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2024 | Summary Report

Ethiopia

Evaluation of the initiative:

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

TIMESIS

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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.

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

Contents

Acronyms

AICS:	Italian Agency for Development Cooperation
CECSIR:	Ethiopian Coffee Strategy and Implementation Roadmap
COOPI:	International Cooperation
CTC:	Coffee Training Centre
DAC:	Development Assistance Committee
ECTA:	Ethiopian Coffee and Tea Authority
ECX:	Ethiopian Commodity Exchange
ESA:	Ethiopian Standard Agency
ETB:	Ethiopian Birr (currency of Ethiopia)
EUR:	Euro (European Union currency)
FG:	Focus Group
ICO:	International Coffee Organisation
LCA:	Life Cycle Analysis
OECD:	Organisation for Economic Cooperation and Development
PI:	Implementation Programme
RBA:	Result-Based Approach
SDGs:	Sustainable Development Goals
TRIPS:	Trade-Related Aspects of Intellectual Property Rights
UNIDO:	United Nations Industrial Development Organisation
USD:	United States Dollar

1 Geographical framework

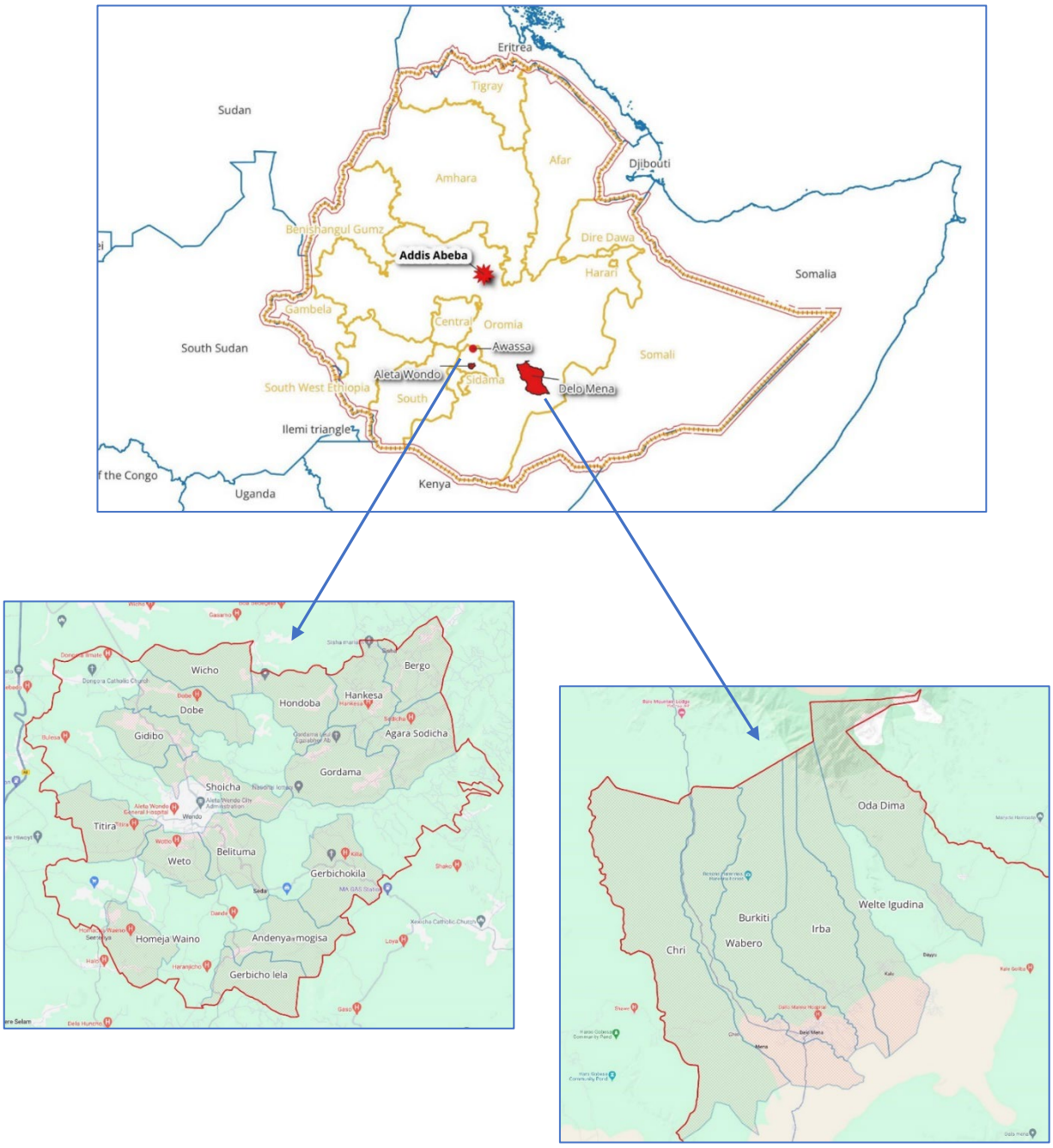

Figure1. Location of the intervention and sites visited during the evaluation: Addis Ababa, Hawassa, Aleta Wondo and Delo Mena Woreda and the Kebele originally headquarters of the cooperatives involved

2 Context of the initiative

2.1 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 and 14.8% of exported volume), Saudi Arabia ($208 million and 13.4% of volume), the United States ($195 million and 12.6% of volume), Japan ($130 million and 8.36% of volume) and South Korea ($111 million and 7.15% of volume). The fastest growing export markets for Ethiopian coffee between 2021 and 2022 were the United Arab Emirates ($48.9 million), Saudi Arabia ($48.2 million) and Japan ($47.5 million).

The coffee industry is an essential source of income for an estimated 15 million workers, providing a livelihood for countless farming families across the country and generating a GDP per capita of USD 2300 per year. 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 demand growing 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 (t)	Surface (ha)	Productivity (t/ha)
2020/21	478.000	542.000	0,82
2021/22	489.000	585.000	0,84
2022/23	496.000	590.000	0,84
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 meeting 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.

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 demercification 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.

2.2 Programme Description

The Programme aims to improve coffee production and quality in Ethiopia by supporting producers, cooperatives and the Ethiopian Coffee and Tea Authority (ECTA). The objective is to increase the supply of quality coffee in the Sidama and Oromia regions, improving both the quantity and quality of roasted coffee and access to the international market. The programme promotes sustainability and conservation of natural resources, addressing environmental challenges related to climate change.

The aim is to modernise the coffee supply chain, enhancing its typicality and improving market transparency. This effort aims to create new job opportunities, particularly in rural areas, and curb unsustainable urbanisation. In addition, the programme aims to improve the quality of coffee for the domestic market, responding to growing urban demand.

Innovations in coffee cultivation are proposed to address the challenges of climate change, enabling smallholders to adopt strategies to better manage risks. The programme also aims to enhance agricultural and entrepreneurial skills by fostering the creation of independent, self-managed organisations and encouraging youth self-employment. Ultimately, it is expected to increase income and food security for producers and workers in cooperatives.

The impact of the programme in the long term is 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:

- Ethiopian Coffee and Tea Authority (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.

3 Scope and objectives of the evaluation

This independent evaluation, conducted two years after the Programme's conclusion, aimed to examine the impact of its implementation. 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 peculiar 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 evaluation criteria 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 impact of the Programme on social, economic and environmental contexts, including structural changes, effects on collective wellbeing, human rights, gender equality and improved incomes and quality of life of smallholder farmers and cooperatives involved;
- As the Programme addressed cross-cutting issues such as human rights, gender equity and environmental impacts, in particular the inclusion of women in the coffee supply chain and the adoption of eco-friendly water-saving solutions.

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.

The dissemination of evaluation results could provide the Programme consortium with meaningful data on the use of public development aid funds and provide Italian stakeholders with details on the effectiveness of the public resources deployed. Furthermore, the sharing of these results with key cooperation agencies and local partners will contribute to enhance the partner countries' evaluation capacity with regard to the project's sector of intervention and the operational methodologies adopted.

4 Methodological approach to evaluation

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

4.1 OECD Criteria

Relevance: Relevance assesses how relevant and meaningful an intervention is for beneficiaries and stakeholders. It examines the alignment of the intervention with local and global priorities, such as the Sustainable Development Goals (SDGs), and considers whether the programme responds effectively to emerging needs in the socio-economic context. It also assesses the intervention's ability to adapt to changes over time and to maintain its usefulness.

Coherence: Coherence tests how well the intervention is integrated with existing policies and initiatives, both locally and internationally. This parameter examines the synergies and harmonisation of the intervention with other ongoing efforts, preventing duplication or conflict. It also assesses how the intervention contributes to the broader collective goals and whether it meets international norms and standards, such as those outlined in the 2030 Agenda.

Effectiveness: Effectiveness measures the degree of success of an intervention in achieving its specific and general objectives. It analyses the results achieved against the planned results, including expected and unintended impacts. This parameter also considers the clarity and consistency of the intervention's objectives and how changes or adaptations during implementation affected the achievement of these objectives.

Efficiency: Efficiency assesses how well the resources deployed for the intervention were used to produce the desired results. This includes an analysis of the economic use of resources, operational management and adherence to schedules. It focuses on the effectiveness of the implementation process and the elimination of waste, ensuring best value for money.

Impact: Impact focuses on the long-term and far-reaching effects of the intervention. This parameter analyses the significant changes, both positive and negative, induced by the intervention on beneficiaries and communities. It assesses how the intervention contributes to systemic and normative changes and the extent of its social, economic and environmental impacts, even beyond the implementation period.

Sustainability: Sustainability examines the ability of the intervention to maintain its benefits over the long term. It considers whether the results and impacts of the intervention can be sustained without continuous external support, assessing financial, economic, social and environmental resilience. This parameter also includes the analysis of exit strategies and how the intervention has built capacity and structures to cope with future challenges.

4.2 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. Special 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 Organic, 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.

5 Presentation of evaluation results

The presentation of the evaluation results is given in this summary report as a table of the 52 evaluation questions with their 52 answers.

Parameter	Question	N	Answer
Relevance	How appropriate can the envisaged programme design and implementation approaches be considered?	1	The design of the Programme is aligned with Ethiopia's political and development priorities in the coffee sector. The approach adopted is well adapted to local needs, with a focus on sustainability and the involvement of small-scale producers.
	To what extent are the Programme's objectives, design elements (inputs, activities, outcomes and their indicators) and theory of change logical and coherent?	2	The Programme aims to increase coffee export revenues and improve the income of small farmers in the regions of intervention, with a focus on households. The objectives are aligned to local needs and supported by a theory of change that aims to improve coffee quality and quantity, and expand access to international markets. Key activities include improving agricultural practices, introducing advanced technologies, training farmers and creating collaborative platforms such as the 'Coffee Forum'. The expected results are an increase in coffee production and quality, increased participation in international markets, and improved farmers' incomes. However, the Programme has not sufficiently integrated the gender dimension, despite the significant role of women in the coffee chain.
	Are the indicators SMART (specific, measurable, achievable, relevant and temporarily defined)?	3	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.

	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?	4	The involvement of AICS, UNIDO and illycaffè in the Programme represents an innovative strength in international cooperation. This collaboration with the private sector is rare and offers a model for future similar initiatives. From the early stages, the Programme benefited from a constructive dialogue between AICS, UNIDO and illycaffè, creating an effective action plan that also involved ECTA. This approach facilitated the political legitimacy of the programme and supported the transition of the Ethiopian coffee sector to a more open market. The identification of common goals among the various stakeholders allowed for effective work throughout the coffee supply chain, achieving significant and systemic results.
	How consistent is the implementation methodology with the expected results?	5	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.
Coherence	To what extent are the ways of implementing the interventions consistent with the country strategy within the coffee value chain?	6	Based on Ethiopia's regulatory framework for the coffee sector, the country's existing rural development plans and economic growth strategies are fully consistent with the initiative and how the different components are implemented.
	Is the proposed intervention strategy coherent, appropriate and viable to achieve the overarching goal (impact)?	7	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.
	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?	8	The programme is well balanced along the entire coffee chain in Ethiopia, involving producers, cooperatives, unions and the ECTA/CTC institution. Compared to other interventions in the sector, it strengthens a 'Quality Coffee System', promoting coordination and training between the various actors in the chain. A distinctive element is the active participation of the private sector, with illycaffè and the Ernesto Illy Foundation not only contributing financially, but also providing significant technical support. Experts from illycaffè continue to play a key role in training courses at the Coffee Training Centre, which has become a reference centre for students from all over East Africa.
Effectiveness	To what extent does the Programme consolidate demand for coffee and enable the increase in the value of production and its sustainable management?	9	The Programme has significantly improved the demand for coffee and the value of production, as well as promoting sustainable management. At the local level, improved practices have raised the quality of coffee, increasing domestic demand, while at the international level, collaboration with partners and the promotion of sustainability have strengthened the reputation of Ethiopian coffee. New cultivation and processing techniques, such as the reduction of water use, have increased the quality and value of coffee. In addition, the training offered to producers has enhanced their skills, allowing them to obtain higher prices in the market. On the sustainability front, the introduction of agroforestry practices and the reduction of chemical use have improved environmental management, ensuring the long-term preservation of resources and the resilience of farming communities.
	To what extent has the Programme established a solid basis for	10	The programme established a solid foundation for effective partnerships with key stakeholders, including the private sector and cooperatives, crucial to achieving its objectives. The

	effective partnerships with relevant stakeholders (particularly in the relationship between the private sector and co-operatives) to achieve the expected results?		partnership with illycaffè, a major company in the sector, played a distinctive role, providing technical support, training and improving quality and sustainability standards. This has enhanced the reputation of Ethiopian coffee and facilitated access to more lucrative markets. NGOs, such as Technoserve and COOPI, have facilitated local implementation and ensured the integration of the Programme's activities in communities, adapting recommended practices to local realities. Their presence and knowledge of the area ensured that the needs of producers were respected. Partnerships with government offices for the promotion of cooperatives improved the governance and administrative capacity of cooperatives, making the distribution of benefits among members more efficient. UNIDO provided ongoing support and supervision, maintaining the focus on sustainable development objectives and facilitating significant commercial agreements, such as the sale of 250 tonnes of coffee to the Italian company Originicaffè for USD 120,000.
	To what extent were the programme activities effectively implemented in terms of quality, quantity and timing?	11	The Programme maintained high quality standards in its activities through collaboration with international and local experts, such as illycaffè and UNIDO, and continuous technical and training support to local participants. It sought to involve as many cooperatives and producers as possible, implementing a wide range of activities, including training and installation of sustainable technologies. The timing of activities was carefully planned to align with agricultural cycles and overcome problems with annual contracts, especially in Delo Mena, where COOPI experienced difficulties due to funding disruptions, while Technoserve maintained continuity through alternative funding. Despite some challenges such as the pandemic and logistical problems, the Programme managed to complete activities in a timely manner, ensuring the overall success of the initiative.
	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?	12	The Programme achieved significant results due to several favourable factors. Effective partnerships between ECTA, illycaffè, UNIDO and local NGOs provided high quality technical and management support, enabling the implementation of advanced practices. The adaptability of the Programme to the local context, with specific strategies for each community, improved the acceptance and effectiveness of the actions. In addition, the training has enhanced the skills of coffee producers, improving quality and productivity. However, challenges such as fluctuations in coffee prices and logistical and financial problems have limited the effectiveness of the Programme to some extent. Nevertheless, the results have led to significant progress: improvements in coffee quality and quantity have increased producers' incomes, contributing to local economic development; the adoption of sustainable practices has had a positive impact on the environment; and strengthened management capacities in the cooperatives have improved operational efficiency and equitable distribution of benefits, supporting the economic stability of communities.
	What lessons were learnt and how was the feedback or learning incorporated into subsequent planning and implementation processes?	13	Crucial lessons have emerged from the Programme's implementation that have influenced future planning and implementation, ensuring interventions are more effective and responsive to the needs of the communities involved. The importance of adapting practices and technologies to local specificities has emerged, especially in remote areas, where simple, low-maintenance solutions have proved essential. Collaboration with strong and competent partners proved to be essential for the success and sustainability of the initiatives. In addition, fluctuations in coffee prices highlighted the need for strategies to mitigate economic risks, such as crop and market diversification. Continuous training was recognised as a key element to improve product quality and support the path to certification and traceability, especially in light of the strict European regulations. Finally, the adoption of transversal and

			multi-stakeholder skills was crucial to adapt to new regulations and to preserve access to European markets. The expansion of support networks and a flexible planning approach enabled the company to better address challenges and respond to feedback, focusing on economic, environmental and social resilience.
	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?	14	The Programme has improved the skills of Ethiopian coffee producers through advanced training, increasing their competitiveness in the markets. Collaboration with experts such as illycaffè and the establishment of the training centre run by ECTA have enhanced the quality and quantity of the coffee produced. In addition, the introduction of sustainable farming practices has strengthened environmental sustainability and long-term productivity. Local cooperatives have benefited from technical support and training, improving management and price negotiations, which has stabilised producers' incomes. The programme has also facilitated access to international markets, creating links with the private sector and promoting participation in global events. Finally, interaction with government institutions has helped to develop policies that favour the coffee supply chain, protecting producers from price fluctuations and supporting exports.
	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)?	15	The Programme has invested in the training of women, seeking to maintain a 50% quota in training sessions. However, this commitment has not translated into a greater female presence in the decision-making roles of cooperatives, where management boards are almost entirely male. This exclusion from decision-making and economic benefits is a serious limitation of the programme and a risk to its long-term sustainability. Women, who are essential to communities and the local economy, must be included not only for fairness, but also because their participation is crucial to the success of production systems.
Efficiency	How efficiently were human, material and financial resources used to achieve the desired results in the set time?	16	The human resources were deployed to their full potential and skills, and the activities, although delayed compared to the initial programme, were congruent with the 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.
	To what extent was the existing programme management structure both appropriate and effective in producing the expected outcomes?	17	The Programme benefited from an appropriate and effective management structure, with strong coordination between NGOs, UNIDO and local institutions. This ensured the application of best practices and knowledge transfer, adapting quickly to local needs. Despite financial and logistical challenges, the Programme remained effective and supported the implementation of sustainable technologies and advanced practices for coffee cultivation and processing. Collaboration with international experts and organisations has contributed significantly to achieving quality and sustainability goals.
	To what extent do the Programme's internal monitoring systems provide management with high quality data that allow for learning and appropriate adjustments to implementation?	18	The Programme's internal monitoring system effectively identified and addressed difficulties during implementation, including the collapse of coffee prices on the international market. In collaboration with the Ethiopian Coffee and Tea Authority (ECTA) and other institutional stakeholders, the Programme consortium analysed the issues and formulated strategies to mitigate risks. This approach demonstrated the capacity of the monitoring system to support Programme management and to adapt to complex challenges, facilitating informed decisions and effective solutions.
Impact	Has the intervention led to significant improvements in the lives of the target beneficiaries? How are they quantifiable?	19	The Programme's intervention has brought about several significant improvements that have profoundly affected the beneficiaries. The quantity and quality of coffee produced increased, resulting in higher incomes for small-scale producers due to good market demand and higher purchase prices. Co-operatives have professionalised their operations, improving their

			means of production and increasing the amount of coffee supplied, which has improved their rating with the Union. This improvement will allow them to access more bank credits in the future, protecting members and preventing the dispersion of coffee on the illegal market. In addition, the Programme has raised the knowledge and skills of the producers, facilitating the transition to a professional production system. This has improved the quality of coffee, increasing the number of grade 1-2 batches and enabling producers to obtain premium payments. The Coffee Training Centre has created a centre of excellence under the leadership of ECTA, attracting knowledge and innovation in the coffee sector to Ethiopia and offering international training courses that are in high demand throughout East Africa, increasing Ethiopia's visibility and image in the medium to long term.
	How did the intervention trigger higher order impacts, such as changes in standards or systemic changes, particularly from a market and product quality standardisation perspective?	20	The Programme has significantly improved the quality of the cooperatives' coffee in Sidama and Delo Mena, where the producers show greater attention to harvesting and processing. However, in Delo Mena, market access difficulties limit the full benefit of these improvements. The initiative has also supported the transition of coffee from a state-controlled product to a market commodity, facilitating access to international niches, especially in Europe, Asia and the Americas, and helping to stabilise prices and enhance the value of Ethiopian coffee.
	Did all intended target groups, especially the most marginalised and vulnerable, benefit equally from the intervention?	21	The initiative showed significant disparities in the support of target groups, highlighting strong differences between women and men and a lack of instruments to ensure equity. Business-oriented cooperatives do not adequately protect disadvantaged workers, who often face exclusionary dynamics. Cultural and traditional factors limit the inclusion of women in decision-making processes and there are no support measures for people with disabilities or single-parent families, for whom some intensive phases of coffee processing are difficult to manage. Simple operational measures need to be incorporated to enable everyone to participate equally in local economic life and to overcome existing production and labour constraints.
	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?	22	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-
	Is the intervention catalysing further change, including results that are scalable or replicable?	23	The Programme's intervention catalysed additional resources and expertise, expanding the results. The Coffee Training Centre (CTC), built by illycaffè and the Ernesto Illy Foundation, has had a great impact. In Aleta Wondo, three modern coffee processing plants were built with the initiative, while Technoserve added another 19 plants using private funds. In Delo Mena, producers have started fair trade relationships and exported 250 tonnes of coffee. The diversification of cupping sources has improved the international credibility of the products.
	How will the intervention contribute to the improvement of society?	24	Coffee is a benchmark for Ethiopia due to its advanced standardisation, which serves as a model for other agricultural supply chains. Coffee cooperatives have obtained certifications such as Fair Trade and Organic, facilitating quality improvement for other exports. The complete processing of coffee, from washing to roasting, adds value and creates jobs, especially for young people. Through the Programme, organisation, quality and environmental sustainability have been improved, also increasing the incomes of producers and cooperatives, and supporting the modernisation of Ethiopian agriculture.

Sustainability	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?	25	The cooperatives and unions, supported by the programme, have taken steps to continue actions even after its end. They developed marketing strategies, such as branding for Harenna coffee, obtained value-added certifications and invested in key infrastructure such as washing stations and drying centres. They improved members' skills through continuous training programmes and created coordination networks to share resources and knowledge. In addition, they have promoted environmental sustainability with environmentally friendly farming practices. These initiatives ensure that the benefits of the Programme endure.
	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?	26	The Programme faces several risks that could jeopardise its sustainability. Market fluctuations and government regulations, such as those of the Ethiopian Commodity Exchange (ECX), can destabilise coffee prices and limit market access. Maintaining international certifications is costly, and the lack of adherence to TRIPS agreements complicates the protection of geographical indications. Insufficient cooperation between cooperatives and government agencies can cause inefficiencies. Political change or instability can reduce support for initiatives, limiting technical assistance and access to credit. Unsustainable farming practices can degrade the environment and jeopardise future coffee production. In addition, the management of coffee plants in the Harenna forest is limited by the restrictions of the Bale National Park, risking reduced long-term productivity if natural regeneration is not guaranteed.
	What measures could be taken to improve sustainability, with a special focus on the role of women and their inclusion in the programme dynamics?	27	In order to promote women's leadership in the coffee sector, it is essential to organise specific workshops and adapt meeting schedules to the needs of women. Dedicated micro-credit programmes can provide the financial support needed to invest in equipment and access new markets. Creating support networks among women facilitates the exchange of resources and knowledge. It is crucial to include women in certification processes to ensure that they benefit. Implementing gender-based monitoring systems ensures effective inclusion of women, and access to legal advice can help them defend their property and income rights.
Value chain	How has the public-private partnership helped to improve the quality of the product?	28	ILLYCAFFÈ contributed technical assistance and remote support, collaborating in the creation of the Coffee Training Centre and providing feedback on coffee samples from Delo Mena. BELCO improved the quality of coffee in the Harenna Forest and participated in joint training on harvesting and post-harvest management. CORSINI renewed its collaboration with the Burka Yadot Farmers' Cooperative Union, developing a specific forest coffee blend. ARC and GALANI COFFEE tested samples of Delo Mena and supported market access for organic and wild coffee. CAFFÈ SAN DOMENICO expressed its intention to buy coffee from the Harenna Forest and improve its traceability. ARFASA GENERAL TRADING PLC supported the export of coffee from Harenna and provided tasting services for Delo Mena. ORIGINICAFFÈ imported large quantities of Ethiopian coffee to Italy, while STUMPTOWN COFFEE ROASTERS facilitated connections to the US market. SLOW FOOD collaborated on the marketing of Harenna Wild Coffee and discussed expansion to other cooperatives. These partners improved the quality of the coffee, expanded access to international markets and supported the continuity of the Programme.
	To what extent has commercial	29	Commercial collaboration has improved the standardisation and quality of Ethiopian coffee, bringing it in line with the standards of

	collaboration promoted increased product standardisation, quality control and, in general, conformity of the product to the buyer's expectations?		European and US markets. Public-private partnerships have helped disseminate uniform quality protocols and technical training has improved cultivation and processing techniques. The Coffee Training Centre introduced new roasting and hulling techniques, increasing the capacity of cooperatives to meet international standards. Technical assistance to the Unions has facilitated price negotiations based on accurate quality control, improving transparency and market quality. In addition, support to the Ethiopian Coffee and Tea Authority strengthened traceability systems and prepared coffee for certification in view of the new European regulations in 2025.
	How has the production capacity of coffee producers improved?	30	The production capacity of coffee farmers has improved thanks to several key interventions. Producers have received advanced training in modern and sustainable farming techniques, improving plantation management and coffee processing. New processing facilities, such as environmentally friendly washing centres and hulling plants, have increased efficiency. The programme has facilitated access to improved seeds and sustainable fertilisers, increasing crop yields. Co-operatives have been strengthened with better management practices and marketing tools, improving co-ordination and distribution of coffee. The introduction of innovative technologies has optimised the cultivation and post-harvest stages, reducing losses and improving coffee quality.
	How do we expect them to increase their commitment/investment in coffee production?	31	The Programme has created crucial production resources for coffee producers, such as the young plant base and new processing equipment. However, to increase household engagement in the sector, two elements are crucial. First, ensuring stable incomes through long-term contracts with minimum prices, which require the demercification of coffee to access niche markets with premium prices. This allows coffee to be valued for its unique characteristics, ensuring economic stability and incentivising further investments. Second, ensuring immediate payment upon delivery of coffee to cooperatives is essential. Producers often cannot wait months for payment, and this practice provides the necessary liquidity to support their families and reinvest quickly. Without this, they are driven to sell through less advantageous channels. These two elements, if achieved, create an environment that motivates producers to invest more in the coffee sector, ensuring a sustainable long-term commitment.
	What improvements have been made to the quality of the coffee value chain?	32	Improvements in the coffee supply chain cover several key areas. Sustainable farming techniques, such as integrated pest management and the use of natural fertilisers, have been introduced, as well as selective harvesting of ripe beans, which have increased coffee quality. Farmers have received specific training on cultivation practices and post-harvest management, including techniques to maintain washing stations and drying beds, improving the preservation of green coffee. In addition, new post-harvest infrastructure, such as eco-friendly washing stations and metal drying beds, was built and improved, reducing the risk of contamination and improving the quality of the final product. The timing of harvesting and processing was optimised, reducing the time between harvesting and drying, which minimised the problems of fermentation and fungal development in the coffee.
	Can quality certification improve the market demand for the product and enable an increase in coffee selling prices?	33	Quality certification, such as organic and fair trade, can increase demand and prices for coffee in the European, US and Asian markets, ensuring that products are ethically and sustainably sourced. With the introduction of new European regulations on deforestation and organic certification from 2025, full traceability and individual certifications for cooperatives will be required, making access to the European market more complex. The Programme has prepared producers for these changes by promoting sustainable farming practices and improving the

			traceability of coffee. This will help producers obtain the necessary certifications and maintain access to European markets, increasing the value and prices of their coffee.
	Which specific certification could guarantee better results?	34	The choice of certification for coffee depends on the target market, the producers' ability to meet standards, and local regulations. The main certifications for Sidama and Oromo producers include Organic Certification, which guarantees that the coffee is grown without pesticides, and is very popular in the European and North American markets, allowing higher prices. With the new European regulations, each cooperative will have to manage this process itself. Fair Trade certification ensures fair prices for producers, improving their living conditions and making the product more attractive. Finally, Rainforest Alliance and UTZ certifications promote sustainable agricultural practices and are preferred by ecologically conscious consumers due to their focus on protecting the environment and improving conditions for local communities.
	How have producers' skills been strengthened in coffee production, harvesting and initial handling and processing?	35	The programme improved the skills of coffee producers through training in advanced agricultural techniques, support for processing management and investment in modern infrastructure. Producers have learned practices such as pruning and composting. Co-operatives have been helped to optimise initial coffee processing, with new washing stations and drying centres. The unions of the cooperatives have improved the processing and export of coffee, obtaining licences and making international sales. In addition, the Coffee Training Centre in Addis Ababa provided advanced technical education, improving capacities throughout the supply chain.
	Have the capacities of the cooperatives improved in the secondary processing of coffee and the quality of services rendered to farmers?	36	The Programme has significantly improved the capacity of the cooperatives in coffee processing and in the quality of services offered to farmers. Significant investments have been made in the infrastructure of the cooperatives, with the renovation of washing stations, the construction of coffee drying centres, and the establishment of input distribution centres and cooperative nurseries, accompanied by technical and management assistance. The cooperatives and unions received training to optimise their operations, improving quality and efficiency in coffee processing and drying. The Programme has also facilitated links with international markets, allowing the cooperatives to export coffee directly at better prices and offering advantageous terms to members, increasing farmers' incomes. For example, BYFCU exported about 250,000 kg of coffee, generating significant income and providing its members with a premium price thanks to the improved practices promoted by the Programme.
	Are Unions able to provide good services to cooperatives and producers in terms of market organisation and coffee procurement?	37	The Programme has improved the capacity of the unions to support cooperatives and coffee producers. The Sidama Coffee Farmers Cooperative Union strengthened its marketing and commercialisation strategies, while the Burka Yadot Farmers' Cooperative Union obtained a licence to export coffee directly, bypassing middlemen and improving control over the value chain. The unions received training to improve post-harvest management and coffee quality, increasing its value in the market. In addition, infrastructural supports, such as hulling stations and sustainable energy, were provided to better manage coffee processing and storage. These improvements have enabled unions to offer premium prices to producers, incentivising higher quality and increasing their incomes.
	How have the processes, equipment and infrastructure for coffee processing been improved?	38	The Programme made significant improvements to the coffee processing infrastructure. Nine washing stations were refurbished and a new coffee drying centre created, increasing the efficiency and quality of processing. In addition, modern roasting, brewing and espresso equipment was installed in the new Coffee Training Centre (CTC) in Addis Ababa, enabling advanced practical training and improving coffee quality. The

			establishment of the CTC provided a permanent centre for continuous training and raising standards in coffee processing. Finally, business plans were developed and approved to optimise processing processes and effectively manage the new infrastructure.
	What is the improvement in the yield of the two coffee processing steps: washed and sun-dried coffee?	39	The programme has improved the coffee yield throughout the supply chain, focusing mainly on the quality aspect. A key element has been the optimisation of harvest timing, ensuring that the cherries are picked at their peak ripeness, resulting in a richer flavour profile and more uniform quality. In addition, post-harvest processing was speeded up to prevent unwanted fermentation and loss of quality. Timely and efficient processes, from cleaning to drying, have been implemented to maintain the freshness and flavour integrity of the coffee. The use of modern machinery and high standards has optimised each processing step, helping to further improve product quality. This integrated approach has raised the profile and perceived value of Ethiopian coffee in the global market.
	Do the machines meet the legal safety requirements in the country? Do they comply with international standards?	40	In many primary co-operatives, coffee processing machinery is often old and inefficient, due to limited financial resources that prevent the purchase of modern equipment. This problem is less evident in larger and financially sound cooperatives, which can invest in new and more efficient machinery. This technology gap negatively affects the quality of coffee and the environmental sustainability of operations. In contrast, the Sidama Producers' Union uses very modern machinery, improving processing efficiency and ensuring high safety standards. These machines reduce the environmental impact and improve the quality of the final product. In the Burka Yadot Producers' Union of Oromia, the dried coffee cleaning machinery, acquired with the support of the Programme, is a positive example of how targeted investments can improve operational efficiency and maintain good energy efficiency.
Environmental Impact	Is it possible to roughly estimate the main sources of carbon and greenhouse gas emissions related to the coffee value chain?	41	In coffee processing, there are two main processes: the wet (washed) process and the dry (natural) process, each with different environmental implications. Both processes start with the manual harvesting of ripe cherries, which involves minimal emissions mainly related to the transport of workers and materials. In the wet process, the cherries are cleaned, fermented, washed and dried, with significant climate-altering gas emissions due to the use of water, energy for the pumps and anaerobic fermentation processes. The cleaning, washing and fermentation of cherries in the wet process generates a total of about 1.1 kg of CO2 equivalent per quintal of cherries, mainly due to the use of fossil fuels and the release of methane during fermentation. The dry process does not require washing or fermentation, but the whole cherries are dried in the sun, thus reducing CO2 emissions related to the use of water and fossil fuels. However, fermentation of the drupes and mucilage during natural drying can produce methane. Both processes include hulling, roasting and grinding of the grains, with moderate emissions due to the use of machinery. Roasting, in particular, can produce significant CO2 emissions if fuelled by gas or fossil fuels. Finally, sales packaging involves emissions related to the transport and production of packaging materials, which must be calculated using life cycle analysis (LCA) criteria.
	Can the main sources of greenhouse gases be reduced with appropriate technologies?	42	Cleaning and Washing (Wet Process): To improve energy efficiency, it is recommended to install high-efficiency pump systems powered by solar energy. To reduce the use of fresh water and minimise environmental impact, it is essential to implement water recycling and purification systems. Fermentation (Wet Process): The control of the fermentation process can be optimised by using biological and mechanical

			techniques to maintain aerobic conditions, thus reducing methane production. Capturing the methane generated can turn it into an energy source, exploiting a potential harmful emission as a useful resource. Drying (Wet and Dry Processes): The use of adjustable drying beds allows maximising sun exposure and improving air circulation, reducing drying time and the possibility of fermentation of residual mucilage. Hulling and Grinding: the energy efficiency of hulling and grinding machines can be improved with technologies that consume less energy per unit of processed coffee. It is advantageous to consider the use of renewable energy to power these machines. In addition, regular maintenance of the equipment ensures efficient operation, reducing energy waste and wear and tear. Roasting: Modern roasters, which offer better temperature and air control, can reduce energy consumption and fossil fuel emissions. Installing heat recovery systems in roasters allows waste heat to be reused in other process steps, such as pre-heating water. Packaging: In order to reduce the emissions associated with the production and disposal of materials, one should opt for biodegradable or recycled packaging. In addition, improving logistical efficiency can help reduce emissions associated with transporting finished coffee to the point of sale or to consumers.
	Are the coffee harvesting and processing stages optimised in terms of water consumption?	43	In coffee processing cooperatives, water use is not optimised because it is currently not considered a limiting factor. This leads to excessive and inefficient consumption, with possible long-term negative consequences such as local environmental problems and sustainability risks.
	Can these be further improved to save and recycle water?	44	To reduce water consumption in coffee processing, several practical solutions are possible. Firstly, the implementation of advanced water treatment and recycling systems would allow water to be reused in multiple process steps, thus reducing overall consumption. In addition, the adoption of technologies to reduce the volume of water needed for washing and fermentation of the grains could lead to significant water savings. Optimising wastewater treatment is another key strategy, thus reducing the environmental impact of discharges. Integrating rainwater harvesting systems could help reduce dependence on local water resources. In parallel, it is essential to invest in educating workers and managers on efficient water use practices, promoting sustainable behaviour. Finally, the use of real-time monitoring systems would allow tracking and analysing data on water consumption, identifying areas where targeted improvements can be implemented.
	Is the water from the depulping of ripe cherries treated before being dispersed into the environment?	45	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.
	Are the chemical inputs applied in the fields used appropriately and consistently with the needs of the soil/recovery capacity?	46	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. Moreover, the producers who harvest ripe cherries in the forest areas in the Delo Mena Wereda observe a total constraint 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.
	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?	47	In Aleta Wondo, new areas for coffee cultivation are located on land previously used for ensete cultivation or under fruit trees such as avocados, mangoes and banana trees. However, mapping shows that the agrarian landscape of the region has remained stable over time, with no recent changes in land use. In Delo Mena, coffee cultivation takes place in two distinct models: under the canopy of the Harenna natural forest, within the Bale Natural Park, and in urban and peri-urban areas following a classical agronomic model. The new areas for coffee cultivation do not damage the natural forest cover, as plots already cultivated with tree perennials are available, promoting biodiversity and sustainable management of the agrarian landscape.
	What is the amount of wild coffee compared to that grown on farmland? How much of the coffee is wild? To what extent is the coffee canopy composed of native species in a structure equivalent to the natural one?	48	According to data collected from a survey of 117 producers, 55% use shade plants of natural endemic species, while 33% harvest coffee under natural forest cover. 8% have coffee plants grown under multifunctional tree cover and 3% have no tree cover at all, mainly due to recent plantings. However, there are significant differences between Sidama and Oromia: in Oromia, 81% harvest coffee under natural forest cover, while only 19% do so under natural endemic tree plants. In Sidama, on the other hand, 88% grow coffee under natural endemic tree plants, and only 23% under multifunctional plants. There are no farmers growing coffee under forest cover in Sidama.
Gender issues and inclusion	Has the programme increased the inclusion of women in the governance of coffee production?	49	The data collected indicate that the programme has not increased the inclusion of women in the governance of coffee production. Among the 20 cooperatives interviewed, only two women were involved, of whom only one holds a managerial position in Oromia. In the focus groups, the women of Aleta Wondo shared that two women were elected to the management boards of the cooperatives, but they hope for a more balanced gender representation. The interviewees believe that many women have the necessary skills for leadership roles, but often do not have access to these opportunities. In Delo Mena, women expressed interest in holding positions on management boards, but face cultural resistance. In both regions, women recognise the importance of a greater gender balance in governance.
	Has the Programme improved the technical capacity of women coffee producers?	50	The programme improved the technical capacity of women coffee producers, although not all of them had access to adequate training. Among the 31 women interviewed, 22 participated in the training, with 17 finding it 'very useful' and 5 'partially useful', indicating a strengthening of skills. In Aleta Wondo, the women learnt techniques to improve coffee quality, such as picking red, large berries and packing them quickly. However, they found it difficult to replace older plants due to shortages in the nurseries. In Delo Mena, the training offered improved the ability to maintain coffee quality, but many women did not have access to further training because of discriminatory practices, limiting their technical development. Participants suggest a more inclusive and equitable training programme.
	Has the income of women coffee producers increased since the Programme?	51	The results of the questionnaires and focus groups show that the earnings of women coffee producers increased during the programme, albeit with regional variations. Of the 31 women interviewed, 19 reported a significant increase in earnings and 6 a slight increase. In Aleta Wondo, women have seen their earnings increase over the last 2-3 years due to the expansion of plantations and improved production techniques, despite a recent price fluctuation. In Delo Mena, on the other hand, earnings have remained stable due to factors such as unpredictable weather, animal damage and berry theft,

			complicated by the difficulty of balancing work on the plantation with domestic responsibilities and transport problems.
	Has the Programme made it easier for women to reconcile family and work responsibilities? In what way?	52	The programme only partially addressed the challenges of reconciling family and work responsibilities for women. In focus groups in Aleta Wondo, participants reported difficulties in balancing family management and work, compounded by cultural beliefs and lack of access to credit. In Delo Mena, women emphasised the problems of limited time, lack of transportation and discrimination in access to agronomic services, which limit their ability to expand plantations. Despite these difficulties, many women have expanded their skills and earnings, with 26 out of 31 respondents planning to expand their activities in the future.

6 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.

7 Recommendations

1) Consider **regulating the local market for quality coffee**: in view of the ever-growing domestic coffee market and the related growing domestic demand as well as the difficulty in restricting the sale of quality coffee through informal channels, it is considered that the definition of a clear and flexible regulatory framework could favour the regulation of trade in a high-quality product also in the domestic market.

Similarly, such a regulatory framework could generate a positive impulse for the entire sector, improving quality standards and consolidating the role of the coffee industry in the country's economy. An increase in the supply of quality coffee on the domestic market would not only respond to the growing demand for the fine product, but would also stimulate the entire supply chain to rise to higher standards, improving the overall positioning of the country's coffee in terms of both volume and quality, while maintaining a strong focus on exports and supporting the growth of both sales channels.

2) **Expand access to financial markets**: facilitate access to low-interest credits 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 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.

8 Lessons learnt

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

The decision to adapt agricultural practices and technologies used to the local context was decisive. 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 purchased and employed, efficient but not too complex to operate and maintain, is certainly the right choice for the context.

A second successful feature of the project is the central role played by strong and collaborative partnerships between the private sector, NGOs and local authorities at different levels. These partnerships, based on diversified competencies and shared objectives, led to excellent results and increased sustainability of the implemented actions. 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 expressed by qualified partners 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.

It is now crucial to maintain a systemic approach in the management of emerging constraints and the identification of risk mitigation measures. 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 the diversification of production and markets. Problems related to this have not been solved, but have been considered 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.

There was further confirmation of the importance of training for different professional levels in the public and private sector. 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 the self-sufficiency and long-term growth of producing communities.

It was emphasised through evaluation how 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 allows epochal challenges, such as pandemics and consequent global economic crises, to be overcome with some tolerance in time.