



Cooperazione Italiana
allo Sviluppo

Ministero degli Affari Esteri
e della Cooperazione Internazionale

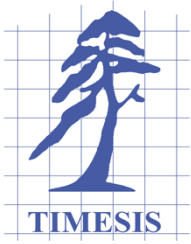
Direzione Generale per la Cooperazione allo Sviluppo - Ufficio III - Sezione Valutazione

2024 | Evaluation Report

Ethiopia

Evaluation of the initiative:

'Strengthening the sustainability
and inclusiveness of the coffee
supply chain through public-
private partnerships' AID 11003



Via Niccolini 7, 56017
San Giuliano Terme (PI)-IT

This independent evaluation was commissioned by Office III of the Directorate General for Development Co-operation of the Ministry of Foreign Affairs and International Co-operation to the company Timesis S.r.l. through a public tendering procedure pursuant to Art. 36 of the Public Contracts Code.

Timesis S.r.l. Evaluation Team: Gabriele Mugnai (Team Leader); Giulietta Delli; Bizuayehu Negassa; Enrico Quaglino.

The opinions expressed in this document represent the views of the evaluators and do not necessarily coincide with the views of the client.

Contents

Contents	ii
Attachments	ii
Acronyms	iii
1 Intervention locations	1
2 Executive summary	2
3 Background of the initiative	4
4.1 The coffee sector in Ethiopia	4
4.2 Programme Description	8
4 Scope and objectives of the evaluation	11
5 Methodological approach to evaluation	11
6.1 OECD Criteria and Sub-Criteria	11
6.2 Tools for evaluation and data collection	16
6 Presentation of evaluation results	17
Ex post analysis of the Theory of Change	17
OECD DAC Evaluation Criteria Analysis	19
6.1.1 Relevance	20
6.1.2 Consistency	24
6.1.3 Effectiveness	26
6.1.4 Efficiency	35
6.1.5 Impact	37
6.1.6 Sustainability	39
Specific evaluation criteria for the initiative	41
6.1.7 Value Chain Analysis	41
6.1.8 Environmental Sustainability	47
6.1.9 Gender dimension	52
7 Conclusions	55
8 Recommendations	57
9 Lessons learnt	58

Attachments

Annex 1 - Evaluation Matrices and Evaluation Questions

Annex 2 - List of documents analysed

Annex 3 - Maps

Annex 4 - Photographic attachment

Acronyms

AICS:	Italian Agency for Development Cooperation
ADLI:	Agricultural Development Led Industrialisation
BYFCU	:Burka Yadot Farmers' Cooperative Union
CECSIR:	Ethiopian Coffee Strategy and Implementation Roadmap
CO ₂ eq:	CO ₂ equivalent
COOPI:	International Cooperation (NGO)
CRGE:	Climate-Resilient Green Economy
CTC:	Coffee Training Centre
DAC:	Development Assistance Committee
DGCS:	Directorate-General for Cooperation and Development
ECTA:	Ethiopian Coffee and Tea Authority
ECX:	Ethiopian Commodity Exchange Authority
ESA:	Ethiopian Standards Agency
ETB:	Ethiopian Birr
GWP:	Global Warming Potential
LCA:	Life Cycle Assessment
MAECI:	Ministry of Foreign Affairs and International Cooperation
MT:	Metric Tonnes (Metric Tonne=1,000 kg)
NGO:	Non-Governmental Organisation
OECD:	Organisation for Economic Co-operation and Development
OSS:	Sustainable Development Goals (SDGs)
GDP:	Gross Domestic Product
PPP:	Public-Private Partnership
RA:	Start-up Report
SDGS:	Sustainable Development Goals
SCFCU:	Sidama Coffee Farmers Cooperatives Union
TRIPS:	Trade-Related Aspects of Intellectual Property Rights
UNIDO:	United Nations Industrial Development Organisation

1 Intervention locations

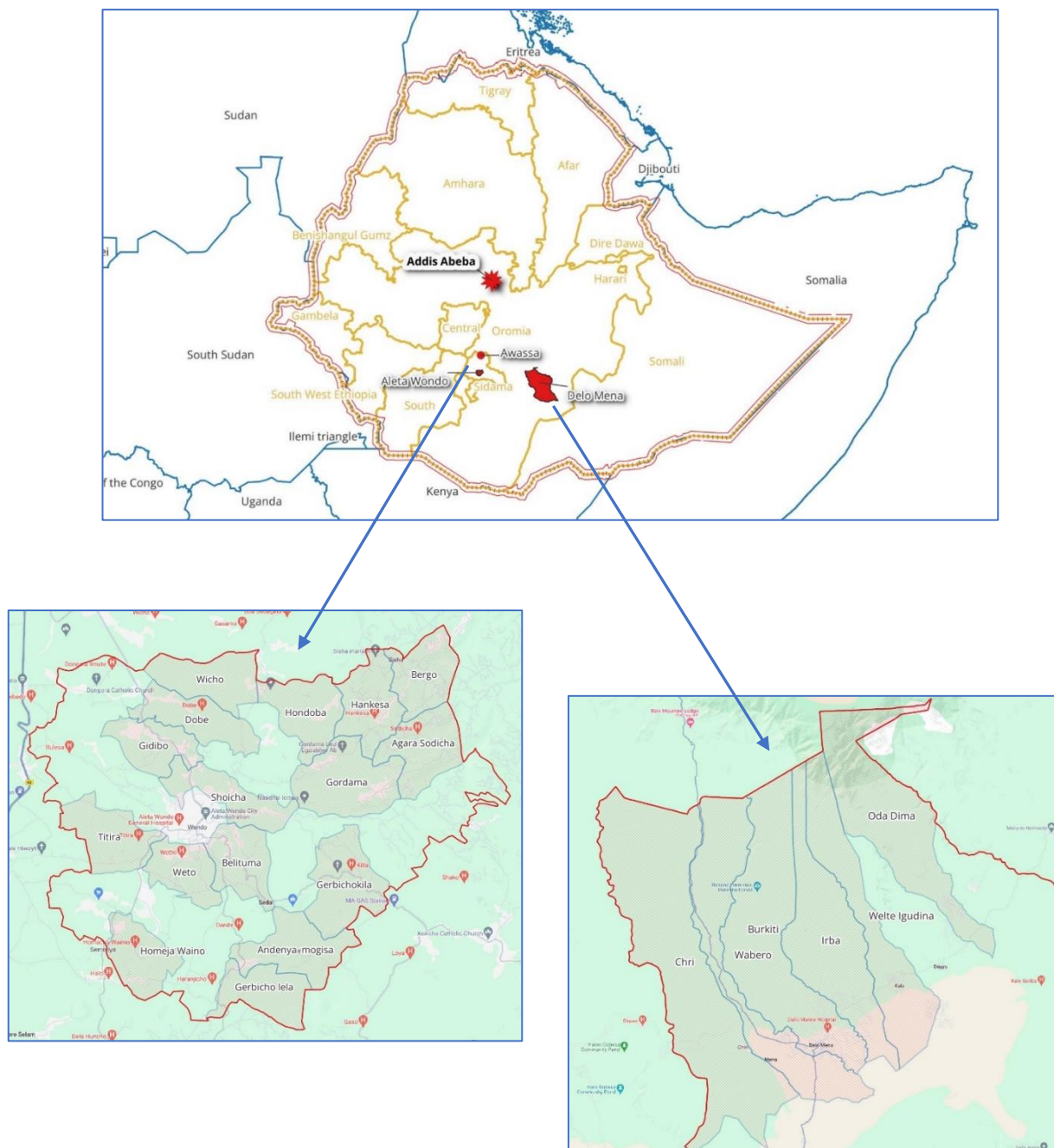


Figure 1. Location of the intervention and sites visited during the evaluation. Addis Abeba, Awassa, Aleta wondo and Delo Mena Woreda and the Kebele originally home to the cooperatives involved

2 Executive summary

<p>EVALUATION BACKGROUND: The Programme 'Strengthening the sustainability and inclusiveness of the coffee supply chain through public-private partnerships' had as its main objective the strengthening of coffee production and quality in the Sidama and Oromia regions of Ethiopia. The Programme aimed to improve the sustainability and inclusiveness of the coffee supply chain through collaboration between public and private actors, improving the economic conditions of smallholders and promoting sustainable agricultural practices.</p>
<p>PURPOSE: The external evaluation was commissioned by MAECI/DGCS to Timesis s.r.l. to verify the overall effectiveness of the Programme, the efficiency in the use of resources, the impact on the beneficiary communities and the long-term sustainability of the interventions. The ultimate aim was to measure the achievement of the expected results and provide useful recommendations for future cooperation initiatives in the coffee sector, contributing to the formulation of more effective and sustainable strategies.</p>
<p>METHODOLOGY: The evaluation methodology of the Coffee Supply Chain Programme in Ethiopia is based on three main components:</p> <p>Logical Framework Matrix Indicators: This matrix includes verifiable indicators to assess the achievement of the Programme's objectives. By analysing these indicators, the Programme's strategy and the relationship between activities and objectives are understood. The collected data are compared over time to assess the Programme's progress.</p> <p>Evaluation logic: This dimension uses evaluation matrices based on the OECD-DAC criteria to analyse the Programme's effectiveness, efficiency, relevance, sustainability and impact. Specific matrices delve into aspects such as gender inclusion, environmental sustainability and local economic development.</p> <p>Evaluation tools: These include qualitative and quantitative methods such as surveys, interviews, focus groups and case studies. These tools are chosen to answer the evaluation questions, ensuring the relevance and reliability of the data collected.</p>
<p>MAIN RESULTS:</p> <p>Relevance: The Programme effectively responded to local needs, improving the quality, productivity, volumes and environmental sustainability of coffee produced in Aleta Wondo and Delo Mena. The initiative was perceived as highly relevant by the beneficiaries and local institutions, which were extensively involved at all administrative levels, from district to federal, reflecting careful and shared planning of the Programme, attentive to the economic and social dynamics of the country and the implementing regions.</p> <p>Effectiveness: the main objectives, such as increasing income for small producers and improving coffee quality, have been achieved if we consider a medium- to long-term analysis; however, fluctuations in the price of coffee on the international market and persistent difficulties in accessing the market, especially in Oromia, represent limitations in transforming more and better quality coffee production into a certain increase in income, such as in 2023, when the price of ripe cherries dropped from 60 to 32 ETB within a year.</p> <p>Efficiency: The management of the Programme demonstrated good efficiency in the use of resources, with a prudent financial management that maximised outputs over inputs. Despite some difficulties in timing and contractual management between AICS and UNIDO and implementing NGOs, the approach adopted ensured full coverage of planned activities and also allowed for an increase in the number of low-impact washing centres, thanks to Technoserve's ability to channel additional funds from their channels.</p> <p>Impact: The impact of the Programme has been significant, with clear improvements in coffee processing techniques, in increasing the production base in terms of number of plants and average age of plants, and in environmental sustainability practices. The intervention has created new wet processing and dried coffee dehulling facilities, increasing the production capacity of the primary cooperatives and the quality level of the product delivered to the Unions of Cooperatives. Gender equity and social inclusion has been promoted, but the integration of appropriate measures into the management of the cooperatives takes longer than the life of the Programme.</p> <p>Sustainability: sustainability appears to be high for the Programme examined; actions and technical solutions that were intrinsically integrated into the economic fabric of the area and did not represent difficulties for ordinary and extraordinary management and maintenance were analysed during the strategic choice phase. The locally developed capacities and improved infrastructures thus offer a good prospect for long-term management and no discontinuity in services is expected. It is however necessary to consider that greater access to credit for the producers and cooperatives involved is an essential point to guarantee the maintenance of services and reduce the dispersion of the product on local markets that are not always transparent.</p>
<p>CONCLUSIONS: The Programme has demonstrated the effectiveness of public-private partnerships in strengthening the coffee supply chain, bringing significant economic, social and environmental benefits. Improved sustainable agricultural practices and social inclusiveness have resulted in positive and lasting changes in beneficiary communities. Despite the successes, challenges remain related to coffee traceability and certification, which require further action to consolidate and extend the achievements.</p>

RECOMMENDATIONS:

Local market regulation: support the Ethiopian Coffee and Tea Authority (ECTA) in developing a regulatory framework that facilitates the sale of high quality coffee in the local market, balancing internal and external requirements.

Access to credit: facilitating access to low-interest credit for small producers and to guarantee funds for cooperatives allows them to improve their capacity to invest in advanced agricultural technologies and practices, but also to allow payment on delivery of part of the coffee delivered to cooperatives while maintaining the attractiveness of cooperatives for their members.

Sustainable Certifications: promote the adoption of international certifications that enhance the value of Ethiopian coffee in global markets, increasing competitiveness and revenues for local producers.

Adaptation strategy to new European certifications: coordinate actions to effectively respond to new EU regulations for organic and anti-deforestation products, ensuring that Ethiopian producers can maintain and increase access to European markets.

3 Background of the initiative

4.1 The coffee sector in Ethiopia

Coffee occupies a crucial position in the Ethiopian economy, being the main revenue generator among exported commodities. The importance of coffee to Ethiopia transcends the exclusive economic dimension, playing a strategic role in the national development agenda. The sector in question, characterised by a wide scope for development both in terms of production volume and qualitative excellence, is a key element in enhancing Ethiopia's economic prominence in the global context. Thanks to its intrinsic capacity for expansion and improvement, it represents an important strategic lever, capable of propelling the country towards a position of greater prestige and international competitiveness.

In 2022, Ethiopia exported \$1.55 billion worth of coffee, ranking it as the seventh largest coffee exporter in the world. In the same year, coffee was Ethiopia's most exported product. The main destinations of coffee exports from Ethiopia are: Germany (\$229 million), Saudi Arabia (\$208 million), Saudi Arabia (\$208 million), the United States (\$195 million), Japan (\$130 million) and South Korea (\$111 million).

The export destinations are depicted in Figure 2 below.

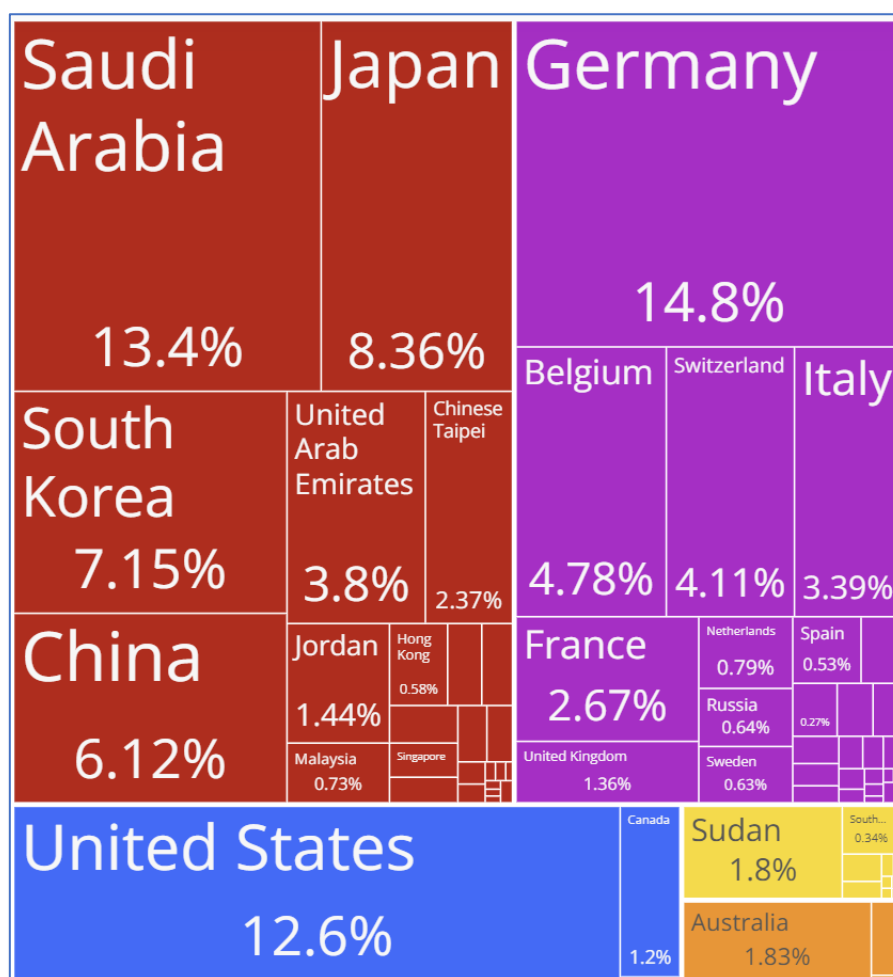


Figure 2. Countries of destination for coffee exported from Ethiopia (Year: 2022; source: Observatory of Economic Complexity)

The fastest growing export markets for Ethiopian coffee between 2021 and 2022 were the United Arab Emirates (USD 48.9 million), Saudi Arabia (USD 48.2 million) and Japan (USD 47.5 million).

The changes in exports per market (2021 - 2022) are depicted in Figure 3:

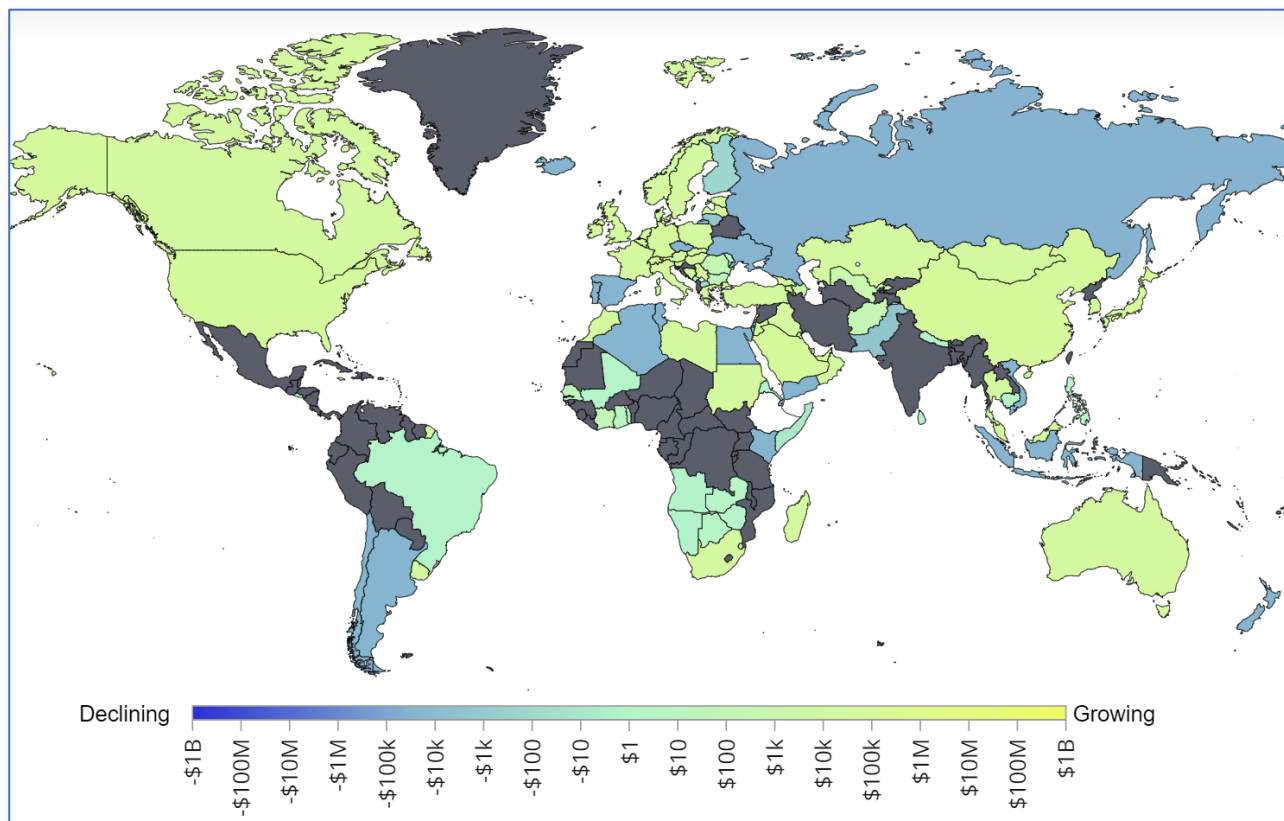


Figure 3. Fluctuating demand for Ethiopian coffee by market (Year 2021-2022; source: Observatory of Economic Complexity)

The coffee industry is an essential source of income for an estimated 15 million workers, providing a livelihood for countless farming families throughout the country. Coffee also plays an important social and cultural role in Ethiopian society, traditionally consumed at every family gathering, and religious festivity, thus justifying 50% of the production consumed domestically and with a growing demand both quantitatively and qualitatively. All this highlights how deeply rooted coffee is in the cultural fabric of Ethiopia and how relevant this is to the market dynamics observed during this evaluation.

The Ethiopian Coffee Strategy and Implementation Roadmap (CECSIR) is an integrated national strategy developed and adopted by the Government of Ethiopia to strengthen the country's coffee industry. The objectives of CECSIR are ambitious and focus on increasing exports, increasing farmers' incomes and creating jobs. The strategic objectives of CECSIR can be summarised as follows:

1. **Increasing the country's valuable currency revenues:** The strategy is to quadruple the country's coffee export revenues by 2033, pursuing a target of between USD 3.6 billion and USD 4.6 billion, still a significant increase from the USD 780 million recorded in 2019.
2. **Increased volume of exported coffee:** The export volume has a target growth of 160%, reaching 1.26 million metric tonnes by 2033, up from 470,000 metric tonnes in 2019.
3. **Strengthening the entire coffee supply chain:** The strategic plan is designed to improve the entire coffee supply chain, with a special focus on the empowerment and resilience of producers, in order to improve their livelihoods and production capacity in the long run.
4. **Income generation:** a key objective is to quintuple farmers' incomes with a target of USD 2.7 billion by 2033, up from USD 468 million in 2019.
5. **Creation of new jobs:** the strategy aims to create 2.7 million jobs in the coffee sector, contributing to economic growth and employment opportunities in Ethiopia, favouring the employment of new generations in the primary sector, also in areas that are not exclusively productive/agricultural and capable of integrating specialised professionals in the various components of the supply chain into the world of work.

Five years after the start of the 15-year plan, there has been considerable progress from a macroeconomic/national perspective. Encouragingly, unit prices increased by 16.8% to USD 5,540 per tonne in FY2022/23. This increase in unit prices helped to offset the decrease in volume, which fell by 20% to 240,000

tonnes compared to the previous year, 2021/22. Despite the drop in volume, revenue fell relatively modestly by only 5% to USD 1.33 billion.

In FY2022/23, a reduction in volumes may be partly attributable to lower demand from some importing countries, which experienced a weakening of purchasing power, and partly to increased coffee supplies from Brazil, Ethiopia's direct competitor, which exerted downward pressure on prices.

Table 1 shows the development of coffee production and prices in Ethiopia over the last three years with an estimate for the current year.

Year	Production (tonnes)	Surface (ha)	Productivity (ton/ha)	Year	Production (tonnes)	Surface (ha)	Productivity (ton/ha)
2020/21	478.000	542.000	0,82	2020/21	478.000	542.000	0,82
2021/22	489.000	585.000	0,84	2021/22	489.000	585.000	0,84
2022/23	496.000	590.000	0,84	2022/23	496.000	590.000	0,84
2023/24 (estimated)	501.000	600.000	0,83	2023/24 (estimated)	501.000	600.000	0,83

Table 1. Coffee productivity in Ethiopia - Source: USDA

Declining prices on the international market have prompted some exporters to hold back their stocks, waiting for more favourable market conditions that can guarantee higher returns, or to redirect their coffee to the domestic market, where prices are considerably higher. Despite the fact that current regulations prohibit the domestic sale of coffee for export, this practice occurs frequently in response to increased domestic demand, which offers the opportunity to obtain significantly lower prices. According to the USDA, prices of quality coffee on the domestic market in 2021/22 ranged from \$3.5 to \$4.5 per kg, significantly exceeding international market prices, which ranged from \$2.2 to \$2.8. Considering that international average prices dropped by up to 40% in 2023, it is possible to understand how strong demand for coffee on the local market drew export-quality coffee from the international market to the domestic market.

As Ethiopian exporters withhold green coffee supplies or sell them domestically, they fail to fulfil their international contracts, complicating efforts to increase export volumes and improve trade practices. During the consultation with the Ethiopian Coffee and Tea Authority (ECTA), this problem emerged as structural with at least 394 coffee export contracts terminated between October 2022 and April 2023, and an estimated 28,000 metric tonnes of coffee worth \$133 million withheld from exporters. This is also why ECTA will assist exporters in finding a sustainable compromise between meeting domestic demand and honouring export contract obligations.

A further factor contributing to reduced revenues is the illicit sale of Ethiopian green coffee abroad at lower prices in order to acquire valuable currency. Since the Ethiopian currency, the birr (ETB), is not freely convertible, there is a strong demand for euros and dollars among importers. Companies engage in this practice in order to obtain USD or EUR from the illegal sale of coffee, which they then use to purchase and import goods with high domestic demand, such as building materials that are in high demand by an exceptionally expanding construction sector in Addis Ababa and Ethiopia's other major cities. At the time of valuation - April 2024 - the Euro/ETB exchange rate on this market reaches 122 ETB per Euro, compared to 61 ETB per Euro in the official banking system. This considerable difference justifies the sale of coffee on the black market even for much lower prices than those set by the government and well below the cost of production if calculated on the basis of an official exchange rate between foreign currency and ETB.

The growing domestic demand poses a challenge to Ethiopia's export targets. As the largest consumer of coffee in Africa, Ethiopia uses approximately half of its coffee production domestically. Data from the International Coffee Organisation (ICO) indicate a steady increase in Ethiopia's coffee consumption in recent years, from 3.64 million 60kg bags in 2017/2018 to 3.79 million bags in 2020/2021.

The intense passion of Ethiopians for coffee fully justifies the steps taken to ensure the availability of high quality coffee beans, destined by law for export, also for the domestic market. The increase in domestic consumption, as noted by the USDA, is partly due to the infiltration of 'export' quality coffee into the country's informal sales circuit, taking advantage of cheaper local prices. Also contributing to this phenomenon is the spread of small coffee kiosks along the streets of Ethiopia's major cities, which represent a significant economic opportunity for young and unemployed women, inserting themselves as a novelty in the country's commercial and social fabric.

In summary, the Ethiopian population benefits significantly from its indigenous crop in terms of the number of people employed in the coffee chain (about 15 million) and a GDP per capita of USD 2,300/year. Figure 4 shows the projected profitability of coffee at the macroeconomic and producer level, as analysed in CECSIR.

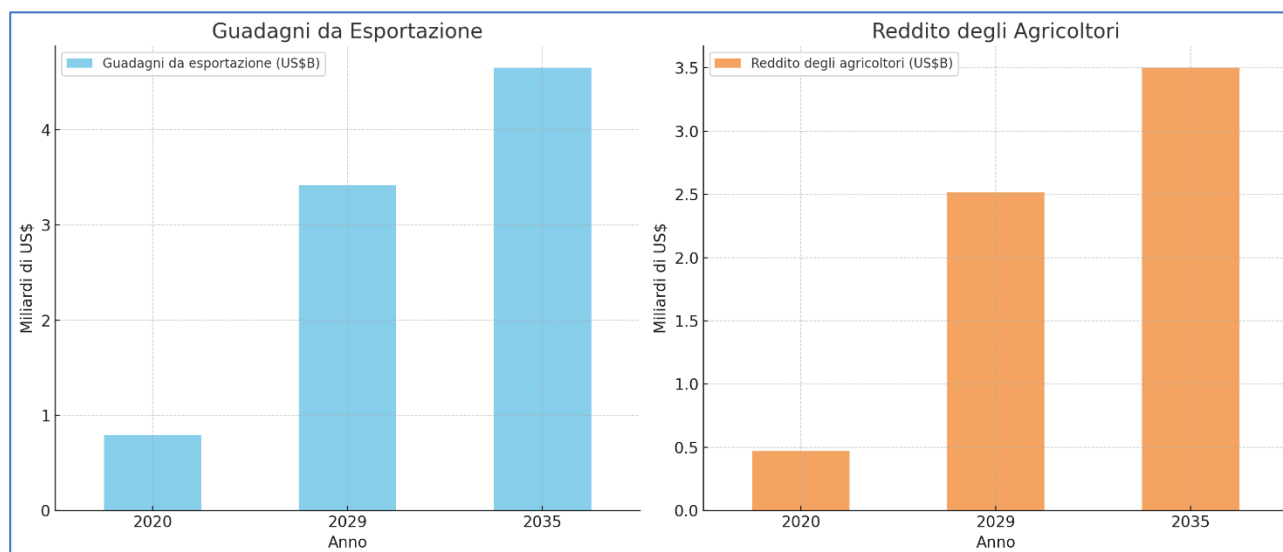


Figure 4. Projected profitability of coffee in 2029 and 2035. Source: CECSIR.

On the whole, the coffee sector in Ethiopia represents both a sector of great importance in the national economy and an area in which major challenges are played out: i) the weakness of cooperative movements and associations of small producers; ii) obsolete and inefficient processing processes and machinery, especially in the initial processing stages; iii) a complex economic landscape in which the presence of the state identifies rules that are difficult to enforce and in which the private component plays an increasingly important role in the commercial capacity of the various sales channels. All this poses great challenges in shaping an Ethiopian Coffee System, fragmenting supply and reducing potential improvement towards quality production.

However, the peculiarities of Ethiopia and its position in the global landscape of coffee producers are unique elements of richness and competitive advantage.

Ethiopia boasts natural and climatic resources that are extremely favourable to the expansion of coffee production, with a low incidence of major plant diseases and a generally good availability of water to accommodate the country's rapidly expanding 'in-water' processing and the demand expressed by the international market. Furthermore, as the place of origin of Arabica coffee, Ethiopia possesses an unparalleled genetic diversity, boasting over 2,000 varieties: this allows, on the one hand, to respond in the future to the new and unknown challenges imposed by climate change, offering an extremely wide capacity to respond thanks to the genetic richness of the plants present, and on the other hand, to characterise itself in a unique position, in the global panorama of coffee producers, moving towards a decommodification of coffee to articulate itself in a series of niche markets with a very diversified and potentially very high added value. In addition, the country benefits from a large and very young rural and urban workforce, ready to bring further growth and innovation to the sector, fostering specialisation, not only in terms of traceability and quality, but also in marketing, digitisation, and saleability of the product, which young people will be able to enhance by fostering a gradual transition in the entire supply chain, from production to final sale.

Finally, coffee cultivation in Ethiopia aligns with sustainable agricultural practices, contributing to the preservation of natural resources, particularly forest and soil biodiversity. As a perennial crop, coffee requires limited or no chemical inputs and can be grown using agroforestry techniques, thus promoting biodiversity and maintaining forest cover. This in turn favours the preservation of forest habitats and soil cover by reducing accelerated erosion dynamics and the loss of surface and fertile soil layers. This is particularly important in light of the new requirements imposed by the European Union with the new Deforestation Regulation that will come into force from January 2025.

In essence, coffee represents much more than just a commercial product in Ethiopia: it is a crucial element that is woven into the economic, social, cultural and environmental dimensions of the country, profoundly influencing Ethiopian identity and steering the nation towards a brighter and more sustainable future.

4.2 Programme Description

The evaluated Programme is aimed at enhancing coffee production and quality in Ethiopia, offering support to the different actors involved in the chain: producers, cooperatives, Unions of Cooperatives, and the Federal Institution ECTA - *Ethiopian Coffee and Tea Authority*. Based on the assumption that the actions envisaged by the Programme will foster better coordination between the actors in the supply chain, it is expected that the supply of quality coffee from the producing regions Sidama and Oromia will increase. This should, in turn, stimulate an improvement in both the quality and volume of roasted coffee produced in the two regions and better sales conditions on the international market. Furthermore, the programme envisages that Ethiopian coffee will gain international recognition as a sustainable product, employing conservation-minded production models that protect natural resources, ensure ecosystem services and adapt to the environmental challenges posed by climate change.

The Programme aims to influence stakeholders in the coffee supply chain in Ethiopia, placing them at the centre of a modernisation effort that intends to rethink the marketing of coffee by enhancing its distinctiveness, improving the market structure and the transparency of the supply chain. Consequently, it aims to create new employment opportunities at various stages, from production to harvesting, from initial processing to roasting and packaging, particularly in rural and remote areas. This effort will have to be instrumental in curbing rapid urbanisation, especially among young people, and in addressing the challenges associated with the preservation of rural areas, job creation and sustainable management of natural resources.

At the same time, the programme expects to raise the quality of coffee for the domestic market, promoting the professionalisation of the sector and the overall quality of the product. This improvement will respond to the growing demand for raw materials from new urban settlements and will enable exported coffee to gain recognition and appreciation in the market. This recognition aims to improve the market positioning of quality coffee for export, will increase the volume of exports, and will increase profits for cooperatives and small producers.

By setting a course to improve the quality and quantity of coffee, the overall objective of the programme is to facilitate a gradual increase in coffee quotas in the international market, thereby improving the earnings of producers and cooperatives.

Within this framework, innovative techniques are being introduced to become standard practices in coffee cultivation, contributing to adaptation and mitigation of the effects of climate change. These practices are expected to enable smallholder families to adopt smart strategies to mitigate the risks associated with changes in rainfall patterns, extended periods of rainfall deficiency and the possible emergence of new phytopathological threats to coffee cultivation.

As an immediate result, the programme aims to strengthen agricultural and entrepreneurial skills through *capacity building* activities, thereby increasing the presence of independent and self-managed organisations offering market access and valuable services. In addition, it seeks to encourage young people to recognise and seize opportunities for self-employment, fostering their involvement in agricultural activities and later stages of the supply chain, thus catalysing a generational transformation within the sector.

In an intermediate stage, as a secondary outcome, the programme aims at an overall improvement of agricultural and entrepreneurial skills, leading to increased income and food security for producers, processing workers and support staff of cooperatives and cooperative unions.

The expected long-term impacts of the programme are as follows:

- Producer organisations become catalysts for change, promoting gender inclusion and generational transition in the coffee sector and agriculture in general.
- The country's rural areas become attractive to young people, stimulating economic development and job creation: this aims to reverse the current trends of urbanisation and depopulation of the countryside, making less densely populated areas centres of economic opportunity and innovation.
- Small producers, processors, entrepreneurs and specialised technical personnel become positive examples in their communities, inspiring similar dynamics in other communities and in other agricultural and agro-industrial sectors.
- Coffee-producing regions become resilient to climate change, ensuring the future availability of quality natural resources and ecosystem services.

The direct beneficiaries of the initiative are:

- 25,000 small farmers in the districts of Aleta Wondo and Delo Mena;

- 21 cooperatives including these producers and their cooperative unions (Burka Yadot Cooperative Union and Sidama Coffee Producers' Union);
- Ethiopian private sector operators in the coffee supply chain (roasters, exporters) who benefit from the vocational training services of the Coffee Training Centre (CTC).

The local authorities involved are:

- Coffee and Tea Authority of Ethiopia (ECTA);
- Ministry of Agriculture of Ethiopia;
- Wereda Cooperative Office of Aleta Wondo and Delo Mena.

The following page shows the outline of the Theory of Change underlying the logic of the Programme.

Activity	Output	First Level Outcomes	Second Level Outcomes	Impacts
Organization of coordination tables between public and private actors operating in the coffee supply chain in Ethiopia	Improved coordination among actors operating in the coffee supply chain	Stakeholders in the Ethiopian coffee supply chain become drivers of modernization, making coffee de-commercialization a process of market articulation and supply chain transparency	Independent and self-managed organizations that provide market access and valuable services	Producer organizations become catalysts of change, promoting gender inclusion and generational transition
Construction of roasting plant	The volume of roasted coffee produced and sold increases	Employment opportunities in the initial processing and roasting phases increase, providing jobs in rural areas and reducing rapid urbanization	Young people recognize self-employment opportunities, developing activities both in agriculture and in the subsequent phases of the supply chain	Rural regions become attractive places for young people, promoting economic development and employment
Training activities on coffee roasting		The quality of roasted coffee destined for the domestic market increases, fostering the professionalization of the sector and the overall quality of the product		
Training on coffee marketing				
Creation of a training center for personnel operating in the public and private sectors	The quality of coffee produced and exported improves	Exported coffee receives recognition and appreciation in the market, consolidating its international demand, the quantity exported, and the revenues obtained by cooperatives	Agricultural and entrepreneurial skills improve, increasing income and food security for producers, processors, and support staff of cooperatives and unions	Small producers, processors, entrepreneurs, and specialized technical staff become positive examples in their communities, inspiring similar dynamics in other communities and other agricultural and agro-industrial sectors
Strengthening of coffee cooperatives on quality aspects of production and initial processing		The continuous improvement process of coffee quality allows the gradual increase of the share of coffee destined for the foreign market, thus increasing the profits of producers and cooperatives		
Promotion of knowledge and experience exchanges with producers from other countries in the Global South				
Training on aspects related to credit access for investments aimed at improving production and initial processing				
Promoting the inclusion of Sidama and Oromia in the Premium Quality circuit				
Promoting coffee quality through certification and traceability				
Introduction of sustainable agronomic techniques for coffee production for cooperatives and producers	Ethiopian coffee is recognized internationally as sustainably produced	Innovative techniques for adapting and mitigating the effects of climate change spread as standards in coffee cultivation	Smallholder agricultural systems become resilient to climate change	Coffee-producing regions become resilient to climate change, ensuring the future availability of natural resources and quality ecosystem services
		Smallholder families adopt climate-smart practices		

Table 2. The Theory of Change underpins Programme logic.

4 Scope and objectives of the evaluation

This independent evaluation, conducted two years after the end of the Programme, aimed to assess the Programme's achievements against the expected results. In accordance with the Terms of Reference (ToR), the evaluation included analyses on coherence, effectiveness, sustainability and impact, following a thorough review of all relevant information on the Programme.

The purpose of the evaluation was twofold: i) to ensure transparency and ii) to offer in-depth reflections to guide future cooperation strategies concerning public-private partnerships. A particular aspect of this Programme and of the evaluation conducted relates to how the local agri-food public sector can involve Italian private partners in mutually beneficial agreements.

The parameters of the evaluation are:

- The relevance of the objectives of the initiative to local needs and their alignment with other initiatives of the Italian Cooperation and those promoted by other donors.
- The logical coherence and overall validity of the Programme.
- The effectiveness of the programme in achieving its results, considering the indicators of the logical framework.
- The efficient use of resources and the proper implementation of programme actions in relation to the needs of the context and according to the identified timeline.
- The Programme's impact on social, economic and environmental contexts, including potential structural changes in systems or regulations.
- The effects of the initiative on collective well-being, human rights, gender equality and the environment.
- The impact of the programme on the incomes and quality of life of the small farmers and cooperatives involved.
- As the Programme addressed cross-cutting issues such as human rights, gender equity and environmental impacts, in particular the development potential of women producers and the effect of eco-friendly solutions on water bodies near Programme sites.

The assessment also addressed critical issues identified in the coffee supply chain, such as lack of coordination, traceability mechanisms, non-standardised industrial roasting, and organisational inefficiencies in cooperatives and unions of cooperatives. The sustainability of improvements in productivity, quality and profitability in coffee production as factors for long-term development was assessed.

The conclusions of the evaluation are based on objective, credible, reliable and verifiable results. This final report incorporates recommendations for improving the programming and management of cooperation interventions in the coffee sector.

Sharing evaluation results could provide information to the Programme consortium on the use of public development aid funds and Italian stakeholders on the effectiveness of allocated public resources. It is hoped that experiences will be shared with key cooperation agencies and local partners, improving mutual accountability and strengthening the evaluation capacities of partner countries.

5 Methodological approach to evaluation

The evaluation measured the results of the Programme using the OECD parameters, as they are widely considered an evaluation standard, required in the call for proposals and provided for in the technical proposal submitted by Timesis.

6.1 OECD Criteria and Sub-Criteria

Relevance

Assessing relevance helps users determine whether an intervention is appropriate. It allows evaluators to check how well the objectives and delivery methods of an intervention are aligned with the needs of beneficiaries and stakeholders as well as with the intervention's underlying priorities. It explores whether recipients consider the intervention useful and meaningful in their daily lives.

Relevance is a critical factor in all phases of the programme cycle, from design to implementation. Relevance can also be assessed in relation to the overall objectives expressed by the Sustainable Development Goals (SDGs). It can be analysed through four potential elements: i) relevance to beneficiary and stakeholder needs,

ii) relevance to context, iii) relevance to quality and design, and iv) relevance over time. Below are briefly some elements to consider when measuring relevance.

How the Programme responds to local needs, policies and priorities

Relevance analysis focuses on the effectiveness of an intervention in meeting the needs and priorities of beneficiaries, highlighting the importance of their inclusion and participation in the design and implementation. This process not only assesses the alignment of the intervention with the context, but also explores how meeting the needs of beneficiaries affects the overall success of the initiative. Beneficiaries may include individuals and communities who do not receive direct services but are nevertheless impacted by the outcomes.

Relevance requires a clear definition of beneficiaries and considers how the intervention aligns with the institutions and policies involved, both locally and globally. The assessment of relevance includes the analysis of different priorities and needs and must capture any trade-offs between these, highlighting the areas that are most affected by the priorities of the collective goals in the 2030 Agenda. The objective is to understand the strategic significance of the intervention beyond the local context, assessing its contribution to global goals and the inclusion of marginalised groups.

Response to context

Assessing the needs of beneficiaries and stakeholders requires a deep understanding of the diverse context surrounding an intervention, including economic, social and political elements. The relevance of this context varies depending on the stage of evaluation-planning or reflection-and must adapt to changes over time. Evaluators are required to assess how the design and outcomes of the intervention have considered the changing context and whether past experiences and lessons learnt from past initiatives have been integrated. This ensures that the intervention remains relevant and effective in addressing targeted needs within its changing environment.

Design Quality

Design quality examines the effectiveness of an intervention's structure in meeting identified needs and priorities, ensuring that objectives are clearly defined. It assesses whether the objectives of the intervention reflect the priorities and needs of the stakeholders through its theory of change and intended mode of operation. This evaluation dimension helps to identify potential design flaws that may be inconsistent with the relevance of the intervention. In addition, this aspect of the analysis enhances the evaluation of the evaluability of the intervention by emphasising the importance of design quality at an early stage. In addition, it sheds light on the suitability of the intervention for the organisation responsible for implementation, taking into consideration factors such as technical, organisational and financial feasibility.

Ability to adapt over time

Evaluators are required to check how interventions adapt to changing scenarios, such as conflicts or changes in economic policies, which significantly influence their implementation. It is essential to monitor the relevance of interventions not only in the initial and final stages, but also in response to changes during their development. This process involves assessing the effectiveness of adjustments made to maintain alignment with core needs and priorities, as well as analysing the impact of these adjustments on the overall quality of the Programme over time. Adaptation to both external and internal changes, including financial changes, provides opportunities to minimise risks or exploit potential opportunities, thereby influencing the focus and responsibilities of the programme. It is imperative to explore these adjustments in depth to assess their effect on the overall relevance of the programme.

Consistency

With the urgent need to adhere to common principles, such as the 2030 Agenda and the Sustainable Development Goals (SDGs/OSS), the coherence criterion favours a holistic approach to assessing synergies, coordination between public bodies and compliance with international norms and standards. This criterion offers a tool for analysing the various trade-offs and possible tensions, identifying areas where overlapping efforts or inconsistent policies may hold back collective progress.

Furthermore, this criterion pushes evaluators to consider the intervention within the broader context of its system - be it an organisation, a sector, a specific theme or a country - going beyond a view limited to individual interventions or institutions. The aim is to ensure external coherence by verifying how far policy objectives are aligned with international development objectives and by analysing the influences and power dynamics of external actors in order to obtain a comprehensive view of the intervention's coherence.

The criterion also emphasises the diversification of funding sources for sustainable development, both internationally and nationally, and calls for an in-depth analysis of how interventions comply with international commitments, including anti-corruption measures and human rights conventions. This approach not only ensures consistency with obligations under international agreements, but also provides a perspective on the relevance of interventions by assessing their ability to respond to global priorities. This adds an additional layer to the assessment of coherence. This focus on international standards marks a significant change in evaluation practices, as they were previously not adequately considered. Some specific elements should be analysed to determine the coherence of a Programme.

Internal coherence

Internal policy coherence assesses how interventions align with an institution's broader policy frameworks and support and complement other initiatives in the same context, focusing on harmonising activities, reducing duplication and ensuring complementarity.

The coherence criterion addresses challenges in different areas of public policy, different levels of government and among different stakeholder groups, emphasising the importance of an integrated approach in complex areas such as the nexus between humanitarian, development and peace.

This sub-criterion also includes vertical coherence, i.e. how the intervention aligns across various institutional levels and funding streams, covered by public interventions, from local to national objectives. The objective is to ensure that interventions are consistent with existing policy agenda priorities, facilitating a unified strategy that embraces horizontal and vertical dimensions for effective policy implementation for impact.

External coherence

External coherence has two main dimensions: i) the alignment of interventions with overall policy frameworks, ii) the response to the Sustainable Development Goals (SDGs) and their coherence with the efforts of other actors in the same context. These aspects emphasise the importance of integrating actions into a broader policy and operational framework, ensuring that initiatives are synergetic and not contradictory to shared objectives. Furthermore, this emphasises the importance of aligning interventions with global commitments, in particular SDG Goal 17.14, which advocates greater policy coherence for sustainable development.

Furthermore, when examining interventions in specific contexts, it is crucial to assess how they complement or overlap with actions undertaken by other entities, with the aim of adding value and avoiding duplication of efforts. Assessments of external coherence require a detailed analysis of how the intervention fits in with broader humanitarian and development efforts, considering its use and contribution to existing systems and coordination mechanisms at various levels.

Effectiveness

Effectiveness measures the extent to which an intervention achieves or has achieved its objectives, highlighting the achievement of the intended results, using specific working approaches and highlighting determinants and any unexpected results. It is crucial to distinguish between effectiveness, which tracks results directly related to the intervention, and impact, which refers to broader, higher-level changes.

This criterion helps to define or evaluate clear objectives, helping stakeholders to understand whether outcomes result from the design of the intervention or its execution. In addition, it is crucial to recognise unintended effects both negative and positive, encouraging proactive identification of risks and addressing any significant unplanned impacts, especially those affecting human rights.

Effectiveness also includes an analysis on the distribution of results among different groups, reinforcing the commitment to equity and the SDG goal of 'leaving no one behind'.

In the evaluation of effectiveness, emphasis should be placed on the most significant outcomes for the context and the public, using a functional evaluative judgement in considering the relative importance of all outcomes, including unintended ones, in the effectiveness of the intervention.

Achievement of objectives

Evaluating the effectiveness of an intervention means understanding whether the programme has achieved its objectives, general and specific (or second level outcomes), and its concrete results or first level *outcomes*. The clarity and coherence of the intervention's objectives are fundamental and any changes in objectives or strategies without justifying documentation call into question the evaluation process itself, necessitating in-depth analysis in documents or stakeholder interviews to reconstruct the intervention's evolutionary logic.

Adaptive programmes, which adapt based on feedback and changing conditions, require evaluators to carefully examine adaptations and the rationale behind them, ensuring that evaluations align with current objectives. Evaluating effectiveness involves identifying changes directly attributable to the intervention, distinguishing them from external influences: this includes recognising unintended outcomes, both ameliorative and adverse, and considering their impact on broader development goals. Evaluators need to go beyond the initial objectives to assess how unintended effects contribute to or hinder the achievement of the broader objectives, emphasising the need for a comprehensive assessment of both intended and unintended outcomes.

Comparison of the Relative Importance of Programme Outcomes

In the evaluation of effectiveness, evaluators investigate whether the intervention has achieved its objectives and secured the expected results. In cases where only some objectives are met, evaluators need to assess their relative importance in determining overall effectiveness. This evaluation may incorporate insights from relevance analysis, which examines the alignment between priorities and stakeholder needs. Thus, evaluators look at whether the intervention was effective in specific aspects or from the perspective of some stakeholders, but not universally with respect to all objectives or perspectives of different types of stakeholders.

Differentiated results

There is a need for evaluators to assess the inclusiveness and equity of outcomes for all beneficiary groups, whether individuals or organisations. This implies an investigation of the use of an inclusive approach from the design to the implementation of the intervention. The evaluation should examine how the objectives of the intervention were developed, in particular whether they emerged from a thorough needs assessment and consultation with stakeholders, including key target groups. Such an analysis can reveal whether the intervention has overlooked opportunities to achieve results for its beneficiaries or to foster long-term impacts. Evaluators should also consider both unintended and planned outcomes, while accepting that some changes may be blurred in the long run and may not be easily measurable.

Determining factors

Understanding the factors influencing results is crucial to enable evaluators to discern why an intervention has or has not succeeded in achieving its objectives, helping stakeholders to identify areas for improvement. These determinants may be internal, such as management practices, human resources, financial management, regulatory issues or changes in implementation strategies. The quality of implementation, including adherence to implementation protocols, is often crucial in determining effectiveness and should be analysed before assessing other dimensions such as efficiency, impact and sustainability.

On the external side, evaluators must consider both positive and negative impacts from the intervention's environment which may have facilitated or hindered the achievement of results. This involves assessing how well the intervention has adapted to changes in its context. The evaluators should also examine the timeframe of the achievement of the results, carping on whether these were congruent with the consortium's commitments and the general execution of the activities.

Efficiency

This criterion offers the opportunity to determine whether the resources used in an intervention can be justified by its results, which is crucial in both practical and political terms. Efficiency is important for many stakeholders, including governments, civil society and beneficiaries. Better use of resources enables more to be achieved through development cooperation, such as progress towards the SDGs. Efficiency is particularly important for governments that are accountable to their taxpayers, who often question the value for money of various policies and programmes, especially decisions on foreign development cooperation, which are subject to more rigorous reviews.

Economic efficiency

Economic efficiency is the key factor in evaluating efficiency, emphasising the elimination of waste and the optimal conversion of inputs into results. It includes the assessment of how efficiently resources are transformed into desired outputs, results and impacts at all stages of the results chain. This involves examining how resources are distributed among different target groups and across various time periods, as well as the strategies employed in acquiring inputs under prevailing market conditions.

Operational efficiency

Operational efficiency is a crucial aspect to evaluate and focuses on the effective use of resources during the implementation phase. To investigate operational efficiency, several questions can be considered: i) were human and financial resources deployed according to plan and were they used to their full potential, or were there instances of misallocation, under- or overspending? ii) was the allocation of resources adequate in response to changing needs? iii) how were risks managed? iv) were decisions made that improved efficiency in the light of new insights? v) were logistics and procurement strategies executed as efficiently as possible?

Punctuality of execution

The timeliness of the action plan, which is closely linked to both economic and operational efficiency, raises the question of whether and to what extent the desired objectives were achieved within the set timeframe. It also provides an opportunity to assess whether the planned timeframe was initially feasible or acceptable. Was it then adequately adapted to different needs during the execution of the intervention, taking into account that external influences and changes to the programme are frequently necessary in many initiatives? The evaluators must ascertain whether efforts were made to overcome obstacles and minimise delays in the management of the intervention, adapting to the changing context.

Impact

The term 'impact' is widely used but often misunderstood, and this may influence stakeholders' perception of the evaluation exercise. In the political arena, it could broadly encompass 'results', mixing efficiency and impact as defined in this context, along with other performance indicators. Recently, it has also been confused with 'impact evaluation', a term for methods that identify statistically significant causal links between an intervention and its results. In such discussions, 'impact' could cover any aspect along the outcome chain, usually implying positive outcomes. Therefore, it is crucial to establish a common understanding with stakeholders on what "impact" means at the beginning of an evaluation and to clarify its use in the evaluation of overall effects.

In this evaluation, the impact criterion answers questions such as:

- Has the intervention led to substantial improvements for its beneficiaries?
- What mechanisms did the intervention use to produce wider effects, such as changes in norms or systemic transformations?
- Are the benefits of the intervention felt equally by all target groups, especially the most marginalised and vulnerable?
- Does the intervention induce lasting alterations in norms, including gender norms, and systems, regardless of intention?
- Has the intervention triggered other types of changes that can be extended or replicated?
- How is the intervention expected to positively change social norms?
- The extent to which the intervention has generated or is expected to generate significant positive or negative effects, intended or unintended, at a higher level.

Sustainability

Assessing sustainability is essential to determine whether the benefits of an intervention will persist beyond financial, economic, social and environmental constraints. This criterion, broader and more precise than its predecessors, covers a range of analytical elements and emphasises the importance of their interaction.

Sustainability is often confused with environmental sustainability or the long-term use of resources, but its main focus in evaluations is on the continuum of results in a broad sense. Evaluators should explicitly define their interpretation of sustainability, considering it at every stage of the results chain and throughout the programme cycle, including aspects of resilience and adaptation to complex environments. This includes assessing the durability of both outputs and impacts, the ability to secure funding - post-intervention - for actions needed in the long term, and to ensure the conditions for sustainability already in place, in a manner integrated into the design of intervention activities.

Sustainability assessment should go beyond donor perspectives and external funding, considering net benefits and potential trade-offs, including the resilience of underlying capacities and systems. The challenge of ensuring long-term benefits, as highlighted in areas such as water and health or community development, underlines the importance of examining sustainability assumptions in the theory of change.

An accurate sustainability assessment can offer insights into the planning and implementation of changes for future sustainable development, including the scalability or replicability of interventions. Planning an exit strategy is a critical component, with assessments examining the development and implementation of strategies to ensure continued positive effects, taking into account potential changes in the contextual environment.

6.2 Tools for evaluation and data collection

Data collection was guided by the Evaluation Questions (DV) mentioned in the evaluation matrices detailed in Appendix 2. These questions were formulated according to the utility and objectives of the evaluation exercise and structured according to the OECD-DAC criteria.

The Evaluation Team (TV) adopted a method mainly based on the Results-Based Approach (RBA) that includes the analysis of various sources of information and data derived from Programme documentation, monitoring reports, and interviews with government counterparts and direct beneficiaries, both individually and aggregated in focused groups. This enabled the analysis of the results achieved by the Programme.

The following evaluation tools were used for data collection:

1. **Documentary analysis:** programme documents, technical reports, monitoring reports, available baseline data, with the aim of analysing the relevance, design and coherence of the Programme with the strategic framework of the humanitarian intervention in Ethiopia. Particular attention was paid to two new incoming EU Regulations: the EU Regulation on Deforestation, officially designated as "Regulation (EU) 2023/1115 on Deforestation-Free Products", and the new EU Regulation on Organics, designated as "Regulation (EU) 2018/848", which is still in the recognition process. Annex 2 provides a list of the documents analysed.
2. **Open and semi-structured interviews with institutional stakeholders:**
 - In Aleta Wondo: institutional representatives of the Aleta Wondo Wereda Cooperative Promotion Office;
 - In Hawassa: a senior official of the Sidama Cooperative Promotion Board;
 - In Addis Ababa: a senior official of the Oromia Cooperative Promotion Board;
 - In Addis Ababa: the executive director of the Sidama Coffee Growers' Union;
 - In Addis Ababa: the director of the Ethiopian Coffee and Tea Authority and the Coffee Training Centre;
 - In Addis Ababa: the director of the *Ethiopian Commodity Exchange (ECX)*;
 - In Addis Ababa: the director of the *Ethiopian Standard Agency (ESA)*;
 - In Addis Ababa: executive staff of Technoserve and COOPI;
 - In Addis Ababa: UNIDO reference expert.
3. **Semi-structured interviews of 18 cooperatives** (8 cooperatives in Aleta Wondo - Gerbichokila is currently outside Wereda in Aleta Wondo) and 10 cooperatives in Delo Mena (2 cooperatives have

dissolved over time). A total of 20 questionnaires were collected, having interviewed two different contact persons in two cooperatives.

4. **Semi-structured interviews with 117 producers:** 49 in Oromia and 68 in Sidama with 26.5% of respondents being women.
5. **Women's Focus Groups (FGs):** With the support of the cooperatives' promotion offices, 2 groups of women coffee producers and activists were identified in the two Weredas of Programme implementation and focus groups were conducted with them to collect specific data on gender issues: their perceptions, view of achievements and impact, good practices developed and perceived, factors favouring or hindering effectiveness and potential impact.

The products of the evaluation exercise are as follows:

- Start-up Report (RA);
- Final Report;
- Synthesis Report of maximum 15 pages;
- Workshop to present preliminary results in AICS Addis Ababa (15.04.2024);
- Workshop to present the draft final report (in Rome);
- Final report presentation workshop (in Addis Ababa);

Throughout the evaluation exercise, the Evaluation Team (ET), through the team leader and the Timesis contract manager, maintained constant contact with the DGCS in Rome, with AICS Addis Ababa, to keep them informed on the progress of the various phases. The DGCS was directly involved in the initial phase (kick-off meeting, presentation and approval of the Initial Report) and the final phase (feedback on the final report, its approval, workshop in Rome). The AICS office in Addis Ababa was directly involved in an inception meeting at the start of the field phase and in the two additional meetings to return the main preliminary considerations.

6 Presentation of evaluation results

The presentation of the evaluation results contemplates 3 distinct sections within which specific evaluation dimensions will be explored in depth: i) an analysis of the theory of change and the level of achievement of the various *outputs* and *outcomes*; ii) the evaluation criteria, as defined in the RA: for each criterion, the sub-criteria previously analysed and the evaluation questions already described in the RA will be considered; iii) cross-criteria, developed in the RA as further evaluation matrices and analysing in particular detail, the environmental, gender equality and financial sustainability aspects of the coffee value chain.

Ex post analysis of the Theory of Change

The Theory of Change matrix is briefly depicted below. In this matrix, the distance between expectations and the actual achievement of various outcomes, ranging from activities to impacts, is indicated by three colours: green denotes a good achievement, orange a partial achievement and red a significant gap in the achievement of that outcome.

Activity	Output	First Level Outcomes	Second Level Outcomes	Impacts
Organization of coordination tables between public and private actors operating in the coffee supply chain in Ethiopia	Improved coordination among actors operating in the coffee supply chain	Stakeholders in the Ethiopian coffee supply chain become drivers of modernization, making coffee de-commercialization a process of market articulation and supply chain transparency	Independent and self-managed organizations that provide market access and valuable services	Producer organizations become catalysts of change, promoting gender inclusion and generational transition
Construction of roasting plant	The volume of roasted coffee produced and sold increases	Employment opportunities in the initial processing and roasting phases increase, providing jobs in rural areas and reducing rapid urbanization	Young people recognize self-employment opportunities, developing activities both in agriculture and in the subsequent phases of the supply chain	Rural regions become attractive places for young people, promoting economic development and employment
Training activities on coffee roasting		The quality of roasted coffee destined for the domestic market increases, fostering the professionalization of the sector and the overall quality of the product		
Training on coffee marketing				
Creation of a training center for personnel operating in the public and private sectors	The quality of coffee produced and exported improves	Il caffè esportato ottiene riconoscimenti ed apprezzamenti sul mercato, consolidando la propria domanda internazionale, la quantità esportata ed i proventi ottenuti da cooperative	Agricultural and entrepreneurial skills improve, increasing income and food security for producers, processors, and support staff of cooperatives and unions	Small producers, processors, entrepreneurs, and specialized technical staff become positive examples in their communities, inspiring similar dynamics in other communities and other agricultural and agro-industrial sectors
Strengthening of coffee cooperatives on quality aspects of production and initial processing				
Promotion of knowledge and experience exchanges with producers from other countries in the Global South				
Training on aspects related to credit access for investments aimed at improving production and initial processing				
Promoting the inclusion of Sidama and Oromia in the Premium Quality circuit				
Promoting coffee quality through certification and traceability				
Introduction of sustainable agronomic techniques for coffee production for cooperatives and producers	Ethiopian coffee is recognized internationally as sustainably produced	Innovative techniques for adapting and mitigating the effects of climate change spread as standards in coffee cultivation	Smallholder agricultural systems become resilient to climate change	Coffee-producing regions become resilient to climate change, ensuring the future availability of natural resources and quality ecosystem services
		Smallholder families adopt climate-smart practices		

Table 3. Gaps between expectations and actual achievement of project results.

The reasons for assigning the most critical ratings - corresponding to the results with orange and red cells - are summarised below:

Output/Outcome	Grading	Justification
Facilitating the inclusion of Sidama and Oromia coffee in the Premium Quality circuit		The process of improving the quality of Sidama coffee started long before the implementation of the Program, while in Oromia it is much more recent and the path to be taken is still long and demanding.
Promoting coffee quality through certification and traceability		The certification of Sidama coffee is guaranteed by the regional Cooperative Union with mechanisms in place prior to the Program. The certification of Oromia coffee is similar but more recent and less structured. For both origins, traceability is still far off, but the improvement of quality and environmental sustainability promoted are nevertheless functional to the enhancement of both certifications, which are fundamental for compliance with new European regulations (on deforestation and new organic).
Improved coordination among actors operating in the coffee supply chain		The initiative has fostered training and exchange among the various actors in the coffee supply chain, but the distances between producers, primary cooperatives, and unions remain significant, and the lack of a common vision reduces the sector's potential.
Ethiopian coffee is recognized internationally as sustainably produced		The actions aimed at the reputation of the brands (Sidama and Oromia) at the international level, supported by the Program, are not enough for the recognition of the environmental sustainability of Ethiopian coffee, which is known for its quality and history more than for its environmental sustainability.
Coffee supply chain stakeholders in Ethiopia become engines of modernization, making coffee demarketization a process of market articulation and supply chain transparency		Coffee is still largely considered a commodity in the country, and the great potential related to the various market niches, with the consequent incorporation of social, ethical, and environmental value in the final price, is substantially unexplored compared to the international market.
Employment opportunities in the initial processing and roasting phases increase, providing jobs in rural areas and reducing rapid urbanization		Cooperatives have personnel with daily administrative and technical functions. However, the model does not reflect the true professionalism of the cooperatives but comes from historical and cultural legacies. For this reason, cooperatives, only in rare cases, represent important economic realities with interesting growth prospects, capable of promoting the employment of young and qualified workforce in rural areas.
The continuous improvement process of coffee quality allows the gradual increase of the share of coffee destined for the foreign market, thus increasing the profits of producers and cooperatives		If the increase in the quality of coffee destined for the foreign market is a consolidated process, unfortunately, this does not always translate into a growth in the profits of producers and cooperatives, because coffee, as a commodity, is quoted on the international market and undergoes significant price fluctuations that erode profits, as seen in the year 2022/2023.
Independent and self-managed organizations that provide market access and valuable services		Primary cooperatives and Cooperative Unions are not fully independent but are influenced by the strategic choices of the sector and suffer from its limitations.
Agricultural and entrepreneurial skills improve, increasing income and food security for producers, processors, and support staff of cooperatives and unions		Despite the improvement in skills and product quality, this is not enough to improve food security and income for producers and supply chain operators due to export price fluctuations and the lack of commercial agreements that guarantee minimum prices.
Producer organizations become catalysts of change, promoting gender inclusion and generational transition		Achieving gender equality is still far off, and the limitations are greater the more remote the communities live and work. The limitations for women and vulnerable people are shared and significant in all cooperatives.
Rural regions become attractive places for young people, promoting economic development and employment		Although income opportunities in the Program's rural areas are varied and diversified, they are not sufficient to reverse the trend of urbanization among younger generations.

Table 4. Reasons for the most critical judgements.

OECD DAC Evaluation Criteria Analysis

The results of the evaluation are presented below with respect to the OECD DAC criteria previously analysed in their sub-criteria, which are followed by a number of additional criteria considered fundamental to the nature

of the initiative and developed according to the questions already included in the relevant matrices in the Start-up Report (RA).

6.1.1 Relevance

Programme Design and Alignment with Local Policies

Ethiopia's Ten-Year Development Plan (2021-2030) represents a broad and ambitious strategic framework that aims to steer the country towards sustainable development through concrete solutions to the main challenges the country faces in the economic, social, administrative and institutional spheres. This plan places special emphasis on strengthening internal reforms and implementing policies that encourage economic growth, social stability and administrative efficiency. The connections with the coffee and agro-industry sector are significant and can be analysed from various strategic aspects outlined in the plan.

Vision and objectives of the plan: the vision of the plan is to transform Ethiopia into an upper middle-income economy, supported by a modernised agricultural sector and a diversified industry. For the coffee sector, this implies improvements in production, quality and access to international markets. For example, the paper describes how Ethiopia aims to promote sustainable agricultural practices and improve infrastructure, such as coffee processing centres, through both dry and wet processing.

Strategic lines: The plan has three strategic pillars that include technological innovation, agricultural processing and improved production capacities, and environmental sustainability. In the context of coffee:

- Technological innovation: the introduction of advanced technologies for coffee processing, including more efficient and environmentally friendly machinery, is crucial to increase the added value within the country.
- Agricultural transformation: supporting the transition from traditional farming practices to more modern and sustainable methods is crucial for the coffee sector. This includes genetic improvement of coffee to increase resistance to disease and climate change.
- Environmental sustainability: implementing cultivation practices that protect the environment and preserve biodiversity, which are essential in a country that is the birthplace of the Arabica, helps preserve the unique characteristics of Ethiopian coffee.

Internal reforms and policies: the plan emphasises the importance of internal reforms to create a favourable environment for investment and to improve governance. For the coffee sector, this translates into:

- Regulatory reforms: creation of a more favourable regulatory framework for coffee cooperatives, facilitating access to markets and improving economic conditions for producers.
- Fiscal and support policies: fiscal incentives for sustainable technologies and coffee exports that can increase the competitiveness of Ethiopian coffee in global markets.

The programme is in line with other important political strategies of Ethiopia:

- The Ethiopian Coffee Strategy and Implementation **Roadmap**, abbreviated as CECSIR **Ethiopian Coffee Strategy and Implementation Roadmap 2020-2035**, is an integrated national strategy developed and adopted by the Government of Ethiopia to strengthen the country's coffee industry. As specified in the introductory part of the evaluation report, the Programme fully responds to the priority axes and lines of action promoted by CECSIR for the 15-year period from 2020 to 2035 envisaged for the implementation of the strategy.
- Coffee Sector Development Strategy: The Coffee Sector Development Strategy is an Ethiopian government initiative, supported by the European Union, aimed at enhancing the quality of Ethiopian coffee by exploiting the more than 2,000 native Arabica varieties. The core of the strategy is to strengthen the capacity of *the Ethiopian Coffee and Tea Authority* to implement regulations to ensure traceability and sustainability of coffee. The traceability system makes it possible to verify the origin of coffee, increasing transparency in the supply chain and ensuring fairer conditions for producers. This strategy not only aims to improve the international reputation of Ethiopian coffee, but also promotes sustainable practices and the welfare of rural communities.
- Ethiopia's **Long-Term Low Emission and Climate Resilient Development Strategy (2020-2050)** is the national strategy for Ethiopia's transition to a low-carbon and climate-resilient economy by 2050. This strategy follows and expands on the goals previously set out in Ethiopia's Climate-Resilient Green

- Economy strategy (CRGE), which focused on climate change mitigation and adaptation as an integral part of the country's economic development. The new strategy encourages the adoption of sustainable agricultural practices that not only reduce GHG emissions but also improve the resilience of coffee to climate shocks. This includes the adoption of farming techniques that conserve carbon in the soil, such as agroforestry, which integrates trees into coffee plantations. Trees not only sequester carbon, but also provide shade for the coffee, reducing the need for irrigation and protecting the plants from temperature extremes. The strategy emphasises the importance of adaptation to climate change, which is crucial for the coffee sector, as climate variations can drastically affect production. Interventions include the development and dissemination of more heat- and drought-resistant coffee varieties, as well as the restructuring of irrigation systems to be more water-efficient. The strategy also promotes resource efficiency and technological innovation in the coffee sector. This includes the introduction of cleaner and less polluting coffee processing technologies, such as coffee processing machines that use less water and energy, thus reducing the environmental impact of coffee production.
- **Agricultural Development Led Industrialization (ADLI):** The Agricultural Development Led Industrialization (ADLI) strategy is a central approach in the Ethiopian government's economic policy. It is designed to use the agricultural sector as the main lever to stimulate the country's industrial development. Within the Growth and Transformation Plan (GTP) for the periods 2011-2015 and 2016-2020, this strategy aimed to transform agriculture from a predominantly subsistence to a more market-oriented activity, with the objective of raising rural incomes and stimulating broader economic growth through industrialisation. ADLI has promoted significant investments in agricultural technology, improved infrastructure such as irrigation systems and rural roads, and training for farmers to increase productivity and quality of agricultural production. This strengthening of the agricultural sector was seen not only as a means to improve food security and reduce poverty, but also as a catalyst for the development of downstream industries, such as food processing and other agriculture-related industries. Through the implementation of ADLI, Ethiopia has sought to create a virtuous circle in which advances in agriculture fuel rural industrialisation, supporting the creation of new jobs and contributing to the overall improvement of the country's economic conditions. This approach emphasised the importance of a robust and dynamic agricultural sector as a foundation for broader economic development.

Design Quality

The Programme was conceived with a specific methodology, well contextualised to the sector of intervention, local development policies and territorial characteristics; it is also explicitly targeted with actions dedicated to the three main levels of the coffee value chain: i) producers, ii) primary cooperatives and iii) unions of cooperatives. This model of intervention was chosen to favour the adoption of mechanisms of complete product traceability, from field to cup, while favouring the inclusion and active participation of all actors involved in the chain, with the aim of strengthening a quality Ethiopian coffee system and effective cooperation between the various economic actors in the chain in the long run.

The Programme's implementation structure integrates *the Ethiopian Coffee and Tea Authority (ECTA)*, an entity that ensures transparency and regularity in the transactions of coffee consignments and coordination between Unions and international buyers, creating a fair and transparent market environment. The collaboration with international private entities such as *illycaffè* and the *Ernesto Illy Foundation* is a further strong point of the Programme, functional in facilitating the increase of quality and sustainability standards through the transfer of knowledge and resources, also through the creation of a Training Centre in Addis Ababa at ECTA: the *Coffee Training Centre*. These partnerships facilitate the introduction of good global practices and promote access to more profitable international markets for Ethiopian producers.

From an operational point of view, the Programme aims to improve coffee productivity and quality, both through an increase in the number of coffee trees and the extent of coffee cultivation, and through standardised, high quality harvesting and first processing techniques and methods. The existing infrastructure at the primary cooperatives has been modernised and environmental requirements improved, particularly for the wet processing, with waste water being treated before it is released into the environment. Co-operatives were strengthened in their technical and managerial capacities through targeted training and continuous updating. In addition, the Programme included the creation of a training centre to ensure continuous learning and the promotion of international coffee certifications, with the aim of further improving the quality of the final product.

The careful planning of activities and their 'cascading' implementation methodology from a federal/central to an operational level on the ground responds not only to local needs but also to the expectations of the global market, positioning Ethiopian coffee competitively on the international scene, with emphasis on sustainability and superior quality.

Adaptability over Time

The initial project document shows considerable flexibility and adaptability to expected socio-economic and environmental changes. The structure of the programme allows for operational adjustments in response to changes in the market or other external dynamics, ensuring its long-term sustainability. Concretely, the promotion of public-private partnerships, with a view to managing the market component responsible for the absorption of the coffee produced, should have ensured the gradual decommodification of coffee to market niches with high added value and reduced price fluctuation linked to the international market, which, although not achieved, would have allowed for the resilience of the sector and a release from these risks. Finally, the implementation mechanism that saw UNIDO coordinating the activities of 2 NGOs operating in the field - COOPI in Delo Mena and Technoserve in Aleta Wondo - allowed to maintain control of the ongoing activities through a rather direct chain of control, if we consider the type of the Programme and the timeframe required for the analysis of data necessarily linked to the seasonality of the agricultural sector, the distance between the Programme sites and the unpredictability of the coffee market.

Relevance Questions

1. How appropriate can the envisaged programme design and implementation approaches be considered?

The Programme design is fully in line with the country's political and development priorities in the coffee sector, and the implementation approaches envisaged respond to the needs of the social and institutional stakeholders involved in the Programme. The four Programme focuses on Producers, Primary Cooperatives, Unions of Cooperatives and ECTA allow to say that all the actors that make up the coffee supply chain in Ethiopia have been actively involved with specific actions in response to objective operational constraints that are widely considered as priorities. UNIDO's coordination also offered the opportunity to operate at the federal/central level in support of ECTA and the Coffee Training Centre, while the participation of two NGOs active in the two Programme territories enabled the proper implementation of activities in support of producers and primary cooperatives.

2. To what extent are the Programme's objectives, design elements (inputs, activities, outcomes and their indicators) and theory of change logical and coherent?

The Programme aims to increase coffee export earnings and the income of smallholder farmers, benefiting mainly households, including women, in the two regions of intervention. The specific objectives logically link to local socio-economic needs and are supported by a robust and well-articulated theory of change, which aims to improve both the quality and quantity of coffee produced and expand access to high-value international markets. The theory is based on the idea that enhancing coffee production and marketing capacities will generate significant economic impact for rural communities. This includes targeted interventions in the coffee value chain and market environment, addressing key problems such as low productivity and limited accessibility to international markets.

As for the design elements of the Programme, these include inputs such as technical support and training, as well as the engagement and participation of local government and farming communities. Key activities include the improvement of agricultural practices, the introduction of coffee processing technologies, the training of farmers, and the creation of platforms such as the 'Coffee Forum' to facilitate collaboration between the various actors in the value chain. The expected results are an increase in coffee production and quality, greater participation in the international market, and an improvement in farmers' incomes, with clearly defined indicators in terms of production volumes, coffee quality and export earnings.

In conclusion, the Programme presents a logical and coherent structure that aligns development objectives with planned activities and inputs, creating sustainable impact through the continuous improvement of local capacities and infrastructure, effectively addressing the specific needs of the coffee value chain in Ethiopia.

At the same time, however, the Programme did not sufficiently include the gender dimension in the design, where, on the contrary, the coffee value chain involves and employs many women, who are significantly impacted in this sector. More details on this aspect are provided in section "7.3.3 Gender Dimension".

3. Are the indicators SMART (specific, measurable, achievable, relevant and temporarily defined)?

The indicators are mostly specific, measurable, achievable and relevant, but the lack of clear time definitions for some of them limits their effectiveness in monitoring progress over time. Specifically with respect to individual parameters:

- **Specific:** the indicators are quite specific, such as the increase in income of small producers and their families, the percentage of institutions participating in the OCF, and the increase in volume and value of roasted coffee. They clearly specify what is to be measured.
- **Measurable:** all indicators have a quantitative dimension, such as the percentage increase in the volume of coffee roasted, the classification of coffee by ECX with a grade between 1 and 3, and the amount of coffee exported with full traceability. The sources of verification are well defined, including reports from ministries and organisations, which support the measurement of the indicators.
- **Achievable:** the indicators appear to be realistic and achievable, considering the programme resources and inputs allocated, such as technical support, training and infrastructure improvements. However, actual achievability may depend on external factors such as the economic and political environment.
- **Relevant:** The indicators are relevant to the Programme's objectives and aligned with the mission to improve the livelihoods and incomes of coffee producers, as well as to increase the production and quality of Ethiopian coffee. They directly reflect the desired impacts of the Programme on the coffee supply chain.
- **Temporally defined:** many indicators lack temporally defined specifications in the data provided, such as deadlines for achieving percentage increases or the realisation of specific events such as the OCF. This could be a weak point in the definition of indicators according to the SMART criterion.

4. To what extent is the Programme the result of a strategic reflection in which development partners, institutional counterparts, the private sector and final target groups participated?

This aspect represents, for this initiative, an extremely peculiar strength. The collaboration of AICS and UNIDO with illycaffè constitutes both an element of innovation in the panorama of international cooperation interventions and a dimension of particular interest in the field of external evaluation in order to understand in detail both the correct modalities of engagement of the private sector and the impacts of the role of an important company of the coffee sector in Italy in a Cooperation Programme on the same coffee chain in Ethiopia. The real and active participation of the private sector in cooperation initiatives is not, in fact, an element that can be taken for granted, nor is it common to many projects, and it was born, from the very first phases of the Programme's conception, from a real and constructive confrontation between AICS, UNIDO and illycaffè, with the definition of an action plan that immediately afterwards involved ECTA, a winning element for the Programme's success and substantial in driving the political legitimacy of the initiative towards the transition of the coffee sector towards the (almost) free market that Ethiopia is currently experiencing. In general, this aspect demonstrates that the identification of common objectives between different types of stakeholders, all legitimately involved in a complex sector such as coffee, makes it possible to work on the whole chain and achieve systemic results.

5. How consistent is the implementation methodology with the expected results?

In order to assess the consistency of the Programme's implementation methodology with the expected results, let us briefly analyse how the planned activities are consistent with the actual achievement of the results they aim for.

1. **Improved coordination between actors in the coffee chain:**
 - **Related activities: Organisation of forums** such as the OCF (Organised Coffee Forum), definition and discussion of OCF preparation documents, collection of feedback to finalise the OCF.
 - **Coherence:** Activities are closely aligned with the objective of improving collaboration and communication between different actors in the supply chain, which is crucial to the overall success of the Programme. The methodological approach of creating and using dialogue platforms such as the OCF is relevant and consistent with the objective of improving governance and coordination.
2. **Increase in the volume of roasted coffee produced and exported:**
 - **Related activities:** Technical assistance to the *Ethiopian Coffee Roasters Association*, carrying out feasibility studies for roasting training centres, support to cooperatives for the installation of roasting plants.

- **Coherence:** The activities are designed to strengthen local technical and production capacities, which are essential for increasing the production and marketing of roasted coffee. This direct alignment between the technical support activities and the expected result of increased production demonstrates a strong methodological coherence.
3. **Improving the quality of coffee produced and exported:**
- **Related activities:** Support to cooperatives in quality certification, improvement of coffee washing stations, training and continuous technical assistance.
 - **Coherence:** The methodology adopted focuses on strengthening the existing infrastructure and improving farming skills and practices. These activities are vital for improving the quality of coffee, showing a high degree of consistency between the implementation methodology and the expected result.
4. **International recognition of the quality and sustainability of Ethiopian coffee:**
- **Related activities:** Global campaigns for the recognition of Ethiopian coffee, promotion of product certifications, support for participation in international events.
 - **Coherence:** The promotional and marketing strategies used aim to improve the perception of Ethiopian coffee globally. The integration of marketing activities with technical support to ensure the quality of the product shows methodological coherence with the objective of strengthening the positioning of Ethiopian coffee in international markets.

The Programme's implementation methodology is highly consistent with the expected results. Activities are well structured to address specific challenges of the coffee supply chain and to realise the strategic objectives of the Programme. This coherence between the planned activities and the final objectives is crucial to the success of the Programme, ensuring that every aspect of the Programme contributes effectively to the desired results.

6.1.2 Consistency

Internal coherence

As pointed out in section 7.2.1 of the document, the Programme under review aligns perfectly with Ethiopia's policy and institutional framework related to the development of the coffee sector and the strengthening of the agro-industry to diversify the country's economy, which is still highly dependent on the primary sector. The distinctive feature of this initiative lies in its ability to comprehensively address the challenges that prevent the full development of the potential of the coffee sector, at all levels of the supply chain. The approach adopted is holistic and represents an unconventional methodology compared to the strategies typically employed by Institutional Donors or other Development Partners.

Numerous initiatives have recently been launched in Ethiopia, but these generally tend to focus on only one or a few specific stages of the value chain, limiting their intervention to specific targets. Here we provide a brief overview of such projects, highlighting how our approach stands out for its comprehensiveness and ambition.

Program Title	Description	Implementing Agency	Implementation Period
Forest Loss Prevention	This Program focuses on deforestation, forest restoration, and integrating sustainability into coffee value chains. It aims to improve livelihoods, restore unproductive coffee gardens, and manage a significant area of land for improved use.	UNDP, Governo d'Etiopia, Global Environment Facility	2023-2031
CAFÉ II	Improves the livelihoods of farmers in Amhara through the professionalization of cooperatives, agricultural training, gender equity, and youth income generation. It builds on previous phases and integrates climate change adaptation.	International Coffee Partners, Hanns R. Neumann Stiftung, Austrian Development Agency	Since 2019
World Coffee Research	Focuses on coffee agricultural research and development to improve productivity and quality. Collaborates with local research centers to develop better coffee varieties and comprehensive agricultural practices.	World Coffee Research, Jimma Agricultural Research Center	Ongoing
Growth of a More Sustainable Coffee Sector in Ethiopia	Enhances the environmental, economic, and social sustainability of coffee value chains by improving farmers' skills and promoting sustainable agricultural practices.	International Trade Centre (ITC)	Ongoing
Nespresso AAA Ethiopia	Provides agronomic training to farmers to improve coffee quality and sustainability, significantly increasing the adoption of best practices.	TechnoServe	Since 2016
Rainforest Alliance Program with JDE Common Grounds	Risk assessment in the coffee sector, focusing on climate-sensitive agriculture, child labor, and harvesting and post-harvesting practices.	Rainforest Alliance, JDE Common Grounds	2021
MEDA in Ethiopia	Development of market connections and transformation of agricultural practices through training and support to farmers and agribusinesses.	Mennonite Economic Development Associates (MEDA)	Since 2010
FOLUR Program	Transforming agriculture to improve food security and increase sustainable production.	United Nations Program	Active

Table 5. Ongoing coffee projects in Ethiopia

The coherence of this programme is strong in the support provided to the different levels of the supply chain, operating in a complementary manner to public investments, guaranteeing technical assistance to Wereda's technical offices, in particular the Cooperative Promotion Offices within the Agriculture Development Offices, which worked with the NGOs COOPI and Technoserve together with the cooperatives to provide knowledge and tools essential to improving the quantity and quality of production. The Unions of Cooperatives then received support in the commercial component for exports, which, albeit to a limited extent, materialised for Burka Yadot to Italy, with 2 containers of coffee. Finally, ECTA and the Coffee Training Centre were the focus of institutional support at the federal level.

External coherence

We analyse external coherence on specific aspects of the country context.

Alignment with general development policies in Ethiopia:

The Programme aligns with Ethiopia's national development strategies that aim to enhance economic resilience and reduce import dependency through the valorisation of local resources and the improvement of agricultural production systems. These objectives are in line with Ethiopia's Vision 2025 which aims to transform agriculture into a modern and productive sector that can support the industrialisation of the country. This includes improving agricultural value chains, promoting agro-industry and increasing exports of finished products rather than unprocessed raw materials. The Coffee Programme fits perfectly into this vision, aiming at improving the coffee supply chain through sustainable and inclusive practices, raising the quality of the product for international markets and increasing the income of smallholder farmers. These objectives reinforce the ambition of Vision 2025 to create local added value and support economic independence.

Response to the Sustainable Development Goals (SDGs):

Optimising resources

In terms of resource optimisation, it is important to emphasise that the Programme implemented mirror actions in two very different areas of the country, both in terms of coffee growing patterns and in terms of maturity of the production process, product processing and marketing capacity. This highlights the fact that the Programme's overall strategy did not duly take into account the fact that operating on two distinct and different territorial clusters led to different results and did not allow for - at any point in the Programme - a real exchange of good practices or any collaboration that could have justified the choice of operating on two such different areas. The optimisation of resources could have been greater by concentrating efforts on one of the two areas and designing the assistance provided to the specific needs of the communities, which, although considered individually, had to share the same design and operational methods.

- Target: Implement frameworks to promote sustainable practices and integrate sustainability into the use of natural resources.
- Indicators: Adoption of sustainable agricultural practices and certification systems for coffee that ensure improved traceability and quality.

The programme responds to OSS No. 1, 8 and 12, specifically by working towards the following targets and indicators:

- OSS 1 (No poverty):
 - Target: Reduce poverty in all its forms by at least 50%.
 - Indicators: Increased income for small coffee producers, which directly contributes to rural poverty reduction.
- OSS 8 (Decent work and economic growth):
 - Target: Support sustainable economic growth through the promotion of productive activities and the creation of decent jobs.
 - Indicators: Improved working conditions and increased profitability for coffee farmers.
- OSS 12 (Responsible consumption and production):

6. To what extent are the ways of implementing the interventions consistent with the country strategy within the coffee value chain?

Based on Ethiopia's regulatory framework related to the coffee sector, the country's existing rural development plans and economic growth strategies, as highlighted in the previous paragraphs, are fully consistent with the initiative and how the different components are implemented.

7. Is the proposed intervention strategy coherent, appropriate and viable to achieve the overarching goal (impact)?

The strategy of the intervention is coherent, appropriate to the needs of the different Programme targets, and credible in achieving an impact with respect to poverty reduction for coffee producers (OSS1), favouring a gradual improvement of working conditions, through professionalisation of the cooperatives and improvement of production processes, also leading to an increase in incomes, thanks to an increase in the quantity and quality of coffee (OSS8). The actions planned for the improvement of production facilities and processes also responds to OSS12 by structuring more sustainable processing.

8. Is Italian Cooperation's intervention adequate to respond to the needs that have emerged and provide a complementary contribution to the efforts of other international actors intervening in the sector?

The initiative is extremely well balanced between the different levels of the coffee chain - producers, cooperatives, unions and the ECTA/CTC institution - bringing a peculiar value, compared to other interventions aimed at the coffee sector in Ethiopia, of strengthening a 'Quality Coffee System' of Ethiopia, favouring the coordination, exchange and training of the different actors, also using upstream competences of the chain. The other complementary aspect of the working approach is the active participation of the private sector: the illycaffè Company and the Ernesto Illy Foundation not only participated financially in the Programme but also made a valuable technical contribution in the choice of certain key actions and their specific implementation methods. To this day, illycaffè experts play an active part in the advanced training courses held at the Coffee Training Centre, which attracts students from several East African countries and is fully active and financially sustainable.

6.1.3 Effectiveness

Achievement of objectives

Below is the logical framework of the Programme with the General Objective, Specific Objective and Expected Results indicators. A brief analysis is provided for each of these indicators on the basis of information gathered during the evaluation.

Intervention logic		Indicators	Level of achievement
General Objective	Contributing to the increase in the added value of the Ethiopian coffee supply chain.	Increased value of Ethiopian coffee (green and roasted)	The price of Ethiopia's green coffee is on a general upward trend in the medium term. The export value, being linked to the international market, may suffer, as in 2023, drastic drops, offset, however, by the strongly growing but unregulated domestic demand for quality coffee.
Specific Objective	Improving the livelihoods and incomes of smallholder farmers and their families through support for the sustainable production, processing, export of Ethiopian coffee in the areas of intervention.	Increasing the income of small producers/producers and their families.	The survey carried out with producers and cooperatives shows that there is an improving trend in the income of coffee producers, although subject to temporary drops in profit due to international circumstances. However, the continued investment in coffee cultivation testifies to the centrality of this crop in family incomes.
Expected Results	Coordination between actors in the coffee chain has improved.	The first <i>OCF (Organised Coffee Forum)</i> was realised with the participation of 90% of the Ethiopian institutions involved.	Modified activities. The establishment of ECTA - and the support provided by projects to promote it as a reference point for both public and private stakeholders at national and international level - forced a reassessment of the need to establish an OCF. It should be noted that, during the establishment of the Programme Document, responsibility for the Ethiopian coffee sector was shared between several institutions, thus not facilitating public-private dialogue. Since then, ECTA has been gaining more and more recognition as a coordinating body for public-private dialogue.
		20% increase in farmers reached by <i>extension services</i>	The interviewed co-operatives report limited but continuous growth rates between 2 and 3% per year. This corresponds, over the 7-year programme period, to approximately 17% growth in members and thus beneficiaries of public extension services.
		The <i>Coffee Authority</i> has adopted good <i>governance</i> practices inspired by the best international standards.	The launch of the CTC and the continuous exchange with international buyers and global experts has increased the governance of international standards.
	The volume of roasted coffee produced and exported has increased.	20% increase in volume of roasted coffee for the domestic and international markets.	Roasted coffee is steadily increasing to meet the domestic demand for quality coffee. However, coffee is mainly exported as green coffee.
		20% increase in the unit value of roasted coffee sold on the domestic and international markets.	The 20% increase in roasted coffee on the international market was achieved due to strong domestic demand. The international market, on the other hand, is affected by international demand but a small share of green coffee.
	The quality of coffee produced and exported has improved.	The coffee produced is graded between 1 and 3 by the ECX (Ethiopian Commodity Exchange Authority).	Green coffee from the Programme sites has increased greatly in quality and usually falls between grade 2 and 3.
		Number of coffee washing stations upgraded and operational.	The number of efficient and environmentally friendly washing stations increased to 22 in the Aleta Wondo area, thanks to the combined intervention of other donors stimulated by Technoserve.

The quality and sustainability of Ethiopian coffee are internationally recognised.	Number of coffee drying beds installed and operational.	Drying beds in Delo Mena increased but with difficulties in operation, maintenance and functionality.
	Quantity of coffee exported with full traceability.	Traceability is still a long way off: it requires further investment in skills and procedures.
	Quantity of quality coffee exported	Exported coffee increased largely due to the increase in the total production of the cooperatives and the growing demand from the international market.
	Quantity of roasted coffee grades ECX 1-4 sold on the domestic and international market.	Roasted coffee increased in particular in response to domestic demand.
	A global campaign for the recognition of Ethiopian coffee is approved and adopted by the OCF.	It was not realised for the same reason as above.

Table 6. Achievement of general and specific objective and result indicators.

To gain a better understanding of how well the specific objective has been achieved, the field data collection, carried out through interviews with 117 producers, 68 in Sidama and 49 in Oromia, included a direct question on the income received, from the cultivation and sale of coffee, from 2014 to the present. The result is represented by the graph below.

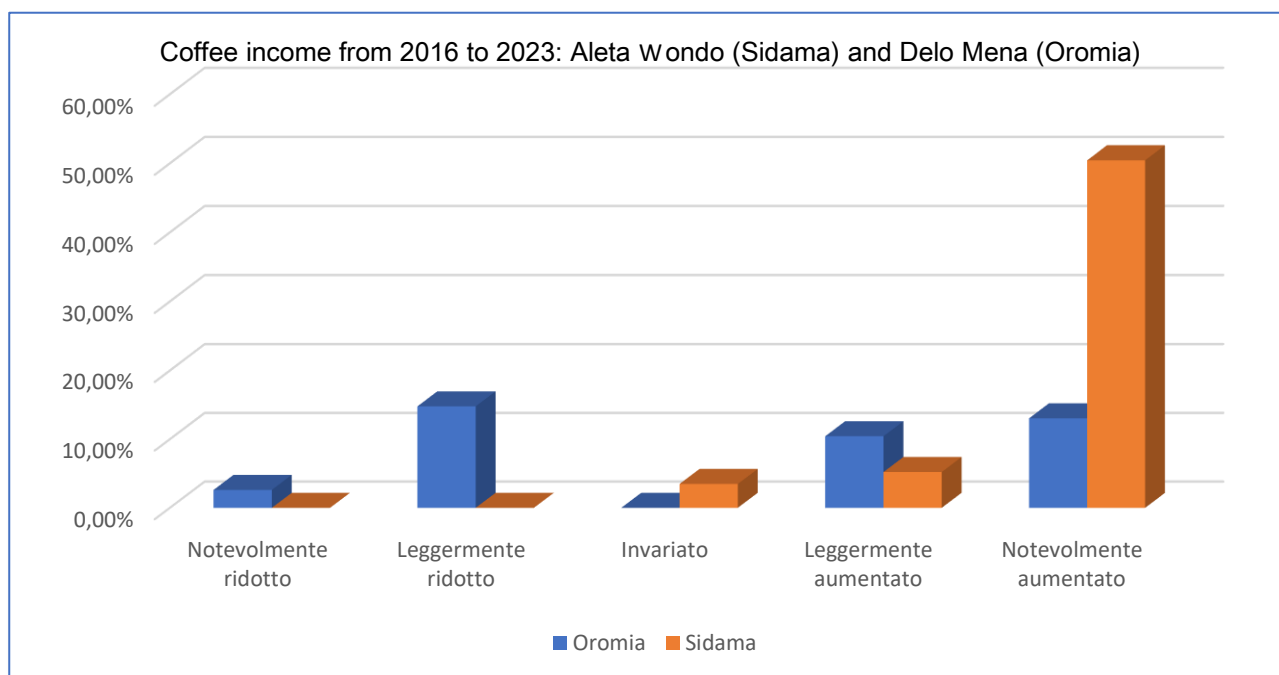


Figure 5. Coffee income in the 2 programme areas from 2014 to date.

Two main trends can be seen from the graph:

- 1) The vast majority of producers report a significant increase in income from coffee (total of 63.48%), while a smaller proportion report slightly increased incomes (15.65%); a smaller proportion report slightly decreased incomes (14.78%), a small proportion report significantly decreased incomes (2.61%) and the rest report no change (3.48%);
- 2) The trend is markedly different between Sidama and Oromia: in the former case the sum of positive perceptions stands at 94% and only 6% declare an unchanged income, while in the latter case 57% have a positive perception of a change in income, 42% have a negative perception while none perceive unchanged continuity. This reflects the difficulties related to market access, which are clearly greater for Aleta Wondo producers in the Oromia region, and which also emerged during the interviews with the cooperatives.

The generally comforting picture is supported by a second question directed at producers and referring to future plans with respect to coffee cultivation. The answers are depicted in the graph in Figure 6.

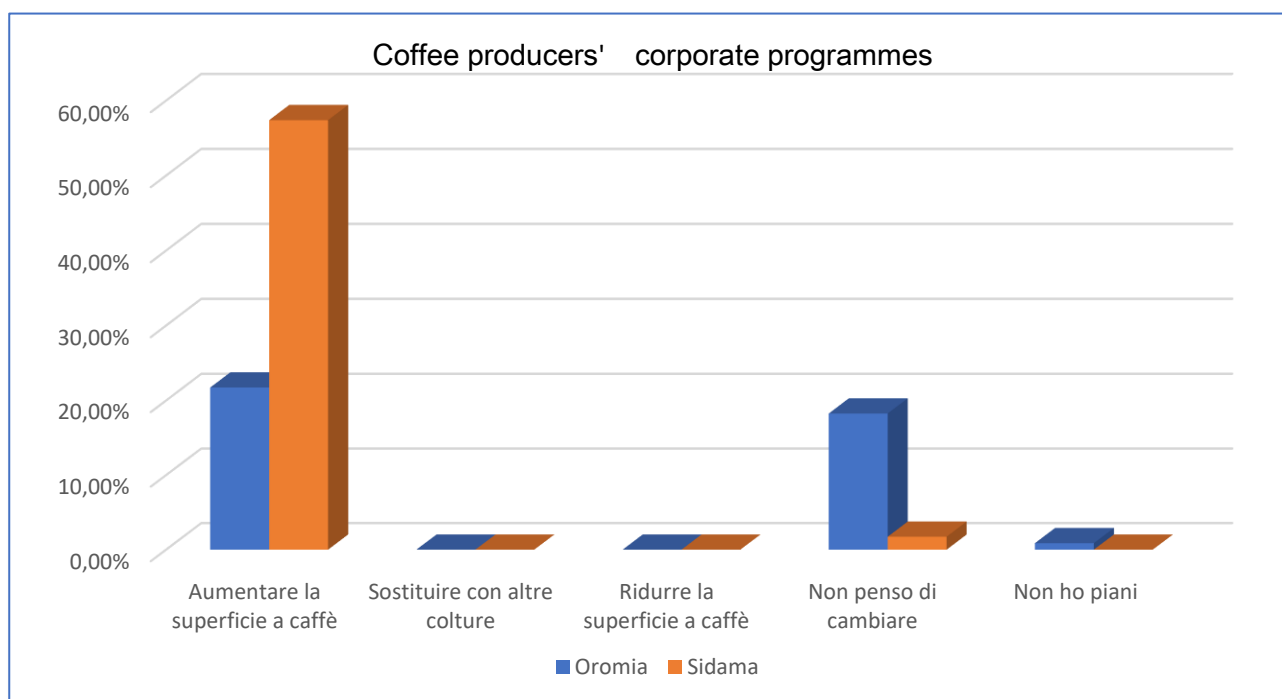


Figure 6. Producer intentions with respect to farm extension for coffee

Two significant elements are also included here:

- 1) 79% of the sample of 117 producers have plans to expand the area under coffee cultivation, 20% to keep it unchanged and 1% have no plans. None are planning to replace coffee with other crops or to reduce coffee cultivation.
- 2) The conviction to invest in coffee, in terms of cultivated extension, is much higher in Sidama than in Oromia where only 53% are convinced to increase the extension of their coffee cultivation, compared to 97% of producers in Sidama.

Comparison of the Relative Importance of Programme Outcomes

The Programme has demonstrated a remarkable capacity to support producers in improving both the quantity and quality of coffee production, achieving high standards throughout the supply chain. Through the establishment of the coffee training centre at the headquarters of the *Ethiopian Coffee and Tea Authority* and the involvement of excellent private partners such as the *illycaffè* company, the Programme has not only increased local skills but also ensured that farmers have the tools to invest further in the sector. This has resulted in a strengthening of the production base with the introduction of young plants that promise a long productive life.

Equally important was the Programme's contribution to the processing infrastructure, particularly in the coffee washing stations in Sidama, where state-of-the-art facilities were implemented to separate the pulp from the washing water and phyto-purification systems to treat the waste water before its release into nature. However, despite the successes achieved in terms of production and environmental sustainability, the Programme has failed to stabilise the incomes of primary producers and cooperatives in a structural way. These actors, being at the first level of a long value chain, remain particularly vulnerable to fluctuations in coffee prices on the international markets and to adverse external circumstances, as evidenced by the naval blockade in the Gulf which necessitated the use of air transport of coffee to Europe, with a significant impact on final costs. This dynamic introduces an element of risk for the continuity of producers' incomes and can cause tension and friction within the coffee system, especially between primary cooperatives and Unions.

Differentiated results

The intervention analysed did not adequately focus its strategy on the protection and inclusion of vulnerable groups from its initial conception. Crucial aspects such as the protection of women's rights and their effective participation in decision-making and production processes were neglected. Likewise, specific measures for persons with disabilities, single-parent families or individuals in particularly fragile economic situations were not taken into account. These shortcomings were clearly highlighted during the consultation process with the members of the cooperatives and coffee producers involved in the Programme, underlining a significant deficiency in the overall approach adopted.

In particular, the testimonies collected from female members of the cooperatives indicate unequal treatment with respect to male members, especially regarding access to credit and payment conditions for delivered coffee. Women are more likely to have to wait up to four months to receive payment for their coffee from the unions, while everyone should be guaranteed immediate payment upon delivery. This inequality also extends to representation on the executive boards of cooperatives, where women are poorly represented, thus being excluded from decision-making processes. On these considerations, see also section 7.3.3 Gender Dimension.

With regard to persons with disabilities, the Programme has not provided adequate supports or adaptations, making it particularly difficult for these individuals to participate in harvesting activities that require intensive and timely work when the cherries are ripening, which is essential to maintain the high quality of the coffee. The lack of support for these community members not only limits their economic participation but also their social integration within the cooperatives.

These issues represent a serious limitation in the Programme's ability to promote substantial equity and to integrate an important social component with enormous potential into local production and economic mechanisms.

Determining factors

The determining factors in the success of the programme were:

- 1) UNIDO's involvement in supervision, management and cooperation activities continues between ECTA, illycaffè and the 2 NGOs that implemented the field actions in Aleta Wondo (Technoserve) and Delo Mena (COOPI);
- 2) The strong *ownership* of the Programme by ECTA and the alignment of activities to the market needs identified and communicated by the two Cooperative Unions of Sidama and Oromia;
- 3) The active participation of the Cooperative Promotion Offices of Aleta Wondo and Delo Mena, which collaborated with Technoserve and COOPI in an atmosphere of confrontation and mutual support.
- 4) The effective introduction of technologies that are effective in reducing environmental impacts, particularly related to the wet processing, successfully implemented by Technoserve and recognised by the cooperatives as a fundamental part of the journey to improve the quality of production processes.

The aspects that have hindered, or at least hopefully only delayed, the achievement of the Programme's main objective, i.e. the increase of producer households' incomes and the optimisation of the initial production and processing system at local level, are the price fluctuation on the international market, which inevitably also affects the local market. However, the substantial and growing local demand has compensated for the producers of Delo Mena's considerable market access difficulties and unsatisfactory purchase prices. The fact that the product is diverted to the local market, although this practice is unregulated and generally prohibited, stems from an existing demand that is difficult to contain; therefore, it is reasonable to work towards its recognition and regulation. Such a mechanism can be seen as a way to balance international price fluctuations 'in the grey area', thus offering producers risk diversification.

9. *To what extent does the Programme consolidate demand for coffee and enable the increase in the value of production and its sustainable management?*

The analysed programme has had a significant impact on consolidating demand for coffee and increasing the value of production, as well as its sustainable management. Below, we examine these aspects in detail:

Consolidating demand for coffee: The Programme has helped to strengthen demand both locally and internationally. Locally, through the introduction of improved cultivation and processing practices, the Programme has increased the quality of coffee, which has boosted domestic demand. Internationally, the collaboration with trading partners and the promotion of sustainable practices have created the basis for

improving the reputation of Ethiopian coffee, which has fostered the growth of demand from foreign markets, particularly in contexts where consumers are increasingly aware of sustainability and product quality.

Increased production value: The advanced cultivation and processing techniques that have been introduced, such as the use of treatment technologies and the reduction of water use in the processing, have led to an improvement in the quality of the coffee produced. This increase in quality translates directly into an increase in the value of the coffee in the markets. The education and training provided to producers through the CTC training centre and the collaboration with illycaffè have further enhanced local skills, helping to create a product that can fetch a higher price in the market.

Sustainable production management: The Programme has placed significant emphasis on the sustainability of coffee growing practices. The introduction of agroforestry practices and the reduction in the use of chemical inputs have improved the environmental sustainability of the production areas. In addition, training in sustainable processing methods and the implementation of phyto-purification systems to treat the water used in the production process have minimised the environmental impact of the processes. These interventions not only help to preserve the environment but also ensure the long-term sustainability of the resources that support coffee production, which is crucial for the resilience of local farming communities.

10. To what extent has the Programme established a solid basis for effective partnerships with relevant stakeholders (particularly in the relationship between the private sector and co-operatives) to achieve the expected results?

The Programme has laid the foundations for the creation of effective partnerships with relevant stakeholders, including the relationship between the private sector and cooperatives, which are essential for the achievement of the expected results. The effectiveness of these partnerships can be assessed on several levels:

Collaboration between ECTA, the Unions and the private sector: the participation of illycaffè, a well-known company in the sector, was a distinguishing feature of the Programme, which strengthened credibility and the transfer of expertise between the private sector and the cooperatives. illycaffè provided not only technical support and training, but also helped to raise quality and sustainability standards in line with the requirements of international markets. This has improved the reputation of Ethiopian coffee and facilitated access to more profitable and stable markets.

NGO involvement: collaboration with NGOs such as Technoserve and COOPI facilitated the implementation of activities in the field and ensured that recommended practices were adapted to local realities. These NGOs acted as mediators between the cooperatives and the private sector, ensuring that Programme initiatives were well integrated into local communities and that the needs of producers were adequately represented and respected. This was also due to the fact that NGOs were already operating in the implementing territories, with their own intervention strategies and a good knowledge of the territory and its stakeholders.

Interaction with co-operative promotion offices: the partnerships established between local cooperatives and government offices responsible for the promotion of cooperatives strengthened the local governance and administrative capacity of the cooperatives. This improved the internal management of the cooperatives and made the distribution of the benefits of the Programme more effective among the members of the cooperatives.

Ongoing support **from UNIDO:** UNIDO played an ongoing oversight and support role, ensuring that the Programme maintained a coherent vision aligned with sustainable development objectives. UNIDO also played a significant role in the business linkage between the Burka Yadot Producers Union and an Italian buyer Originicaffè, which purchased 250 MT of coffee for a value of USD 100,000.

11. To what extent were the programme activities effectively implemented in terms of quality, quantity and timing?

Quality of activities: the quality of programme activities was ensured through the implementation of high standards in management and execution procedures. Activities were regularly monitored to ensure that they met the objectives of sustainability and effectiveness. Collaborations with international and local experts, including technical partners such as illycaffè and international organisations such as UNIDO, helped to maintain a high level of quality, ensuring that the practices adopted were state-of-the-art and adapted to the local context. Ongoing training and technical support provided to local participants further elevated the quality of the activities implemented.

Quantity of **activities**: regarding quantity, the Programme tried to cover as many co-operatives and individual producers in the target areas as possible. A broad set of activities was implemented, including training sessions, installation of sustainable technologies and coordination and supervision meetings.

Timing of activities: The timing of the implementation of activities was a critical component, especially considering the need to align initiatives with agricultural cycles and optimal periods for training and technical intervention. A second problem related to the timing of activities implementation is due to the contractual timelines between AICS and UNIDO and UNIDO and the 2 implementing NGOs: COOPI and Technoserve. The one-year contracts between AICS and UNIDO turned into less than 12-month contracts between UNIDO and Technoserve and COOPI, reducing the continuity of the technical assistance provided to the communities and impacting on the final result. This problem was particularly relevant in Delo Mena where COOPI was not able to guarantee the same service during the periods of lack of financial coverage, while Technoserve, benefiting from funds from different sources, mainly private, had the possibility and capacity to cushion the lack of funds from AICS/UNIDO and guarantee continuous quality assistance. This capacity of Technoserve has also been instrumental in increasing the number of phyto-purification plants for coffee washing stations to 22, while AICS Programme funds were only for 3. The Programme generally met the planned deadlines, thanks to effective planning and coordination between all stakeholders involved. However, some delays were caused by external factors, such as the COVID 19 pandemic, delays in financial transfers or logistical difficulties. Despite these obstacles, the Programme organisation worked to minimise disruptions and ensure that activities were completed in a timely manner.

In summary, the Programme activities were implemented with a high level of quality and sought to achieve a broad quantitative coverage, despite some operational challenges. Planning and adaptation to local needs and agricultural timeframes allowed for effective timing, contributing to the overall success of the initiative.

12. What factors contributed to the achievement or non-achievement of the expected results? In what way did the achievement of the results favour progress on the outcome level?

In order to assess which factors contributed to the achievement or non-achievement of the programme's intended results and how the achievement of these results promoted progress at the *outcome* level, it is important to consider both positive and limiting aspects.

Factors conducive to achievement

- Effective partnerships and quality technical support: Effective partnerships between ECTA, illycaffè, UNIDO and local NGOs provided the necessary technical and management support, ensuring the implementation of best practices and the adoption of advanced technologies. These partnerships enabled knowledge transfer and improved responsiveness to local needs.
- Capacity to adapt to the local context and specific approach for each Wereda: the Programme demonstrated a remarkable capacity to adapt to local conditions and needs, implementing strategies that reflected the realities of coffee-growing communities. This flexibility improved the acceptance and effectiveness of the proposed actions.
- Training and skills development: training sessions and skills enhancement among coffee producers improved the quality of work and productivity, contributing directly to the Programme's development goals.

Limiting factors:

- Market fluctuations: fluctuations in international coffee prices posed a significant challenge, affecting the stability of producers' incomes and limiting the Programme's ability to deliver lasting economic benefits.
- Logistical and financial problems: Delays in financial transfers and logistical problems sometimes hindered the timely implementation of planned activities, affecting the effectiveness and timing of programme actions.

Progress on outcome level due to the results obtained:

- Local economic development: the increase in the quality and quantity of coffee produced has enabled producers to access more remunerative markets, increasing their income and contributing to the improvement of local economic conditions.

- Environmental sustainability: the introduction of sustainable agricultural practices and efficient natural resource management technologies has promoted a positive environmental impact, preserving resources for future generations of producers.
- Improved management capacity in cooperatives: strengthening management and technical capacities in cooperatives has improved operational efficiency and allowed for a more equitable distribution of benefits among members, strengthening social cohesion and the economic stability of communities.

In conclusion, the success of the Programme in terms of achieving specific results had a direct impact on progress at the *outcome* level, despite some remaining challenges mainly related to external factors such as market and financial conditions.

13. What lessons were learnt and how was feedback or learning incorporated into subsequent planning and implementation processes?

Several important lessons have emerged from the implementation of the Programme that have influenced subsequent planning and implementation processes. These lessons have enabled stakeholders to adapt and improve development strategies, ensuring that future initiatives are more effective and better respond to the needs of the communities involved.

Lessons learnt:

- Importance of adaptation to the local context: one of the main lessons learnt is the importance of adapting practices and technologies to local specificities. The operational difficulties in the more remote areas of the Oromia region made it possible to identify simple and applicable solutions with reduced operation and maintenance requirements.
- Need for strong, competent and collaborative partnerships: the Programme highlighted the value of strong partnerships between the private sector, NGOs and local authorities, diversified in terms of competencies and administrative level. Well-structured collaborations based on shared objectives led to excellent results and greater sustainability of the implemented actions.
- Need to cope with fluctuations in international coffee demand: the difficulties associated with fluctuations in international coffee prices have taught the importance of foreseeing economic risk mitigation strategies, such as risk diversification for producers by expanding the production of other cash crops, the natural diversification of markets to which producers refer if they are dissatisfied with the purchasing conditions proposed by cooperatives.
- Responding to knowledge and skills training needs: the need to intensify efforts in the field of training and local skills development for producers and operators active throughout the coffee chain has been recognised. This need is now recognised as central to the further improvement of product quality and progress in certification and traceability. These elements are unanimously recognised as fundamental to ensuring the self-sufficiency and long-term growth of coffee-producing communities.
- The need for certification and traceability: the new European regulations for deforestation and organic products are very restrictive and require the development of certification procedures managed directly by primary cooperatives (no longer by Unions) drastically impacting on the level of skills held by primary cooperatives' staff and the financial resources allocated to these procedures. Failure to adapt to the required standards risks excluding the product from the European market with important repercussions on the entire sector in the country. Therefore, in the framework of future interventions, it would be important to provide adequate training on this aspect to the stakeholders of the coffee chain.

Incorporating feedback and learning into subsequent processes:

- Operating as a coffee system of Ethiopia: adoption of cross-sectoral and multi-stakeholder competencies to cope with the need to adapt to new European regulations, which could result in the exclusion of Ethiopia's coffee from the European market.
- Expansion of support networks: based on lessons learned, greater priority was given to expanding support networks for manufacturers, both locally and internationally, to facilitate access to new markets and technologies.
- Flexible and iterative planning: feedback gathered has led to the adoption of a more flexible and iterative approach in planning subsequent actions, allowing for ongoing adjustments based on changes and community responses.

- Focus on economic resilience: the strategies adopted in the second part of the programme, compared to the initial stages of strategy identification, show a greater focus on economic, environmental and social resilience, identifying access to credit as a strategic line to be pursued in the subsequent phases of the programme.

14. To what extent does the Programme contribute to creating a favourable environment for the coffee sector in Ethiopia by supporting the different actors in the supply chain?

Skills and capacity building: one of the most important aspects of the Programme has been the investment in training and capacity building of local producers. Through collaboration with experienced entities such as illycaffè and the establishment of the training centre run by ECTA, producers have been able to improve their coffee growing and processing techniques, thereby increasing the quality and quantity of coffee produced. This strengthening of skills has contributed to making producers more competitive in national and international markets.

The results of the Kobo questionnaire for cooperatives clearly confirm this result, as all respondents stated that the training was very useful (90%) or partially useful (10%).

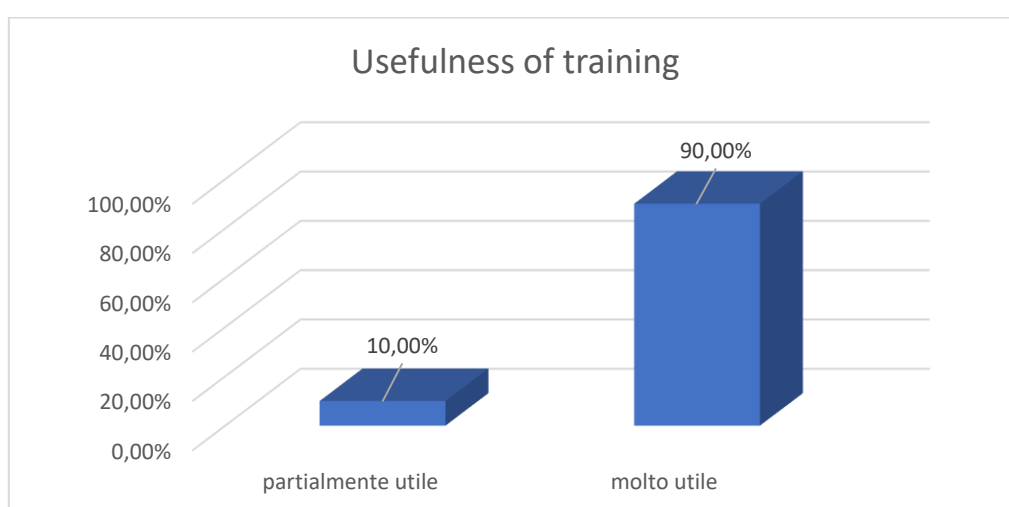


Figure 7. Usefulness of training

Introduction of sustainable practices: The Programme has promoted the adoption of sustainable agricultural practices, such as agroforestry and efficient water management. These methods have not only improved the environmental sustainability of farming practices, but have also helped preserve biodiversity and improved the long-term yield of coffee plantations.

Strengthening local cooperatives: through training and technical support to producer cooperatives, the Programme has strengthened these essential structures, enabling them to better manage operations, improve price negotiation and distribute benefits more equitably among members. This has helped stabilise producers' incomes and improve the internal governance of the cooperatives.

Strengthening market linkages: the Programme has facilitated stronger linkages between Ethiopian producers and international markets through partnerships with private sector actors and participation in international fairs and events. This has improved market access for Ethiopian coffee, facilitating the exploration of new markets and the diversification of sales channels.

Institutional support and public policies: the interaction between the Programme and government institutions has contributed to the formulation of policies that support the entire coffee chain. This includes measures to protect producers from excessive price fluctuations and to promote coffee exports.

15. To what extent have the results at the outcome and output levels led to improvements in women's employment and empowerment (including participation and leadership roles)?

The programme invested in the training of women and maintained a quota of 50% (often not reached) for all training courses implemented. However, inclusion in the training phases has not translated into an effective

strengthening of the female presence in first-tier cooperatives, with management boards almost exclusively male.

The exclusion of women from the decision-making processes and governing bodies of cooperatives, and often also from the economic benefits reserved for men, represents a significant limitation of the initiative and a considerable long-term operational risk. Women are a key resource for communities and local economic ecosystems. Their inclusion, besides being a matter of equity, contributes significantly to the success of local production systems.

6.1.4 Efficiency

Economic efficiency

The initiative reached a total of 39,995 people, 22 primary coffee cooperatives, 2 Unions of Cooperatives, technicians from 2 Wereda, cooperative promotion offices at the Wereda and regional level, and ECTA, as a key institution for the promotion of the country's coffee policies and the improvement of the regulatory framework for the market.

Details of the activities implemented by the Programme are given below with respect to the two Wereda of intervention.

Aleta Wondo:

Farmers' Union involved:

- Union of Coffee Growers' Cooperatives of Sidama

Cooperatives involved:

- Gidibona Sheicha,
- Gerbicho Kila,
- Bargona
- Agere Sodicha
- Wotona Bultuma
- Hondobana Borbodo
- Dobena Wicho
- Homacho Waheno
- Gerbicho Lela
- Titira

Number of farmers trained:

- 25,315 farmers (15,377 women and 9,938 men)

Restructuring activities:

- renovated cooperative wet processing plants (a total of 22 renovated with additional support from Technoserve)

Support activities for farmers:

- 1 nursery for the production of new coffee plants established
- 3 agricultural input supply centres established
- 141,000 coffee seedlings and 140,439 shade trees distributed

Delo Mena:

Farmers' Union Involved:

- Union of Agricultural Cooperatives Burka Yadot

Cooperatives involved:

- Irba
- Chiri
- Wabero
- Walte Gudina
- Burkitu Darara
- Oda Dima
- Bekelcha/Mekenisa
- Bobiya

- Manyate
- Habubi
- Biftu Kankicho
- Ele Mekenisa

Farmers reached by the Programme:

- 1,811 coffee growers

Total number of cooperative farmers:

- 14,680 persons (2,936 households)

Support activities for farmers:

- 12 input supply centres built
- 12 Built Coffee Drying Centres
- 445 drying beds

The quality of the personnel provided by UNIDO, Technoserve and COOPI made it possible to effectively train the producers and technical and administrative staff working at the cooperatives involved and led to a significant improvement in the agricultural practices carried out in the field, the primary processing techniques used at the primary cooperatives and consolidated the quality of the product destined for the Unions.

Therefore, the efficiency of the intervention can be considered high, as both the quality of the inputs and the perception of the beneficiaries is positive and can be seen in the production assets and procedures applied in the field and in the first processing sites.

Operational efficiency

The Programme's operations were characterised by an efficient monitoring and control chain from Addis Ababa to Aleta Wondo and Delo Mena. UNIDO's coordination allowed for the centralisation of relevant information, throughout the period of implementation of the activities and to share it with AICS Addis Ababa and, in turn, with MAECI DGCS. This allowed for continuous monitoring even though security constraints in the Delo Mena area prevented, for long periods of time, field visits to that area and thus direct observation of the Programme progress by UNIDO staff. The presence of COOPI has however allowed for the provision, with a fair degree of continuity, of basic technical assistance to communities and institutional counterparts on the ground.

16. How efficiently were human, material and financial resources used to achieve the desired results in the set time?

The human resources were deployed to their full potential and skills, and the activities, although delayed compared to the initial programme, were congruent with sometimes impeding operational conditions at the Delo Mena site. The Programme, during its long period of implementation, was undoubtedly affected by the suspension of activities due to the COVID 19 pandemic and the critical security conditions that affected Oromia for a long period of time.

17. To what extent was the existing programme management structure both appropriate and effective in producing the expected outcomes?

The Programme management structure was assessed as appropriate and effective in producing the expected outcomes. The Programme was implemented with a high capacity for coordination between operational NGOs, UNIDO and institutional counterparts, ensuring effective application of best practices and crucial knowledge transfer. This coordinated approach enabled rapid adaptation to local conditions and needs, maximising the impact of initiatives and maintaining effectiveness despite intermittent funding and logistical challenges. In addition, it supported the implementation of sustainable technologies and advanced coffee growing and processing practices, as evidenced by collaboration with international experts and organisations, which contributed significantly to the Programme's quality and sustainability objectives.

18. To what extent do the Programme's internal monitoring systems provide management with high quality data that enable learning and appropriate adjustments to implementation?

The Programme's internal monitoring system effectively identified difficulties encountered during the implementation of planned activities and was able to propose effective solutions for their resolution. This system also monitored recent difficulties related to the collapse of coffee prices on the international market. The issues were carefully analysed by the programme consortium in collaboration with various institutional stakeholders, in particular *the Ethiopian Coffee and Tea Authority (ECTA)*. This stimulated an informed and evidence-based debate, which contributed to the formulation of strategies aimed at risk containment,

highlighting the capacity of the monitoring system to support Programme management in the face of complex challenges.

6.1.5 Impact

Significance

The Programme has had a major impact, making a significant difference in the lives of local producers and creating the conditions for a profound improvement in the perception of Ethiopian coffee in international markets. Through collaboration between the private and public sectors, the Programme has promoted improved agricultural practices and increased the quality and volume of coffee produced. The creation of the Coffee Training Centre (CTC) in Addis Ababa, implemented with the support of illycaffè and the Ernesto Illy Foundation, has developed high-level training courses that equip participants with advanced skills .

The Programme has also supported ECTA in increasing its institutional capacity and the internationalisation of the sector, enabling better coordination of the coffee supply chain and promoting Ethiopian coffee internationally. The joint efforts have laid the foundation for structural economic growth of small-scale producers, improving not only their productivity and sustainability, but also the product requirements for international recognition of Ethiopian coffee as a high quality product; the latter has not been fully achieved by the initiative but requires further time. In essence, the Programme's approach has produced substantial changes in the Ethiopian coffee sector, demonstrating the effectiveness of collaboration between public and private sectors to achieve common goals of sustainable development and economic growth. This has potential positive repercussions not only for coffee producers, but for the country's entire coffee sector.

19. Has the intervention led to significant improvements in the lives of the target beneficiaries? How are they quantifiable?

The significant improvements brought about by the intervention are manifold and have had a profound impact on the lives of the target beneficiaries:

- 1) An increase in the quantity and quality of coffee produced has been observed. In a context of good market demand and rising purchase prices, this improvement would translate into higher incomes for small producers.
- 2) There has been a professionalisation of the cooperatives, resulting in improved means of production. This has not only increased the quantity of coffee delivered by members and non-members, but has also improved the cooperatives' rating vis-à-vis the union. As a result, cooperatives will, in the medium term, be able to access higher credits granted by the banking system to cover payments upon delivery of the coffee, thus protecting their members and preventing the dispersion of the product on the illegal market.
- 3) The programme facilitated a cross-sectoral increase in knowledge and skills that facilitated the transition from an amateur to a professional production system. This has helped improve the quality of coffee, leading to an increase in the number of Grade 1-2 batches and, therefore, a higher product price in international markets. This allowed producers to receive additional premium quota payments, further increasing the satisfaction and economic welfare of the producers involved in the Programme.
- 4) The Coffee Training Centre has created a pole of excellence in ECTA's sphere of action, polarising on Ethiopia much of the knowledge and innovation in the coffee sector and allowing the development of international training courses that are in high demand by technicians and operators throughout East Africa. This creates opportunities for greater visibility and a return on image that is difficult to measure but certainly significant in the medium to long term.

20. How has the intervention triggered higher order impacts, such as changes in standards or systemic changes, particularly from a market and product quality standardisation perspective?

Based on the discussion with the technical staff of the Union of Coffee Producers of Sidama, the quality of coffee from the cooperatives involved in the Programme is visibly and systematically on the rise, denoting an ever-increasing care of the producers and primary cooperatives in the harvesting and initial processing of the product. The upward trend is also widespread in the Delo Mena area, where, unfortunately, the greater difficulties in accessing the market, denounced by the producers interviewed, frustrate the efforts to standardise and improve the quality of the products. The initiative has also effectively supported the process of transforming the coffee sector from a product under total state control to a market commodity characterised by strong characterisation and articulation. This is functional to the gradual conquest of market niches, mainly

European but also Asian and American, which in time will allow the decommodification of the product, with consequent price stability, with consolidated buyers and selected consumers.

21. Did all intended target groups, especially the most marginalised and vulnerable, benefit equally from the intervention?

Unfortunately, the target groups were not equally supported during the implementation of the initiative. As previously described and commented on in section 7.3.3. below. Gender dimension, the participatory survey revealed the presence of strong inequalities between women and men and a lack of instruments to guarantee the right of all. Co-operatives operate as business-oriented entities, but do not integrate procedures to protect disadvantaged workers, for whom there are dynamics of exclusion and abandonment. Cultural and traditional factors are very strong and limit the inclusion of women in decision-making mechanisms, just as they do not provide mutual aid measures for differently abled persons and single-parent households for whom many of the short but intensive coffee processing steps are impossible to perform with high quality. There is a need to integrate operational and simple measures that allow everyone to participate in local economic life and to benefit from supports that can bridge the productive and labour gap that limits their capacities.

22. Is the intervention transformative, i.e. does it affect lasting changes in norms, customs, including those related to gender equality, and systems, whether intentionally or unintentionally?

The Programme has introduced training tools designed to influence behaviour and shared rules. However, since these tools aim to change deeply rooted traditional values, they have not yet been adopted. These changes are particularly delicate and difficult to achieve, especially when they affect the role of women and their inclusion in local social and economic life. Despite the efforts made, results in this area are not yet visible.

23. Is the intervention catalysing further change, including results that are scalable or replicable?

The intervention catalysed additional financial resources and expertise that increased the overall results, in particular:

- 1) CTC: realised by illycaffè and the Ernesto Illy Foundation, it is a high-impact action within the framework of the Programme.
- 2) Treatment plants for coffee washing residues in Aleta Wondo, with separation of the pulp for compost production and treatment of the washing water through phyto-purification with vetiver: 3 modern washing centres were built with the resources of the initiative, Technoserve built another 19, for the same communities involved in the Programme, covering the entire number of coffee washing centres of all the cooperatives in the Wereda of Aleta Wondo. Technoserve utilised the private sector funds, being very active on social business projects and prioritising the continuity of assistance to the communities involved.
- 3) Initiation of business relations of Delo Mena producers with fair trade buyers and export of 250 MT of green coffee.
- 4) Diversification of *cupping* sources for a broader test phase shared between the various operators gaining credibility in the international market.

24. How will the intervention contribute to the improvement of society?

Coffee is a product that is a benchmark for Ethiopia with respect to various dimensions related to quality and the opportunities offered by the agricultural sector in the country, specifically:

- 1) Standardisation of agricultural products: product standardisation processes are at their peak compared to other supply chains. The procedures adopted are also an objective for cereal and agricultural supply chains in general;
- 2) The certification of food products: Fair Trade, Organic are the certifications already obtained by several, structured cooperatives in the field and this is not usual for other products even if they are exported. Knowledge of these procedures will facilitate the increase in quality and saleability also of other products (e.g. fruit) that are exported abroad and will require recognisable qualities in the future.
- 3) The real addition of value to products that are also consumed on the local market: washing, drying, cleaning, roasting manage to bring the coffee to the finished product, allowing it to reach the many bars and customers throughout the country. This aspect, currently poorly regulated by institutions, is already happening and offers great job opportunities to many young people. Coffee develops value in the country,

along the entire supply chain, and this has been enhanced by the programme thanks to roasting courses, school facilities and continuous improvement work.

- 4) The employment of young people in agriculture in rural areas: coffee is recognised as an agricultural product that attracts young people, due to its diverse use of labour, attractive business prospects and high yield per hectare.

All of these aspects make a significant contribution to the modernisation of the country's agriculture and its transition to transformation agriculture, which allows for great added value, large employment of the population in the secondary sector, an increase in job opportunities even in the country's secondary population centres (small and medium-sized towns), and generational change in agriculture. The programme has fostered these aspects by working in the direction of organisation, quality and environmental sustainability and increased incomes for producers and primary cooperatives.

6.1.6 Sustainability

25. What plans or strategies have the Co-operatives and Unions of Co-operatives, and other relevant stakeholders developed to ensure the continuity of the actions undertaken after the Programme's conclusion?

Primary co-operatives and unions of co-operatives have implemented, with the support of the Programme and within the framework of the technical assistance provided, actions aimed at ensuring the continuity of the actions undertaken after the end of the Programme, consolidating the market for their product and investing in skills and capacities. Below are the main measures instrumental to the continuity of the Programme's results.

Marketing and branding strategies: A plan was developed to improve the visibility and marketing of the cooperatives' products. For instance, a branding strategy was developed specifically for Hareenna coffee, including the creation of a website, promotional materials and participation in trade fairs to attract more buyers and establish long-term market connections.

Certifications and Geographical Indications: the cooperatives worked to obtain certifications that add value to the product, such as organic and fair trade. In addition, the possibility of obtaining a Geographical Indication for Hareenna coffee was explored, thus increasing the coffee's recognition internationally and guaranteeing a premium price for producers.

Capacity building and continuous training: training programmes have been implemented for cooperative members on sustainable farming practices, post-harvest management and marketing techniques. These programmes aim to improve the quality and productivity of coffee, thus ensuring more income for farmers.

Establishment of networks and coordination platforms: Coordination platforms were established between cooperatives, unions, and other relevant actors (such as government agencies and non-governmental organisations) to facilitate the sharing of resources, knowledge and best practices.

Investment in infrastructure and technology: the cooperatives have invested in infrastructure such as drying centres and washing stations that help maintain the quality of the coffee. These investments are crucial to ensure the long-term sustainability of the quality improvement practices introduced by the Programme.

Environmental and social sustainability: Plans have been developed to minimise the environmental impact of coffee production activities, including the implementation of environmentally friendly washing stations and the promotion of farming practices that preserve biodiversity.

These strategies demonstrate a concrete commitment to the long-term sustainability of coffee supply chain improvement activities, ensuring that the benefits of the Programme continue to positively affect local communities after its conclusion.

26. Do the legal framework, policies, governance structures and processes in which the Programme operates present risks that could undermine the sustainability of the Programme's benefits?

Several aspects related to the legal framework, sectoral policies, governance structures and processes are highlighted that could present risks to the sustainability of the Programme's benefits. Below are some of the main risks identified:

Market fluctuations and regulations: government policies regarding coffee exports and trade, such as those related to the *Ethiopian Commodity Exchange* (ECX), can significantly influence prices and market access for coffee producers. Changes in policies or regulations can create instability and negatively affect the prices at which producers can sell their coffee.

Certifications and quality standards: obtaining and maintaining international certifications (such as organic or fair trade or the new EU forest protection regulation) can be costly and complex. Furthermore, Ethiopia's non-membership of TRIPS (*Trade-Related Aspects of Intellectual Property Rights*) agreements further complicates the protection of geographical indications, limiting the ability to fully capitalise on unique designations of origin.

Challenges in governance and coordination: Cooperation and coordination between cooperatives, unions of cooperatives, and government agencies are crucial to the long-term success of the Programme. Lack of governance or coordination can lead to inefficiencies and poor implementation of development strategies.

Political changes and instability: changes in government or in sectoral and development policies may alter support for specific initiatives such as those of the Programme, reducing the funds allocated to Wereda's technical offices and thus the technical assistance provided to cooperatives by the public system. In addition, political or social instability may undermine the ability of cooperatives to operate effectively, being penalised in terms of access to credit through the national banking system.

Environmental sustainability: unsustainable farming practices can degrade the environment, affecting soil quality and water availability, which could jeopardise the long-term production of high quality coffee.

Intellectual and commercial property issues: failure to effectively protect unique coffee varieties and production techniques can lead to a loss of exclusivity and potential market premiums for producers.

Utilisation constraints imposed by the Bale National Park: the impossibility of managing, renewing, replanting the coffee plants in the Haremma forest constitutes a constraint imposed by the Park Authority that conflicts with the long-term management of the plants. The continuity of the harvest of ripe cherries is linked to the productive capacity of the existing plants and their spontaneous renewal to maintain the species by natural means. The latter is not a foregone conclusion and depends on maintaining perfect climax conditions in the local ecosystem. There is therefore a risk that a prolonged non-renewal of coffee plants from seed could lead to a loss of productivity and, over time, to the disappearance of the plants in the forest undergrowth.

27. What measures could be taken to improve sustainability, with a particular focus on the role of women and their inclusion in the programme dynamics?

Promotion of women's leadership: organise workshops and seminars that aim to develop women's leadership skills, giving them the tools to take on leadership roles within co-operatives and on management boards.

Identification of practical limits to women's participation in co-operative life: objective and easily surmountable limits have been found which currently prevent women's participation in co-operative boards. A complete mapping of these limits can help to adopt rules useful to overcome them; for instance, the organisation of meetings in the evening hours is a deterrent to women's participation, in many areas of the Programme; the identification of time slots compatible with traditional customs and tasks usually attributed to women is already a first important step towards real participation.

Women-only microcredit and financial support programmes: create or expand microcredit programmes specifically for women to help them invest in equipment, technology or agricultural practices that improve sustainability and efficiency. Financial support can also help women overcome economic barriers to entering new markets or adopting new technologies.

Women's support networks: encourage the formation of women's networks and associations within the coffee sector that can offer mutual support, exchange of knowledge and resources, and a platform for collective representation.

Include women in the certification process: ensure that women are actively involved in the processes leading to coffee certification (organic, fair trade, etc.). This can not only increase their involvement and visibility but also ensure that the benefits of certification reach women producers.

Gender-based monitoring and evaluation: implement gender-sensitive monitoring and evaluation systems to ensure that programme policies and practices effectively promote women's inclusion and well-being: this recommendation relates to future programmes in the same communities.

Access to legal and property advisory services: provide women with access to legal advisory services to help them understand and defend their property and other legal rights, including those related to land and income from the sale of agricultural products.

Specific evaluation criteria for the initiative

6.1.7 Value Chain Analysis

28. How has the public-private partnership helped to improve the quality of the product?

The private sector, under the co-ordination of UNIDO and the impetus of ECTA, contributed significantly throughout the duration of the Programme, in the specific areas shown in the table below.

Partner	Activities and Collaborations
ILLYCAFFÈ	PPP Program Partner. Technical assistance through field missions and remote support. Extended collaboration to establish the Addis Ababa Coffee Training Center. Coffee sample tasting and feedback to overcome defects. Advice, recommendations, and literature on international coffee market trends. Coffee samples from 2017/2018 and 2018/2019 from Delo Mena tasted – feedback provided. Availability to taste coffee samples from 2019/2020.
BELCO	Coffee sample from 2016/2017 tested from Harenna Forest. Recommendations on quality improvement measures provided to BYCU. Fruitful collaboration led to joint training on Harvesting, Post-Harvest Management, and Coffee Processing Methods.
CORSINI	Readiness to resume collaboration with the Burka Yadot Farmers' Cooperative Union (BYFCU) from which the company has obtained forest coffee and developed a specific single-origin blend sold as specialty coffee.
ARC	Coffee samples from 2017/2018 and 2018/2019 from Delo Mena tested. Availability to taste the 2019/2020 coffee from Delo Mena. Willingness to collaborate to facilitate access to international buyers interested in organic and wild coffee.
GALANI COFFEE	Coffee samples from 2017/2018 from Delo Mena tested. Willingness to collaborate to facilitate access to international buyers interested in organic and wild coffee. Interest in Harenna coffee 2019/2020.
CAFFÈ SAN DOMENICO	Willingness to purchase coffee from Harenna Forest. Willingness to collaborate with the Program to improve the traceability of Harenna Wild Coffee.
ARFASA GENERAL TRADING PLC	Supported the export of Harenna coffee in 2018. Provided feedback on Delo Mena coffee (2017/2018). Willingness to support the Program by providing tasting services.
ORIGINICAFFÈ	Imported 72 bags of coffee to Italy in 2018. Imported 336 bags (20,169 kg) of Harenna Forest Wild Coffee, harvested 2018/2019, into Italy. Imported 16,200 kg of washed coffee exported to Italy in 2021. Import process for sun-dried Harenna coffee into Italy in 2022.
STUMPTOWN COFFEE ROASTERS	Interest in tasting Delo Mena coffee and connecting the Union with the US market.
SLOW FOOD	Willingness to collaborate with the Program to improve the marketing of Harenna Wild Coffee (Slow Food Presidium). Willingness to discuss a possible expansion of the Slow Food Presidium to other coffee-producing cooperatives in Delo Mena.

Table 7. Private Sector involvements in the Programme through UNIDO

This type of interaction with the private sector provided important feedback to the producer/cooperative unions in understanding the essential requirements of coffee with respect to different buyers and markets.

29. To what extent has commercial collaboration promoted increased product standardisation, quality control and, in general, conformity of the product to the buyer's expectations?

Commercial collaboration has significantly promoted increased product standardisation, quality control, and conformity of the product to buyers' expectations and thus to European and US markets. The creation of public-private partnerships has facilitated the adoption of uniform quality protocols throughout the coffee supply chain. This process was supported by the technical training provided to producers and cooperatives, focusing on advanced cultivation and processing techniques, which improved the consistency and quality of the coffee produced. In particular, the implementation of the Coffee Training Centre and the introduction of new roasting and hulling techniques have increased the capacity of the cooperatives to meet international standards and acquire skills related to the categorisation of the coffee produced. In addition, the technical assistance offered to the Unions has allowed them to consolidate that wealth of knowledge that is fundamental for negotiating the purchase and sale price of different batches of coffee with buyers, after careful quality control according to international procedures and standards, to which both Unions and buyers adhere. This is crucial for market transparency and to stimulate continuous improvement of product quality. The support provided to the *Ethiopian Coffee and Tea Authority* (ECTA) in terms of business relations and advanced technical expertise, has also made it possible to strengthen the traceability and quality systems, setting up the product certification process also in view of the new and restrictive European regulations in force from January 2025.

30. How has the production capacity of coffee producers improved?

The production capacity of coffee producers is improved through several key interventions:

Technical Training: Producers received advanced training in modern and sustainable agricultural techniques, improving their skills in plantation management and coffee processing.

Supporting Infrastructure: New coffee processing facilities were built, including environmentally friendly washing centres and hulling plants, increasing the efficiency of coffee processing.

Access to Quality Input: The Programme has facilitated access to improved seeds and sustainable fertilisers, helping to increase crop yields.

Support to Cooperatives: Co-operatives were strengthened by adopting better management practices and marketing tools, improving coordination and distribution of coffee.

Introduction of Technologies: The implementation of innovative technologies has optimised the cultivation and post-harvest phases, reducing losses and improving the quality of the final product.

31. How do we expect them to increase their commitment/investment in coffee production?

The production assets created and enhanced by the Programme, primarily the production base, i.e. the number of plants and their young age, and the processing equipment and procedures, represent important resources for local producers. However, the substantial increase in the engagement of producer families in the coffee sector is largely determined by two key elements.

First, a structural growth of income from coffee sales guaranteed through long-term contracts with protected minimum selling prices. This is only possible if coffee is demercedified and succeeds in reaching market niches with high added value. The de-commodification of coffee allows the product to be differentiated, valorising it for its unique characteristics and allowing producers to access market segments willing to pay premium prices, thus ensuring greater economic stability and incentivising further investment in production.

Secondly, obtaining payment upon delivery of the coffee to the cooperative is crucial to ensure the stability of the cooperative system itself. This is crucial because farmers, in most cases, cannot wait four months to receive payment for their product. The practice of payment upon delivery of ripe cherries provides producers with the immediate liquidity they need to support their families and promptly reinvest in their farming activities. Without this guarantee, many producers are forced to use alternative, albeit less advantageous, trade channels that offer immediate payment. Guaranteeing payment on delivery therefore reinforces trust in the cooperative system, reduces the temptation to sell through less transparent and less profitable channels, and helps to stabilise the entire coffee supply chain.

These two factors combined create a favourable environment that motivates producers to invest more in the coffee sector, ensuring a more robust and sustainable long-term commitment.

32. What improvements have been made to the quality of the coffee value chain?

The improvements made to the quality of the coffee supply chain are:

Cultivation and harvesting techniques: improved and sustainable agricultural techniques have been introduced, including integrated pest and disease management, optimised use of natural fertilisers, and the adoption of selective harvesting methods to ensure that only ripe coffee beans are harvested, directly contributing to improved coffee quality.

Training and skills: coffee growers received specific training on best cultivation, harvesting, and post-harvest practices, including training on how to manage and maintain coffee washing stations and drying beds to preserve the quality of green coffee.

Post-harvest infrastructure: new post-harvest infrastructure such as washing stations and metal drying beds were improved and built. These investments helped reduce the risk of coffee contamination and improve the consistency and quality of the final product. The new infrastructures built followed criteria to reduce environmental impacts, reducing water use, partially, and, above all, building washing stations equipped with waste water treatment systems based on pulp composting and phyto-purification of waste water.

Procedures: The timing of harvesting and initial processing of ripe cherries was optimised, greatly reducing the time between harvest and the start of drying or washing and separation of the drupe from the seed. This improvement has led to a considerable reduction in the problems resulting from fermentation and the development of fungal mycelia that are risky for entire batches of coffee.

33. Can quality certification improve market demand for the product and enable an increase in coffee selling prices?

Quality certification can actually improve market demand for coffee and enable higher selling prices. Certifications, such as organic or fair trade, serve to guarantee that products have been produced according to certain ethical and environmental sustainability standards: this not only increases consumer confidence, but often allows producers to obtain higher prices, as the product is more in demand in the European, US and Asian markets. Fair Trade certifications, currently produced by the Unions of Cooperatives, are sufficient to maintain a stable business relationship with this type of buyer, according to the Sidama Producers' Union.

What will be different, however, is the introduction of the new European deforestation regulation and the new organic certification regulation, which will soon have significant impacts on the coffee market.

Regulation (EU) 2020/841 on deforestation states that only products that do not contribute to deforestation can be imported into the EU. This implies that for Ethiopian coffee, and for all agricultural products in general, full traceability will be required to ensure that production did not take place in areas of recent deforestation.

In parallel, **Regulation (EU) 2018/848** on organic production and labelling of organic products requires that products imported into the EU as organic have been produced according to standards that reflect those of the EU. Moreover, this certification can no longer be granted centrally by producer unions, but must be held by each individual cooperative, with an annual verification process, and which cannot be conducted for cooperatives with more than 2,000 members. In Sidama, many of the co-operatives active in the Programme already have more than 2,000 members and this will oblige them to conduct 2 verification processes per year, affecting costs and the complexity of procedures.

It is expected that by the beginning of 2025, the absence of certifications guaranteeing compatibility with EU environmental (forestry) and organic standards will make it impossible to import coffee into Europe. This will radically change the market, as producers without such certifications will find their export possibilities to Europe extremely limited.

In this context, the Programme has been instrumental in laying the foundations to facilitate the attainment of these certifications. Thanks to the sustainable farming practices introduced and the improved product traceability, coffee is closer to meeting the requirements for organic certifications and for products that do not contribute to deforestation. This will not only improve access to the European market, but potentially also sales prices, as European consumers are willing to pay more for products that are in line with their environmental and social values.

34. Which specific certification could guarantee better results?

The choice of the most appropriate certification depends on various factors, the most significant of which are: (i) the target market and specific buyers, (ii) the producer's ability to meet the required standards, (iii) the local legal and regulatory framework and the presence of intermediary bodies that facilitate the certification process against one or more standards. The certifications identified during the assessment and the most widely adopted by the Sidama and Oromo producer unions are:

Organic Certification: verifies that the coffee has been grown without the use of pesticides and synthetic chemical fertilisers, following practices that favour environmental sustainability and soil health. It is particularly valued in the European and North American markets, where there is a strong demand for organic products. It often guarantees a substantial premium in the final product price. Currently, the process is completely carried out at the Unions of Cooperatives, but with the entry into force of Regulation (EU) 2018/848 it will have to be conducted by individual cooperatives.

Fair Trade: Fair Trade certification ensures that coffee producers receive a fair price for their products, helping to improve the living conditions of farming communities. It includes standards for fair working conditions and sustainable business practices. This certification can help build brand loyalty and the emotional appeal of the product.

Rainforest Alliance/UTZ: promote environmental conservation and improve the living conditions of coffee farmers. They are committed to encouraging sustainable farming practices that protect not only the environment, but also local communities. Products that display the Rainforest Alliance or UTZ label are

generally preferred by ecologically conscious consumers, as they guarantee a reduced ecological footprint and a positive social impact.

35. How have the producers' skills in coffee production, harvesting and first processing been strengthened?

The skills of coffee producers in various aspects of coffee production, harvesting, handling and processing were strengthened through a series of training and support activities:

Training on improved agricultural practices: coffee producers received training on improved agricultural practices, including pruning and renovation, composting, preparing planting holes, planting coffee plants, selecting young plants and pruning them, and soil erosion control.

Support to co-operatives in first processing: the Programme supported co-operatives in better managing the first processing of coffee, particularly in the washing and drying processes. The support took the form of the renovation of washing stations and the construction of coffee drying centres, as well as providing technical and management assistance for the operation of these facilities.

Training and support for producer unions: producer unions supported by the Programme received assistance to improve secondary coffee processing (cleaning and sorting) and marketing/export activities. This included obtaining export licences and support in realising the first sales of coffee abroad, thereby increasing the autonomy and marketing capacity of the unions. The Burka Yadot coffee producers' union was supported by the construction of a hulling plant to clean the dried coffee from the pericarp and outer integument.

Investment in infrastructure and technology: the Programme has invested in modern infrastructure and technology, such as the establishment of a Coffee Training Centre in Addis Ababa, which provides vocational training at all levels of the coffee value chain. This centre is equipped with modern laboratories and equipment for roasting and tasting coffee, improving the technical skills of participants.

36. Have the capacities of the cooperatives improved in the secondary processing of coffee and the quality of services rendered to farmers?

The capacities of the cooperatives were significantly improved in the secondary processing of coffee and in the quality of services rendered to farmers. Here are the specific details of the actions undertaken:

Infrastructure investments: Significant improvements were made to the existing infrastructure. In the Aleta Wondo cooperatives, nine washing stations were renovated and a coffee drying centre built. In addition, input distribution centres and a cooperative nursery were established, and technical and management assistance was provided for the management of this infrastructure.

Training and technical assistance: Co-operatives and unions received training on how to improve their services and operations, with a focus on best practices in the management of coffee processing and drying stations. This helped to improve the overall quality of the coffee processed and to make operations more efficient and sustainable.

Export and marketing support: The Programme facilitated the link between the cooperatives and international markets, thereby increasing their capacity to export directly. This has enabled the cooperatives to obtain better prices for their coffee and offer better prices to their members, improving farmers' incomes.

Concrete results: BYFCU, with the support of the Programme, exported about 250,000 kg of coffee, generating significant revenues and paying its members a premium price for coffee produced according to the improved practices supported by the Programme's intervention.

37. Are Unions able to provide good services to cooperatives and producers in terms of market organisation and coffee procurement?

The unions have significantly improved their capacity to provide services to cooperatives and producers, particularly with regard to market organisation and coffee procurement. Here are some relevant details:

Marketing and Export Support: Unions were supported in improving their marketing strategies and export capacities. For example, the Sidama Coffee Farmers Cooperative Union (SCFCU) displayed a resilient and independent marketing strategy. The Programme helped these unions to develop and implement robust business plans that improved their operational management and marketing capacity.

Export licences and market operations: The Burka Yadot Farmers' Cooperative Union (BYFCU) was assisted in obtaining an export licence, which allowed the union to export its coffee directly, bypassing middlemen. This greatly improved the union's ability to control and optimise the coffee value chain, from acquisition to final sale.

Training and technical assistance: Unions received specific training to strengthen their capacity to provide technical and operational support services to member cooperatives. This included post-harvest coffee management, preparation and quality management, which are essential to improve the market value of coffee.

Infrastructure investments: Infrastructure support, such as the construction of *hulling* stations (*hulling*) and the provision of sustainable energy (generators and electrical transformers), was provided to ensure that the unions could efficiently manage the processing and storage of coffee.

Tangible economic results: the Programme's intervention led to tangible economic results, increasing the income of coffee producers through improved market access and coffee quality premiums. Unions have been able to pay their members an additional price (premium) for coffee produced according to improved practices, incentivising further improvements in production and quality.

38. How have the processes, equipment and infrastructure for coffee processing been improved?

Improvement of processing infrastructure: major renovations and upgrades were carried out in coffee washing stations and drying centres. For example, nine washing stations were renovated and a new coffee drying centre was established, thus improving the cooperatives' ability to process coffee more efficiently and to higher quality standards.

Purchase and installation of modern equipment: The Programme provided modern and technologically advanced equipment for coffee processing. This includes roasting machines, *brewing* equipment and espresso machines, all installed in the new Coffee Training Centre (CTC) in Addis Ababa. This equipment enabled advanced practical training and improved the quality of the final product.

Establishment of the Coffee Training Centre (CTC): The construction and equipping of the CTC was a cornerstone of the Programme, providing a permanent venue for continuous vocational training and skills enhancement for workers in the coffee sector. The centre was equipped with *cupping*, roasting and *brewing* laboratories, which not only enhance training, but also raise the overall level of coffee processing practices in the country.

Development and approval of business plans: Business plans for cooperatives and unions were developed and implemented, focusing on the optimisation of work processes and the effective management of new infrastructure and equipment.

39. What is the improvement in the yield of the two coffee processing steps: washed and sun-dried coffee?

The improvement in coffee yields over the entire production and processing chain achieved by the Programme focuses substantially on the quality aspect. A key element is the improvement of harvest timing, ensuring that the coffee cherries are harvested at exactly the time of their optimum ripeness. This not only ensures a richer and more complex flavour profile, but also greater uniformity in the quality of the coffee produced. In addition, speedy post-harvest processing is crucial to prevent unwanted fermentation or loss of quality of the harvested cherries. Efficient and timely processing processes, from cleaning to fermentation and drying, are essential to maintain the flavour integrity and freshness of the coffee. Finally, the use of appropriate processes and equipment allows these steps to be optimised, with modern machinery and appropriate standards supporting accurate and careful processing, further contributing to the improvement of coffee quality. This integrated and quality-focused approach aims to raise the profile of coffee on the global market, increasing not only the quality but also the perceived value of the coffee produced.

40. Do the machines meet the legal safety requirements in the country? Do they comply with international standards?

In many primary cooperatives, the machinery used in primary coffee processing tends to be obsolete and energy inefficient. This situation often results from limited financial availability, which prevents the purchase of more modern equipment. Consequently, only a few larger and financially robust cooperatives have the capacity

to invest in new and more efficient machinery. This technological gap between cooperatives can have a significant impact on the quality of the coffee produced and the environmental sustainability of their operations.

On the contrary, the Sidama Producers' Union is distinguished by the use of extremely modern machinery, which not only increases processing efficiency but also complies with the highest safety standards. This not only improves the quality of the finished product, but also ensures that operations are safer for workers and less harmful to the environment due to reduced climate-altering gas emissions and lower energy consumption.

Furthermore, in the Burka Yadot Producers' Union of Oromia, the dried coffee cleaning machines (*dehullers*) are a positive example of how targeted investments can improve operational efficiency. These machines, acquired with the support of the programme, are in good working order and contribute significantly to the union's ability to process coffee to a high standard, while maintaining good energy efficiency.

6.1.8 Environmental Sustainability

41. Is it possible to roughly estimate the main sources of carbon and greenhouse gas emissions related to the coffee value chain?

Below is a summary analysis of the main sources of carbon and climate-altering gas emissions in the entire coffee supply chain.

Processing Phase	Wet Process (Washed)	Dry Process (Natural)	Potential Climate-altering Gas Emissions	Processing Phase	Wet Process (Washed)	Dry Process (Natural)	Potential Climate-altering Gas Emissions
Collection	Same for both processes: manual harvesting of ripe cherries.	Same for both processes: manual harvesting of ripe cherries.	Minimal emissions; mainly related to the transport of workers and materials.	Collection	Same for both processes: manual harvesting of ripe cherries.	Same for both processes: manual harvesting of ripe cherries.	Minimal emissions; mainly related to the transport of workers and materials.
Cleaning	Removal of drupe and mucilage by washing. Use of fossil fuels to power the pump that brings water from the river below to the washing station.	Not applicable	Only for the wet process: 0.5 kg CO ₂ eq/q of cherries (water and energy for pump and machinery)	Cleaning	Removal of drupe and mucilage by washing. Use of fossil fuels to power the pump that brings water from the river below to the washing station.	Not applicable	Only for the wet process: 0.5 kg CO ₂ eq/q of cherries (water and energy for pump and machinery)
Fermentation	Fermentation of the cherries in tanks to remove residual mucilage.	Not applicable	Only for the wet process: 0.3 kg CO ₂ eq/q of cherries (anaerobic process releasing methane: methane has an index of Global Warming Potential - GWP of 36 times CO ₂)	Fermentation	Fermentation of the cherries in tanks to remove residual mucilage.	Not applicable	Only for the wet process: 0.3 kg CO ₂ eq/q of cherries (anaerobic process releasing methane: methane has an index of Global Warming Potential - GWP of 36 times CO ₂)
Washing	Grain washing to remove mucilage residues; fossil fuel used to	Not applicable	For the wet process only: 0.3 kg CO ₂ eq/quintal of cherries (intensive use of water and	Washing	Grain washing to remove mucilage residues; fossil fuel used to	Not applicable	For the wet process only: 0.3 kg CO ₂ eq/quintal of cherries (intensive use of water

	power the pump that brings water to the fermentation station		potential impact on water resources; fossil fuel used to power the submersible pump)		power the pump that brings water to the fermentation station		and potential impact on water resources; fossil fuel used to power the submersible pump)
Drying	Sun drying on elevated beds or patios	Sun-drying of whole cherries	For both processes: Minimal emissions; dependent on site management. Only for the dry process: fermentation of the drupe and mucilage and production of methane.	Drying	Sun drying on elevated beds or patios	Sun-drying of whole cherries	For both processes: Minimal emissions; dependent on site management. Only for the dry process: fermentation of the drupe and mucilage and production of methane.
Decortication	Removing the shells from dried beans.	Removing shells from dried cherries.	For both processes: 0.05 kg CO ₂ eq/q of cherries (emissions from machinery)	Decortication	Removing the shells from dried beans.	Removing shells from dried cherries.	For both processes: 0.05 kg CO ₂ eq/q of cherries (emissions from machinery)
Toasting	Roasting the beans to develop aroma and flavour.	Roasting the beans to develop aroma and flavour.	For both processes: 0.4 kg CO ₂ eq/q of cherries (significant emissions if burners are fuelled by gas or other fossil fuels).	Toasting	Roasting the beans to develop aroma and flavour.	Roasting the beans to develop aroma and flavour.	For both processes: 0.4 kg CO ₂ eq/q of cherries (significant emissions if burners are fuelled by gas or other fossil fuels).
Grinding	Grinding of roasted beans.	Grinding of roasted beans.	For both processes: 0.05 kg CO ₂ eq/q of cherries (emissions from machinery).	Grinding	Grinding of roasted beans.	Grinding of roasted beans.	For both processes: 0.05 kg CO ₂ eq/q of cherries (emissions from machinery).
Packaging	Packaging for sale.	Packaging for sale.	For both processes: Emissions from the transport and production of packaging materials to be calculated using LCA criteria.	Packaging	Packaging for sale.	Packaging for sale.	For both processes: Emissions from the transport and production of packaging materials to be calculated using LCA criteria.

Table 8. Sources of climate-change gas emissions in the coffee value chain

42. Can the main sources of greenhouse gases be reduced with appropriate technologies?

Below is an analysis of the main solutions for reducing climate-altering gas emissions in the coffee supply chain.

Process	Improved Technology	Reuse and Sustainability	Process	Improved Technology	Reuse and Sustainability
---------	---------------------	--------------------------	---------	---------------------	--------------------------

Cleaning and Washing (Wet Process)	Install solar-powered energy-efficient pump systems without a battery but with water storage upstream of the system.	Implement water recycling and purification systems to reduce the volume of fresh water needed and minimise the impact on local water resources.	Cleaning and Washing (Wet Process)	Install solar-powered energy-efficient pump systems without a battery but with water storage upstream of the system.	Implement water recycling and purification systems to reduce the volume of fresh water needed and minimise the impact on local water resources.
Fermentation (Wet Process)	Use biological and mechanical controls to manage the fermentation process so that it takes place under aerobic conditions, thus reducing methane production.	Install methane capture systems to use it as an energy source, turning a harmful emission into a useful resource.	Fermentation (Wet Process)	Use biological and mechanical controls to manage the fermentation process so that it takes place under aerobic conditions, thus reducing methane production.	Install methane capture systems to use it as an energy source, turning a harmful emission into a useful resource.
Drying (Wet and Dry Processes)	Use adjustable drying beds that maximise sun exposure and improve air circulation, reducing drying time and the possibility of fermentation of residual mucilage in the dry process.		Drying (Wet and Dry Processes)	Use adjustable drying beds that maximise sun exposure and improve air circulation, reducing drying time and the possibility of fermentation of residual mucilage in the dry process.	
Decortication and Grinding	Improve the efficiency of existing machines with technologies that use less energy per unit of coffee processed. Consider using renewable energy to power these machines.	Implement regular maintenance programmes to ensure that machines are always working at maximum efficiency, reducing energy waste and wear and tear that could increase energy consumption.	Decortication and Grinding	Improve the efficiency of existing machines with technologies that use less energy per unit of coffee processed. Consider using renewable energy to power these machines.	Implement regular maintenance programmes to ensure that machines are always working at maximum efficiency, reducing energy waste and wear and tear that could increase energy consumption.
Toasting	Use modern roasters that offer greater temperature and air control while reducing energy consumption and fossil fuel emissions.	Install heat recovery systems in roasters to utilise waste heat in other steps of the production process such as water pre-heating.	Toasting	Use modern roasters that offer greater temperature and air control while reducing energy consumption and fossil fuel emissions.	Install heat recovery systems in roasters to utilise waste heat in other steps of the production process such as water pre-heating.
Packaging	Replace traditional packaging materials with biodegradable or recycled options to	Improving logistical efficiency to reduce emissions related to the transport of	Packaging	Replace traditional packaging materials with	Improving logistical efficiency to reduce

	reduce emissions associated with the production and disposal of packaging materials.	finished coffee to points of sale or consumers.		biodegradable or recycled options to reduce emissions associated with the production and disposal of packaging materials.	emissions related to the transport of finished coffee to points of sale or consumers.
--	--	---	--	---	---

Table 9. Potential climate-altering gas emission reductions in the coffee supply chain with appropriate measures.

43. Are the coffee harvesting and processing stages optimised in terms of water consumption?

In the context of coffee processing, water management is a critical component, especially in wet processes. However, based on observations and interviews, water consumption is not optimised in the wet coffee processing in cooperatives. This lack of optimisation stems from the fact that water is currently not seen as a limiting factor in production. Consequently, current practices may lead to an excessive and inefficient use of the water resource, without significant incentives to implement conservation or recycling techniques.

This situation can have several negative implications, such as increasing the risk of long-term sustainability. In addition, excessive water use can lead to local environmental problems, such as the alteration of aquatic habitats, the reduction of water reserves available for other agricultural activities or human consumption, and increased contaminant loads in local waters due to discharges from coffee processing.

44. Can these be further improved to save and recycle water?

Some solutions can actually reduce water consumption, as described below.

Water recycling systems: implement advanced water treatment and recycling systems that allow water to be reused in multiple stages of the process. These systems may include filtration technologies, reverse osmosis, and biological treatments that clean water for repeated use.

Consumption reduction technologies: adopt technologies that reduce the volume of water required for washing and fermenting the grains. This may include the installation of more efficient flow control systems, which distribute water more evenly and reduce waste.

Improved wastewater management: optimise the treatment of wastewater from coffee processing to minimise environmental impact. This may include the installation of sedimentation tanks, artificial ponds (*wetlands*), or other ecological systems that treat the waste water before it is released into the environment.

Rainwater harvesting tanks: implement rainwater harvesting systems to reduce dependence on local water sources. The collected water can be used for various processes, helping to reduce pressure on local water resources.

Training and education: educate workers and plantation managers on efficient water use practices. Training can help promote more sustainable and conscious behaviour with respect to water use.

Monitoring and data management: use real-time monitoring systems to track water consumption and identify areas where consumption can be reduced. Data analysis can help make informed decisions on where and how to implement improvements.

45. Is the water from the depulping of ripe cherries treated before being dispersed into the environment?

In the wet process used at Aleta Wondo, the waste water from washing the coffee is properly separated from the pulp by a mechanical separation process; the wet pulp is sent to a composting station, the mature substrate of which is distributed to the co-operative members, while the water, with a high content of mucilage and suspended organic matter, is filtered through phytodepuration using a downstream vetiver area that treats the water, which is then released back into nature.

46. Are the chemical inputs applied in the fields used appropriately and consistently with the needs of the soil/recovery capacity?

According to the observations made during the field survey at several co-operatives, it emerged that all interviewed producers adopt organic agronomic practices. This includes the exclusive use of organic fertilisers, which are only applied during the planting phase of new seedlings. This choice is dictated by the desire to maintain the natural fertility of the soil, which, thanks to its particular edaphic and pedological characteristics, does not frequently require an additional input of external substances.

In addition, producers who harvest ripe cherries in the forest areas in the Delo Mena Wereda observe a total restriction imposed by the Park Authority, limiting themselves exclusively to harvesting the ripe fruit. This practice ensures almost zero environmental impact and promotes the sustainability of the forest ecosystem, contributing to the maintenance of biodiversity and the conservation of natural resources.

47. Are the new coffee plantations established in cleared forest plots? How recent is the shift from forest to coffee orchards? Are new coffee plantations created at the expense of natural forests? How long ago was the transition from forest to coffee plantation?

In Aleta Wondo, areas traditionally cultivated with coffee are in areas that have long been used for agriculture. The new plots for coffee cultivation are on land previously used for ensete (false banana) cultivation or located under the cover of fruit trees such as avocados, mangoes and banana trees. The cartography in Appendix 1 shows that the agricultural landscape in this region has remained stable over time, with no recent changes in land use.

In Delo Mena, coffee cultivation takes place on two distinct models: one takes place under the canopy of the Harena natural forest, within the Bale Nature Park, while the other takes place in urban and peri-urban areas following a classical agronomic model, on former cultivated areas, under shade plants such as false banana and other fruit species. The new areas for coffee cultivation do not compromise the natural forest cover, as there are plenty of plots already cultivated with tree perennials that lend themselves to coffee planting in the lower vegetation layer, promoting biodiversity and sustainable management of the agrarian landscape.

48. How much of the coffee is wild compared to that grown on agricultural land? How much of the coffee is wild compared to that grown on agricultural land? And to what extent is the coffee canopy composed of native species in a structure equivalent to the natural one?

Based on the data collected by interviewing 117 producers, it appears that 55% of coffee growers use shade plants of natural endemic species, 33% harvest coffee that is under natural forest cover, 8% have coffee plants grown under multipurpose trees (fruit or carpentry wood production), and 3% have no tree cover at all, justified by the fact that they are newly planted plants, together with young shade plants that do not currently provide that function. The situation is very different, however, in Sidama compared to Oromia, in the former the majority (88%) grows coffee under natural endemic tree plants, while a small part (23%) uses multifunctional tree plants. The remaining part (6%) has no cover as they are new plantings. None are growing under forest cover.

In Oromia, however, the majority (81%) harvest coffee under natural forest cover, while 19% grow coffee under natural endemic trees. No producers manage coffee under multifunctional productive trees, nor are they in an uncovered situation. Below is the graph representing the situation.

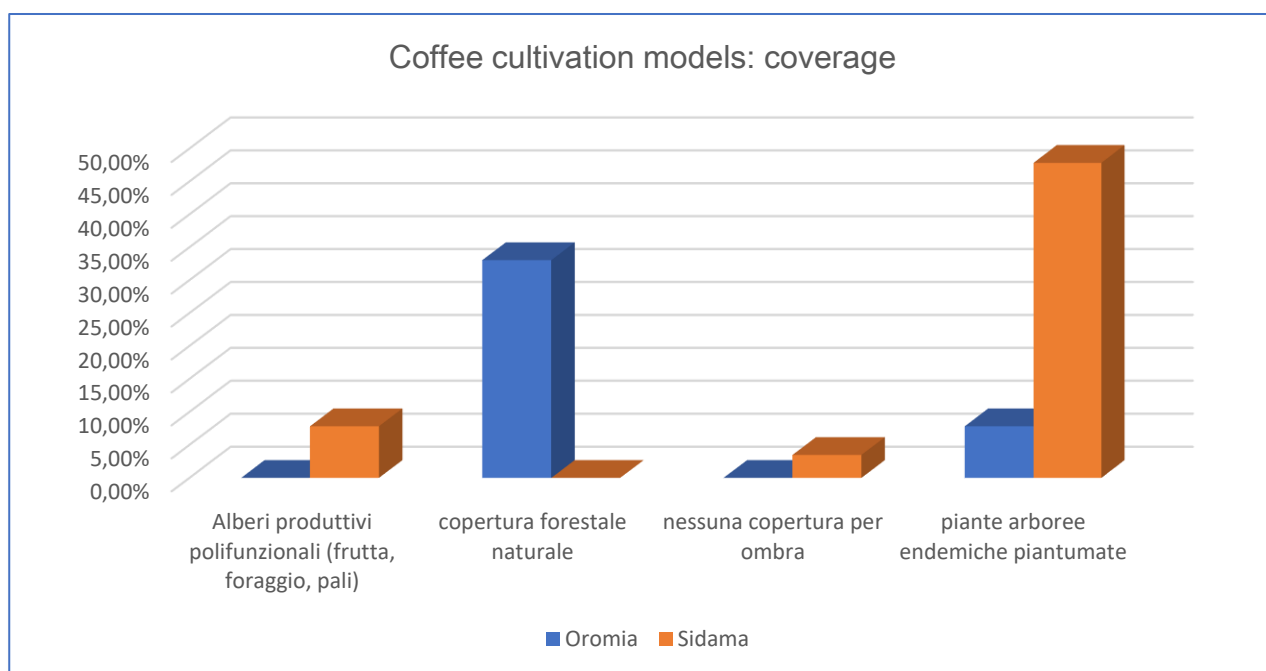


Figure 8. Coffee coverage in the two programme areas.

6.1.9 Gender dimension

Although the Programme did not identify specific objectives related to the gender dimension¹, the implemented activities have nevertheless had an effect on them, as women are extensively involved in the different stages of coffee production.

In fact, the coffee supply chain employs a lot of women, especially in the harvesting and drying phases. In addition, several women involved in the coffee supply chain are associated with cooperatives, as owners of the land where the coffee is grown and/or as householders.

According to the International Coffee Organisation (ICO), 70% of the work in the coffee value chain is provided by women². However, they have less access to land, inputs, finance and knowledge. Within rural households, women often have little say in decision-making and are limited in their access to public services, such as training programmes. Finally, they often have little control over income from agricultural production and investment decisions.

Also in view of these limitations, this evaluation has attempted to provide answers to the questions below. To answer them, the analysis was essentially based on two data collection instruments: focus groups with women and the two Kobo questionnaires for cooperatives and producers. In addition, specific questions on this dimension were asked during interviews with *key informants*.

Both questionnaires and focus groups were addressed to farmers and members of the cooperatives that were involved in the programme, in order to obtain as informed and reliable answers as possible.

The data from the questionnaires were disaggregated by gender in order to highlight the most significant responses expressed by female respondents.

¹ This aspect is clearly highlighted in the UNIDO independent final evaluation report, as follows: " **The project only partially exploited its significant potential to support gender empowerment and inclusiveness in the coffee value chain.** These priorities were not addressed by project design and were not mainstreamed during the project implementation. On the other hand, the project had a positive contribution towards natural resources management and an environmentally friendly approach to the coffee value chain. With its support to Harena Forest coffee, the project positively contributed to conservation and biodiversity goals'. (Independent Terminal Evaluation, UNIDO, January 2023, p. 20 and p. 50).

² Gender Equality in The Coffee Sector, ICO Report 2018, <https://www.icocoffee.org/documents/cy2017-18/icc-122-11e-gender-equality.pdf>

Essentially, the results of this evaluation confirm what has already been highlighted in the final programme report and the final independent evaluation prepared by UNIDO³.

In particular, as highlighted in both documents:

- *Gender mainstreaming interventions should be clearly defined at the design stage and implemented during the implementation of future coffee value chain projects, taking into account the role women play in this value chain. Future interventions should pay further attention to the design and implementation of gender empowerment and inclusive support priorities across the coffee value chain. Monitoring, evaluation and reporting should follow up on these priorities.*
- In order to achieve evidence-based results, coffee projects should be equipped with stronger M&E systems that include detailed analyses of the family farming system (disaggregated by gender and age groups) and incomes and how the proposed changes may affect work and family incomes, including for women.
- The Programme missed the opportunity to address the gender imbalance, the limited opportunities for women in coffee production and processing, and their need for empowerment along the entire coffee value chain. Many opportunities remain open to further support inclusiveness and governance throughout the coffee value chain in Ethiopia.

In particular, according to some studies carried out in the coffee supply chain⁴, the challenges that should be addressed to improve the gender dimension are the following:

1. Limited access to **resources**: women often have limited access to credit, land ownership and modern agricultural technologies. This limits their ability to improve productivity, employ sustainable practices and ultimately increase their income.
2. **Inequality in decision-making** processes: women's participation in decision-making processes within the coffee industry is limited. Their voices and perspectives are often excluded, preventing them from actively formulating policies and strategies that could further their livelihoods.
3. **Gender-based** discrimination: women experience gender-based discrimination, both within their communities and in the wider coffee sector. They face unequal pay, limited opportunities for the development of skills and leadership roles, and barriers to accessing markets and information.

In addition, one of the objectives of the *capacity building* (training) activities was to train participants on gender mainstreaming in order to support leaders in sensitising and mobilising women in the community to join cooperatives and ultimately increase the number of women members and nominate women for leadership positions during elections at the general membership meeting. The data collected in this evaluation, however, confirm that this objective has not been achieved, or has been achieved only very partially.

49. Has the programme increased the inclusion of women in the governance of coffee production?

According to the data collected, the programme has not increased the inclusion of women in the governance of coffee production.

Of the 20 co-operatives interviewed, only 2 women responded, of whom only one was in a managerial position (Oromia).

The focus groups dedicated to women also highlighted the following.

In Aleta Wondo's focus group, participants shared that two women were elected to cooperative boards. However, they would like to see better gender representation on the boards. According to the interviewees, many women members of cooperatives would have the experience and skills to hold positions of responsibility and representation, but they do not always have access to this opportunity.

In Delo Mena, the interviewees expressed interest in holding positions on the governing councils, emphasising their confidence in being able to contribute meaningfully, not least because of their experience in family and community management. However, there is currently cultural resistance to having them participate in

³ Final Report project ID: 130144, UNIDO, May 2022 and Independent Terminal Evaluation, UNIDO, January 2023.

⁴ <https://ethiolatincoffee.com/empowering-women-in-the-coffee-value-chain-unlocking-opportunities-for-greater-benefits/>

management councils. In any case, women in both regions recognise the importance of a greater gender balance in governance.

50. *Has the Programme improved the technical capacity of women coffee producers?*

The programme has improved the technical capacity of women coffee producers, albeit with some challenges, including the fact that not all have had the opportunity to benefit from adequate training.

In terms of numbers, of the 31 female respondents to the coffee producer questionnaire, 22 women participated in the training; of these, 17 found it 'very useful', while 5 considered it 'partially useful'. This indicates that, in the perception of the respondents, the training helped to strengthen their skills.

In Aleta Wondo, the women through training learnt how to pick the red, thicker berries to ensure the quality of the coffee. They also learnt the importance of packing the coffee within 12 hours of harvesting to preserve its quality. However, the women highlight challenges such as the lack of plants in the nurseries, which hinders the replacement of older plants.

In Delo Mena, the women only had access to the training course implemented by COOPI five years through the Programme. The course improved their capacity to maintain the quality of the coffee. Since that date, many have not received further training due to discriminatory practices in the selection of participants. This has limited women's access to the necessary technical knowledge, reducing their growth potential. The participants suggest a more inclusive training programme, with equal access to tools and technologies.

51. *Has the income of women coffee producers increased since the Programme?*

The results of the questionnaires and focus groups show that the income of women producers increased overall during the programme.

The income of women coffee producers increased overall after the programme, although the impact varies between regions and local conditions. The data indicate that of the 31 women producers, 19 felt they had a significant increase in their earnings, while 6 experienced a slight increase.

In Aleta Wondo's focus group, participants noted a growth in earnings over the last 2-3 years, mainly due to the expansion of coffee plantations and improved harvesting and production techniques. However, they also lamented a decrease in earnings over the past year due to fluctuating prices.

In Delo Mena, women state that their earnings have remained stable in recent years due to various factors, such as unpredictable weather, the presence of animals that damage the plantations, and the theft of the berries from the plants, due to the limited time women are able to dedicate to coffee harvesting (limited by family duties). Women report having difficulty balancing work on the plantation with domestic responsibilities and having transport problems that affect both the quality and quantity of coffee they sell.

52. *Has the Programme made it easier for women to reconcile family and work responsibilities? In what way?*

The programme has only partially addressed the challenges of reconciling family and work responsibilities.

In Aleta Wondo's focus group, women stated that the dual role of family management and work is very demanding and they often cannot manage both effectively, especially during pregnancy and menstruation, partly due to cultural beliefs that prevent them from working on plantations during those periods. Some emphasised the need to improve access to credit to enable women to delegate work and better focus on family management.

In Delo Mena, women highlighted the difficulty in balancing production with domestic responsibilities due to limited time and lack of adequate transportation. Discrimination in access to agronomic services and plant varieties further limits their ability to expand plantations.

Respondents indicated that better access to training and credit could help them better manage the dual role.

At the same time, the data show that women feel they have expanded their skills and improved their earnings, as 26 out of 31 respondents are planning to expand their businesses in the future. There are no specific details on how these women have reconciled family and work responsibilities, but we can assume that the increase in skills and earnings has facilitated the balance between the two to some extent.

7 Conclusions

The Programme has achieved significant results in improving the coffee chain produced in the Sidama and Oromia regions. The Programme has concretely strengthened the agricultural and entrepreneurial skills of small farmers, increasing their productivity and profitability.

The process of improving product quality has worked in favour of standardisation and the processing of coffee that is originally of high quality, because it is produced from certified plants (from the production nursery), harvested at the peak ripening time of the cherry and therefore under optimal conditions.

The increased efficiency of first processing and treatment processes has then allowed the producer unions to provide generally high quality products, often at grade 2, sometimes 1 and only in the worst of cases at grade 3, defined through rigorous and standardised quality control processes.

The increase in the quality of coffee has led to a higher value of the product on the international market, but also on the local market which, although not officially a sales channel for quality coffee, is absorbing more and more product at competitive prices.

The consolidation of local demand for quality coffee has led to the paradox that producers, in years when the international market is particularly penalising, derive greater profits from local buyers who roast and sell on the local market. Although operating in a grey area of lack of regulatory framework, this opportunity actually diversifies the risk of producers and represents a concrete alternative to the long and complex supply chain aimed at the international channel.

The Programme promoted sustainable agricultural practices, geared towards 'de facto' organic production and the use of green solutions in the modernisation of coffee washing centres in Aleta Wondo.

Despite its successes, the programme faced many challenges, including the difficulty of establishing systems for traceability and certification. These areas represent priorities for future interventions that can further strengthen the Ethiopian coffee supply chain. Promoting further international certification and better integrating small-scale producers into global markets can increase their resilience and ability to navigate increasingly competitive markets.

In conclusion, the Programme has shown that the integration of sustainable agricultural practices and social inclusiveness can significantly transform the coffee supply chain, bringing lasting economic, social and environmental benefits. The experience gained and lessons learnt provide a valuable basis for replicating and expanding similar initiatives. Continued commitment to innovation and sustainability will be crucial to ensure that the coffee sector in Ethiopia continues to grow and prosper in a responsible manner.

With regard to the individual evaluation criteria, the conclusions are as follows:

Relevance and Programme Design

The design of the Programme is fully in line with the country's political and development priorities in the coffee sector, and the planned implementation approaches respond to the needs of the social and institutional stakeholders involved in the Programme. The Programme presents a logical and coherent structure that aligns development objectives with planned activities and inputs provided, creating sustainable impact through the continuous improvement of local capacities and infrastructure, effectively addressing the specific needs of the coffee value chain in Ethiopia. The collaboration of AICS and UNIDO with illycaffè constitutes an innovative element in the panorama of international cooperation interventions. The Programme's implementation methodology is highly consistent with the expected results. The activities are well structured to address specific challenges of the coffee supply chain and to achieve the strategic objectives of the Programme.

At the same time, however, the Programme did not sufficiently include the gender dimension in the design, whereas, on the contrary, the coffee value chain involves and employs many women, who are significantly impacted in this sector.

The indicators are mostly specific, measurable, achievable and relevant, but the lack of clear time definitions for some of them limits their effectiveness in monitoring progress over time.

Consistency

The Programme under review is perfectly aligned with Ethiopia's policy and institutional framework regarding the development of the coffee sector and the strengthening of the agro-industry in order to diversify the country's economy, which is still highly dependent on the primary sector. The coherence of the Programme under review is strong in the support provided to the different levels of the supply chain, operating in a complementary manner to public investments. Moreover, the Programme is aligned with Ethiopia's national development strategies, which aim to strengthen economic resilience and reduce import dependency through the valorisation of local resources and the improvement of agricultural production systems. The initiative is balanced between the different levels of the coffee supply chain - producers, cooperatives, unions and the ECTA/CTC institution - bringing a distinctive value, compared to other interventions targeted at the coffee sector in Ethiopia, of strengthening a 'Quality Coffee System' of Ethiopia, favouring the coordination, exchange and training of the different actors, also using upstream competencies of the chain

Effectiveness

The Programme has demonstrated a remarkable capacity to support producers in improving both the quantity and quality of coffee production, achieving high standards throughout the supply chain, and has had a significant impact on consolidating demand for coffee and increasing the value of production, as well as its sustainable management. The Programme has laid the foundations for the creation of effective partnerships with relevant stakeholders, including the relationship between the private sector and cooperatives, which are essential for achieving the expected results. Equally relevant has been the Programme's contribution to processing infrastructure, particularly in the coffee washing stations in Sidama, where state-of-the-art facilities for separating pulp from washing water and phyto-purification systems for treating waste water before its release into the wild have been implemented.

However, despite its successes in terms of production and environmental sustainability, the Programme failed to structurally stabilise the incomes of primary producers and co-operatives. The aspects that have hindered, or at least hopefully only delayed, the achievement of the Programme's main objective, i.e. the increase of producer households' incomes and the optimisation of the initial production and processing system at local level, are the price fluctuation on the international market, which inevitably also affects the local market. Furthermore, the intervention analysed did not adequately focus its strategy on the protection and inclusion of vulnerable groups from its initial conception.

The quality of programme activities was ensured through the implementation of high standards in management and execution procedures. Activities were regularly monitored to ensure that they met the objectives of sustainability and effectiveness. Despite some challenges (timing of implementation, annual contracts, COVID 19, etc.), the Programme activities were implemented with a high level of quality and sought to achieve a broad quantitative coverage, despite some operational challenges. Planning and adaptation to local needs and agricultural timeframes allowed for effective timing, contributing to the overall success of the initiative.

Efficiency

The initiative reached a total of 39,995 people, 22 primary coffee cooperatives, 2 Unions of Cooperatives, technicians from 2 Wereda, technicians from the cooperatives' promotion offices at Wereda and Region levels, and ECTA, as a key institution for the promotion of the country's coffee policies and the improvement of the market regulatory framework. The quality of the staff provided by UNIDO, Technoserve and COOPI made possible the effective training of producers and technical and administrative staff working at the cooperatives involved and led to a significant improvement in the agricultural practices carried out in the field, the primary processing techniques used at the primary cooperatives and consolidated the quality of the product destined for the Unions.

Therefore, the efficiency of the intervention can be considered high, as both the quality of the inputs and the perception of the beneficiaries is positive and can be seen in the production assets and procedures applied in the field and in the first processing sites.

Impact

The Programme has had a major impact, making a significant difference in the lives of local producers and creating the conditions for a profound improvement in the perception of Ethiopian coffee in international markets. Through collaboration between the private and public sectors, the Programme has promoted improved agricultural practices and increased the quality and volume of coffee produced. The creation of the

Coffee Training Centre (CTC) in Addis Ababa, implemented with the support of illycaffè and the Ernesto Illy Foundation, has developed advanced training courses that equip participants with advanced skills. The data collected show that the quality of the coffee from the cooperatives involved in the Programme is visibly and systematically on the rise, denoting an ever-increasing care of the producers and primary cooperatives in the harvesting and initial processing of the product. The growing trend is also widespread in the Delo Mena area, where, unfortunately, the greater difficulties in accessing the market, reported by the producers interviewed, frustrate efforts to standardise and improve product quality.

Sustainability

Primary cooperatives and unions of cooperatives have implemented, with the support of the Programme and within the framework of the technical assistance provided, actions aimed at ensuring the continuity of the actions undertaken after the end of the Programme, consolidating the market for their product and investing in skills and capacities. Among the most relevant are: marketing and branding strategies, certifications and geographical indications, capacity building and continuous training, creation of networks and coordination platforms, investments in infrastructure and technology, and environmental and social sustainability interventions.

These strategies demonstrate a concrete commitment to the long-term sustainability of coffee chain improvement activities, ensuring that the benefits of the Programme continue to positively affect local communities after its conclusion. In each case, sustainability could be improved through the adoption of the following measures, some particularly focused on women: promotion of women's leadership, identification of practical limits to women's participation in association life, women-only microcredit and financial support programmes, women-only support networks, inclusion of women in the certification process, gender-based monitoring and evaluation, and access to legal and property advisory services.

8 Recommendations

- 1) **Support ECTA in regulating the local market:** it is important to assist ECTA in developing a regulatory framework that allows for the sale of quality coffee quotas on the local market. Considering the impossibility of controlling and preventing the sale of quality coffee through informal channels, a clear and flexible regulatory framework would legitimise the sale of high quality product on the local market; this, in turn, could have a driving effect on the entire sector, raising overall quality levels and further strengthening the role of the coffee sector in the national economy. An increased availability of high-quality coffee on the domestic market would not only satisfy the growing local demand for premium product, but would also stimulate the entire supply chain to aim for higher quality standards, raising the bar for coffee on a global scale.
- 2) **Expand access to financial markets:** facilitate access to low-interest credit and guarantee funds to enable small producers to invest in production and technological improvements. The system could use institutional banking channels and credit management by cooperatives, as is already the case. The use of guarantee funds could enhance the cooperatives' access to credit and could provide for reward criteria, according to virtuous criteria demonstrated in the management of the cooperative itself. Besides aspects related to good financial management, criteria related to gender balance in management boards, measures to safeguard people with fragility and good practices for the fair treatment of members (CSR criteria) could be integrated. Access to credit could thus provide the motivation for co-operatives to make management improvements and progress with respect to fairness and transparency criteria.
- 3) **Strengthen sustainable certifications:** incentivise the adoption of international certifications such as Fair Trade, Rainforest Alliance, and Organic to increase the value of Ethiopian coffee in global markets and ensure sustainable agricultural practices, including through the use of specifically granted loans.
- 4) **Support an operational strategy to respond to the new European certifications** for organic products and for products that do not affect deforestation: the process already started by ECX needs coordination between the different actors in the sector, in order to define a shared strategy, increasing the negotiating capacity with the European Union and adhering to protocols that can be implemented in a timely manner.
- 5) **Improve product traceability:** implement advanced technologies for coffee traceability, such as *blockchain* systems, to ensure greater transparency of the supply chain and strengthen consumer confidence.

- 6) **Intensify training and technical support:** expand training programmes for smallholders on advanced agricultural techniques, farm management and climate change adaptation to improve coffee yields and quality.
- 7) **Develop supporting infrastructure:** invest in essential infrastructure such as roads, irrigation systems and storage facilities to improve market access and reduce post-harvest losses.
- 8) Encourage **product diversification:** incentivise producers to diversify coffee products and other crops to reduce the exclusive economic dependence on coffee and increase the resilience of farming communities.
- 9) **Support for local entrepreneurs:** create incentives for young people and women to start businesses related to the coffee chain, including processing and sales activities, to stimulate the local economy and articulate the services functional to the chain.
- 10) **Implementing agroforestry practices:** further promote agroforestry techniques that integrate coffee cultivation with other tree species to improve biodiversity and environmental sustainability, as well as production risk diversification, when fruit trees, food trees (ensete) for animal nutrition or pole plants are used.
- 11) **Strengthening the inclusiveness of vulnerable groups and gender equity aspects already at the design stage:** future interventions should pay further attention to the design and implementation of the priorities of gender empowerment and inclusive support through the coffee value chain. Furthermore, although the Programme has invested in the training of women, inclusion in the training phases has not translated into an effective strengthening of women's presence in first-tier cooperatives, to the extent that management boards are almost exclusively male. The exclusion of women from the decision-making processes and governing bodies of co-operatives, and often also from the economic benefits reserved for men, represents a significant limitation of the initiative and a considerable long-term operational risk.

9 Lessons learnt

The implementation of the programme highlighted several successful approaches that can guide future development initiatives.

Adapting practices and technologies to the local context. The operational difficulties encountered in the remote areas of the Oromia region demonstrated the effectiveness of simple solutions chosen for coffee processing and storage. Keeping the process dry, for locally produced coffee was the winning, and not taken for granted, choice implemented by the Programme. The machinery adopted, efficient but not too complex to manage and maintain, is certainly the right choice for the context.

Working with strong and collaborative partnerships between the private sector, NGOs and local authorities. These partnerships, based on diversified skills and shared objectives, have led to excellent results and greater sustainability of the actions implemented. Particularly high is the sense of *ownership* of the Programme by the local authorities, not only the federal ones, but also in the Wereda of implementation of the activities.

The real technical skills brought a fundamental added value: the experts who took part in the Programme, both representing the public sector of Ethiopia and the Italian private sector, first and foremost the technicians of illycaffè, provided an irreplaceable contribution in the credibility of the initiative, in the quality of the contents shared and in the actions implemented for each component of the Programme. Many skills, shared by various partners, both Italian and Ethiopian, allowed the construction of lasting and solid relations between entities, organisations and people, destined to last over time and stimulate new opportunities for cooperation.

The systemic approach is central. The management of fluctuations in international coffee demand and the challenges of price changes have highlighted the importance of economic risk mitigation strategies, such as diversification of production and markets. Problems related to this aspect have not been solved but have been taken into account and addressed by the institutions in charge and partners of this Programme, and this is an indirect but valuable outcome of the Programme and an approach to be adopted across the board on other initiatives so central to the economic life of the country.

Training remains a central issue. The need to intensify training and local skills development efforts throughout the coffee supply chain was recognised, in order to improve product quality and advance certification and traceability, which are essential for self-sufficiency and long-term growth of producing communities.

Flexibility is an added value. It was emphasised that a flexible and iterative approach to action planning, based on continuous feedback and adaptation to local conditions, is essential to improve the effectiveness and

resilience of projects and enables them to overcome epochal challenges, such as pandemics and consequent global economic crises, with a certain tolerance in time.