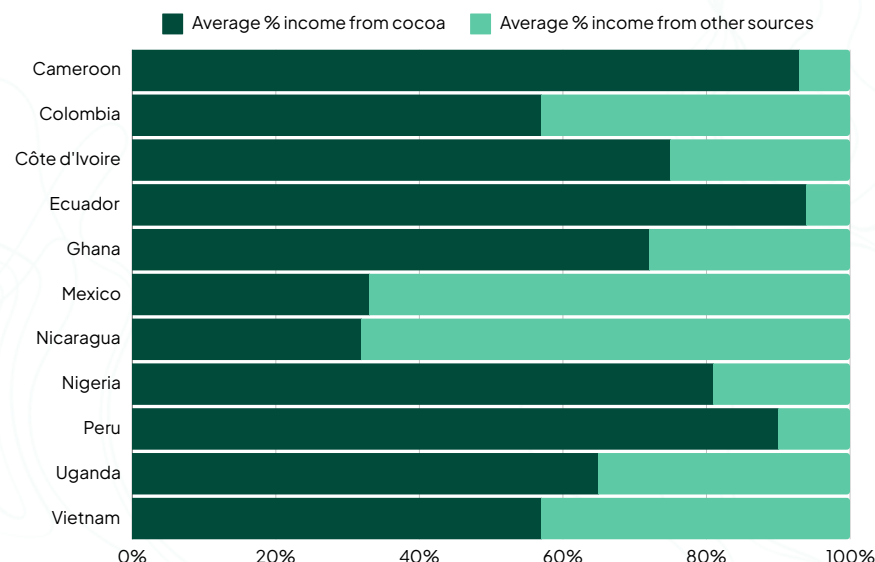


Figure 1: Average farmer households' percentage of income from cocoa

The median yield and farm size are strong indicators of income and therefore the values for the sample per country are included in Table 1 (overleaf).

Living income baseline and roadmap continued

	Cameroon	Colombia	Côte d'Ivoire	Ecuador	Ghana	Mexico	Nicaragua	Nigeria	Peru	Uganda	Vietnam
Median farm area (ha)	3.16	3	3	3	2.4	1.75	0.81	4	3.3	0.77	1
Median cocoa yield (kg/ha)	664	580	354	1,186	306	191	411	576	1,300	371	1,189

Table 1: Median yield and farm size of sample

The share of households below the living income benchmark (Figure 2) is a straightforward yet informative indicator that reflects the size of the population failing to achieve a basic but decent standard of living. Similar to a poverty headcount, it provides initial insights into the proportion of households earning less than what is considered a decent income.

Across all origins surveyed, on average 73% of farming households were below the living income benchmark, with Côte d'Ivoire and Ghana having the highest percentages. These severe findings highlight the challenges faced by cocoa farmers, particularly in West Africa. In Côte d'Ivoire and Ghana, the study sample potentially exacerbated the results due to the household demographics and survey period.

While our operations generally have 18% female-led households, the sample in Côte d'Ivoire and Ghana included 31% and 29% respectively. Typically, female-headed households have lower incomes than male-headed ones.

The 2017 KIT studies^{26,27} showed 6.9% (Côte d'Ivoire) and 9.4% (Ghana) of typical male-headed households achieved the living income benchmark. When isolating male-headed households our findings in Côte d'Ivoire were comparable, but in Ghana there is a disparity. In Ghana, yields were lower (306kg/ha) than the KIT study (438kg/ha for male-headed households). Overall, West Africa experienced a production drop in 2023, due to poverty, inflation, high fertiliser costs, extreme weather, and land degradation. Further, larger than average household sizes in the sample also led to significant benchmark adjustments see [Appendix 1](#).

The gap of the median income to the living income benchmark compares the median total household income with the (median) living income benchmark value (Figure 3). Medians are less sensitive to extreme values so better represent the 'typical' farmer household. Since income distributions are typically skewed, the median income is typically smaller than the mean income, resulting in a larger gap indicator than if we had used the mean.

Similar to the share below the living income benchmark, Côte d'Ivoire and Ghana had the largest gap between the median household income and the living income benchmark for the typical farmer, while Peru had the smallest gap. This indicates that the typical farmer in Peru is very close to achieving a living income.

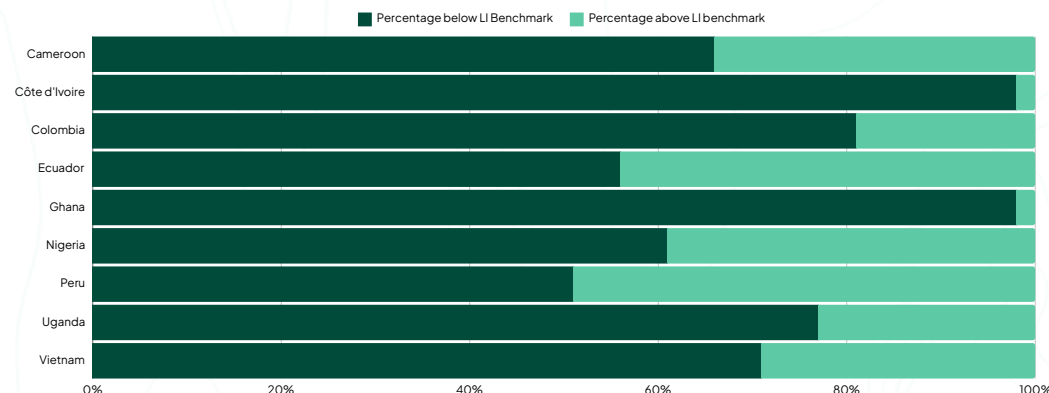


Figure 2: Share of those below the living income benchmark

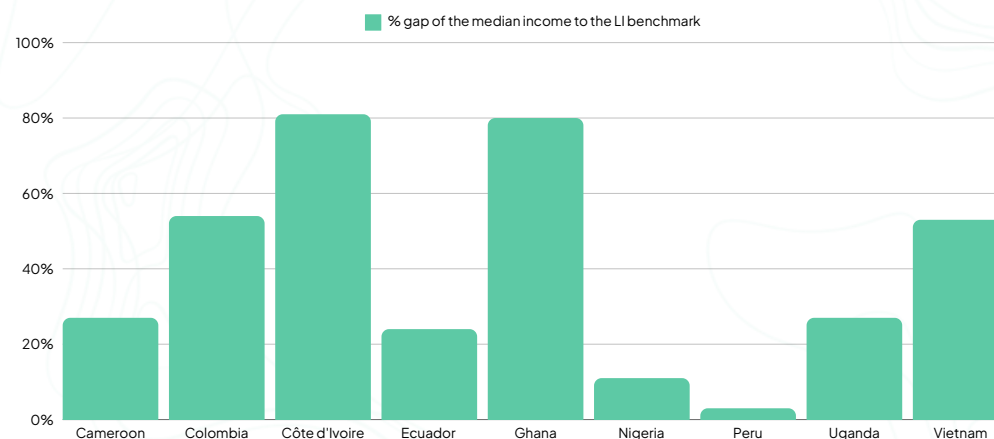


Figure 3: Gap of the median income to the living income benchmark

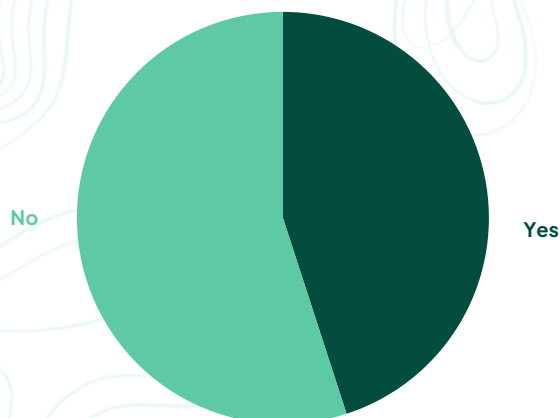
²⁶ Tysler, M., Bymolt, R., & Laven, A. (2017). Analysis of the income gap of cocoa producing households in Côte d'Ivoire: Comparison of actual incomes with the Living Income Benchmark. <https://www.kit.nl/wp-content/uploads/2019/01/Analysis-of-the-income.pdf>

²⁷ Tysler, M., Bymolt, R., & Laven, A. (2017). Analysis of the income gap of cocoa producing households in Ghana: Comparison of actual incomes with the Living Income Benchmark. https://docs.wixstatic.com/ugd/Oc5ab3_93560a9b816d40c3a28daaa686e972a5.pdf

Living income baseline and roadmap continued

In addition to quantitative metrics assessing actual household income, we sought to understand farmers' perceptions of wealth, financial resilience and food security by posing a range of questions. For instance, farmers across 10 origins²⁸ were asked, "In the last 12 months, did you save (put aside a part of your household income for use in the future)?" Across all origins surveyed, the average percentage who responded affirmatively was 57%. However, Cameroon, Colombia and Nicaragua were the exceptions, where the more common response indicated that farmers had been unable to save any portion of their income in the preceding year. In Nicaragua, only 22% of farmers could save, while in Colombia and Cameroon, the percentages were 29% and 31%, respectively. The inability of farmers to save in Nicaragua in 2022/23 could be attributed to consumer price inflation rates significantly exceeding regional averages for Central America and the Caribbean. In the future, we hope to better understand the reasons for not saving or the intended purposes for those who could save.

In the last 12 months, did you save
(put aside a part of your household income for use in the future)?



²⁸ Cameroon, Colombia, Côte d'Ivoire, Ghana, Mexico, Nicaragua, Nigeria, Peru, Uganda and Vietnam.

²⁹ Cameroon, Colombia, Côte d'Ivoire, Ghana, Mexico, Nicaragua, Peru and Vietnam.

The **Reduced Coping Strategies Index** (rCSI) was employed as a proxy measure for food insecurity. This index considers both the frequency and severity of five pre-determined coping strategies that households may have employed in the seven days preceding the survey. A higher score indicates greater reliance on negative coping strategies, signifying increased food insecurity (the maximum rCSI score is 56, which would occur if a household utilised all five strategies every day for the previous seven days).

Across the eight origins assessed,²⁹ the average rCSI score was 5, suggesting mild food insecurity among households. The most commonly adopted coping strategy was relying on less preferred or less expensive foods. However, Cameroon exhibited significantly higher food insecurity, with an average household score of 20, indicating moderate food insecurity. This could be because of a number of factors, including heavy rains and winds damaging food crops leading to reduced production, while an early and harsh dry season shortened the cocoa harvesting season.

It is important to note that the rCSI's seven-day recall period captures a snapshot of the food security situation, which can change rapidly, especially in volatile contexts. The rCSI is designed for repeated use over time to monitor changes and is influenced by seasonality and shocks. Seasonal variations are particularly relevant in agricultural supply chains like cocoa, where household income is inconsistent throughout the year. For example, in Cameroon most farmers had finished the main crop cocoa sales about a month before the survey period.

The Cocoa Economic Analysis survey has provided valuable insights into the income levels and living conditions of cocoa farming households. The findings highlight the significant challenges many farmers face in achieving a decent standard of living. These findings serve as a call to action for stakeholders in the cocoa supply chain to prioritise interventions and initiatives that can enhance farmer incomes, promote financial resilience and ensure food security. Addressing these critical issues is not only a moral imperative but also essential for the long-term viability and sustainability of the cocoa sector.

Moving forward, continued monitoring and analysis of household income, living standards and coping strategies will be crucial in tracking progress and informing targeted strategies to uplift cocoa farming communities. Collaborative efforts involving farmers, industry players, governments and civil society organisations will be vital in driving meaningful change and fostering a more equitable and prosperous cocoa value chain.

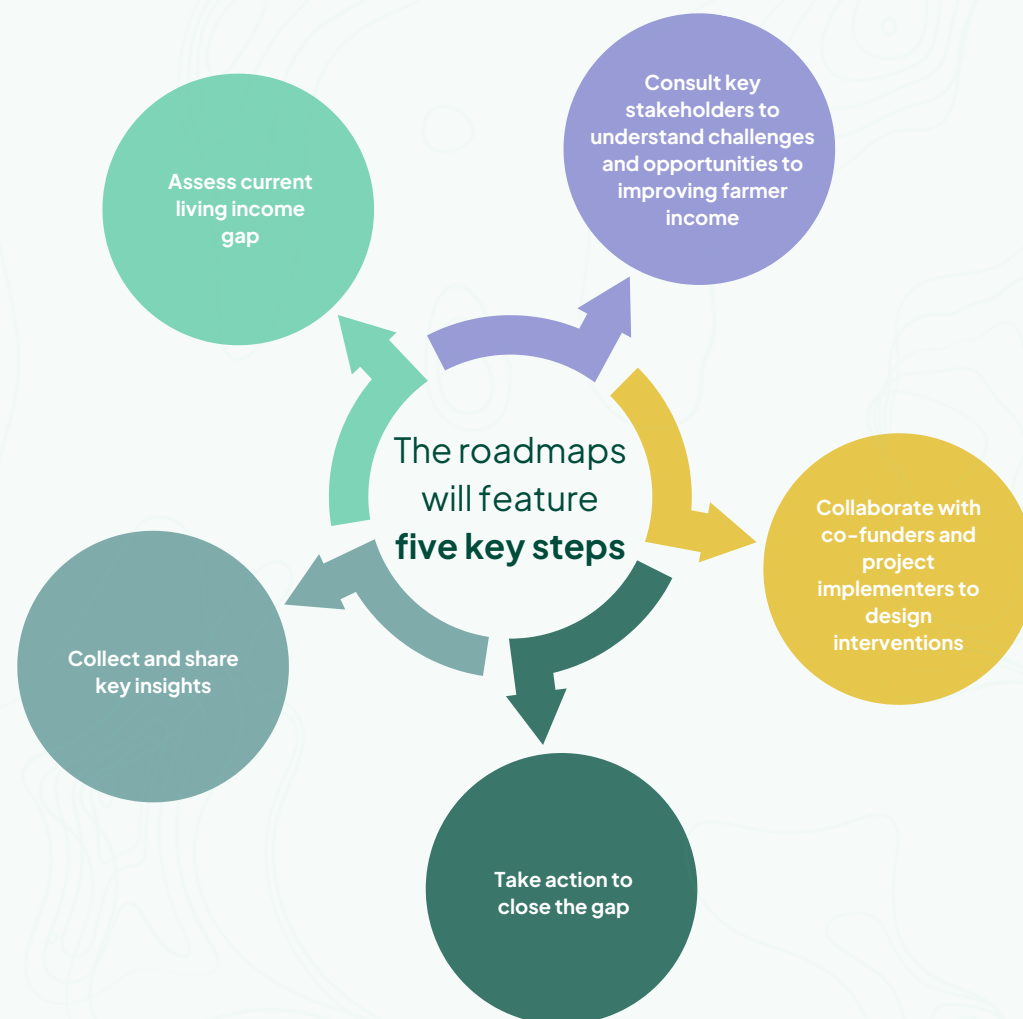
3.8

Developing our living income roadmap

As we review our Smarter Cocoa strategy and focus on moving from risk assessments and benchmarking to implementation, we aim to develop locally adapted roadmaps for each origin which extend beyond farm-level interventions. These should include improvement of purchasing practices, as highlighted by the recent Voice Network publication,³⁰ as well as refining how we support farmers in cocoa production and alternative income generation opportunities. Progress should not only be assessed on how many farmers are earning a living income but also what relative income improvements have been made, to avoid the temptation to simply consolidate supply chains and only source from better-off farmers.

Our goal is to shift away from a one-size-fits-all approach when addressing living income gaps across our supply chain, as experience has shown that such blanket solutions have limited practical impact. Instead, we aim to develop personalised interventions tailored to specific farmer segments. We want to devise targeted strategies that cater to the unique needs and circumstances of different farmer groups. These strategies will be informed by criteria such as farm size, the magnitude of the living income gap, household demographics, and other relevant factors. By segmenting our farmer base and understanding their distinct challenges, we can develop customised interventions that effectively address the specific barriers preventing them from attaining a decent living income. This targeted approach will enable us to allocate resources more effectively and maximise the impact of our efforts in uplifting the livelihoods of cocoa farming communities.³¹

For us as traders, our long-standing relationships with clients and farmer partners are a cornerstone of our approach. By leveraging these strong ties, we can collaboratively explore and implement sustainable solutions that address the multifaceted challenges hampering the achievement of living incomes.



³⁰ Fountain, A.C. (2023). Good Purchasing Practices in Cocoa, a Barometer Consultation Paper. The Voice Network. <https://voicenetwork.cc/wp-content/uploads/2023/12/Purchasing-Practices-in-Cocoa.pdf>

³¹ Waarts, Y. R., Janssen, V., Aryeetey, R., Onduru, D., Heriyanto, D., Aprilly, S. T., N'Guessan, A., Courbois, L., Bakker, D., and Ingram, V. J. (2021). Multiple pathways towards achieving a living income for different types of smallholder tree-crop commodity farmers. *Food security*, 13(6), 1467–1496. <https://doi.org/10.1007/s12571-021-01220-5>

Spotlight

3.9

Piloting our roadmap in Ecuador

Latin America is the fastest-growing cocoa-producing region globally, and, as the largest producer in the region, Ecuador is a key origin for ECOM and our clients. In December 2022, our SMS team in Ecuador was one of the first to complete the Cocoa Economic Analysis survey, which showed that 56% of households were below the living income benchmark and the median farming household had a 24% gap to the living income.

The survey results indicated that a 25% increase in yield would close the living income gap for the median farmer. An increase of that kind is possible through the application of better agricultural practices, such as more efficient use of biofertilisers. Armed with this kind of information, we can now design practical interventions that can achieve the desired impact and give farmers the help they need to boost their incomes.

Following these findings, the team piloted a country-specific tailored roadmap in Ecuador. Using the field team's expert knowledge, ECOM hosted a working group, supported by GIZ and Sustainable Food Lab, to understand the opportunities and local priorities which can be leveraged to increase household income.

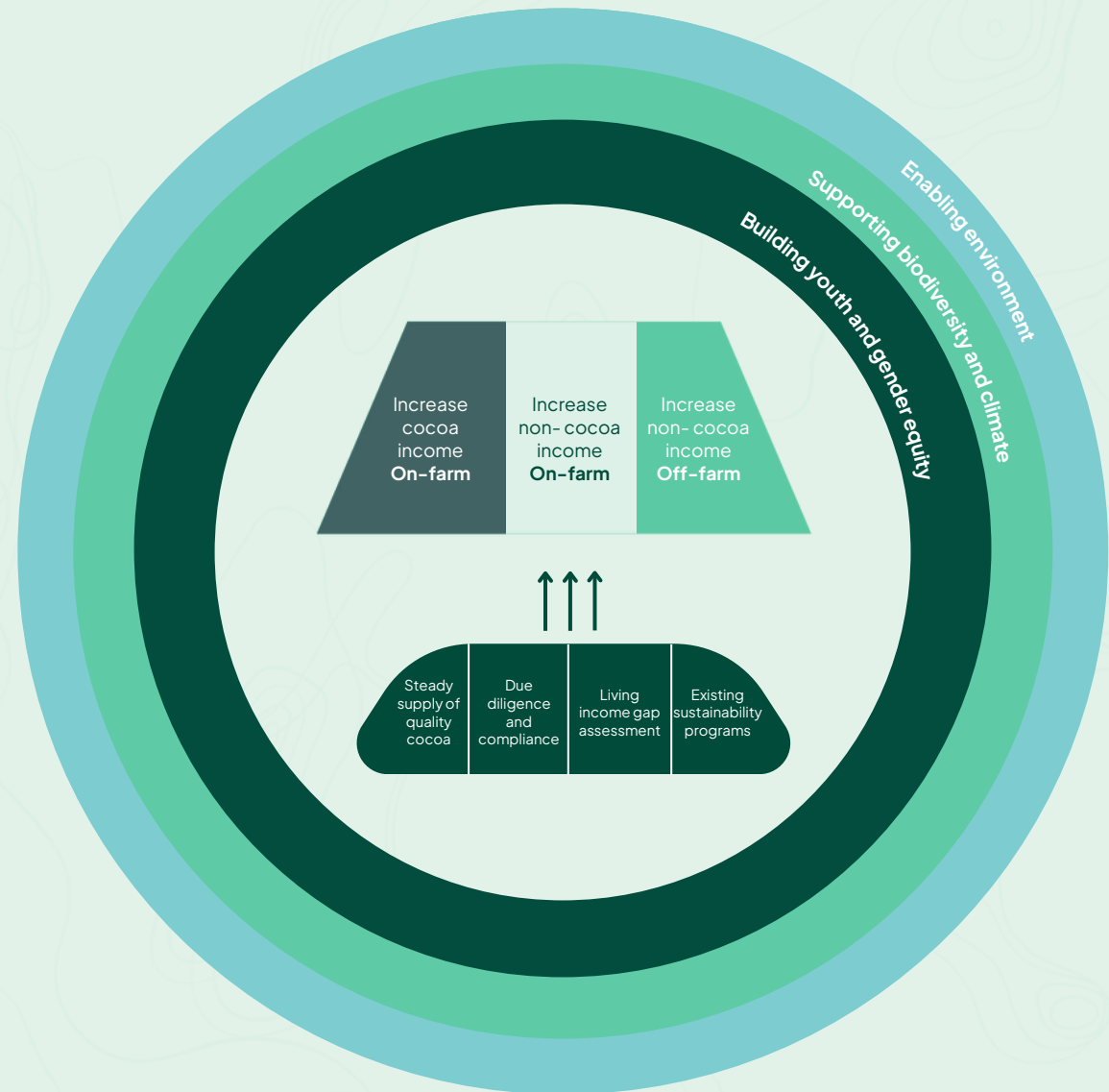
This identified four focus areas to increase income:

1. Improving cocoa production and quality
2. Diversifying farmers' incomes
3. Gender equity and youth engagement
4. Biodiversity and climate-positive agricultural practices

It is important to note that these focus area interventions are specific to Ecuador, as they will be different for each origin.

A goal for 2024 will be developing an implementation plan for Ecuador. The project enabled us to identify income levers and develop a roadmap for closing the living income gap for cocoa farmers in our Ecuadorian supply chain. Our Ecuador SMS team has years of experience in supporting cocoa farmers, and the project builds on this knowledge while developing new engagement and impact opportunities.

By choosing a living income approach, we are moving beyond compliance to enable a decent standard of living for cocoa farmers and their families. Through partnership with clients, ECOM can help close the living income gap for Ecuadorian cocoa farmers and their families, enhancing resilience to economic and environmental challenges, and contributing to the long-term viability of the cocoa sector.



Spotlight

3.10

Improving farmer income and resilience

ECOM has partnered with DEG Impulse, a subsidiary of DEG to support cocoa farmers in Côte d'Ivoire, Ghana and Nigeria to produce non-cocoa crops. DEG Impulse supported the project with funding from the German Federal Ministry for Economic Cooperation and Development (BMZ) as part of the develoPPP programme. The objective was to increase household income to enable resilience and reinvestment in cocoa. For many households, cocoa is a part of the overall household income. Diversification can therefore serve as an important strategy to hedge inherent agricultural risk, and having multiple income sources can create resilience against the natural volatility of global commodity markets, reducing dependence on single seasonal crops.

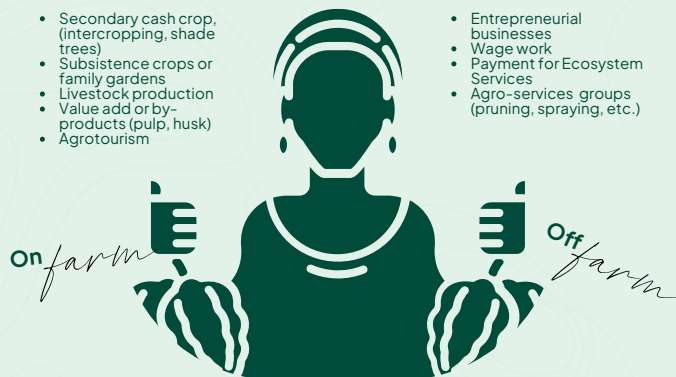
To understand the impacts of the programme, ECOM partnered with impact measurement specialist 60 Decibels to speak directly with the farmers associated with ECOM's PPP Programme. The farmers' experiences were captured through phone surveys held immediately after their initial registration to establish a baseline, and again two years into the programme.

For the initial survey in 2021, 60 Decibels spoke directly with 158 farmers. In 2023, they conducted a follow-up with the same farmers and 125 additional participants, to identify any changes during the intervening two years.

Types of diversification

- Secondary cash crop, (intercropping, shade trees)
- Subsistence crops or family gardens
- Livestock production
- Value add or by-products (pulp, husk)
- Agrotourism

- Entrepreneurial businesses
- Wage work
- Payment for Ecosystem Services
- Agro-services groups (pruning, spraying, etc.)



The results show an increase in the use of alternative income streams, especially maize in Côte d'Ivoire, chilli peppers in Ghana and cassavas in Nigeria. This means that, while cocoa remains the main income crop, and relied upon by the majority of farmers in these countries, it has declined as a percentage of household income. The programme supported farmers to grow these crops (training, supply of agro-inputs, coaching on the usage of inputs at each producing stage, etc.). The programme also provided them with better access to markets where they could sell greater volumes at a better price. In all, nine out of ten farmers reported an increased household income because of non-cocoa crops and three out of ten described the increase as significant. In Ghana especially, nearly one-quarter (23%) had begun earning additional income to cocoa for the first time.

The survey also recorded an increase in the percentage of farmers feeling secure about their household's livelihood, from 49% at baseline to 87% at follow-up, an increase the majority ascribed to ECOM's support.

An important finding was that, compared with the baseline results, farmers at follow-up were more likely to reinvest income from additional crops back into cocoa and more than 60% reported improvement in cocoa management.



3.11

Improving agricultural practices

- **KPI:** Train 80% of farmers in our ECOM origin-sourced supply chains in improving agricultural practices annually, with an ambition of reaching 200k individual farmers by 2025
- **Status:** Completed

By employing good agricultural practices (GAPs), farmers can grow crops more efficiently, improving their financial returns. This is why we've been working with farmers to train them on improving agricultural practices across our origin-sourced supply chains.

We're pleased to share that over the last two consecutive years this KPI has been achieved – and two years ahead of our target. However, as our thinking and programme design evolve, we aim to transition away from general group training towards coaching-focused and tailored training approaches as part of the living income strategy. By operationalising better training as well as systems to measure behaviour change effectively, we can evolve our strategies to optimise impact.

3.12

Providing support services for farmers

- **KPI:** Provide access to farmer-centred services to 100% of farmers in our ECOM origin-sourced supply chains by the end of 2025
- **Status:** In progress

We continue to provide these services, which include individual coaching, access to inputs, delivering seedlings, equipment rentals, research and information on global crop prices and other support for farms, through our wide range of partner projects. In 2023, 98% of farmers in our origin-sourced supply chains had access to farmer-centred services.

Spotlight



3.13

Growing financial resilience

In 2022 and 2023, we implemented the Nestlé Income Accelerator Program with two of our partner cooperatives in Côte d'Ivoire. The programme is designed to help farmers in cocoa farming communities close the living income gap and secure additional sources of income.

The programme aims to accelerate the adoption of sustainable practices at farm and household levels by enabling and incentivising these practices. It has four clear objectives:

- Increased adoption of pruning among participating farmers
- Children aged between 6 and 16 in IAP attending school
- Promotion of agroforestry through the distribution and planting of multipurpose trees
- Families diversifying their income from additional activities (e.g. alternative crops, raising livestock)

Families who engage in these practices earn up to €500 per annum for the first two years and €250 each following year. Farmers and their spouses register for mobile money accounts as part of entry into the programme. These conditional payments are based on successful adoption of practices and are in addition to volume-related certification premiums, which is one of the reasons this novel approach has engaged farmers so effectively. Payments are therefore made directly and transparently via mobile money, with two of the payments going to the female in the household and two to the male. Women are empowered to share financial responsibilities for savings, loans and investments through the setup of Village Savings and Loans Associations (VSLAs).

Read more about the [Nestlé Income Accelerator Program](#).

3.14

Women and youth empowerment

Although many women are involved in cocoa farming, their contributions are frequently overlooked. There are significant gaps between men and women in areas such as income, skills training and financing, and women often have no direct control over household income or access to land, limiting their opportunities.

For young people, there is often a lack of employment opportunities or clear career paths in cocoa-growing communities, which can severely restrict them or lead to them leaving the area in search of better prospects elsewhere. This, in turn, can have a negative impact on agricultural communities.

Tackling gender inequalities and youth disengagement is pivotal for building thriving and resilient cocoa farming communities.

Read more about our approach to women and youth empowerment in our [ECOM Group Sustainability Report \(page 25–26\)](#).





3.15

Progress against our KPIs

Gender equity

- **KPI:** Have 100% of ECOM origin-sourced supply chains covered by the GEI and improvement plans by the end of 2025
- **Status:** In progress

We have made steady progress towards this target. We are close to covering the majority of our origin-sourced supply chains with the GEI, and are developing improvement plans for implementation with those that are already covered.

We have a number of Better Together Workshops planned for 2024, and we will be able to provide feedback on these in our 2024 Cocoa Report.

The application of the GEI is the foundation for the project and the Better Together Workshop series, described below. Equal Origins created the GEI as a diagnostic tool to support Extension and Advisory Services (EAS) Providers and Producer Organisations to assess their current practices and approaches through a gender lens, and to identify opportunities for capacity building, action and impact. Because women are a 'hidden workforce' contributing to every bean in the supply chain, specific organisational capacities are necessary to ensure education and technical assistance will reach and benefit them.

The Better Together Workshop series instructs organisations on integrating gender-responsive strategies into broader training programmes. These encompass key activities such as:

- Establishing a methodological approach to baseline analysis of gender mainstreaming capacity among EAS providers
- Assisting project staff and enumerators with quality baseline data collection
- Identifying key gender gaps in service provision and proposing actionable recommendations to bridge these gaps
- Facilitating four online sessions with select stakeholders to discuss and assess the situational diagnostic results
- Providing stakeholders with comprehensive guidelines to monitor progress in gender mainstreaming
- Consolidating outcomes in a situational diagnostic report

We plan to adapt these workshops to each individual origin and help our teams develop a Gender Equity Development Plan.

Spotlight

3.16

Working towards gender equity in Ghana

Ghana is the second-largest cocoa producer in the world, making cocoa a vital part of the country's economy. However, gender inequality is pervasive within the cocoa sector, due to a combination of unequal access to productive resources, such as land, and harmful gender norms at household, community and institutional levels. Although women are involved in nearly all activities of cocoa production in Ghana, cocoa is largely considered a man's crop, and women's roles and contributions remain unrecognised, undervalued and often unpaid.

In response to these barriers, ECOM has partnered with USAID to promote gender equality and empower women in the cocoa value chain in Ghana. Our goal was to increase gender responsiveness in our internal policies and practices, and pilot targeted women's empowerment activities in cocoa communities.

The GEI and a participatory gender analysis provided a better understanding of our gender equality practices and capacity, as well as of the barriers and opportunities for women's empowerment, particularly around access to productive resources and income diversification opportunities. The analysis found that, although we promoted gender equality internally and in our work with cocoa farmers, we lacked clear policies, strategies and expertise to guide and institutionalise such efforts. Women's representation in field positions was low and we signed contracts with individual farmers based on their status as landowners, which means most contracts were signed with men.

We set specific objectives, including strengthening our internal gender equality and social inclusion (GESI) capacity; promoting women's empowerment by updating our Good Social Practices training for farmers to focus on land rights and shifting harmful gender norms; and supporting income diversification and economic resilience for women.

USAID supported ECOM through its Integrated Land and Resource Governance (ILRG) programme. ILRG helped us to develop internal staff capacity and develop or revise policies and practices to better integrate gender equality and social inclusion into standard business operations and farmer engagement practices. We developed a GESI Strategy for 2022–2027 and trained 21 management staff (14 men and seven women) and 159 field staff (114 men and 45 women), representing ECOM's entire field staff base in Ghana. We also hired a Gender and Sustainability Specialist to lead coordination between ECOM global, in-country management, and field staff on GESI policies to oversee the implementation of GESI activities in cocoa communities.

We delivered Good Social Practices (GSP) training to 2,646 farmers (1,213 men and 1,433 women) in 37 communities in the Assin Fosu and Asamankese districts. We started seeing positive changes in harmful norms, with more equitable control of resources, distribution of labour, and decision making within cocoa households. We established 52 VSLAs with 1,283 women and, with ILRG support, we developed and delivered women's empowerment and entrepreneurship training to 1,402 women in 37 communities. This increased access to finance helped women support their households and invest in their children's education and small businesses.

Read more about the programme in our [2023 ECOM Group Sustainability Report \(page 26\)](#).



4 Protecting and regenerating nature

"Achieving our Net-Zero goals requires a holistic approach that recognizes the interconnectedness of climate, resource management, biodiversity and social factors. Meeting our ambitions means taking bold actions across all these areas."

Camila Olmedo Mendez
Regional Sustainability Manager LATAM

4.1

Protecting and regenerating nature: Overview

Our focus

The cocoa sector faces multifaceted environmental challenges that threaten its long-term sustainability and the livelihoods of millions of farmers worldwide. Climate change, with its unpredictable weather patterns and rising temperatures, is disrupting cocoa cultivation practices and exposing farmers to increased risks. Deforestation, driven by the expansion of agricultural land and unsustainable farming methods, not only contributes to GHG emissions but also leads to biodiversity loss and ecosystem degradation. Many cocoa farmers, trapped in a cycle of poverty and lacking resources, are forced to prioritise short-term survival over sustainable farming practices, often leading to forest clearing for new cocoa plots.

Protecting and regenerating nature within the cocoa sector is not only an environmental imperative but also a socio-economic necessity. By adopting climate-smart practices, such as regenerative agriculture, cocoa farmers can increase their resilience to climate change, enhance biodiversity, and promote long-term productivity. Furthermore, these approaches have the potential to improve soil health, water retention and nutrient cycling, ultimately contributing to improved yields and farm profitability. Collaborative efforts involving farmers, industry stakeholders, governments and civil society organisations will be crucial in scaling up these nature-based solutions and ensuring a sustainable future for the cocoa sector and the communities that depend on it.

Read more about our work to protect and regenerate nature in our [ECOM Group Sustainability Report](#).

Our commitments

- Optimising our natural resource management practices
- Improving farmer resilience to the effects of climate change
- Becoming a Net-Zero company in our Scope 1, 2 and 3 emissions by 2050

Our 2023 KPIs

KPIs	Status
Carry out deforestation and biodiversity risk assessments in 100% of our ECOM origin-sourced supply chains by the end of 2023 to prioritise activities that mitigate deforestation and work towards zero deforestation in the supply chain	Completed
Establish agroforestry models and monitoring systems in 100% of origin-sourced supply chains by the end of 2023	Completed
Carry out country-wide climate change risk assessments in all cocoa origins by the end of 2023	Completed

See our full list of KPIs [here](#).

4.2

Deforestation and biodiversity

The continued expansion of land use for agriculture is a major cause of deforestation. According to one estimate, 37% of forest loss in protected areas of Côte d'Ivoire is due to cocoa production.³² As a cocoa trader, we have a responsibility to protect and increase the diversity of native vegetation and habitats, which are essential to support critical ecosystems on which food production depends. We work with farmers, communities, clients and partners to protect nature and restore ecosystems, employing new technology to help us identify biodiversity loss and ways to reverse it.

We take concerted action with all stakeholders to assess and eliminate deforestation, forest degradation and negative impacts from operations and supply chains. We are currently preparing for the implementation of the EUDR in 2024 to ensure we are fully compliant. The EUDR mandates 100% traceability to plot level, risk assessments and mitigation protocols to ensure no deforestation is associated with cocoa entering the EU.

³² Confectionery News Article. Read more [here](#).

Spotlight



4.3

Protecting land tenure rights in Côte d'Ivoire

The Côte d'Ivoire Land Partnership (CLAP) is a public-private partnership gathering cocoa industry leaders, the Côte d'Ivoire government and the German cooperation agency, GIZ. The collaboration aims to bring affordable land tenure documentation for Ivorian cocoa farmers at scale, that is government sanctioned, industry championed and community accepted. By doing so, it aims to secure livelihoods and legacy for current and future generations of farmers.

CLAP is a long-term initiative which began in 2019 with a country-wide scoping assessment. Areas and villages are selected for mapping of farms, and the project builds relationships with local stakeholders through training and engagement. A pilot in 2020 assessed its feasibility and saw software developed and tested. Field mapping and data collection began in three areas of the country in 2021. By 2023, some 9,000 land tenure documents had been delivered to cocoa smallholder farmers, confirming their land ownership rights. The project will scale up this year, with the aim of delivering 100,000 documents in more than 200 villages by 2028.

As well as providing valuable land rights documentation, the project also delivers education on land rights as well as impact evaluation, conflict resolution mechanisms and shade tree registration.

Read more about our work to protect natural resources in our [2023 ECOM Group Sustainability Report \(pages 48–51\)](#).

4.4

Progress against our KPIs

Deforestation and biodiversity risks

- **KPI:** Carry out deforestation and biodiversity risk assessments in 100% of our ECOM origin-sourced supply chains by the end of 2023 to prioritise activities that mitigate deforestation and work towards zero deforestation in the supply chain
- **Status: Completed**

We successfully completed this KPI in 2023, analysing data from Côte d'Ivoire, Ghana, Nigeria, Cameroon, Sierra Leone, Peru, Ecuador, Colombia, Mexico, Nicaragua, Vietnam and Uganda.

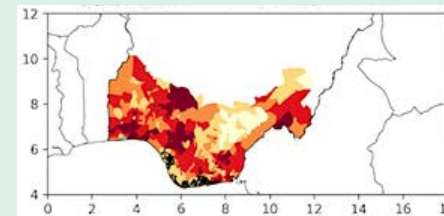
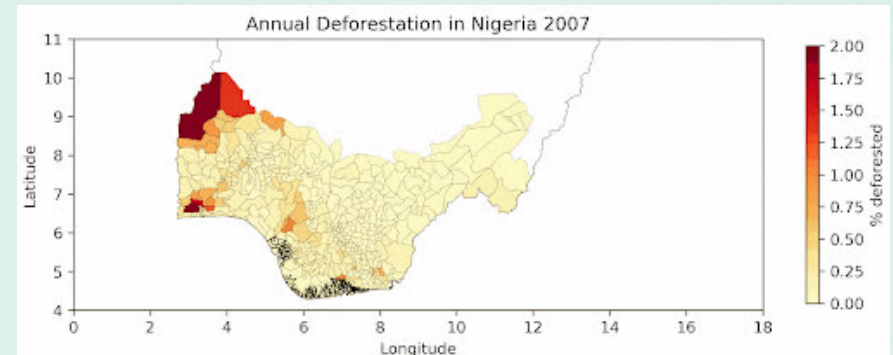
Predicting future deforestation risk is key for the effectiveness of intervention strategies because it enables us to anticipate where deforestation hotspots might be and allows for more efficient allocation of resources. This will be a key part of our mitigation strategy.

ECOM Research used freely available historical deforestation data to analyse trends in tree loss at the state and country level. This allows our model to predict areas at risk of deforestation in the future, categorised as low, medium-low, medium, medium-high and high-risk levels.

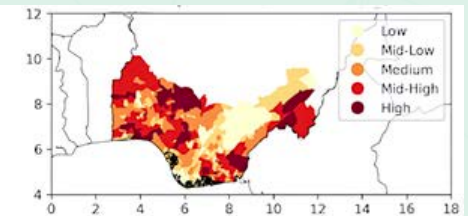
- **New KPI:** Identify and prevent deforestation, in respect of land that has been degraded or deforested since 2020, with the implementation of a strong monitoring, risk assessment, due diligence and remediation process in all our supply chains by 2025

After completing the risk assessments, we are focused on continuing monitoring to identify and prevent deforestation. Despite the wide usage of satellite monitoring throughout the industry, it has limitations and can be challenging when working with cocoa due to the lack of consistency in datasets. Given the complexity of global supply chains and the varied contexts in which we operate, eliminating deforestation completely from our supply chain would focus on exclusion rather than remediation. While we are dedicated to sustainable and responsible practices, our current risk investigations into the best possible models have taught us that there is room for error when relying only on satellite imagery, making ground truthing an essential component to confirm if deforestation is actually occurring. Our strength is working at origin with smallholder farmers, and we are especially sensitive to unfairly limiting farmers' access to markets when it is not justified.

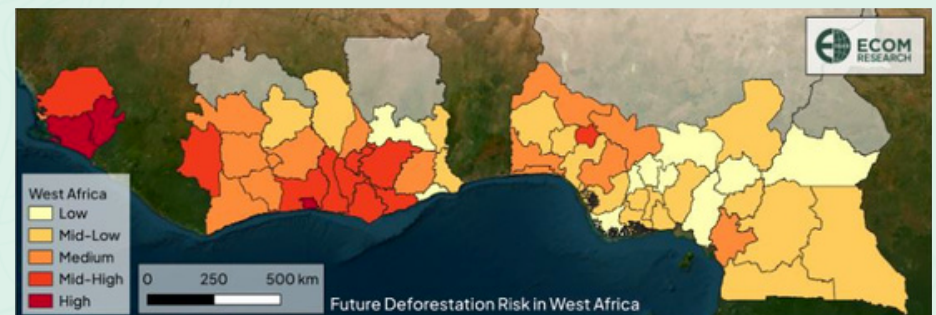
This extends to deforestation, and we go through a thorough response process before deciding to remove a farmer from a supply chain.



Actual deforestation risk in Nigeria for 2023



Predicted deforestation risk in Nigeria for 2023



Spotlight

4.5

Evaluating biodiversity risks in Ecuador

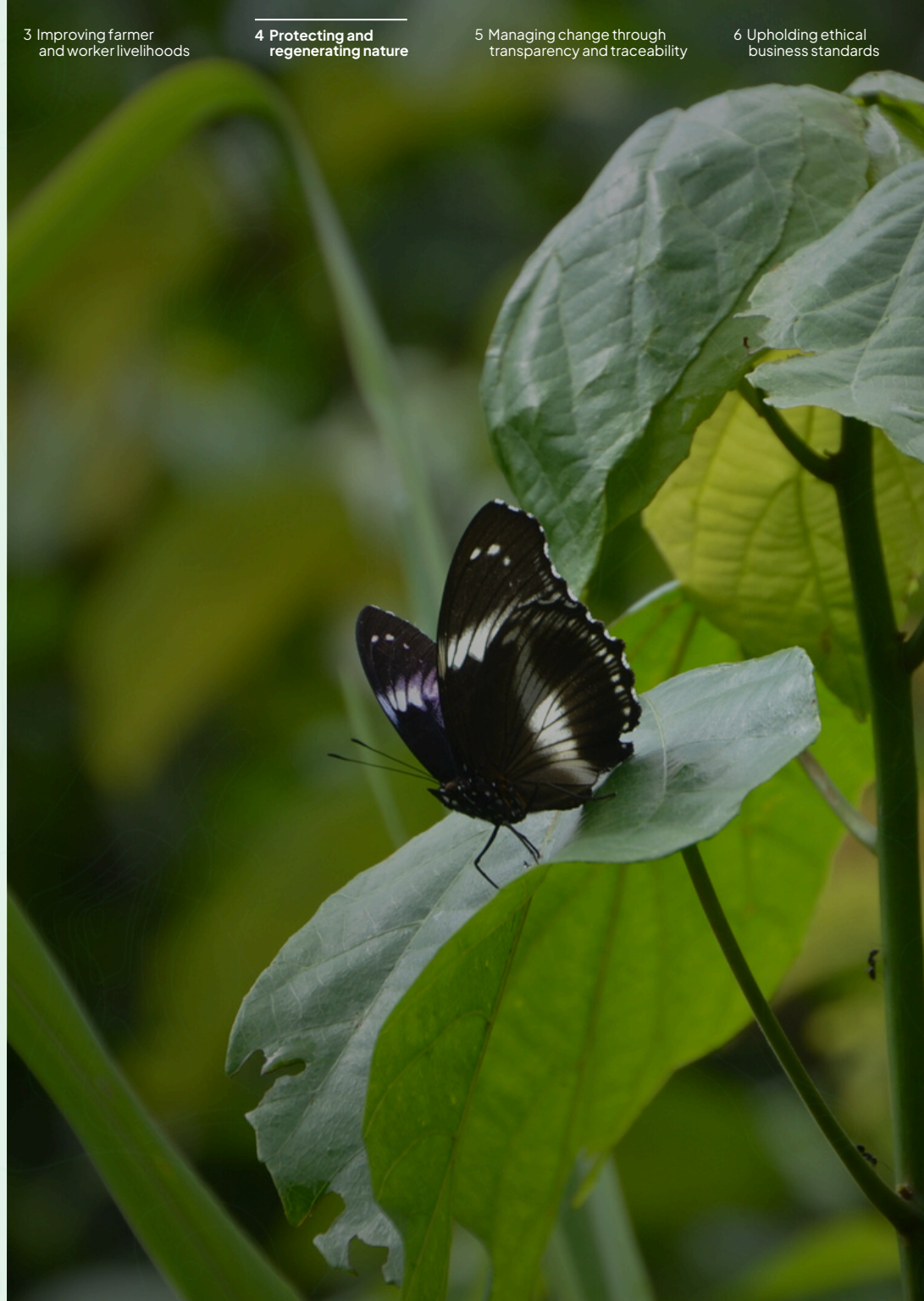
In Ecuador, ECOM has worked with Reckitt and Nature-based Insights (Nbi) – a spin out of the University of Oxford – to carry out biodiversity screening of agricultural land. The assessment helped us evaluate risk levels attached to the land, providing valuable information to support sustainable cocoa production. The assessments are paired with our research into deforestation and climate risks, as well as our knowledge of farming densities and existing interventions like Rainforest Alliance certification rates.

For each area, Nbi extracted geospatial data from 16 individual data layers, looking at the following:

- Present risk levels from natural disasters
- The importance of local biodiversity
- Carbon stock and historical emissions
- The integrity of ecosystems
- The extent of natural ecosystems and historical loss

This enabled them to explore issues such as protected area integrity, potential critical habitats, critical natural assets, key biodiversity areas and the species richness. The study found that several areas had high levels of biodiversity importance, with as much as 60% of the land being classed as Key Biodiversity Areas, protection of the land varied, from 50% coverage in one area to just 3% in another.

The areas are then ranked according to risk level, enabling us to prioritise those best suited for biodiversity focused interventions. This will be achieved through a combination of activities (e.g. agroforestry, boundary planting or water stewardship) that will support around 400 farmers.



4.6

EU Deforestation Regulation

Throughout the year, we have been preparing for the upcoming implementation of EUDR. This regulation covers all imports into, and exports from, the EU, for the following products: cattle, cocoa, coffee, palm oil, soya, rubber and wood.

EUDR requires that imported or exported goods must meet three criteria:

- They have not been produced on land deforested or degraded after 31 December 2020
- They have been produced in accordance with the legislation of the country of production
- They are covered by a statement disclosing that due diligence was carried out and that no or only negligible risk was found at an “adequately conclusive and verifiable” level

In response, we are not only adapting to the new regulations but embracing the opportunity to refine our processes and strengthen our position as a leader in sustainable practices in the industry. We are focusing our efforts around three key areas:

1. **Direct supply chain** – ensuring farmer and supplier education, data readiness and compliance.
2. **Indirect supply chain** – ensuring suppliers are aware of EUDR requirements and educating them about trade opportunities through transparency and collaboration, and strengthening due diligence through Sourcemap, a trusted third-party platform.
3. **Deforestation assessment** – developing an in-house deforestation assessment procedure, ERDA, aligned with EU recommended practices, alongside origin risk assessments and risk mitigation strategy.

As part of our preparation for compliance with EUDR, we need to demonstrate that there has been zero deforestation within plots of land where we source cocoa from the end of 2020. We will achieve this by using ECOM’s own deforestation detection methodology, ERDA. As there is no standardised or singular truth to detect deforestation at present, to ensure robustness, ECOM intends to assess compliance using multiple sources in addition to ERDA. We are working internally to create protocols to ensure the new regulations do not negatively impact farmers and instead help them create long-term economic growth.

Read more about ECOM’s work on deforestation and biodiversity risks in our [2023 Group Sustainability Report \(page 61\)](#).

Spotlight

4.7

Developing ERDA, our deforestation analysis tool

In 2023, ECOM Research developed a new and more effective tool to detect genuine deforestation, ECOM Research Deforestation Analysis (ERDA). Partnering with a leading UK university with expertise in remote sensing technologies, ECOM Research can now accurately measure live woody biomass, providing more precise measurements of forest tree loss in an agricultural context than publicly available datasets. This helps to overcome the difficulty in differentiating between land management techniques such as removing shade trees, pruning and replanting of trees and actual forest loss. Proper land management practices can be misidentified as deforestation in the publicly available datasets, which would leave the farmers unable to export their harvests to the EU under the forthcoming regulations.

ERDA enables us to record more accurate rates of deforestation in our supply chains. Initial figures for Peru and Côte d'Ivoire show that, between 2001 and 2020, deforestation levels were, respectively, 22% and 37% lower than previously thought.

Our intention is to pair ERDA with a Deforestation Verification Protocol which includes desk-based assessments of individual farms using high-resolution satellite imagery.

The successful development and implementation of ERDA equips us with the tools we need to make our zero-deforestation commitment.



4.8

Progress against our KPIs

Agroforestry

- **KPI:** Establish agroforestry models and monitoring systems in 100% of origin-sourced supply chains by the end of 2023
- **Status:** Completed

Agroforestry is a multifunctional land-use approach, and it is one element of our regenerative agriculture strategy. It offers numerous benefits, including bringing increased agronomic, ecological and socio-economic resilience, and contributes to the long-term success of cocoa farming systems. Agroforestry activities include elements such as integrating shade trees to promote the growth of cocoa trees, strategic planting near water sources to prevent erosion and planting species that enhance ecosystems and improve pest control.

Cocoa is often grown in the variable system of agroforestry, where forests are selectively thinned and cocoa trees, along with other fruit and timber trees, are planted beneath the remaining canopy. This means that natural forest is replaced, which contributes to environmental degradation, both directly on farms and indirectly beyond. While the integration of shade trees in agroforestry supports the growth of young cocoa, shade becomes less critical in older plantations, necessitating a dynamic approach to shade-tree management. The changing response to shade regimes as cocoa plantations age highlights the importance of identifying the optimal combination and density of species to maintain high cocoa production within an agroforestry system over time.

Cocoa farmers are facing climate change impacts and increasing productivity demands, and must therefore adopt and scale up sustainable management practices with integrated multidisciplinary approaches. For ECOM, this means a collaborative effort involving co-learning, co-adapting and co-managing with cocoa farmers. Our role is supporting this sustainable transition; however, cocoa farmers must decide if agroforestry can be a tool that meets their priorities, whether that be income diversification or pest management, and if so, how to adapt it to meet those needs.

There are many diverse agroforestry portfolios available, which are each tailored to individual farmers and environments. This makes it challenging to standardise monitoring on the scale of agroforestry adoption in our supply chain and therefore for us to set global targets which we can confidently report progress against.

This drove us to establish a definition for agroforestry across our origin-sourced supply chains by the end of 2023. We hope to focus on understanding the various intensity levels across systems and associated outcomes from those different levels in the future.

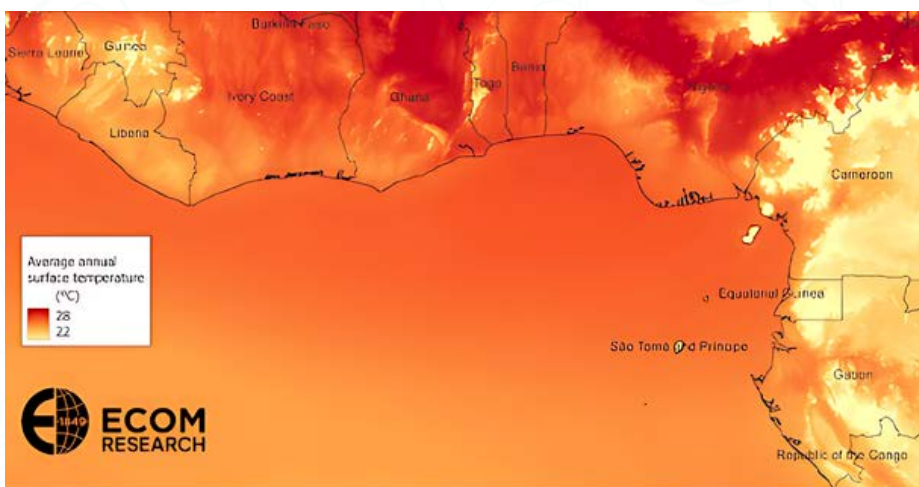
For our standardised definition for a minimum intensity or converting system (Seedling Level) through to the highest intensity (Mature Level) of agroforestry, please see [Appendix 2](#).



Climate change risks

- **KPI:** Carry out country-wide climate change risk assessments in all cocoa origins by the end of 2023
- **Status: Completed**

In 2023, we successfully completed this KPI to support the long-term viability of our operations by proactively addressing two fundamental questions: how will climate change impact cocoa production regions, and what will happen to the areas currently suitable for cultivating cocoa? By gaining insights into these pressing issues, we can develop strategies to adapt our operations, support farmers, and ensure a sustainable cocoa supply chain in the face of a changing climate.

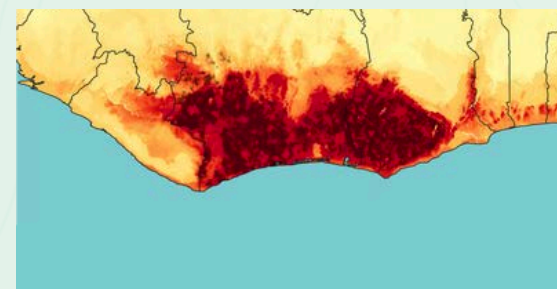


Current surface temperature

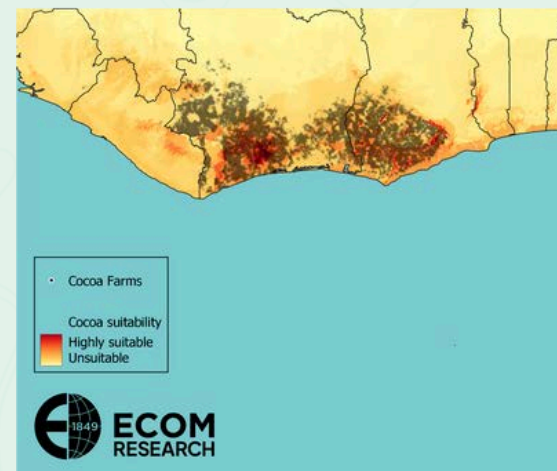
To carry out the assessment, we utilised precise farm polygons to pinpoint the current locations of cocoa cultivation, combined with high-resolution climate data to analyse future climatological projections. By applying advanced machine learning techniques, we identified the optimal climatic conditions conducive to successful cocoa growth and determined the regions most vulnerable to the impacts of climate change.

Our research in West Africa suggested that, by the middle of the century (2041–2070), the number of regions suitable for growing cocoa could be significantly reduced, largely as a result of increased surface temperatures in the dry season. There could also be reductions in rainfall, with a similar change predicted in South and Central America. On the other hand, East Africa and South East Asia could see unchanged or increased levels of precipitation.

This makes the adoption of farm management strategies based on climate-smart cocoa practices key to the future success of growing cocoa in the region. The data gathered from the risk assessments will influence future programming decisions, ensuring that climate change is central to decision making on our activities.



Current cocoa suitability



Future cocoa suitability

Climate-smart agriculture

- **KPI:** Train 100% of farmers in climate-smart agriculture in ECOM origin-sourced supply chains identified as being at high risk of negative impacts from climate change by the end of 2025
- **Status:** In progress

Climate-smart agriculture (CSA) is an approach to farming that aims to transform and reorient agricultural systems to effectively support development and ensure food security under a changing climate. The Food and Agriculture Organization (FAO) of the United Nations defines CSA as agriculture that sustainably increases productivity, enhances resilience (adaptation), reduces/removes GHGs (mitigation), and enhances the achievement of national food security and development goals.

CSA is context-specific, meaning the practices vary based on local conditions. Some examples include:

- Conservation agriculture (minimal soil disturbance, permanent soil cover, crop rotations)
- Precision farming (using technology to apply inputs more efficiently)
- Drought-resistant crop varieties
- Improved irrigation techniques
- Agroforestry

In 2023, 35% of farmers across all our origins were trained in climate-smart cocoa cultivating practices. Cameroon and Côte d'Ivoire are our highest-risk origins for negative effects from climate change, but all producer countries face significant risk. In Cameroon, 70% of the farmers in our origin-sourced supply chain were trained, and in Côte d'Ivoire 24% were trained.

Spotlight



4.9

Developing climate-smart agriculture

In Côte d'Ivoire, we are collaborating with the Green Innovation Centre of GIZ, the German Corporation for International Cooperation. The project provides training and awareness raising to help farmers adapt to climate change, build resilience and increase incomes through climate-smart cocoa and agroforestry. Demonstration plots have been developed to showcase practices and their benefits. After initial training, participating farmers receive ongoing coaching, monitoring and evaluation.

In addition to this, around the protected areas of the Bossematié Nature Reserve and the Beki Classified Forest, we are working to tackle deforestation and improve conservation by helping farmers in the forest buffer zone transition to agroforestry. We collaborated with GIZ to develop a management plan for the Reserve's buffer zone; we are now developing an incentive scheme based on carbon stocks and additional planting of trees for promoting agroforestry practices. As well as this, two non-carbonised energy briquettes units are being installed within two of our partner cooperatives to encourage their use instead of chopping firewood. Finally, to reduce carbon emissions, we have distributed improved cooking stoves to cocoa farming households, to replace the traditional systems.

We are also supporting local nurseries to develop plants for on- and off-farm planting and distributing trees to further accelerate the transition to agroforestry. This will all be supported by a plan to monitor and prevent deforestation.



4.10

Rehabilitating cocoa farms

In Nigeria, cocoa farmers often lack the finance to invest in planting new trees to regenerate their farms. As a result, many cocoa trees in the country are ageing and unproductive, with some cocoa farms with trees that are more than 50 years old.

To address this, ECOM has created a central nursery, where hybrid cocoa seedlings are grown for distribution to farmers. These seedlings were obtained from CRIN, the sole institution in Nigeria authorised to oversee the cocoa sector's regulation, research and development. By producing seeds and plants with genetic diversity, we can provide farmers with more climate-resilient stock. The type of seedling we have distributed is an early-bearing variety that combines high yields with resistance to insects, pests and disease. Twelve hybrids of cocoa have been released and distributed to farmers since 2010. In the first half of 2023, more than 95,500 hybrid cocoa trees were distributed to farmers.

A similar nursery in Mexico produced 500,000 cocoa plants and agroforestry trees annually, with young trees taking just 4-5 months to grow to the point where they are distributed and ready for planting.

4.11

Greenhouse gas mitigation

ECOM is committed to environmental sustainability and we recognise our responsibility to reduce emissions and mitigate our ecological impact across all operations. We are dedicated to minimising our carbon footprint throughout the entire value chain, including transportation and logistics. By implementing energy-efficient practices, optimising transportation routes, and exploring renewable energy sources, we strive to lower our GHG emissions and contribute to a more sustainable future for our planet.

Read more about our work to reduce GHG emissions in our [ECOM Group Sustainability Report \(pages 39–41\)](#)

Quantifying and reducing our emissions

- **KPI:** Quantify GHG emissions for Scope 1 (direct operations), 2 (purchased energy) and 3 (indirect impacts) in our operations and supply chains
- **Status:** Completed

This KPI was completed in 2022 and enabled us to establish a carbon reduction roadmap for cocoa. The roadmap identifies key actions to reduce the carbon footprint of our cocoa beans supply chain, including farm-level traceability that will help certify the deforestation-free provenance of our cocoa. Learn more about our roadmap in our [2022 ECOM Cocoa Sustainability Report \(page 38\)](#).

Net-Zero ambition

- **KPI:** Achieve Net Zero emissions in our entire value chain by 2050 following the SBTi
- **Status:** In progress

While this KPI is ongoing, we have submitted a new commitment to support our climate change targets to the SBTi, which is currently awaiting approval. ECOM submitted near-term targets to be reached by 2030 and Net-Zero targets to be reached by 2050, along with our most recently updated corporate carbon footprint to the SBTi for validation.

ECOM's near-term and Net-Zero target submission also includes targets for Forest, Land and Agriculture (FLAG). FLAG emissions are related to two categories: land use change (LUC) emissions (i.e., deforestation) and land management emissions. We will target LUC emissions by collecting direct LUC (dLUC) emissions data to understand the impact of deforestation and prevent future deforestation events. Additionally, we will provide farmers with payments for ecosystem services (PES) to decrease the risk of deforestation. For land management emissions, we will focus our efforts on reducing our emissions through low carbon interventions (e.g., reduction and optimisation of fertiliser use) and sequestering carbon through on-farm interventions, such as applying biochar and distributing agroforestry shade trees. This means that ECOM will identify and prevent deforestation, in respect of land that has been degraded or deforested since 2020, with the implementation of a strong monitoring, risk assessment, due diligence and remediation process in all our supply chains by 2025. The new commitment, if approved, will facilitate a risk assessment process for deforestation by 2025.





Spotlight

4.12

ECOM's carbon calculator

Since completing our KPI to establish a carbon reduction roadmap for cocoa by the end of 2022, we have developed new projects and initiatives to work towards our decarbonisation goals. An essential part of our decarbonisation strategy is to ensure we accurately measure our emissions at farm level.

To accelerate efforts on primary data collection, we are developing an internal carbon calculator for each of our main commodities. This calculator can be used in every origin and can calculate emissions and carbon removals (e.g., agroforestry) from traceable farms. With the roll-out of the internal carbon calculator in 2024, we will be able to monitor the carbon emissions and removals of the commodities being sourced more accurately. Additionally, we are developing agroforestry and SOC monitoring protocols to accurately sample farms, collect data effectively and monitor carbon removals.

Most cocoa emissions are related to LUC. Since this has a high impact on cocoa's overall emissions, an essential part of our carbon reduction strategy for cocoa is to continue to fight deforestation. Both the GHG Protocol and the SBTi require monitoring systems, risk assessments, due diligence and a remediation process, which are being implemented by ECOM. To align with this for LUC, we continue to monitor our dLUC emissions annually through our internal tool, ERDA. We also aim to prevent any future deforestation events and ensure we have a deforestation cut-off date of 2020 to comply with EUDR.

We are also mobilising our resources to support our decarbonisation journey by exploring innovative technical solutions such as biochar. This is created from the residues from cocoa husks and can be applied to the land, where it acts as a permanent carbon sink and improves soil fertility to increase cocoa yields.

5 Managing change through transparency and traceability



"Transparency and traceability are at the very core of sustainability, providing the data needed for meaningful change in our supply chains."

Katharine Halle

Global Business Transformation Manager

5.1 Managing change through transparency and traceability: Overview

Our focus

Traceability and transparency are central to a responsibly managed supply chain, which is an integral part of our sustainability strategy. However, as we operate globally and with complex supply chains, providing such traceability can be challenging.

ECOM has been collecting farm- and farmer-level data digitally for a long time, working with cocoa farmers and other supply chain participants to strengthen traceability through the latest digital tools and technologies. In late 2023, we partnered with BanQu, a pioneering blockchain-based platform, to enhance transparency and accountability throughout our supply chain.

Read more about our work to manage change through transparency and traceability in our **ECOM Group Sustainability Report (pages 56–62)**.

Our commitments

- To ensure responsibility in our supply chains

Our 2023 KPI

KPI	Status
Achieve 100% traceability to farmer organisation/community for all beans purchased through ECOM origin-sourced supply chains by the end of 2023	Completed

See our full list of KPIs [here](#).

5.2

Traceability and transparency

At ECOM, we place a strong emphasis on collecting and disclosing comprehensive information about our supply chains and sourcing locations. This enables us to make informed decisions about where to prioritise support in the transition towards more sustainable performance. We recognise that capacity-building and close collaboration with our supply chain partners are important in ensuring effective prevention and mitigation of human rights and environmental risks. Our long-standing supplier relationships, built on trust and mutual understanding, facilitate our ability to meet the increasing transparency requirements from regulators and clients.

The forthcoming EU Corporate Sustainability Due Diligence Directive (CS3D) will have significant implications for ECOM, as it sets stringent obligations for companies to address actual and potential adverse impacts on human rights and the environment across their operations, subsidiaries and supply chains. In preparation for the CS3D's introduction, ECOM proactively identifies, prevents and mitigates negative human rights and environmental impacts throughout our operations, subsidiaries and value chain. Where adverse impacts have occurred, we are committed to providing appropriate remediation to affected stakeholders.

To demonstrate our commitment, we published our comprehensive [Supply Chain Due Diligence Policy](#), outlining our robust approach to due diligence practices. Furthermore, the CS3D mandates that large companies align their business strategies with the Paris Agreement's goal of limiting global warming to 1.5°C, necessitating a clear plan for achieving Net Zero emissions. At ECOM, we have a well-defined commitment to reach Net Zero by 2050, supported by a comprehensive carbon reduction roadmap to guide our progress and ensure accountability.

As legislative and client requirements continue to evolve, ECOM remains steadfast in our dedication to upholding the highest standards of sustainability, human rights and environmental stewardship throughout our value chain.

In 2023, as a part of our developing due diligence process, we launched a supplier self-assessment with Sourcemap for all commodity suppliers in the partner-sourced supply chain. From the results, we were able to better understand our suppliers and how they respond to major human rights and environmental risks, such as child labour.

Following the data collection phase, we thoroughly reviewed and refined the assessment to ensure its relevance and applicability across diverse supplier types and operational contexts, and carried out a second assessment in the beginning of 2024. Our objective is to analyse the results from the yearly supplier self-assessment in conjunction with context-specific risk assessments, fostering collaborative efforts with our suppliers to address the most severe risks within their operations. This comprehensive approach not only strengthens our commitment to ethical and sustainable practices but also empowers our partners to uphold the highest standards of human rights and environmental stewardship throughout the supply chain.

Our due diligence efforts will also support us to comply with EUDR (read more [here](#)). We transparently report on the appropriate disclosures, including through this Report and our Group Sustainability Report.

We seek to exhaust all avenues to improve the human rights and environmental impacts in our supply chains. We disengage only when all options have been exhausted and further steps to prevent and mitigate negative impacts are not feasible. Using our leverage and expertise in trying to prevent and mitigate adverse human rights impacts, we can have a large positive impact. Responsible disengagement ensures that we do not cause undue harm to the most vulnerable actors in the supply chains when exiting business relationships.

Read more about our work to ensure traceability in our supply chains in our [2023 ECOM Group Sustainability Report \(pages 56–62\)](#).



5.3

Progress against our KPIs

Traceability in ECOM's origin-sourced supply chains

- **KPI:** Achieve 100% traceability to farmer organisation/community for all beans purchased through ECOM origin-sourced supply chains by the end of 2023
- **Status:** **Completed**

Annually, we disclose our direct origin-sourced supply chain on our [website](#), providing stakeholders with detailed information about our sourcing practices and partner networks. Building upon this foundational transparency this year we transformed this static PDF list into an interactive, user-friendly map. This platform will further increase visibility and accessibility, offering a dynamic visual representation of our direct and indirect suppliers in our origin-sourced supply chain. The [map](#) serves as a powerful testament to our traceability achievements, enabling stakeholders to explore and understand the intricate web of our cocoa supply chain.

Traceability in partner-sourced supply chains

- **KPI:** Achieve 100% traceability to farmer organisation/community for all beans purchased through ECOM partner-sourced supply chains by the end of 2025
- **Status:** **In progress**

In 2023, ECOM traded over 677,000 MT of cocoa externally, of which 95% is traceable to a specific country, 44% is traceable to a cooperative, and 40% is traceable to farm. With the ongoing changes in the regulatory world of the cocoa industry and globally, it is important that our KPIs are in line and reflect these changing ambitions. Therefore, we are increasing the ambition of our target to:

- **New KPI:** Achieve 100% traceability to farm level for all beans and products by 2025

As EUDR is being implemented before our original deadline for this KPI, we have decided to update the level of traceability to fall in line with regulatory requirements. With the ongoing support of technological advances like BanQu, discussed on the next page, we feel confident to make this new commitment. We welcome more ambitious goals from regulators, as they propel the whole industry forward.



5.4

Sourcing sustainable cocoa

- **KPI:** Ensure 100% of beans purchased through ECOM origin-sourced supply chains are sustainable by the end of 2025
- **Status:** In progress

In 2023, 93% of our origin-sourced supply chain was 'sustainable', while 7% was conventional and <1% was Organic. Globally for our entire cocoa supply chain, 50% of the volume is 'sustainable'.

We currently define 'sustainable' as a farm that operates under the interventions or investments made to support cocoa sustainability related to economic sustainability (farmer livelihoods, income, productivity, alternative income generation or living income measures), social sustainability (working towards the elimination of child labour and forced labour, community development, and women and youth empowerment) or environmental sustainability (working towards the elimination of deforestation, reforestation, climate-smart practices or agroforestry). To create strict parameters for reporting, we defined this to include all volumes certified by Fairtrade, Rainforest Alliance, or from verified programmes.

However, we recognise that the definition of 'sustainable' is ever evolving, and we must continually raise our ambitions to meet the changing regulatory landscape and stakeholder expectations. As such, we are setting the groundwork to transition from this current definition of 'sustainability' to acknowledge the dynamic nature of the term.

We aim to set more specific, ambitious targets around sustainable procurement and, therefore, this KPI may be adjusted by the publication of our 2024 report to reflect our evolving commitment to sustainability as we strive to remain at the forefront of responsible and ethical sourcing.

Please see ECOM's definition of sustainable cocoa in the [Glossary of terms](#).

Spotlight



5.5

Using first-mile technology to improve data capture

A key part of traceability is first-mile data – the first mile being the distance between where cocoa beans are produced and our first point of purchase or product handover. With highly complex global supply chains and processes, obtaining complete, accurate, reliable and consistent first-mile data can be extremely challenging.

To address this challenge, ECOM has selected BanQu as our first-mile technology partner, a non-crypto blockchain technology solution that can capture our product journey from farm to export, providing an auditable chain of custody with near real-time reporting. BanQu's in-origin data collection platform will improve transparency and accessibility for our farmers and suppliers in remote locations, linking our ambitious ESG goals at every level of our company as we strive to make a positive impact on farmers, communities and the environment. With real-time, verifiable data down to the source, ECOM will be able to better track, inform and deliver sustainability initiatives for ourselves and our stakeholders, drive our business growth, and ensure ongoing sourcing compliance.

BanQu was created for remote farms, and so can work on simple phones with SIM cards in rural low-connection environments, making it ideally suited for our supply chains and farmers.

The roll-out of BanQu across our origins and commodities will help facilitate consistent and immediately accessible data within our very complex supply chains, and enable us to deliver increased value to our clients and supply chain. Implementation will begin in early 2024, initially in one coffee- and one cocoa-producing country, before being introduced to other origins.

6 Upholding ethical business standards

Conducting business ethically is the cornerstone of lasting success, where integrity cultivates trust, and trust fuels growth. It's not just about following rules, but about setting a standard that inspires and uplifts the entire community.

Imogen Chopra
Global Head of Legal

6.1

Upholding ethical business standards

Sustainability is not only about our products and processes – it is also about our people and how we operate our business.

ECOM aims to manage our business the right way. We strive to work in a way that builds trust with all our stakeholders, developing and implementing policies that demonstrate our commitment to ethical management, integrity and honesty throughout all our actions.

We maintain the highest levels of ethical standards in the conduct of both our operations and those of our suppliers. We ensure robust corporate governance systems are in place to promote better economic, social and environmental outcomes, and remain ready to meet global regulations.

ECOM strives to build a culture across our business that values meritocracy, openness, fairness and transparency. We work continuously to promote equal treatment and embrace diversity in employment and to attract, recruit and retain the right talent. We operate an [Equality, Diversity and Inclusion Policy](#) that guides our actions and reinforces our values and responsibilities.

Our ECOM Group Sustainability Report sets out our actions and achievements in 2023 towards operating responsibly as a business. By investing in our employees, we create a workforce with the necessary skills and motivation to enable us to accomplish our goals.

As a business, our work is guided by a series of policies and codes of conduct. We also aim to ensure our clients share our standards. We monitor and manage the impacts of our activities on farming communities and systems, and aim to ensure all farmers and workers receive a living wage and a fair income.

Read more about our approach to operating ethically and more detailed people disclosures in our [2023 ECOM Group Sustainability Report \(pages 63 to 75\)](#).



Appendix 1

Cocoa Economic Analysis (CEA) and Living Income Benchmark Study Template

Study parameters	Cameroon	Colombia	Côte d'Ivoire	Ecuador	Ghana	Mexico	Nicaragua	Nigeria	Peru	Uganda	Vietnam
Name of study	CEA	CEA	CEA	CEA	CEA	CEA	CEA	RVO-Solidaridad	CEA	CEA	CEA
Geographic area	Edzendouan Goura Nguila Obala Swara, Swrb	Convencion Fortul Giron Hacari Matanza Morrórico Pauna Rio Negro San Calixto San Pablo de Borbur San Vicente Santa Helena del Opón Saravena Arauca Sardinata Corregimiento de Las Mercedes Teorama Tona	Ahondjo Coopalba ECAFHS Faho Scaeths	Cañar El Oro Guayas Los Ríos	Asamankese Dunkwa Fosu Obuasi Goaso Samreboi Suhum Unicom Assin	Chiapas	Pacific Lowlands	Boki Etung Ikom Obanliku Obudu	Marañón en el Dorado Tocache Mariscal Caceres Bellavista San Martin Lamas	Hoima Kagandi	Dong Nai BRVT Ben Tre Vinh Long Tien Giang Dak Nong Dak Lak
Survey period	Nov-Jan 2023	Feb-July 2023	Nov 2023	Sept-Oct 2022	Aug-Sept 2023	Sept-Oct 2023	Aug-Nov 2023	2022	Feb-March 2023	May-Nov 2023	Aug 2023
Study population description (e.g., part of programme, general sourcing area, etc.)	Direct	Indirect	Direct	Direct	Direct	Direct	Indirect	Direct	Direct	Indirect	Indirect
Sampling method (e.g., cluster sampling, stratified sampling, etc.)	Stratified sampling	Random	Stratified sampling	Random	Stratified sampling	Random	Random	Stratified sampling	Random	Random	Random
Sampling confidence and margin of error	>99% conf with 5% margin of error	<90% conf with 10% margin of error	95% conf with 8% margin of error	95% conf with 10% margin of error	>95% conf with 5% margin of error	>95% conf with 8% margin of error	90% conf with 10% margin of error	>99% conf with 5% margin of error	95% conf with 10% margin of error	<90% conf with 10% margin of error	>95% conf with 10% margin of error
Number of farming households in the sample	668	26	150	100	507	131	64	1288	89	22	100

Appendix 1

Study parameters	Cameroon	Colombia	Côte d'Ivoire	Ecuador	Ghana	Mexico	Nicaragua	Nigeria	Peru	Uganda	Vietnam
Range of land sizes (total farm) (ha)	0.6–30.4	N/A	1–55	0.82–28	0.2–80.9	0.5–700	1–120	0.5–60	0.8–105	0.4–97	0.2–5
Range of land sizes (target crop) (ha)	0.2–29.8	1–16	1–18	0.82–21.9	0.2–80.9	0.4–258	0.2–32	0.5–21	0.7–18	0.3–12	0.2–4.5
Household size (median)	6	4	8	4	6	4	4	5	4	8	4
Household size (average)	6.109	3.77	8.77	3.59	6.37	3.89	4.64	4.73	3.66	7.5	3.98
Number of children (mean)	2	N/A	4	2	3	N/A	N/A	2	2	N/A	1
Living income benchmark (LIB) information											
LIB study name and reference link	Rural area: Living income reference value	Rural Areas and Small Towns: Living Wage Benchmark	Rural area, Cocoa: Living income reference value	Rural area, Coastal Region: Living Wage Update Report	Rural area, Cocoa growing areas of Ashanti, Central, Eastern, Western Regions: Living income reference value	As a result of cocoa income being <50% of total household income we did not calculate the living income gaps for Mexico and Nicaragua		Rural area: Reference Value Report	Living Income Report: Rural Areas and Small Towns of Coffee and Cocoa Growing Regions of Cajamarca, Cusco, Junin, and San Martin, Peru	Rural area/Lake Victoria Basin: Living Wage Benchmark	Rural areas: Living Wage Benchmark
LIB year conducted	Original 2020 Updated 2023	Original 2018 Updated 2023	Original 2021 Updated 2023	Original 2016 Update 2022	Original 2018 Updated 2022	N/A	N/A	Original 2020 Updated 2021	2022	Original 2019 Updated 2023	Original 2019 Updated 2023
Original LIB living income value (local currency per household per year)	2,188,188	36,414,552	3,587,796	8,424	27,888	N/A	N/A	1,664,136	28,452	13,878,528	121,875,948

Appendix 1

Living income benchmark (LIB) information	Cameroon	Colombia	Côte d'Ivoire	Ecuador	Ghana	Mexico	Nicaragua	Nigeria	Peru	Uganda	Vietnam
LIB value adjusted for study household size and inflation (local currency per household per year)	2,660,150	36,414,552	4,916,609	8,424	46,539	N/A	N/A	1,805,376	28,452	22,205,645	116,797,784
Method used for household size adjustment	OECD Modified scale	None	OECD Modified scale	None	OECD Modified scale	N/A	N/A	OECD Modified scale	None	Linear adjustment	OECD Modified scale
Inflation rate used	N/A	N/A	N/A	N/A	1.38	N/A	N/A	1.1	N/A	N/A	N/A
Exchange rate to USD (average for 2023)	606	4,301	606	1	9.85	N/A	N/A	399	3.8	3,726	23,500
Benchmark application (single adjustment for all households or benchmark adjusted to each household)	Single adjusted benchmark used for all farming households	Single adjusted benchmark used for all farming households	Single adjusted benchmark used for all farming households	Single adjusted benchmark used for all farming households	Single adjusted benchmark used for all farming households	N/A	N/A	Benchmark adjusted for each farming household	Single adjusted benchmark used for all farming households	Single adjusted benchmark used for all farming households	Single adjusted benchmark used for all farming households
Living income analysis information	Actual cost of production (survey)										
Cost of production for target crop: is actual cost of production or sustainable cost of production used?											
Cost of production for target crop	Farmer self-reported cost of production (survey)										

Appendix 1

Living income analysis information

Cameroon

Colombia

Côte d'Ivoire

Ecuador

Ghana

Mexico

Nicaragua

Nigeria

Peru

Uganda

Vietnam

Total volume produced

Farmer self-reported (survey)

Price received at farmgate/
premium/other payment

Farmer self-reported (survey)

Land in target crop

Farmer self-reported (survey)

Net other on- and off-farm income

Projected from self-reported: percentage of total income from target crop (survey)

Net other on- and off-farm income

N/A - not accounted for in this study

Appendix 2

ECOM agroforestry intensity levels

Indicators	Seedling Level low intensity or converting system	Sapling Level	Mature Level
Land coverage	1 ha		
Tree density (trees per ha) ³³ and basal area (m ² per ha) ³⁴	≥12 trees per ha OR basal area of ≥ 3m ² per ha	≥16 trees per ha OR basal area of ≥ 5m ² per ha	≥20 trees per ha OR ≥ or basal area of 8m ² per ha
Number of species (non-cocoa) ³⁵	Not specified	≥3	≥5
Recommended species ³⁶	Any combination of forest, legume and fruit trees determined through a discussion with the farmer.	Multipurpose trees are deliberately selected through a discussion with the farmer to have more than one function, such as native shade, economic shade and/or trees for intercropping, selected based on climate suitability and incremental revenue estimates.	Multipurpose trees are deliberately selected through a discussion with the farmer to have more than two functions, such as native shade, economic shade and/or trees for intercropping, selected based on climate suitability and incremental revenue estimates.
Additional requirements	<ul style="list-style-type: none"> Individual farmer goals drive agroforestry system purpose Engage with all local specifications shared through local agriculture bodies – for example, in Côte d'Ivoire, agroforestry as described in the African Regional Standard (ARS 1000) (25–40 trees/ha) Adapt to local physical and environmental contexts – for example, generally more shade in sites with poor soils and less shade in fertile soils Preferably all native species except when the intention is linked to food security and/or livelihood diversification, which often require non-native tree species. Research suggests the ratio of native versus exotic species is rarely specified and up to local discretion. Farmer technical training is of key importance to ensure well-implemented farm management practices for successful agroforestry. This includes timely pruning and weeding, integrated pest management (IPM) and introducing other regenerative agriculture practices such as composting or vermiculture. Slow roll-out to show short-term benefits and reduce risk to farmer livelihoods is recommended or scaled cash payments for agroforestry adoption Additional planting around farm boundaries or near water systems to create buffers Added benefit of short-cycle food crops like legumes, chillies etc. dependent on the age of the cocoa plantation Vertical stratification of the shade canopy is recommended Regular monitoring of farms to assess outcomes and iterative improvement 		

Agroforestry can contribute to agronomic, ecological and socio-economic metrics requiring diverse protocols to monitor and evaluate its success. Monitoring protocols will need to be locally adopted based on programme and farmer goals.

Carbon accounting is a key part of our monitoring protocol and must be aligned with the Greenhouse Gas Protocol's Land Sector and Removals standard and the Clean Development Mechanism's A/R methodology, both of which are internationally recognised standards. Our protocol has therefore been developed in partnership with emissions reduction consultants, ensuring alignment with these standards and adherence to the best practices for the following:

- Carbon monitoring on agroforestry systems: in a given country, and among a group of farms, how to measure the carbon stored in the shade/agroforestry trees
- Soil organic carbon (SOC) monitoring: in a given country, and among a group of farms, how to measure the carbon stored in the soil following the application of farming practices

³³ Number of non-cocoa trees per hectare (ha). ECOM programmes have a large range, with some models aiming for more than 300 non-cocoa trees per ha.

³⁴ Basal area is a measure of stand density. It indicates how much of the growing space in a defined area is being utilised (average amount of an area occupied by tree stems) and is often well correlated with stand stem volume. It can be measured using the total cross-sectional area of all stems in a stand measured at breast height and expressed as per unit of land area.

³⁵ Depending on the microclimate, farmer priorities, etc.

³⁶ Varies considerably between origin operations as expected and prioritises farmer choice and implementation intentions. Research suggests functional or ecological guilds should be a key consideration with species selection.

Glossary of terms

Term	Definition
Agroforestry	<p>A plan and criteria specific to the farmers' needs, interests and abilities developed in a participatory process and agreed upon with farmers based on an assessment of the ability for the plan to deliver the three benefits (productivity, economic and environmental). A landscape assessment is acceptable and can be used instead of farm-specific assessments if it is adapted to farmers' needs, interests and abilities when implemented. The plan considers and incorporates the following:</p> <ol style="list-style-type: none"> 1. A farmer's production goals, profit targets, interests, ambitions and abilities regarding adoption of agroforestry. 2. A farm's soil, climate, size, current cocoa planting density and other crop density, current yields and net profit. 3. The tree species, planting density/design, timeframe, labour requirements and financial investment needed to deliver the three benefits most effectively (refer to Appendix 2). 4. Details on how each farmer will receive the technical support, coaching, inputs and finance that they need to be successful. 5. Information from a market assessment that identifies the market demand and accessibility for a farmer to sell the agroforestry products identified in the plan.
Carbon reduction roadmap	The purposeful reduction of a carbon footprint through the scientific analysis of a supply chain, mapped out through a comprehensive, long-term plan.
Certified	Cocoa that has been certified by Rainforest Alliance, Fairtrade or Organic.
Child protection and the prioritisation of education training	<p>Informal or non-formal education based on a curriculum and delivered to farmers using best practice methods for adult learning. It is focused on increasing knowledge, understanding and skills. It can be delivered one-on-one or in groups and can be continual or a one-off. The training curriculum includes all four core topics as per industry standards:</p> <ol style="list-style-type: none"> 1. What is child labour? 2. What types of work are children allowed/not allowed to do? 3. What activities are hazardous? 4. What are the associated risks?

Glossary of terms

Term	Definition
Climate-smart agriculture (CSA) training	Aims to mitigate carbon emissions from cocoa agriculture and help farmers to adapt to the negative impact of climate change on cocoa production and to adapt agricultural practices, if necessary. CSA is not one action; it is rather an approach consisting of several possible actions. CSA is also not a 'one-size-fits-all' approach that is the same for every cocoa farmer; it depends on the specific impact of climate change (the identified climate threat) in a certain area and the capacity of the farmer to respond to this and apply suitable CSA practices.
Counterparty	A legal entity or group on the opposing end of a financial transaction or contract, often to which financial risk exists.
ECOM Group	Our global operations, which cover the Cocoa division, as well as all our other commodities and operations (e.g. coffee, cotton etc.).
Economic resilience	The ability of an economic or socio-economic system to withstand sudden changes or disasters.
Environmental, social and governance (ESG)	Refers to company practices around, impacts on and efforts to manage environmental, social and governance performance in such a way as to minimise negative impacts and amplify positive outcomes, both materially and from a reputational perspective.
Farm	The total amount of productive cocoa land the farmer manages and harvests from. In many cases, there is a collection of multiple plots for one farmer.
Farmer	One person in a single residence on a farm where the primary occupation of the household is the operation of the cocoa farm.
Implement	Can be done directly by the organisation itself or its suppliers, or indirectly by building capacity among local communities or by supporting local public actors.
Improving/Good agricultural practices (GAP)	Agricultural methods that include pruning, pest and disease management, weed management, shade management and harvest management. These practices are promoted to farmers to improve sustainable cocoa production, and the basic environmental and operational conditions necessary to produce safe, clean and healthy cocoa beans.

Glossary of terms

Term	Definition
Income diversification programmes	Programmes that increase the proportion of income derived from non-cocoa farm sources.
Net Zero	Achieving a balance between the amount of emissions produced and those removed from the atmosphere in order to reduce global warming.
Origin-sourced supply chain	All cocoa beans purchased through an ECOM-managed operation in a sourcing country. Beans do not have to be sustainable or under a programme. In 2023 for cocoa, this includes 11 origins: Cameroon, Colombia, Côte d'Ivoire, Ecuador, Ghana, Mexico, Nicaragua, Nigeria, Peru, Uganda and Vietnam.
Partner-sourced supply chain	All cocoa beans purchased through a third-party/non-ECOM managed origin operation. Cocoa can be certified or conventional.
Responsible practices and trade	To actively and consciously ensure that methods and operations within a supply chain do not cause significant negative effects on people, communities or the environment.
Sustainable	A farm that operates under the interventions or investments made to support cocoa sustainability related to economic sustainability (farmer livelihoods, income, productivity, alternative income generation or living income measures), social sustainability (working towards the elimination of child labour and forced labour, community development, and women and youth empowerment) or environmental sustainability (working towards the elimination of deforestation, reforestation, climate-smart practices or agroforestry). It must be third-party verified and include components of traceability. It does not include Organic but does include Rainforest Alliance, Fairtrade certification, and third-party verified sustainability programmes.

Glossary of terms

Term	Definition
Traceability to farmer or community/farmer organisation	<p>Product traceability in the cocoa sector is the “ability to follow the physical movement and/or mass conformity of cocoa through specified stage(s) of production, processing and distribution” (International Organization for Standardization (ISO), African Regional Standards (ARS).</p> <p>Traceability to farmer: In a traceable supply chain to farmer level, polygons or GPS points are the standard for all farms, with unique farmer IDs tracked to first purchase point.</p> <p>Traceability to community/farmer organisation: In a traceable supply chain to community/organisation level, GPS points are the standard for the first transaction point in the cocoa supply chain, where cocoa transfers from the farmer’s control to the control of a subsequent supply chain actor. This is typically also the first point where one farmer’s cocoa is aggregated with cocoa from other farmers (hence, it is commonly referred to as the ‘first aggregation point’). In the direct supply, it may be a buying station, cooperative section, farmer group, Purchasing Clerk shed (Ghana), or other type of farmer organisation’s cocoa purchasing location. Outside of the direct supply, it may include traitants, pisteurs or intermediaries, who may purchase cocoa at the community or the farm levels.</p>



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