

Project Evaluation Series

Evaluation of the project “International Alliance on Climate Smart Agriculture”

Project code: GCP/GLO/534/ITA

Annex 2. Pilot project evaluation report: Climate smart agriculture project with cocoa under an agroforestry system in Ecuador

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Abbreviations and acronyms

Agrocalidad	Agency for regulation and phyto- and zoosanitary control (<i>Agencia de Regulación y Control Fito y Zoosanitario</i>)
CCI	Climate smart cocoa (<i>Cacao climáticamente inteligente</i>)
CSA	climate smart agriculture
CSL	climate smart livestock
FAO	Food and Agriculture Organization of the United Nations
FFF	Forest and Farm Facility
FODESNA	Napo Sustainable Development Fund (Fondo de Desarrollo Sostenible de Napo)
GEF	Global Environmental Facility
GIAHS	Globally Important Agricultural Heritage System
GIZ	German Development Cooperation (<i>Deutsche Gesellschaft für Internationale Zusammenarbeit</i>)
IACSA	International Alliance on Climate-Smart Agriculture
IKIAM	Amazon Regional University
INIAP	National Institute of Agricultural Research (Instituto Nacional de Investigaciones Agropecuarias)
NDC	nationally determined contribution

1. Introduction

1.1 Purpose of the evaluation

1. This document presents the report of the evaluation of the project "Climate smart agriculture project with cocoa under an agroforestry system in Ecuador" (Cacao climáticamente inteligente, or CCI project). This was a pilot project of the global project¹ GCP/GLO/534/ITA "International Alliance on Climate Smart Agriculture" (hereafter "IACSA" or "the project"). The CCI project has been implemented by the Food and Agriculture Organization of the United Nations (FAO) in Ecuador from November 2019 to December 2021. The evaluation served a double purpose of accountability and learning (improvement and enlightenment). It assessed project results, their relevance for targeted beneficiaries, national needs and priorities. It also documented important lessons for potential scaling, replication or follow-up projects in the climate smart agriculture (CSA) sector. To this end, the evaluation assessed i) the performance of the project considering both its global and national dimensions, ii) its results, their sustainability and transformational changes occurred in the enabling environment for CSA, and iii) shortcomings as well as good practices of project implementation.

1.2 Methodology

2. For the overall methodology, see the methodology section of the full report. In Ecuador, the evaluation team interviewed key stakeholders (at FAO, partner agencies and beneficiary organizations) in Quito and Tena. In April 2022, the evaluation team visited the areas where practices were visited in the field (Tena, Archidona and Carlos Julio Arosemena Tola municipalities).

1.3 Limitations

3. Overall limitations of the evaluation are presented in the general evaluation report. Specific limitations of the pilot project evaluation were the limited time to visit all field project activities, so the observations is based on a representative selection. This selection was done in conversation with the project coordinator and the three associations. At the time of the field work, no COVID-19-related travel restrictions were in place so this did not form a limitation.

¹ In several occasions, the IACSA project is referred to as a program and in fact, it has many aspects of a program (long term execution with emerging, additional outputs and increasing budget, nested project within overall scope). However, it has been administratively managed as a project and therefore will be referred to as a project.

2. Background and context of the project

2.1 Context of the project

4. Cocoa is an important commodity for Ecuador. According to FAOSTAT data, in 2020 the country exported USD 923 million in cocoa products (beans, butter, paste and powder). This was more than double the export value in 2010, making it the third largest exporter of cocoa beans in the world. Cocoa was the sixth most exported product in Ecuador. Ecuador is a leading country in the production of high-quality cocoa (*cacao fino de aroma* or fine-flavor cocoa), with a volume of about 200 000 tonnes per year. The global demand for this product has grown during the last decade, generating an unsatisfied demand of about 120 000 tonnes per year. Approximately 100 000 families of small producers are involved in the supply chain (99 percent of the total; CEFA, 2022).
5. The traditional cocoa production area in Ecuador is in the coastal plains. However, over the past couple of decades, its cultivation has increased in the Amazon region, the natural distribution area of *Theobroma cacao*. Here, the production of cocoa has allowed small indigenous communities to improve their living conditions. However, there are also problems related to cocoa production, including conflicts over land and limited institutional and financial support for small and medium-sized producers. Deforestation, pollution, a lack of access to export markets and limited knowledge of production costs constitute challenges. In addition, producers in the Napo province indicate that they perceive climate risks, including temperature increases and variation in the intensity and seasonality of rains (FAO, 2021d).
6. These climate change impacts are reported to have effects on the production of cocoa and other income-generating crops as they increase the spread of pests and diseases and exacerbate soil erosion and the loss of soil nutrients, which lowers yields. Other risks include strong winds, the overflowing of rivers and estuaries and dry periods. There is a need to strengthen small and medium cocoa producers' capacities to adapt to the effects of climate change, for example by promoting the transfer of ancestral knowledge to youth, disseminating information on agroecological management, diversifying incomes and connecting farmers to stable markets (FAO, 2021a).
7. The CCI project is a pilot project under the IACSA project. It received full funding from the Italian Ministry of Ecological Transition through IACSA. It is implemented by FAO, in close collaboration with three cocoa producer associations. The project sought to apply the three objectives of CSA in practice through the support to one specific crop (cocoa) in one specific region of Ecuador (Napo province) in order to effectively support sustainable development and ensure food security in the context of a changing climate.
8. The CCI project had a total budget of USD 352 792 and was planned to be executed for 14 months, from 5 November 2019 to 31 December 2020. Its planned impact statement was aligned to the Country Programming Framework (CPF) objectives "Increase and improve supplies of goods and services from agriculture and forestry and fisheries in a sustainable manner". Therefore, the evaluation team considers the specific outcome as the project impact statement "The climate-smart approach in cocoa production was strengthened under the Chakra System". The project's results framework includes one outcome and three outputs, each with its indicator, baseline, target, means of verification and assumptions

(Table 1). Ten general activities were identified, that were further specified in the operative plan.

Table 1. Logical framework matrix

Results chain	Indicators				Assumptions
	Indicators	Baseline	Target	Means of verification	
Outcome: <i>Entrepreneurial capacities, aptitudes for traceability in cocoa products and for developing climate change measures in cocoa production under Chakra system in two cocoa producers' associations of the Napo province strengthened</i>	Number of cocoa producer associations applying CSA approach	0	3		CSA is well understood and there is willingness to adopt it by different actors in the project area. Political will for cocoa promotion under agroforestry system and to channel financial resources for cocoa value chain.
Output 1: Cocoa quality and entrepreneurial capacities strengthened	One management plan for cadmium pollution designed	0	1	Document	Producers are willing to learn and engage actively in generating better practices in cocoa production.
	Study of carbon sequestration potential and the certification requirement	0	1	Document	There are no information barriers.
Output 2: Cocoa diversity conservation implemented	One garden of cocoa varieties installed in each farmers association	0	2	Visual verification	Producers are willing to learn and engage actively in activities that contribute to biodiversity conservation.
Output 3: Capacities for CSA implementation and carbon sequestration measurement enhanced	Number of people trained in CSA and sustainable agriculture	0	150	Certification	Farmers and Ministry of Agriculture and Livestock professionals are willing to engage actively in training activities on carbon sequestration and CSA. Political will to channel financial resources for mitigation under REDD+.
	One e-learning course on CSA developed	0	1	Ministry of Agriculture and Livestock webpage	Ministry of Agriculture and Livestock demand for capacity building remains a priority.
Activity 1.1	To study "niches" of certification for cocoa products (organic, carbon neutral, others) cost effective for small farmers associations				
Activity 1.2	To conduct a traceability study of cadmium content in cocoa grain and soils				
Activity 1.3	To define the carbon sequestration potential in an average farm (Chakra) and its relation with market opportunities				
Activity 1.4	To develop a sustainable financing strategy for farmers association				
Activity 2.1	To develop cocoa genetic diversity conservation (in-situ) via local gardens				
Activity 2.2	To characterize cocoa local varieties (including white cacao)				
Activity 3.1	To train farmers on CSA practices (including the proper use of fertilizers, cadmium management, and organic matter, and others)				
Activity 3.2	To train farmers on measuring carbon sequestration potential in the cocoa agroforestry system (based on the REDD+ methodology)				
Activity 3.3	To elaborate an e-learning course on CSA Activity 3.4				
Activity 3.4	To conduct a training program for rural extensionists, professionals and farmers on sustainable agriculture and climate change				

3. Findings

3.1 Relevance

EQ 1: Has there been any change in the relevance of the project during its implementation that affect the relevance of the project objectives and goals?

EQ 1.1: Have changes in international/national policies, public plans or societal developments changed the context of the implementation of the project?

Finding 1. There has been an increasingly positive institutional (public and private) environment for sustainable (high quality, climate smart) cocoa. Ecuador has a green products national exportation policy, including cocoa. CSA is included in Ecuador's nationally determined contribution (NDC) and its implementation plan (2021). During project execution, the sustainable development fund for the Napo province started implementation, creating direct funding opportunities to support CSA cocoa initiatives.

9. The Government of Ecuador has adopted several policies to promote sustainable cocoa cultivation and export, in recognition that Ecuador is one of the countries of origin of the cacao tree and that there is a growing demand for fine-flavor varieties, as well as a high potential for socially and environmentally sustainable production mechanisms. For instance, Ecuador has a green products national exportation policy, including cocoa (UNCTAD, 2015) and the Ministry of Agriculture and Livestock implements a programme for the renovation of fine flavour cocoa plantations (Ministry of Agriculture and Livestock, 2022).
10. In 2019, Ecuador launched its first NDC to the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC). Ecuador specifically included CSA through climate smart livestock (CSL). This explicit inclusion was a result of the FAO-implemented Global Environmental Facility (GEF) project on CSL.² While cocoa is not directly mentioned in the NDC; improved sustainability in cocoa cultivation as part of climate adaptation has been included in the NDC implementation plan (Ministry of Environment, Water and Ecological Transition, 2021). This shows an improved and direct linkage between sustainable cocoa cultivation and climate action.
11. At the provincial level, the Environmental Trust Fund (*Fondo de Desarrollo Sostenible de Napo*, or FODESNA) which was created with the FAO-implemented GEF project "Napo - Sumak Kawsay"³ was replenished and started implementation during the execution of the CCI project. This fund became the major source of funding for the Chakra Corporation certificate (see Finding 6).

EQ 1.2: Have new insights, paradigms or the availability of new technologies in the area of CSA or climate action overall, affected the relevance of project objectives and goals?

Finding 2. The project built on and was executed in synergy with several other projects in support of improving sustainable cocoa production in the Napo province. The jointly developed insights

² GEF Project ID 4775

³ GEF Project ID 4774

and results from different other projects supported the relevance and effectiveness of the CCI project.

12. The CCI was implemented in the Napo province in Ecuador. This Amazonian jurisdiction is characterized by a high landscape and biological diversity and a rural population of predominantly indigenous origin. Around 79 percent of the province is part of conservation schemes and another important part is under agroforestry systems with coffee, cocoa and fruit. Less environmentally sustainable land use (cattle ranching, monocropping systems and urban areas) is relatively small compared to other Amazonian provinces. This socioenvironmental context provides a positive setting for the development of a project to pilot climate smart cocoa cultivation.
13. For decades, the Napo province has received a series of sustainable rural development and nature conservation projects that have worked in synergy, and the CCI project has adequately built on this.
 - i. The German Corporation for International Cooperation (GIZ) has supported agroforestry programs (including cocoa and coffee cultivation) since the previous century, through different programs, and is still an important development partner.
 - ii. Since 2015, FAO has implemented two GEF projects that formed a direct basis for the CCI project: the Napo-Sumak Kawsay project supported biodiversity conservation and sustainable livelihoods for rural communities. The climate smart livestock project was implemented in several provinces, including the Napo province, and was the first to pilot CSA in Ecuador.
 - iii. Currently, FAO coordinates the Forest and Farm Facility (FFF) that provides direct financial support and technical assistance to strengthen forest and farm producer organizations representing smallholders, rural women's groups, local communities and indigenous peoples' institutions (FAO, 2022a). FFF is also applied in the Napo province.
 - iv. FAO is a partner in the Proamazonia program (Proamazonía, 2022). Since 2017, the Proamazonia program is implemented by the United Nations Development Programme (UNDP) through the ministries of environment and agriculture. It started as a USD 73 million project funded by the Green Climate Fund (GCF)⁴ and GEF.⁵ The Proamazonia program works in all Amazonian provinces to halt deforestation, among other actions, through supporting improved practices in four value chains, including cocoa.
 - v. Several other cooperation agencies support smaller sustainable agriculture initiatives in the Napo province, such as the *Fondo Ecuatoriano de Cooperación para el Desarrollo* (FECD) y la *Entidad Nacional Josefinos del Murialdo* (ENGIM).
14. Most of the past and ongoing programs have worked to improve cocoa production and include social and environmental considerations. With the exception of the CSL project, all initiatives have worked with and strengthened the same three cocoa producer associations that are collaborating with the CCI project. Also, these partners have coordinated to develop the idea of promoting the Chakra system and developing a certification scheme. Therefore, they developed an interinstitutional roundtable ("Grupo Chakra") of which FAO

⁴ GCF project IDs FP019 and FP110.

⁵ GEF project ID 9055.

was a part. In this setting, information was exchanged, activities coordinated and initiatives aligned. According to interviewed participants of this roundtable, the development of the CCI project was done in the context of the table and the lessons of other initiatives were included. This process ensured that the project was fully aligned with other initiatives, built on ongoing work and coordinated its support to associations. Therefore, the CCI project, while limited in funding and implementation time, in practice was part of a larger family of initiatives to support sustainable cocoa cultivation which strongly contributed to its effectiveness.

EQ 1.3: Have any institutional changes (at FAO or its partners) affected FAO's comparative advantage or institutional capacity to implement the project?

Finding 3. The project is well aligned with FAO's strategies. The increased attention by FAO to climate change provides an improved enabling environment for CSA in general. Also, after having managed a series of projects with a similar focus in the Napo province, FAO has become a continued implementing partner for the beneficiaries that built trust and continuity.

15. FAO has implemented a series of important projects during the last decade (see Finding 2) and therefore, provided continuity and sustainability to the results of individual projects, created synergy with other initiatives and a stable network with local public and private stakeholders, which provided it with an important comparative advantage to implement the current project.
16. The project is fully aligned with the CPF 2018–2021 (FAO and Ministry of Foreign Affairs and Human Mobility, 2018): the CSA principles are directly aligned with one of the CPF's strategic objectives "ensure that agriculture, forestry and fisheries are more productive and sustainable". The project also contributes to three of the four other strategic objectives (food security, poverty reduction, efficient and inclusive agricultural and food systems). The new FAO strategic framework (FAO, 2021b) has prioritized climate action and identified addressing climate change as an overarching challenge which directly relate to FAO's global goals. The establishment and implementation of climate-smart agricultural practices, policies and programs is mentioned as the way argi-food systems should transform and increase their resilience to achieve sustainability and the Paris agreement goals. The latter has created a potential stronger global support to CSA within the institution. Finally, in 2021, FAO launched a global action on 'one-country-one priority product' (FAO, 2022b) and in the recent regional FAO conference held in Quito (March 2022), Ecuador suggested cocoa as its priority product.

EQ 2: Was the project design appropriate for delivering the expected outcomes and set goals?

EQ 2.1: How was the internal coherence of the project in terms of synergies and complementarity between objectives, components, activities and outputs?

Finding 4. The CCI project lacked a clear coherence between activities, outputs and outcomes which, at any rate, did not affect the project's outcomes.

17. The design of the project logic has several flaws. While the project outcome and outputs are well defined and relevant, the activities do not fully align with outputs. On the one hand, this relatively poor alignment is evidenced by the figure that links activities, components and CSA pillars (p. 15 of the project document) that has many crossing lines and lacks inclusion of project outputs. Also, there were activities planned for on output (e.g. 1.3:

define carbon sequestration potential) which would be more adequate for another output (3: capacities for sequestration measurement enhanced). On the other hand, the activities not always add up to the output (e.g. output 1 includes "strengthened cocoa quality" but the activities only refer to cadmium content, but not overall quality). Moreover, interviewed individual farmers mentioned the support to renovation of cocoa crowns with improved variety clones as the most appreciated project activity supporting cocoa quality but this logic was not presented in the project document. Other well-received activities (the formalization of the corporation of associations and the further support to the Chakra certification) were only planned as minor activities and not included as such in the project document (see Finding 6).

18. However, considering the good overall performance of the project (See Findings 6-9) the flaws in design evidently did not affect the delivery of project outputs and outcomes. A factor that contributed to this success was adequate adaptive capacity of project implementation.

EQ 2.2: Did the project design consider all necessary inputs for effective delivery, in terms of budget, human resources, time and monitoring/reporting arrangement?

Finding 5. The design of the CCI project adequately considered implementation arrangements and budget requirements, but operational management and reporting was not included. Not enough time was planned: the originally considered project implementation period was too short.

19. The document that was developed for the design for the CCI project was an internal document between the country office in Ecuador and the management of the IACSA programme. Therefore, it did not follow a specific format set by a donor. It nevertheless was relatively complete with a well-developed context and rationale, project logic (outcomes, outputs, activities), budget, stakeholder identification and engagement, knowledge sharing and risk management strategies. The document considered implementation arrangements in terms of institutional framework and coordination with public agencies. On the other hand, it lacked detailed management arrangements in terms of staffing and decision-making as well as reporting and monitoring arrangements and cross cutting priorities such as gender equity and social inclusion.
20. The necessary financial inputs resulted to have been well planned considering that project outcomes were satisfactorily achieved with the available budget. The main challenge was time: the original planning (14 months) was far too short considering the process needed to establish the corporation of associations and the arrangements needed for the Chakra certificate and recognition (see Finding 13).

3.2 Effectiveness

EQ 3: To what extent has the project contributed to the achievement of stated outputs and outcomes?

EQ 3.1: Did the project contribute strengthening cocoa quality and entrepreneurial capacities? (output 1)

Finding 6. Through the consolidation of the Chakra certification and the establishment of the Chakra corporation, the project strongly supported the entrepreneurial capacities of the cocoa associations. Technical capacities of cocoa farmers were supported to improve cocoa quality.

21. The project had several important contributions to the strengthening of entrepreneurial capacities. The establishment of the "Chakra Corporation" was a major step for institutional strengthening. A formalized network of five indigenous peoples' producer organizations (the three associations that partner with the project plus two others) dedicated principally to the promotion of the Chakra system and the development of the Chakra certification. The corporation is now an independent entity with its own staff (recruited from members of the associations, who work partially on a voluntary basis) and its own budget (provided by the provincial sustainable development fund FODESNA). In parallel, together with the three cocoa producing associations, a governance system (ethic committee) for the Chakra certification was agreed and installed, under the model of a participatory guarantee system (*sistema participativo de garantías* – SPG).⁶ Formal standards for the Chakra system were agreed (Cacao Amazónico, 2022) and inspectors (within the member associations) were trained.
22. The Chakra Certification aims at establishing a voluntary quality certificate, that combines principles of organic production, fair trade and cultural tradition. The chakra is a biodiverse agroforestry system rooted in the local Indigenous Peoples' culture and managed mostly by women. It is a family production unit that besides producing cash crops (cocoa in this case), family food and medicine, is a way of life, where farmers form a spiritual connection that helps preserve the system (Tarrasón Collado & Salinas Dávila, 2020). The process to develop chakra as a certification aims at being recognized nationally (by the National Public Food and Agriculture Quality Institute) and internationally (by the FAO Global Important Agricultural Heritage System). While this recognition at the national and global level are still under consideration, the process is operational and the first farms have been certified in public events.
23. Interviewed representatives from the cocoa associations, FAO, other organizations that work in the region and local and national public agencies, all consider this process key for institutional strengthening. Among the different steps to improve the cocoa development in the Napo province, the formation of the Chakra Corporation and the development of the certification (including the establishment of governance and control mechanism) is fully attributable to the project. Also, the two study tours organized by the CCI project for members of the associations helped to improve their capacities. Finally, FAO together with other support programs supported entrepreneurial capacities of the associations through their continued and permanent collaboration.
24. Among the planned activities undertaken for this output, the certification "niche" study directly supported the development of the Chakra certification and the development of the sustainable financing strategy was part of the development of the corporation. However, the activities implemented related to the aspects of institutional strengthening and Chakra certification were more far reaching than originally planned, in response to the demands of the beneficiary associations. This included a detailed Sustainability Assessment of Food and Agriculture Systems (FAO, 2014) of the cocoa farming practices (Torres *et al.*, 2022). The cadmium content study was done well but not connected to project objectives; it was only used to analyze site aptitudes and little to improve cocoa quality. On the other hand, activities undertaken for output 3 (train farmers for CSA practices) included renovation of

⁶ An alternative certification scheme to Third Party Certification. It is characterized by multi-stakeholder approach based on the principles of participation, transparency and trust (Pino Andrade, 2017).

cocoa tree crowns with grafting of better clones, which was a significant contribution to cocoa quality improvement.

25. The carbon sequestration potential in an average farm was strategic and a key component for the CSA approach. It was executed as part of output 1 but is more aligned with output 3. Its result was very positive, showing the potential carbon sequestration of the cocoa produced under the Chakra system can amount to up to 200 tonnes/ha which is double that of conventional cocoa plantations and approaches the total carbon content in primary tropical rain forest (Torres *et al.*, 2022). This well executed study has been considered very relevant by institutional and academic partners, while the interviewed associations representatives showed interest but did not see concrete market opportunities (see Finding 8).

EQ 3.2: Did the project ensure implement cocoa diversity conservation? (output 2)

Finding 7. The project promoted the selection and use of good quality cocoa varieties and established these in Kallari clonal gardens.

26. Through targeted activities, the CCI project contributed to cocoa diversity. It stimulated the identification of promising varieties through the organization of a fair (Mejor Mazorca; or Best Fruit) in February 2020. This included cultivated and wild varieties of both *Theobroma cacao* and *T.bicolor* (white cocoa or *patasmuyu*). These varieties are conserved in situ in the Kallari clonal garden. This clonal garden is an ongoing initiative of Kallari that is used to improve cocoa diversity of the farms of their associates. Because of the short project implementation period, the varieties that are gathered through the project are not yet been applied at scale. Therefore, the characteristics and quality of these varieties in relation to improved productivity or resilience to climate change cannot be assessed. General experience with including different cocoa varieties and organic production shows improved climate resilience (Jacobi *et al.*, 2014).

EQ 3.3: Did the project manage to enhance capacities for CSA implementation and carbon sequestration measurement? (output 3)

Finding 8. The project contributed effectively to some elements of CSA in cocoa production, particularly enhanced productivity through improved agricultural practices and adaptation through crop diversification. For carbon mitigation, the project established a carbon sequestration measurement system that showed positive data about the contribution of cocoa agroforestry systems to carbon mitigation. While these studies were widely accepted by governmental agencies and academics, the farmer associations did not yet see the benefit and its monitoring is uncertain.

27. The project targeted enhanced capacities for CSA implementation through its three elements: productivity, adaptation and mitigation and through a combination of training to farmers and field application. The CCI project supported the improved productivity of the individual farms of the associates, through renovation of cocoa tree crowns with grafting of other (higher yield, higher quality) varieties. This is an ongoing activity, not unique for the CCI project. Other initiatives have supported this activity and have proven positive outcomes both in productivity and resilience (varieties are more resistant to climate impacts and less sensitive to diseases). This activity was applied through a farmer field school (FFS)-like approach, by which the renovation was done farm-by-farm, leaving capacities installed with the owners of the farm where the initiative is piloted and other farmers who participate in the activity. However, field observations during this evaluation

showed that the improved farms are the ones that received direct support from the CCI project (or other initiatives) and that there has been little replication on farmers' own initiative.

28. While there is a suite of potential tools to improve sustainable productivity and adaptation capacity, in coordination with the beneficiary associations the choice fell on crown renovation, to complement support activities by other initiatives. The associations coordinated the application of CCI project support in synergy with other practices such as crop diversification for income (plantain, vanilla) and food security (fruit), improved organic fertilizer management and harvesting/processing techniques.
29. The general capacity strengthening on CSA through FFS (including good production practice, cadmium management, climate mitigation) targeted principally university students from farmer families. The updating of the FFS curricula was done to create synergy with the evaluation standards for best agricultural standards (applied by Ministry of Agriculture and Livestock).
30. The third element of CSA (climate change mitigation through carbon sequestration) was promoted by including the farm owners in the study on carbon sequestration potential (for output 1). While the interviewed farmers who participated showed interest during the research activities, they were not able to clearly articulate the methodology or the potential use of the data. Also, the participating cocoa associations' members showed relatively low interest in the mitigation potential of cocoa farming and did not convey a high priority in its monitoring. This was evidenced by the conversations between associations and the FFF project: initially, it was suggested that the FFF project would support ongoing carbon monitoring activities. However, the Chakra Corporation preferred to use further funding for other goals (increase capacity for project development) rather than carbon monitoring. According to interviewed association managers, while applauding the results of the study, they mentioned that the potential of including cocoa in a future carbon market is still uncertain in comparison to other opportunities for improved cocoa management.
31. Apart from CSA capacities of cocoa producers, the CCI project has also contributed to CSA training to a wider target audience. The project generated two courses for a wider audience. One of these was done with the Amazonian Regional University (IKIAM); a course for university students and staff on CSA, formally certified by the university. This was attended by 60 people of the agroecology career and the wider university community. In addition, the project supported a seminar on CSA in IKIAM's open study week, assisted by 2 000 people. In 2021, the CCI project also launched an e-learning course on climate smart cocoa, available at the FAO regional learning platform for Latin America and the Caribbean.⁷ According to the platform managers, after five months, a total of 1 442 people registered for the course (41 percent from academy/universities; 20 percent independent professionals and 11 percent public agencies; overall 44 percent women).

⁷ <https://capacitacion.fao.org/>

EQ 3.4: Has the project successfully strengthened entrepreneurial capacities, aptitudes for traceability in cocoa products and for developing climate change measures in cocoa production under Chakra system in two cocoa producers' associations of the Napo province? (direct outcome)

Finding 9. The project achieved its outcome of strengthening entrepreneurial capacities and developing climate change measures in cocoa production in three producers' associations.

32. With the overall achievement of the project outputs, the generation of the project outcome has been mostly guaranteed by the improved entrepreneurial capacities (output 1). The Chakra certification process, managed by the corporation of the cocoa producer associations, as well as the improved cocoa diversity and management of different varieties, both guarantee improved traceability in cocoa products. The three associations have a steadily increasing cocoa export to premium markets that demand both certification and guarantee of origin. Finally, the capacities for CSA implemented among producers and a wider audience of students, field practitioners, etc. (output 1) generated actual application of climate change measures, both in terms of adaptation and mitigation (more diverse and higher biomass in Chakra system in comparison to traditional cocoa plantations).

EQ 3.6: How is the project assessing, documenting and sharing its results, lessons learned and experiences?

Finding 10. Even though the project did not have a specific monitoring, reporting or communication strategy, it effectively disseminated its results and experiences through numerous publications, presentations and training events.

33. The project did not have a specific monitoring and reporting strategy. This might have been correct considering the short originally planned implementation time of the project (14 months). However, due to the delays caused by the COVID-19 pandemic, the project was extended until early 2022 (more than a one-year extension) and had several implementation challenges (see e.g. Finding 13 and 16). In the end, one progress report was produced in early 2021, covering the period until December 2020. This report is detailed, showing the percentage progress of all activities and the operative plan for the remaining (extended) period. At the time of this evaluation, a final report was produced in the form of an edited book with overall and diverse knowledge generated by the project (Torres *et al.*, 2022). Hence, even though the monitoring and reporting was not planned, it was adequately done.
34. The description of a communication strategy in the project document was limited to dissemination or products. In practice, more was done through the production of a series of project outputs and its active dissemination. The project produced technical reports on a wide variety of themes such as manuals for cocoa management, carbon sequestration potential, ecosystem services identification, monitoring of carbon content, identification of international market niche, and a comprehensive publication resembling the overall project (Torres *et al.* 2022). The project also contributed to global FAO knowledge products on CSA. In addition, it produced YouTube videos on the role of women, implementation of the CCI project and success stories with over 1 000 views each. The training events mentioned in Finding 8 in itself were communication activities. Finally, the project's results were presented in local, national and international events, including the UNFCCC Conference of Parties in 2021. At the end of the project implementation period, several products were produced and this includes the risk that dissemination of these products and related communication activities cannot be done under project implementation. There is no formal

project closure event and hand over of responsibilities or a communication campaign around the CCI project achievements publication.

3.3 Progress to impact

EQ 4: To what extent may the progress towards long-term impact be attributed to the project?

EQ 4.1: Is there evidence that the CCI project strengthened the climate smart approach on cocoa production under the Chakra System? (final outcome)

Finding 11. Together with other initiatives, the CCI project has successfully strengthened the CSA approach on cocoa production under the Chakra system in three associations in the Napo province. There is no evidence yet of scaling to other associations or provinces.

35. The evaluation team considers that the expected long-term impact was considered to be best described by the final outcome (see section "context of the project"). With its successful achievement of the direct outcome (see Finding 9), the project certainly contributed to the strengthening of the cocoa production under the Charka system. The three cocoa producing associations, which were established during the last decade and fully managed by small holders, mostly indigenous peoples, have consistently and increasingly adopted improved cocoa management practices and acquired entrepreneurial capacities. Thanks to their own initiative and supported by a series of development partners and international grants, these associations attained steadily increasing profitability, improved their cocoa quality, acquired organic certification and assessed national and international markets. The overall business development of these associations can be considered climate smart, because they improved their productivity, improved climate resilience by organic production and crop diversification and contributed to mitigation by the application of agroforestry systems.
36. The overall positive development of the three associations is an ongoing process to which the CCI project contributed with a few specific elements. First, it framed the work of the three organizations in the context of CSA which connected it to a wealth of global knowledge and experience. It also quantified the mitigation potential, which creates a potential to tap into other (future) opportunities. More concretely, several key steps for the establishment of the Chakra system, its certification and the corporation of associations can be attributed to the project. Finally, the capacities created through training (in situ, at the University and online) strengthen the enabling environment for climate smart cocoa. Therefore, while the overall positive development of the three cocoa associations is supported by several initiatives, the CCI project contributed with some key elements in their success story.
37. The three associations together have approximately 600 members and buy cocoa from approximately 2 000 producers. This represents 10 percent of cocoa production in the Napo province. Thanks to the efforts of other development partners such as Proamazonia and GIZ, there is a growth of similar initiatives targeting small scale, agroforestry-based, fine flavour cocoa production. Nevertheless, the impact in the Napo province with these three associations stand out and real, large-scale uptake of this sustainable production beyond the Napo province and the three associations is incipient.⁸ The particular impact of

⁸ An indication of early scaling to other provinces is the inclusion of two associations (on cocoa and Guayusa-leaves) from Orellana province in the Chakra Corporation.

the FAO work on cocoa (not only the CCI project, but also the Napo-Sumak Kawsay and FFF projects) has not (yet) expanded to other associations, other scales or provinces.

38. The project did manage to include some elements of CSA at governmental level. The Ministry of Environment, Water and Ecological Transition declared its specific interest in climate adaptation and mitigation aspects of the CCI project, because of its potential to contribute to national policy. While the NDC (developed before the CCI project) limited the mention to CSA to livestock, its implementation plan (developed during CCI project implementation) makes explicit reference to CSA. Several governmental agencies were actively involved in the project, particularly the National Institute of Agricultural Research (INIAP) and the Agency for regulation and phyto- and zoosanitary control (Agrocalidad) who showed increased attention to the Chakra system. The latter is part of the ethical committee of the Chakra Certification. The same holds for the provincial government, who supports the Chakra Certification and finances the Corporation (through FODESNA).

EQ 4.2: Are there any barriers or other risks that may prevent future progress towards long-term impact?

Finding 12. The main barrier to further progress towards large scale, sustained climate smart cocoa production is the insufficient support of local (national, provincial) public policy towards formalization of the Chakra certification and scaling to other associations and provinces.

39. The consolidation of the three associations, its joint corporation (that includes two more associations), and continuously improving business performance guarantees long-term impact. Some elements of CSA are fully mainstreamed in that performance. Other elements, particularly the national formalization of the Chakra certification and its acceptance at Globally Important Agricultural Heritage System (GIAHS), are not complete yet and may be a barrier for long-term impact of CSA in the cocoa sector. The main challenge for this formalization was time: even though the project implementation period was double what was originally planned, time did not allow for the full process of establishing the standards, forming the ethical committee, training of controllers and presenting and accepting the entire system, in spite of the support of the governmental partners (Agrocalidad). Also, the lack of scaling (see Finding 11) is a barrier for future progress: as long as the CSA activities remain limited to 10 percent of cocoa farmers in one province and are not applied to other associations, crops and regions, their development might get arrested.
40. Another barrier for larger-scale and consolidated impact of CSA in Ecuador is the scattered support of public agencies. While there are several examples of fruitful collaboration (see Finding 11), these public agencies have not yet committed to apply lessons from the project at scale and according to the interviewed representatives, coordination between agencies for CSA activities is still incipient. Key support is needed from the provincial government. While this agency was crucial to formally recognize the Chakra as a sustainable agroecological production system (by formal Ordinance; Autonomous Decentralized Provincial Government of Napo, 2017), its development and financing (through FODESNA), currently, it is not actively supporting its consolidation or expansion. According to FAO and cocoa associations, formalized and continuous support of the provincial government is key to ensure that the Chakra seal is aligned with both local public policy and government control agencies.

3.4 Efficiency

EQ 5: To what degree has the project been implemented efficiently, cost-effectively, and has management been able to adapt to any changing conditions to improve the efficiency of project implementation?

EQ 5.1: Was the project cost-effective; how does the project cost/time versus output/outcomes equation compare to that of similar projects?

Finding 13. Considering its modest budget and short implementation period, the project was highly efficient. The time extension due to the COVID-19 pandemic resulted to be a positive adjustment for the project implementation.

41. The project received a total budget of USD 352 792. This is a relatively low budget compared to other FAO implemented projects in the Napo province (e.g. the GEF projects Napo-Sumak Kawsay had a budget of USD 2.6 million and the CSL project USD 3.8 million). While other projects of course had a broader scope, it does indicate the targeted and specific reach of this project, with limited financial means. Of the project budget, US 270 200 was dedicated to project activities and the remaining USD 82 592 (23 percent) to unlinked transactions, project support and general operating expenses. This is a reasonable balance, provided that all administration, salaries and operations were included in the 23 percent. Given that the overall project results were satisfactory achieved, this can be considered an efficient use of resources.
42. Time was a serious constraint. Originally, the project was planned for 14 months. It started in November 2019 and started implementation of several activities, related to the support to associations and the formalization of the Chakra certification and market studies (output 1), the "best cocoa fruit" fair for output 2 and some preparation for training courses (output 3). Soon after, the COVID-19 pandemic started (March 2020) which hit particularly hard in Ecuador. The country was in a full lockdown until June 2020 and travel restrictions continued during most of 2020. During this period, several activities that could be done through online means were effectively completed, such as the studies as well as the consolidation of the corporation of associations and the formalization of the Chakra certification (standards and ethical committee formation). According to the progress report delivered by FAO, at the planned end date of the project (December 2020) most of the originally planned activities were completed, as well as 80 percent of the budget. However, much of the field-based activities (support to producers) could not be executed, such as the first Chakra certified farms, improvement of the clonal garden, monitoring training for carbon sequestration and practical application of CSA good practices. Also, studies had to be finished, e-learning launched and support to associations consolidated.
43. The project was seriously affected by the COVID-19 pandemic, which caused many operative challenges (see Finding 16). In response, the project was extended to early 2022. The evaluation team considers that this project extension was crucial to achieve the results. In hindsight, several crucial project activities, such as the process for establishing the Chakra Corporation, the procedures for the Chakra certification, the monitoring of carbon and the trainings, needed more time than originally planned, independent of the COVID-19 pandemic. Therefore, thanks to the extension period, project results were achieved because the original time available was far too short. Even then, project staff felt time was still too

short to do enough dissemination of results in lieu of supporting the consolidation of results (see Finding 10).

EQ 5.2: To what extent are the coordination mechanisms to implement the project functioning and contributing to project efficiency?

Finding 14. The implementation and management model of the project was transparent and simple (few staff and partners) which contributed to efficient project execution.

44. The project was managed by one manager, assisted by a technical assistant and a climate change specialist. Other project staff were independent consultants for specific activities. Interviewed project partners highlighted the good technical capacity and open communication with project staff. Their commitment was evidenced in the period when the project future was uncertain (see Finding 13). While there was communication and collaboration with many agencies and initiatives, the number of direct partners was limited to a group of most relevant institutions, including the Ministry of Environment, Water and Ecological Transition, two institutions of the Ministry of Agriculture and Livestock (INIAP and Agrocalidad), the provincial government, two research organizations (IKIAM and the Amazon University) and the three cocoa producing associations. With the exception of the producer associations, which participated in practically all activities, partner organizations were involved in specific activities. For instance, Agrocalidad was a lead partner in the Chakra certification process, INIAP provided support to cocoa management and the universities were involved with research and training. This proved to be an efficient approach to effective project delivery: all interviewed partners commended the fluent collaboration conducive to timely project outputs.

EQ 5.3: To what extent did the implementing agency effectively discharge its role and responsibilities related to the management and administration of the project?

Finding 15. FAO Ecuador implemented the CCI project effectively and efficiently, both in technical and administrative aspects. While project partners commended a good technical support and knowledge management from FAO, few perceived being part of a global alliance on CSA.

45. Both the evaluation team and the project partners have only noted positive aspects of FAO's project implementation. The major evidence of this is the effective and efficient management of a project of limited resources and time. The project partners commend the good technical quality, perceiving that world class knowledge on cocoa value chains and CSA was made available to Ecuador. Government officials mentioned that FAO's continued support to issues related to climate and agriculture was crucial to consider CSA as part of NDC implementation. Other agencies mentioned FAO's expertise not only applied to the CCI project but also to other joint projects such as Proamazonía.
46. Administratively, the project was managed as a field budget authorization, which is a FAO internal accounting system directly between the field office (Ecuador) and the Budget Holder of the global program (IACSA) at headquarters. This is a quick and efficient way of funds management.
47. Interviewed stakeholders in Ecuador did not have knowledge of the international alliance of which this project was part. While the program coordinator of the global IACSA project provided well received technical support to FAO personnel in Ecuador, beyond FAO no one knew of the existence of the Global Alliance on CSA or mentioned any FAO-managed

network on the issue. Interviewed people who work at academic or technical level on CSA in cocoa all mentioned they get their CSA knowledge directly from FAO technical support (personnel in Ecuador) and from other sources (the research programme on Climate Change, Agroforestry and Food Security [CCAFS] was mentioned by three).

EQ 5.4: To what extent has the project management been able to adapt to changing conditions to improve the efficiency of project implementation?

Finding 16. The COVID-19 pandemic drastically changed the implementation conditions of the project but its management adapted smartly to enhance effectivity.

48. In late 2020, the global programme (IACSA) requested of the donor a no-cost extension, claiming delays due to the COVID-19 pandemic. However, this extension was initially denied and granted only after several month (see, Finding 16 of the main report). This decision caused an immediate liquidity problem for FAO, because they had committed several spendings but there was no income. This situation was resolved by keeping the staff within the organization with other tasks while the technical assistant was hired by one of the cocoa associations. Also, partner organizations were kept informed in a transparent way, asking for their understanding. The FAO representative in Ecuador was helpful in the overall effort to obtain an extension for the IACSA project by visiting the Italian Ambassador and informing about the situation. In the end, IACSA obtained its extension and activities in Ecuador could be resumed in June 2021 with a new six-month operative plan. The project finished all its activities in early 2022, even though at the moment of evaluation it is still awaiting full project closure, pending a few specific activities (publication of the end report and this evaluation).

EQ 5.5: What were the major efficiency factors influencing the achievement or non-achievement of project results (e.g. time, funding, capacity, communication, etc.)?

Finding 17. The technical and personal qualities of staff working on the project (FAO and others), the flexibility of implementation and the synergy and complementariness with other projects were factors that contributed to the achievement of results. The changing public policy context and low time/budget limited this achievement.

49. The project was effectively delivered by FAO and its personnel, with an adequate level of efficiency (see Findings 15 and 16). In addition, staff from partner organizations was also among the best in their field. For instance, INIAP delegated their national cocoa management specialist and the carbon studies were led by a regional specialist with many academic publications on the matter and holding high positions at the regional universities. The synergy and complementariness with other initiatives ensured that the project was part of a longer-term development on sustainable production of cocoa (Finding 11). Limiting factors are the short time available and the changing local policy context which has affected continued ownership of the Chakra system by local government authorities (Finding 12).

3.5 Sustainability

EQ 6: What is the likelihood that the project results will continue to be useful or will remain to be supported after the end of the project?

EQ 6.1: What process has the project generated or supported that ensure sustainability?

Finding 18. While the Chakra certificate will help to enhance sustainability, it is not consolidated yet. Complementary initiatives and public policy are needed to consolidate the project's results.

50. The CCI project achieved its planned outputs and outcomes, among others thanks to ongoing work from different initiatives to support sustainable cocoa cultivation. The consolidation of the CSA approach in cocoa depends on the final acceptance and implementation of the Chakra certification. While well underway and likely to be achieved soon, it is not yet fully formalized both nationally and internationally (as GIAHS). This consolidation is also partly dependent on continued governmental and public policy support (see Finding 19) and the presence of other support initiatives.
51. Even though the cocoa associations are technically, administratively and operationally well organized (Torres *et al*, 2022), they still lack financial sustainability. This might be surprising because of their annual revenue of over USD 1 million (for two of them), but can be explained by the low income of most of their associates (80-90 percent small farmers with income of around or less than a minimum wage) and they are registered as part of the popular and solidary economy which allows them to receive support funding from public funds and international cooperation but are not targeting profit (SESP, 2022). Therefore, these associations keep depending on external funding for development of their additional (not commercial) activities. Thankfully, there are several initiatives underway (Proamazonía, FFF) that continue to support these associations and their corporation for the Chakra seal. Given the limited adoption of the carbon sequestration monitoring among the farmers and the cocoa associations (Finding 8), this activity should be fully supported by another initiative to attain certain sustainability until the climate mitigation potential of cocoa systems can actually be rewarded financially.

EQ 6.2: What are the key risks that may affect the sustainability of the project results and benefits (consider financial, socio-economic, institutional and governance, and environmental)?

Finding 19. Changing government administration and public policy can affect continuity of project results. Externalities (such as illegal mining operations) may disrupt the political economy.

52. Continuation of governmental agencies and public policies are still variable: during the previous provincial administrations a solid support to the development of the Chakra system was perceived, with the emission of the Formal Ordinance (Finding 12) and inclusion in the Ethical Committee under the SPG (Finding 6). However, lately, governmental enthusiasm has been lower and according to representatives from FAO and the three associations, it has been increasingly difficult to agree on meetings with the provincial government. At the national level, there is increasing recognition of CSA (Findings 1 and 11), which ensures certain sustainability to the development of the approach. Still, interviewed stakeholders commented that the commitment is mostly within the environment ministry and research institutes associated with the Ministry of Agriculture and Livestock while CSA is not yet reflected in general agricultural policies in Ecuador. Sustained public policy at the local and national level is required to provide continued

support to the development and promotion of the Chakra system and therefore, the CSA concepts in cocoa cultivation.

53. Externalities beyond the control of the project partners form another risk for the sustainability of project results. For instance, at the time of evaluation there is a massive illegal mining site in the middle of the cocoa growing territory of the three associations, where up to 5 000 people are working every day. Apart from all environmental and social negative impact (PI, 2022), according to interviewed cocoa producers, the site attracts local men (mostly) because in one day, the equivalent of one week of "normal" work can be earned. This situation, however, leads to social disruption: men leaving the farm household and being away the entire week, losing interest in association activities and spending their earnings during the weekend on parties and luxury products rather than the farm.

3.6 Cross-cutting issues

3.6.1 Partnerships and stakeholder engagement

EQ 7: How effective were the collaboration mechanisms among all parties involved?

EQ 7.1: To what extent were other actors, at international and national level, such as civil society, indigenous population or local communities and private sector involved in project design and implementation?

Finding 20. The cocoa sector in the Napo province is predominantly managed by Indigenous Peoples; all three major farmers' associations are Indigenous Peoples-based and participated fully in project development and implementation.

54. Indigenous Peoples from the Kichwa Nation are the main project partners because the cocoa sector in the Napo province is predominantly Indigenous Peoples-managed. All associations are Indigenous Peoples-based and the Chakra system is formally recognized as a Kichwa traditional production. The producer associations were fully included in project design and implementation. They joined FAO and other development partners in continued meetings about the Chakra certification, the development of the corporation, trainings and field activities. The follow-up project funded by FAO FFF, provides direct financing to the three associations.

EQ 7.2: What was the effect of partnerships and stakeholder engagement on the project results?

Finding 21. The involvement of the cocoa-producer associations was key to ensure the design, adoption and consolidation of project results. Coordination with other initiatives helped to align project activities.

55. The far-reaching and continuous involvement of the three associations in practically all project activities ensured improved understanding and adoption of project results and therefore, impact at the farm level. It also ensured that activities that were of more interest (eg., field practices) were emphasized rather than activities of less interest to them. The synergy and complementarity with other programs and agencies ensured that the CCI project could build on, collaborate with and follow up with a wider group of initiatives.

3.6.2 Gender

EQ 8: To what extent were gender considerations taken into account in designing and implementing the project?

EQ 8.1: Were gender equality, youth and Indigenous Peoples considerations taken into account in project design?

Finding 22. Gender and Indigenous Peoples' aspects were considered in project design, although these were not further specified in the results framework, project activities or indicators.

56. The sustainability section of the project document includes a specific paragraph on gender equality (section 3.2), emphasizing that 60-70 percent of small-scale cocoa producers are women. Therefore, it was planned that the CCI project would ensure that the needs, priorities and constraints of women are properly taken into consideration. The project would provide value added by targeting activities that promote the participation of women and youth not only as beneficiaries but also as community leaders, and by mainstreaming gender at institutional and community levels. This approach, however, was not further specified in the results framework, indicators, budget or training. There was one project product targeting gender (a YouTube video "Women in the Amazon chakra").

EQ 8.2: Was the project implemented in a manner that ensures gender equitable participation and benefits as well as women empowerment?

Finding 22. The CSA activities promoted by the CCI project had several expected and unexpected positive results on women's empowerment.

57. Even though the inclusion of gender activities, indicators, budget, training etc. was marginal (Finding 21), the CSA activities of the CCI project by default targeted women's empowerment because of the predominance of women in the small-scale cocoa cultivation. Therefore, most of the beneficiaries of the project are women. Even though the governance level of the three associations continues to be male dominated (the three presidents are men), more than 60 percent of staff are women and therefore, the increased entrepreneurial capacities also benefit women more than men. Finally, among the project staff, partner organizations and consultants who participated in the project implementation there were also more women than men.

58. This by-default target on women's empowerment generated expected and unexpected positive results. As expected, the improved farming activities increased farmers' income: according to families visited, practices such as crown renewal of cocoa trees and others improved their income three/four-fold. As an unexpected result, it contributed to the social position of women within the family. In many families, the male heads of the household generate income from off-farm work, while the women are in charge of the Chakra. Interviewed women expressed that before, even though the Chakra produced food and materials, the appreciation of their partners for their work was low because income was minimal. Once money was produced, even though it is only half a minimum wage, the men appreciate the farm work and support their partners and daughters not only to do the farm work but also to take up leadership positions in the community and association or to go to capacity building events.

4. Final observations

59. The CCI project in Ecuador was a successful effort to apply CSA principles to one crop, in a specific jurisdiction. It showed how improved practices for increased productivity and adaptation as well as more carbon sequestration could be included in a wider traditional sustainable production system "chakra", and how the focus on chakra management and certification can strengthen CSA adoption. There were clear results on increased productivity, crop diversification and capacity increase of individual farmers and their associations. The impact remained local; there has not yet been only some initial uptake by other associations or in other provinces.
60. The project was highly effective and efficient, particularly considering the short implementation period and limited funds. All outputs and outcomes were satisfactorily achieved. This result was generated through a good performance and adaptive capacity (particularly in response to the COVID-19 pandemic) of the implementing agency, its partners and project staff. Moreover, the context of Indigenous Peoples-based small-holder cocoa cultivation in a unique province like Napo with the presence of well-organized cocoa associations provided a strong enabling environment for the inclusion of CSA in cocoa cultivation. Previous and complementary cocoa initiatives in the Napo province, done by FAO and other agencies contributed strongly to the success of the CCI project. This also showed that CSA principles can easily be aligned with other approaches that have been applied before to support sustainable cocoa production in the province (agroecology, agroforestry, traditional knowledge-based production systems, etc.) and whether or not individual farmers or their associations understand all aspects of CSA, is not necessarily a barrier for its adoption.
61. Sustainability of the project results is moderately probable, because of the leadership of the producer associations and ongoing support programs which have adopted CSA principles in cocoa. The fact that the chakra certification is not yet formally accepted and the variable support from public agencies are barriers for future sustainability and application at scale.
62. The findings in this report support the evaluation findings, conclusions and recommendations of the overall evaluation of the IACSA project. In addition, the evaluation team would like to propose some recommendations specifically for the Ecuador CCI project:
 - i. To ensure sustainability of project results, FAO should continue its support the cocoa producer associations to finalize the recognition of the Chakra seal and GIAHS.
 - ii. FAO should continue to promote the inclusion of CCI project partners and activities in other (ongoing and future) projects in the Napo province.
 - iii. FAO and other development partners in the Napo province, as well as the national and provincial public agencies, should target scaling of the outcomes of the CCI project to other producer associations and other provinces.
 - iv. Carbon monitoring has been implemented through a well-developed methodology for cocoa plantations and has delivered valuable data for the eventual inclusion of cocoa in landscape level mitigation schemes. However, this evaluation showed that

this monitoring does not have a high priority for the farmers or the associations while there is not a real direct benefit. Therefore, it is recommended that FAO and the Ministry of Environment, Water and Ecological Transition should ensure the monitoring of carbon stocks in cocoa plantations.

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Appendix 1. People interviewed

Last name	First name	Institution/agency	Role
Alvarado	Kimberley	Tsatsayaku	Cocoa producer
Andi	Christofer	Chakra Corporation	CCI technical support
Andi	Fanny	Kallari	Cocoa producer
Andrade	Ana	FAO	Climate change specialist - CCI project
Cáceres	Vanessa	FAO	Deputy representative - administration
Cárdenas	Daisy	Ministry of Environment, Water and Ecological Transition	Focal point for project
Cerda	Keytie	Tsatsayaku	Productora de cocoa
Chancosa	Cristina	FAO	Field technician - CCI project
Chapallbay	Rusbel	National Assembly	Advisor on Biodiversity (formerly: Provincial Director of the Ministry of Environment, Water and Ecological Transition, Consultant GIZ)
Cueva	Kelvin	FAO	Forestry specialist
Dahua	Bladimir	Kallari	Manager
Enríquez	Geovanny Francisco	FAO	CCI project coordinator
Farfán	Guido	Chakra Corporation	Coordinator
Flores	Johanna	FAO	Deputy representative - program
Grefa	Geovanny	Kallari	Cocoa technician
Grefa	Marco	Wiñak	President
Jurado	Daniela	Agrocalidad	Napo district technician
Liqui	Saúl	Tsatsayaku	President
Paredes	Nelly	INIAP	Focal point for project
Pozo	Carlos	Kallari	President
Procel	Gina	Proamazonia	Field technician
Quiroz	James	INIAP	Cocoa specialist
Tapuy	Gerson	Kallari	CCI technical support
Tapuy	Ermita	Tsatsayaku	Cocoa producer
Torres	Bolier	Amazon State University	Professor (formerly: Rector, IKIAM)
Valarezo	Isamar	Tsatsayaku	Manager
Vallejo	Virginia	FAO	FFF coordinator
Zimmerman	Agustín	FAO	Representative

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