

Costa Rica Low-Carbon Coffee

Final Evaluation and Learning Exercise (ELE) Report & Management Response

June 2021

Overview

- **Management Response:** response to the recommendations made by the evaluation team in this Evaluation and Learning Exercise (ELE) report. Jointly written by the NAMA Support Project (NSP) and the Technical Support Unit (TSU) of the NAMA Facility.
- **Evaluation and Learning Exercise Report:** external and independent evaluation conducted by the consortium AMBERO and Oxford Policy Management.

ELE Costa Rica Coffee Management Response

1 Background

In 2020, the NSP Costa Rica Coffee was subject to an independent end-of project Evaluation and Learning Exercise (ELE) conducted by an evaluation team led by AMBERO Consulting.

The Technical Support Unit (TSU) is publishing this management response to the recommendations made by the evaluation team in their ELE report.

2 Response to Recommendations

| Recommendation | Management Response | | |
|--|---|-------------|--|
| Recommendation 1 | Activities | Who | When |
| NSP design: a) For projects in a smallholder sector to include baseline emissions data and target reductions/removals in the NSP Proposal is cumbersome and reliable baseline data may not exist. It is recommended that a scoping study is included to either validate existing data or collect necessary data for the baseline and targets. b) Indicators should be SMART and sufficient indicators should be developed for the specific context. Two to three well-defined indicators per output deliver a solid base for monitoring and evaluation. | <u>Current Activities</u> On a) During the DPP and with financial support from the NAMA Facility, applicants can conduct studies to substantiate existing GHG emission data and collect necessary additional data for baselines and targets. | TSU | Since the 4 th Call, demand-based |
| | On b) As part of feedbacks on Outline and Proposal submissions, the TSU provides recommendations on proposed indicators. | TSU | Ongoing |
| | <u>Additional Activities</u> On b) The TSU provides more explicit guidance in its Outline and Proposal templates on the recommended number of indicators. | TSU | 12/2020 |
| Recommendation 2 | Activities | Who | When |
| Timescales: It takes more time than anticipated [four years] in the NSP's design for changes and results to materialise in agricultural, particularly smallholder, settings, and it is recommended that the NAMA Facility is realistic in its expectations. | <u>Current Activities</u> As part of feedbacks on Outline submissions, the TSU encourages to propose realistic timelines taking into account sector-specifics. | TSU | Ongoing |
| | <u>Additional Activities</u> Based on learnings from its NSP portfolio, the NAMA Facility expectations and requirements concerning agricultural, particularly | Donors, TSU | Q1/2021 |

| | | | |
|---|--|------------|---|
| | smallholder-specific, projects will be discussed. | | |
| Recommendation 3 | Activities | Who | When |
| Financial interventions in the coffee sector: It is recommended for such products [concessional loans] to be timed in line with production cycles (when funds are needed throughout the year), to build on existing structures such as credits received through global coffee traders and/or roasters and to collaborate with banks or respectively other financial service providers (civil society) closer to farmers/ farmer organisations, i.e. with established business relations. | <u>Current Activities</u> When submitting an NSP Outline, applicants are required to provide a basic business model and justification for the chosen financial support instrument to demonstrate the need and feasibility of the financial intervention. | TSU | Since the 4 th Call |
| | When submitting an NSP Proposal, NSPs are required to provide an in-depth analysis of the market and financial analysis (including cash-flow analysis) to substantiate that the financial mechanism responds to an actual need and can be implemented effectively. | TSU | Since the 4 th Call |
| | <u>Additional Activities:</u> As part of feedbacks on NSP Outline submissions that are similar to the NSP Costa Rica Coffee, the TSU relates to lessons learned from the ELE and shares the link to the ELE report. | TSU | Start in Q1/2021 (7 th Call feedbacks) |
| Recommendation 4 | Activities | Who | When |
| Framing the narrative: For farmers, climate change adaptation tends to be more relevant and important than mitigation. They may be more accessible when approached through an adaptation rather than a mitigation perspective, i.e. the work should align to the objectives and needs of the coffee farms and mills. | <u>Current Activities</u> This is not unique for the agricultural sector. NSPs are expected to create co-benefits for the target groups that can be the main driver for changes and help to frame the narrative. The NAMA Facility accepts that GHG mitigation is not the core incentive for target groups to change behaviour or make an investment decision but that co-benefits (or legal compliance) are key drivers for mitigation actions. | TSU | Ongoing |

Final Evaluation and Learning Exercise: Costa Rica “Low Carbon Coffee” NAMA Support Project

NAMA Support Project Evaluation and Learning
Exercises for the NAMA Facility

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Final report

Kerstin Linne and Julio Guzmán

October 2020

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Disclaimer

The results and analysis included in the report are based on an external and independent evaluation conducted by the consortium AMBERO-OPM. The conclusions drawn in the report do not necessarily reflect the official views of the NAMA Facility and/or of the NAMA Support Project under evaluation.

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Preface

The NAMA (Nationally Appropriate Mitigation Actions) Facility was established in 2013 and has since received support from donors including Denmark, the European Union, Germany, and the United Kingdom. The NAMA Facility’s vision is to ‘accelerate carbon-neutral development to keep temperature increases to well below two degrees Celsius by supporting NAMA Support Projects (NSPs) that effect sector-wide shifts toward sustainable, irreversible, carbon-neutral pathways in developing countries and emerging economies. All NSPs with an overall duration of more than three are subject to a mid-term and to a final evaluation and learning exercise.

The NAMA Facility’s Technical Support Unit (TSU) functions as the secretariat of the NAMA Facility. The TSU commissioned AMBERO and Oxford Policy Management to conduct mid-term and final Evaluation and Learning Exercises (ELEs) for NSPs from calls 1, 2, 3 and 4.

Each ELE is conducted using the same Theoretical Framework (FW), which involves the application of a document review, participatory workshops, and stakeholder interviews to collect evidence about NSPs’ results and lessons analysed using a Theory-based approach centred on the use of contribution analysis reinforced by elements of process tracing.

This document presents the findings of the **final ELE of the Costa Rica Low Carbon Coffee NSP**. The report has been reviewed by Marcela Tarazona (Technical Lead, NSP ELE Team) and Elizabeth Gogoi (International Expert A, NSP ELE Team). For further information, please contact vera@ambero.de.

Executive summary

This document presents the findings of the **final ELE of the Costa Rica Low Carbon Coffee NSP**. The ELE was undertaken during the period June-October 2020. In accordance with the Terms of Reference, this ELE sought to address the following questions:

- Has the NSP achieved its results?
- Has the NSP started to trigger transformational change?
- What was learnt from the NSP so far?

More information about the key focus of this ELE and on the methodology followed can be found respectively in Section 1.2 and Section 2.

The Costa Rica Low Carbon Coffee NSP (March 2015 - December 2020) has a budget of EUR 7 million. Its objective is that “coffee production and processing in Costa Rica is done in a lower-emission and sustainable manner”.

The NSP has two components to achieve overall project objectives: a technical and a financial one. The technical component works with coffee farms towards lower emission production practices. The financial component works with financial institutions to avail necessary financial resources to coffee farms and mills to invest in low-emission practices and facilities.

The NSP is in line with national strategies and policies such as

- the “Decarbonisation Plan 2019-2050” target (formerly Carbon Neutrality 2021);
- the Costa Rica’s Nationally Determined Contributions (NDCs); and
- the “State Policy for the Agri-food Sector and Rural Development 2010-2021” of the Costa Rican Ministry of Agriculture (MAG).

The NSP addresses a **need, set out also in these policy documents, for the government to implement strategies and achieve targets related to low-carbon and sustainable economic development**. However, there is no specific policy target for climate change mitigation for coffee farms and mills. The NSP is built on the assumption that the coffee sector contributes 10% of national greenhouse gas emissions and holds a reduction (90,000tCO₂e p.a.) and removal potential (30,000tCO₂e p.a.).

The NSP has demonstrated that climate change mitigation activities can lead to increased cost efficiencies at coffee farms and mills, thus ultimately reducing coffee production costs. The activities implemented by the target group (coffee farms and mills) also translate into emission reductions. This demonstrates strong alignment between business interests of the target group, and both the country and NAMA Facility’s climate objectives.

When the NSP’s Theory of Change (ToC) was designed by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the NAMA Facility did not yet have an overarching ToC. Nonetheless, the NSP shows alignment with the outcomes identified in the current NAMA Facility ToC, designed in December 2018.

The main difference between the NSP’s TOC and the NAMA Facility ToC, is the NSP focus on **delivering transformation via technical assistance**, and the financial component is more of **an enabling activity to facilitate access to finance for coffee farms and mills**. The NAMA Facility’s ToC

puts more emphasis on climate finance as a driving transformation force. According to the NAMA Facility, NSPs should demonstrate how climate finance effectively contributes to transformational change. The focus of NSPs should be on financial support mechanisms that serve to mobilise capital investments in and operation of carbon-neutral alternatives in a given sector.¹

The NSP is expected to deliver impact via two outcomes: the first a result of **technical interventions** (outcome 1; technical component) and the second a result of **financial interventions** (outcome 2; financial component). These will be assessed against three indicators: two under outcome 1 and one under outcome 2. Outcome 1 states *“The key actors in the coffee sector implement strategies, programmes and measures which ensure that coffee is produced and processed in a low-emission and environmentally, socially and economically sustainable manner”* and its two indicators have been achieved. Outcome 2 states *“Key actors in the coffee sector, especially at the level of coffee mills, invest in technologies for low-carbon coffee production”* and the corresponding indicator has been achieved only partly. **The NSP therefore achieved its outcomes to a large extent.**

Three financial interventions under outcome 2 were foreseen: a credit line for privately and cooperative like organised mills and farmer organisations, a subsidy scheme for investments in efficient technologies for mills² and an incentive mechanism for farmers to plant shade trees³. The financial component has not been as successful as anticipated. This is due to the credit line being unsuccessful: no credit was disbursed due to the strict requirements and bureaucratic structures of financial institutions and the rather unattractive financial conditions of the credit scheme developed. When the funds were finally available, other sources of financing with better conditions and less bureaucracy were available on the market.

All project activities under outcome 1 as well as the subsidy scheme for mills and the incentive mechanism for farmers contributed to reaching its outcomes.

According to the NAMA Facility, “transformational change is a catalytic change in systems and behaviours resulting from disruptive climate actions that enable actors to shift to carbon-neutral pathways”. This means that the NSP catalyses sustained greenhouse gas (GHG) emissions savings at a much larger scale than the savings from the NSP alone. The goal is that all NSPs ‘lock in’ GHG savings from systemic change.

Respective changes towards such a transformation have been confirmed throughout the interviews particularly at the level of the involved government partners as well as of the involved coffee farms and mills. **Transformational change has thus not been achieved, yet, but the road to transformation has been prepared.**

For example, the NSP exceeded its target of reaching 6,000 coffee producers with an additional 1,536 producers now applying at least two of the promoted low emission technologies and practices. It reached 40 out of 50 targeted coffee mills that now apply at least two technologies reducing GHG emissions such as enhanced drying patios or increased energy efficiency. One important contribution of the NSP was to raise awareness of the need for data collection and monitoring, and to support implementation among coffee farms and mills.

In the interviews, the beneficiaries particularly highlighted the following benefits brought about by the NSP:

¹ Compare <https://www.nama-facility.org/concept-and-approach/theory-of-change/>, last accessed 01/09/2020.

² 10% of the investment carried out to a maximum of US\$15.000.

³ US\$4 per tree planted including the cost of the seedling.

“We changed the old drying ovens (in our mill) for new and more efficient ones, which is saving energy and lowering emissions.”

“The NSP structured internal processes for producers and mills. Now we collect data daily and maintain records”

“The NSP has supported us with training, inventories, coffee shade trees, reforestation activities, micro-mills, and treatment of wastewater. All this is now paying out in reduced costs.”

The national coffee institute (ICAFE) and the government partners, Ministry of Agriculture and Livestock (MAG) and Ministry of Environment and Energy (MINAEC), are satisfied with the NSP’s results and its implementation structure. They explicitly pointed out to note positive changes within their own work by building on project results such as enhanced emission data collection systems providing a more accurate picture of the contribution of the coffee sector to the national carbon neutrality target and the better trained extension staff, who are able to implement more targeted activities. Ultimately, it has increased the work quality and the work efficiency of the national extension staff.

Based on the analysis of all inputs, the evaluators derive at the **following main lessons learnt and accompanying recommendations for potential future NSPs in smallholder agriculture:**

1. **NSP design:** One NAMA Facility requirement is to include baseline emissions data and target reductions/removals in the NSP Proposal. However, for projects in a smallholder sector this is cumbersome and reliable baseline data may not exist (as in this case). There is a risk that it will lead to setting false and impossible target values. It is recommended that a scoping study is included to either validate existing data or collect necessary data for the baseline and targets. Another important lesson from the evaluation regarding NSP design is related to the development of NSP indicators. Indicators serve to measure progress and ultimately impact. In this case, the NSP has a total of 31 indicators. This translates into enormous monitoring efforts. At the same time, some of these indicators are not specific, measurable, attributable, realistic and/ or timely (SMART). The value of these indicators is thus marginal. For future NSPs we recommend that indicators should be SMART and sufficient indicators should be developed for the specific context. Two to three well defined indicators per output deliver a solid base for monitoring and evaluation.
2. **Timescales:** It takes more time than anticipated in the NSP’s design for changes and results to materialise in agricultural, particularly smallholder, settings, and it is recommended that the NAMA Facility is realistic in its expectations. Achieving measurable impact in the Costa Rican coffee sector within four to five years is unlikely, especially when approaches need to be first developed and piloted and timed to production cycles. As one interviewee stated: *“Now that it is becoming interesting, the project is over”*.
3. **Financial interventions in the coffee sector:** It is a challenge to find financial products suitable for smallholder agricultural contexts. Coffee farmers and millers do not have the necessary collateral required by commercial banks, and their financial literacy and trust in banks may be low (particularly for smallholder farmers already at high risk of building up debt). It is therefore recommended for such products to be timed in line with production cycles (when funds are needed throughout the year), to build on existing structures such as credits received through global coffee traders and/or roasters and to collaborate with banks or respectively other financial service providers (civil society) closer to farmers/ farmer organisations, i.e. with established business relations.
4. **Framing the narrative:** For farmers, climate change adaptation tends to be more relevant and important than mitigation. They are negatively affected by rising temperatures or changes in

precipitation. They may be more accessible when approached through an adaptation rather than a mitigation perspective, i.e. the work should align to the objectives and needs of the coffee farms and mills.

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List of abbreviations

| | |
|---------------------|---|
| AR | Annual Report |
| BEIS | UK Department for Business, Energy and Industrial Strategy |
| BID-FOMIN | Inter-American Development Bank - Multilateral Investment Fund (Banco Interamericano de Desarrollo - Fondo Multilateral de Inversiones) |
| BMU | German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit) |
| BMZ | German Federal Ministry of Economic Cooperation and Development |
| CABEI | Central American Bank for Economic Integration |
| CATIE | Centro Agronómico Tropical de Investigación y Enseñanza |
| CO ₂ (e) | Carbon dioxide (equivalent) |
| ELE | Evaluation and Learning Exercise |
| ER | Emissions reduction(s) |
| FONAFIFO | National Forest Fund |
| FW | Theoretical Framework |
| GAP | Good Agricultural Practices |
| GHG | Greenhouse gas |
| GIZ | German Corporation for International Cooperation GmbH (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH) |
| IADB | Inter-American Development Bank |
| IATP | Institute for Agriculture and Trade Policy |
| ICAFFE | Costa Rican Coffee Institute |
| IGS | Indicator Guidance Sheet |
| IICA | Inter-American Institute for Cooperation on Agriculture |
| IKI | International Climate Initiative |
| IMN | National Meteorological Institute |
| KII | Key Informant Interviews |
| M&E | Monitoring and Evaluation |
| MAG | Ministry of Agriculture and Livestock |
| MINAE | Ministry of Environment and Energy |
| MRV | Monitoring, Reporting and Verification |
| NAMA | Nationally Appropriate Mitigation Actions |
| NDC | Nationally Determined Contributions |
| NP | NSP Proposal (version from 15 Oct. 2014) |
| NSP | NAMA Support Project |
| OPM | Oxford Policy Management |
| SINAMECC | National Metrics System for Climate Change |
| SMART | Specific, measurable, attributable, realistic, timely |
| ToC | Theory of Change |
| TSU | Technical Support Unit |
| UNA | National University of Costa Rica |

1 Introduction

The overall purpose of this report is to present the results of the first pilot Evaluation and Learning Exercise (ELE) under the NAMA Facility for the Costa Rica “Low Carbon Coffee” NSP. The purpose of the ELEs is to promote learning (including from failures) and adaptation, and to promote accountability of the NSPs and NAMA Facility results. This is in line with the NAMA Facility’s overall M&E Framework.⁴

1.1 Overview of the Costa Rica “Low Carbon Coffee” NAMA Support Project

The government of Costa Rica initiated a Coffee NAMA (NAMA Café) in a participatory process to be implemented during a period of ten years starting in 2011.⁵ The main institutions involved in the development of the NAMA Café are the Ministry of Agriculture and Livestock (MAG), the National Coffee Institute (ICAFFE), the Ministry of Environment and Energy (MINAE) and the National Foundation FUNDECOOPERACIÓN. The project “Support for Implementing the National Strategy for Climate Change” implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the research centre Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), the Costa Rican National University (UNA) and Inter-American Institute for Cooperation on Agriculture (IICA), funded by BMU’s International Climate Initiative (IKI) offered technical support to design the Costa Rica NSP.

The overarching goal of the Costa Rica “Low Carbon Coffee” NSP is that coffee production and processing in Costa Rica is done in a lower-emission and sustainable manner.⁶

The NSP has two components: a technical and a financial one. Under the technical component, the NSP works with coffee farms towards lower emission production practices (output A), with coffee processors (mills) towards lower emission facilities and processes (output B), with Costa Rican institutions as well as coffee farms and mills towards a system for monitoring, reporting and verifying emissions (output C) and with coffee supply chain actors towards access to differentiated markets (output D). Under the financial component the NSP works with financial institutions to avail necessary financial resources to coffee farms and mills to invest in low-emission practices and facilities. This includes a credit line for privately and cooperative like organised mills and farmer organisations, a subsidy scheme for investments in efficient technologies for mills and an incentive mechanism for farmers to plant shade trees.

The NSP is being implemented by GIZ between March 2015 and December 2020 with a budget of EUR 7 million.

The steering structure of the NSP is as follows:

- A **Political Steering Committee** comprising representatives of MAG, MINAE and ICAFFE at the level of Ministers or Vice Ministers and respectively the Executive Director of ICAFFE. The Political Steering Group gives guidance to the project on the political and strategic level.

⁴ The NAMA Facility M&E framework is available at: <https://www.nama-facility.org/concept-and-approach/monitoring-evaluation/>, last accessed 06/07/2020.

⁵ <https://www.namacafe.org/en/costa-rican-coffee-nama>, last accessed 12/08/2020.

⁶ All the below mention project description was taken from GIZ 2014.

- A **Technical Steering Committee** comprising representatives of MAG, MINAE and ICAFE at the level of technical experts responsible for coordination, and respectively a member of the executive board of ICAFE with decision making power, a GIZ member and a representative of the NAMA Café support project financed by BID-FOMIN in advisory roles. The Technical Steering Committee is responsible for overseeing and coordinating the project implementation and providing technical guidance.
- A **Technical Secretariat**, which functions as the project management unit.
- An extended roundtable, “**Mesa NAMA Café**” which, based on demand and interest, includes a much wider variety of stakeholders such as cooperatives, public institutions, NGOs, consultants, national and international academies and financial institutions, which focus on cooperation and coordination of activities involving the partners of NAMA Café, as well as on knowledge management. The Mesa NAMA Café also links the NAMA Support Project with Costa Rica’s broader NAMA Café activities.

1.2 Agreed Evaluation and Learning Questions

The ELE has been guided by the following evaluation and learning questions (see Evaluation and Learning Matrix in Annex D):⁷

1. To what extent does the NSP address an identified need (coffee producers, processors, markets)? How well does the NSP align with government and agency priorities (regarding lower CO₂ emissions)?
 - 1.1. Were the NSP design and actions, and in particular the financial mechanisms, appropriate to support investments in mitigation actions in the coffee sector in an efficient manner?
 - 1.2. Are results that are reported for the five mandatory core indicators by the NAMA Facility in line with the NAMA Facility’s M&E framework?
 - 1.3. Were the activities, outputs, and outcomes of the NSP designed to solve identified needs?
 - 1.4. Did changes in the country’s context affect the relevance of the project’s deliverables (relevance)?
 - 1.5. If we were now at the project design stage, based on what you know now, what would you have done differently?
 - 1.6. What institutions were involved in the project implementation? How would you rate their performance?

→ These aspects are addressed in chapter 4.1.
2. To what extent is the implementation of the NSP achieving intended outcomes in the short, medium, and long term?
 - 2.1 Can credible mitigation figures be deducted from the large variety of small-scale investments? How reliable are figures reported for a large number of different actions by different people?
 - 2.2. Structure & steering: How is the NSP being implemented?

⁷ There are five main evaluation and learning questions agreed for all ELEs. In addition, TSU, the NSP team as well as the evaluators specified the indicated sub-questions in the inception phase of this particular ELE.

2.3 Were there additional products and/or impacts obtained that were not planned in project design (unintended impacts)? (e.g. governance)

→ These aspects are addressed in chapter 4.2.1 and 4.2.2.

3. Is there evidence that the NSP is contributing to its expected outcome?

3.1. In the context of other public and private initiatives in Costa Rica to promote sustainability - or specifically sustainable coffee – how significant has the NSP been and to what extent can its catalysing effect be confirmed?

→ These aspects are addressed in chapter 4.2.2.

4. To what extent is the relationship between inputs and outputs timely, cost-effective, and to expected standards?

→ These aspects are addressed in chapter 4.2.2.

5. What are the overall learnings from the NSP that are relevant for others?

5.1. What are lessons learnt from this NSP that are relevant for other coffee NAMAs and for projects working along the agricultural value chain?

5.2. How far have general market conditions such as the macroeconomic development of Costa Rica, world coffee prices, damages by parasites and other factors had an impact on the NSP?

5.3. Has the NSP caused decisions to plant additional coffee plantations and thus had adverse impacts in terms of increased greenhouse gas (GHG) emissions? Have other unintended adverse impacts occurred?

5.4. Will the activities promoted/ results delivered by the NSP be scaled up by the Costa Rican Ministry of Agriculture (MAG), the Costa Rican Coffee Institute (ICAFE), the Costa Rican Ministry of Environment and Energy (MINAE) and/or privately by coffee producers and mills? Is there a permanent change in how things are done, including legal norms and policies, that can be attributed to project activities?

→ These aspects are addressed in chapter 5.

The ELE was designed to be both summative, meaning assessing and summing up achievements so far and formative, meaning being process and future oriented by providing suggestions on how to improve future NSPs in the agricultural smallholder sector. In order to reach both objectives, a mix of different methodological approaches was applied following the Theoretical Framework.

2 Approach of the Costa Rican ELE

At the start of the analysis, existing information such as the NSP Proposal and amendments, interim reports and presentations available with the NSP team and/or the TSU were assessed. The data collection process was started with a kick-off workshop on 15 June 2020 between the evaluators and the NSP team to jointly assess the NSP’s Theory of Change (ToC). The robustness of the NSP ToC against the NAMA Facility ToC is important, because it provides an overall common framework on which the impact of each NSP can be evaluated. Each NSP is expected to be contributing to and feeding into the NAMA Facility ToC.

Following this kick-off workshop, data collection took place and ended with a workshop to validate pre-results with the NSP team on 26 June 2020. Initially the data collection was foreseen to take place on-site in Costa Rica via a mix of Focus Group Discussions and individual Key Informant Interviews. Given the travel restrictions due to COVID19, data collection was ultimately carried out virtually via individual interviews through MS Teams, Skype, Zoom, WhatsApp or phone calls (see semi-structured interview guidance in Annex E) between June 17 and 24 conducted by Kerstin Linne as the international team lead and Julio Guzmán as the national evaluator.⁸

A purposive sampling methodology was applied to identify interviewees. A list of 42 individuals to include in the interviews was provided by the NSP team, who were assumed to be closely linked to the project and therefore at risk of bias given the lack of external validity. To partly balance this bias the evaluators applied Excel random numbers to the proposed interviewee list to prioritise interviewees. Furthermore, they included further interviewees based on information available on beneficiaries at the website of Costa Rica’s NAMA Café⁹ and added interviews with third-party verifiers, i.e. persons/ institutions involved in the coffee and/or climate change sector, that could offer information on the overall context and validity of the approach. Out of this, sample interviews were conducted based on willingness and availability of interviewees. Wherever possible, both evaluators conducted the interviews jointly, allowing one evaluator to focus on the interview and discussion and the other on taking notes. This way evaluator triangulation during data collection could be carried out to a certain extent.

Ultimately, 39 interviews were conducted, 38 virtually and one in-person, with a total of 57 persons (some interviews included up to four persons). Table 1 offers an overview on the conducted interviews.

Table 1: Overview on conducted interviews

| Category | Public institutions | Banks | Civil society institutions | Beneficiaries (mills+farms) | Intl. coffee companies | 3 rd party verifiers | Total |
|-------------------|---------------------|-------|----------------------------|-----------------------------|------------------------|---------------------------------|-------|
| No. of interviews | 6 | 4 | 5 | 9 | 2 | 8 | 39 |

To arrive at overarching conclusions, interview results (primary data source) were compared with the project reports and other documentation (secondary data source). The evaluators grouped the

⁸ Initially, a third evaluator was foreseen to support the ELE. Due to health reasons, this person dropped out of the process after initial planning activities.

⁹ <https://www.namacafe.org/en/beneficios>, last accessed 01/07/2020.

respective information under the evaluation questions in a word document to compare overlaps and differences in information provided by the different sources.

The data collected served as the input to construct and assess causal pathways between activities, outputs, and evidence towards outcomes (the ‘mapping of causal pathways’ as per the Theoretical Framework (FW)). The validity of the causal pathways was then assessed using process tracing based on evidence from both the primary and secondary data sources. Based on this assessment, the evidence on the contribution of the different project interventions towards the achieved results (catalytic change) was analysed and articulated.

The information presented in this report is evidence-based. Wherever possible the information sources are indicated without undermining the right to anonymity of the interviewees. Therefore, the evaluators developed a code system where each of the interviews is assigned a specific code. This code, e.g. c41, is indicated in brackets as a source of information alongside documents, studies or websites. Where no source is indicated, the evaluators are stating their conclusions.

3 Theory of Change¹⁰

The NSP “Low Carbon Coffee Costa Rica” aims to contribute to Costa Rica’s carbon neutrality strategy (see chapter 3.2) through emission reductions in the coffee sector. **The NSP is built on the assumption that the coffee sector contributes 10% of national greenhouse gas emissions and holds a reduction and removal potential¹¹ of 120,000 tons of carbon (tCO₂e) per year (NSP Proposal (NP), GIZ 2014).**

The rationale for the NSP is that there are a number of barriers for the uptake of low-emission production methods in the coffee sector. This includes limited understanding of the opportunities and technical skills to adopt such methods, as well as the availability of finance to encourage sustainable coffee production. There are limited market and other incentives for financing and adopting low-emission coffee production.

The NSP’s objective that “coffee production and processing in Costa Rica is done in a lower-emission and sustainable manner” was expected to be achieved through the following outputs:

- Enabling low-emission coffee production and processing;
- Enabling Monitoring, Reporting and Verification (MRV) of the sector’s GHG emissions;
- Promoting low-emissions coffee in the global market; and
- Enhancing access to financial resources to support the reduction of GHG emissions at production (farm) and processing (mill) level.

As a result of these outputs the NSP was expected to have contributed to an increase in: trained extensionists, public investments, the application of low-emission good agricultural practices (GAP), coffee quantity and quality, efficiencies through reduced production costs, investment willingness due to reduced costs and perceived risks. **It was also expected to inform other agricultural NAMAs in Costa Rica and wider market practices by stimulating premium payments for a coffee with an added value.**

While the NSP was set out as a pilot to inform others, the scale of the change directly expected from the project is not clear. It is not evident from the project design whether the whole Costa Rican coffee sector was targeted, which is implied by its objective and objective indicators but is not reflected in the outcome indicators (see chapter 4.2.1).

According to the NP, the main trigger for transformational change was foreseen through market and economic forces, meaning changes in the behaviour of farmers by reducing production costs and achieving premium payments, and thereby appealing to their business interests. Ultimately, this was envisaged to lead towards continuous transformation towards a low emission coffee economy and to support the country’s vision to achieve carbon neutrality in the long run.

Ultimately, the NSP aimed to support stable coffee production, to motivate farmers and millers to remain in the coffee sector, to maintain the level of employment within the sector and to prevent land-use changes. Figure 1 lays out the NSP’s ToC and the main causal pathways as described in the NP.

¹⁰ Developed by the evaluators based on the NSP Proposal and inputs during the kick-off workshop.

¹¹ 90,000tCO₂e reduction (i.e. reducing emissions that normally occur) + 30,000tCO₂e removal (i.e. capturing GHG from the atmosphere and storing them in biomass).

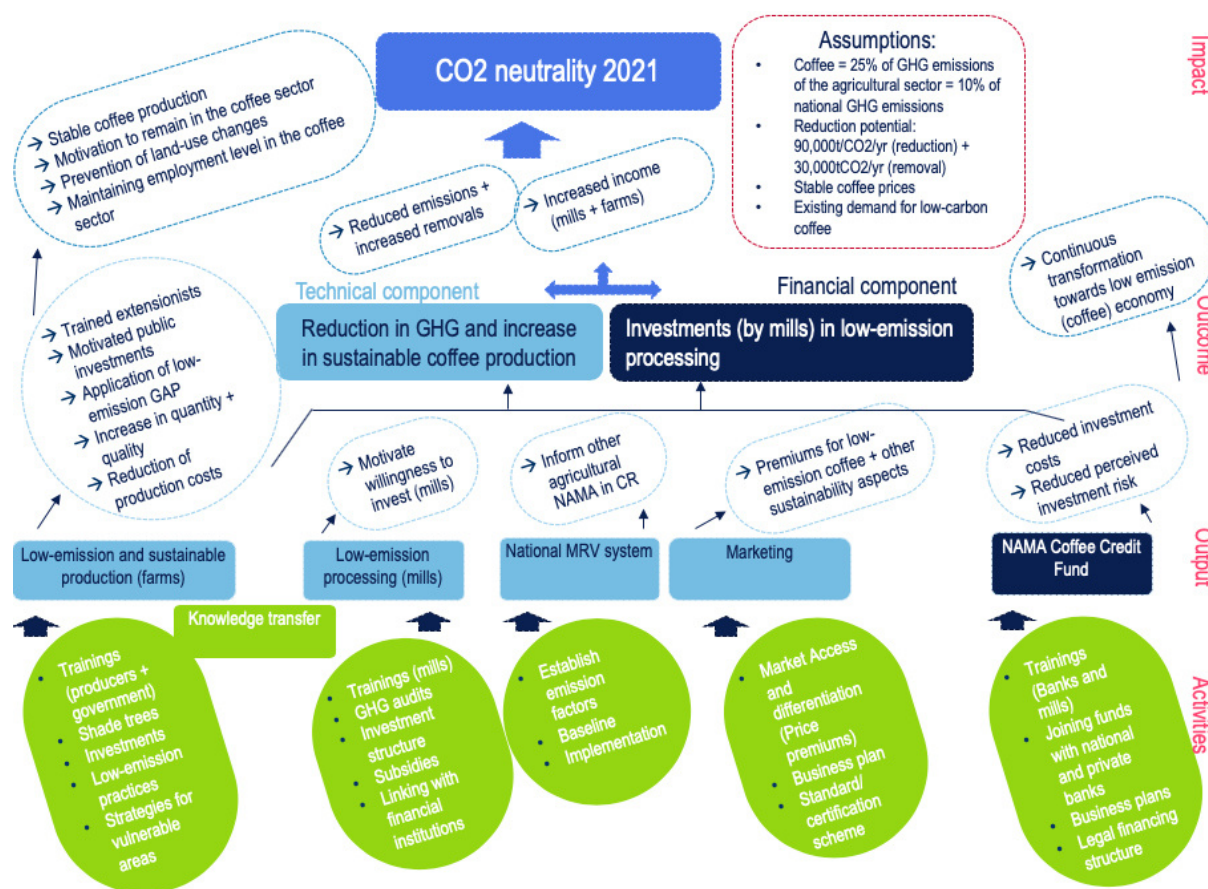


Figure 1: Theory of Change of Costa Rica “Low Carbon Coffee” (as per NSP Proposal)

At the time of NSP design, the NAMA Facility did not have a ToC, which was only developed at the time of the third Call for Proposals. Nonetheless, the NSP’s ToC feeds into the current ToC of the NAMA Facility from December 2018.¹² The main difference is the focus of the NSP on interventions under the technical component, whereas the NAMA Facility’s ToC strongly emphasises the financial component:

- The NSP is focused on enabling transformation via technical assistance coupled with access to finances for coffee farms and mills as a means to enable implementation on the ground.
- In contrast, the NAMA Facility’s ToC presents climate finance as driving transformational change, with technical assistance as a means to enable effective climate finance.

This shows diverging perspectives of the NSP and the NAMA Facility while the NAMA Facility’s ToC was developed as the NSP was already being implemented. **Going forward, it will be important that NSP ToC outputs and outcomes etc. can be mapped to the overall ToC.**

The NAMA Facility considers transformational change as a “*catalytic change in systems and behaviours resulting from disruptive climate actions that enable actors to shift to carbon-neutral pathways*”.¹³ The NSP’s ToC takes this up by a) referencing influencing other agricultural NAMAs and by b) producing new approaches, such as the MRV system and training extension staff which can be scaled up to reach more farmers than directly involved in the NSP in the medium to long turn.

¹² ToC available at <https://www.nama-facility.org/publications/intervention-logic-of-the-nama-facility-theory-of-change/>, last accessed 06/07/2020.

¹³ See <https://www.nama-facility.org/concept-and-approach/transformational-change/>, last accessed 15/07/2020.

The NAMA Facility published its first M&E Framework in November 2015. The current version was published in November 2018.¹⁴ Since its first version this framework includes five mandatory core indicators:

1. M1: Reduced GHG emissions
2. M2: Number of people directly benefiting from NSPs
3. M3: Degree to which the supported activities are likely to catalyse impacts beyond the NSPs (scaling up, replication and transformation potential)
4. M4: Volume of public finance mobilised for low-carbon- investment and development
5. M5: Volume of private finance mobilised for low-carbon investment and development

According to the interviews conducted, these indicators are perceived as good impact indicators for any project (universal and independent of the sector or context); therefore, they serve as standard indicators for all NSPs. They capture transformational change as well as the effects of financial interventions and mitigation achievements.¹⁵

Based on the assessment the evaluators conclude that by developing the NAMA Facility’s ToC with a focus on financial interventions, the NSP’s ToC became less fitting within the NAMA Facility’s M&E Framework. Nonetheless, the NSP was able to deliver inputs towards the five mandatory core indicators.

¹⁴ M&E Framework available at <https://www.nama-facility.org/publications/monitoring-and-evaluation-framework/>, last accessed 08/07/2020.

¹⁵ The M&E Framework includes indicator guidance sheets (IGS) for these indicators, which are perceived as helpful in periodically assessing lessons learned and in improving reporting and monitoring of relevant (mostly GHG and financial) data.

4 Key Findings

4.1 The relevance of the NSP

According to the NSP Proposal and the interviews (e.g. c63, c64, c65, c66), the NSP was in line with national development priorities of Costa Rica. This includes the national target to achieve Decarbonisation of the economy by 2050 (formerly Carbon Neutrality by 2021), the Nationally Determined Contributions (NDCs) and the "State Policy for the Agri-food Sector and Rural Development 2010-2021" of the Costa Rican Ministry of Agriculture (MAG), which includes "Climate Change and agro-environmental management" as one of its four pillars.

The government of Costa Rica actively participated in the NSP, based on the existing political-institutional framework relevant in this context. This included the National Development Plan 2015-2018, the National Climate Change Strategy, the Carbon Neutral Country Programme, the State Policy for the Agri-Food Sector, the Action Plan for Climate Change and Agri-Environmental Management and the National Decarbonisation Plan.¹⁶

Costa Rica was one of the first countries worldwide to set a target of becoming carbon neutral by 2050 (based on GHG inventory from 2005).¹⁷ To achieve this goal, the country is implementing the National Climate Change Strategy (Estrategia Nacional de Cambio Climático), which lists the agricultural sector as one of the main intervention sectors for mitigation action. The NAMA Café was designed to have a significant impact on the carbon neutrality of the agricultural sector. According to the GHG inventory from 2005 the coffee sector contributes 10% to national emissions (NP).¹⁸

The coffee sector's relevance to the country's overall agricultural emissions was overestimated initially, as a result of inaccurate information and/or gaps in the GHG emissions data from the National Meteorological Institute (IMN). During the design of the NSP, information from Costa Rica's national GHG inventory from 2005 was used. However, during project implementation when GHG data was collected, it turned out that the coffee sector does not contribute 9-10% of national emissions but rather 1.6% (input during kick-off workshop, c31, c32, c41, c62). On the one hand, this showed that climate change mitigation via reducing GHG emissions in Costa Rican coffee production and processing can only play a minor role in achieving national carbon neutrality. On the other hand, for the NSP it meant that achieving the targeted emission reduction of 340,000 tons carbon dioxide equivalents (CO₂e¹⁹) was hardly possible as the targeted farms emitted much less than the presumed baseline indicated.

The project was implemented by the core NSP team (GIZ staff) through a political committee and a technical committee. Both committees were staffed with representatives from MAG, MINAE and ICAFE with ICAFE as the most active and committed partner (see chapter 1.1). Key findings about partner involvement from the interviews are (c11, c12, c21, c22, c23, c24, c28, c29, c32, c41, c42, c61, c62, c65, c68):

¹⁶ <https://cambioclimatico.go.cr/wp-content/uploads/2020/01/PLAN.pdf>, last accessed 09/08/2020.

¹⁷ Initially carbon neutrality was targeted by 2021 and in 2018 this target was defined for 2050, see <https://climateactiontracker.org/countries/costa-rica/>, last accessed 08/07/2020.

¹⁸ According to discussions during the kick-off workshop on 15 June the coffee sector was estimated to be responsible for 9% of national emissions, the proposal states 10%.

¹⁹ The NP talks of CO₂; however, applicable GHG emissions in coffee production and processing cover CO₂, N₂O and CH₄. The NSP correctly reported CO₂e accordingly as to indicate the reduced emissions (CO₂, N₂O and CH₄) as the amount of CO₂ which would have the equivalent global warming impact.

- ICAFE: Very committed, engaged throughout the execution of the project and was key at all levels of implementation from training to strategic decisions at the technical and political committee. Interviewees rate ICAFE’s engagement between 3 and 4 (out of 4).²⁰
- MAG: Committed to a certain extent. Extensionists were involved but had to deal with requests from other crops besides coffee at the same time. At the beginning high officials were very committed (especially in the political committee), but this changed towards the last years of the project. Interviewees rate MAG’s engagement between 2 and 3.
- MINAE: Committed only regarding the MRV system and hardly visible in other components of the project. Interviewees rate MINAE’s engagement as 2.
- GIZ: The leaders of the project and present at farms, mills and the institutional level as well as with the private sector. Perceived as the ones steering towards change. Interviewees rate GIZ’s engagement between 3 and 4.

The interviewed beneficiaries - coffee producers and processors (mills) - also confirmed that the project was relevant to their needs and interests. According to the interviews, there was a high willingness to participate in the project among beneficiaries due to the national carbon neutrality target (c12, c21, c22, c23, c24, c32, c41, c42, c61, c62, c64, c65). The underlying motivations differed between wanting to support this national endeavour or wanting support to meet requirements they were expecting the government to impose on them (c21, c22, c28). At the same time, reducing GHG emissions was no self-interest of the beneficiaries. In contrast, they directly feel the impacts of climate change such as changes in temperatures, precipitation patterns and pest and disease outbreaks. Thus, their direct need to cope with these symptoms is far greater than their potential need to reduce GHG emissions (c33, c34, c35, c37). The amount of GHG in the atmosphere has no direct and obvious impact on coffee farmers and processors and it is thus an abstract concept for them. Since mitigation was not perceived as a priority by producers and processors their willingness to invest in mitigation activities was initially limited.

However, while analysing suitable means to lower emissions, the beneficiaries realised that efficiencies in their production and processing could be increased, ultimately lowering production costs. This met their business interests and thus led to an increased interest in participating in the project (c22, c24, c41, c51). Similarly, based on the insight that investments in proposed low-emission practices, processes and potentially machinery translates into increased efficiency and cost reductions, investment willingness increased. At the same time, this process sensitised coffee producers and processors on climate change issues and made them realise the importance of registering and monitoring farm/mill activities (c12, c21, c22, c23, c24, c28, c29, c32, c41, c64, c65). For the beneficiaries, the emissions reductions were positive co-benefits to the efficiency and cost savings made (c12, c21, c22, c23, c24, c28, c29, c32, c41, c64, c65).

Box 1: Relevance of the NSP

Overall, the evaluators rate the relevance of the NSP as high in the beginning, feeding into national strategies and responding to the business interests of coffee farmers and processors. Detecting that the coffee sector contributes only 1.6% to national GHG emissions instead of the presumed 9-10% limits the relevance of the coffee sector in feeding into the national Decarbonisation Plan 2019-2050. This may have been one of the reasons for MAG and MINAE to reduce their commitment to the NSP throughout its duration.²¹ In turn, this is a sign of reduced priority given to the coffee sector regarding climate change mitigation at national level. This change in circumstances thus reduced the NSP’s relevance regarding partner needs and priorities.

²⁰ Scale: 1 = Not at all engaged, 2 = A little engaged, 3 = Quite well engaged, 4 = Fully engaged.

²¹ This has not been stated throughout the interviews and is thus an unproven hypothesis of the evaluators.

4.2 The contribution of the NSP to achievement of the outcomes

In this section the overall contribution story of the NSP is outlined, bringing together the results for EQs 2 and 3. It first outlines the achievements of the project against the indicators used to measure results, and then explores the evidence on the role of the NSP in achieving these results as well as wider transformational change considering internal, external and contextual factors. Lessons learnt and recommendations from this section are summarised in chapter 5 and Annex C.

4.2.1 Achievements against the indicators

The NSP monitors achievements using 31 indicators: 5 mandatory core indicators, 7 objective, 3 outcome and 16 output indicators. Table 1 summarises the results, while Annex A.2 provides a detailed indicator breakdown of the achievements.

At the output level, indicators have mostly been fulfilled. Out of 16 indicators under the five outputs (see Figure 1), ten have been fulfilled fully or even exceeded their target values, four have partly been fulfilled and two have not been fulfilled at all. The latter two and their current status are:

- *“Long-term strategies or economic alternatives for vulnerable coffee regions are developed, discussed with the coffee sector and confirmed by ICAFE and MAG”* (indicator A.4): A long-term strategy for vulnerable zones has not been accomplished (target: 1 strategy; currently: 0 strategies). A proposal for a national policy on climate change for the coffee sector was developed and is expected to feed into the development of a National Strategy for Low-Carbon and Resilient Coffee Production expected in December 2020 which includes strategies for vulnerable coffee regions.
- *“Support of 50 bankable projects by NSP Café”* (indicator E.3): No bankable project has so far been supported (target: 50 bankable projects; currently: 0). Despite a one year extension of the NSP due to work on the financial outcome (see Figure 1) no credit has been disbursed for any bankable project under the NSP due to a) the beneficiaries finding more attractive financing sources, specifically with the Costa Rican Development Bank which offered more appealing interest rates²², b) changes in investment priorities of the mills or c) poor financial statements insufficient to apply for credit due to low coffee productivity.

At the outcome level, the indicators for the technical component have been largely met, but only partially so for the financial component:

- 1) Outcome of the technical component: “The key actors in the coffee sector implement strategies, programmes and measures which ensure that coffee is produced and processed in a low-emission and environmentally, socially and economically sustainable manner.”
 - a. Indicator: At least 6,000 producers on at least 25,000ha apply at least two of the promoted practices.
 - b. Indicator: At least 50 coffee mills apply at least two technologies to reduce GHG emissions.

This outcome has largely been reached with 7,536 farmers (125% of the target value) having implemented at least two of the proposed low-emission practices on 20,807ha (83% of the target

²² In local currency colones: Basic passive rate, with a floor of 4%. In US\$ average rate of the last 6 months in the Costa Rican Central Bank (BCCR) with a floor of 3%.

value) and 40 mills (80% of the target value) having applied at least two GHG-reduction practices (M+E data, Annual Report²³ (AR) 2019, c62, c41).

- 2) Outcome of the financial component: “Key actors in the coffee sector, especially at the level of coffee mills, invest in technologies for low-carbon coffee production.”

- a. Indicator: EUR 8,000,000 private finance mobilised

This outcome has partly been fulfilled with EUR 3,364,488 of private finance mobilised (42% of the target value according to M+E data, AR2019, c41).

The NSP’s indicators and achievements are laid out in Table 1. In a number of cases, a change in the target values was proposed by the NSP and rejected by the NAMA Facility due to being considered too low. Thereby, the original targets remained valid, despite the NSP knowing and indicating, that these could not be met due to changes in the NSP’s context.

Table 2: Achievements according to objective indicators

| No. | Indicator | Level of achievement |
|-----|---|--|
| 1 | a) Reduced emission intensity of 1kg green coffee to 1.62tCO ₂ e | a) Achieved to almost 102% (reduced to 1.59tCO ₂ e) |
| | b) Reduction of total emissions in the coffee sector: 340,000tCO ₂ e | b) Achieved to 18% (60,116tCO ₂ e reduced; different baseline scenario than anticipated during project design led to inability to reach the defined target; an application for changing the target value was not approved by the NAMA Facility as the proposed new target values were perceived as too low) |
| 2 | Emission reductions achieved at coffee plantations until the end of the project (including carbon fixation in agroforestry systems) [xxx tCO ₂ e] No target defined. | 4,633 tCO ₂ e reduced at farms |
| 3 | Emission reductions achieved at the level of coffee processing in 4 years [tCO ₂ e] | 55,483 tCO ₂ e reduced in coffee processing (111% of proposed target) When the official amount of emissions from IMN changed from 9-19% of emissions of the coffee sector to 1.56%, the NSP requested TSU to target 50,000tCO ₂ e, which was not approved |
| 4 | Volume of public finance mobilised: EUR 2,585,000 | Achieved by 92% (EUR 2,366,081) Sum of investments mobilised by ICAFE, MAG and MINAE (co-financing) |
| 5 | Transformation potential: 4 (i.e. clear evidence of change – transformation judged very likely) ²⁴ | Partly achieved (i.e. between early (2) and tentative (3) evidence of change – transformation likely) |

²³ Verification of reported information, in particular numbers, in the annual reports is out of scope of the evaluation. Reported information has been triangulated during interviews and across different documents, e.g. “shade-tree planting” is indicated in the AR and interviewees confirmed to have planted shade trees.

²⁴ According to the IGS in the M+E Framework available at <https://www.nama-facility.org/publications/monitoring-and-evaluation-framework/>, last accessed 08/07/2020.

| No. | Indicator | Level of achievement |
|-----|---|--|
| 6 | Price per kg low-emission coffee 5%-10% higher than conventional coffee | AR2019 indicates a price increase of 6-8% (i.e. indicator achievement of 80%) based on a survey of seven beneficiaries conducted by the NSP |
| 7 | 850,000 trees planted (no specification of type of trees (coffee/shade trees) <u>and</u> number of species per hectare under coffee (no target value + no indication of species) <i>Note: the target value indicated in AR2018 and AR2019 is given as 120,000 trees per year, while the monitoring indicator is given as 850,000. Amending the target to 120,000 trees has not been approved by the NAMA Facility yet, the annual reports state the lower target values.</i> | Achieved to 9% with target of 850,000 trees ²⁵ (75,272 trees planted) No indications on changes in number of species per hectare → Indicator not specific enough for measurement → Reporting not carried out on both aspects of this indicator |

Source: AR2018+2019, interviews (reflecting the achievement level until the end of 2019, while the NSP runs until 12/2020)

Triangulating the information from the reports with information derived from the interviews and looking closer into the reported figures shows some gaps/ shortcomings. Reported figures can therefore not be confirmed fully reliable.

Regarding indicator 4, the reported amounts are based on inputs by ICAFE, MINAE, CABI and Hivos mainly for personnel and external experts, research and development, travel, organisation of conferences, workshops, and participation in international as well as national fairs. Investments by CABI seem to correspond to the requirements of the IGS on this indicator. Accountability of investments by ICAFE and MINAE according to the IGS can be questioned based on their additionality, i.e. the extent to which these institutions would have spent these amounts in the absence of the NSP. Due to the existing national endeavours these investments may have been made with as well as without the NSP. HIVOS is a civil society entity mostly working with funds from other donors.²⁶ Whether these amounts can be accounted for is not clear in the IGS.

Regarding indicator 6, the reported price increase is based on a survey among 15 beneficiaries of which 7 responded. Out of these 7, 3 responded to the specific question on a price increase for low emissions coffee. Out of these 3, one indicated a price increase. This one response is the source of the indicated price increase. Throughout the interviews with beneficiaries and roasters no-one confirmed a price increase for low-emission coffee. The information in AR2019 without indication on the sample size and level of feedback received is misleading.

Furthermore, indicator 7 is not specific enough. Its second aspect “number of species per hectare under coffee” does not specify which species it refers to (e.g. species of shade trees or species of wildlife) neither does it contain a target value of these species. In addition, reporting on this indicator is done against wrong target values in AR2018 and AR2019 and only on one (number of trees) of the two aspects it contains.

In general, due to the structure of the sector aggregating emission data depends on inputs of a large number of different actors. Working in a smallholder agricultural sector such as coffee, a certain error has to be accepted in reported emission data (c11). The quality of this data depends on the applied methodology and its complexity, as well as the capacities of farmers and millers to collect

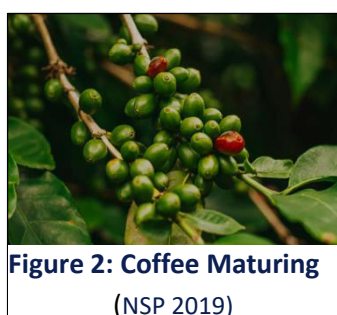
²⁵ The original proposal was 120,000 per year, NSP had requested the change to 120,000 trees in 2018, which was not accepted.

²⁶ See <https://www.hivos.org/who-we-are/>, last accessed 12/08/2020.

and report necessary data. In addition, it depends on whether this additional work of collecting quality data has been recognised, meaning financially compensated for. If it is not paid for (either as price differential or as cost reduction), data quality is likely low.

4.2.2 The contribution of the NSP in achieving the outcomes and supporting transformational change

To explore the evidence on the role of the NSP in achieving results the evaluators have triangulated different sources of data. This provided a narrative for contribution of results, which the evaluators mapped against the causal pathways between activities, outputs, and evidence toward outcomes laid out in the NSP’s ToC (see Figure 1). Based on this process tracing²⁷, the evaluators identified complementary and mutually exclusive explanations for why certain changes happened/ did not happen.



As per the ToC, the main contribution of the NSP to driving change in the sector was expected to be training farmers to increase their knowledge on the potential for GHG reductions to translate into cost reductions at the farm and mill level, and to lead to increased coffee quality and quantity. This together with providing access to necessary inputs (financial resources as well as agricultural inputs) was expected to motivate them to adopt and increase their investments in low emission practices. This, again, was expected to have a wider catalytic and transformational effect, primarily by

offering low emission coffee in the global market coupled with some promotional activities to create market uptake and recognition.

Based on the evaluation’s findings, this contribution story can mostly be confirmed (c11, c14, c21-29, c32, c42, c41, c44, c45, c62, c63, c64, c65, c67, c68, c69). The main causal pathways for achieving the outcomes and supporting transformation change are outlined below, including the role of the NSP relative to the role of external and contextual factors. Some of these were expected, some were not, others were expected, but did not take place.

The main causal pathways for driving towards change as outlined in the Proposal (see also chapter 3.1 and Figure 1 and Table 3) are:

- **Causal pathway 1:** Training among farmers increases their knowledge on cost reductions and coffee quality and quantity. Coupled with access to necessary inputs (financial resources as well as agricultural inputs) this will lead to the adoption of proposed low emission practices.
- **Causal pathway 2:** Increased efficiencies and training at mill level coupled with suitable financial products increases their willingness to invest.
- **Causal pathway 3:** Activities for GHG reductions also translate into cost reductions at farm and mill level.
- **Causal pathway 4:** GHG reduction translates into increased coffee quality and quantity.
- **Causal pathway 5:** Offering low emission coffee in the global market coupled with some promotional activities will create market uptake and recognition (price differential).

²⁷ Table 3 offers a summary of the results of the process tracing.

Training and new practices (causal pathway 1)

Training and technical support at the farm and mill level led to the adoption of proposed agricultural practices. These practices included e.g. soil analysis to correct acidity, agroforestry and shade management, the use of resistant varieties, equipment calibration, soil conservation, pruning of coffee plants and production-based fertilisation. The NSP has shown that coffee farmers can participate in climate change mitigation activities. There are about 43,000 coffee farmers in Costa Rica²⁸ and 272 mills²⁹. Thus, about 16% of all farmers and 22% of all mills have been reached directly by NSP activities (AR2019).

Interviewees confirmed receiving support from the NSP in a number of areas: Technical assistance, analyses of processes and practices at farm (i.e. soil analysis) and mill level (i.e. energy audits), provision of shade trees alongside a respective money incentive (a total cost of US\$4 per tree planted: US\$2.14 paid to farmers for each verified tree plus the cost of the tree), financial recognition of investments³⁰ resulted in lower emissions (10% of investment up to US\$15,000) and participation in ‘commercialisation trips’ to connect with roasters and promote their coffee Europe and the USA.

Many interviewees emphasised the **innovative training approach of the NSP**. Practical sessions to learn by doing rather than through theoretical classroom sessions were reported to open up the minds of farmers, mills and public as well as private extension staff to project recommendations (c11, c12, c21, c25, c28, c32, c41, c42, c44, c61, c63, c65, c68).

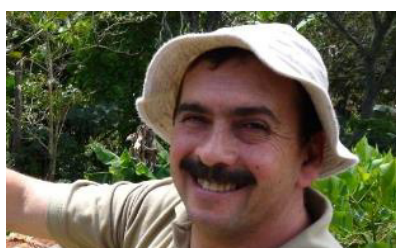


Figure 3: Coffee Farmer
(NSP 2016)

This achievement was aided by the existing high consciousness of the Costa Rican coffee sector about high quality coffee, sustainable development, climate change, and the environment enabled the NSP to engage coffee farms and mills in project activities. Coffee farms and mills are mostly well informed e.g. around coffee prices, sustainability certifications and their approaches so that they could follow project interventions. In other coffee producing countries working on climate change, specifically mitigation, may not have been possible/as successful due to different capacities of farms and mills. However,

interviews confirmed that the project did lead to even higher consciousness about climate change and the environment among beneficiaries.

Most notably, the NSP’s support led to a new practice on data collection at farms and mills. This represents a cultural change: Producers and mills (especially smaller ones) were not used to recording data on farm and mill activities. Those supported are now continuously monitoring and recording their activities to further analyse their own data and improve efficiencies, however, they are not able to monitor GHG emissions. This behavioural change of starting and sustaining data collection is based on a higher level of awareness of the beneficiaries with respect to their importance for business decision-making to increase efficiencies, lower costs, fulfil buyers’ information needs – regarding traceability requirements and own communication purposes.

This has led to improved processes based on the collected data, as for example soil data and analysis allows farmers to identify and address specific nutritional needs of the soil. Applying the right

²⁸ See <https://www.wri.org/blog/2019/09/coffee-farmers-costa-rica-are-brewing-solutions-climate-change-and-competition>, last accessed 07/07/2020.

²⁹ See <https://www.comunicaffe.com/costa-rica-s-coffee-production-is-up-this-year-by-15-to-1-47-million-bags/>, last accessed 07/07/2020.

³⁰ It could be defined as a partial investment grant.

fertilizers at the right time in the correct way optimizes yields and production costs while, at the same time, reducing GHG emissions. In addition, such data is of interest for buyers due to their own traceability and/ or sustainability goals and reporting needs. Furthermore, coffee producers and processors now are more digitalised and less apprehensive about the use of technology. Increased data availability throughout the supply chain helps to monitor GHG emissions and thus creates the basis for engaging in GHG reduction activities. In the case of the NSP this is done through the national MRV system and not at the level of the target group (coffee farmers and mills).

There were also external contributors to this change. Coffee buyers (roasters/exporters) showed great interest in emission data at the farm and mill level. This data motivated downstream such private actors to support the NSP’s training programme with their extension staff and with creating access to farms they source from. This input of the private sector was critical in allowing the NSP to achieve its targets regarding beneficiaries reached and training conducted.

Efficiency savings and willingness to invest (causal pathway 2 + 3 + 4)

The demonstrated efficiency savings from these improved practices led to an increased willingness to invest. Interviews with farmers and mills highlighted that their main take-away from the project was the **benefit of reduced costs**. Increased efficiencies - through the NSP’s analyses and audits (e.g. on energy efficiency), training, and subsidies - supported by the project have led to private mitigation investments by mills (approx. EUR 2.1 million (see Annex A.1)). However, total private investments realised by farmers and mills have been lower than targeted (EUR 8 million including investments from other supply chain actors e.g. traders or roasters). Partly this was due to the failure of the credit line. The credit line became available too late in the implementation and was not competitive (see further below).

Furthermore, external factors affected the performance on this target. The low coffee market price, during the last five years³¹ led to income losses and reduced willingness to invest and capacities among coffee farms and mills (c11, c32, c62, c65, c21, c23, c25, c26). According to the interviews, the Costa Rican fiscal reform also resulted in tax increases and reduced willingness to invest and capacities among coffee farms and mills. Several interviewees explained this reasoning by the statement “*Taxes reduce the little income available to farmers, and then their possibilities to invest in anything, taking into account that 92% of Costa Rican coffee producers are little farmers that live solely on the income from coffee*”. Conversely, the adoption rate of the proposed agricultural practices has been stated to have been influenced positively by the external factor of coffee leaf rust (due to heavy losses farmers were willing to try new approaches; c27, c29, c41, c65).

It was also expected that a motivating factor for investment at the farm and mill level would be the demonstrated effect of GHG reductions on increased coffee quality and quantity. However, project duration was too short to allow for monitoring impact changes in coffee quality and quantity that usually tend to take three to five years in coffee production (c14, c41, c45, c67, c68).

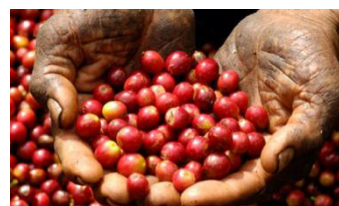


Figure 4: Coffee cherries
(NSP 2016)

Transparency and market uptake (causal pathway 5)

The MRV system for the coffee sector is now working with up-to-date information and a traceability app (CR Café), which will improve data collection in the future and capabilities of beneficiaries for data analysis. An unexpected result of the project is that, based on more

³¹ See <https://sca.coffee/pricecrisis> or <https://www.bbc.com/news/world-us-canada-48631129>, last accessed 10/07/2020.

awareness on data collection, monitoring and reporting, farmers and mills are sensitised and enabled to participate in ICAFE’s transparency initiative using a mobile application “CR Café” to connect coffee farmers with consumers.³² This increased awareness is beneficial for ICAFE as more farmers and mills are capturing the necessary data and are uploading it via the application.

MAG, MINAE and ICAFE plan to further refine the national MRV system, to continue work towards increasing the sales via direct trade models (and thus increasing incomes of farmers and mills by saving costs of intermediaries) and to further promote the national Traceability and Sustainability Statement which aims to inform buyers and consumers in a transparent manner on every detail of the production and processing of Costa Rican coffee.³³

The NSP supported the development of this statement and the mobile application “CR Café” to collect the respective data. The NAMA Café is included as one of eight pillars of the statement, which will further ensure sustaining the NSP’s achievements (AR2019).³⁴ This is further backed by the Costa Rican Law 2762 on the relationship between coffee producers, processors and exporters³⁵, which limits the total earnings of processors at 9% of the final price; the rest should go to producers. Given the institutionalised significance of coffee in Costa Rica coupled with the relevance of climate neutrality in the national context (see chapter 3.2) the risk of reversing the achieved outcomes can be considered as rather low (c31, c41, c51, c62, c63, c65, c66).

The transformational change on the wider sector expected as a result of influencing market enablers is not directly observable. It was expected that offering low emission coffee in the global market coupled with some promotional activities will create market uptake and recognition (price differential). AR2019 indicates a price increase of 6-8% based on a survey of seven beneficiaries conducted by the NSP. However, the interviews showed that this price increase is rather due to a more direct relationship between seller (farms/ mills) and buyer (traders/ roasters) and due to valued traceability information instead of because of emissions reduction.



Figure 5: Low Carbon Coffee on Sale
(NSP 2016)

Demand for low-emission coffee so far hardly exists, or only potentially in some very niche segments (c45, c46, c47, c67). In addition, such mark-ups will only be paid for single origin coffee, meaning for coffee that is not used for blends. Such coffee is mainly found in the specialty segment.³⁶ Parts of Costa Rica’s coffee fall into this category, but not the total beneficiaries’ production (c11, c32, c41, c45, c67). Uptake and monetary recognition of low-emission coffee can thus potentially be achieved in individual supply chains (although no such case was encountered during the evaluation) and is unlikely to happen on a large scale under current market conditions (c22, c27, c46, c47).

However, bringing together mills and coffee buyers (European and US American roasters) during commercialisation trips enabled the mills to better understand what coffee roasters are looking for

³² An introductory video clip is available at <https://www.youtube.com/watch?v=PdAm6f414ZO>, last accessed 10/07/2020.

³³ See <http://www.namacafe.org/en/news/22-costa-ricas-coffee-production-low-carbon-and-sustainable>, last accessed 07/08/2020.

³⁴ See <https://cafedecostarica.com/en/statement#social>, last accessed 07/08/2020.

³⁵ See <http://cafedecostarica.com/en-institucionalidad>, last accessed 07/08/2020.

³⁶ Single origin coffee is usually prepared with a coffee of high quality. Quality depends on factors such as botanical variety, topographic and weather conditions and care during production, post-harvest handling and transport. Coffee quality is usually indicated with points on a scale up to 100. Specialty coffee, which is the main sector for single origin coffee starts at 80 points (see www.thespecialtycoffee.com/resources/specialty-coffee/, last accessed 25/08/2020).

and how they operate within the supply chain. Therefore, the mills adapted their coffee requirements for the farm level, their processing standards and their traceability systems to better match roaster needs and increase the probability of (direct) trade with roasters.

Table 3 summarises the validity of the main causal pathways based on the process tracing. The main causal pathways stated in the ToC are rated based on the evidence found/ not found indicating whether the hypothesis can be confirmed or rejected.

Table 3: Overview on the validity of the causal pathways

| Categories ³⁷ | Description | Causal pathways of the NSP |
|------------------------------------|---|---|
| Smoking gun (confirmatory) | If evidence is observed, the hypothesis is confirmed. If evidence is not observed, the hypothesis is not confirmed, but this is not enough to reject the hypothesis. | <ul style="list-style-type: none"> • GHG efficiency translates into cost reductions at farm and mill level (evidence is observed, and the hypothesis confirmed). • Training among farmers increase their knowledge on cost reductions and coffee quality and quantity. Coupled with access to necessary inputs (financial resources as well as agricultural inputs) this will lead to the adoption of proposed low emission practices (evidence is observed, and the hypothesis confirmed). |
| Hoop test (disconfirmatory) | If the evidence is not observed, the hypothesis is rejected. If the evidence is observed, the hypothesis is not rejected, but this is not sufficient to confirm the hypothesis. | <ul style="list-style-type: none"> • Offering low emission coffee in the global market coupled with some promotional activities will create market uptake and recognition (evidence is not observed, the hypothesis is rejected). |
| Double decisive | If evidence is observed, the hypothesis is confirmed. If the evidence is not observed, the hypothesis is rejected. | |
| Straw in the wind | If the evidence is observed, this is not sufficient to confirm the hypothesis. If the evidence is not observed, this is not sufficient to reject the hypothesis. | <ul style="list-style-type: none"> • GHG efficiency translates into increased coffee quality and quantity (evidence is not observed, this is not sufficient to reject the hypothesis). • Increased efficiencies and training at mill level coupled with suitable financial products increases their willingness to invest (evidence is partly confirmed, this is not sufficient to confirm the hypothesis). |

Source: Conclusions by the evaluators

The road to transformation - institutional change

Further emission savings are expected in the future through the scaling-up of activities. According to interviews, both government partners, MAG and MINAE, are satisfied with the project results. They highlighted their interest in either continuing the project or scaling it up via a second phase. Interviewees confirmed that they have integrated project results and approaches and, continued and expanded the work both within the project region as well as outside. This includes the roll-out

³⁷ Categories and descriptions are based on the methodology proposed in the Theoretical Framework.

of the developed training to further farmers and mills, as well as the foreseen roll-out of some of these elements, e.g. the proven format (questionnaire) for collecting the relevant data at farmer level to calculate GHG emissions, by private actors in other coffee origins.

In addition, ICAFE is internalising several activities of the NSP in its Annual Operational Plan, such as training related to climate change issues and efficiency and activities around agroforestry systems. At the same time, its internal capacities and resources are reported low, which may limit the success and scalability of these initiatives.

However, COVID19 heavily reduced scale up activities and discussions about replication in other coffee growing regions and countries with interested private partners, due to the fact of impossibility of doing fieldwork. Furthermore, producers were worried about harvesting, because of entry restrictions to the country, which is traditionally heavily dependent on the foreign workforce (from Nicaragua and indigenous people from Panamá -Ngöbe – Buglé). And, some others, producers/small exporters, were negatively affected in their sells, because they used to deal directly to specialty coffee shops, which were closed.

The project led to systemic institutional changes, a key sign that transformational change is likely. MAG and MINAE stressed changes they have introduced within their own institutions, specifically in their operating planning, which build on project results, such as the CR Café app for traceability in farms and mills, the increased availability of emission data, the now available MRV system and better trained extension staff. They now have up-to-date emission data to work with, they have a defined approach for analysing emissions at farms and mills and they apply these approaches in their daily work to support coffee farms and mills, which provides an indication of future improvement, despite its limited human and financial resources, that in turn translates into transformational change and sustainability.

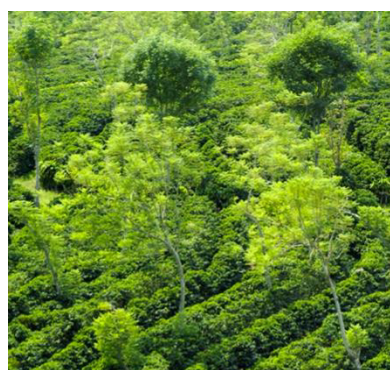


Figure 6: Shade management
(NSP 2016)

In addition, extensionists, especially from ICAFE and MAG, now have more knowledge about how to conduct technical training sessions with coffee producers and processors.

Ultimately, MAG and MINAE see these results as enabling factors for scaling up the NSP towards the transformation of the whole Costa Rican coffee sector. Their main concern is related to the availability of financial resources to further drive this process forward. Shortcomings in the financial component³⁸ and a lack of sufficient own funds within the sector and among the government entities involved are likely jeopardising further scaling up and, ultimately, transformation; especially, regarding post-COVID activities. This leads to the following considerations:

Box 2: Considerations by the evaluators regarding limitations towards sector transformation

- The NSP is designed too ambitiously to claim sector transformation towards its finalisation. This relates to too short implementation period as well as building on the hypothesis that transformation will be financed by supply chain actors through premiums for low-emission coffee. To stimulate the latter, the NSP did not include sufficient marketing activities and funds for such activities to create demand and uptake of low-emission coffee awarded with a price mark-up.
- Financial weaknesses of the Costa Rican coffee sector impede its transformation.

³⁸ See page 16 and page 21 for further details.

A change in government and in vice-ministers of MAG and MINAE as well as in three different Technical Coffee Managers at MAG in four years negatively affected the NSP. The high staff turnover meant capacity had to be rebuilt several times and resulted in delays. At the same time, the new government in 2014 changed their vision of the Costa Rican NAMA Café from “carbon neutrality” to “low emissions”. This was rather in line with the NSP’s approach, which did not aim at zero emissions.

The project has handed over the coffee sector’s MRV system to ICAFE by incorporating the system into the National Metrics System for Climate Change (SINAMECC), which monitors, evaluates and follows up on the National Climate Change Strategy. As such the NSP has contributed to stimulating the monitoring of further emission reductions in coffee (AR2019, c62, c65). This was aided by a new Executive Director at ICAFE who required onboarding and sensitising anew but seemed to be more interested and committed to supporting changes in the coffee sector. This strengthened the NSP’s link with ICAFE and helped in institutionalising approaches and results.

The project is informing wider attention on climate change mitigation in the coffee sector: The NSP has set an example on how a sub-sector within the agricultural sector can contribute to this national strategy. According to interviews, Costa Rica has a “NAMA Livestock”, which is using lessons learnt by the NSP specifically regarding the MRV system and individual collection of data by beneficiaries. The project has also supported improved governance of the NAMA Café (ICAFE, MAG, MINAE). Before the Annual Operational Plan was done by each single institution, now it is a joint activity of all three institutions.

In this sense, the NSP has catalysed future additional GHG reductions in the coffee sector as well as other agricultural sectors beyond its direct GHG savings. From this perspective, the NSP has contributed to the NAMA Facility’s overall outcome of demonstrating the potential for ambitious low-carbon actions and catalysing additional GHG savings.

The Costa Rican NAMA Café, and the NSP in particular, also helped highlighting the sector globally and in particular to German authorities and ministries such as BMU and BMZ. Different members of parliament have visited the project, which is a benefit for the NAMA Facility as it increases its visibility (c61, c62).

Box 3 provides some quotations from the interviews to validate the positive contribution of the NSP.

Box 3: Quotations from beneficiaries on the benefits of the NSP

- *“The NSP structured internal processes for producers and mills. Now we are used to collect data daily and maintain records.”*
- *“Traceability³⁹ supports commercialisation: buyers did not know about the NSP, but when we explained the initiative and buyers understood it, they got very interested. This differentiates Costa Rican coffee from the rest and provides an added value.”*
- *“The CR Café app covers a lot of information of producers and mills and connects us with the buyers. This helps in building up more direct trading relations.”*
- *“The project helped us to construct greenhouses for coffee drying. Before we dried the coffee outside on the patio. Drying (parts of) the coffee now within the greenhouses reduces our use of firewood, coffee husk and energy and results in reduced emissions.”*
- *“We received many trainings. This knowledge now helps us to perform more efficiently.”*
- *“We changed the old drying ovens for new and more efficient ones, which is saving energy and lowering emissions.”*
- *“The NSP has supported us with training, inventories, coffee shade trees, reforestation activities, micro-mills, and treatment of wastewater. All this is now paying out in reduced costs.”*
- *“By conducting soil analyses and now knowing how to interpret the results we improved our fertilizer management. This reduces our input costs as well as GHG emissions and soil and water pollution.”*

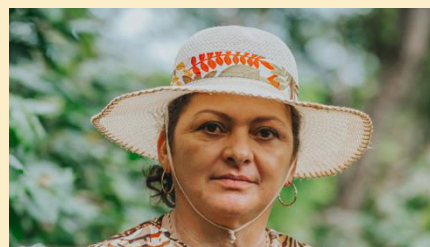


Figure 7: Coffee farmer
(NSP 2019)

Source: Stakeholder interviews

Unfulfilled pathways of change

There were some NSP interventions which did not deliver the change expected. In particular, the contribution of the credit line has been negligible. Financial products offered under outcome 2 included a credit line for mills and farmer organisations, a subsidy scheme for investments in cost efficient technologies at mills and an incentive mechanism for farmers to plant shade trees. The main reasons for not accomplishing outcome 2 were a delay in availing the financial offer and scarce investment capacities by the mills due to changes in the context⁴⁰ (see below; c24, c41, c51, c56, c62).⁴¹

NSPs under the NAMA Facility are based on the concept that the financial and the technical component interact and support each other. In the case of the Costa Rica Coffee NSP, however, the credit line was set up only in August 2018 with funds becoming available not until the second half of 2019, while, for example, carbon audits at mill level had been conducted in 2016 and 2017 (AR2019, c51, c56, c62). Throughout these audits emission reduction potential activities have been identified. The credit line foreseen to avail necessary financial resources for implementing such activities was then only offered two to three years later. By then it is likely that the processors had already

³⁹ Most of today's coffee is hardly traceable down to the coffee producers, at most it can be traced to the region where it was processed or to the specific mill. Traceability is an important concept for working towards a sustainable coffee sector. It entails record keeping from inputs at farm level and passing this information to following chain actors. (For further information, see, for example, <https://www.sourcemap.com/blog/its-time-for-traceable-coffee-sourcemap-introduces-the-responsible-cocoa-platform>).

⁴⁰ See explanation of change in the country context in chapter 4.2.2 page 14.

⁴¹ See also Annex A.1 “Accomplishment of outcome indicators of the NAMA Café's Logframe”.

forgotten about the carbon audit results, had lost interest in participating in the NSP or had obtained funding elsewhere (evaluators’ interpretation). In this case, the two components did not interact and support each other.

The CABEL, the chosen partner to facilitate access to credits for mills and farmer organisations, turned out to be a slow-moving institution which did not prioritise the NSP’s activities (c51, c61, c62, c65). This slowed down processes and delayed progress of the financial component. Access to these financial resources became available only when the NSP was originally intended to finish (AR2018, AR2019, c56, c62). For this reason, a one-year extension up to December 2020 was signed off in July 2019. When the funds were finally available, other sources of financing with better conditions and less bureaucracy were on the market (c41, c51, c56). The Development Bank of Costa Rica, the National Forest Fund (FONAFIFO)⁴², and the National Coffee Sustainability Fund (FONASCAFÉ)⁴³ provided better credit conditions than the NSP through CABEL, which led to credits offered by the project being rather unattractive (c22, c27, c51, c56). The fact that when the credit was finally available, other, less bureaucratic and better conditions sources of financing were available led to not fully reaching beneficiaries as intended.

The incentive mechanism for farmers to plant trees was well received according to the interviews. At the same time, the target of planting 850,000 trees was not reached. With the foreseen budget it was not possible to plant that many trees but only about 75,000. This either indicates unrealistic target setting with the defined budget or incorrect budgeting at the design stage.

In total, 45 investments have been made by mills based on the provided subsidy scheme 25 were targeted. Subsidies have been paid out after verification of the investment by ICAFE. Therefore, the subsidy scheme is the most successful out of the three financial mechanisms offered through the NSP.

For each mill an action plan was developed to reduce emissions. Incentive schemes for mills were paid after presenting an updated GHG inventory and action plan. Counting with an updated inventory and action plan was a requirement for applying for the incentive. Demonstrated success in progressing in the implementation of the action plan was not (c22, c28, c58, c62, c65). Linking the subsidies to the implementation of the action plan would have strengthened control over implementation of the defined practices.

Lastly, there was little financial knowledge and capacities during project design and take-off among the involved GIZ staff (c58, c61, c62, c65). Adapting the financial component to the Costa Rica context and identifying suitable financial partners was thus challenging and related shortcomings led to falling short of the set financial targets.

Conclusions on pathways of change

In summary, the NSP has provided an important contribution in promoting Costa Rican low-emission coffee, both directly with its support to farmers and mills, but also indirectly by influencing the wider work of the partners involved and informing wider market enablers (c11, c63, c65, c66). Nonetheless, the catalytic effect of the NSP and its long-term impact can only be assessed after three or four more coffee cycles, i.e. by mid-2023 or 2024.

There are no comparable initiatives with this specific focus on climate change mitigation and holistic approach from production up to processing and marketing. However, there are many initiatives with

⁴² See <https://www.fonafifo.go.cr/es/>, last accessed 10/07/2020.

⁴³ See <http://www.icafe.cr/aprobada-ley-de-sostenibilidad-cafetalera/>, last accessed 10/07/2020.

a broader focus on increasing sustainability in Costa Rican coffee production (e.g. research and training financed by BMZ).⁴⁴ The NSP therefore is unique in its approach on climate change mitigation in the Costa Rican coffee sector and serves as a role model for coffee NAMAs in other countries as well as further agricultural NAMAs in Costa Rica.

Furthermore, Costa Rica is among the coffee producing countries with the highest share (32%) of production which is certified under various sustainability standards (e.g. Fairtrade, Rainforest Alliance certification schemes etc.) plus large amounts of coffee under company specific verification schemes such as Starbucks’ CAFÉ Practices and Nespresso’s AAA programme (Potts et al 2014). For Nespresso and Starbucks, Costa Rica is an important sourcing origin. In this context private sector sustainability investments from international coffee actors are quite common in the country and cannot be attributed solely to the NSP (c13, c43, c44, c68).

Overall, achieving the NSP’s outcomes can clearly be attributed more to the technical than the financial component. However, specific external factors did impact on the NSP’s success quite substantially. The supportive contribution of the private sector has to be highlighted in project achievements. Low investment willingness and capacities of farms and mills due to low coffee prices on the one hand and tax increases on the other have to be highlighted in explaining falling short of some project targets.

It should also be noted that indications of leakage (e.g. incentivising the expansion of coffee plantations)⁴⁵, have not been encountered during the evaluation.

4.3 How efficient is the project?

The project was initially planned from March 2015 to February 2019 with a total budget of EUR 7 million, with EUR 3 million which were foreseen for the financial component and EUR 4 million for the technical component (project Proposal (NP)). Due to delays in the exchange of notes between the governments of Costa Rica and Germany the project only started in January 2016 with some preparatory activities taking place in 2015. Therefore, project duration was adjusted to January 2016 until December 2019.

The 2018 Annual Report (AR) indicates a shift in budget allocation to EUR 2.63 million for the financial component and EUR 4.37 million for the technical component. The documentation of the official approval of this shift is not available to the evaluators.⁴⁶

In July 2019, a cost-neutral extension up to December 2020 was granted due to delays in implementing the financial component. According to the AR2019 the project had spent EUR 6,579,480. Information on expenditure per budget line is not available to the evaluators.

The project is therefore being implemented according to the adjusted design document.

According to the 2019 AR, 9,851 beneficiaries have been reached and range from representatives of coffee mills to coffee producers and technical advisory personnel from ICAFE and MAG. This

⁴⁴ See <https://www.wri.org/blog/2019/09/coffee-farmers-costa-rica-are-brewing-solutions-climate-change-and-competition> or <http://spilling-the-beans.net/special-report-costa-rica-taking-coffee-sustainability-to-a-higher-level/>; all last accessed 08/07/2020).

⁴⁵ Definition of leakage as per the UN-REDD Programme: <https://www.unredd.net/knowledge/glossary.html>, last accessed 10/07/2020.

⁴⁶ This shift was approved as part of the amendment request submitted in November 2018 that was partially approved by Donors in December 2018/January 2019.

translates into approximately EUR 668 per beneficiary based on total expenditures of EUR 6,579,480 until December 2019. Considering the total budget spent, to achieve a reduction of 1 tCO₂e therefore cost about EUR 109. Looking into prices of carbon credits from agriculture (1 credit = tCO₂e) prices of EUR 4 – 15 (USD 5 – 17) are paid according to a study by the Institute for Agriculture and Trade Policy (IATP 2020). The emission reductions in this setting are therefore quite cost-intensive and beyond their potential market value. The cost per emission reduction may be justified taking into account EUR 94 per emission reduction (based on EUR 15 as the price for an emission reduction) for enabling transformational change towards a low emission coffee sector. However, comparative figures in this context do not exist, which impedes drawing substantiated conclusions.

Evidence on the cost-effectiveness of the project hardly exists. Comparative studies have not been found in the course of the evaluation, thus only an internal cost analysis is possible. The fact that the project reached 2,851 beneficiaries more than planned can either indicate highly efficient project processes, inappropriate planning during project design or compensating for planned activities that were not carried out. In the case of the NSP a mix of all three is likely to apply: once training sessions were developed and running, efficiencies as well as interest among participants increased, planning to reach 7,000 beneficiaries was a safe target and as the financial component did not develop as planned more focus could be given to activities under the technical component. Falling short on the emission reductions target on farms, specifically on the nominal reduction, cannot be attributed to project inefficiencies, but more to the incremented effort needed to obtaining reductions on the revised low emissions factor baseline of the NSP - from 9% to approximately 1.6% - (see explanation in Section 3.3).

5 Lessons learnt and recommendations

This section summarises the findings from EQ5 on lessons that can be learned from the NSP. This includes learnings from successes, particularly design features which help explain the successes, but also reasons for the limitations (c14, c21, c22, c23, c24, c25, c26, c27, c28, c29, c32).

Recommendations based on this learning are also provided to inform future NSPs in this sector and beyond.

5.1 NSP design

The NSP monitoring and reporting framework could be strengthened. The NSP has 31 indicators to measure results. Based on the evaluators’ experience, this is a greater number of indicators than is typical for a project of this scale and size, and it required a substantial effort by the NSP team in monitoring and reporting. It is recommended that when designing an NSP, indicators should be designed to sufficiently and effectively monitor the desired objective(s). Besides the core indicators, the evaluators propose up to three objective indicators, three outcome indicators and two indicators per output.

It is also recommended that all indicators need to be SMART. Each indicator should contain just one aspect. Reports should be checked against correctness of the stated indicators and/ or templates for reporting should be provided including the indicators to report on in a way that they cannot be amended. Sample sizes and level of participation in data collection activities should have to be reported within the ARs.

At the same time, the NAMA Facility should stay flexible and acknowledge the fact that NSPs are implemented in dynamic contexts. Changes in these contexts can impact on defined target values and indicators. Where these changes are sensible adjusting target values and/ or indicators should be considered while ensuring the indicators remain SMART.

A reliance on partnerships with other initiatives brings benefits, but also risks. For example, the NSP started without validated emission factors that were supposed to be an input of the BID-FOMIN project. Lacking validation of emission factors used in the MRV system may negatively impact on the credibility of the reported figures. This is an internal factor impacting on the NSP’s performance.

Therefore, complementarity and building on existing approaches and initiatives should be ensured, in this case the emissions factors not delivered by the BID-FOMIN project. Where information and/or deliverables are agreed and dependent on partner inputs, as in this case emission factors on fertilisers, their availability needs to be ensured. Respective leverage mechanisms of project partners (in this case ICAFE, MAG, and MINAE) should be used in case of non-compliance.

5.2 Timescales

Change in smallholder agricultural settings needs more time than anticipated during the design of the NSP. At least six to seven years would be more realistic and would take a better advantage of the setting built by the NSP. Approaches and methods had to be developed and tested (e.g. what data to collect for emissions monitoring and how to collect it at farm and mill level) before rolling out. In smallholder settings with many actors to cover it takes time to reach all beneficiaries and then it takes time for the beneficiaries to implement the necessary practices. Therefore, measuring impact within four to five years in this setting is unlikely. This was either not known during the design of the NSP or it was ignored/accepted due to other priorities. Furthermore, project activities

and the duration of the project needs to be coupled to production cycles. Otherwise project uptake and success at the level of beneficiaries is likely low. As one interviewee stated: *“Now that it is becoming interesting, the project is over”*.

It is recommended that longer project durations or a two-phased approach need to be considered: the first phase of five years considering a pilot project as in this NSP, and the second phase, again of five years, emphasising on scaling it up. In planning such an approach, phase 2 would only be implemented based on successful implementation of phase 1 according to specific, measurable, attributable, realistic and timely (SMART) indicators.

5.3 Coffee sector specifics

The type of financial products to be offered in smallholder agricultural contexts is complex. Smaller actors such as farmers or millers do not have the necessary collateral required by commercial banks. In addition, trust in these institutions may be low and financial literacy limited. At the same time, especially smallholder farmers are at a high risk of falling into debt, if they are not trained in financial decision-making: for example, one bad harvest can jeopardise their livelihoods, especially if they have to re-pay expensive loans (high interest and many indirect costs of requirements), which increases their reluctance to participate in commercial financial schemes, especially in the traditional banking system.

In addition, **the timing of implementing the technical and the financial components have to be aligned.** Only then can the NSP feed into and fulfil the NAMA Facility’s ToC. Context and culturally specific conditions have to be considered in this aspect.

It is recommended that mechanisms to create access to financial resources need to be linked to production cycles regarding timing (when are funds needed) and should build on existing structures. These structures may not be linked to financial traditional banking institutions only but could also build on civil society and/ or private actors along the coffee supply chain. Coffee farmers already receive upfront payments and credit through global coffee traders and/ or (specialty/direct trade) roasters.

Building on existing channels, such as working with banks closer to farmers and mills and/ or availing funds through private/civil society partners working with the farmers and mills, might be better options, which should be considered when designing the NSP. For a financial scheme, a link with a harvest insurance scheme should be explored to reduce risk. In case of a bad harvest, the harvest insurance would cover income losses and, ultimately, credit repayment.

Working in agriculture, climate change adaptation is crucial. Many mitigation practices on farm level have adaptation effects and co-benefits (see sections 4.1 and 3.3): for farmers adaptation is more relevant and practical than mitigation. During future NSPs in smallholder agricultural settings, farmers should be approached through an adaptation rather than a mitigation perspective.

The challenge of setting targets and gathering baseline data. Asking for inclusion of baseline data and target reductions/removals in a smallholder sector during the project design stage proved cumbersome and potentially not constructive. Reliable baseline data may not exist at the time of the project Proposal (as in this case) leading to false and impossible target values. The process of NSP design changed since the design of the Costa Rica NSP. By now a Detailed Preparation Phase is planned in and resourced on average with EUR 250,000. This opportunity did not exist when the Costa Rica NSP was designed and the shortcomings in the planning confirm the necessity of such a phase.

Project success is closely linked to private sector involvement, for example, in regard to the training carried out by Nespresso and Starbucks. Sector transformation requires inclusion of all sector actors at the national level and of all value chain actors (producers – consumers). Generating an offer has to go hand in hand with creating the respective market to ensure uptake. When creating a new or differentiated product offer, the respective market needs to be created alongside it. In global agricultural value chains this may include consumer education activities to fully enable sector transformation.

Furthermore, agricultural NSPs should promote public-private collaboration to boost synergies and accomplish their objectives. In this specific case, Nespresso and Starbucks played an important role in training farmers. Only in this collaboration reaching proposed targets was possible. Coffee supply chain actors, especially traders, are usually closely linked to farmers, have support structures in place and can accordingly create access to farmers.

The interaction between environmental, social, economic and institutional sustainability features importantly in this NSP. Environmental sustainability is inherent in emission reductions and shows as well in the promotion of shade trees (agroforestry systems). The underlying incentive to participate is based in cost reductions and ideally also premium payments; but financial incentives also play an important role in this matter. Empowerment of coffee farmers and mills addresses social sustainability and institutional sustainability is given by Costa Rica’s NAMA Café. Only if all four features occur together real transformation is possible.

5.4 Team and motivation

The importance of the implementation and team structure. According to interviews, a key success factor for achieving outcome 1 was implementation through a political and a technical committee with members of ICAFE, MAG, MINAE, and the NSP team (c22, c27, c44, c63). The division into a technical and a political committee proved beneficial to ensure participation of high-level staff able to make decisions within the partner institutions and at the same time to anchor technical knowledge at the institutions. By working with ICAFE, MAG and MINAE, the NSP created strong ownership at the national level.

In addition, the NSP staff were highly committed to accomplishing the project indicators and, more importantly, driving change within the Costa Rican coffee sector towards more efficiency and lower GHG emissions. **This personal motivation supported the project’s success.**

The support of the TSU helped the NAMA Café at the design and implementation stages by providing guidance on how to assertively deal with issues of climate change and financing. Because GIZ has less capacity and knowledge on financial interventions (as compared to their technical experience on climate change in the agricultural sector) they benefited from the TSU’s support and guidance. Furthermore, at the implementation stage the TSU’s emphasis on monitoring and reporting helped the NSP to continuously monitor its activities, such as through developing the (semi-) annual reports, which helped increase the commitment of the project’s staff toward accomplishing the output and outcome goals described in the Logframe (c61, c62, c51, c31, c41, c39).

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Annex A NSP achievements

A.1 Accomplishment of outcome indicators of the NAMA Café’s Logframe

Within the following chart, in the column on comments, the information is based on monitoring data, reports and interviews.

| OUTCOME INDICATOR | BASE LINE | GOAL | ACCOMPLISHMENT | % | COMMENTS |
|--|-----------|-------------------------------|-----------------|------|---|
| <i>Project objective:</i> Coffee production and processing in Costa Rica is done in a lower emission and sustainable manner | | | | | |
| <i>Indicator 1:</i> Reduction of emission intensity of coffee production (plantations and processing) at national level and of absolute total emissions in TCO _{2e} per year [kg CO _{2e} per year/kg green coffee] | 2.7 | n/a | 1.59 (-1.11) | -41% | Reduction of emission intensity of coffee production (plantations and processing) at national level (baseline 2.7 kg CO _{2e} /kg of green coffee) and of absolute total emissions in CO _{2e} per year. There is no information on how the initial baseline for this indicator was calculated. |
| <i>Indicator 2:</i> Emission reductions achieved at coffee plantations until end the project (including carbon fixation in agroforestry systems) [xxx tCO _{2e}] | 0 | n/a | 4,633 | n/a | Reduction per farm. |
| <i>Indicator 3:</i> Emission reductions achieved at the level of coffee processing in 4 years [tCO _{2e}] | 0 | 50,000 (original: 340,000) | 55,483 | 111% | When the official amount of emissions from IMN changed from 9-10% of emissions of the coffee sector to 1.56%, the NSP requested TSU to adjust the emission targets which was not approved. |
| <i>Indicator 4:</i> Volume of public finance mobilised [2.585.000 EUR] | 0 | 2,585,000 | 2,366,081 | 92% | Sum of investments mobilised by ICAFE, MAG and MINAE (co-financing) |
| <i>Indicator 5:</i> Potential for transformational change [monitored qualitatively according to the guidelines set by the NAMA facility] | 0 | n/a | 3 | n/a | The NSP Project obtained a 3 in 4 years, because a substantial progress was achieved so far (70%). The project has tentative evidence of transformational change judged likely. |

| OUTCOME INDICATOR | BASE LINE | GOAL | ACCOMPLISHMENT | % | COMMENTS |
|---|-----------|-----------|----------------|------|---|
| Indicator 6: Price per kg coffee achieved by those farmers applying low carbon technologies and practices is higher (by up to 5 to 10%) than by conventional coffee farmers [%] | 0 | 5%-10% | 6-8% | 100% | Results obtained in a coffee mill's survey with seven respondents. One respondent indicated better prices achieved due to other factors than low emissions. No other respondent indicated a price increase. |
| Indicator 7: Increase in number of trees (850.000 trees) and number of species per ha of coffee produced [number of trees] | 0 | 850,000 | 75,272 | 9% | Results obtained from FUNBAM contract |
| <u>Outcome of Technical cooperation</u> | | | | | |
| The key actors in the coffee sector implement strategies, programmes and measures which ensure that coffee is produced and processed in a low-emission and environmentally, socially and economically sustainable manner. | | | | | |
| Indicator 1: At least 6,000 producers on at least 25,000 ha apply at least 2 of the promoted technologies and practices (e.g. agroforestry, soil protection through minimal soil movement, increased organic matter of coffee pruning material, tree litter and other organic material, vegetation cover, diversification with fruit trees or trees for wood production, application of chemical or organic fertilisers according to analyses of soil fertility, slow-release fertilisers) [# of producers] | 0 | 6,000 | 7,536 | 126% | The MRV did not measure exactly this indicator but linked it to the output indicator A3. Sum of attendee lists from ICAFE-MAG and NESPRESSO. Use the CIMS results: 84% of our farmers are using 2 GAPs |
| Indicator 2: At least 50 coffee mills have applied at least 2 technologies which reduce GHG emissions (e.g. water treatment technology minimising methane emissions, biogas, more efficient furnaces, solar drying, treatment of pulp) [# of coffee mills] | 0 | 50 | 40 | 80% | The MRV did not measure exactly this indicator, but linked it to the output indicator B2 |
| <u>Outcome of financial component</u> | | | | | |
| Key actors in the coffee sector, especially at the level of coffee mills invest in technologies for low-carbon coffee production | | | | | |
| Indicator 3: Volume of private finance mobilised for low-emission technologies and practices (includes private finance mobilised for low-carbon technologies at coffee mills and – if possible – also at | 0 | 8,000,000 | 3,364,488 | 42% | The MRV did not measure exactly this indicator but linked it to the M5 indicator. Quantifies the mobilisation of money for investment of |

| OUTCOME INDICATOR | BASE LINE | GOAL | ACCOMPLISHMENT | % | COMMENTS |
|---|-----------|------|----------------|---|--|
| coffee farms, e.g. for renovation of coffee) [Euros] | | | | | mills (approx. EUR 2.1 million), Nespresso (EUR 1.2 million), and HIVOS (EUR 62.000) |

Source: Interviews 2020, M+E data 2020, GIZ 2019, GIZ 2014, AR 2019.

A.2 Accomplishment of the output indicators of the NAMA Café’s Logframe

Explanation of colour coding:

Green = indicator achieved or exceeded

Orange = indicator partly achieved

Red = no progress achieved on the indicator

Output indicators A: Low-emission, sustainable coffee production

- **Indicator A.1:** Exceeding the goal of capacity building measures for farmers (target: 90; actual 383 measures; level of achievement: 426%)
- **Indicator A.2:** Exceeding the goal of higher number of qualified extension officers (target: 48; actual: 487 extension officers; level of achievement: 1,015%)
- **Indicator A.3:** Exceeding the goal of farmers implementing low emission, sustainable coffee production technologies (target: 6,000; actual: 7,536 farmers; level of achievement: 126%)
- **Indicator A.4:** A long-term strategy for vulnerable zones was not accomplished yet but expected to be finished by December 2020. A proposal for a national policy was developed and is expected to feed into the development of a National Strategy for Low-Carbon Coffee Production (target: 1 approved strategy; actual: 0). However, the current COVID-19 pandemic could delay further progress.

Output indicators B: Low-emission coffee processing

- **Indicator B.1:** Exceeding the goal of carbon audits conducted and presented (target: 30; actual: 62 carbon audits; level of achievement: 207%)
- **Indicator B.2:** Only reached 7% of the goal of coffee mills reduction of cost by 20% (only 2 of 30 mills – the goal - accomplished a 20% reduction). The project, in fact, worked with 40 mills, out of which 38 reached a reduction between 2% and 5%, which was not enough to accomplish the indicator goal)
- **Indicator B.3:** Exceeding the goal of coffee mills receiving a formal verification of low carbon coffee (target: 30; actual: 34; level of achievement: 113%). Another 34 mills accomplished low carbon coffee based on informal verification by the NSP.

Output indicators C: MRV

- **Indicator C.1:** An MRV system produces data on GHG emissions and emissions reduction for the coffee sector (target: 1 MRV system; actual: 1 MRV system); however due to non-validated emissions factor validity of the data might be questioned; the indicator seems not specific enough on the requirements regarding the MRV system
- **Indicator C.2:** The MRV system is run by a national stakeholder (target: 1 MRV system taken over by 1 national entity; actual: 1 MRV system taken over by 1 national entity)

Output indicators D: Competitiveness and access to differentiated markets

- **Indicator D.1:** Exceeding the goal of established business relations between coffee mills and buyers regarding low emission coffee (target: 10; actual: 14; level of achievement: 140%)

- **Indicator D.2:** Exceeding the number of national and international activities (target: 32 activities; actual: 40; level of achievement: 167%)
- **Indicator D.3:** Accomplished a national statement about traceability for low emission and sustainable coffee (target: 1 statement; actual: 1 statement)

Output indicators E: NAMA Coffee Credit fund

- **Indicator E.1:** Developed contractual agreements for the design and implementation of NAMA Café Financing Programme (target: contractual agreements; actual: contractual agreements)
- **Indicator E.2:** Exceeding the number of viable projects in coffee mills by 204% (target: 25 projects; actual: 51); however, the 51 pre-feasibility studies on viable projects have been handed over to CABI without any coffee mill seeking concrete financing options
- **Indicator E.3:** No bankable project supported (target: 50 bankable projects; actual: 0); despite a one year extension of the NSP due to work under outcome D no credit has been disbursed for any bankable project under the NSP due to a) the beneficiaries finding more attractive financing sources, b) changes in investment priorities of the mills or d) poor financial statements due to low coffee productivity
- **Indicator E.4:** Exceeding the goal of projects supported by the ICAFE incentive mechanism (subsidies for realised investments) (target: 25 projects; actual: 45; level of achievement: 180%)

Within the following chart, in the column on comments, the information presented in grey (transparent) and italics is taken from the Logframe, the blue one is the original indicator, and the rest is based on information from monitoring data, reports and interviews.

| OUTPUT INDICATOR | BASE LINE | GOAL | ACCOMPLISHMENT | % | COMMENTS |
|--|-----------|------|----------------|--------|---|
| Project objective: Coffee production and processing in Costa Rica is done in a lower emission and sustainable manner | | | | | |
| Output A: Low-emission, sustainable coffee production <i>Coffee farmers have increased awareness and implement technologies for producing low-emission coffee in an environmentally, socially and economically sustainable manner</i> | | | | | |
| Indicator A.1: 30 capacity building measures for farmers per year have been executed by national extension service [number of measures] | 0 | 90 | 383 | 426% | Reaching 50% in the first two years and 100% in the overall project cycle. 30% of the measures are gender specific (participation in measures) Goal 90 is taken from 15 during 2016 and 2017, and 30 during 2018 and 2019. This was the result of a joint work among MAG, ICAFE, NESPRESSO and GIZ |
| Indicator A.2: A higher number of qualified extension officers (in at least 30%, baseline 2014 160 extension workers) integrate in an efficient and innovative extension service low-emission coffee production practices in their advisory services. [number of extension officers] | 0 | 48 | 487 | 1,015% | At least, 20% of the services are gender specific (access to job market/contraction of female officers) Sum of attendee lists from ICAFE-MAG and NESPRESSO. This was the result of GIZ training for MAG, ICAFE, NESPRESSO and the mills |

| OUTPUT INDICATOR | BASE LINE | GOAL | ACCOMPLISHMENT | % | COMMENTS |
|--|-----------|-------|----------------|------|--|
| Indicator A.3: At least 1,500 farmers per year start implementing low emission, sustainable coffee production technologies [number of farmers] | 0 | 6,000 | 7,536 | 126% | At least 20% of measures are gender specific (participating producer are families, where women are “Chief of Household” access to gender specific credit lines – Banca de Mujer). Sum of attendee lists from ICAFE-MAG and NESPRESSO. Use the CIMS results: 84% of our farmers are using 2 GAPs Good agricultural practices were implemented by farmers, as well as monitoring. 50% of the indicator was accomplished through the partnership with NESPRESSO |
| Indicator A.4: Long-term strategies or economic alternatives for vulnerable coffee regions are developed, discussed with the coffee sector and confirmed by ICAFE and MAG [number of strategy/policies] | 0 | 1 | 0 | 0% | National policy/strategy for the coffee sector. Strategy expected to be finished by December 2020 |
| Output B: Low-emission coffee processing <i>Coffee mills invest in technologies and measures to process high quality coffee in a low-emission manner</i> | | | | | |
| Indicator B.1: 30 carbon audits conducted, and results presented to the NAMA Café Financing Programme [number of carbon audits] | 0 | 30 | 62 | 207% | Original indicator in Logframe: 30 carbon audits conducted, and results presented at NAMA Credit Fund Results of carbon audits and GHG inventories. Verification of ISO Standard 14064-3, annual revision at coffee mills |
| Indicator B.2: 30 coffee mills have reduced coffee production costs and/or implemented cost- or energy/ wastewater/GHG efficient measures and technologies that increase productivity (kg of green coffee/production cost) by 20% [number of coffee mills] | 0 | 30 | 2 | 7% | Original indicator in Logframe: Contractual agreements, rules and procedures for investment subsidy programme are established, considering specific gender criteria (existence of gender policies, access to gender credit lines, capacity building policies). The project worked with 40 mills. Only 2 mills accomplished a reduction of 20% or superior. The rest 38 mills accomplished reductions from 2% to 5% |

| OUTPUT INDICATOR | BASE LINE | GOAL | ACCOMPLISHMENT | % | COMMENTS |
|--|-----------|------|----------------|------|--|
| <p>Indicator B.3: 30 coffee mills have received a formal verification of low-carbon coffee processing on the basis of official verification schemes [number of coffee mills]</p> | 0 | 30 | 34 | 113% | <p>Verifications such as "norma carbono-neutralidad", "indicación de origen", "Programa País 2.0" or ISO Norm 14064-3.</p> <p><u>Original indicator in Logframe:</u> number of projects supported by NAMA Credit Fund and/or xxx thousand US\$/EUR of capital investment subsidy disbursed. At least 20% of supported projects consider specific gender criteria (capacity building, access to finance, access to job market).</p> <p>Another 34 mills accomplished low carbon coffee processing, but with an informal verification from the project</p> |
| <p align="center">Output C: MRV</p> <p align="center"><i>A national wide MRV system for coffee sector is established and produces the necessary data to inform the responsible national authority on GHG emissions and emission reductions in the coffee sector</i></p> | | | | | |
| <p>Indicator C.1: From 2016 onwards, an MRV system produces data on GHG emissions and emission reductions in the coffee sector</p> | 0 | 1 | 1 | 100% | <p>Project documents; rules and procedures for the MRV system; data from the MRV system</p> |
| <p>Indicator C.2: At 12/2018, the MRV functions are carried out by a national stakeholder</p> | 0 | 1 | 1 | 100% | <p>Transferal of the MRV system or integration of MRV functions into an existing system, e.g. of ICAFE</p> <p>This indicator was added and was not part of the original Logframe</p> |
| <p align="center">Output D: Competitiveness and access to differentiated markets</p> <p align="center"><i>Coffee producers have access to differentiated markets due to its cost-efficiency, low carbon footprint, high quality and sustainable production</i></p> | | | | | |
| <p>Indicator D.1: 10 coffee mills have entered business relations with buyers and a market for low-emission coffee is created [number of coffee mills]</p> | 0 | 10 | 14 | 140% | <p><u>Original indicator in Logframe:</u> Coffee producers reduce coffee production costs and implement cost or energy efficient measures and technologies that reduce production costs in up to 20% and/or increase production per unit (ha/kg) in up to 20%.</p> |

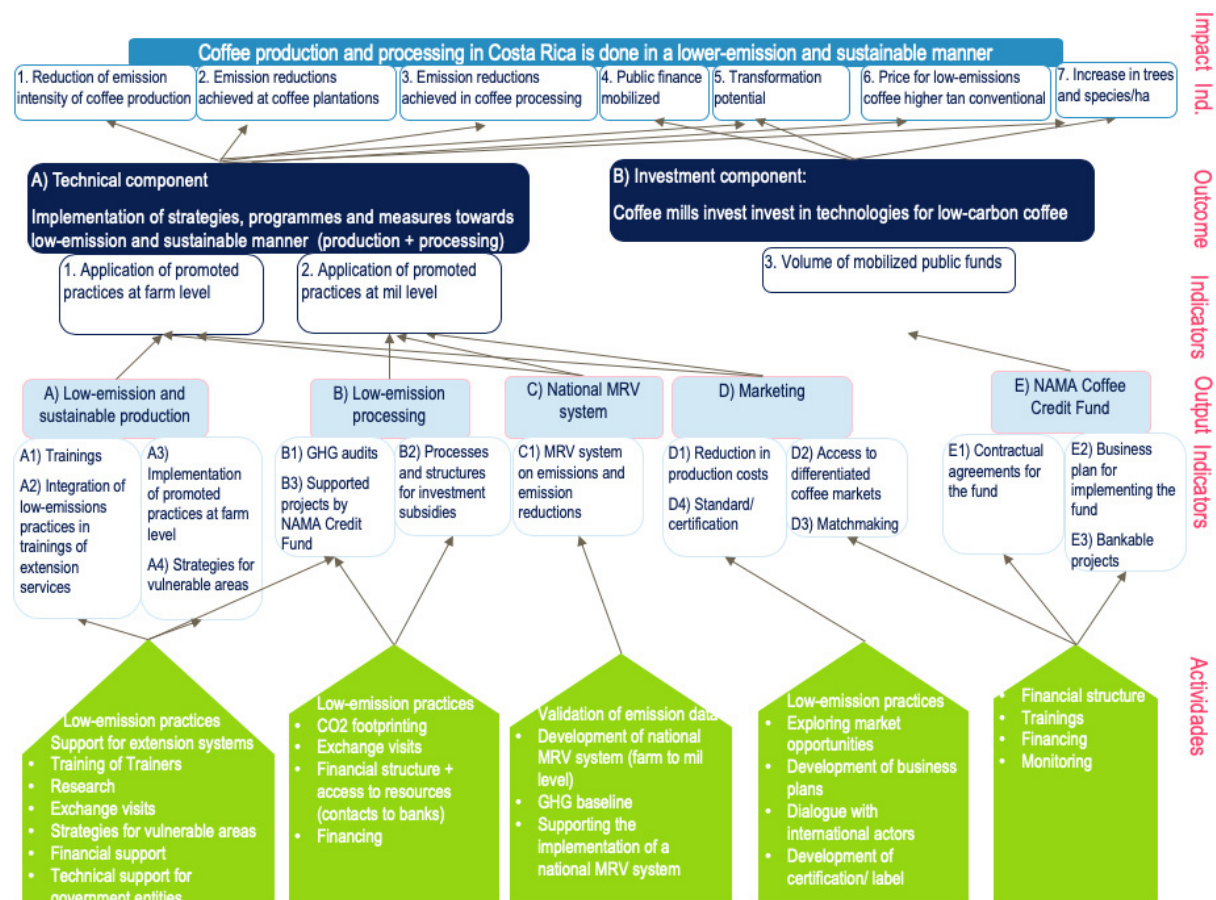
| OUTPUT INDICATOR | BASE LINE | GOAL | ACCOMPLISHMENT | % | COMMENTS |
|---|-----------|------|----------------|------|--|
| Indicator D.2: At minimum eight promotional national or international activities and/or matchmaking contacts or business activities are organised by ICAFE in cooperation with international buyers (e.g. roadshows, sales meetings or events, participation at trade shows etc) per year have been undertaken or attended to market differentiated coffee from Costa Rica [number of activities] | 0 | 24 | 40 | 167% | <i>Original indicator in Logframe: Coffee producers and mills have access to comprehensive information on market opportunities, implement new business concepts and have access to differentiated coffee markets</i> |
| Indicator D.3: Target groups and stakeholders in Costa Rican coffee production, in cooperation with international actors (e.g. Fairtrade, Rainforest) have developed a national statement about the traceability for low-emission and sustainable coffee of Costa Rica [quantity] | 0 | 1 | 1 | 100% | <i>Original indicator in Logframe: At minimum eight promotional national or international activities and/or matchmaking contacts or business activities are organised by ICAFE in cooperation with international buyers (e.g. roadshows, sales meetings or events, participation at trade shows etc) per year have been undertaken or attended to market differentiated coffee from Costa Rica</i> |
| Indicator D.4: This indicator was not replaced | | | | | <i>Original indicator in Logframe: Target groups and stakeholders in Costa Rican coffee production, in cooperation with international certification standards (e.g. Fairtrade, Rainforest,) have defined an internationally recognised certification or eco-label standard for low-emission coffee of Costa Rica</i> |
| Output E: NAMA Coffee Credit fund A NAMA Coffee credit fund managed by the Central American Bank of Economic Integration BCIE offers a refinancing facility to commercial banks for on-lending to the coffee sector (mills and producers) for investments in low-emission technologies and practices | | | | | |
| Indicator E.1: Contractual agreements for the design and implementation of NAMA Café Financing Programme agreed with CABEI, national banks, NSP, Steering Committee and other relevant stakeholders in the second year of project implementation [quantity] | 0 | 1 | 1 | 100% | <i>Original indicator in Logframe: Contractual agreements for the design and implementation of NAMA Credit fund and its steering structure agreed with the BCIE, national banks, NSP, Steering Committee and other relevant stakeholders in the</i> |

| OUTPUT INDICATOR | BASE LINE | GOAL | ACCOMPLISHMENT | % | COMMENTS |
|--|-----------|------|----------------|------|--|
| | | | | | <i>first 6 (six) months after starting NSP</i> |
| Indicator E.2: Based on experiences of technical assistance in farms and mills and of feasibility studies in the first three years of project, 25 technically and financially viable projects have been presented to NAMA Café Financing Programme [number of viable projects in coffee mills] | 0 | 25 | 51 | 204% | <i>Original indicator in Logframe: based on experiences of technical assistance in farms and mills and of feasibility studies by fast track component in the first year of project, a relevant portfolio and/or business plan for the implementation of NAMA Credit Fund is elaborated and presented at and/or confirmed by NAMA coffee steering committee</i> |
| Indicator E.3: Support of 50 bankable projects by NSP Café [number of bankable projects] | 0 | 50 | 0 | 0% | <i>Original indicator in Logframe: support of bankable projects in numbers and/or amount of US\$/EUR of credit disbursed by NAMA Credit Fund (target value to be defined during first year of project operation)</i> |
| Indicator E.4: The ICAFE incentive mechanism supports 25 projects which reduce or fix GHG emissions and/or (waste) water and energy consumption in mills and farms [number of projects] | 0 | 25 | 45 | 180% | This indicator was added to the original Logframe in 2018 and officially agreed upon with TSU |

Source: Interviews 2020, M+E data 2020, GIZ 2019, GIZ 2014, AR2019

Annex B NSP Logframe

This summary of the NSP’s Logframe has been developed by the evaluators based on the Logframe presented in Annex 2 of the Proposal (GIZ 2014):



Annex C Specific lessons learnt and recommendations on the NSP

Based on today’s knowledge project actors see the following improvement potential for the NSP (c12, c21, c22, c23, c24, c28, c29, c32, c41, c42, c54, c58, c61, c62, c65):

- Availability and correctness of inputs: Existing GHG emissions data for the coffee sector was too high leading to false assumptions regarding reduction/removal potential. Validated emissions factors, e.g. for fertilisers, did not exist. These were planned to be developed in another project by the name of “BID-FOMIN”⁴⁷ funded by the Inter-American Development Bank (IADB) and implemented by FUNDECOOPERACIÓN, a civil society entity with the goal to improve socio-economic and environmental conditions in Costa Rica via offering financial solutions for respective projects. However, these inputs have not been developed by BID-FOMIN and were thus not available to the NSP. Relying on external inputs and their correctness poses a risk that should be monitored from the start and needs defined countermeasures in case of occurrence.
- Timeliness of activities: Technical and financial support should be linked, and combined offers for beneficiaries should be available at the same time/when corresponding with the production cycle.
- Complementarity and inclusion:
 - Collaboration with and building upon the BID-FOMIN project did not work out as planned. Collaboration between BID-FOMIN and ICAFE was not as smooth as hoped for and there was a high turnover in staff on both sides. The NSP had similar components (e.g. MRV), which led to the BID-FOMIN project rather focussing on supporting a NAMA on livestock as to avoid duplication of efforts. Complementarity to existing initiatives and inclusion of respective actors should be ensured at all project levels, especially by national institutions, in this case ICAFE, but also MAG and MINAE.
 - Participation of the National Meteorological Institute (IMN) was sought since the beginning of the project; despite several attempts of the NSP to collaborate with IMN the institution could not be motivated to collaborate on emissions factors. This should have been enforced by the national partners MAG and MINAE, and/or even ICAFE, as all of them are public institutions.
 - The different publicly funded projects in the Costa Rican coffee sector should be complementary to create synergies. This was foreseen in the BID-FOMIN project by developing and handing over emission factors to the NSP via IMN. However, as the BID-FOMIN project focused on activities in the livestock sector instead, assuming that the NSP would take up all activities in the coffee sector (see previous bullets), the emission factors were not developed. ICAFE and/or the political committee should have ensured collaboration.
- Government buy-in: Despite the existing national initiatives on climate change mitigation a government change negatively affected the project. Changing (vice-)ministers at MAG and MINAE led to changes in prioritising of the NSP and affected its implementation.
- Timely implementation of technical and financial components: Implementation of the financial component was delayed by lengthy internal processes of the financial partners and lacking experience on this matter by the implementing agent, specifically CABEL.

⁴⁷ See <https://www.namacafe.org/es/proyecto-bid-fomin>, project duration: 2013-2018

Implementation of training and emissions analyses (technical component) did therefore not coincide with availing credits and subsidies to the beneficiaries. When the beneficiaries were trained and potentially motivated to access funds for investing in low-emission practices and processes, access to these funds was not yet available. When the access was created investment willingness had potentially dropped and was not corresponding to the production cycle; e.g. a producer would not invest in low-emission fertiliser around harvesting time as this is not the time to apply fertilizer and a mill would not invest in new machinery during harvesting time when the processing is already ongoing. Implementation of financial and technical support should come at the same time and correspond to the production cycle.

- Channelling financial resources: The Central American Bank for Economic Integration (CABEI) turned out a slow-moving institution hardly prioritising NSP activities. This slowed down processes and delayed progress of the financial component. The chosen project partner thus did not deliver as planned. Other ways to avail finances to producers and mills should have been considered, e.g. through private companies and civil society entities closer to coffee producers and mills than commercial banks and/or banks the beneficiaries already work with. Alternative partners have not been looked for by the NSP at that point in time due to time constraints. Working with several partners right from the start and monitoring their performance closely to identify a) who is not delivering and b) who is performing best needs to be considered in future NSPs.
- Coffee renovation: Many farms have very old coffee trees which are low in productivity and highly vulnerable to climatic changes and pest and disease attacks, this translates into a) higher needs for inputs to maintain productivity and b) limited investment willingness due to low incomes. Although renovation may not have a direct mitigation impact it translates into less emissions per kg green coffee produced in the long run, i.e. 5-15 years (increased production per coffee tree = less emissions per unit produced). Renovation needs to be considered when addressing climate change (adaptation and mitigation) in the coffee sector.
- Expectations: Some producers were expecting extra income from generated carbon credits, which, in this project setting, was not to be achieved. Such expectations need to be managed right from the start.
- Promotion: Demand for low-emission coffee is so far very low in the market. A market for this does hardly exist and still needs to be created. The marketing message needs to be improved to better position “low emission Costa Rican coffee” in the market.
- Engagement of downstream supply chain actors: Coffee roasters have a pull-effect along the whole supply chain; if they are asking for data and/or an added value for their coffee such as the attribute “low emission” more producers and mills would engage in such activities. They should be involved right from the start.
- Duration: Interventions in perennial crops such as the coffee sector take time. Uptake among smallholders may need years and continuous support over several crop cycles is necessary. A longer execution period of the NSP would allow for rolling out the developed approaches and reap the benefits by monitoring long(er)-term impacts.
- Technical studies should have been made according to the needs of every mill and not standardised. 62 energy audits at mills (micro⁴⁸, medium and large) were carried out according to AR2019, but approximately only five of them really implemented some of the recommendations according to the interviews (c11, c12, c21, c25, c28, c32, c41, c42, c44, c61, c63, c65, c68). Most probably this is due to the fact that they did not have investment capabilities to do so. Individual assessments per mill considering immediate necessities and

⁴⁸ Approximately 40% of the 56 mills were micro-mills.

responding to their needs, for example regarding coffee pulp or wastewater treatment, may have been more successful in actual implementation of measures.

- The use of pilot farms of community leaders is a good way of getting attention for the coffee sector on the actions promoted by the NSP.
- Subsidies in-kind should be linked to a contract for a direct investment in accomplishing the action plan of every farm and/or mill beneficiary of NAMA Café; for example, the US\$15.000 should have been linked to the action plan agreed with every mill.
- The negotiation of the credit line should have counted with the participation of ICAFE, which knows the coffee sector and the different financing ways that are most common in the country.
- The project should have further included coffee roasters to work on creating demand.
- The project should have further insisted on participation of the National Meteorological Institute (IMN) via MAG and MINAE to ensure the delivery of the emission factors.
- The Costa Rican coffee sector should focus on competing for quality (not quantity), and selling more directly.

Annex D Evaluation and Learning Matrix

| No. | Evaluation Question | Hypothesis | Existing information | Who can answer this question | Data collection |
|---------------------------------|---|--|--|---|--|
| 1. | Relevance: To what extent does the NSP address an identified need (coffee producers, processors, markets)? How well does the NSP align with government and agency priorities (in regard to lower CO2 emissions)? | The project supports the implementation of existing governmental workstreams, as well as private and institutional coffee initiatives or incentivises these. | Project concepts (logical framework matrix) and progress reports | Beneficiaries, project implementers, GIZ, public partners, donors, ICAFE, public institutions | <ul style="list-style-type: none"> In-depth interviews Semi-structured key informant interviews NSP proposal Context analysis Document review |
| 1.1 Additional Q by GIZ | Were the NSP design and actions, in particular the financial mechanisms, appropriate to support investments in mitigation actions in the coffee sector in an efficient manner? | Investments in mitigation actions in the coffee sector have not been achieved as planned. | Progress reports | Banks, private sector, ICAFE, MAG, DCC (climate finance) | <ul style="list-style-type: none"> Semi-structured key informant interviews Document review |
| 1.2 Additional Q by GIZ | Are results that are reported for the five mandatory core indicators by the NAMA Facility (M1-M5) in line with the NAMA Facility's M&E framework? | Streamlining the project's results with the NAMA M+E framework is not ideal. | Progress reports | Project implementer GIZ | <ul style="list-style-type: none"> Semi-structured key informant interviews Document review |
| 1.3 Additional Q by ELE Team | Were the activities, outputs, and outcomes of the NSP (LFM) designed to solve identified needs? | The logical framework matrix responded to the needs and problems identified in the country/sector diagnosis. | Progress reports | All stakeholders | <ul style="list-style-type: none"> Semi-structured key informant interviews Document review |
| 1.4 Additional Q by ELE Team | Did changes in the country's context affect the relevance of the project's deliverables (relevance)? | Changes in framework conditions impacted project performance (design vs implementation). | Progress reports | All stakeholders | <ul style="list-style-type: none"> Semi-structured key informant interviews Document review |
| 1.5 Additional Q by ELE Team | If we were now at the project's design stage, based on what you know now, what would you have done differently? | Project design and planning could be improved. | Progress reports | All stakeholders familiar with the project proposal/design | <ul style="list-style-type: none"> Semi-structured key informant interviews Document review |
| 1.6 Additional Q by ELE Team | What institutions were involved in the project implementation? How would you rate their performance? | There are deficiencies in the performance of institutions involved in project implementation regarding their expected performance. | Progress reports | All stakeholders | <ul style="list-style-type: none"> Semi-structured key informant interviews Document review |

| No. | Evaluation Question | Hypothesis | Existing information | Who can answer this question | Data collection |
|-------------------------------|---|---|--------------------------------------|---|--|
| 2a | Effectiveness: To what extent is the implementation of the NSP achieving intended outcomes in the short, medium, and long term? | There are deviations between intended and actual outcomes. | Progress reports | Project implementer GIZ, beneficiaries, private actors, public sector | <ul style="list-style-type: none"> In-depth interviews Semi-structured key informant interviews Annual reports Semi-annual reports Annual reports Logframe data Other data from NSP monitoring system |
| 2a.1 Additional Q by GIZ | Can credible mitigation figures be deducted from the large variety of small-scale investments? How reliable are figures reported for a large number of different actions by different people? | Mitigation efforts in smallholder settings are complex and reported figures hardly transparent. | M+E data | Project implementer GIZ, mills, producers | <ul style="list-style-type: none"> Semi-structured key informant interviews |
| 2b | Structure & steering: How is the NSP being implemented? | There are deviations between planned and actual implementation. | Proposal, steering structures | Project implementer GIZ, public partners | <ul style="list-style-type: none"> Semi-structured key informant interviews Document review |
| 2b.1 Additional Q by ELE Team | Were there additional products and/or impacts obtained that were not planned in project design (unintended impacts)? (e.g. governance) | Unintended products and impacts derived from project implementation. | Progress reports | All stakeholders | <ul style="list-style-type: none"> Semi-structured key informant interviews Document review |
| 3 | Effectiveness/ Impact/ Sustainability: Is there evidence that the NSP is contributing to its expected outcome? | The outcome may be achieved, though evidence that change is brought about by project activities may be missing. | Proposal, progress reports, M+E data | Project implementer GIZ, beneficiaries, public and private actors, banks, civil society | <ul style="list-style-type: none"> In-depth interviews Semi-structured key informant interviews Annual reports Semi-annual reports Annual reports Logframe data Other data from NSP monitoring system |
| 3.1 Additional Q by GIZ | In the context of other public and private initiatives in Costa Rica to promote sustainability - or specifically sustainable coffee – how significant | The NSP is one among many contributing workstreams. | Progress reports | Project implementer GIZ, beneficiaries, public and private actors, | <ul style="list-style-type: none"> Semi-structured key informant interviews Annual reports |

| No. | Evaluation Question | Hypothesis | Existing information | Who can answer this question | Data collection |
|------------------------------|---|--|----------------------------|--|--|
| | has the NSP been and in how far can its catalysing effect be confirmed? | | | banks, civil society | <ul style="list-style-type: none"> Semi-annual reports |
| 4 | Efficiency: To what extent is the relationship between inputs and outputs timely, cost-effective, and to expected standards? | Time and budget management were accurate. | - | Project implementer GIZ | <ul style="list-style-type: none"> In-depth interviews Annual reports Semi-annual reports Annual reports Logframe data Other data from NSP monitoring system |
| 5 | Impact/Sustainability: What are the overall learnings from the NSP that are relevant for others? | Relevant lessons learnt have been identified. | Progress reports | Project implementer GIZ, civil society, private + public actors | <ul style="list-style-type: none"> In-depth interviews Semi-structured key informant interviews Annual reports Semi-annual reports |
| 5.1 Additional Q by GIZ | What are lessons learnt from this NSP that are relevant for other coffee NAMAs and for projects working along the agricultural value chain? | Coffee/ smallholder settings require particular aspects/ a certain design for successful implementation. | Progress reports | Project implementer GIZ, civil society, private + public actors | <ul style="list-style-type: none"> In-depth interviews Semi-structured key informant interviews Annual reports Semi-annual reports |
| 5.2 Additional Q by GIZ | How far have general market conditions such as the macroeconomic development of Costa Rica, world coffee prices, damages by parasites and other factors had an impact on the NSP? | Framework conditions outside the influence of the NSP have enabled/ disabled success. | Progress reports | Project implementer GIZ, civil society, private + public actors, verifiers | <ul style="list-style-type: none"> Semi-structured key informant interviews Annual reports Semi-annual reports |
| 5.3 Additional Q by GIZ | Has the NSP caused decisions to plant additional coffee plantations and thus had adverse impacts in terms of increased GHG emissions? Have other unintended adverse impacts occurred? | Leakage has not been controlled. | Progress reports, M+E data | Project implementer GIZ, civil society, private + public actors, verifiers | <ul style="list-style-type: none"> Semi-structured key informant interviews Annual reports Semi-annual reports |
| 5.4 Additional Q by ELE Team | Will the activities promoted/ results delivered by the NSP be scaled up by MAG, ICAFE and/or privately by coffee producers and mills? Is there a permanent change in how things are | Replication/ scaling up by others indicates true change in the long-run. Attribution of impact to the NSP is possible | Progress reports | All stakeholders, include universities, ICAFE and MAG | <ul style="list-style-type: none"> Semi-structured key informant interviews Document review |

| No. | Evaluation Question | Hypothesis | Existing information | Who can answer this question | Data collection |
|-----|---|--------------------------------------|----------------------|------------------------------|-----------------|
| | done, including legal norms and policies, that can be attributed to project activities? | (based on a solid theory of change). | | | |

Annex E Semi-structured interview guidance

Note: Not all questions were asked throughout each interview. This depended on the specific interviewee and the flow of the interview.

Method: Phone, Skype, Zoom interviews.

Agenda/ Structure of interview:

- Thank you for agreeing to be interviewed. AMBERO and Oxford Policy Management (OPM) has been commissioned by the NAMA Facility to conduct Evaluation and Learning Exercises (ELEs) for their NAMA Support Projects (NSPs) that the Facility funds. This interview relates specifically to a final ELE for the Costa Rica “Low Carbon Coffee” NSP being implemented by GIZ.
- We are carrying out a series of interviews with individuals who have been involved in the delivery of this project or may be a partner or beneficiary of the project. In addition, we are also interviewing a selected group of individuals who are not directly involved in the project, nor perhaps aware of the project, but who understand the wider issue and context and can provide a third-party independent perspective.
- We will ask a series of open-ended questions but welcome an informal discussion.
- This discussion is confidential, and the final report will discuss broad trends and results, without any reference or attribution to specific organisations (unless explicit consent is requested in advance).

Note: EQ = Question according to numbering in Annex H of Theoretical Framework, ELEQ = Question according to numbering in NSP evaluation matrix

Main statistical data:

| Interview data | |
|---------------------------------|--|
| Name of interviewer | |
| Organisation | |
| Names & position of interviewee | |
| Contact details of interviewee | |
| Date of interview | |

| Project background | |
|--|--|
| General question | ----- DO NOT ASK ----- How did the project come into being, what was the point of departure and what was your role? |
| Reference to evaluation questions | (general background) |
| Specific questions | <ul style="list-style-type: none"> • When did you first hear about the project? • How did you get involved and what was your role? • What were your expectations on the financial and the technical components and how suitable did you consider them at project beginning? |

| Relevance (ELEQ 1) | |
|---------------------------|---|
| General questions | <p>----- DO NOT ASK -----</p> <p>To what extent does the NSP address an identified need (coffee producers, processors, markets)?</p> <p>How well does the NSP align with government and agency priorities (in regard to lower CO2 emissions)?</p> |
| Specific questions | <p>EQ1.1</p> <p>Do you know of relevant policies in the context of low carbon agriculture/ coffee? Which ones? How did the project support these?</p> <hr/> <p>EQ1.2/ELEQ1.3</p> <p>In how far did project activities address identified needs? (Were the activities, outputs, and outcomes of the NSP (LFM) designed to solve the identified needs described above?) Do you see differences in this regard related to the technical and the financial components?</p> <p>If possible, please rate:</p> <p>Answer on a scale 1 - 4</p> <p>Scale: 1 = Not at all, 2 = A little, 3 = Quite well, 4 = Fully</p> <hr/> <p>EQ1.1/ELEQ 1.1</p> <p>Were the NSP design and actions appropriate to support investments in mitigation actions in the coffee sector in an efficient manner? Why/ why not? Do you see differences in this regard related to the technical and the financial components?</p> <hr/> <p>EQ1.4/ELEQ1.4</p> <p>In how far have changes in the country's context (political, market, environmental) affected the relevance of the project?</p> <p>Which changes and what were their project implications?</p> <p>If possible, please rate:</p> <p>Answer on a scale 1 - 4</p> <p>Scale: 1 = Not at all, 2 = A little, 3 = Quite well, 4 = Fully</p> <hr/> <p>EQ2.8/ELEQ1.6</p> <p>Which institutions were involved in the project? How would you rate their performance?</p> <p>If possible, please rate:</p> <p>Answer on a scale 1 - 4</p> <p>Scale: 1 = Not at all, 2 = A little, 3 = Quite well, 4 = Fully</p> <hr/> <p>EQ2.4+2.5/ELEQ 1.5</p> <p>If we were now at the project's design stage, based on what you know now, what would you have done differently? (Consider the technical and the financial component.)</p> <hr/> <p>EQ1.3, EQ2.7/ELEQ1.2</p> <p>How well did the NSP feed into the NAMA Facility's M&E Framework (indicators M1 – M5)? Are results that are reported for the five mandatory core indicators by the NAMA facility (M1-M5) in line with the NAMA Facility's M&E framework?</p> <p>M1 = GHG emissions reduced</p> <p>M2 = Number of people directly benefitting</p> <p>M3 = Potential for scaling-up, replication and transformation (catalytic effect)</p> <p>M4 = Amount of public finance mobilised</p> <p>M5 = Amount of private finance mobilised</p> <p>If possible, please rate:</p> <p>Answer on a scale 1 - 4</p> <p>Scale: 1 = Not at all, 2 = A little, 3 = Quite well, 4 = Fully</p> |

| Effectiveness (ELEQ 2) | |
|--|---|
| Specific questions 2a | <p>EQ2.1/ ELEQ 2a</p> <p>To what extent is the implementation of the NSP achieving its outcomes in the short, medium, and long term? Please elaborate (why/ why not reached).</p> <p>If possible, please rate:</p> <p>Answer on a scale 1 - 4</p> <p>Scale: 1 = Not at all, 2 = A little, 3 = Quite well, 4 = Fully</p> |
| | <p>EQ2.2+2.6+2.10+2.12+3.3+3.4+3.5/ELEQ2a.1</p> <ul style="list-style-type: none"> Have you invested in mitigation activities? Why/ why not (consider technical and financial components)? How easy/ complicated was it to monitor mitigation figures? Please explain. How reliable do you consider the monitoring and reporting? How reliable do you consider mitigation figures added up from a large number of different actions and actors? <p>If possible, please rate:</p> <p>Answer on a scale 1 - 4</p> <p>Scale: 1 = Not at all, 2 = A little, 3 = Quite well, 4 = Fully</p> <ul style="list-style-type: none"> What are strengths/ weaknesses of this approach? |
| Specific questions 2b | <p>EQ2.11+2.13+2.15/ELEQ2b</p> <p>Structure & steering: How is the NSP being implemented? Please describe who you collaborated most with and how you/ the project took decisions.</p> |
| | <p>EQ2.1+3.2/ELEQ2b.1</p> <p>Were there additional products and/or impacts obtained that were not planned in project design (unintended impacts)? <i>(Note for interviewer only (do not ask specifically): potentially governance aspects, increase of GHG emissions outside project area e.g. new coffee plantations (leakage))</i></p> |
| Effectiveness/ Impact/ Sustainability (ELEQ 3) | |
| General questions | <p>----- DO NOT ASK -----</p> <p>Is there evidence that the NSP is contributing to its expected outcome?</p> <p>In the context of other public and private initiatives in Costa Rica to promote sustainability - or specifically sustainable coffee – how significant has the NSP been and in how far can its catalysing effect be confirmed?</p> |
| Specific questions | <p>-</p> <p>Have you/ your organisation been working on low carbon (climate smart) agriculture/ coffee before the NSP?</p> |
| | <p>EQ2.15+3.1+3.5/ELEQ3</p> <p>Did the NSP bring about new subjects /thematic fields or components (processes, new staff, training...) on the topic in your organisation? If so, please explain.</p> |
| | <p>EQ3.1-3.4+2.13/ELEQ3</p> <p>Do you actively support involved project actors to build knowledge and capacities on low carbon coffee? If so: Whom do you support and how do you do so?</p> |
| | <p>EQ3.1-3.4+2.13/ELEQ3</p> <p>Have you received (from other project actors) support to build up relevant capacities and structures in your own organisation? If so: please elaborate.</p> |
| | <p>EQ3.4/ELEQ3</p> <p>Do you plan to further work on low carbon coffee beyond 2020? Would you like to see this work continued? Why/ why not?</p> |
| | <p>EQ3.3+3.5/ELEQ3.1</p> |

| | |
|--|---|
| | <p>Do you know of other initiatives (public/ private) working on sustainable and low carbon coffee in Costa Rica? Potentially: Which are the most important ones? What was the role of the NSP in this context?</p> <p>EQ3.3+3.5/ELEQ3.1</p> <p>How effective would you rate the role of the NSP towards sustainable low carbon coffee in Costa Rica?</p> <p>If possible, please rate.</p> <p>Answer on a scale 1 - 4</p> <p>Scale: 1 = Not at all, 2 = A little, 3 = Quite well, 4 = Fully</p> |
| Efficiency (ELEQ 4) | |
| General question | <p>----- DO NOT ASK -----</p> <p>To what extent is the relationship between inputs and outputs timely, cost-effective, and to expected standards?</p> |
| Specific questions | <p>EQ4.1+4.2/EQ4</p> <p>How do you rate the time management of the project? Have activities been implemented as planned? Why/ why not?</p> <p>If possible, please rate.</p> <p>Answer on a scale 1 - 4</p> <p>Scale: 1 = Not well managed at all, 2 = Managed rather poorly, 3 = Managed rather well, 4 = Good time management</p> |
| | <p>EQ4.3/EQ4</p> <p>How do you rate budget management of the project? Was spending as planned? Why/ why not?</p> <p>If possible, please rate.</p> <p>Answer on a scale 1 - 4</p> <p>Scale: 1 = Not well managed at all, 2 = Managed rather poorly, 3 = Managed rather well, 4 = Good time management</p> |
| Impact/ Sustainability (ELEQ 5) | |
| General questions | <p>----- DO NOT ASK -----</p> <p>What are the overall learnings from the NSP that are relevant for others?</p> |
| Specific questions | <p>EQ5.1/ELEQ5.1</p> <p>What have you learnt from this NSP? In how far is this relevant for other coffee NAMAs and for projects working along agricultural value chains?</p> |
| | <p>EQ1.4+5.2+5.3/ELEQ5.2</p> <p>In how far have changes in framework conditions (political, market, environmental, macroeconomic development of Costa Rica, world coffee prices, damages by parasites...) affected the project?</p> |
| | <p>EQ5.4+3.2+3.4+2.10/ELEQ5.6</p> <p>Do you plan to scale up or replicate developed approaches? Why/ why not?</p> |
| | <p>EQ5.1+3.2/ELEQ5.6</p> <p>What do you consider as the project's main achievements that will be maintained in the future?</p> |

Annex F List of interviewees

| No | Organisation | Position |
|----|--|--|
| 1 | GIZ | Project Director |
| 2 | GIZ | Project advisor |
| 3 | GIZ | Project advisor |
| 4 | Consultant (formerly GIZ) | Project advisor |
| 5 | MAG (NAMA Café) | Minister Assistant Chief of extension |
| 6 | ICAFE (NAMA Café) | Technical Manager Sustainable Production General Manager Administrative assistant |
| 7 | MINAE (NAMA Café) | Sub-director climate change Technical Assistant climate change Viceminister Director climate change |
| 8 | Fondo Nacional de Financiamiento Forestal (FONAFIFO) | Manager Coordinator |
| 9 | Ministerio de Comercio Exterior (COMEX) | Director |
| 10 | Cámara de Exprtadores de Costa Rica | General Manager |
| 11 | Banco de Costa Rica | Director Cooperative |
| 12 | Banco Centroamerica de Integración Económica | Executive Executive Director |
| 13 | Banco Promérica | Director Ccredit |
| 14 | Banco Interamericano de Desarrollo | Oficial BID LAB |
| 15 | World Coffee Research | Extensionist |
| 16 | CATIE | Professor / Investigador |
| 17 | Fundación Banco Ambiental (FUNBAM) | Director |
| 18 | FUNDECOOPERACIÓN | Executive Director |
| 19 | HIVOS | Project Manager |
| 20 | Coope Tarrazu R.L. | Manager Coordinator |
| 21 | Coope Victoria R.L. | Coordinator |
| 22 | Coopronaranjo R.L. | Operations Manager |
| 23 | Cordillera de Fuego S.A. | Director micro-mill |
| 24 | Beneficio Las Marías S.A. | General Manager |
| 25 | Las Lajas | Director micro-mill |
| 26 | Zalmari S.A. | Director micro-mill |
| 27 | APROCETU, Asociación de Procutores del Cerro de Turrubares | Director |
| 28 | Aquiaries | Director |

| | | |
|------------|--|--|
| 29 | GIZ TSU | Senior Member of the NAMA Facility's secretariat |
| 30 | Nespresso Centroamérica | Regional Director |
| 31 | Starbucks | Global Director Agronomy |
| 32 | Deutscher Kaffeverband | Gerente |
| 333 | Melitta | Director Sustainability |
| 34 | Rainforest Alliance | Director, Environment |
| 35 | IDH | Programme Manager Coffee |
| 36 | Global Coffee Platform | Executive Director |
| 37 | Münchhausen Kaffee Rösterei | Owner |
| 38 | Speicherstadt Kaffeerösterei | Owner |
| 39 | Consultants on Costa Rican Coffee Strategy | Consultants |

Annex E NSP Factsheet⁴⁹

NAMA Facility

Low-Carbon Coffee NAMA in Costa Rica



1. Facts

| | |
|-----------------------|--|
| Implementing partners | Ministry of Environment and Energy (MINAE) Ministry of the Environment Ministry of Agriculture and Livestock (MAG) ICAFE BCIE Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH |
| NAMA Facility funding | EUR 7 million |
| Project duration | five years |
| Status | implementation |

2. Towards a Low-Carbon Paradigm

In order to both reach the nation's target of carbon neutrality by 2021 and support international climate protection efforts, Costa Rica has developed the world's first nationally appropriate mitigation action (NAMA) in the agricultural sector.

The Costa Rican NAMA Café promotes the sustainable production and processing of low-carbon coffee in order to effect the long-term transformation of the coffee sector as a whole.

The project's main objectives include reducing GHG emissions in production and processing while maintaining a high-quality coffee output using environmentally and socially sustainable methods. With that, the NSP ensures that farmers receive an adequate income and that local natural resources are preserved. Additional public and private financing for investments in innovative technologies and practices will also be leveraged.

Costa Rica's NAMA Café is receiving support via the NAMA Support Project (NSP) “Low-Carbon Coffee Costa Rica”. With support from the NAMA Facility, this project

On behalf of



Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety



Department for
Business, Energy
& Industrial Strategy

⁴⁹ https://www.nama-facility.org/fileadmin/user_upload/publications/factsheets/2017-12_factsheet_nama-facility_costa-rica_coffee_01.pdf, last accessed 12/08/2020.

is now in implementation. The NSP is as an integral part of the NAMA Café and aims to create the first low-carbon coffee in the world by reducing GHG emissions and improving resource efficiency at coffee plantations and coffee mills.

3. Change in the Face of Challenges

In Costa Rica, coffee production plays a key role in the economy while also accounting for nine percent of greenhouse gas (GHG) emissions. Costa Rica's coffee plantations cover more than 90,000 hectares, situated between 600 and 1,600 metres above sea level. Moreover, the sector comprises 45,000 producers, 239 mills, 72 exporters and 80 roasters, representing eight percent of the Costa Rican workforce.

Costa Rica is well known for its high altitude and high quality coffee: Coffee production has historically been closely linked to Costa Rica's national identity and economic development. However, the sector is facing multiple challenges: fluctuating world coffee prices, a recent resurgence of a fungal disease affecting more than 60% of the Costa Rican coffee growing area and relatively high production costs, as coffee farms rely on manual labour.

Additional pressures include high levels of soil acidity and the impact of climatic changes.



4. Achieving Transformational Change

The NSP seeks to induce sector-wide transformational change by not only targeting the reduction of GHG emissions, but also the production and processing of high quality coffee in an environmentally and socially sustainable manner. At the same time, this project is designed to consider the fact that coffee production in the country needs to provide adequate income to farmers and preserve natural resources, such as soil and water, in order to ensure sustainability. Furthermore, the leveraging of additional public and private financing for investments in improved production, processing technologies and practices is a key requirement for reaching the envisaged goal. The project approach aims at the long-term transformation of the coffee sector by emphasising the importance of channelling investments and allocating resources in favour of low-emission technologies.

The Low-Carbon Coffee NSP delivers a combination of technical and financial support by focusing on several factors, including the strengthening of technical and institutional capacities at the national level to facilitate private-sector inclusion and cooperation. An emphasis is also placed on determining the regions with a high relevance for the coffee sector to serve as models for replication in other geographical areas. Furthermore, the Low-Carbon Coffee NSP seeks to identify key actors along the value chain with the potential to reduce emissions in the coffee sector and foster essential framework conditions that enable sustainable transformational change in the coffee sector.

In technical terms, GHG emissions on the production side are reduced through the use of new, more efficient fertilisers and application schemes as well as the introduction of agroforestry. On the processing side, water is reused and recycled and milling by-products are composted and used as fertiliser or fuel for the coffee roasting process. One mill has already acquired a compost turner and several mills have invested in equipment to improve processing. Furthermore, the coffee husk is used from processing to reduce the use of firewood in ovens.

Target groups of the Low-Carbon Coffee NSP include at least 6,000 producers on 25,000 hectares and at least 50 coffee mills that – by the end of the project – apply at least two low-carbon practices or technologies.

The NSP's technical cooperation (TC) component focuses on:

- Awareness-raising and capacity-building measures to support coffee farmers and mill operators in the implementation of sustainable low-emission technologies and practices;
- Establishing a cost-efficient monitoring, reporting and verification (MRV) system at the farm, mill and national levels;
- Developing marketing strategies and business opportunities for cooperatives and coffee mills to help position themselves in the international market.

The NSP's financial cooperation (FC) component focuses on:

- Fast-tracking investment subsidies for low-emission technologies;
- Establishing a support fund in cooperation with BCIE for commercial banks financing low-emission investments in the coffee sector.

5. Expected Results

The NSP will increase economic sustainability of coffee production by introducing new methods and facilitating access to differentiated markets and the NSP will support climate resilience through the use of shade trees. Furthermore, the project will leverage substantial private funding for investments in low-carbon coffee processing technologies. Close collaboration between cooperatives and mills, the financial sector and with multipliers such as the national extension services will all contribute to a transformation of the coffee sector in Costa Rica.

The project will also contribute to the empowerment of farmers and millers to develop sustainable livelihoods, maintaining employment for up to 150,000 jobs during the harvest period and potentially improving more than 400,000 people's standard of living of. The aggregate emission reduction potential amounts to 1.85 Mt CO₂e over 20 years, with emission reductions of 250,000 tons CO₂e directly attributable to the NAMA Support Project.





Low-Carbon Coffee NAMA in Costa Rica

6. Further Information and Updates

<http://namacafe.org/> and <http://www.nama-facility.org/projects/low-carbon-coffee-nama/>