Coffee Barometer

Content

Coffee Barometer

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Introduction

Ensuring long-term viability and giving equal importance to short-term economic gain at the farm level are both integral to foster sustainability in the coffee sector.

Introduction

The coffee sector holds an abundance of knowledge, intelligence, enthusiasm, and economic resources to potentially tackle the most pressing issues it faces. We find ourselves in a transitional phase where the current discourse on coffee sustainability is addressing profound issues for the industry. Questions regarding obvious gaps to reach living incomes, adaptation and mitigation of increasing climate change impacts, and the expansion of consumer demand for sustainable coffee ask our attention. Yet, even when we consider the genuine successes achieved thus far, their cumulative impact falls short of addressing the full spectrum of challenges confronting the sector. It is evident that sustainability cannot be regarded as an ultimate destination that will one day be achieved in the coffee industry. Rather, the focus on sustainability should not be viewed in isolation but as a way to uphold human rights and curtail ecological degradation, social injustice, and economic instability.

As we look towards the future, 2030 stands as the new horizon for delivery, replacing the previously set target of 2020, which passed without much notice. Once again, an opportunity for the coffee sector to transform theory into action and make substantial progress towards a sustainable and equitable future. Governments, companies, and civil society continue to embrace initiatives geared towards "sector transformation" – curbing tropical deforestation, respecting human rights, and mitigating the impacts of climate change. Their commitment to collaborative efforts holds the promise of achieving tangible socio–economic and environmental solutions on a significant scale.

Meanwhile, the norms governing international business practices are undergoing a transformation. The European Union is leading a global shift with groundbreaking legislation requiring due diligence on human rights and environmental impacts in commodity supply chains, exemplified by the EU Regulation on Deforestation (EUDR). This marks a broader trend in traditional consuming markets, as governments seek to influence the ethical and environmental dimensions of coffee production, trade, and consumption. The magnitude of the mandatory requirements expected in the coffee industry is significant, and it is clear that many coffee companies are ill–equipped to handle this transformation. Amidst the grand claims of sustainability and rosy promises of a prosperous future in

coffee agriculture, the harsh reality faced by coffee producers is marked by price volatility and rising production costs due to higher prices for fertilizers and labor. Coupled with rampant inflation and the profound consequences of a rapidly changing climate in the most vulnerable origins, the coffee sector finds itself immersed in a state of crisis.

To transition towards a more sustainable coffee sector, we must engage in substantive activities that go beyond highlighting farm–level production practices. It is crucial to recognize the interconnectedness between globalization of production, natural resource depletion, and the exploitation of marginalized and impoverished communities. While the sector's total economic value has significantly increased, the benefits seem to be disproportionately concentrated in Europe and North America. This lack of economic retention is jeopardizing the sustainability of the coffee value chain. To address this, the debate must confront trade inequities, particularly the disconnect between market prices and production costs. Businesses need to demonstrate greater willingness to compensate small–scale farmers for sustainable practices by offering prices that account for social and environmental costs and by investing in long–term trading relationships.

The 2023 edition of the Coffee Barometer aims to increase understanding of the scale, depths and complexity of the main sustainability discussions, by weighing the evidence, debunking rhetoric, and revealing what is going on at sector level. By doing so the report establishes a direct connection with the evaluation of corporate sustainability strategies, as presented in the new Coffee Brew Index on our website: *www.coffeebarometer.org*

This report is structured around four central challenges:

Part 1. The concentration of coffee production in a limited number of countries, coupled with price dynamics that fail to ensure long–term stability for small–scale coffee farmers, and evolving consumer expectations.

Part 2. The importance of ensuring that coffee income contributes to the well–being, and livelihoods of millions of farmers in Africa, Asia, and Latin America. To flourish, these farmers should be able to generate a living income, making their farms economically viable and ecologically sustainable.

Part 3. An examination of the sustainability policies and strategies in place at the top eleven coffee roasters, along with a critical assessment of the role and contribution of each roaster.

Part 4. Exploring the expanding scales of sustainability and mandatory frameworks, particularly the combination of EU legislation covering deforestation–free production, human rights due diligence, and reporting.

By connecting these issues in the conclusion, we foster a more comprehensive understanding of the multifaceted challenges faced by the coffee sector. Only through such introspection and critical analysis can we pave the way for meaningful change and work towards building a coffee industry that is truly sustainable, just, and equitable.

2

Coffee trade

The coffee industry’s pursuit of affordable green coffee often disregards vital aspects like sustainable production and trade practices.

2

Coffee trade

Introduction

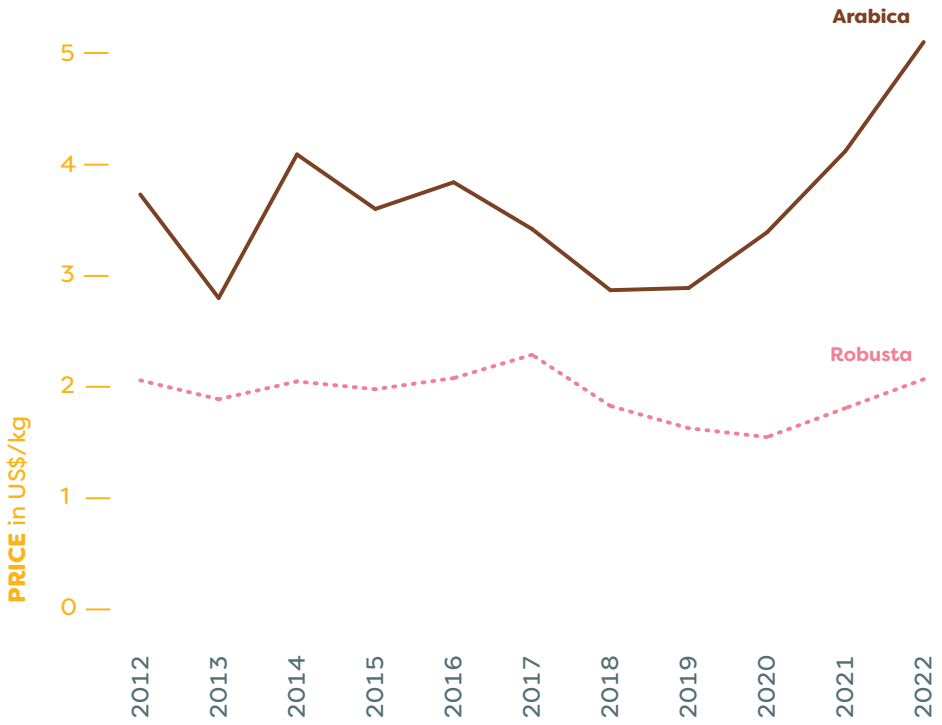
Over the past two decades, the global demand for coffee has shown an upward trajectory, resulting in a consistent expansion of production and exports. According to the International Coffee Organization (ICO, 2023b), worldwide coffee consumption surpassed 168.5 million bags during the 2021–2022 period. The well-established markets of Europe, Japan, and North America accounted for more than half of this global coffee consumption. In these markets the average per capita coffee consumption stands at 7kg, in stark contrast with the global figure of a mere 2kg. As consumer preferences evolve, the strong demand for coffee is presenting opportunities and challenges for producers, exporters, roasters, and retailers. Since the coffee market is quite complex and opaque, most consumers have absolutely no idea where their coffee comes from, who produced it, or if the producer got a fair price.

Coffee price

Starting from early 2021 and continuing through late 2022, the price of coffee witnessed a steady rise, culminating in the ICO indicator C price reaching a ten-year high of US 244 cents/lb in February 2022.[1] This upward trajectory can be attributed to various factors, including adverse weather conditions such as a sudden frost that impacted key coffee-growing regions in Brazil in July 2021, leading to increased shipping container costs, and the International Coffee Organization reducing the global 2020/21 coffee surplus to a 22-year low in early 2022 (ICO, 2023b). However, in recent months, the global market price of coffee has experienced a significant decline, reaching an 18-month low of US 145 cents/lb in January 2023, and now hovering around US 180 cents/lb. Meanwhile, the cost of producing coffee has been steadily increasing, primarily driven by rising labor costs and the increasing prices of inputs such as fertilizers and pesticides. In recent years, inflationary pressure and fluctuations in exchange rates are adding to this upward trend.

The global price of coffee is determined based on the supply and demand dynamics within the global market. Arabica coffees are primarily traded on the New York Stock Exchange, while Robusta coffees are traded on the London Stock Exchange. These

Figure 1. Average Arabica and Robusta price



markets operate through two main mechanisms: current or physical markets and future contracts. The issue is that most market activity is not trading coffee that exists today, but coffee futures. Futures contracts are essentially agreements to purchase a set amount of coffee (37,500 pounds) at a specific price when the contract expires. This mechanic allows end-buyers (like large-scale roasters) to buy future shipments of beans when the price is low if they expect the price to rise in the future when they need those beans. It also allows investors and speculators to buy futures low, then sell high down the road, leading to greater liquidity in the market. This system is well-established

and accepted around the world as a way to determine the price of coffee. Unfortunately, producers can get 'trapped' by the C market price, meaning it becomes the final price for their coffee, rather than the baseline price.

The C price discovery mechanism in the market distinguishes relatively little between characteristics of quality and origin-specific traits. At the consumers' end of the spectrum, the retail price of roasted and ground coffee seems to evolve independently from the green (unroasted) coffee C price. While retail prices tend to follow the peaks in the C price, they do not undergo equivalent downward adjustments during periods of low C prices. This asymmetric price transmission means that during troughs in the C price, retail prices for roasted coffee remain high on supermarket shelves. Also, US retail consumption market data confirms this: roasted coffee witnessed an average price increase of 98% from 1982 to 2018, whereas the C price experienced a decline of 27%. (NewForesight, 2021).

Coffee production

Despite coffee being cultivated in over 50 countries worldwide, the global market is heavily reliant on the bulk coffee supplies from just a few countries. In 2022, Brazil alone was responsible for a staggering 40% of the world's coffee production, while Vietnam has become the uncontested second largest producer, contributing 20%. Additionally, just three countries—Colombia, Indonesia, and Honduras— contribute to a quarter of global coffee output. The export share of the other 45 countries has significantly declined in comparison to the top 5 producers, most notably in Central America and West and East Africa, which have become less influential in international coffee trade. This concentration of production has been driven by the industries' desire to leverage economies of scale, particularly crucial in low-margin businesses where cost efficiency is paramount.

This shift in dynamics has substantial implications. Nations with lower production levels often depend heavily on coffee exports as a crucial economic pillar, such as GDP growth, rural employment, tax revenue, and export earnings. A broad basis also contributes to a rich variety of flavors and qualities. Furthermore, nurturing a diverse range of coffee origins could potentially serve as a pivotal factor in safeguarding the long-term sustainability and resilience of the coffee supply chain, especially in light of the projected impacts of climate change and loss of biodiversity.

Coffee consumption

Europe is the largest coffee consumer market accounting for 2.54 million tons of coffee in 2022 (EU27), equal to 24% of the total world consumption of coffee. The US is second at 16%, an equivalent of 1.66 million tons in 2022. Brazil, known as the largest producer and exporter of coffee, is the third largest consumer market in the world consuming 1.36 million tons of coffee, or 13% of total world consumption. Notably, Europe's consumption levels in 2022 returned to pre-pandemic levels, matching the figures recorded in 2018. The growth rate in Europe remained modest at just 0.1% year-on-

Figure 2A: Global green coffee trade 2022

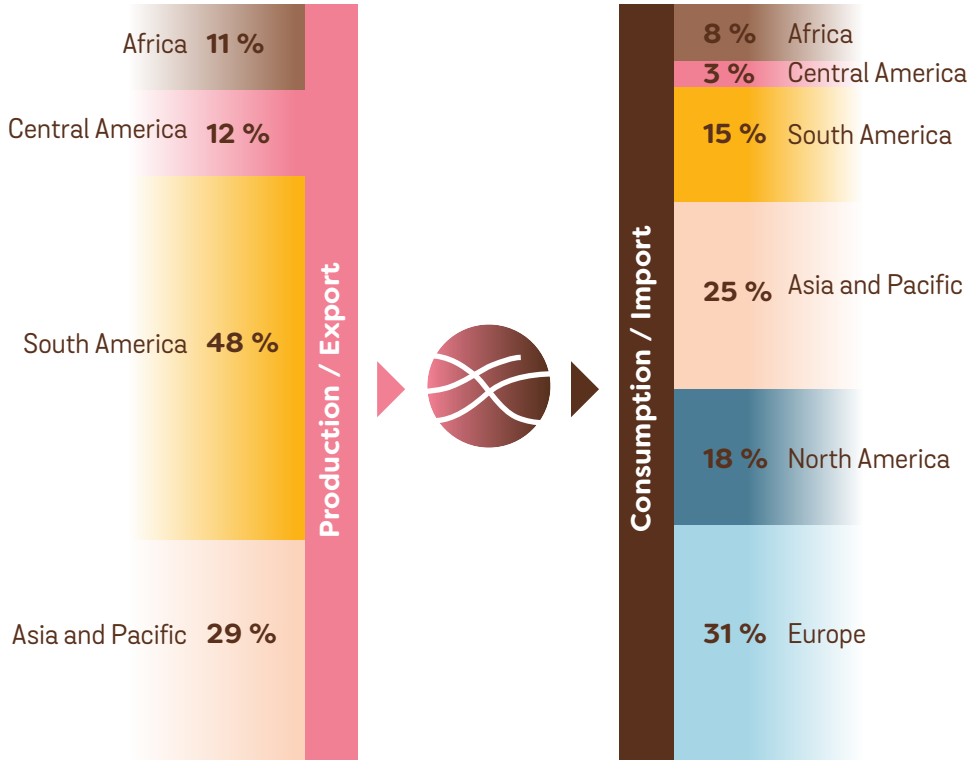
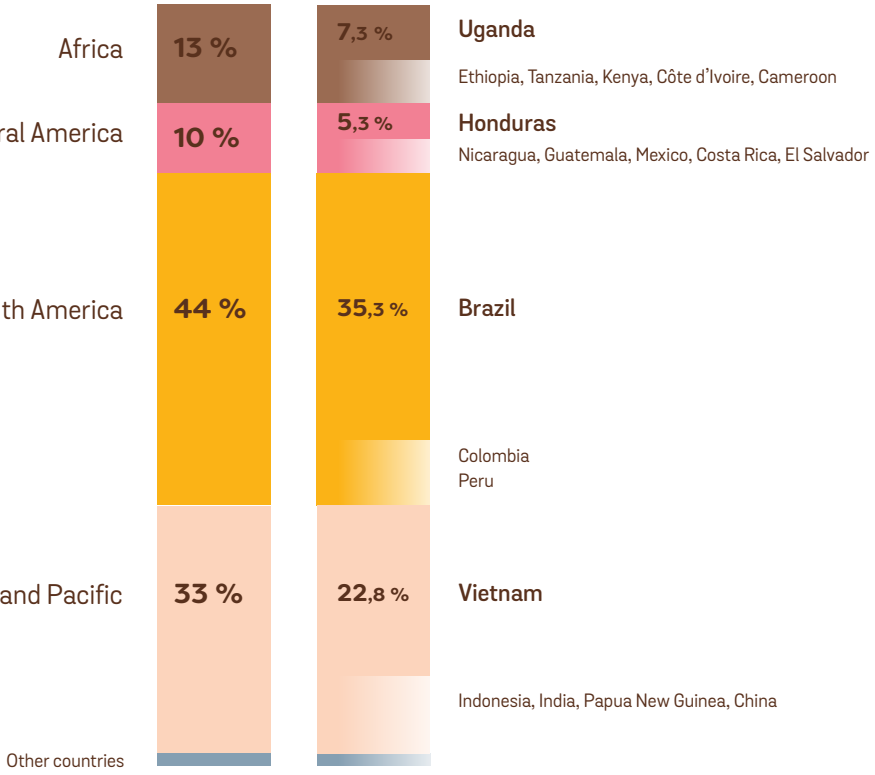


Figure 2B: Origins of green coffee imports EU27 - 2022



year. North America showcased a similar recovery pattern to Europe, with consumption surpassing pre-pandemic levels in 2022. The region's consumption demonstrated a year-on-year growth rate of 1.3% in 2022. In contrast, coffee consumption in the Asia Pacific region experienced a year-on-year growth rate of 3.1%.

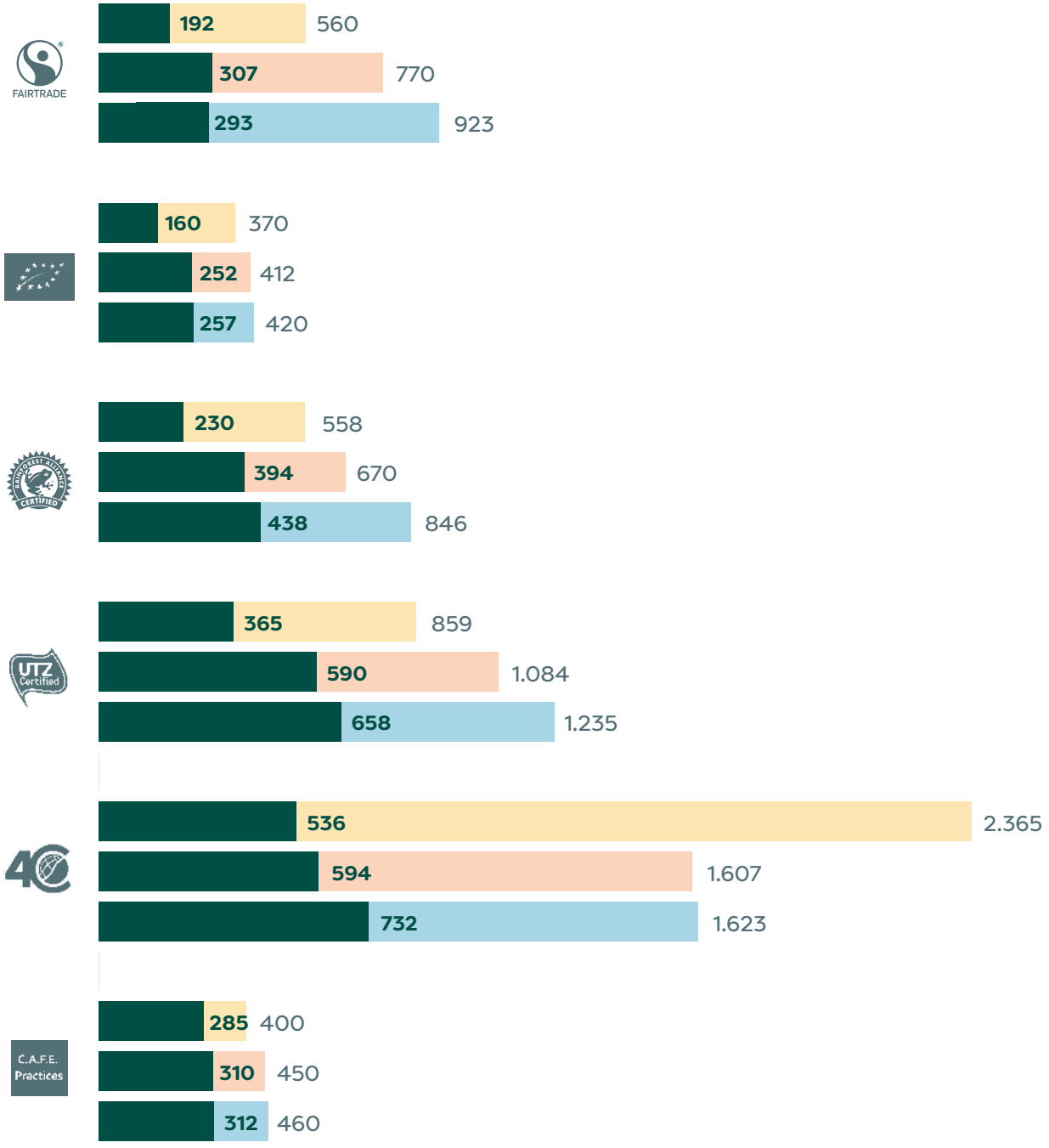
While the majority of consumers in established markets purchase their coffee from supermarkets for home consumption, retail dynamics are rapidly changing. Consumers are increasingly willing to pay a premium for convenience and unique experiences, gravitating towards single-serve options like Nespresso capsules, Keurig K-Cup pods, and ready-to-drink coffee beverages. By 2020, more than 40% of US consumers owned a single-cup coffee brewing system. In 2022, coffee pods accounted for 16% of the EU27 market in terms of volume, reflecting their significant presence in the coffee industry. While other formats (like roast and ground) dominate the market, it is worth noting that coffee pods contribute to a substantial portion of total retail sales, representing 40% in value terms within the EU27 region (ECF, 2023).

Conventional coffee accounts for 70% of world consumption leaving a large share of world production with limited traceability and ease of substitution for roasters to other origin countries (TFCLI, 2020). While there seems to be a growing awareness of and concern about sustainability among consumers (Eurobarometer, 2020), the global market share of more "sustainable options" remains limited. Among the identified barriers are an information asymmetry between consumers and producers, higher prices, the dominance of established consumption routines, information overload, and lack of transparency and trust (Terlau and Hirsch, 2015). As a credibility attribute, sustainability is not perceivable per se. Consequently, consumers have to look for cues that indicate the sustainability performance of a product or brand.

Sustainability standards

To overcome the barriers to sustainable consumption, Voluntary Sustainability Standards (VSS) stand out as the tool to increase transparency and trust in sustainability-related product attributes and to foster sustainable consumption behavior (Fernandes Martins et al., 2022). Well-known examples of VSS in the coffee sector include Fairtrade, Rainforest Alliance and the Organic certification, all of which promote better conditions in coffee production practices. They bring the function of coordinating and regulating the sustainability characteristics of global coffee production to the fore. Third-party auditing and, increasingly, the use of technologies, such as satellite images and remote sensing in the deforestation space, contributes to monitoring and enforcing compliance (Heldt and Beske Janssen, 2023). However, quantifying the effectiveness and impact of VSS remains complex and debated (Rubio-Jovel, 2022). There are deeply rooted structural problems that can only be solved with the involvement of all relevant public and private actors, as well as mandatory rules.

Figure 3. Overview market share VSS 2017 / 2019 / 2021



In the last decade, voluntary standards have been very successful in increasing the volume of certified coffee at the farm level. In the 2020–22 period, approximately 55% of global coffee production was certified, but this figure does not account for cases of multiple verifications or certifications. Despite this impressive percentage, the direct benefits to farmers, such as price premiums and access to new markets, are constrained by the industry's ability to absorb the total volume of certified coffee. This is a critical issue, as in 2021, less than 26% of coffee was purchased by the industry. In other words, the other 74% of the sustainable coffee available was marketed as conventional coffee. Consequently, certified producers, who have made upfront investments to comply with standards, suffer a reduction in profitability. This situation diminishes their financial capacity and undermines their motivation to invest in continuous improvement practices. To overcome these challenges, comprehensive action is needed to properly market the available volumes and ensure that certified coffee receives the recognition and support it deserves.

3

Resilient livelihoods

Coffee farmers constantly analyze their options, manage risks, and make decisions, prioritizing improved well-being, fostering stability, and creating better future prospects.

3

Resilient livelihoods

Introduction

Across the world, coffee production has traditionally provided the agricultural mainstay for millions of people living in the tropical upland areas. Coffee is cultivated on approximately 12.5 million farms worldwide, primarily managed by small-scale farmers who work on just a few hectares of land. In fact, 95% of coffee farms are no larger than 5 hectares, with 84% spanning less than 2 hectares. Coffee producers often have limited economic alternatives, leading many countries to heavily rely on coffee for their export earnings. However, over the past two decades, low and volatile coffee prices have had a devastating impact on farming communities. This context is particularly relevant to producers who are located in countries which contribute to 15% of global volumes (see figure 2b).

Numerous studies have shed light on their prevalent inequality within these coffee value chains (Utrilla-Catalan et al., 2022). The specific situations in coffee-producing countries vary widely, but two common factors loom over the future of the coffee production.

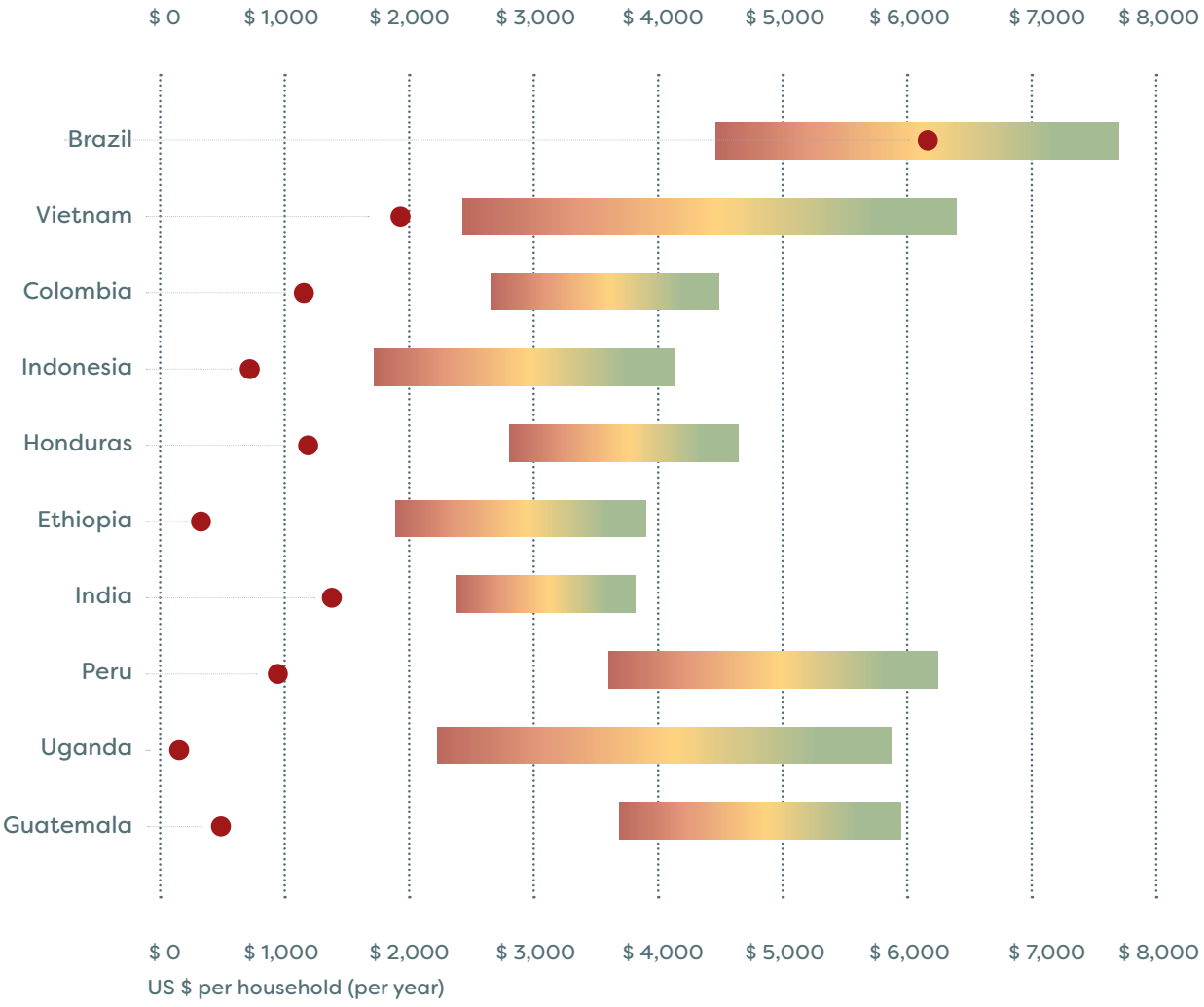
Firstly, coffee farmers continue to grapple with poverty and precarious living conditions. Secondly, there is an urgent need to adapt to shifting climate patterns, coupled with the imperative to address the sector's carbon emissions.

Living income

Living income is finally getting traction on the sector's sustainability agenda. The concept of living income has become widely recognized and influential, with many actors in the coffee industry embracing it. A network of organizations and initiatives has emerged, amplifying the momentum behind the pursuit of living income. Within the coffee sector, platforms such as the Global Coffee Platform (GCP), the Sustainable Coffee Challenge (SCC), and the Coffee Public Private Task Force (CPPTF) have placed living income as a top priority.[2] The Living Income Community of Practice frequently highlights examples of how the coffee sector is a central subject for discussion, information sharing, and capacity building.

Figure 4. Country overview living income - coffee income

Adapted from: Cordes, K. and Sagan, M. (2021). Responsible Coffee Sourcing:
Towards a Living Incomefor Producers. p. 18. Columbia Center on Sustainable Investment



While the coffee sector is increasingly emphasizing the importance of living income and living wage benchmarks, a significant gap persists in terms of comprehensive data for each coffee–producing region. Several in–depth studies are regularly conducted at the country level, however, a comprehensive analysis encompassing all countries is notably absent (ICO, 2021; ILO, 2020). An insightful recent analysis conducted by Columbia University (Kaitlin et al., 2021) addresses this gap by examining the net annual income from coffee farming with living income benchmarks in ten countries, based on coffee prices from the period 2018–2019. It is important to note that these comparisons in figure 4 should be seen as rough estimates of how an average producer might fare within each country.[3] The main findings of this comparison include:

- In 8 out of the 10 countries, the average coffee income is at or below the poverty line.
- Brazil stands out as the only country where the average producer earns a net coffee income that surpasses certain living income estimates.
- Uganda has the largest gap to living income, with an average coffee producer earning $88 per year from coffee, in contrast to living income reference values ranging from over $2,000 to nearly $6,000.

Living wage

Coffee is a very labor–intensive crop, with the majority of work dedicated to hand–harvesting; a meticulous process aimed at preserving the quality of the beans. Within the coffee sector, there are various tasks that are gender–specific, leading to an over–representation of women in roles such as harvesting and post–harvest processing, including drying and hand–sorting the beans. Despite the significant number of workers employed in the coffee industry (e.g., 2.6 million in Ethiopia, 1.5 million in Indonesia, and 1.44 million in Vietnam), the issue of providing living wages for workers remains largely overlooked. Available research indicates that farmworkers in the coffee industry receive wages that do not adequately meet their fundamental needs (Pindeo Caro, 2020). The findings further reveal that these wages not only fall below the national averages, but also fall below the average wages paid in the broader agricultural sector.

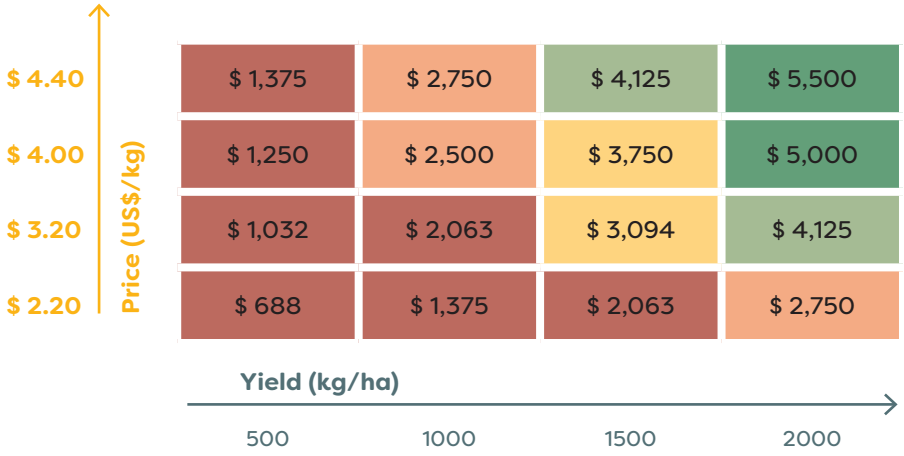
Monthly wages for coffee workers are influenced by the number of hours worked. Firstly, many workers in the coffee industry are hired as casual labor on a daily or task basis, which does not cover a full month of employment. Secondly, a considerable portion of workers are engaged in harvesting, where payment is based on the quantity of coffee harvested per day (Verité, 2022). Female workers comprise nearly half of total employment in the sector, yet they earn significantly less than their male counterparts (ILO, 2020). This disparity can be attributed, in part, to the relatively high number of women working as unpaid family workers.

Climate change

A recent analysis conducted by the Stockholm Environment Institute (SEI) paints a dire picture, revealing that climate change has the potential to slash global Arabica coffee production by a staggering 45.2%, while global Robusta production could suffer a

Figure 5. Theoretical household net income for a 1 ha farm

Inspired by: Hochberg, A. and Bare, M. (2021). Strategies to enhance coffee farmers' incomes: Rainforest Alliance experience and research. p. 7. Rainforest Alliance.



23.5% decline (Dzebo and Adams, 2022). With climate change, significant portions of land used for coffee cultivation are anticipated to become unsuitable by 2050, particularly for Arabica coffee. Efforts to ensure sustainable coffee production must consider the preservation and conservation of forests and other ecosystems, recognizing their ecological significance and the potential negative consequences of their conversion into coffee plantations.

Achieving a delicate balance between meeting the global demand for coffee and preserving biodiversity while upholding and reinforcing essential ecosystem services requires meticulous planning. This involves implementing robust conservation strategies and promoting the sector-wide adoption of responsible land-use practices, such as regenerative agriculture and agroforestry. Key coffee-producing regions will likely significantly reduce. For instance, in Brazil s Minas Gerais and São Paulo States, regions that account for a significant portion of the country's coffee output, the proportion of land suitable for coffee farming could plummet from 70–75% to a mere 20–25%. In Goiás, the viability of coffee cultivation may cease altogether. Other renowned coffee-growing regions will also face the imminent threat of a sharp reduction in suitable coffee-growing areas. Warming temperatures and shifting rainfall could sharply reduce the production in Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Mexico, and Vietnam (Dzebo and Adams, 2022). Although coffee production could potentially relocate to other elevations in many countries, the expansion of coffee cultivation into previously untouched regions poses a significant threat to vital ecosystems that store vast amounts of carbon and biodiversity, and as such provide valuable services for local communities and humanity at large. In numerous countries where coffee is grown, a substantial portion of the projected suitable land for coffee production in 2050 is currently covered by forests, and unfortunately, these areas often lack sufficient protection measures (CI, 2020).

The historical expansion of coffee farms, which often replaced forests, has been a significant driver of deforestation and environmental degradation (Branthomme et al., (2023). Over the past two decades, approximately 130,000 hectares of forested land has been lost each year to coffee cultivation, resulting in an estimated annual emission of around 45 million tCO_2e (Pendrill et al., 2019). The continuous global demand for coffee further exacerbates the threat of converting forested areas into coffee plantations. For example, in Indonesia's Bukit Barisan National Park (Williams, 2021). When forests, typically habitats for many endangered animal species, are cleared for coffee farming, the carbon stored in trees is rapidly released as CO_2. While not all coffee farms are established on recently deforested land, the greenhouse gas emissions associated with land use change (LUC) can reach up to 35$kgCO_2e$/kg of roasted coffee, even when distributed over several years (Vilagomez et al., 2022).[4]

In recent years, forest conservation has gained significant traction on the global political agenda, resulting in a surge of collaborative initiatives involving both public and private actors. These efforts aim to achieve the SDGs and align with the objectives of the Paris Accord as well as the Global Biodiversity Framework, concurrently promoting carbon neutrality and preserving forest ecosystems. Considering that coffee consumption is projected to exceed 200 million bags, possibly by 2030 (Ralph, 2022), significant changes in the production, trade, and consumption stages are inevitable. Sustainable consumption and production are explicitly addressed by the UN as vital pillars in the SDGs (UN, 2015). The recent IPCC report (IPCC, 2023) strongly emphasizes the importance of demand-side solutions to alter consumption patterns and mitigate climate change. The EU27, the world's largest coffee market, has explicitly included coffee among the seven agricultural commodities covered by the EU Deforestation Regulation (EUDR), which is set to come into effect in 2024 (see chapter 5).

Agroforestry

Nature-based solutions offer a potential pathway forward. These solutions encompass actions and policies that leverage the resources provided by nature to protect and restore ecosystems, while simultaneously addressing societal challenges (Gomes, 2020). In addition to exploring strategies like transitioning to climate-adapted coffee varieties, farmers have the option to adjust the management practices of their coffee systems to mitigate the impacts of climate change. The issue of fundamentally transforming the entire agricultural production system continues to be a topic of discussion and disagreement within the industry. Additionally, a key point of contention revolves around the allocation of investment costs and who will bear the financial burden.

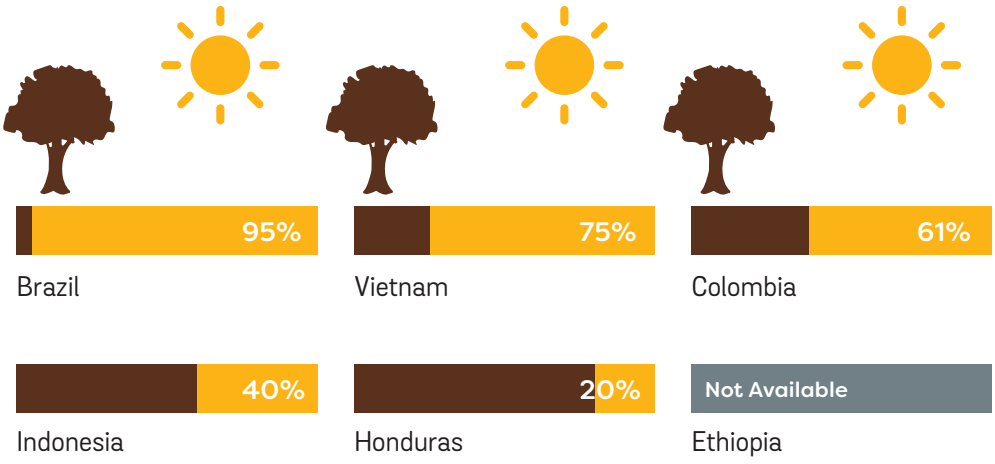
Climate smart, regenerative agriculture as well as agroforestry, in particular, have emerged as a promising solution for sustaining coffee production in the face of climate change. These approaches involve intercropping coffee plants with shade trees and promote practices that enhance soil health. This can enhance nutrient cycling, promote biodiversity, store carbon, and create a favorable microclimate. The presence of shade trees in coffee agroforestry systems leads to lower average air temperatures and higher

soil moisture compared to unshaded coffee systems. While shade levels above 50% in coffee plantations have been associated with decreased productivity, shade levels below 50% do not seem to compromise yield (Gomes, 2020).

This shift in farming practices holds the potential to address the environmental challenges associated with coffee production and enable the cultivation of coffee in a more sustainable and climate-resilient manner. Since coffee is a perennial crop that lasts for 20 to 30 years, it is an issue of long-term planning and investing. Clearly, agroforestry should not be seen as a substitute for natural forests, but rather as a means to restore degraded landscapes. Agroforestry has the potential to contribute to global restoration efforts and store vast amounts of carbon, potentially amounting to millions of metric tons.

Moreover, within the context of the coffee industry's objectives, which have predominantly concentrated on the reduction of emissions, a new development is emerging. Guidance emanating from the Science Based Targets Initiative (SBTi), tailored specifically to companies with a large ecological footprint due to emissions originating from land use, allows companies to invest in carbon removals within their supply chains. This encourages companies to allocate resources towards the mitigation of carbon by the uptake of carbon insetting efforts across the industry. Companies are challenged to assess their broader ecological impacts, encompassing factors such as biodiversity, land utilization, water management, and similar facets. The guidelines of formulating and delineating objectives for addressing these multifaceted aspects are currently being

Figure 6: hectares sun vs. shade



formalized by the Science Based Targets Network (SBTN). Several coffee companies –Nestlé, JDE Peet's and Tchibo– are part of the Corporate Engagement Program of SBTN.

Box 1 **Stenophylla coffee**

Research to develop new and resilient coffee varieties is ongoing (WCR 2022) and sometimes provides promising prospects. An excellent example is the rediscovery of 'Coffea stenophylla' – a rare and threatened species from West Africa – which has the potential to ensure the future of great-tasting coffee in the face of climate change.

While there are 124 species of coffee, we rely on just two for 99% of our coffee consumption: arabica and robusta. Arabica is a cool-tropical plant with a mean annual temperature requirement of around 19°C. It is vulnerable to increasing global temperatures and coffee leaf rust, a fungal disease that has severely impacted coffee plantations in Central and South America. Robusta grows at low elevations in wet-tropical conditions and requires an average annual temperature of 23°C and is resistant to certain strains of coffee leaf rust. However, robusta falls short in its flavor and is widely regarded as inferior to arabica, with the majority of its production used for instant coffee. In 2021, researchers of Kew announced the discovery of stenophylla coffee in Sierra Leone. It grows wild in hot-tropical areas at low elevation, only 400 m above sea level. While stenophylla grows and crops under similar climatic conditions to robusta, it has a higher mean annual temperature requirement of 24.9°C, which is 1.9°C higher than that of robusta, and a substantial 6.2–6.8°C higher than arabica. Coffea stenophylla is classified on the IUCN Red List of Threatened Species as 'Vulnerable', so efforts are urgently required to safeguard the future of the species in the wild. Further work is required to fully evaluate its potential as a climate resilient, high-value crop species and breeding resource, including claims of drought tolerance and resistance to coffee leaf rust.[5]

4

Coffee brew index

Effective addressing of social and environmental impacts requires well-defined corporate strategies, bringing together elements like transparency, traceability, supplier engagement, and procurement practices.

4

Coffee brew index

Introduction

Historically, the coffee retail market has been heavily dominated by a small number of large roasters, primarily based in Europe and the United States. With a global reach and a diversified range of brands, they have established a strong presence in all major coffee markets. The consolidation of the coffee market, driven by major multinational companies, has resulted in a concentrated industry landscape (CB, 2018). In an era where supermarket shelves overflow with an array of brands and coffee chains dot every street corner, the notion of real consumer choice proves to be a mere illusion. For example, only 4 companies provide 68% of coffee in the US: J.M. Smucker, Starbucks, JDE Peet's and Kraft Heinz (Lakhani, 2021).

These leading companies provide a wide range of coffee products, including traditional roast and ground coffee, single-serve options, espresso beans, and instant coffee. It is worth noting that some of these roasters hold a higher value share compared to their volume share, indicating their dominance in premium coffee segments such as single-serve capsules or the out-of-home market. Conversely, roasters with a reverse share equation typically compete in the more affordable roast and ground coffee segment (see detailed company overviews on our website: www.coffeebarometer.org).

Some of the largest coffee roasters in the world are now positioning themselves as sustainability leaders, making ambitious commitments and engaging in partnerships and multi-stakeholder initiatives. These firms often narrowly interpret sustainability as improving efficiency and competitiveness of business in a globalizing world economy of increasing scarcity, ever-higher risks, and opaque supply chains. Challenging the efficiency-focused narrative of corporate sustainability is not an easy task. The promises and claims made by these roasters are alluring, and expectations from regulators, civil society, consumers, and investors are rising. Stakeholders increasingly demand that companies monitor and address human rights and environmental risks in their global supply chains. Over the past two decades, this demand has given rise to numerous initiatives and guidelines promoting responsible business conduct in the coffee industry. These initiatives range from company-level commitments to voluntary sustainability

standards (VSS), multi-stakeholder programs, and due diligence guidelines developed by international organizations, to mandatory supply chain regulations enforced by governments.

The starting point of this chapter is the realization that little detail is known about the specific sustainability strategies of the major coffee roasters. Without well-defined strategies and reporting mechanisms that encompass crucial elements like transparency, traceability, supplier engagement, monitoring, and sector collaboration, companies will be unable to effectively address the social and environmental impacts within their coffee supply chains. Keeping this in mind, we recognized the imperative to develop a novel approach for evaluating and scoring the sustainability efforts of the main global coffee roasters and retailers. What makes this approach innovative is that it surpasses a mere checklist of sustainability topics being addressed. Instead, it assesses the level of maturity of these engagements and the extent to which they are integrated into the core of the business and its decision-making processes. In this edition of the Coffee Barometer, we introduce the Coffee Brew Index, which focuses on these essential aspects required to achieve sustainable development in four critical areas: Sustainability Strategy, Social Conditions & Inclusion, Environment, and Sustainable Purchasing & Economic Conditions.

Our assessment reveals that while the majority of companies have overarching strategies and sustainability activities in place, comprehensive tangible, measurable and time-bound goals and objectives remain limited in many cases. The maturity of individual company coffee sustainability strategies varies, influenced by diverse factors such as company size, available resources and financial drivers, stakeholder interests, and company culture. Yet the progress made by leading companies using readily available tools and systems demonstrates that the goals are attainable. Implementing sustainable business practices in the coffee industry requires adjusting existing business practices, leveraging knowledge and employing approaches that are already known and tested (Sellare et al., 2022).

Methodology

Documentation: To conduct the assessment, we assessed the contents of corporate annual or sustainability reports, as well as any accompanying documents or sets of public information directly linked to these reports. Our decision to focus on these sources aligns with the principles outlined in the Global Reporting Initiative (GRI) and its associated guidance, which emphasizes the importance of easy accessibility to relevant information. During the review process, we observed that certain companies present their sustainability information in well-structured annual reports, providing easily accessible data on key material topics. However, other companies have less organized information, requiring the compilation of fragmented reports to complete the assessment. Our evaluation highlights the importance of transparent sustainability reporting, encompassing all aspects of Governance, Environment, Social, and Economic (ESG) factors in a comprehensive package that is easy to understand and digestible for the general public. It is worth noting that four – out of the eleven – companies, namely Lavazza, Melitta, Tchibo, and Massimo, have not published sustainability reports for the year 2022 as of the date of conducting

Figure 7. Coffee Brew Index

Visualization of all results: www.coffeebarometer.org
List of individual company assessments: www.coffeebarometer.org

this assessment (May 2023). While we do not factor this into the scoring for this year, it is important to emphasize that timely reporting of sustainability data is a best practice in sustainability reporting and strategy.

Engagement process: Following the completion of the review, we shared the individual assessments with the respective companies and extended an invitation for them to provide feedback. Acknowledging the valuable contribution made by companies in engaging with our assessment, we are grateful for the proactive involvement and comments provided by the majority of roasters. Regrettably, we must note that Kraft–Heinz is the only company that did not respond to our invitations to participate in the evaluation process.

Assessment approach, scoring and limitations: The assessment aimed to gauge the level of maturity of each company regarding sustainability issues within the coffee supply chain. Companies were awarded higher scores if they demonstrated clear strategies encompassing various dimensions of sustainability, specific time–bound goals, investments, and activities integrated into their supply chains, as well as continuous monitoring and public reporting on their sustainability objectives.

In acknowledging this is our first attempt to score the performance of each company, we recognize the following limitations in our efforts:

A current bias towards a «more is better» approach in select assessment areas. For example, higher scores were assigned for more certified volume, increased engagement with MSIs, and a broader range of investments in specific sustainability thematic areas. We recognize that certifications are not always tied to better sustainability performance and that more engagements do not necessarily speak to the quality or depth of those engagements. We understand the shortcomings of this current scoring methodology and intend to evolve over time to better evaluate the quality and depth of these engagements and investments.

For many companies in our assessment, it was not always clear whether investments with farmers or their corresponding communities were tied directly to the supply chain or even origins from which the company sourced. Sometimes engagements were made in general "coffee communities" and it was therefore difficult to assess whether sustainability engagements and investments were "in the supply chain", especially when companies made investments through their foundations. Ideally, in a fully integrated and mature strategy, sustainability investments and engagements would be embedded in the business and within the supply chain. This is another shortcoming of this current assessment that we intend to evolve over time– the fact that we were unable to tease out some of these details regarding supply chain investments, may unintentionally distort some results.

Due to limited resources, we were unable to employ triangulation of information from companies with local stakeholders to verify the accuracy and reliability of the reported data.

Figure 8a. Coffee Cup Index: Strategy

Strategy

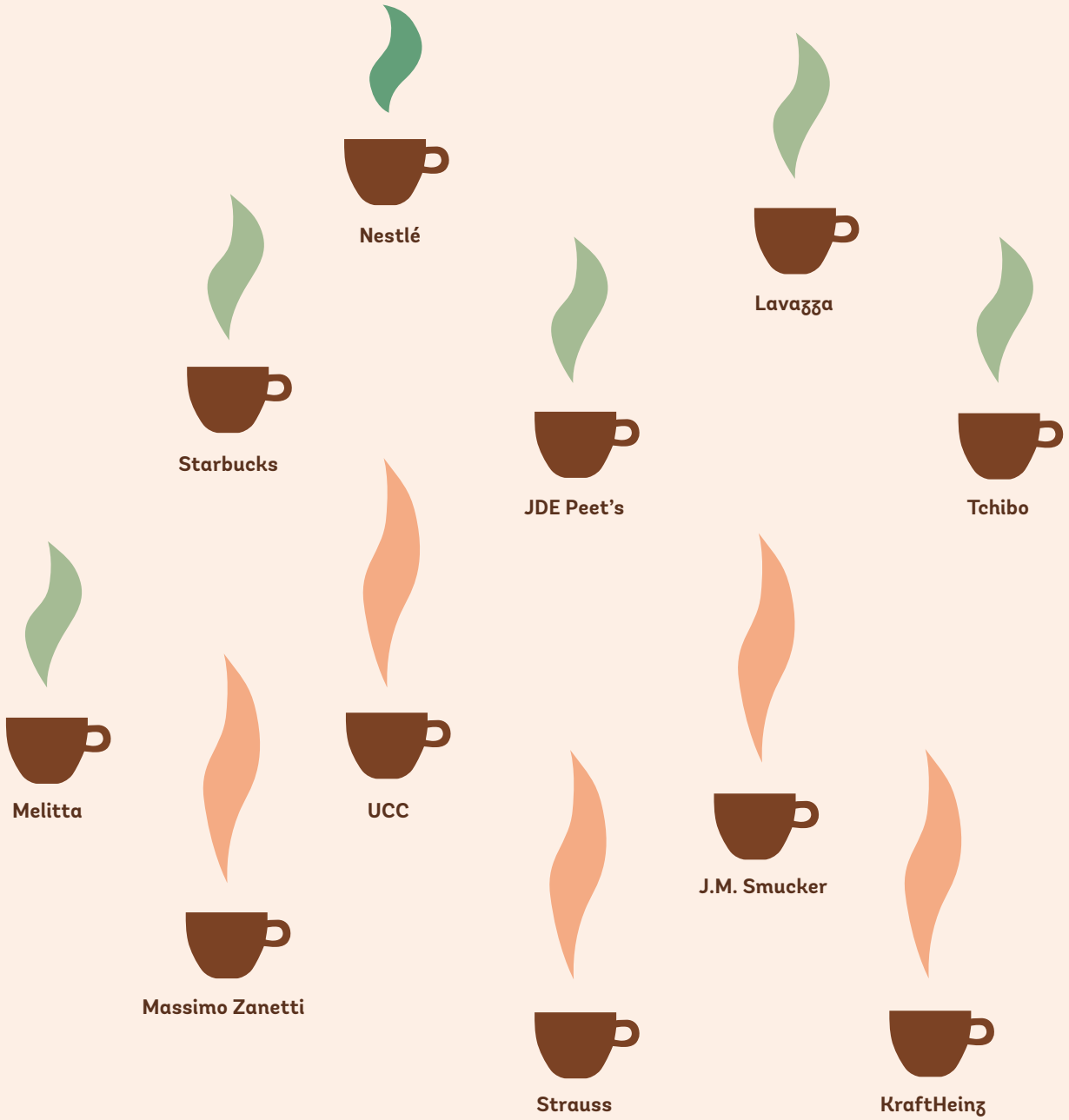
Sustainability strategies

In this section, we look at both the overall corporate and coffee–specific sustainability strategies. Given the prominence of all these roasters in the global coffee industry, we would expect them to have individual coffee sustainability commitments as well as cohesive strategies to support the sector (even if the company is active in other products beyond coffee), but this expectation was not always met. While companies tend to disclose their broader strategies, specific and comprehensive background information is not always readily available in their public sources. Corporate disclosures often lack depth and quantified detail when it comes to strategic elements. For instance, there seems to be a disconnect between the identification of sustainability risks and working towards tangible results through the combination of VSSs, company codes of conduct, and supply chain investments.

All coffee roasters rely on outsourced coffee production, often located in regions where human rights abuses and exploitation of natural resources are potential concerns. While most companies have overarching sustainability strategies that outline their specific thematic commitments, they often lack comprehensive, tangible, measurable, and time–bound goals, and objectives. This pattern is a consequence of voluntary sustainability regulations and reporting practices that grant companies the freedom to choose their own sustainability strategies and disclosures. On a positive note, some companies, such as Nestlé, JDE Peet's and Starbucks, provide information that, while sometimes incomplete, allows for a better understanding, setting an example that verifiable information at the outcome level is indeed possible.

While company policies and strategies include concrete objectives, these are often expressed in terms of implementing activities rather than setting comprehensive and robust targets linked to broader impacts. Ideally, coffee–specific sustainability strategies would involve farm–level investments and activities that are embedded into supply chains based on identified risks and local needs. The level of public transparency plays a critical role here in assessing these strategies, yet none of the companies provide financial estimates of their yearly sustainability portfolio, which could provide insights into their efforts to address sustainability risks in their coffee supply chains. This may indicate that companies consider transparency in this aspect optional or, even worse, that they themselves lack access to such information.

Figure 8b. Coffee Cup Index: social



Our first assessment results reveal that 5 out of 11 companies across social, environmental, and economic pillars still rely on ad hoc and one-off projects and investments that are not necessarily part of a larger overarching coffee sustainability strategy. These initiatives are sometimes associated with corporate charitable efforts. As mentioned above in the 'Limitations' section, it was difficult to tell in some cases whether these projects were actually embedded in the supply chain, requiring further investigation to determine their alignment. It remains unclear whether this lack of transparency stems from limited knowledge of supply chain traceability or the immaturity of strategic engagement at this stage. Comparisons with thematic results presented in subsequent paragraphs indicate that while most companies provide some information on policies, risks, activities, and goals at the farm level, they tend to remain vague on strategic sustainability aspects, such as trading practices, fair price setting, or farmers living incomes.

Social

Social conditions and inclusion

To evaluate human rights-related disclosures, we identified salient human rights issues faced by coffee companies (UNGP 2011) in our questionnaire. When it comes to corporate disclosure on human rights, we often encounter narrative and case-specific approaches. Our assessment reveals that while most companies have robust Codes of Conduct addressing labor conditions and rights, the mechanisms to identify areas of risk and establish preventative strategies for ensuring good labor conditions are still limited. On the one hand, this observation indicates that labor rights are regarded as important by many roasters. However, on the other hand, it is notable that only a small number of companies offer pertinent and precise information regarding their specific policy targets and methods to prevent and address risk. Regarding social inclusion at the farm level in particular, there is a scarcity of companies setting targets aimed at integrating gender equality and next generation into their day-to-day practices, even though several companies have activities and investments on this topic (ICO, 2021).

Most companies do not disclose information regarding policies that tackle identified human rights risks in their coffee supply chains, and they fail to describe changes in the nature of human rights issues over time. It is evident that reporting can only play a supportive role by ensuring the disclosure of meaningful information. Achieving corporate accountability requires a different approach, one that specifies companies legal responsibilities based on human rights due diligence, as outlined in chapter 5.

Figure 8c. Coffee Cup Index: Environment

Environment

Environment and climate

While it is true that a relatively high percentage of companies provide information about their climate change strategies, the overall assessment yields a mixed picture. It is encouraging to note that a majority of companies have improved their climate–related targets and reporting, likely influenced by increasing international standardization and guidance on requirements and science–based target setting (such as CDP, SBTi, etc.). However, the extent to which companies provide detailed information about managing climate risks in coffee production at the field level often remains vague. Only a handful of companies –Nestlé, JDE Peet's, Starbucks, Lavazza and Tchibo – have a set of comprehensive policies addressing biodiversity, water, and ecosystem conservation in their reports.

Our assessment demonstrates that Nestlé, JDE Peet's and Starbucks are, compared to the others, the most advanced in their inclusion of deforestation as a material risk within their sustainability strategies. However, the overall quality and depth of deforestation policies and commitments varies (Wardell et al., 2021). Very few roasters have policies that meet best–practice requirements as set out by the Accountability Framework initiative (AFi), such as clear target and cut–off dates as well as necessary management systems to ensure progress. Instead of assuming responsibility at the company level, many address the issue in their Supplier Code of Conduct or sourcing policies, placing the responsibility on suppliers to ensure deforestation–free coffee. The level of information provided by companies about their deforestation policies seems to correspond with the low percentage of companies referencing or not referencing their progress in the producing countries. This poor performance explains the apprehension among private sector actors regarding the forthcoming EU Deforestation Regulation (as discussed in chapter 5).

Figure 8d. Coffee Cup Index: Economic

Economic

Sustainable purchasing and economic conditions

In this section, we present the findings related to sustainable purchasing practices and roasters' practical efforts to enhance the economic viability of coffee farming. The cornerstone of a coffee company's operation lies in its purchasing practices (Molenaar and Huetz–Adams, 2023). These crucial decisions not only determine the company's environmental, social, and economic impact but also hold the power to either propel a sustainable coffee industry forward or intensify the existing challenges it faces.

Despite companies making bold claims in their public communications regarding their commitments, this part of the assessment proved to be the most challenging for the companies to answer, resulting in disappointingly low overall scores. As a result, it does not come as a surprise that the disclosure of sourcing policy outcomes reflects a general trend of companies failing to provide relevant and specific details. For example, very few companies share up–to–date public information about their certification and verification processes, sustainability premiums and long–term contracts, let alone their supplier base.

We also examined whether companies offer sufficiently detailed information to comprehend crucial matters like the profitability of coffee farming and the struggle to attain a living income for farmers. Regrettably, only a small number of companies provide some specific information on their involvement, citing concrete actions and investments. Those engagements often relied on quality improvements rather than examining profitability, costs of production or living income. The majority simply rely on their membership in MSIs as a token of their participation on this theme. Such information is vital for engaging in meaningful discussions about the progress of individual companies and the overall advancement of the sector.

Figure 9. Corporate members of MSIs

Multi-stakeholder accountability

Over the past two decades, the concept of multi-stakeholder initiatives has surged in prominence as a governance approach. It has become the default method for addressing complex issues, with corporate partnerships and voluntarism taking center stage. Notably, MSIs now play a vital role in achieving the Sustainable Development Goals and implementing the Paris climate agreement. MSIs are hailed as a means to tap into the abundant human, material, and financial resources of the private sector and other non-state actors, mobilizing shared resources that complement public efforts (Herlin, 2021).

MSIs, such as the ICO Coffee Public Private Task Force (CPPTF) Working Group, the Global Coffee Platform (GCP), and the Sustainable Coffee Challenge (SCC) bring together governments, civil society, and private sector actors. Consequently, MSIs effectively legitimize the role of companies as primary actors in global coffee sector governance, enabling them to shift their public image from being contributors to the problem to champions of the solution (Hart et al., 2021). This allows them to portray themselves as "taking action" while conveniently sidestepping the more complex and contentious issues. For example, in individual company strategies, the membership of a MSI is often used as a proxy to claim engagement with thematic subjects, such as deforestation-free supply chains or living income benchmarks. This approach becomes apparent through the lobbying endeavors of industry associations like the European Coffee Federation (ECF), as they engage with the EU policymakers. In their lobbying efforts, the ECF emphasizes the activities of MSIs related to human rights and environmental concerns, aiming to showcase the proactive involvement of the private sector (eg. ECF, 2022, 2022a, 2022b).

One might expect civil society to challenge how corporations are reshaping the sustainability narrative in the different MSIs. However, as partnerships deepen and NGOs become entangled in webs of corporate and governmental fundraising schemes, an increasing number of NGOs seem to accept, or at least refrain from openly criticizing, the corporate sustainability narrative (Anheier et al., 2019). For example, this is evident when evaluating the degree of NGO participation in the consortium responsible for producing the Coffee Barometer over the past decade. The absence of inclusion and engagement with local civil society, labor unions, and indigenous organizations in producing countries reflects a lack of commitment to fostering robust accountability within these frameworks (IPES-Food, 2023). Addressing the challenges at hand requires nimble accountability structures and metrics to assess cumulative impact; a facet currently lacking in MSIs (Haque, 2020). For instance, establishing baselines for sustainable business practices, such as the GCP sourcing snapshot and equivalence mechanism, will be crucial to foster collective impact (see Box 2).

Box 2 **GCP Equivalence Mechanism**

The GCP Equivalence Mechanism (GCP EM) is a framework established by the GCP to assess the comparability of sustainability schemes to the Coffee Sustainability Reference Code (GCP, 2022). This code acts as a basic industry standard for economic, social, and environmental sustainability in global green coffee production and primary processing. Through the Equivalence Process, GCP evaluates whether a sustainability scheme adheres to both the Code and a set of operational criteria encompassing governance, standard-setting, assurance, data, and claims requirements. Recognized schemes are classified as either GCP Baseline Coffee Code equivalent 2nd Party or 3rd Party assurance. Currently, a total of 19 sustainability schemes have received recognition from GCP. Among them, five schemes have achieved equivalence with 3rd Party assurance, while 14 schemes have obtained equivalence with 2nd Party assurance. All recognized schemes are eligible to participate in the GCP Collective Reporting on Sustainable Coffee Purchases.

The rise of company sustainability verification schemes, including in-house schemes, has primarily been propelled by the introduction of importer-country due diligence legislation. This legislation poses a fundamental challenge to the traditional approach of coffee trading, which has historically prioritized financial and logistical considerations over factors like origin and production methods. As a result, many companies are now investing in efforts to improve traceability back to the farm level and evaluate the associated risks of procurement. While it is commendable to see the GCP's efforts to align and establish a common language for enhancing sustainability practices, it is crucial to critically evaluate the increasing number of sustainability schemes that have varying levels of support, market share, and accountability mechanisms. As it presently stands, GCP's EM is a compilation of ostensibly "equivalent" systems. It falls short in the provision of any supplementary insights pertaining to the evaluation outcomes for each distinct scheme. The notion of even establishing a semblance of comparability or a benchmark among the various schemes is lacking. In its current form GCP's EM is unable to fulfill its intended purpose of aiding stakeholders in navigating the intricate array of diverse schemes, thus inadvertently enabling a competitive race to the bottom. As the industry embraces diverse sustainability schemes, it becomes imperative to assess their respective contributions and the degree to which they address critical challenges such as social equity, environmental conservation, and economic viability. It is essential to strike a balance between fostering collaboration and standardization within the coffee industry while ensuring that sustainability initiatives are both meaningful and credible.

5

Towards mandatory compliance

Traders, roasters, and retailers hold the responsibility for due diligence compliance, yet smallholders in coffee-producing countries may bear the costs to access the European market.

5

Towards mandatory compliance

Introduction

In our examination of coffee roasters' sustainability strategies and reporting, it was striking to discover the widespread lack of transparency coupled with inadequate disclosure (see figure 7). For instance, despite the well-established presence of voluntary sustainability initiatives in the coffee sector, the procurement of certified coffee appears to stagnate (see figure 3). It has also been clear that the implementation of VSS, in isolation, lacks the potency to foster an alternative that economically benefits producers, upholds workers rights, and addresses climate change adaptation (Partiti, 2022).

However, questions pertaining the effectiveness and impact of voluntary approaches are not exclusive to the coffee sector. Comparable trends are observable in sectors such as cocoa, palm oil, and soybeans, to mention only a few. The general lack of voluntary progress by international companies active in global agricultural value chains have led policymakers to pivot towards the realm of mandatory legislation (Charles, 2023). This transition is rooted in the recognition that more assertive measures are requisite to channel the course of global agricultural practices toward enhanced sustainability. Mandatory regulations will play a pivotal role in aligning coffee production, trade, and consumption with environmental protection and ethical considerations (Clifford Chance, 2022).

Regulations, if well-designed, have the potential to catalyze a shift in the coffee sector, reshaping the very nature of the current business models. Compliance with these regulations often requires thorough monitoring of coffee supply chains and the ability to demonstrate the effective implementation of due diligence measures (Wuttke et al., 2022). In contrast to voluntary guidelines and frameworks, these laws provide comprehensive accountability and enforcement mechanisms that include penalties, remedies for rights violations, the potential exclusion from public tenders and, in some cases,

even civil liability. It is crucial to emphasize the risk linked to these legislations, wherein industry players might transfer compliance costs, ultimately burdening coffee farmers. In order to prevent such a scenario, the industry should take a proactive stance in their support to small–scale producers to avoid further marginalization.

In the period from 2015 to 2022, an array of consuming nations spanning North America, Oceania, and Europe have set forth enacted legislative measures intended to enhance the environmental and social sustainability of businesses operating within (agricultural) supply chains.[6] Specifically within the European Union, the largest global coffee importer, the sector's business model stands to be directly influenced by the regulatory transformations largely stemming from the EU's Green Deal (Rudloff, 2022). The most notable legislations to call out are the EU Deforestation Regulation (EUDR), Corporate Sustainability Reporting Directive (CSRD), the Forced Labor Regulation and the Corporate Sustainability Due Diligence Directive (CSDDD).

Deforestation regulation

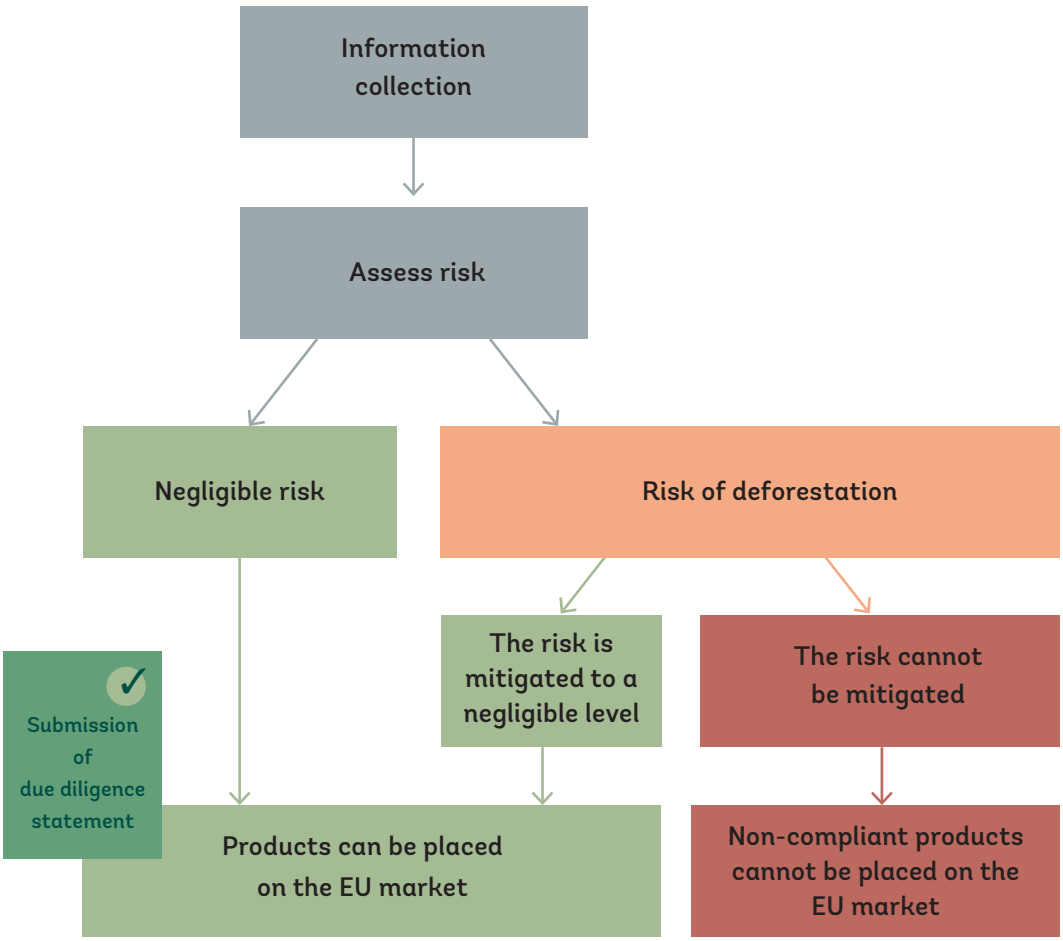
Undoubtedly, the legislative measure exerting the most influence on the European coffee industry is the EU Deforestation Regulation (EUDR), which became effective in June 2023. Roasters and traders have been given a timeframe of 18 months to imple–ment the new rules (31 December 2024), with micro and small enterprises granted an additional six months. The EUDR aims to address the issue of deforestation and forest degradation, associated with products traded in the EU market. The EUDR requires companies to ensure that the products they place on the EU market, or export from it, are not associated with deforestation.[7] This new regulation introduces mandatory due diligence rules for operators and traders involved in the production and trade of various commodities, including coffee, cocoa, rubber, palm oil, cattle, wood, and soy (see figure 10), (Treanor Basik and Saunders, 2021). To do so, companies will be required to provide a due diligence statement, outlining the product;

A is produced in a deforestation–free manner, meaning the land used for production has not undergone deforestation or forest degradation after the specified cut–off date of December 31, 2020 and;
B complies with all relevant applicable laws, including those related to human rights and the rights of indigenous peoples in the country of production.

To enable EU Member State authorities to verify compliance with the deforestation–free requirement, companies need to be able to provide in their due diligence statements geolocation points of the plots of land where the products come from, and polygons are mandatory for plots larger than 4 ha. Moreover, a factor with significant potential influence is the requirement for complete traceability of all products back to the plot. The regulation establishes a benchmarking system to assess the risk of deforestation and forest degradation in different countries or regions within a country. This system will categorize countries into three baskets based on the level of deforestation risk: low, standard, and high.

It is essential to underscore that these obligations extend beyond importers (referred to as "operators" in the EUDR), and that companies further down the supply chain, including big retailers (termed "traders" under the EUDR), may have the same obligations and legal responsibility if they introduce or market products covered by the regulation on the EU market. Likewise, companies engaged in exporting products governed by the EUDR from the EU market are bound by identical obligations. Although lacking legal enforceability, the enactment of the EUDR underscores the expectations for companies to make an effort "*...to ensure that a fair price is paid to producers, in particular smallholders, so as to enable a living income and effectively address poverty as a root cause of deforestation*".

Figure 10. EUDR's Due Diligence requirements



Sustainability Reporting (CSRD)

On January 5, 2023, the Corporate Sustainability Reporting Directive (CSRD) entered into force in the EU. The CSRD requires all large companies and all listed companies (except listed micro-enterprises) to disclose information on what they see as the risks and opportunities arising from social and environmental issues, and on the impact of their activities on people and the environment. This helps investors, CSOs, consumers and other stakeholders to evaluate the sustainability performance of companies. The first companies will have to start reporting under ESRS (European Sustainability Reporting Standards) for the financial year 2024, with the first sustainability statement published in 2025.

These standards are designed to enhance transparency and accountability by standardizing the way companies communicate their ESG performance. Over time, the ESRS disclosure requirements aim to bring sustainability reporting on par with financial reporting. To achieve this, the CSRD mandates that the sustainability statement, prepared in accordance with the ESRS, be included in a dedicated section of the management report, based on a double materiality assessment. This signifies an important step towards strengthening sustainability reporting and aligning it with established financial reporting practices.[8]

EU legislation pipeline

While the EUDR and CSRD have already been enacted this year, the coffee industry is anticipating the ongoing development of various other EU legislations that will soon become applicable to its operations. For instance, in June 2023, the European Parliament adopted its position on the Corporate Due Diligence Directive (CSDDD), a proposed directive that will enforce mandatory human rights and environmental due diligence requirements on companies. The aim of the CSDDD is to provide legal clarity and prevent fragmentation by establishing rules on corporate due diligence obligations, directors duties, and civil liability.

The CSDDD underscores the need for tangible measures in the day-to-day business operations to address sustainability issues. In order to fulfill their due diligence obligations, companies will need comprehensive and relevant data concerning their supply chains. The scope of human rights and environmental impacts within the CSDDD is quite broad. It encompasses, notably, the right to a living wage. Several NGOs, companies and governments have advocated for the inclusion of living income as well, to ensure smallholders and self-employed workers are fully protected by the CSDDD provisions. Likewise, several stakeholders have called for an obligation that compels companies to review their procurement practices as an integral component of the due diligence mandate in the CSDDD. It could introduce specific elements that enable rights-holders to seek remedy and enforce their rights: the possibility to submit well-founded concerns to regulatory authorities, to activate the complaints mechanisms that companies are required to establish in adherence to the directive, and to file civil complaints. If properly implemented, these represent major steps towards empowering

upstream stakeholders in agricultural supply chains. Consequently, the CSDDD has the potential to actualize the coffee sector's commitments aimed at enhancing the livelihoods of coffee producers.

The legislative progress of the CSDDD is currently under development. Although the formal approval of the directive might take place in early 2024, taking into account the transposition timelines, coffee companies operating within the EU will likely be obligated to adhere to the requirements beginning in 2026.

Furthermore, on September 14, 2022, the EU Commission unveiled its proposal for a Regulation that introduces a ban on the introduction and distribution of products manufactured through forced labor within the EU market, as well as their export from the EU market (EC, 2022) This proposal is currently undergoing evaluation by both the European Council and Parliament and will require joint endorsement. Under this regulation, companies (regardless of their jurisdiction) are prohibited from introducing products produced under forced labor conditions into the EU market or exporting them from the EU. To accomplish this, competent authorities of the Member States are mandated to evaluate the likelihood of forced labor infractions based on available data and, when deemed necessary, to initiate investigations into the relevant products and companies. In the event that a product is determined to be manufactured using forced labor, national authorities are mandated to dispose of it, unless companies can substantiate the eradication of forced labor from their supply chains. Considering the multitude of allegations surrounding forced labor incidents in various countries within the coffee supply chain, this regulation holds significant pertinence for the coffee sector.

A new reality

While legislation possesses the capability to establish equitable conditions and stimulate innovation, the ongoing legislative advancements within the EU, particularly exemplified by the EUDR, have encountered significant opposition or hesitancy within the coffee industry ICO, 2023c). The coffee sector has consistently opposed the incorporation of coffee within the EUDR framework, contesting the stipulated 7% deforestation attribution to coffee within the EU regulation (Naranjo, 2023).[9]

Similar to the majority of EU legislations, the formulation and acceptance of the EUDR is the result of a decade-spanning policy dialogue and advocacy undertakings involving EU institutions, civil society, and industry representatives. This endeavor encompassed an array of impact studies, public consultations, formulation of stances, and public events. Within this context, the European coffee industry, represented by the European Coffee Federation (ECF), remained largely absent from the policy dialogue. In contrast, companies within the cocoa sector exhibited significantly higher levels of involvement, articulation, and proactive participation throughout the entire legislative development trajectory, even preceding the crystallization of a concrete proposal (Voice Network, 2019). Only as the legislative process advanced into its latter stages did the coffee industry advocacy movement begin to engage in a more dynamic manner.

As the EUDR becomes a fixed reality, the industry must promptly acknowledge the novel circumstances that demand adaptation for effective operation within the European market. Swift preparation is imperative to meet impending deadlines, requiring the implementation of rigorous measures across their business operations and supply chains across all sourcing points. It is evident that numerous companies encounter substantial shortfalls in terms of EUDR readiness. Essential traceability data remains elusive or inaccessible, and a multitude of stakeholders lack resilient management systems to systematically evaluate and alleviate deforestation hazards present within their supply chains.

Mitigating adverse effects

While compliance with the EUDR will undeniably impose a burden on companies, it is crucial to acknowledge the uncertainties it creates for the governments of producing countries and, most significantly, for the millions of small-scale coffee farmers. A distinct risk linked to the EUDR, highlighted by both industry and civil society, lies in the absence of a thorough evaluation of its implications on smallholder producers prior to its enforcement. At the same time, as flagged by Ivorian cocoa smallholders and CSOs, the increased traceability, requested by the EU as part of the EUDR, is needed to tackle the complexity of supply chains, which oftentimes is detrimental for smallholders (Ongidef, 2022).

Despite the clear legal responsibility for compliance falling on traders, roasters, and retailers within the EU, there is a significant risk that industry actors shift costs, obligations, and administrative burdens onto small-scale farmers in order to access the European coffee market. However, globally there is little experience on how to balance these heightened mandatory due diligence measures with the inclusion of smallholders or cooperatives into export supply chains. In view of the impending EUDR requirements, the coffee industry has to exhibit unwavering and proactive engagement to alleviate the concerns of small-scale coffee farmers and leave no space for ambiguity. In its January 2022 'reactive statement' the ECF reiterated: "*The ECF and its members are committed to increasing transparency and traceability along the coffee supply chain*" and that the role and wellbeing of smallholder farmers the coffee supply chain "*is a paramount concern to the coffee sector as a whole and should remain a priority in the new Regulation's implementation*" (ECF, 2022a). Now that the regulation is in effect, it is up to the coffee sector to uphold this commitment. It is essential to underscore that the financial burden and obligations inherent to the implementation of the legislation will not be shifted onto their shoulders. A possible way to do so is through pre-competitive collaboration on data norms and interoperability of data management and traceability systems, which can maximize efficiency and avoid duplication of work and costs for suppliers (Quynh Chi and Meulensteen, 2023).

The challenge to comply is likely to be less complicated in countries with a well-developed infrastructure and strong institutional frameworks. For instance, Brazil has relatively good land title data, polygon data and forest monitoring data, with much of

it already digitized (Quynh Chi and Meulensteen, 2023). To a certain extent this is also true for Vietnam, that just published a national plan on EUDR, developed with private sector involvement (Oger, 2023). However, in countries characterized by inadequate infrastructure, low levels of traceability and a significant presence of smallholders, the industry is likely to encounter difficulties in meeting the EUDR requirements. Notable among these countries are Ethiopia, Uganda, Tanzania, Kenya, Peru, Colombia, and some Central American countries. Collectively, these countries are accounting for two-thirds of the global population of coffee smallholders (CB, 2020).

Moreover, potential disengagement from high-risk suppliers poses a substantial challenge in the coffee sector, due to the diverse origin regions. Without proactive support from buyers, smallholders lacking organization and resources to provide the requisite data for EUDR compliance will bear the initial impact. While the European Commission committed to develop support programs, the industry also needs to play a leading role. The coffee industry has the capacity and responsibility to proactively forge partnerships to provide financial investments and support on the ground. Some coffee companies have recently hinted at the possibility of EUDR prompting shifts in coffee sourcing. If the coffee sector genuinely prioritizes its sustainability agenda and underscores the importance of smallholder inclusion, it must strive to avoid abrupt disengagement. Producers, especially smallholders, should receive timely information, guidelines, and adequate capacity-building regarding the regulations (Naranjo et al., 2023). If the wellbeing of smallholders is really *"a paramount concern to the coffee sector as a whole"*, the industry has an important role to play here. The results of risk assessments conducted by companies should serve – even for high-risk supply chains – as a foundational basis to support farmers on the ground. These assessments should establish the bedrock for constructing resilient support frameworks aimed at bolstering sustainable coffee farming as well as holistically addressing root causes of deforestation. And rather than doing this in isolation, the industry should leverage the multitude of MSIs in the sector to effectively achieve impact.

6

Conclusion

The era of cheap coffee has come to an end!

6

Conclusion

Coffee, a beverage consumed throughout the world, has achieved remarkable success in terms of consumption. However, beneath this success lies an extractive model of production that centers around the trade of commoditized coffee at affordable prices. Due to its nature as a bulk commodity, coffee is characterized by its interchangeable quality, which fuels a constant drive to acquire it at the lowest possible cost. This approach to production poses a substantial challenge when it comes to achieving comprehensive sustainability within the coffee sector. The focus on cost reduction and profit maximization stands in contrast to the sustainability commitments made by individual companies and the broader global agendas regarding climate action and the attainment of Sustainable Development Goals (SDGs). The concept of a sustainable coffee sector appears to be nothing more than an illusion when we consider the multifaceted challenges faced in coffee producing countries. Small-scale coffee producers, though not a homogeneous group, often find themselves with limited economic alternatives and endure hardships, arduous working conditions, and depleted lands. These circumstances pose two overarching threats to the future of coffee production worldwide. Firstly, a considerable proportion of coffee farming families cultivating coffee within countries with less competitive production standings grapple with persistent poverty and precarious living conditions. Secondly, urgent action is required to address the challenges posed by shifting climate patterns while simultaneously mitigating the sector's environmental impact.

In theory, coffee production holds the promise of providing millions of small-scale farmers with an enviable prospect: a stable income and livelihood options. In reality, the situation is far more complex, evident through the prevalent living income gaps found in most coffee-producing countries, excluding Brazil. A common approach in the sector is to focus on increasing yield per hectare and enhancing coffee quality as a means to bridge the living income gap. While this may lead to higher incomes, it also amplifies the need for more labor, a persistent concern for small-scale coffee farmers worldwide. The inability to attain a living income raises doubts about the feasibility of making substantial progress towards accomplishing other sustainability objectives. While research in various areas, including living income and living wage benchmarks, is essential,

immediate action is imperative to improve the lives of coffee farmers and farm workers, not in some distant future, but in the present moment. The industry can promptly improve its trading practices and procurement policies (e.g., terms of payment and pricing) directed towards coffee farmers. Such improvements would have an immediate effect on their income and the security of their livelihoods. It is also the most effective way to empower farmers to reinvest in their own businesses, upholding crucial ecosystem services, and the adoption of responsible land-use practices like agroforestry.

At present, the world's largest coffee roasters are positioning themselves as leaders in sustainability, making ambitious commitments and participating in multiple MSIs. Their sustainability goals encompass 100% sustainable sourcing, 100% deforestation free, 100% carbon neutrality, and 100% recycling. The promises and claims made by these roasters are alluring, and expectations from regulators, civil society, consumers, and investors are rising. While some individual companies may be performing better than others, our Coffee Brew Index reveals that most companies are not yet taking the actions necessary to fulfill the existing sector commitments in addressing social and environmental risks. It is important to recognize that for these companies, their actual sustainability strategy is narrowly focused on improving efficiency and competitiveness within a globalized economy characterized by scarcity, increasing risks, and opaque supply chains.

Without a clear strategy and robust reporting mechanisms in place to address the main challenges in the coffee sector –including elements like transparency, traceability, supplier engagement, monitoring, and sector collaboration – companies will be unable to effectively address social and environmental impacts in their coffee supply chains. For example, very few companies share up-to-date public information about their certification and verification processes, sustainability premiums and long-term contracts, let alone their supplier base. Such information is vital for engaging in meaningful discussions about the progress of individual companies and the overall advancement of the sector.

On paper, the sustainability promises of most roasters remain disconnected, limited to token charity or CSR initiatives that only superficially address their social and environmental impacts. Implementing sustainable business practices in the coffee industry requires adjusting existing business practices, leveraging proven knowledge and approaches. However, it is important to recognize that making this work in practice will also necessitate substantial investments. The lack of any transparency regarding procurement practices or funding raises concerns that none of the roasters are demonstrating a willingness to compensate small-scale coffee farmers for operating sustainably, such as by paying a price that reflects the social and environmental costs involved.

The concept of multi-stakeholder governance, which provides a semblance of legitimacy and some level of accountability, has proven advantageous for corporations. The Global Coffee Platform (GCP), the Sustainable Coffee Challenge (SCC), and the ICO

Coffee Public Private Task Force (CPPTF) bring together governments, civil society, and the private sector. Through their active participation and financial support of these initiatives, companies frequently exert influence over the discourse, ensuring it aligns with their own interests and avoiding topics that might jeopardize their market share and profitability. With limited accountability systems in place, involvement in these MSIs enables companies to portray themselves as proactive without engaging with the complex and contentious issues at hand.

This strategic behavior is evident in industry lobbying efforts and corporate strategies, often citing MSI membership as evidence of engagement in specific areas such as zero-deforestation or ensuring a living income for producers. Furthermore, there has been a noticeable shift in the discourse surrounding sustainability within the coffee industry. It has become increasingly intertwined with quality management and risk mitigation within the coffee supply chain. This situation becomes apparent through the inclusion of many different sustainability guidelines and internally managed verification and traceability systems within the GCP 2.0 equivalence mechanism. Rather than raising the bar and encompassing a comprehensive strategic approach at sector level, this mechanism concentrates on farm-level sustainability, thereby narrowing the definition of sustainable coffee production. Consequently, the focus shifts away from systemic issues such as the uneven allocation of risk and reward. This contributes to a growing imbalance in the bargaining power dynamics between coffee buyers and coffee producers and misdirects attention towards factors like price, farm profitability, pricing, and the necessary transformative changes required to trading practices beyond the farm level.

Simultaneously, in the realm of international business practices, a momentous change is occurring. This entails a shift away from relying solely on voluntary sustainability initiatives towards a more stringent regulatory framework centered around mandatory due diligence requirements. Taking a leading role in recent years, the EU has proposed and adopted international laws focused on environmental, social and governance (ESG) factors that reinforce each other. These laws compel companies operating in industries like the coffee sector to prioritize the protection of human rights and prevent environmental degradation. Compliance with these regulations will require thorough monitoring of coffee supply chains and the ability to demonstrate the effective implementation of due diligence measures. In contrast to voluntary initiatives, these laws provide a comprehensive accountability framework that includes penalties, remedies for rights violations, and the potential for exclusion from public tenders. However, our index reveals a concerning reality: on paper, the majority of coffee roasters are ill-prepared for the upcoming legal requirements, highlighting the urgent need for a more pro-active approach from all those involved.

While the various EU due diligence regulations present an opportunity to advance sustainability in the coffee sector, caution must be exercised to avoid unintentionally exacerbating the existing vulnerabilities faced by small-scale coffee farmers. Unrealistic expectations of substantial progress within the coffee sector neglect the fact that most

producers are struggling to meet their basic needs. Unfortunately, our experience with VSS shows that roasters often shift the burden of responsibility and costs of implementation onto farmers and producing countries. Acknowledging and addressing these fundamental issues is critical for achieving meaningful progress. While mandatory due diligence with robust enforcement mechanisms is probably key to progress, it should also foster collaboration between producers and importers, providing small-scale farmers with the necessary support and resources to meet the required standards. An integrated approach, supported by substantial financial assistance from the coffee industry, and the enforcement of local regulations, is essential for effective implementation. The goal is to find a "smart mix" of voluntary and mandatory instruments that promote development and ensure the well-being of coffee producers and their communities (Schleifer and Fransen, 2022).

Sources

Figure 1. Average Arabica and Robusta price
World Bank Commodity price data 2023 (database, updated on June 2, 2023). Source

Figure 2a. ICO (2023b). Coffee report and outlook. Source
Figure 2b. ECF (2023). European coffee report 2022/23. Source

Figure 3. Overview market share 2017/2019/2021
We appreciate the data contributions from 4C CAS, Fairtrade International, Fair Trade USA, Rainforest Alliance, Organic, and Starbucks. However, as Nestlé has not provided and update, we have omitted the AAA overview.

Figure 4. Country overview living income – coffee income
Kaitlin Y. Cordes and Sagan, M. (2021). Responsible Coffee Sourcing: Towards a Living Income for Producers. Columbia Center on Sustainable Investment. Source

Figure 5. Theoretical household net income for a 1ha farm
Our figure represents a reevaluation of the calculation of a theoretical household's net income based on potential yield and price scenarios for a 2 hectare farm, as outlined in:
Hochberg, A. and Bare, M. (2021). Strategies to enhance coffee farmers' incomes: Rainforest Alliance experience and research. Source

Figure 6. Hectares sun versus shade grown coffee
See for more information the data pertaining to 17 countries, as outlined in: Somarriba, E. and Lopez–Sampson A. (2018). Coffee and cocoa agroforestry systems: Pathways to deforestation, reforestation, and tree cover change. PROFOR. Source

Figure 7. Coffee Brew Index
Additional details regarding the index and company sustainability strategy assessment, including the scoring and methodology, can be accessed on our website: *www.coffeebarometer.org*

Figure 8a. Coffee Cup Index: Strategy
Figure 8b. Coffee Cup Index: Social
Figure 8c. Coffee Cup Index: Environment
Figure 8d. Coffee Cup Index: Economic

For further insights into the thematic sustainability strategy assessment, including comprehensive information on the scoring and methodology, please visit our website: *www.coffeebarometer.org*

Figure 9. Corporate members of MSIs
We reached out to each company to ascertain their involvement in one or more MSIs.

Figure 10. EUDR: Due Diligence requirements
The figure represents the authors' interpretation, designed to visually depict the EUDR due diligence requirements.

Endnotes

1 ICO indicator C price: For research purposes and to get a better overview of the worldwide price development for coffee, the ICO indicator prices represent and track prices of four main types of coffee qualities: 1. Colombian and mild Arabicas, 2. other mild Arabicas, 3. Brazilian and other natural Arabicas, 4. Robustas.

2 Examples of recent and fortcoming studies:
ICO's CPPTF launches series of living income benchmark studies (2023, February): Source
Fairtrade International (2023). Living income reference prices. Source GCP (2023): First findings of the study on coffee growers' income in Minas Gerais and Espîrito Santo. Source Verité (2023): Publication of living income and living wage study for the Colombian coffee sector. Source

3 These country averages do not consider household income derived from sources other than coffee. Within each country, there are producers who perform significantly better or worse than the average figures suggest. Like many small-scale farmers, coffee producers have multiple income streams. Even when coffee constitutes the primary source of household income, other sources and livelihood strategies, such as food produced on the farm, can contribute significantly. This can result in a total household income that is 10–40% higher than the income from coffee alone).

4 Estimates of GHG emissions from coffee range from about 3 to more than 40 kgCO2e/kg roast coffee. Average emissions are likely about 20 kgCO2e/ kg RC, driven largely by significant land-use change, fertilizer use, and wet-processing effluent, which are each potentially large GHG contributors.

5 For more information see Kew: Source

6 Examples include, the UK's Modern Slavery Act of 2015, France's Duty of Vigilance Law of 2017, the Netherlands' Child Labour Due Diligence Act of 2019, and Germany's Act on Corporate Due Diligence in Global Supply Chains of 2021.

7 For more information see the FAQ of the EU Deforestation Regulation: Source

8 The new rules will apply to EU-based companies across all sectors, including financial services, with over 250 employees and a worldwide turnover exceeding 40 million euros. Parent companies with more than 500 employees and a global turnover of over 150 million euros will also be subject to the directive. Non-EU companies generating at least 40 million euros in the EU, with a total turnover surpassing 150 million euros, will be included as well.

9 Additionally, Naranjo et al. (2023) assert that both the evident connection between deforestation in coffee-producing nations and the substantial proportion of coffee imported into the EU underscore the necessity of encompassing coffee within the regulatory framework.

Green coffee conversion
1 bag = 60 kilogram
1 MT = 1,000 kilogram = 16,67 bags

List of abbreviations

BHHRC	Business & Human Rights Resource Centre
CB	Coffee Barometer
CDP	Carbon Disclosure Project
CGIAR	Consultative Group on International Agricultural Research
CPPTF	Coffee Public Private Task Force
CSDDD/CS3D	Corporate Sustainability Due Diligence Directive
CSRD	Corporate Sustainability Reporting Directive
CPPTF	Coffee Public Private Task Force
CSO	Civil Society Organization
CSR	Corporate Social Responsibility
DD	Due Diligence
EC	European Commission
ECF	European Coffee Federation
ESG	Environmental Social Governance
ESRS	European Sustainability Reporting Standards
EU	European Union
EUDR	European Union Deforestation Regulation
FAO	Food and Agriculture Organization of the United Nations.
GCP	Global Coffee Platform
GDP	Gross Domestic Product
GRI	Global Reporting Initiative
HRDD	Human Rights Due Diligence
ICO	International Coffee Organisation
IDH	Sustainable Trade Inititive
IISD	International Institute for Sustainable Development
IPCC	Intergovernmental Panel on Climate Change
IPES	International Panel of Experts on Sustainable Food Systems
IUCN	International Union for the Conservation of Nature
LUC	Land use change
MSI	Multi–stakeholder Initiative
NGO	Non Governmental Organisation
SBTi	Science Based Targets initiative
SBTN	Science Based Targets Network
SCA	Specialty Coffee Association
SCC	Sustainable Coffee Challenge
SDG	Sustainable Development Goal
SEI	Stockholm Environment Institute
TFCLI	Task Force Coffee Living Income
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VSS	Voluntary Sustainability Standards
WCPF	World Coffee Producer Forum
WCR	World Coffee Research
WRI	World Resources Institute
WWF	World Wildlife Fund
ZDCs	Zero–Deforestation Commitments

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Colophon

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