Acorn

This document represents the basic layout and describes the required input for an ADD (**Acorn Design Document**).

Of each project within Acorn an ADD should be provided. The ADD should be stored and made available on the Acorn platform for the stakeholders concerned. This report is drawn up in close collaboration between the local partner and Acorn staff members. The local partner is responsible for providing all required information and performing the assessments. Acorn is responsible for the quality and continuously updating of the ADD. The ADD can be requested by validation and verification bodies and certifiers for third party oversight or quality checks at any given time.

The following index box is provided before each section in the ADD to demonstrate the goal of the section, when each section needs to be performed, the frequency in which these sections need to be updated, who should complete the assessments within, and who should verify the information provided.

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Part A: Project Summary

Question	General Information	Answer
1	**Project title**	Solidaridad Colombia
2	**Project location - country, region & district** (attach map if possible)	Colombia, Risaralda, Tolima, Huila, Caldas, Antioquia Bolívar, Santander (see Annex 1 - Map of project location & ecoregion).
3	**Ecoregions**	• Cauca valley montane forests (Coffee) • Cauca valley dry forests (Coffee) • Magdalena Valley montane forests (Coffee and Cacao) • North-western Andean montane forests (Coffee) • Cordillera oriental montane forest (Cacao) Refer to Annex 1 Map of project location & ecoregion.
4	**Local partner representative** (name & position)	*Concealed for data protection purposes.*
5	**Local partner mission statement**	We enable farmers and workers to earn a living income, shape their own future, and produce in balance with nature by working throughout the whole supply chain to make sustainability the norm.
6	**Contact details** (phone, email, & address)	*Concealed for data protection purposes.*
7	**Main cash crop(s)**	Coffee and cocoa. Sugarcane and bananas are also grown as secondary cash crops on some plots.
8	**Project target group**	Colombian smallholder independent coffee and cocoa producers who have recently begun the transition to agroforestry practices but do not have the technical resources and skills or finances to successfully operate a long-term agroforestry system.
9	**Number of existing participants**	16.925 coffee farmers (December 2024) 10.092 cocoa farmers (December 2024)

10	**Number of potential additional participants**	10.000 coffee farmers (December 2025) 10.000 cocoa farmers (December 2025)
11	**Estimated total size of project area (ha)**	43.129 hectares coffee with average size of 1.6 hectares (December 2025) 41.038 hectares cocoa with average size of 2.04 hectares (December 2025)
12	**Describe the project's aims and objectives** (e.g. the problems this project will address)	This project aims to increase the quality and productivity of farmer output, adapt the farmland to build resilience to climate change, avoid deforestation, and reduce and sequester carbon emissions through agroforestry. These is done by supporting improved practices on existing agroforestry and supporting the transition of farmers in their process of transformation.
13	**Describe how smallholder farmers/communities were involved during the design of the agroforestry project** (Provide evidence of participation e.g. workshops, meetings).	Solidaridad has been able to engage farmers in communal activities required for implementing agroforestry. During the process, the following activities are organized: selection of the trees (according to traditional knowledge and farmer desires), training sessions by lead farmers to their nearby community, setting up nurseries, pruning shade trees by using machinery (under bailment contracts), pest control activities (hormiga Arriera), etc. This project is existing agroforestry and was designed before the involvement of Acorn. Evidence in the form of photos are seen in Annex 6 Project council reports.
14	**Provide a general description of current socioeconomic conditions in the project area** (income, poverty level etc.)	Participants live below the poverty line and struggle financially within an average income between 3000 and 4000 USD a year. Their financial state continues to worsen over time due to the negative impacts climate change has on farm productivity and income.
15	**Describe how the agroforestry intervention proposed is expected to impact the following;**	a. <u>Food security/nutritional intake:</u> Project intervention will result in increases in food security due to the expected increases in productivity/coffee and cocoa yields and income diversification (carbon credits), that help farmers to afford a variety of nutritious food.

		b. Farmer financial state: Project intervention will help build farmer resilience against the damaging effects of climate change, such as shade trees protecting crops from harsh weather conditions. The marketable products derived from the trees planted and the carbon credit received for sequestration will offer diversification in income streams, act as a buffer for farmers in times of financial hardship.
		c. Gender equality: Social inclusion of women and young people is expected to increase due to promoted participation and formal leadership in agroforestry through Solidaridad's gender-inclusive approach (see Part H, Q7) to their project management and entrepreneurship school for young people.
		d. Farmer access to resources: Solidaridad provide farmers with agroforestry training and advice, planting resources, and free transportation to visit and to learn from successful agroforestry systems. The carbon payments that farmers will receive will allow them to purchase the necessary materials needed for the long-term maintenance of their agroforestry system.
		e. Biodiversity on farms: Biodiversity will increase due to the planting of diverse shade and fruit trees among coffee and cocoa crops that provide a suitable habitat for local species and pollinators.
16	**Describe whether there is a low, medium or high risk of deforestation in the region where the project is located**	Low risk. Farmers are trained on the importance of shade trees because of their multiple benefits in coffee and cocoa growing: providing organic matter to the soil, improving its fertility, improving coffee and cocoa quality, improving the microclimate of the farm and improving the landscape. Due to the slope conditions of the farms and the difficult access in the project area, it is not profitable to cut the trees to sell for wood. Due to expected long-term increases in farm productivity, logging outside of the project area due to project interventions will be limited.

17	**Describe any known local land degradation/ deforestation processes or trends, and drivers of these** (e.g. population increase, fire, conversion for agriculture)	No major deforestation trends in area. The coffee and cocoa area has remained stable in recent years. Some farmers have cut down a single tree, but they have replanted it after to recover the population and maintain the balance. Any potential incidences are properly monitored and documented.
18	**Please select the following type of land use that best describes the project area**	Existing and new agroforestry production with coffee and cocoa crops.
	Land Tenure	
19	**Estimated average plot size per farmer (ha)**	1.4 hectares in coffee 2.07 hectares in cocoa
20	**How is land tenure organised among participants** (formal titling, informal titling or land mapping)	Majority of participating farmers demonstrate formal titling. In other cases, farmers have user rights over their plots.
	The Agroforestry System	
21	**Is this project new or existing agroforestry or a combination**	A combination of new and existing agroforestry The 21,000 farmers Solidaridad aim to reach in 2023 are predominantly existing agroforestry (<10% new), in the coming years an increase in new agroforestry is expected up to 30% of the total. Within existing agroforestry new trees are planted to replace older, sick/dead trees and to increase the total trees per hectare under agroforestry.
22	**Type of trees that have/will be planted under agroforestry scheme** (shade, fruit-bearing, medicinal)	Shade trees have been prioritised, some having medicinal properties. In general, the project that aims to plant shade trees in coffee and cocoa plantations to create an agroforestry system. The farmers will plant native species that provide shade and improve soil quality with the aim of improving resilience of coffee and cocoa plantations to climate change, and increasing carbon storage in trees at farms.
23	**Describe how the agroforestry system is expected to impact the land** (e.g. more shade, less pests,	The trees planted under this agroforestry system will result in a better micro-climate for the farms and for coffee and cocoa growing, an

	less inputs – fertilisers, presence of pollinators)	increase in pollinators, the conservation of soil, economic benefits for farmers, and articulation with other projects.
	Project Additionality	
24	**Is the project incorporated by any other accounting program (e.g. compliance, voluntary or national GHG program)? If yes, describe how project ensures no double counting will take place.**	No, the project is not incorporated by any other accounting program.
25	**How is the initial implementation of this project being financed?**	Donor funding from Norwegian Agency for Development Cooperation (NORAD), the Postcode Lotteries Group (Netherlands/Germany) and the Dutch Ministry of Foreign Affairs.
26	**Did/will the project receive grant funding or investment for project start-up? If yes, who provided this?**	Yes, see question above for funding to info. The project has received funding till 2027.
27	**In what year and season will/were the first trees planted?**	The first trees were planted in 2019 in the coffee regeneration season. Tree planting takes place in two moments. In coffee agroforestry systems, during April-May and in times of renewal of coffee plantations after the main harvest (January, February, March) to take advantage of the coffee planting and establish shade trees. In cocoa agroforestry systems, during the months March-May and from September till November.
28	**Was the project established with the intent of receiving carbon finance for trees planted?**	Yes, Solidaridad Colombia had the plan to find carbon financing for farmers since the establishment of the project. Farmers were informed that they could receive carbon credits for the trees they plant since the beginning. Next to carbon payments the project is also intended to increase climate resilience.
29	**Is this project mandatory under any national or local laws** (List relevant forestry regulations, national climate change commitments etc.)	No (see Part C - Additionality Assessment positive list for specific documentation).

30	**Without the project's involvement, would farmers have the necessary resources, skills, knowledge, finances, or network to successfully transition to a long-lived agroforestry system?**	No, before project intervention farmers lacked the necessary resources, skills, knowledge and finances to transition successfully to agroforestry. They could have attempted alone but likely failed due to lack of agroforestry knowledge and skills and ended up in worse financial conditions than before. It is important to highlight that, local knowledge is in any case, the starting point to improve current practices. Knowledge and preference on specific crops and species is taken into consideration suggest a new agroforestry design and interventions.
31	**What is the main driver encouraging farmers to transition to agroforestry?**	The effects of climate change on productivity and income diversification.
32	**Was the promise of carbon credits the enabling factor for farmers to transition to agroforestry long-term?**	Farmers were interested in the idea of agroforestry before carbon finance, however, the reward of credits made the transition more financially feasible and possible long-term.
33	**What are the biggest challenges faced by farmers** (climate change, volatility in commodity prices, low productivity, access to resources, financial security, crop damage from wildlife, human conflict etc.)	Climate change, unstable productivity of coffee, cocoa and other food crops, access to resource (materials/knowledge) and volatility of coffee and cocoa prices

Part B: Eligibility Checklists

Local partner eligibility checklist			
Topic	Sub-topic	Requested information	Result
Organizational capacity	Organizational structure	Provide a description of your organizational structure and roles of each organization involved for the project (attach diagram/table).	See Annex 3 Organisation structure
	Organizational capacity	Provide a description of your "on the ground" capacity to undertake long-term community-led project(s) and implement agroforestry.	Fundacion Solidaridad Latinoamericana has around 100 FTE in Colombia as operational capacity to undertake implementation of projects.
	Sustainability	The local partner agrees with the Rabobank's sustainability policy.	Yes sustainability-policy-framework.pdf
	GDPR	The local partner's current data handling policies are compliant with GDPR regulations.	Yes
	Participant organization	Describe how the project is organized, or in the process of being organized, into cooperatives, associations, community-based organizations or other organizational forms able to contribute to the social and economic development of the participants and their communities, and which is democratically controlled by the participants.	Solidaridad works with small farmers associations, and those that already have a structure (lead farmers). Those organizations are voluntary and community based. This was really helpful when Solidaridad was implemented (as there were community structures already in place).
	Project effects	The project strives to not contribute, or does its utmost to avoid, environmental or (agricultural) biodiversity harm.	Yes
	Entity	The local partner is an established legal entity that takes responsibility for the	Yes

	project and for meeting the requirements of the Acorn Framework for the duration of the project.	
Local presence	The local partner has a strong in-country presence and the respect and experience required to work effectively with local participants and their communities.	Yes
Local policies	The local partner has a solid understanding of local policies and can confirm that the country's policy allows individual CRUs to be sold.	Yes
Influence	The local partner is capable of negotiating and dealing with government, local organizations and institutions.	Yes
Resources	The local partner is focused and has the organizational capability and ability to mobilize the necessary resources to develop the project (e.g. including access to seedlings, inputs, agronomic knowledge, monitoring and technical support).	Yes
Data collection	The local partner can provide reliable data (i.e. GPS polygons, phone numbers, other KYC data).	Yes
Training	The local partner has the ability to mobilize and train participants, and implement and monitor project activities.	Yes
Condition (i)	The local partner recognizes that the participant's involvement in the project is entirely voluntary.	Yes
Condition (ii)	The local partner recognizes that participants own the carbon benefits of the project intervention.	Yes
Participant payments (i)	The project coordinator ensures that payments are made in a transparent and traceable manner.	Yes
Participant	The project coordinator ensures that mobile payments to participants are	Yes

	payments (ii)	either already possible or there are no foreseeable obstacles for this in the near future.	
	Contributions	The local partner does not draw more than 10% of sales income for ongoing coordination, administration and monitoring costs. Exceeding this percentage is only possible in exceptional circumstances where justification is provided and Acorn formally approves a waiver.	Yes
	Participant identity	The local partner is able to collect and provide proof of participant's identity.	Yes
Tenure & rights	Land-tenure and carbon rights (i)	Provide a description of how land tenure is organized amongst the target project participants	All land is formally owned by participants. In a few cases (approximately 10%), farms belong to the men (head of the household), but their wives have been assigned one plot within the farm in the Acorn program; or farms belong to non-resident Colombians and they are administered by stewards, which are participants of Acorn. In both cases, Solidaridad is providing written agreements among the parties, to avoid eventual conflicts and ensure participants have rights to the CRUs generated (See Annex 2 Land tenure documentation).
	Land-tenure and carbon rights (ii)	The project applies to land over which the participant/community has (formal/informal) ownership or long-term user rights.	Yes

Sustainable land use activity	Land use	Provide a description of the current land use activities, before the start of the project intervention, within the project.	Current land use is coffee and cocoa plus additional (food) crops
	Project design	The project is/will be designed to promote sustainable land-use and has/will have a feasible business case underwritten by agronomist(s) and community representatives.	Yes
	Deforestation	The local partner confirms that no deforestation has taken place five years before the start of the project intervention (project baseline). If this cannot be confirmed, a description of the cause of the deforestation is provided, including the measures that have been taken to prevent deforestation from happening again.	Yes
	Additionality	The local partner ensures project additionality and ensures a durability period of 20 years.	Yes
	Existing agroforestry (i)	Agroforestry at the farm level has been implemented less than 5 years before the start of the project intervention.	Yes
	Existing agroforestry (ii)	Participants and local partners confirm that previously sequestered CO_2 on the land has not yet been monetized.	Yes
	Existing agroforestry (iii)	Existing agroforestry has been funded largely by donors/grants.	Yes
	New agroforestry	There is sufficient supply of seedlings, inputs, water and other required resources.	Yes
	Naturalized species	The local partner promotes the use of native species. The use of naturalized species is acceptable under the conditions outlined in the Framework.	Yes

	Current habitat	Provide a description of the current ecosystem and flora and fauna species of the project area.	Colombian Sub tropical Andean ecosystem (official Biome name is Tropical and Subtropical dry broadleaf forests)

Participant eligibility checklist			
Topic	Sub-topic	Requested information	Result
Organizational Capacity	Smallholder labour force	Participants are not structurally dependent on permanent hired labor, and manage their land mainly by themselves with the help of their families.	Yes
	Smallholder farm size	The cultivated land of participants does not exceed 10 ha.	Yes
	Resources	Participants have the ability to mobilize the necessary resources to implement the project.	Yes
	Data collection	Participants can allow reliable data to be collected for the project (i.e. GPS polygons, phone numbers, other KYC data).	Yes
	Condition (i)	Participants are aware that their decision to participate in the project is entirely voluntary.	Yes
	Participant identity	Participants are able to provide proof of their identity.	Yes
Tenure & rights	Land-tenure and carbon rights (i)	Provide a description of how land tenure is organized.	All land is formally owned by participants. In a few cases (approximately 10), farms belong to the men (head of the household), but their wives have been assigned one plot within the farm in the

			Acorn program; or farms belong to non-resident Colombians and they are administered by stewards, which are participants of Acorn. In both cases, Solidaridad is providing written agreements among the parties, to avoid eventual conflicts and ensure participants have rights to the CRUs generated (See Annex 2 Land tenure documentation).
	Land-tenure and carbon rights (ii)	The project applies to land over which the participant/community has (formal/informal) ownership or long-term user rights.	Yes
Sustainable land use activity	Land use	Provide a description of the current land use activities within the project.	Participants use the land for cultivation of crops. These crops include coffee, cocoa and other food crops.
	Deforestation	Participants confirm that no deforestation has taken place five years before the start of the project intervention (project baseline). If this cannot be confirmed, a description of the cause of the deforestation is provided, including the measures that have been taken to prevent deforestation from happening again.	Yes
	Additionality	Participants ensures project additionality and is aware that the project has a durability period of 20 years.	Yes
	Existing agroforestry (i)	Participants confirm agroforestry at the farm level has been implemented less than 5 years ago.	Yes

	Existing agroforestry (ii)	Participants confirm that previously sequestered CO_2 on the land has not yet been monetized.	Yes
	Current habitat	Provide a description of the current ecosystem and flora and fauna species of the project area.	Participant land is located in a Colombian Sub tropical Andean ecosystem and consists of crops, native trees and livestock.

Part C: Additionality Assessment

Positive list	Demonstrate that the project meets requirements (a) and (b) and at least one of the requirements (c) and (d).	
	(a) The project area is located in a country or region with a recent UNDP Human Development Indicator below or equal to 0.8.	Yes, the HDI is below 0.8 (Colombia 2021: 0.752).
	(b) The project shall not be mandatory by any law or regulation, or if mandatory, the local partner shall demonstrate that these laws and regulations are systematically not enforced.	Solidaridad states that the project is not mandated by any law/regulation. This is evidenced when referring to Colombia's NDC report (2020), The CONPES 4021 (Forestry Policy), Ley 2021 de 2006 (Forestry Resources Law), and Ley 1931 del 27 Julio de 2018 (Climate Change Law). **For more information on each specific law, please refer to the annex 12 , which explains the laws in detail*.
	(c) The project is located in a region with a mean annual precipitation of less than 600 mm	Yes, on average the precipitation in the different area of the project are at most, 300 mm on average in the wettest month (May), as seen between 1991 and 2022[1].
	(d) The project area is (predominantly) located in a country or region with a recent UNDP Human Development Indicator below 0.6.	No, the HDI is above 0.6 (0.752).
Barrier analysis	Demonstrate that the project intervention would not have taken place due to a least one of the following barriers.	
Type of barrier	Situation without project	Situation with project
Financial/ economic barrier	Farmers are eager to transition from monoculture to agroforestry as a means to adapt to climate change, but will only do so when provided with the necessary and costly resources needed to do so. Besides from a small minority of Colombian	Solidaridad provides financial institutions business models and data from the field to mitigate credit risk from smallholder farmers and unlock finance for transforming conventional production, or degraded land,

[1] *Colombia - Summary | Climate Change Knowledge Portal*

	farmers, most producers do not have the means to implement a successful agroforestry project on their own.[2] Participants live below the poverty line and struggle financially.[3] Their financial state is worsening over time due to the negative impacts climate change has on farm productivity and income. There are no financial incentives for farmers to adopt on-farm climate change mitigation measures such as agroforestry practices. For smallholder farmers in the project area, the resources necessary for establishment of an agroforestry system (seedlings/saplings) are not always affordable and if purchased from their own pocket put them and their families into an extremely vulnerable financial state over the following years before the trees have grown to a level that offers benefits. Alone, farmers are unable to receive financing for any transformation of their land and are therefore discouraged. Currently, there are no projects that enable the access to (international) carbon markets. Without project interventions and carbon finance, it is likely that a part of the shade-trees and neighbouring forest would be cut down to plant more coffee, cocoa or other crops for self-consumption and trading, such as bananas or sugar cane, or to extract wood to use.	agroforestry. The project implementation costs at the farm level are initially covered through grant funding from NORAD, Dutch Ministry of Foreign Affaris and Postcode Lotteries Group. With this start-up funding, farmers receive free expert based agroforestry training and advice, planting resources, and free transportation to visit and witness successful agroforestry systems. The carbon finance that Solidaridad receives from Acorn throughout this project positively reinforces their continuous efforts to train farmers, especially while scaling. The clear financial benefit in the form of carbon credits that this project offers farmers as a reward for their mitigation actions is the enabling factor for their transition to agroforestry.

Overall conclusion:

This assessment aims to prove that the agroforestry project, coordinated by Solidaridad in Colombia, and the trees planted during this project are additional. This document explores the concept of additionality at the tree level, the farmer level and the project level, emphasizing the importance of the latter.

Tree Level

The agroforestry transition projects led by Solidaridad were established from 2018 onwards. The collaboration between Acorn and Solidaridad began in 2020. From the start of their project, until the time they connected with Acorn, Solidaridad have had the intention to scale their

[2] *Farming in the Face of Uncertainty: How Colombian Coffee Farmers Conceptualize and communicate Their Experiences With Climate Change*

[3] *Investments make farms perform better to achieve living income*

agroforestry project by offering farmers carbon finance for the trees they plant. Therefore, this agroforestry project was initiated and the first trees planted, in response to a promise of smallholder farmers receiving carbon credits. As per the agroforestry design and implementation plan for this project, the first phase of trees were planted by the initial lead farmers in 2019. These farmers will continue to plant their trees in phases over the coming years depending on the finances and resources available. The carbon credits farmers receive for the trees planted in the project are ex-post based and will only be derived beginning from the period 2020-2021. In this project, the contribution of pre-project trees planted in 2019 is less than 5% of total biomass calculated through growth models, there the pre-project adjustment factor is not applied.

Farmer level

Besides from a small minority of farmers, smallholder farmers in the project area, do not have the financial means to implement a successful agroforestry project on their own. This barrier is enhanced due to the current lack of projects that enable farmers access to international carbon markets. Colombian farmers live below the poverty line with an income between 3000 and 4000 USD and experience losses in productivity and income due to the increasing effects of climate change[4]. The participant farmers in this project couldn't have made a successful or long-term shift to agroforestry without the financial support provided by Solidaridad in collaboration with Acorn. The project implementation costs at the farm level were initially covered through grant funding from the Norwegian Agency for Development Cooperation (NORAD). Without consistent grant funding, Solidaridad cannot sustainably continue to support these farmers, let alone all farmers in their expansive network who have the potential to transition to agroforestry with the expected scaling of their agroforestry project. Without project interventions and carbon finance, it is likely that a part of the shade-trees and neighbouring forest would be cut down to plant more coffee, cocoa or other crops for self-consumption and trading, such as bananas or sugar cane, or to extract wood to use. Most farmers in the region are not aware of the benefits that come from protecting the shade trees. Research suggests that smallholder farmer deforestation behaviours in developing countries could stop if provided with carbon credits based on current carbon prices[1]

Given the promise of carbon finance by partnering with Acorn, Solidaridad direct their grant funding to overcome the costs that have been restricting growth in farmer agroforestry knowledge and preventing them from implementing such practises. Solidaridad employs local agronomists to provide agroforestry training and advice to farmers, including what type of trees they should plant according to their land and crops. Such advice would have been too costly to receive if a farmer was to seek this from an agronomist themselves. This training and advice provided to farmers is only possible due to Solidaridad baring the costs. The carbon finance that Solidaridad receives from Acorn throughout this project positively reinforces their continuous efforts to train farmers, especially while scaling. This is important as farmer knowledge and skills are the most important determinants of successful long-term agroforestry schemes. To enhance farmer knowledge of and dedication to agroforestry practises further, this project organises farmer visits to other agroforestry locations to witness the benefits for themselves, overcoming

4 *Rural Policy Review of Colombia 2022 | Knowledge for policy*

the transport costs that would normally restrict farmers from such a learning experience. Without the necessary expert based training, that is normally too costly for farmers, it is likely than any transition to agroforestry a farmer would have attempted to make without the support of this project would have failed and left them in a more dire financial state than before.

Although farmers had no technical knowledge on agroforestry practises before this project, they were aware that such practices build resilience against climate change. If it wasn't for their lack of financial resources, farmers would have attempted to transition to agroforestry before the project implementation. For smallholder farmers in the project area, the resources necessary for establishment of an agroforestry system (seedlings/saplings) are not always affordable and if purchased from their own pocket put them and their families into an extremely vulnerable financial state over the following years before the trees have grown to a level that offers benefits. Alone, farmers are unable to receive financing for any transformation of their land and are therefore discouraged. The clear financial benefit in the form of carbon credits that this project offer farmers as a reward for their mitigation action is the enabling factor for their transition to agroforestry.

Project level

Solidaridad do not work with a fixed number of smallholder farmers but a constantly growing and expanding network. Solidaridad's aim for this project is to increase the uptake of climate smart agriculture in the coffee and cocoa supply chain through agroforestry, resulting in higher productivity and grain quality, lower carbon emissions and avoid deforestation. The first trees planted under the initial phase of this project are few compared with what will be planted over the following phases in Solidaridad's agroforestry design, provided capital (funding from sources such as NORAD, Dutch MFA, PLG and private sector) is available to support further scaling. Only focusing on the initial farmers who plant the first trees takes away from the additionality of the full project. The farmers expected to transition to agroforestry with the scaling of the project must also be considered. If the first farmers who transitioned with Solidaridad are not rewarded with income from the carbon credits, both Solidaridad and the farmers may be discouraged from scaling up their agroforestry interventions using carbon credits after all their hard work and lack of significant benefits in the initial years. This lack of reward will reflect poorly on agroforestry schemes for other farmers in the community and region that have the potential to transition, resulting in a barrier to scaling up.

The success of the first 1000 farmers, who are financially compensated for the carbon they have sequestered, will work as an extra stimulus to increase the participation of the wide range of farmers that Solidaridad has access to, roughly 25,000 in the coming 5 years. Acorn provides carbon finance to the farmers and Solidaridad to overcome their financial barriers on a larger scale. This systems approach involves looking at the financial barriers a part of these 25,000 farmers face and ensuring the first farmers receive carbon payment, critical to start the development of a carbon financing structure required for scaling, and as proof of payback for investors who want to fund a portion of the projected 25,000 farmers. The project as a whole will not receive investment unless financiers have proof of and faith in the carbon credit system

as a payment for investment. Providing carbon finance to compensate Colombian farmers is the only practical way to achieve scale and proof of concept.

[1] Seeber-Everfeldt, C., Schwarze, S., & Zeller, M. (2009). Payments for environmental services – Carbon finance options for smallholders' agroforestry.

Part D: Carbon Baseline Assessment

Carbon Baseline		
Requested information	Format	Answer
Describe how land tenure has been demonstrated	Text	All participants demonstrate formal titling (See Annex 2 Land tenure documentation).
Describe potential land tenure issues and measures taken to mitigate these	Text	In a few cases in the region (approximately 10), farms belong to the men (head of the household), but their wives have been assigned one plot within the farm in the Acorn program; or farms belong to non-resident Colombians and they are administered by stewards, which are participants of Acorn. In both cases, Solidaridad is providing written agreements among the parties, to avoid eventual conflicts (See Annex 2 Land tenure documentation).
Description of current land use	Text	The main cash crop grown on the land is coffee and cocoa. The land is also used for livestock purposes (chickens, pigs and rabbits). Between 2-5% of the project area is planted with crops other than coffee and cocoa. The main additional crops grown are sugar cane and bananas for trading and self-consumption, citric fruits, beans and corn as a staple food. Without project interventions farmers would possibly be inclined to cut down their shade-trees in times of financial hardship to sell for wood. However, this is unlikely on some farms due to unfavourable slope conditions. The likely situation without project intervention is that farmers would not continue to plant more trees on their land, instead placing more focus on the expansion of coffee and cocoa crops for trading. Before project intervention, most farmers in the region were not aware of the benefits that come from protecting shade trees. It is likely in this situation that farmers would not have sufficient knowledge, skills or awareness to care for and maintain the existing trees on their farms successfully long-term. Chemical pesticides are often replaced by biological and cultural control under our agroforestry model. For example, farmers use the *Beauveria bassiana* fungus to biologically control a variety of soil-borne pests that coffee and cocoa crops are vulnerable to such as thrips. In the case of chemical pesticides, some farmers use commercial products with the active ingredient Chlorpyrifos, category 1b. Approximately 15% of farmers use pesticides on their

		farms. Farmers combine chemical fertilizers with the use of coffee and cocoa pulp. By tradition, they have applied fertilizers without soil analysis, a level that has been adequate to maintain their coffee plantations with good nutrition. Without the project intervention, the number of trees and crops currently on the land would remain the same, no additional trees would be planted because farmers would have expected coffee and cocoa to be grown better in full sunlight. The productivity levels of the coffee and cocoa crops would remain unstable and decrease slowly due to the impacts of climate change. Without further planting of additional trees with project intervention, there would be less shade/protection, and more harmful impacts from extreme weather on crop, soil, flora, and fauna health.
Description of current habitat species	Text	The main crop species found in the project area are coffee, cocoa, sugar cane , bananas, citric fruits, beans, and corn. The most prevalent tree species in the project area include *Cordia alliodora,* ice cream bean, Inga spectabilis, Spanish cedar and avocado. Animal species regularly observed in the project area include squirrels, possums, sparrows, owls, snakes and armadillos. Threatened species such as the Military Macaw and Giant Anteater have also been observed in the project area. Pollinator species observed regularly in the project area include bees, beetles, butterflies, moths, ants, flies, mosquitos, sunbirds, possums and hummingbirds. Without project intervention, the species expected to decline according to IUCN Red list include the *Momotus aequatorialis, Caenolestes convelatus, Myrmecophaga tridactyla,* and *Ara militaris*. Without project intervention, the tree species would be expected to remain the same. Biodiversity (in terms of pollinator and wild animal species abundance) would be expected to slowly decline without project interventions due to climate change.
Description of deforestation potential	Text	Solidaridad have not yet seen cases of deforestation or the burning of trees in the project area, it is not at all prevalent on farms. The coffee and cocoa area has remained stable in recent years in the regions. Some farmers have cut down a single tree, but they have replanted it after to recover the population and

		maintain the balance. The T-5 check reveals that only 1 plot out of the 2397 in the project area shows signs of deforestation within the last 5 years (see question 2 below). Due to the slope conditions of the farms and the difficult access in the project area, it is not profitable to cut the trees to sell for wood. However, in times of financial hardship it may be the only choice for farmers without income diversification from project intervention. With increased productivity and the incentive of carbon credits, Solidaridad expects a reduction in deforestation for fuelwood production and greater farmer awareness for natural resource conservation.
Description of trees species <2m and their distribution	Text	Banana trees (3-4 trees/ha for self-consumption). Fruit trees such as avocado and citrus trees (3-4 trees/ha).
Number of existing trees ≥2m	Number	5541 (see tree species list below)
Number of existing trees older than 5 years	Number	1246
Coverage percentage of existing trees older than 5 years	%	22.7

1) Tree species
   a) Tree species list in Coffe (≥2m).

Species ≥2m *(Latin name)*	**Number**	**Species ≥2m** *(Latin name)*	**Number**
Acrocarpus fraxinifolius	*13*	*Ficus benjamina*	*3*
*Adenanthera pavonina**	*1*	*Ficus grandis*	*1*
Aegiphila cuatrecasasii	*9*	*Ficus luschnathiana*	*2*
Albizia sp	*71*	*Gliricidia sepium*	*87*
*Alibertia patinoi**	*8*	*Guadua sp*	*56*
Aniba perutilis	*1*	*Heliocarpus sp*	*3*
*Annona muricata**	*56*	*Hymenaea courbaril*	*1*
*Annona squamosal**	*2*	*Inga edilus**	*1389*
Bixa orellana	*2*	*Inga ornata*	*131*

Bocconia frutescens	*2*	*Inga spectabilis**	*411*
Cecropia odorata	*1*	*Inga sp*	*2*
*Cajanus cajan**	*2*	*Inga spuria**	*11*
Calophyllum brasiliense	*3*	*Jacaranda sp*	*3*
*Carica papaya**	*42*	*Juglans neotropica**	*22*
Cassia spectabilis	*1*	*Laurus nobilis*	*1*
*Castañea mollissima**	*2*	*Leucaena leucocephala*	*12*
Cecropia angustifolia	*5*	*Leucaena magnifica*	*10*
Cecropia peltata (yarumo)	*205*	*nMacadamia integrifolia**	*2*
Cecropia sp (surrumo)	*4*	*Maclura tinctoria*	*8*
Cedrela odorata	*242*	*Mangifera indica**	*87*
Cedrela fissilis	*1*	*Melicoccus bijugatus**	*2*
*Citrus limon**	*74*	*Miconia caudata*	*1*
Citrus reticulata	*38*	*Morella pubescens*	*4*
Citrus sinensis	*94*	*Myrcianthes leucoxyla*	*68*
Cordia alliodora	*1135*	*Nogal criolla*	*2*
Crescentia cujete	*22*	*Ochroma pyramidale*	*8*
Croton lecheri	*2*	*Oreopanax incisus*	*3*
Croton magdalenensis	*2*	*Persea americana**	*195*
Croton urucurana	*2*	*Pinus sp*	*1*
Cupania americana	*54*	*Piper aduncum*	*27*
Deguelia utilis	*5*	*Piperaceae sp**	*40*
Dendropanax arboreus	*1*	*Podocarpus oleifolius*	*1*
Philodendron costarricense	*4*	*Polylepis australis (tabaquillo)*	*6*
Elaeocarpus sp	*3*	*Pouteria sapota**	*3*
*Eriobotrya japonica**	*6*	*Prosopis juliflora*	*3*
Erythrina edulis	*10*	*Psidium guajava**	*103*
Erythrina poeppigiana	*2*	*Quercus robur*	*2*
Eucalyptus	*14*	*Ricinus communis*	*25*
Eucalyptus globulus	*4*	*Samanea saman*	*1*

Eucalyptus grandis	*1*	*Sapium glandulosum*	*6*
*Eugenia stipitata**	*2*	*Schizolobium parahyba*	*15*
Euphorbia cotinifolia	*13*	*Senna spectabilis (vainillo)*	*8*
Ficus americana	*2*	*Spathodea campanulata*	*1*
Tabebuia chrysantha	*3*	*Theobroma cacao*	*396*
Trema micrantha	*27*	*Toxicodendron striatum*	*3*
Trichanthera gigantea	*63*	*Trichanthera sp*	*36*
Urera caracasana	*2*	*Urera baccifera*	*22*
Vismia guianensis	*3*	*Urtica dioica*	*3*
Zanthoxylum rhoifolium	*5*	*Vasconcellea pubescens*	*2*
Unidentified	*45*	*Zanthoxylum sp*	*1*

**Fruit trees*

The table above solely shows the number of trees per species at project baseline in 2021, the ground truth data of the project also provide additional information on the average tree sizes.

b) Tree species list in Cocoa (≥2m).

	Species >2m	Number		Species >2m	Number
1	*albizia guachapele*	*3*	*23*	*Jacaranda caucana*	*2*
2	*Anacardium excelsum*	*43*	*23*	*Mammea americana*	*1*
3	*Artocarpus altilis*	*1*	*25*	*Manclura tinctoria*	*5*
4	*Astronium graveolens*	*18*	*26*	*Muntingia calabura*	*2*
5	*Attalea butyraceae*	*1*	*27*	*Myrsine coriaceae*	*2*
6	*Averrhoa carambola*	*1*	*28*	*Myrsine spp*	*1*
7	*Cariniana pyriformis*	*14*	*29*	*Nectandra spp*	*154*
8	*Casearia corymbosa*	*18*	*30*	*Ocotea spp*	*2*
9	*Casimiroa edulis*	*1*	*31*	*Ormosia spp*	*15*
10	*Cassia grandis*	*1*	*32*	*Phyllanthus acuminatus*	*3*
11	*Chrysophyllum cainito*	*1*	*33*	*Platymiscium hebestachyum*	*1*

12	*Coffea arabica*	*1466*	*34*	*pouteria spp*	*1*
13	*Cupania cinerea*	*1*	*35*	*Pseudosamanea guachaphele*	*272*
14	*Enterolobium cyclocarpum*	*18*	*36*	*Shizolobim parahybum*	*17*
15	*Erythrina spp*	*67*	*37*	*Sin identificar*	*2*
16	*Erythroxylum coca*	*1*	*38*	*spondias mombin*	*3*
17	*Erytrhina spp*	*1*	*39*	*Spp4*	*1*
18	*Ficus dendrocida*	*2*	*40*	*Syzygium jambos*	*8*
19	*Ficus spp*	*43*	*41*	*Tabebuia rosea*	*38*
20	*Garcinia mangostana*	*1*	*42*	*Tectona grandis*	*1*
21	*Guazuma ulmifolia*	*8*	*43*	*Theobroma grandiflorum*	*1*
22	*guiaiacum officinale*	*1*	*44*	*Tibouchina lepidota*	*2*
				Total	*1711*

2) Provide T-5 check data to evidence loss of tree cover over the past five years from project start date.

Outcome	Number	Plot ID	Reason for failure
PASS	999		
FAIL	1	CO000862 - 1013	We have checked with Solidaridad, but they indicate that they have spoken to the farmer and confirmed that no deforestation has taken place on this plot. Our remote sensing team indicated that, with high probability, this one failed plot could be due to adjacent dense areas and the accuracy of the technology on a plot of 0.9ha. It is not always 100% accurate assessing plots under 1 hectare in size. As the remote analysis showed only 1 failed case in addition to the qualitative check performed by Solidaridad, we consider it justifiable to overrule the failed plot and prevent having to exclude one farmer from the program. The

			impact is also very limited as the plot has not created any CRUs yet.

3) Provide a description of the ecoregion(s).

Ecoregions can be differentiated for both coffee and cocoa. In terms of coffee production, this takes place within four different ecoregions: Cauca valley montane forests, Cauca valley dry forests , Magdalena valley montane forests, North-western Andean forest and the Cordillera oriental montane forest.
These five ecoregions share many similarities, specially between Cauca Valley montane forest and dry forest. Both ecoregions are classified with a biome named 'Tropical and Subtropical dry broadleaf forests', which indicates that they have a similar collection of flora and fauna. The elevation of Cauca Valley Montane Forest is <1.000m2 and the mean elevation of Cauca Valley Dry Forests is 940m2. The conversation status of both ecoregions is considered critically endangered as well. Contrary to this, the north-western Andean forest is located at high altitude between 1000 and 4000 meters. Given the big amplitude of heights, the ecoregion can be divided in three sections. Going from lower to higher altitude these are the pre-montane forest, monte and upper montane forest. Naturally, the height difference leads to a higher rainfall average at lower levels (up to 4000 mm/year) and decreases as the altitude increases. Similarly, the biodiversity in the ecoregion decreases along with the height of the terrain, as the climate characteristics play a role. The north-western Andean forest is also the most biodiverse region of the four. The reason for this is the isolation experienced by many species during the glacial period. This condition has made 50% of all plant species to be endemic.
Plots with cacao as the main cash crop can be found on three different ecoregions : Magdalena Valley montane forests , Magdalena Valley dry forests and Cordillera oriental montane forest, but in the case of the latter it only takes place a lower altitudes within the ecoregion. The Magdalena Valley Montane Forests y Magdalena-Valley dry Forests share many similarities. They concentrate a high biodiversity of mammals, reptiles and birds, as well as a natural wealth in forests and ecosystems in the Magdalena river basin; due their proximity to urban centres, these ecosystems are under pressure of natural habitat degradation. Finally the ecoregion of the Cordillera oriental montane forest stands out for its great altitude, as it can reach up to 3000 mts. Naturally, this altitude range can bring a diverse set of climate conditions, with low temperatures at higher altitudes. The same applies for the precipitation patterns, with seasonal changes, the ecoregion can be subject to precipitation varying from 1000mm to 3000mm annually. In terms of flora and fauna, big species of animals such as bears , tapirs, foxes or pumas can be found. Similarly, the ecoregion presents a high amount of bird species.

Ground truth plots are collected for all coffee and cocoa eco-regions, which are part of the project. To enhance the performance of the model, all ground truth plots were used in one model, representing the variation in biomass for the selected regions. The complementing characteristics and the distribution of plots led us to the decision to develop one carbon model based on a combination of the ecoregions as this improved the accuracy of the model.
Initially, during 2021 ground truth plots are collected from three ecoregions where coffee producers were active In this initial phase of the project, a total of 672 ground truth plots are used, where 503 are collected in the ecoregion named 'Cauca valley montane forests' and 169 are located in the ecoregion 'Cauca valley dry forests', as these were the initial ecoregions on which the project took place. Later on, during 2022 and 2023 more ground truths plots were collected to include the north western Andean montane forest This ensures that the model is calibrated for the mentioned eco-

regions, capturing the variability and allowing to enhance the performance of the model, all ground truth plots were used in one model, representing the variation in biomass within each region. The complementing characteristics and the distribution of plots led us to the decision to develop one carbon model based on a combination of the ecoregions as this improved the accuracy of the model.

Part E: Project Baseline Assessment

Toral number of participants surveyed		Number of female participants surveyed	Number of male participants surveyed		
100		**30**	**70**		
Area	**Indicator**	**Metric**	**Source**	**SDG**	**Result**
Environmental improvement	**Agricultural biodiversity**	**Calculation of crops, livestock, natural vegetation, and pollinators. Presence wild animals.**	**Farmer survey and Gini-Simpson Index**	**15**	**50.5**
Local livelihood	**Farmer income**	**Annual farmer revenue (income + CRU revenue – expenses)**	**Farmer survey**	**1, 8**	*To be filled in after the 3rd year of project implementation*
	Household Nutrition	**Number of food groups consumed in the household in the past 24 hours.**	**Household Dietary Diversity Score (HDDS) index survey[5]**	**2**	7
	Agricultural land use productivity	Average yield of main cash crop(s) (kg/ha/year) and total farm yield (kg/ha/year)	Farmer survey	2, 8, 12	Average of 1783,5 kg/year for the total farm productivity. While the cash crops have a productivity of 2579 and 988 kg/ha/year for coffee and cocoa respectively
	Women empowerment	Number of female employees, Project Council members, and participants. Subjective farmer perception of women involvement in the project.	Farmer survey and local partner survey	5	*Not applicable. The project has decided not to survey participants on this indicator*

[5] *Swindale & Bilinsky, 2006*

	Youth inclusion	Number of youth employees, Project Council members, and participants. Subjective farmer perception of youth involvement in the project.	Farmer survey and local partner survey	4, 8	*Not applicable. The project has decided not to survey participants on this indicator*

*Metrics and sources provided are suggestions only; projects are allowed to select other, more suitable metrics.
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1. Famer Income from Carbon Finance

I.) Describe the current financial state of farmers and describe how the project intervention is expected to positively/negatively impact this.

Participants live below the poverty line and struggle financially with an average income between 3000 and 4000 USD a year. Their financial state continues to worsen over time due to the negative impacts climate change has on farm productivity and income. Project intervention will help build farmer resilience against the damaging effects of climate change, such as shade trees protecting crops from harsh weather conditions. The marketable products derived from the trees planted and the carbon credit received for sequestration will offer diversification in income streams, act as a buffer for farmers in times of financial hardship.

II.) Fill in the table below based on the carbon credits received by farmers

Please note, this table will be filled in after the third reporting period, when the project baseline is assessed and participants have already received revenue for their CRUs.

Farmer name	Number of credits received	Time period credits were received	Total income from carbon credits
TOTAL CREDITS		**TOTAL INCOME**	

2. Nutritional Variety and Agricultural Productivity

I.) Describe farmer nutritional intake currently and how project intervention is expected to positively/negatively impact this.

Participants in Colombia have household income constraints that affect their possibilities to afford diversified and nutritious meals, leading to the consumption of a diet with little variation and poor nutrition. As seen in the table below, farmers currently consume on average 7 food groups, with some consuming as little as 4 food groups daily. Project intervention will result in increases in food security due to the expected increases in productivity/coffee yields and income diversification

(carbon credits), which help farmers to afford a variety of nutritious food. In addition, Solidaridad gave nutritional kits to be administered by communities. Those kits included seeds (beans, maize, etc.) and chickens to be administered and shared on a communal basis.

II.) Describe the current productivity levels of farms and how project intervention is expected to positively/negatively impact this.

Farmers with an average size of 1 hectare in coffee have an average output of 1472 kg/hectare/year (dry parchment coffee) and 988kg/ha/year for cocoa. However, the average productivity value for coffee has been increased due to a few outliers with significant productivity. Productivity is better represented by the median of 1000kg/hectare/year. Solidaridad assumes that over the project lifespan (meaning from the implementation of agroforestry until trees are fully grown, expected to increase over an 20-year period) – the productivity level for all farmers will increase with up to 20%. In the initial (1-3) years the productivity may be slightly lower (losses of less than 5%) due to the effect of the new agroforestry systems established. From the third year onwards, productivity and the quality of the coffee produced should increase. However, it must be noted that in general, productivity levels change per year and are strongly impacted by climate (rainfall), and therefore it will not be 100% clear what would be the impact of a transition to agroforestry from one year to another. It is possible to trace the increase in productivity to the implementation of agroforestry systems. To define the effect of climate variations, nearby farms (with similar climatic effects on them) with different production systems implemented can be compared. They have access to many different farms/production systems because Solidaridad is a large NGO with diverse agricultural projects throughout Latin America.

III.) HDDS Index nutrition survey results combined with agricultural productivity.

Food group type	Average amount of households consuming each food group (%)
Cereals	*92*
Root and tubers	*69*
Vegetables	*50*
Fruits	*47*
Meat, poultry, offal (5)	*77*
Eggs	*76*
Fish and seafood	*12*
Pulses, legumes, nuts and seeds	*22*
Milk and milk products	*56*
Oils and fats	*65*
Sweets	*49*
Spices, condiments and beverages	*58*
Average number of food groups consumed per household: 7 (6,73)	

IV) Agricultural productivity survey results

Average yield of cash crop (kg/ha/year)	Average total farm yield (kg/year)	Other crops contributing to productivity and their amount (%) in terms of amount produced per kg/ha

Coffee 2579 kg/ha/year Cocoa 988 kg/ha/year	1783,5 kg/year	Besides coffee and cacao, which are the main crops (*depending on the farmer, one is more predominant than the other one*) other cash crops are maize, avocado, bananas and sugar cane and to a lesser extent citric species such as orange and lemon. On average, these additional crops represent a 5% of the productivity of the main cash crops.

3. Agricultural Biodiversity

I.) Describe the current state of biodiversity and how project intervention is expected to positively/negatively impact this.

Based on the Gini-Simpson Index below, the state of biodiversity in the project area is classified as average but bordering unsustainable. Taking the wild and threatened animal species and pollinators listed below into account, the outcome moves further away from the unsustainable classification. This Gini-Simpson result of 50% is due to the high domination of coffee crops over other crops and fruit bearing trees. The impacts of project interventions will be highly positive for biodiversity. There will be greater farmer motivation and awareness for planting a variety of trees in the productive area and taking care of the forests to create a better micro-climate for the farms and for coffee growing, soil conservation, economic benefits for farmers, and articulation with other projects. These benefits will ensure farms become a more suitable habitat for local species and pollinators. Several farmers say that excessive shading can possibly reduce coffee productivity, so training in shade management and monitoring in the field is relevant and is currently part of the technical assistance provided by Solidaridad.

II.) How many farmers perform beekeeping?

25 out of 100 farmers perform beekeeping. From these, only 4 of them raise them purposely , while the remainder carries out wild beekeeping.

III.) Gini-Simpson Index Results.

Crops	**Area**	**pi**	**p2**	**Livestock**	**number**	**equivalent**	**pi**	**p2**
Coffee	62	.41	.17	Pigs	92	5.4	.026	.000676
Sugarcane	3	.02	.0004	Chickens	1041	14.57	.0.070	.0049
Cocoa	85	.56	.3136	Rabbits	17	.97	.0004	.0000
Total	**150**		**.48 (52%)**	Cows	183	183	0.89	0.7921
				goats	15	1.5	0.007	0.0000

Average of crop/livestock indices	**34**		**Total**	1348	**205.44**		**.7976 (20%)**

Natural vegetation, trees and pollinators	
	Value
Productive area with natural vegetation	0.5
Pollinator Presence	1
Beekeeping	0.5
Total	0.67
Agricultural Biodiversity Score	(Crops average + livestock average + Vegetation, tress and pollinator average) / 3
	0.46

IV.) List pollinator species in the project area.

Present in project area	**Pollinator type**
Regularly	Bees, beetles, butterflies, moths, ants, flies, mosquitos, sunbirds, possums, hummingbirds
Moderately	Bats
Sometimes	-
Rarely	-

V.) List wild animal species in the project area.

Species (***latin name***)	**Prevalence** (***Regularly/Sometimes/Rarely***)
Dasyprocta punctata	Regularly
Momotus aequatorialis	Regularly
Ortalis ruficauda	Regularly
Sciurus granatensis	Regularly
Tyto alba	Rarely
Zonotrichia capensis	Sometimes
Dasypus novemcinctus	Regularly

VI.) List species with a high local environmental and social conservation value in the project area, and if influenced by project intervention, describe relevant monitoring objectives/plan.

Species *(Latin name)*	**Threat Classification** (Culturally Significant/ Vulnerable/Endangered/ Critically Endangered)	**Project Influence** (Positive /Negative)	**Monitoring Objectives/Plan**
Myrmecophaga tridactyla	Vulnerable	Positive	Every 2-3 years the IUCN red list will be checked against a list of animals to identify species that need extra monitoring. This list will be created based on Solidaridad knowledge and answers from a sample of farmers that are surveyed on the presence of species they have observed in project area and asked the cultural importance of those species to the farmer (low, medium, high value for farmer)
Ara militaris	Vulnerable	Positive	
Caenolestes convelatus	Vulnerable	Positive	

4. Indicator Monitoring

I.) Describe the monitoring objectives for any expected impacts on farmer livelihood and the environment from project intervention. If there are any negative impacts expected, describe the relevant mitigation actions.

Livelihood / environmental indicator	**Impact description**	**Mitigation action (if negative impact expected)**	**Monitoring frequency**	**Responsible party**
Nutritional Variety	Project intervention will result in increases in food security due to the expected increases in productivity/coffee and cocoa yields and income	N/A	After 6 months of implementation, and every 2-3 years thereafter.	Solidaridad Colombia

	diversification (carbon credits), that help farmers to afford a variety of nutritious food. In addition, Solidaridad gave nutritional kits as a once off to be administered by communities. Those kits included seeds (beans, maize, etc.) and chickens to be administered and shared in a communal basis. Ongoing provision of nutritional kits is not part of the project intervention at this stage but may be depending on the impact seen during monitoring.			
Agricultural biodiversity	Will increase due to the planting of diverse shade trees among coffee and cocoa crops that provide a suitable and native habitat for local species. However excessive shading may reduce coffee and cocoa productivity. All the species selected in the agroforestry design are native and selected by the community by using their ancestral knowledge (grandmothers and grandfathers within the community).	The training in shade management and monitoring in the field is not only relevant for monitoring biodiversity impact but also for farm productivity.	Once the project is implemented, and every 2-3 years thereafter.	Solidaridad Colombia

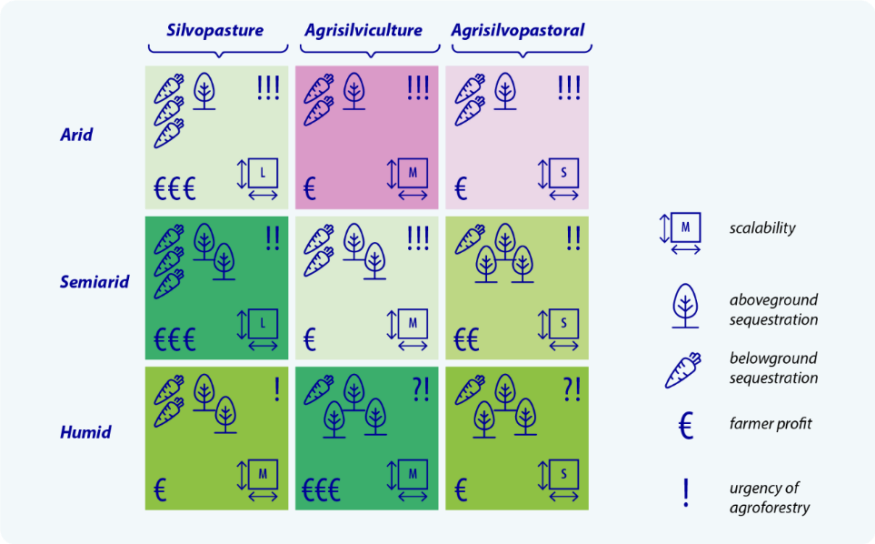
Farmer financial state	Project intervention will help build farmer resilience against the damaging effects of climate change, such as shade trees protecting crops from harsh weather conditions. The carbon credit received for sequestration will offer diversification in income streams and act as a buffer for farmers in times of financial hardship.	N/A	Solidaridad is promoting farmers accounting, as this would provide evidence of the costs' reduction (such as in fertilizer) achieved with the agroforestry systems. Every two years to three years.	Solidaridad Colombia
Farm productivity	Solidaridad assumes that over the project lifespan (meaning from implementation of agroforestry until trees are fully grown) – the productivity level for all farmers will increase with up to 20%. This increase in productivity is expected to lead to an increase in farmer income.	Explanation about Acorn, when and how CRUs are generated is communicate d by the local partner to the participants, making farmers understand the risk of short-term productivity loss and long term quality gains. Also, training in shade management and monitoring in the field is relevant and is currently part of the technical assistance	Yearly, Solidaridad measures a sample of farmers to verify the benefits of agroforestry with respect to yields and ensures careful repetition of the information to the farmer.	Solidaridad Colombia

		provided by Solidaridad.		

Part F: Project Activities

1. Describe the agroforestry system to be implemented as part of the project using the figure below (silvopasture/agrisilviculture/agrisilvipastoral).

The agroforestry system is classified as existing agrisilvicultural agroforestry in a humid environment on which coffee and cocoa are the main cash crops. The planting of shade trees is prioritised in this system.



2. For each agroforestry system fill out the table below (use additional tables if necessary):

Species details				
Type	**Species**	**Native, naturalised or invasive?**	**If naturalised, please describe its likely:**	
			Livelihood benefits that make it preferable to any alternative native species	**Impact on biodiversity or other provision of key ecosystem services in the project and surrounding areas**
Coffee agroforestry design				
Cash Crop	*Coffea arabica / Coffea canaephora*	Naturalized	Main cash crop	Core species in the agroforestry design. Besides its central role for farmer's livelihoods, it can also act as source of shade and shelter for different animal and plant species
Tree	*Inga ornata kunth*	Native	N/A	Improve quality of the soil, provide proper shade for coffee and protects watersheds.

Tree	*Cedrela odorata l.*	Native	N/A	Provide proper shade for coffee and cocoa trees and protects watersheds.
Tree	*Albizia carbonaria britton*	Native	N/A	Improve quality of the soil, provide proper shade for coffee trees, and protects watersheds.
Tree	*Inga spectabilis (vahl) willd*	Native	N/A	Improve quality of the soil and provide proper shade for coffee trees
Tree	*Handroanthus chrysanthus (jacq.) S.O. grose*	Native	N/A	Improve quality of the soil and provide proper shade for coffee trees
Cacao agroforestry design				
Cash crop	*Theobroma cacao*	Native	N/A	Core specie in the agroforestry design. Besides its central role for farmer's livelihoods, it can also act as source of shade and shelter for different animal and plant species
Tree	*Quercus humboldtii Bonpl*	Native	N/A	Provide cover and protection to cocoa plants and other ecosystem services.
Tree	*Tabebuia chrysantha*	Native	N/A	Provide cover and protection to cocoa plants and other ecosystem services.
Tree	*Tabebuia rosea*	Native	N/A	Provide cover and protection to cocoa plants and other ecosystem services.
Tree	*Trichanthera gigantea*	Native	N/A	Provide cover and protection to cocoa plants and other ecosystem services.
Tree	*Pseudobombax septenatum (Jacq.)*	Native	N/A	Provide cover and protection to cocoa plants and other ecosystem services.
Growth management				
Preparation and Planting	Soils require organic matter before shade trees are planted (see Part D-Carbon Baseline). Distances among shade trees can be around 13 meters x 13 meters and 18 meters x 18 meter in cacao.			

Tree/Shrub Management	Regular pruning and weed control during the first 2-3 years. Maintenance pruning during the renewal of coffee trees.
Crop Management	The crop management is different between coffee and cocoa. In the case of coffee farms, usually, the land used to cultivate coffee is divided into 5-6 plots For example, if there are 50 coffee plants in total on the plot, these would be divided into 5-6 subplots. Therefore, there could be 5 subplots, each containing 10 coffee plants in this case. Yearly, all the coffee trees within one plot are cut to a height of 20-30 centimetres. As a result, coffee yields are maintained, and shade trees can be managed (prune). In terms of cocoa , the management is different. For these, plants are established in small plots of approximate areas of 1 hectare with planting distances of 3 meters x 3 meters, a distance that allows the planting of forest trees for the SAF.

3. Describe the project's agroforestry design/implementation plan.

Farmers choose for themselves the trees they would like to plant on their farm based on community and ancestral knowledge (grandmothers and grandfathers within the community), and advice given by an agronomist from Solidaridad after they assess the species suitability. For farmers with very steep land and erosion problems, shade trees are concentrated at the top of the hill; while farmers in need of organic matter will have shade trees throughout the coffee and cocoa crops. Finally, as trees are also ornamental, they can be planted in the boundaries of the farm too. The ideal moment for planting shade trees is during the coffee renovation season, which occurs every 5 to 6 years depending on the region and context of the farmer. In Colombia, all coffee producers manage their farms dividing the cultivated land into 5 to 6 plots, in which they grow different varieties of coffee with different ages, because on this way, they have stable coffee production. Each plot should be partially renovated (pruning coffee trees up to 20-30 cms of height). The goal is for farmers to plant 50 trees per hectare over the life of this project, a minimum of 20 years. Farmers will plant their trees over a period of 1-5 years, however, the amount of trees they plant each year is up to them and varies depending on farmer resources. Seedlings are sourced from local nurseries and provided to farmers by Solidaridad at no cost to farmers.

In Colombia, cocoa producers have established their plantations under a model that considers densities of 1100 plants / ha and planting distances of 3 m x 3 m. This model for the establishment of cocoa plantations is developed in association with timber species and other short-cycle crops in the 2 years of its establishment, later these plantations are mainly associated with timber trees only, however the deficient technical support and the lack of knowledge of the producers for the sustainable management of the crop associated with the climatic impact has caused the loss of plant material of cocoa and timber trees that considerably reduces the density of plants / ha, which decreases their carbon sequestration potential, reduces the productivity and income of cocoa farmers. Solidaridad's goal is for cocoa farmers to improve their productivity by planting timber trees

reaching densities of up to 70 trees/ha, strengthening their SAF, and implementing sustainable management practices to increase their productivity.

In addition to a random sample of farmers who answered surveys on the importance of trees regarding UV index and IVI (Importance value index), a sample of smallholder farmers (random plots of 200 square meters) are visited by agronomists to validate their land's conditions, soil characteristics and floristic structure and composition as this allows the selection of the most appropriate shade trees. The agronomist visits the land each year that new farmers are onboarded and assess the conditions before the first trees are planted by the new farmers. This data was used to determine 5 tree species from the large list of eligible trees obtained from the Cenicafé and Cenicacao. After this study, very specific guidelines were developed for the agroforestry system promoted by Solidaridad Colombia. Those guides include among others: outdistance sowing and cultural practices (maintenance, care and irrigation).

4. Provide an estimate of the carbon benefits for each tree species per hectare over a likely median project period.

Tree species	Expected carbon benefit/ha	Project period used (e.g. 10 years)
Inga ornata kunth	*20 CO2e kg/Ha*	*10 years*
Cedrela odorata l.	*46 CO2e kg/Ha*	*10 years*
Albizia carbonaria britton	*18 CO2e kg/Ha*	*10 years*
Inga spectabilis (vahl) willd	*20 CO2e kg/Ha*	*10 years*
Handroanthus chrysanthus (jacq.) S.O. grose	*11 CO2e kg/Ha*	*10 years*
Quercus humboldtii Bonpl *Tabebuia chrysantha*	*30 CO2e Kg/ Ha*	*10 years*
Tabebuia chrysantha	*30 CO2e Kg/ Ha*	*10 years*
Tabebuia rosea	*30 CO2e Kg/ Ha*	*10 years*
Trichanthera gigantea	*30 CO2e Kg/ Ha*	*10 years*
Pseudobombax septenatum (Jacq.)	*3C O2e Kg/ Ha*	*10 years*

**These figures will not be used to issue CRUs and are derived from FarmTreeTool*

5. Describe how this agroforestry system is expected to impact the land (i.e. shade, less pests, increase in pollinators).

The trees planted under this agroforestry system and the education farmers are provided with on how to manage and care for such a system will result in a better micro-climate for the farms and for coffee and cocoa growing, an increase in pollinators, the conservation of soil, economic benefits for farmers, and articulation with other projects. Solidaridad has learnt through their research for this project (i.e. case studies described) that in coffee agroforestry systems, overshading can result in reduced coffee

productivity. The reason for this is due to poor farmers' knowledge/skills in how to monitor for signs of overshading and how to reduce and achieve ideal shading conditions for coffee and cocoa through pruning etc. However, the training that Solidaridad give farmers in overshading monitoring, identification and mitigation will ensure this does not occur and increase production quality.

6. How do you ensure that the trees already in the project area before project intervention (if any) do not perish due to competition with the trees planted during this project or are damaged due to project activities?

All practices are implemented based in the Cenficafe research, which suggests the use of 50 shade trees per hectare scattered among the farm. In addition, species are native and were selected as a way to bring them back to the ecosystem (as those trees were seen very often in the past by the elder generation in the community). Solidaridad focus on the number of shade trees planted in total (old/new). They ensure planting does not go over the maximum number/density of trees for the land. This ensures the new trees have enough space and distance from old trees and do not perish due to the newly planted trees (i.e. due to lack of sunlight, nutrients etc). They also use all native species so they are used to growing together and do not involved naturalised or invasive species that may compete with native species in that environment.

In cocoa, different organizations based on the National Cocoa Council (Fedecacao, Agrosavia, Red Cacaotera, ICA, Compañía Nacional de Chocolates, Casa Luker) promote the technological offer for the management of cocoa plantations, all the practices that will be implemented consider the development of climate-smart agriculture, Solidaridad's accompaniment will guarantee that cocoa plantations strengthen their SAF with forest tree densities between 70 and 120 trees/ha.

Part G: Project Council

1. Describe the project council governance structure, showing that participants or community groups collectively nominate project representatives who have the capacity to operate and make decisions on their behalf, and determine a decision-making mechanism for the project council.

A Project Council did not exist when the project was implemented before partnership with Acorn, but the model included lead farmers, who inspired and promoted those practices among their communities. At that ,moment the project council will consisted of Solidaridad and these same lead farmers as they were selected by Solidaridad for this role because of their close engagement with other farmers and the community and the trust placed in them by participants to speak and make decisions on behalf of them.

After two years of running this project and given its expansion both geographically and in terms of participants , Solidaridad has chosen to establish two different project councils. Specifically for the central and south region of the project. All project council members have good communication skills, advocating for the needs of the farmers in the ecoregions. Through the participation of lead farmers in the project council we will ensure farmers that they feel represented by their leaders. Solidaridad will have easy access to them for efficient and consistent meetings. Solidaridad assesses the suitability of lead farmers each year. The council members will be assessed against any feedback/grievances received during this time..

2. Describe how project council allows participants to provide feedback on the project design and implementation.

Solidaridad will use Acorn's Project Council Slides during project council meetings to ensure all important topics are discussed in an open and interactive manner where feedback is prompted. In previous meetings with lead farmers, Solidaridad has welcomed feedback they received from the community on the selection of the farmers, creation of the nurseries and training processes, and integrated it into their Agroforestry design. Farmers will report feedback though Whatsapp messages or emails (if available) which will be received by lead farmers/technicians (there are 15 to 20 lead farmers assigned to each technician and 1 technician per local community) and if they are not able to use this method they will report feedback to lead farmers verbally during farm visits. The lead farmers will voice all feedback that has not yet been actioned during project council meetings. As seen in Part K, risk reversal, you can see in depth the communication Solidaridad has had with farmers during project design. During the design of the agroforestry system Solidaridad researched case studies on coffee and cacao agricultural systems, and actively engaged during meetings with coffee and cocoa growers and their families, the local community and organisation in both sectors. Lead farmers were also assigned a range of participants to inform and seek feedback from verbally during technical visits about project activities.

3. List the lead farmers that have been nominated by participants to represent project participants during project council meetings to voice concerns and needs, and actively engage in decision making.
   Project council participants for the central region:

Participant	Gender	District	Region	Years participating in council
Farmer 1	Male	Aguadas	North	2
Farmer 2	Female	Aguadas	North	2
Farmer 3	Male	Aguadas	North	2
Farmer 4	Male	Belén de Umbría	North	2
Farmer 5	Male	Belén de Umbría	North	2
Farmer 6	Female	Anserma	North	2
Farmer 7	Female	Anserma	North	2
Farmer 8	Female	Mistrató	North	2
Farmer 9	Female	Guática	North	2
Farmer 10	Male	Quinchía	North	2
Farmer 11	Male	Riosucio	North	2
Farmer 12	Male	Quinchía	North	2

Participant	Gender	District	Region	Years participating in council
Farmer 1	Female	Morales	South	1
Farmer 2	Male	La Sierra	South	1
Farmer 3	Female	Timbio	South	1
Farmer 4	Male	Cajibío	South	1
Farmer 5	Male	Popayan	South	1
Farmer 6	Male	Sotara	South	1
Farmer 7	Male	Sotara	South	1
Farmer 8	Male	La vega	South	1
Farmer 9	Female	La Sierra	South	1
Farmer 10	Male	Cajibio	South	1

Farmer 11	Female	La Vega	South	1

Project council participants for the region south:

4. Describe the grievance mechanism for this project, including;
    I.) The method for communicating grievances (Whatsapp/phone, email, Facebook, meeting, letters, anonymous box etc.).

Farmers communicate grievances through Whatsapp to lead farmers if they have access to that app or emails and if not they communicate verbally to their assigned lead farmer during farm visits. One technician (agronomist) is assigned per community of farmers. At the same time, each of them has assigned among 15 to 20 lead farmers as the contact to receive farmer and community grievances.

II.) How do you ensure that complaints and/or recommendations can be done at any time and can be identified or be anonymous?

Constant communication between farmers and their leaders, as well as among leaders and technicians is key to ensure proper communication between farmers and Solidaridad. Solidaridad builds relationships with communities based on trust and transparency. Usually, there are no anonymous channels, but all the information provided on the grievances is carefully handled by the team, as it could be very sensitive topics, in which Solidaridad supports due diligence with competent authorities

III.) The process in place to ensure grievances raised are dealt with in a transparent, fair and timely manner (e.g. chain of escalation).

The chain of escalation that Solidaridad has in place for grievances is as follows:
Community/farmer > lead farmer > technician > project coordinator > project manager

Solidaridad has the following channels to receive feedback and recommendation from farmers: Solidaridad's agronomist, Lead farmers (promoters), farmer associations. In addition, the coordinators of the program are well-positioned in the community. It is normal for them to receive Whatsapp messages and emails with complaints, suggestions, requests to them. Those emails can be written on behalf of the community or a particular participant. These messages are received by the lead farmer or technician and if easy to resolve are actioned, if not they are escalated to the coordinator and or manager for further action and to be reported to Acorn within 35 days.

IV.) Describe how the grievance mechanism is communicated to participants.

Technicians have a lot of engagement with the farmers when they were collecting polygons and ground truth data. After that, the engagement is sustained during field visits. At this time, and during farmer training, they informed participants of the manner in which they can communicate grievances to lead farmers. Furthermore, the open channels for the communication of grievances is reminded to participant during project councils.

5. List any grievances that have been raised outside of project council meetings and the actions taken to resolve them.

    - **Central region:**

Grievance reported	Action taken	Responsible party
Payments not perceived by farmers (10-08-2023)	*Participants were asked to double check the bank account to which payments were sent. In the end, all participants confirmed the reception of payments*	*Solidaridad*
Remaining technical questions after field visits (10-08-2023)	*Some participants reached out with follow up questions after training sessions, which were answered immediately through phone calls or text messaging.*	*Solidaridad*

- **Southern region:**

Grievance reported	Action taken	Responsible party
No grievance reported (06-10-2023)	*No grievance reported*	*Not applicable*

6. Provide all project council reports that have been produced in the first year (minimum of 2). These reports must be completed based on the Project Council Report template provided by Acorn (including what decisions were made, how they were made, any feedback given and how it is been acted upon, grievances reported and how they are dealt with, satisfaction with grievance mechanism, proof of meeting (minutes and attendee list).

   Provided. Concealed for data protection purposes

7. Provide meeting minutes or other forms of evidence that demonstrate participants contributing to the selection and design of activities, considering :

   - Local livelihood (customs, needs and opportunities)
   - Land availability and tenure
   - Food security
   - Inclusion of marginalized groups
   - Opportunities to enhance (agricultural) biodiversity
   - Monitoring
   - Project implementation
   - Field management
   - Payments

   Provided. Concealed for data protection purposes

Part H: Organisational Capacity

1. Describe your legal status as a local partner (e.g. NGO, local co-op or trader).

Solidaridad is an international civil society organization (NGO) with over 50 years of experience in developing solutions to make communities more resilient. The organization is registered as a non-profit foundation in Colombia. See Annex 11 Solidaridad certificate of registration.

2. Describe your in-country presence and relationship with participants and communities in the project area.

Solidaridad has its early roots in supporting farmer communities in Colombia, including Risaralda, Cauca, Antioquia, Caldas, Tolima, Huila and Bolivar over the last 10 years. Solidaridad is in constant collaboration with the local communities and farmers within the project area to explore the challenges and opportunities they face while implementing agroforestry practices. They do this through technical visits to the farms, dialogues with the coffee and cocoa growers and their families, and meetings with the community.

3. Briefly describe how you contribute to the social and economic development of the participants and their communities.

Communities involved in the project are located near strategic ecosystems and biological corridors. Climate change could drive farmers to sell their land (which is too warm) for recreational/touristic purposes; and later on, deforest the park for establishing their coffee crops (in more altitude regions). This project enhances land's quality and productivity in the long term, avoids deforestation, ensures sustainable livelihood, and preserves the ancestral coffee tradition of the region. As climate patterns such as El Niño and La Niña are becoming more recurrent and strong, it is important to handle their negative effects. The dry season (El Niño) affects the quantity and quality of the produce, and increases the likelihood to develop plant diseases. The rainy season (La Niña) increases erosion's risk in very steep farms. Such negative effects can be mitigated with agroforestry practices. And as a result, farmers achieve consistency in yields and quality in their produce, while their efforts in adopting/keeping agroforestry practices are compensated with income from carbon emission sales.

4. What is the experience of the local partner working with farmers and in the project location (organising land tenure, implementing agroforestry, providing training etc.).

Solidaridad is an international civil society organization with over 50 years of experience in developing solutions to make communities more resilient. They have more than 10 years of experience in agroforestry, climate change projects, carbon footprint and work with communities. With the climate programme directed at coffee and cocoa producers, it has been active in the key production areas since 2014. Solidaridad works with a focus centred around young people, women, families, other organisations and cooperatives. Soldiaridad engaged, formed and strengthened a group of young lead farmers to reach and train a greater number of producers. Earlier programmes such as Coffee of the Future and Cocoa More Sustainable, has helped the organisation to understand better the main needs and key motivations of the landscape stakeholders, thereby gaining hands-on experience with farmers in coffee and cocoa before this agroforestry project with Acorn (climate smart agriculture). Solidaridad is in constant collaboration with the local communities and farmers within the project area to explore the challenges and opportunities they face while implementing

agroforestry practices. They do this through technical visits to the farms, dialogues with the coffee and cocoa growers, their families and community meetings.

5. Describe how the project will securely store project information, including project designs, business case details, proof of payment, record of participants events and monitoring results.

All data is stored in the cloud by using Google Drive. This is in accordance with GDPR as Personal data is not stored by local partner and most farmer information will be stored on the platform. If it is necessary to store such data on the drive, such as meeting minutes with names, these will be anonymised or abbreviated to keep with GDPR. Information such as payments etc is stored only on the platform. All data will be stored online. If data is retrieved manually by pen and paper this will be scanned and shredded. Payment records will be stored electronically in the platform.

6. List relevant local, national and international policies, laws and regulations and demonstrate how the project is aligning project activities to comply.

CONPES 4021 is a policy that promotes knowledge about the importance of keeping forest in Colombia. This policy includes the promotion of agroforestry practices, particularly in areas under pressure of deforestation. This project is developed, among the others, to keep the Natural Park of Tatamá. Please also refer to See Part C - Additionality Assessment for relevant laws and regulations.

7. Describe project's mechanisms to identify and address barriers to participation for groups that could be excluded based on the basis of gender, age, income or social status, ethnicity or religion, or any other discriminatory basis.

Solidaridad pilots new approaches and methodologies in the field of social inclusion of women and young people. This helps to ensure that producers from marginalised groups cover their costs and earn at least a living income. Solidaridad believes that women can play a decisive role in improving their families' livelihoods. To increase their participation and formal leadership in agroforestry, Solidaridad developed a gender-inclusive approach to their project management and technical assistance (see attachment below). In these agroforestry coffee and cocoa projects, Solidaridad reinforces ongoing gender-focused interventions and provides access to an entrepreneurship school for young people. Additionally, Solidaridad ensures that participants are not excluded based on their background, gender, age or social status. Solidaridad works in partnership with institutions that are already in the field and have standards for inclusivity, such as the regional office of the National Coffee Federation (FNC in Spanish) and National Cocoa Federation (Fedecacao). FNC includes the majority of coffee farmers of the country, given the benefits provided to coffee farmers (extensionist services, subsidies, incentives, etc.) As farmers in the region were targeted with FNC, there is low risk of discrimination. Both FNC and Fedecacao have a variety of trainings and policies for projects and leaders in the coffee and cocoa sector in regards to inclusion, diversity and equity (Diversity, Equity, and Inclusion (DE&I) Resources for Your Coffee Business (ncausa.org)). See question 8 which explains that any farmers who registers interested will be onboarded regardless of gender, age, income, status etc.

8. Describe process for onboarding participants.

Solidaridad Colombia plays an important role in raising awareness among vulnerable farmers about the importance of shade trees as a strategy to build resilience against climate change. In collaboration with Federación Nacional de Cafeteros (association of coffee farmers in Colombia), marginal regions with very low altitudes (below 1.400 m.a.s.l.) and very steep farms are selected to implement climate-smart agriculture. The onboarding process requires understanding the fears and limitations that smallholder farmers face when they are implementing/maintaining their agroforestry systems in the first four years, as those are critical to ensure the expected results. This knowledge is transformed into strategies to overcome those challenges and ensure the long-term commitment of the farmers. This is known as the Change Management approach which is leveraged with community-based activities. With extensive data provided by the Colombian Coffee Growers Federation and Fedecaco, Solidaridad created segments of farmers to be onboarded based on their land size and altitude (meters above sea level). These two variables are key to identify the most vulnerable farmers to the impacts of climate change and those intended for the project with Acorn. Cocoa producers will be identified with different local actors, mainly with first-level producer organizations in the different territories validated with local authorities and other actors such as the National Cocoa Association of Colombia (Red Cacaotera). Solidaridad selected the regions of Risaralda, Cauca, Antioquia, Caldas, Huila, Tolima and Bolivar for 2023 and within these departments, farmers were openly invited to sign up for agroforestry practices through community meetings, and those that were onboarded are the only ones who wanted to implement agroforestry no matter their ethnicity, gender, status religions etc. Therefore, any farmer who is aware of the project, and interested in transitioning to agroforestry, while meeting the eligibility criteria of Acorn, is eligible for onboarding. Solidaridad aims to onboard all farmers that show interest in ACORN.

9. Describe project employment policies regarding employment of youths, women, and disadvantaged groups.

Solidaridad is an equal opportunity employer. It advertises in an accessible manner through its website and through social media networks. All HR processes are open, transparent, and monitored. New hirings take into account the needs of the program and the skills offered by the applicants. Currently we have a balance of 46% women and 54% men under contract. The project follows the solidaridad code of conduct (Code-of-Conduct.pdf (solidaridadnetwork.org). The project does not employ any children under the age of 16 as per the Colombian Labor Code. This is reflected in all written employment agreements.

10. Describe how women are involved in the project but NOT as farmers (i.e. partnering nurseries, training).

Among the group of field technicians and promoters there are multiple women (25 out of 55 people). At community level, nurseries are set up by farmers (usually by women and youth). If men are the heads of the household and the participant farmers listed with the project, in many cases women are still involved in the project in terms of maintenance of the farm and trees.

11. Does Solidaridad provide information to participants in an applicable language and/or format that suits all participants and avoid discrimination of illiterate groups?

All project material for farmers (forms, surveys, plans etc) is in Spanish and if from Acorn, translated by Solidaridad to Spanish. Project information that is crucial to farmer success is relayed not only online but also via lead farmers in person during farm visits so to not discriminate against illiterate.

12. Describe how the project will promote knowledge sharing among participants and the community.

Lead farmers play a crucial role in inspiring others to adopt climate-smart agriculture in their coffee and cocoa crops. Besides, Solidaridad developed a strategy of “Puntos verdes” (Green points in English) in which communities may receive additional incentives (mainly inputs for their production, or other emotional rewards) to keep their practices in the long term. Motivations are driven on a communal basis, as is proven that farmers influence each other. Solidaridad will run education sessions on agroforestry issues and benefits with farmers and the community and trips to successful agroforestry systems. Methodology of Puntos Verdes is as follows: farmers are invited to engage in activities that promote taking care of the soil or water resources. Those activities are done on a voluntary basis, classified as individual or group tasks, and they rewards farmers with “green points” (puntos verdes in Spanish). Those points can be exchanged for fertilizer, machetes, rubber boots, seeds, etc. Those elements help farmers to be engage in the improvement of their agroforestry system.

Green Points is a methodological strategy to encourage community work and the implementation of climate-smart practices at the farm level. The accumulation of points is given by activities carried out by the producer and his family. Each activity generates different points. There is a group supervisor to review practices and points achieved. Then the points are exchanged for work tools, fertilizers with a low carbon footprint, among others.

Part I: Payments and Benefit Sharing

1. Provide a detailed business case and financial analysis for the project demonstrating an increased annual income from both agricultural production and carbon sequestration needs to exceed the costs associated with the transition to agroforestry and the generation and trading of CRUs.

A detailed business case has been completed for both the local partner and participant for both coffee farmers and cocoa farmers. These are represented in separate documents (See Annex 4 Local partner and farmer business case). The business case of the local partner shows that Solidaridad have received a significant amount of donor funding from multiple sources that will be used for this project in terms of farmer onboarding to reach 25,000 farmers by 2024. Solidaridad has the financial capacity to successfully support farmers with the transition in the near future until they start to experience significant increases in productivity of up to 20% over the life of the project and generate more CRUs (up to 96 euro per farmer/year) when trees reach maturity. This ensures that the full 80% of CRU will be directed to farmers.

For example, for coffee agroforestry models in the later stages of the project, farmers will generate approximately , 6 CRUs a year , equating to a minimum of 120 euro. *Please note, this reflects a price of 20 euros per CRU, which is the minimum sale price as set by Acorn. Therefore, this projection should be considered as a base scenario and the results will be dependent upon CRU prices and amount of CRUs sold*. The 80% of this that farmers receive equals to a minimum of 96 euro and the local partner will receive at least 12 euro per farmer *(with a selling price of 20 euros/ CRU)*. As this project is existing agroforestry (in year 4), farmers can expect to be receiving this next year in 2023 (conservatively year 5 as seen in participant budget) and until then Solidaridad has adequate resourcing/funding to ensure farmers stay incentivized through awareness/training and supply of material etc. As donor funding is temporary and Solidaridad have a plan to grow at a significant scale, this stable income from carbon finance (received at regular intervals - annually) will ensure they have enough capacity over the life of the project to continue support new and existing farmers.

In the case of cocoa agroforestry, we estimate that the accumulation of carbon through shade species associated with cocoa cultivation, accumulated between 25 and 30 tn eq CO2/ha. The same study reported that cacao trees accumulated between 6 and 9 tn eq CO2/ha, considering a crop cycle of up to 20 years. The technical team of the Solidaridad Cocoa program estimates that the Carbon Removal Units - CRU are estimated at 5 CRU / year equivalent to 100 euros, which in a life cycle of up to 20 years, will allow the implementation of sustainability incentives to improve productivity and yields of cocoa crops.

2. Demonstrate financial feasibility that ensures local partner will not draw more than 10% of sales income for ongoing coordination, administration and monitoring costs

In the first measurement of biomass, participants in Colombia will receive on average 5 CRUs per Ha, which is EUR 80 additional to their income. This value is net income, after deducting 10% of Acorn's fee and 10% of Solidaridad's overall costs. The main part of the investment was done by Solidaridad when the project was implemented. Funds were provided by donors. It is expected that 10% will cover costs of maintaining farmers engagement. Currently, a business case for the Local Partner is being built to check that this would be the case or to plan in advance, if extra funds are required. It is the aim that when received, the 80% of funds that will be paid to farmers will be clearly labelled or earmarked for that purpose. It is not permitted for Solidaridad to take more than a maximum of 10% of CRU revenue, which is stated in the signed local partner contract.

3. Describe the seen/expected productivity changes that will result from project interventions

Solidaridad assumes that over the project lifespan (meaning from implementation of agroforestry until trees are fully grown) – the productivity level will increase with up to 20%. In the initial (1-3) years the productivity may be slightly lower (losses of less than 5%) due to the effect of the new agroforestry systems established. From the third year onwards, yield and the quality of the coffee and cocoa produced should increase gradually. However, it must be noted that in general, productivity levels change per year and are strongly impacted by climate (rainfall) and therefore it will not be 100% clear what would be the impact of a transition to agroforestry from one year to another. It is possible to trace the increase in productivity to the implementation of agroforestry systems. To define the effect of climate variations, nearby farms (with similar climatic effects on them) with different production systems implemented can be compared. When coffee and cocoa yields are described, it means: kilograms of coffee and cocoa beans per hectare, while productivity is a relationship between outputs to inputs. Having said that, in Colombia, the amount of coffee and cocoa beans per hectare (yields) will not significantly increase, because it tends to be consistent, and with better quality. Besides, environmental services produced by shade trees can decrease the use of fertilizer and the management of weeds.

4. Describe how payments will be disbursed to participants and how they are linked to performance

All payments through Solidaridad Colombia will be disbursed in a transparent and verifiable way. Payment will be not made in-kind. Payment to farmers will be done by using conventional bank accounts or digital wallets (apps installed into farmers' phone).

5. Provide evidence of an account (separate to the local partner's operational finances) or earmarked funds for the sole purpose of participant finances.

Solidaridad has earmarked the funds received from CRUs (80%) to ensure transparency of payment and for future monitoring and audits. Evidence will be provided in the annual updates of the ADD after year 1.

6. Show that at least 80% of the proceeds from CRU sales should accrue to participants.

Evidence will be provided in the annual update of the ADD after year 1 regarding the amount and % transferred to the participants.

7. Describe what proportion of cash payments or individual in-kind payments will be disbursed to farmers.

All payments will be monetary payments through the bank accounts or digital wallets of participants. No in-kind transfers will be applied

8. Where payments are completed by cash payments, describe an appropriate mechanism organised by the local partner to record the receipt of payment (i.e. a form saying who has been paid, what date, how much, their farmer ID and the farmer's signature to acknowledge payment).

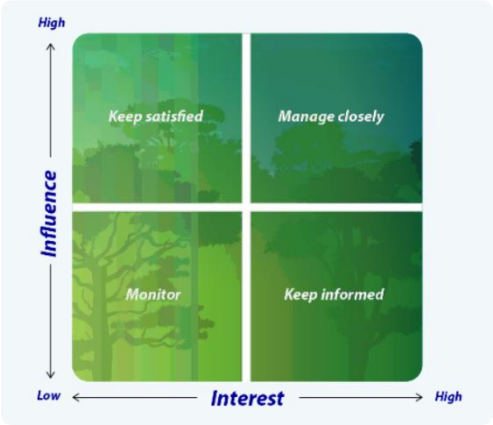
Payment to farmers will be done by using conventional bank accounts or digital wallets (apps installed into farmers' phone. Full transparency is guaranteed on the platform as you can see who

has been paid, the date, the amount, their ID and tickbox for the farmer to manually demonstrate this payment information is correct and they have received it.

9. Describe the in-kind benefits that will be provided, if any.

Benefit	Examples	Description
Inputs	• Seedling costs • Sapling costs • Fertilizer	*No in-kind benefits will be provided using the carbon payments. Farmers will benefit for in-kind benefits provided by grants of international donors.*
Education	• Training costs • Agronomist consultation costs	
Operation	• Mobile communication costs • Mobile payment costs • Fencing	
Livelihood	• Land tenure consultation costs	

Part J: Stakeholder Analysis



1. Referring to the stakeholder analysis figure above, describe the interest and influence each stakeholder has in the project and justify the reason for this in the table below. All stakeholders that receive outcomes other than "Monitoring" must be informed of the project (e.g. newsletters) and their views/approval sought where necessary. Please add rows for additional stakeholders as necessary.

Stakeholder	Interest	Influence	Justification	Outcome	Informed
Participants/ Farmers	High	High	Project participants have signed farmer agreements.	Manage closely	Y
Local communities	High	High	Local communities have been informed and engaged in a participatory manner by lead farmers during meetings with the community and coffee and cocoa growers on agroforestry issues, running information campaigns through community radio, and meetings with the community to do field work, and videos and news on social networks (Whatsapp, Linkedln, Facebook, Youtube).	Manage closely	Y
National Government	Low	High	Solidaridad Colombia signed the *Coffee, Forest & Climate Agreement*;	Keep satisfied	Y

			(see Annex 5 Letter to national government) which includes the Colombian government. This agreement was signed in Bogota, Colombia, on August 10th of 2021. During the signing the aim of the project (CRU generation) was discussed.		
Local government	Low	Low	Solidaridad works closely with regional environmental organizations such as CARDER, to promote adequate natural resources management.	Monitor	Y
Financial partners / Donors	High	High	Project implementation costs at farm level were covered through grant funding. Solidaridad has grants secured with PLG, Dutch MFA for the period 2022-2025	Manage closely	Y
NGOs	High	Low	Farmer associations	Keep informed	Y
Technical/ agronomical partners	High	High	Assistance from local agronomists has been obtained in the development of the agroforesty systems for farms in this project	Manage closely	Y
Coffee traders	High	High	Solidaridad Colombia signed the *Coffee, Forest & Climate Agreement*; which includes exporters, producers, and civil society.	Manage closely	Y
Coffee roasters	Low	High	Create demand for coffee and are informed with videos and news on social networks (Whatsapp,	Keep satisfied	Y

			LinkedIn, Facebook, Youtube).		
Cocoa traders	High	Medium	Safeguard sustainable production and supply as part of sourcing policies and net-zero commitments of (inter-)national clients.	Keep satisfied	Y

Part K: Reversal Risk Assessment

Project phase	Drivers behind reversal risk	Risk level	Justification
Project adoption / start	Limited education or inadequate understanding of agroforestry	Low	Solidaridad ensures that technical assistance (training, planting resources, agronomist advice, demo farmers, and farm visit) is effective so that producers can increase or maintain their productivity as a result of implementing agroforestry practices. This includes the ongoing assistance from local agronomists. Solidaridad develops digital solutions that provide insight on producers' gaps and progress, and provide predominantly online and in person training for trainers and producers. All participants in the project area have a mobile and access to internet is free in their main village. If using online training the farmer can simply download all material on their phone in town and access it offline at home later. Solidaridad also arranges tours with farmers to other agroforestry locations to see the benefits to have shade trees on the farm. For those who are illiterate, Solidaridad also perform training during technical farm visits so they do not miss out on this.
	Marginal community support or low community involvement	Low	Solidaridad explores the challenges and opportunities the farmers and community face while implementing agroforestry practices. They do this through technical visits to the farms and dialogues with the coffee and cocoa growers, collaborating with community-based organizations on sustainability issues, reviewing case studies on the coffee and cocoa economy and the context of coffee/cocoa cultivation, and having field technicians based in the municipalities. Solidaridad promotes the ACORN agroforestry initiative and its positive social and economic impacts in the community by educating the community and coffee and cocoa growers on agroforestry issues, running information campaigns through community radio, technical visits to the farm for follow-up monitoring, and meetings with the community to do field work, and videos and news on social networks (Whatsapp, Linkedln, Facebook, Youtube). Solidaridad also undertake activities with the farmers such as planting fruit trees, promoting work within and with the community, and conducting trainings in environmental education to protect forests and natural resources.

	Inadequate operational capacity (limited experience, no local presence)	Low	Solidaridad has 10 years of operations in Colombia in the coffee and cocoa sector, developing locally developed solutions for agroforestry, climate change projects and carbon reductions. With its programmes Solidaridad have been present in the key coffee (since 2014) and cocoa production areas (since 2019) of Colombia for considerable time. It has a tailored approach to include young people, women, families, other organisations, cooperatives. Solidaridad engages, trains and strengthens groups of lead farmers to reach and train gradually greater number of producers. Solidaridad is in constant collaboration with the local communities and farmers within the project area to explore the challenges and opportunities they face while implementing agroforestry practices. They do this through technical visits to the farms, dialogues with the coffee growers and their families, and meetings with the community. Solidaridad expects a mortality rate for trees planted of 5-10%. As the goal for farmers (outline in AF design) is to plant a maximum of 50 trees per hectare, a loss of 5% is roughly 2 trees, which is not so concerning for farmers of the LP. With larger losses of 10%, farmers are offered new saplings from the LP to plant and replace trees that were not successful. Solidaridad explained that farmers have lost a few trees but discovered later the next year that some trees reproduce naturally by themselves too which can make up for the mortality.
	Insufficient (local) nurseries	Low	Solidaridad supports and makes alliances with community nurseries in the municipalities, as well as relationships with locally-based entities such as the regional environmental authorities in the ecoregions, to support agroforestry projects. There are also several commercial nurseries in the project area with whom Solidaridad works to produce and deliver the required seedlings. Solidaridad's field technicians deliver seedlings and seeds to plant on the farms and in community nurseries.
	Animal or human interference	Low	Solidaridad works closely with regional environmental authorities to promote adequate natural resources management. To reduce potential animal interferences, they implement community-based activities, to ensure the conservation of watersheds, habitat corridors and forest protection. These activities were carried out with the community working groups and with the lead promoters. Under

			the same strategy of planting trees in the coffee and cocoa plantations but in a lower percentage-proportion, participating producers organize special events to reforest basins, corridors and forests. For example, within the green points system, this type of activities is promoted.
Project progress	Negative project cash flow	Low	Basic financial planning has been undertaken (cash-flow analysis, financial operation projections). Based on expected volume more detailed planning will take place. Project implementation costs at farm level were covered through grant funding and the technical assistance for onboarding was shared between Solidaridad and Rabobank. For 2022-2025, Solidaridad has grants secured with PLG and Dutch MFA for the period 2022-2024. In 2023 Solidaridad will build the vehicle to separate new projects (additional users) and "maintenance" projects (existing users for the durability of the CRUs). Solidaridad has limited reserves and is able to run a core team for maintenance activities (existing users for the durability of the CRUs) on buffers in the unlikely case of the fallout of grant funding beyond 2024. Solidaridad has reserves in the case of unforeseen events, but these are limited. Additionally, it is part of a network, in which a healthy financial buffer is present. In the case of minor size natural disasters, they can operate on the buffer, for larger events with severe impact, they will need additional funding. Luckily, the likelihood of significant events such as droughts and or wildfires is low and these have not occurred in the last 20 years[6].
	Poor agroforestry schemes	Low	Assistance from local agronomists has been obtained in the development of the agroforestry design for this project. Farmers choose for themselves the trees they would like to plant on their farm, based on the previous advice given by local agronomists. Training in shade management and monitoring in the field is relevant and is currently part of the technical assistance provided by Solidaridad. Trainings are conducted on agroforestry through a specific agroforestry curriculum led by local agronomists.
	Change of land	Low	Change of land ownership during the project will be monitored through an information update from the network of local community leaders living in the

[6] *Colombia - Vulnerability | Climate Change Knowledge Portal*

	ownership and coverage		villages, and with technical support in field from Solidaridad.
	Political instability (e.g. war, economic crisis)	Low	Solidaridad has access to security assessments at regional and national level. They have frequent meetings with sector stakeholders, Ministries and financial institutions.
	Natural risks: - Fires - Pests & disease - Extreme weathers - Other events	Medium	Solidaridad has carried out some case studies on climate change risks, on harvesting or soil loss (see Annex 10 Case studies on risk of climate change). The organization also worked with the communities on risk management trainings to become more climate resilient through prevention and good practices on- and off-farm. In August 2021 Solidaridad Colombia signed the Coffee, Forest and Climate agreement in Colombia (*https://acuerdocafebosqueyclima.com*). This strengthens the connections with the most relevant actors in the coffee chain in Colombia to promote mitigation and adaptation initiatives to climate change. Also, Solidaridad does not only monitor the development of natural disasters and hazards but also analyses the likelihood of these based on historical events. In this regard, based on the hazard trends for the last 50 years, the risk for droughts and fires is low, given that the latest events took place more than 20 years ago.[7]
Project maturity	Logging risk	Low	Farmers are educated on how shade trees are very important for coffee and cocoa growers because of their benefits in coffee and cocoa cultivation, such as: providing organic matter to the soil and mitigating the risk of erosion, improving the quality of the coffee and cocoa beans, enhancing the microclimate of the farm and improving the landscape. Due to the slope conditions of the farms (ranging between 20% to 50%) and the difficult access in the project area, it is not profitable to cut the trees to sell for wood. The costs and time involved in obtaining harvesting permits often outweigh the financial benefits communities receive from timber sales. As a result, intermediaries exploit this gap by taking over the permitting process, but they offer communities only marginal prices for their timber (Agudelo, et al., 2022)[8]. For farmers, timber harvesting poses additional risks, such as

[7] *Colombia - Vulnerability | Climate Change Knowledge Portal*

[8] *Costos de aprovechamiento del manejo forestal comunitario en Colombia: impactos, lecciones aprendidas y desafíos.*

			potential damage to coffee and cocoa trees caused by falling timber—an issue that is especially problematic on steep terrain, where controlling tree falls is more difficult and the risk of productivity loss is higher. Due to expected long-term increases in farm productivity, logging outside of the project area due to project interventions will be limited. Solidaridad have not yet seen cases of deforestation or the burning of trees in the project area. The coffee and cocoa area has remained stable in recent years in the regions. Some farmers have cut down a single tree, but they have replanted it after to recover the population and maintain the balance.
	Waning or short-lived local partner commitment	Low	Solidaridad enables public-private dialogue to reach commitments and implement policies that create conditions and incentives for producers to adopt sustainable practices. They also regularly convene stakeholders and design sustainability policies to enhance long term implementation and commitment to the project. Agreements are also signed as part of this project with Acorn, the local partner and the farmer, demonstrating their commitment to the longevity of this project. The ACORN supply team will keep communication open with the local partner and evaluate their commitment to the project.

1. List any reversal risks in Part K that are high-risk, provide appropriate mitigation actions, and describe how often these risks will be monitored.

Risks	Mitigation action	Monitoring Frequency	Responsible Party
No high risks	N/A	N/A	N/A

Part L: Technical Specifications

1. Applicability Conditions

In the table below, explain how this project meets the applicability conditions of the Acorn Methodology:

	Applicability Condition	Met	Reasoning
A	The Project Interventions meet the Agroforestry definition (see Section 3 of Acorn methodology v1.0) and any trees planted are Native or Naturalized species	Yes	Confirmed by local partner and explained in carbon baseline
B	The Project Area must not have been cleared of native vegetation within 5 years of the start of the Project Intervention.	Yes	Initially, a verbal check was performed with the local partner who confirmed this and t-5 checks from remote sensing measurements confirmed it as well
C	Individual plots within the Project Area are between 0.1 and 10 ha	Yes	Confirmed through polygon checks
D	All land within the Project Area is either cropland or degraded land and not on wetlands under the Baseline Scenario	Yes	Initial verbal explanation in carbon baseline by local partner and land cover check performed confirmed
E	The project interventions must not include activities that increase the total number, weight or number of grazing days for any livestock type, relative to the baseline scenario.	Yes	Explained to participants and to be confirmed by sample-based agricultural biodiversity check over the coming years
F	The project intervention must not include the planned harvesting of planted trees during or after the crediting period.	Yes	Covered in local partner contract
G	Heavy machinery must not be used for site preparation or management.	Yes	Not applicable for these smallholder farmers and covered in the local partner contract
H	The project intervention must not increase the use of synthetic (nitrogen-containing) fertilizers relative to the baseline scenario.	Yes	Covered in local partner contract
I	Soil disturbance attributable to the project intervention must not occur on more than 10% of a plot that is under any of the following types of land: - Land containing organic soils;	Yes	The SoilGrid confirmed that project is not on high organic soils, with the following results thickness detail >200cm, SOC content less than 20%, but 4,20%, limited clay 35%.

	- Land which, in the baseline, is subjected to land-use and management practices and receives inputs listed in Annex 4 of Acorn Methodology		

2. Carbon Sequestered

Amount of carbon sequestered	Amount of CRUs generated	Crediting Period
5605 Tonnes	5605	2020-2022
15822 Tonnes	15822	2022-2023

3. Adjustment Factors

This table below gives an overview of the adjustment factors applied for this specific project (see Annex 7 Input data for adjustment factor calculations).

AdjF	Factor (%)	Reasoning
Leakage	0%	See question 3.1 below
Uncertainty Coffee	27%	See Validation Data Packages (VDPs)
Uncertainty Cacao	42%	See VDPs
Pre-project	25%(2024) – Coffee 10% (2024)- Cacao	See VDPs

Leakage assessment

Estimated reduction in project productivity (%)	Cash crop(s) contributing most to project productivity	Proportion of project land used to grow cash crop (%)	Type of land production will be shifted to
<5%	Coffee	90%	Categorized as '0'
<5%	Cocoa	90%	Categorized as '0'

I.) Describe the potential leakage situation of the project over its lifetime.

Solidaridad assumes that over the project lifespan (meaning from implementation of agroforestry until trees are fully grown) – the productivity level will increase with up to 20%. In the initial (1-3) years the productivity may be slightly lower (losses of less than 5%) due to the effect of the new agroforestry systems established. From the third year onwards, productivity and the quality of the

coffee produced should increase. However, it must be noted that in general, productivity levels change per year and are strongly impacted by climate (rainfall) and therefore it will not be 100% clear what would be the impact of a transition to agroforestry from one year to another. It is possible to trace the increase in productivity to the implementation of agroforestry systems. To define the effect of climate variations, nearby farms (with similar climatic effects on them) with different production systems implemented can be compared.

Although productivity losses of 5% may be experienced in the first year, farmers are educated on how shade trees are very important for coffee growers because of their benefits in coffee cultivation, providing organic matter to the soil, improving its fertility, improving coffee quality, improving the microclimate of the farm and improving the landscape. This education, in combination with the promise of carbon credits and the harsh slope conditions of the farms (reduced tree cutting profitability), ensures farmers activities will not be displaced to outside of the project area in these initial years. Following the initial years, the increased productivity Solidaridad expect over the life of the project will result in a reduction in deforestation for fuelwood production and greater farmer awareness for natural resource conservation. The proposal is that coffee farmers do not cut down the forests to use fuel wood that is produced in the shade trees on the farms. Farmers are educated on how shade trees are very important for coffee growers because of their benefits in coffee cultivation, providing organic matter to the soil, improving its fertility, improving coffee quality, improving the microclimate of the farm and improving the landscape.

Productivity in the cocoa agroforestry systems must consider that cocoa plantations have decreased their productivity due to the loss of cocoa plants and timber trees, due to climate change and due to other conditions such as the lack of technical assistance. Previous factors have had an impact on the profitability of the productive system, increasing the presence of pests and diseases that considerably reduce crop yields. For this reason it should be considered that in the first two years of monitoring cocoa producers, a decrease in the incidence and severity of pests and diseases such as Monilia and Phipthoptora is observed. The adoption of management practices for the development of sustainable production have a learning curve that is considered in the Solidaridad support model for cocoa producers. It is expected that from the third year onwards productivity and sustainability will increase, as a result of the maturity of trees and improved ecosystem services, including biodiversity benefits associated with the natural pollination of cocoa as well as temperature regulation within the plantations and optimized management of cocoa farmers.

II.) Describe the land between farms and a maximum of 5km outside of the project area (i.e. crop land, degraded land, forest).

Land cover between the coffee and cocoa agroforestry plots is generally cultivated land (for example sugarcane or fruit crops). A portion of the farmers is located close to a natural forest, which is the reason why Solidaridad wanted to work with the farmers. The agroforestry systems should create a buffer zone to avoid further deforestation.

The land cover assessment showed that the majority of the surrounding land consists of 'tree cover below 60% threshold, cropland and some grassland (see table below).

Shrubland	Grassland	Cropland	Built-up	Bare/Sparse vegetation	Permanent water bodies	Tree cover <60%	Tree cover >60%
0.1144	38.0095	1.330	0.8672	0.0685	1.06723	27.6757	30.8661

III.) List farmer activities (performed before project implementation) that could be displaced from project interventions and lead to an increase in emissions outside of the project area, if any.

Displaced farmer activity	Area activity displaced to
Considered unlikely to take place	Therefore, it is not applicable

4. Root-Shoot

Ratio	Reasoning
0.32	Applied the default value for the calculations as alternative literature is very limited to no existing and IPCC values could not yet be sufficiently matched

Annex 1: Map of project location & ecoregion

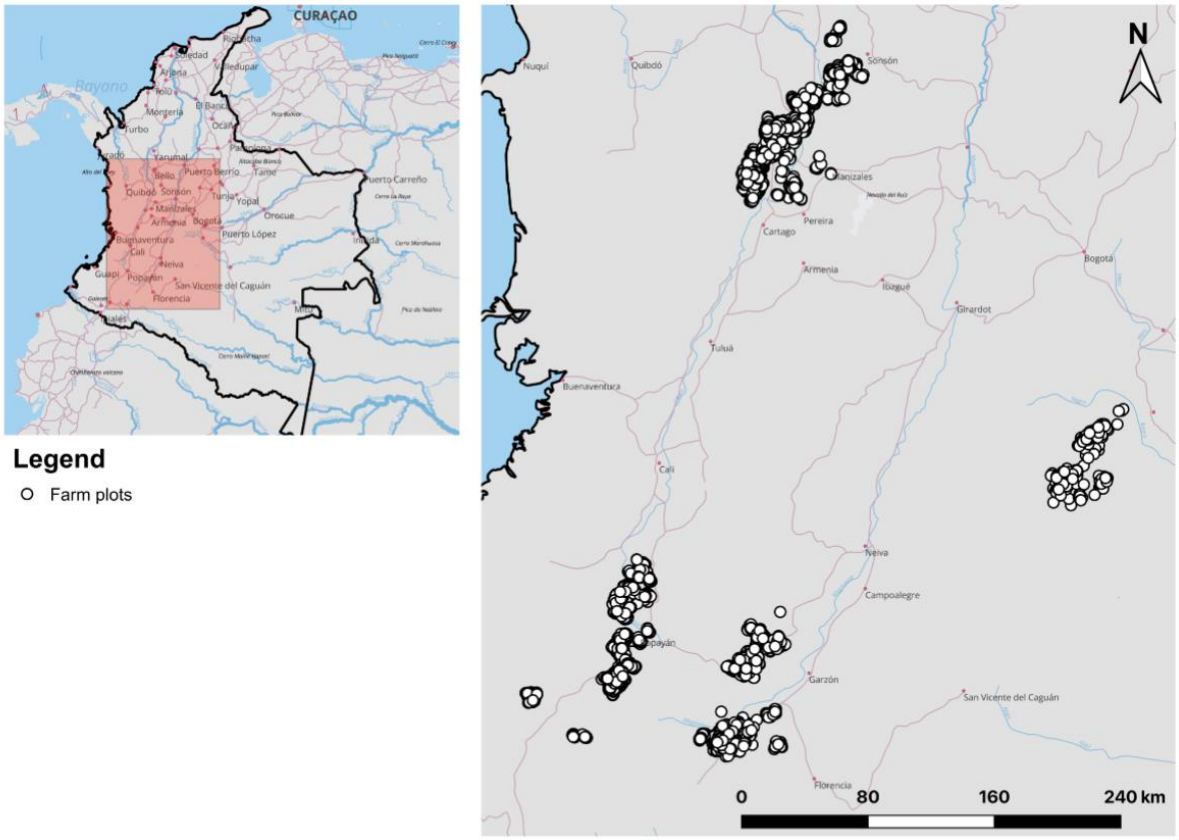


Image 1: Map of project location and participating plots

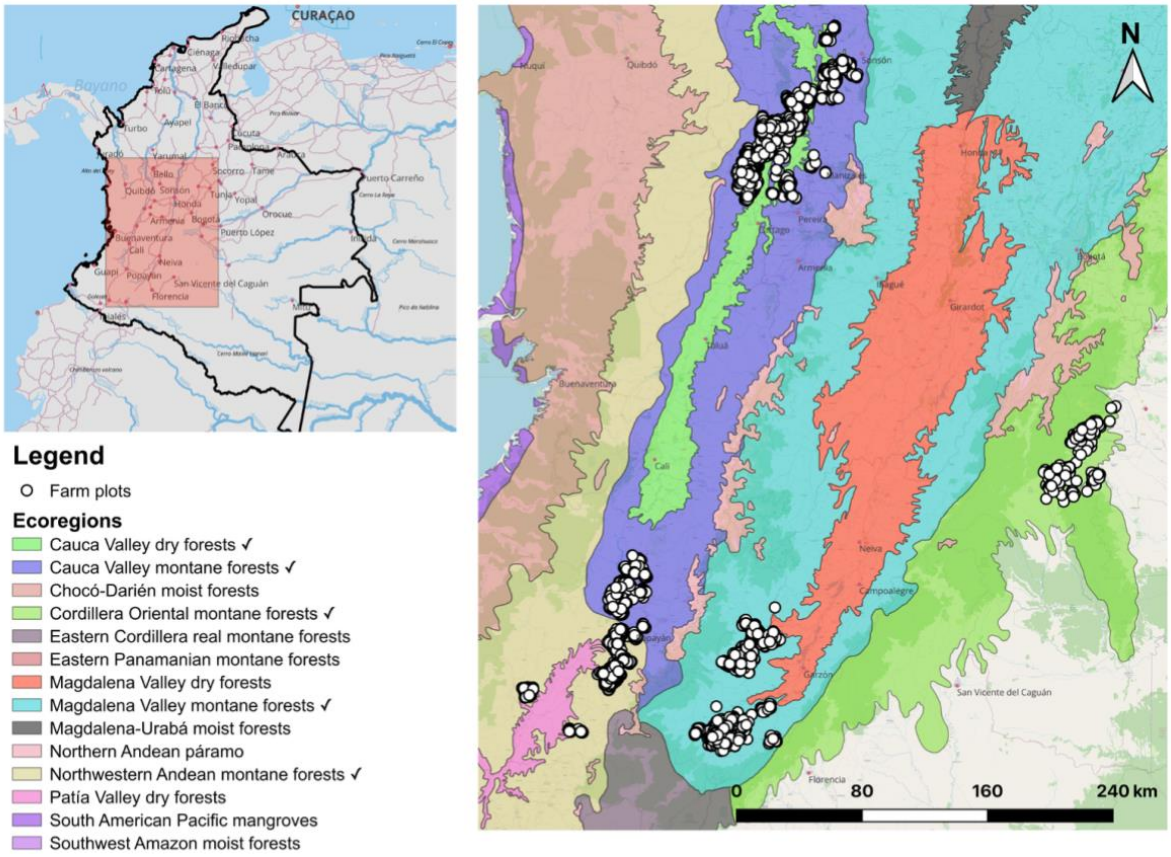


Image 2: Maps of ecoregions and participating plots

Annex 2: Land tenure documentation (sample-based)

Provided. Concealed for data protection purposes

Annex 3: Organisation structure

Provided. Concealed for data protection purposes

Annex 4: Local partner and farmer business case

Provided. Concealed for data protection purposes

Annex 5: Letter to national government

Provided. Concealed for data protection purposes

Annex 6: Project council reports

Provided. Concealed for data protection purposes

Annex 7: Input data for adjustment factor calculations

Provided. Concealed for data protection purposes

Annex 8: Farmer contract

Provided. Concealed for data protection purposes

Annex 9: Local partner contract

Provided. Concealed for data protection purposes

Annex 10: Case studies on risk of climate change

Provided. Concealed for data protection purposes

Annex 11: Solidaridad certificate of registration

Provided. Concealed for data protection purposes

Annex 12: National laws description

Separately provided.