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.

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Solidaridad Acorn Design Document

Uganda | *Arua, Gulu, Kasese, Masaka, Mbale, Mubende, and Nebbi districts*

Date of submission: July 2023

Part A: Project Summary

Question	General Information	Answer
1	**Project title**	Adoption of Agroforestry among smallholder coffee farmers under the PFC (practice for chance) coffee program.
2	**Project location - country, region & district** (attach map if possible)	Uganda: Arua, Gulu, Kasese, Masaka, Mbale, Mubende, and Nebbi districts (see Annex 1).
3	**Ecoregion(s)**	East African montane forests, East Sudanian savanna, Victoria Basin forest-savanna mosaic, Albert Rift montane forests, Northern Congolian forest-savanna mosaic, and Rwenzori-Virunga montane moorlands.
4	**Local partner representative** (name & position)	*Provided, 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)	*Provided, concealed for data protection purposes*
7	**Main cash crop(s)**	Coffee
8	**Project target group**	Ugandan smallholder independent coffee 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**	41.014 farmers
10	**Number of potential additional participants**	Approx. 15.000 farmers (to reach a total of 56,000 farmers)
11	**Estimated total size of project area (ha)**	23.264 hectares.
12	**Describe the project's aims and objectives**	This project aims to increase the quality and productivity of farmer output, adapt the

	(e.g. the problems this project will address)	farmland to build resilience to climate change, avoid deforestation, and reduce and sequester carbon emissions.
13	**Describe how smallholder farmers/communities were involved during the design of the agroforestry project.** (Provide evidence of participation, e.g. workshops, meetings)	Lead/promoter farmers, who have represented local farmers and communities for up to 6 years (before the project began) in four different districts in the project area, were actively engaged during design of the projects (i.e. farmer training and input for agroforestry system to be implemented). See Annex 7 for evidence of engagement.
14	**Provide a general description of current socioeconomic conditions in the project area** (income, poverty level etc.)	Ugandan smallholder farmer participants significantly lack the income, resources and capacity to develop agroforestry projects by themselves or as a community. Poverty levels among farmers ranges from 30 to 40%, with over 50% of family households having an income of <1 USD a day.
15	**Describe how the agroforestry intervention proposed is expected to impact the following;**	a. Food security/nutritional intake: Project intervention will result in increases in food security due to the fruit trees planted that provide an accessible source of food for farmers. The expected increases in productivity and income diversification from project intervention will increase farmer income and their ability to afford a variety of nutritious food.
		b. Farmer financial state: Project intervention will help build farmer and crop resilience against the damaging effects of climate change, such as shade trees protecting 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 and act as a buffer for farmers in times of financial hardship.
		c. Gender equality: Gender equality should increase due to the strong focus Solidaridad place on ensuring women are part of the agroforestry and climate smart trainings and receipts of tree seedlings (see Part H). Solidaridad also promote women involvement in the planting of trees on farm, management of these agroforestry systems.
		d. Farmer access to resources: Solidaridad provide farmers with agroforestry advice, ongoing capacity development and sensitization, planting materials, and the

		necessary infrastructure for the implementation of the agroforestry practices. The carbon credits that farmers will receive will allow them to afford the necessary materials needed for the long-term maintenance of their agroforestry system.
		e. <u>Biodiversity on farms:</u> Will increase due to the planting of diverse shade and fruit trees among coffee 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 surrounding the project (not project area)**	Deforestation is common and a high risk in the region surrounding the project (see Part D – Carbon Baseline. However, it is low risk in the project area due to the measures Solidaridad take (offering capacity development on the benefits of agroforestry, providing tree seedling germplasm, and working to provide energy saving cookstoves).
17	**Describe any known local land degradation/ deforestation processes or trends, and drivers of these** (e.g. population increase, fire, conversion for agriculture)	Deforestation is common in the region of the project due to land expansion for agriculture and for wood products (timber, poles, fuel wood, etc).
18	**Please select the following type of land use that best describes the project area**	Existing agroforestry.
	Land Tenure	
19	**Estimated average plot size per farmer (ha)**	0.62 hectares.
20	**How is land tenure organised among participants** (formal titling, informal titling or land mapping)	Farmers demonstrate Informal Titling – Purchase/customary land agreement (common in farming settings) (see Annex 3)
	The Agroforestry System	
21	**Is this project new or existing agroforestry or a combination**	Existing agroforestry but a combination at scale.
22	**Type of trees that have/will be planted under agroforestry scheme** (shade, fruit-bearing, medicinal)	The planting of shade, fruit and medicinal trees is prioritised in this system.
23	**Describe how the agroforestry system is expected to impact the land** (e.g. more shade, less pests,	The impact from project interventions will be overwhelmingly positive for biodiversity due to the increase of tree species (especially those that flower and produce fruits) and the positive

	less inputs – fertilisers, presence of pollinators)	impacts that has on habitat suitability for native flora, fauna and pollinator species. The only potential negative side effect may be the overcrowding of shade trees, leading to increases in pest outbreaks. To mitigate this Solidaridad have integrated mandatory pest and management practices in farmer training.
	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	**In what year and season will/were the first trees planted?**	The first trees were planted by the initial lead farmers in late 2017.
26	**Was the project established with the intent of receiving carbon finance for trees planted?**	Yes, Solidaridad had the intention of seeking carbon finance for farmers and themselves. Farmers may not have transitioned without the promise of a reward for their change in practices. Solidaridad have limited resources for this project and would not have been able to run such a project at scale long term relying on temporary grant funding alone. The 10% they will receive from CRUs and the help with data collection from Acorn allows them to commit to such a long-term project to help farmers in Uganda transition to agroforestry.
27	**Is this project mandatory under any national or local laws** (List relevant forestry regulations, national climate change commitments etc.)	No, see Annex 10.
28	**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?**	Ugandan smallholder farmer participants significantly lack the income, resources and capacity to develop agroforestry projects by themselves or as a community. Without project interventions, most farmers do not have sufficient finances to purchase tree seedlings themselves. Participating farmers are also technically challenged by a lack access to such planting materials and the necessary infrastructure for the implementation of the agroforestry practices and technology.
29	**What is the main driver encouraging farmers to transition to agroforestry?**	Additional/diversified income and protection for their crops from climate change. Farmers seeks a more stable source of income that protects them against high volatility in

		commodity prices, low productivity and crop loss from extreme climatic events.
30	**Was the promise of carbon credits the enabling factor for farmers to transition to agroforestry?**	The provision of tree seedlings and capacity enhancement has encouraged the adoption of agroforestry by farmers. However, the long-term financial benefit expected from carbon finance was the enabler for their transition to this sustainable farming system as farmers seek a tangible reward greater than shade for the change in their farming practises.
31	**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 and low productivity, high volatility in commodity prices, access to planting materials, lack of knowledge and awareness of agroforestry.
	High over business case	
32	**If existing agroforestry, how has this project been funded to date?** (financed by the local partner, the farmers, grants/funding, or a combination)	Solidaridad relied on temporary grant funding from PFC Coffee for early implementation of this agroforestry project. This funding was used to finance farmer trainings and supported in tree seedling provision and distribution during project start-up.
33	**Briefly describe the costs for the farmer in this project** (e.g. seedlings, fertilisers, labour)	1 farmer (1 ha) . Trees planted over 3 years (126 trees) • Seedlings = 31.50 euro for 126 trees • Tree planting = 11.25 euro for 126 trees • Training costs = 21 euro over 3 years * please note plots are much smaller than 1ha in the project area, often reaching as small as 0.1ha.*
34	**Briefly describe the costs for the local partner in this project** (e.g. seedlings, onboarding, data collection, training, farmer engagement, planting materials etc.)	For 1250 farmers: One off costs: 25,000 euro • Onboarding = 10euro per farmer for data collection Ongoing costs: 5,000 per year • Monitoring (project indicators, i.e. farmer income and payment) • Reporting (grievances etc.) Project council (2 x year)
35	**How will this project be financed and by whom during the design/implementation stage** (e.g. financed by the local partner, the farmers, grants/funding, or a combination)	Currently, Solidaridad receive mainstream funding from the Ministry of foreign affairs of the Dutch Government, however, only a minute amount of this is directed to this agroforestry project in Uganda.

Part B: Eligibility Checklists

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 in annex).	Solidaridad work closely community CBOs, farmer groups, local government structures and innovation platforms to foster on ground adoption of interventions. (see Annex 2 for organizational hierarchy).
	Organizational capacity	Provide a description of your "on the ground" capacity to undertake long-term community-led project(s) and implement agroforestry.	Solidaridad is an international civil society organization with over 50 years of experience in developing solutions to make communities more resilient — by supporting repressed communities through fostering more sustainable supply chains. They use the village savings and loan association scheme to increase financial household security. Solidaridad employ their community based approaches in providing tree seedling germplasm and agroforestry extension services to farmers. In order to ensure survival and performance of trees on farm, they use our tree preference assessment, tree seedling distribution tool and tree seedling performance assessment tool in which our field assistants and lead farmers are trained to use these tools.
	Sustainability	The local partner agrees with the Rabobank's sustainability policy.	Yes
	GDPR	The local partner's current data handling policies are compliant with GDPR regulations.	Yes
	Participant organization	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	Yes

	communities, and which is democratically controlled by the participants.	
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 project and for meeting the requirements of the Acorn Framework for the duration of the project.	Yes
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 payments (ii)	The project coordinator ensures that mobile payments to participants are either already possible or there are no foreseeable obstacles for this in the near future.	Yes
	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	Land is owned by individual farmers rather than community ownership. The most common ownership type is by inheritance and purchase. A farmer owns the sole decision on use and sale of land although if its inherited the decisions can be influenced by clan members.

	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.	Land is used mainly for agriculture where perineal and annual crops are grown seasonally
	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.	Fragile tropical ecosystem endowed with fertile loam soils harboring an array of species diversity from lower to high plant resources. Subsistence farming on small holder holdings is common while coffee stands as the most grown crop in the region integrated with beans, maize and bananas. Highland areas also grown Irish potatoes, onions and carrots. The most common species include, meosopsis eminii, cordia spp, Albizia spp, Ficus spp, Markamia lutea, Melia spp, etc.	

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, with the support of the local partner, 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	Yes

		(i.e. GPS polygons, phone numbers, other KYC data).	
	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.	Land is owned by individual farmers rather than community ownership. The most common ownership type is by inheritance and purchase. A farmer owns the sole decision on use and sale of land although if its inherited the decisions can be influenced by clan members.
	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.	Land is used mainly for agriculture where perennial and annual crops are grown seasonally
	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	Yes

	implemented less than 5 years ago.	
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.	Fragile tropical ecosystem endowed with fertile loam soils harbouring an array of species diversity from lower to high plant resources. Sustenance farming on small holder holdings is common while coffee stands as the most grown crop in the region integrated with beans, maize and bananas. Highland areas also grown Irish potatoes, onions and carrots. The most common species include, meosopsis eminii, cordia spp, Albizia spp, Ficus spp, Markamia lutea, Melia spp, etc.

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[1] below or equal to 0.8.	Yes, the HDI is below 0.8 (0.544)
	(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.	The project is not legally mandated in any of the following regulatory documents; the NDC of Uganda (2021), the National Forestry Policy 2001 (statement 6), the National Forestry and Tree Planting Act 2003, the National Adaptation Plan for the Agricultural Sector 2018, and the National Climate Change Policy 2015.
	(c) The project is located in a region with a mean annual precipitation of less than 600 mm^2.	No, the mean annual precipitation is above 600mm2 (1498mm2).
	(d) The project area is (predominantly) located in a country or region with a recent UNDP Human Development Indicator below 0.6.	Yes, the HDI is below 0.6 (0.544)
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 & Technical barriers	Ugandan smallholder farmer participants significantly lack the income, resources and capacity to develop agroforestry projects by themselves or as a community. Without project interventions, most farmers do not have sufficient finances to purchase tree seedlings themselves. A small minority of farmers in Uganda are able to afford these inputs, while majority will manage those that are retained and the naturally generated stamps. In addition to this financial barrier, participating farmers also technically challenged by a lack access to such planting materials and the necessary infrastructure for the implementation of the agroforestry practices and technology.	Due to project intervention, farmers are supplied with the once inaccessible planting materials in order to plant their first trees and transition to an agroforestry system. The carbon credits that farmers receive will ensure they are able to afford and access the materials (i.e. tree seedling germplasm) on their own and continue planting trees, while maintaining the first trees planted, throughout the first years of the project's implementation phase. The carbon finance received by Solidaridad will allow them to provide participants with ongoing capacity development and sensitization, support and enable them to support local institutional development and scaling of their agroforestry project (helping all farmers in their expansive

network with the transition to agroforestry).

Overall conclusion:
This assessment aims to prove that the agroforestry project, coordinated by Solidaridad in Uganda, 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 project led by Solidaridad was established in 2017. The collaboration between Acorn and Solidaridad began in 2021. From the start of their project, until the time they connected with Acorn, Solidaridad have had the intention to scale their 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. The first trees were planted by the initial lead farmers in late 2017. As part of Solidaridad's agroforestry design and due to their limited financial resources and funding, farmers plant trees in a slow and phased manner over multiple years depending on the finances and resources available. Solidaridad believe the phased approach is much more sustainable than planting all trees in one year as it allows for cross participatory learning among farmers and farmer groups. It also enables farmers to plan strategically in terms of labour costs, and time required. 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 2021. To ensure additionality in response to the first trees planted by these farmers, the adjustment factor for pre-project trees will be applied as per the Acorn methodology.

Farmer level
Ugandan smallholder farmer participants significantly lack the income, resources and capacity to develop agroforestry projects by themselves or as a community. Poverty levels among farmers ranges from 30 to 40%, with over 50% of family households having an income of <1 USD a day. Without project interventions, most farmers do not have sufficient finances to purchase tree seedlings themselves. A small minority of farmers in Uganda are able to afford these inputs. In addition to this financial barrier, participating farmers also technically challenged by a lack access to such planting materials and the necessary infrastructure for the implementation of the agroforestry practices and technology. Due to project intervention, farmers are supplied with the once inaccessible planting materials (tree seedlings/germplasm) in order to plant trees and continue their transition to an agroforestry system. The carbon credits that farmers receive will ensure they are able to afford the planting materials on their own and continue planting trees, throughout the first years of the Acorn project's implementation phase, while successfully maintaining the first trees planted. The carbon finance received by Solidaridad will allow them to provide participants with ongoing capacity development and sensitization, support and enable them to support local institutional development and scaling of their agroforestry project. The provision of tree seedlings and capacity enhancement has encouraged the adoption of agroforestry by farmers. However, the long-term financial benefit expected from carbon finance was the enabled them to commit to the transition to this sustainable farming system as farmers seek a reward greater than shade and fruit for the change in their farming practises. If farmers were not to receive carbon finance, their adoption of agroforestry practices would also be further restricted by land type, social cultural dynamics, gender roles, availability of inputs, and knowledge gaps on the benefits of agroforestry.

Solidaridad relied on temporary grant funding from PFC Coffee for early implementation of this agroforestry project. This funding was used to finance farmer trainings and supported in tree seedling provision and distribution during project start-up. Currently, Solidaridad receive mainstream funding from the Ministry of foreign affairs of the Dutch Government, however, only a minute amount of this is directed to this agroforestry project in Uganda. Without the support of carbon finance, they cannot sustainably continue to help their farmers overcome their technical and financial barriers, let alone all farmers in their expansive network who have the potential to transition to agroforestry with the expected scaling of this project. In addition to rewarding Solidaridad for their efforts in supporting farmers to transition, carbon credits reward farmers for undertaking these new sustainable practises, help them understand the long-term benefits of agroforestry, and turn them into leaders that act as role models to their community.

The additional income in the form of carbon credits ensures Ugandan farmers have the physical resources necessary to maintain their trees over time and a financial buffer that prevents them from cutting them down in times of high volatility in commodity prices, low productivity and high risk of crop loss from extreme climatic events. Without a diversified income, farmers would rarely have the financial stability needed to overcome the socio-economic challenges associated with poverty and climate change. In times of crisis or devastation, farmers would have no other option than to sell the wood from the trees they have planted. Many of the first trees planted by these smallholder farmers do not provide immediate tangible benefits, such as shade trees compared to fruit trees, and if they lack cultural significance, may be the first cut down in an emergency to make quick money to feed their families. Unfortunately, deforestation is common in the region of the project due to land expansion for agriculture and for wood products (timber, poles, fuel wood, etc). Research suggests that smallholder farmer deforestation behaviours in developing countries could stop if provided with carbon credits based on current carbon prices[1]. Carbon finance and the capacity development offered by Solidaridad on the benefits of agroforestry, incentivise farmers to keep their trees in the ground and scale up agroforestry practices, not regress to behaviours contributing to deforestation. The long-term sustainability of recently implemented agroforestry systems and the first additional trees planted are jeopardized if Ugandan farmers don't receive compensation for the carbon they sequestered.

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 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 long-term agroforestry design, provided capital 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. The carbon credits received by the first farmers will encourage sustainable behaviours and create better practises at scale. 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 farmers, who are 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 30,000. 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 these 30,000 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 the full 30,000. The project as a whole will not receive investment unless financers have proof of and faith in the carbon credit system as a payment for investment. Providing carbon finance initially to compensate Ugandan 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	Land tenure consists of: • Informal Titling – Purchase/customary land agreement (common in farming settings) The informal titling is that farmers own land by inheritance from parents/clan with no titles from government authorities. It also involves farmers that purchase land and owned by agreement between seller and buyer with no formal government titles. These agreements can be used by farmers when getting formal titles farm government land authorities. (see Annex 3 for a sample of land titles).
Describe potential land tenure issues and measures taken to mitigate these	Text	There are very limited land disputes/arguments in the project area because most land is family owned and divided among family members. In cases of disputes Solidaridad link directly with local council committees before carrying out agroforestry project to make sure land tenure is well sorted.
Description of current land use	Text	The land is used for existing agrisilvicultural agroforestry, involving the intercropping of coffee with bananas and growing maize as a secondary cash crop. Trees are planted among the coffee crops through scattered planting. The Upland zone of the landscape is characterized by intensive coffee and maize and livestock farming. Additional crops grown in the project area include sorghum, maize, beans and cowpeas. Of these additional crops, maize and beans are sold at markets and sorghum and cowpeas are seen as staple food for farmers. Coffee is grown on approximately 65% of the total productive land in the project area. Chemical pesticides (Dimethoate, Roket, Eminent, supa cyper, Cyper force) are used in times of pest infestation. Most farmers use inorganic fertilizers (i.e. manure). Roughly 50kg per acre of coffee of fertiliser is used. Without project interventions farmers would have not adopted agroforestry to a larger extent, although they would have used their past experiences from their ancestors to integrate native trees on farm or maintain and manage existing ones through FMNR. Without project interventions, the limited farmer knowledge on benefits and management of trees on their farm would have a negative impact on tree cover change. Without project interventions, there would be diversity reduction since ignorance of the species would result in less/no adoption of new species.

Description of current habitat species	Text	The project area has a range of agroforestry trees, woodland trees, fruit trees, native and some naturalised trees, and exotic trees. The most common tree species include *Cordia Africana*, *Markhamia lutea*, *Eucalyptus grandis*, *Ricinus communis*, *Ficus natalensis*, *Persea americana*, *Mangifera indica*, *Maesopsis eminii*, and *Albizia coriaria*. The habitat is a fragile tropical ecosystem endowed with fertile loam soils harbouring an array of species diversity from lower to high plant resources. Subsistence farming on small holder holdings is common while coffee stands as the most grown crop in the region integrated with beans, maize and bananas. Highland areas also grown Irish potatoes, onions and carrots. Wild animals are rarely spotted in the project area and when they are this consists of monkeys, squirrels, snakes and foxes.
Description of deforestation potential	Text	Solidaridad are not aware of any deforestation undertaken in the project area within the last 5 years. However, deforestation is common in the region outside of the project area due to land expansion for agriculture and for wood.
Description of trees species <2m and their distribution	Text	Cordia africana, Albizia coriaria, Ficus spp, and Spathodea c are common and scattered across all of the project area. Eucalyptus spp are found in woodlots and Calliandra. C are planted on the boundaries of the farms in the project area.
Number of existing trees >2m	Number	4411
Number of existing trees older than 5 years	Number	1691
Coverage percentage of existing trees older than 5 years	%	38.5%

1. Tree species list (>2m).

Species >2m (Latin name)	Number	Species >2m (Latin name)	Number
Acacia hockii	2	Maesopsis lutea	37
acacia polyacantha	4	Markhamia lutea	550
acacia abyssinica	8	Malus pumila*	1
Acacia Mearnsii	1	Malus sieversii*	3
acrocarpus fraxinifolius	3	Mangfera indica*	110
Albizia coriaria	9	Melia azedarach	1
Albizia granibactiata	1	Melia volkensii	4
Albizia olaria	2	milicia excelsa	32
Allophylus abyssinicus	1	moringa oleifera	3

Anona muricata*	12	Morus alba	9
artocarpus heterophyllus*	51	Nuxia congesta	1
Arundinaria alpina	1	olea capensis	3
azadirachta indica	1	olea welwischii	4
bauhinia variegata	6	Ozoroa insignis	5
Barsama abyssinica	27	pacula aquntica	1
Beaucarnea recurvata	1	Persea Americana*	260
bougainvillea spectabilis	2	phytolacca dodecandra*	2
Bridelia micrantha	12	pinus batuladio	48
Calliandra calothyrsus	136	Pinus caribaea	26
Carica papaya*	3	pinus patula	69
casuarina equisetifolia	8	podocarpus latifolius	4
cassia didymobotrya	1	Prunus africana	10
cyathium vulgaris	2	psidium guajava	54
Cestrum nocturnum	11	Rauvolfia caffra	16
Chrysophyllum albidum*	2	ricinus communis	358
citrus ballidus*	9	Rubus caecus	9
Citrus limon*	13	sapium ellipticum	17
Citrus sinensis*	30	solanum aculeastrum	1
combretum collinum	38	Sambucus africana	3
combretum molle	52	Saraca asoca	1
Cordia africana	600	schefflera arboricola	1
Cordia millenii	15	senna didymobotrya	1
croton macrostachyus	34	Senna spectabilis	64
croton megalocarpus	8	Sesbania punicea	1
Cupressus lusitanica	35	Sesbania sesban	60
cusiona arborea	1	Solanum betaceum*	4
cyphormanda betacae*	7	solanum datura	1
dracaena fragrans	24	Spathodea campanulata	28
datura suaveolens	3	stereospermum kunthianum	2
dodonaea angustifolia	3	strychnos spinose*	1
Dombeya kirkii	8	Syzygium cordatum	1
Dombeya mukole	2	syzygium guineense	4
Doviaris microcalyx	2	syzygium owariense	21
dracaena steudneri	2	Tamarindus indica	6
Ehretia cymosa	31	Tephrosia vogelii	9
Ekerbergia capensis	13	Terminalia brownii	1
Entada abyssinica	1	Terminalia mentalis	23
Eribotriya japonica	51	Thevetia peruviana	5
eucalyptus grandis	527	Tithonia	3
Ficus apiculata	2	trema orientalis	11
Ficus elastica	40	vangueria apiculata	31
ficus exasperata	1	vangueria madagascariensis*	7
Ficus mucuco	67	vernonia amygdalina	5
ficus natelensis	169	Vernonia auriculifera	42
Ficus ovata	40	vernonia conferta	28
Ficus sycomorus *	9	Vitex doniana	22
Ficus sur	41	ximenia Americana*	6
flacourtia indica	1	Unknown	2
Gliricidia sepium	42		

Grevelia robusta	99			
Hibiscus	14			
jacaranda mimosifolia	16			
Jatropha curcas	1			
juniperus procera	1			
khaya anthotheca	14			
leucaena diversifolia	2			
luxia congesea	1			
maesa lanceolata	1			
Maesopsis eminii*	38			

***Fruit trees**

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

Number of failures	Reason for failure
174	Existing trees were removed to make room for new agroforestry trees and clearing of forested land to convert for farming. These farmers are not eligible to generate CRUs.

3. Provide a description of the ecoregion.

East African montane forests

The East African montane forests covers 4 countries Uganda, Tanzania, Kenya, and South Sudan, and extend across a total of 65,500 square kilometres. The ecoregion occupies elevations above c. 1,500 m altitude, with the highest altitudes of some mountains separated into the East African montane moorlands ecoregion. The climate of these mountains is wetter than the surrounding lowlands, but has a pronounced rain shadow, with the eastern and southern faces being significantly wetter. The climate in this ecoregion is temperate and seasonal, with night temperatures falling below 10°C in the cold season and rising to above 30°C during the day in the warm season. At the higher elevations frosts are possible. Rainfall varies between 1,200 and <3,000 mm per annum, with a distinct wet (October–December and March–June) and dry (January–February and July–October) season. The biome of this ecoregions is classified as tropical and subtropical moist broadleaf forests.

The threatened black rhinoceros and African bush elephant—some of the most charismatic and endangered megafauna in Africa—live amongst these montane forests in the Rift Valley of East Africa, created by the cracking of the African plate system and the volcanoes typical of this ecoregion—including Mount Kilimanjaro, Mount Kenya, and Mount Elgon. The conservation status of this ecoregion is considered critical/endangered.

East Sudanian savanna

The East Sudanian savanna is the eastern half of the Sudanian savanna *belt which runs east and west across Africa. the eastern block lies in a belt stretching from northern Uganda along the Ethiopia– Sudan border region, bounded on the east by the western lowlands of Ethiopia, on the southeast by the Northern Acacia–Commiphora bushlands and thickets ecoregion, on the south by the Victoria Basin forest–savanna mosaic in Uganda, and on the southwest by the Northern Congolian forest-savanna mosaic.*

The East Sudanian Savanna is a hot, dry and wooded savanna, south of the Sahel. The ecoregion is flat, mainly lying between 200 m and 1,000 m in altitude. The climate is tropical and strongly seasonal. The annual rainfall is as high as 1,000 mm in the south, but declines to the north with only 600 mm found on the border with the Sahelian Acacia Savanna. Almost all rainfall occurs in a single rainy season from April to October, during which time large areas of southern Chad and northern parts of the Central African Republic become inundated and inaccessible. The biome is categorized as tropical and subtropical grasslands, savannas and shrublands.

Victoria Basin forest-savanna mosaic

The ecoregion covers an area of 165,800 km². It lies in the upper basin of the Nile River, between 800 and 1500 meters elevation. Lake Victoria is at the centre of this ecoregion. Lake Victoria is the largest freshwater lake in Africa and the second largest in the world in terms of surface area. It supports approximately 30 million people's livelihoods including irrigated agriculture and fishing. The basin supports a mixture of forest and savanna habitats, important assemblages of savanna mammals, such as the chimpanzees which are found in many of the forested areas of the western parts of the ecoregion. Centred on Lake Victoria, the ecoregion encompasses most of south-central Uganda, the eastern half of Rwanda and extends into Tanzania, Burundi, Democratic Republic of Congo, and Kenya.

The ecoregion's climate is tropical. Annual maximum mean temperatures range from 24º to 27º, and mean minimum temperatures range from 15 °C to 18 °C. Rainfall generally ranges from 1000 to 1400 mm annually. Most rain falls in the two rainy seasons, from March to May and from August to November. The Vitoria Basin forest – savanna mosaic is classified with a biome named Tropical and subtropical grasslands, savannas and shrublands. It conservation status is considered critical.

Albertine Rift montane forests

The Albertine Rift Montane Forests stretches across 15,150 hectares of land in tropical Africa (Democratic Republic of the Congo, Uganda, Burundi, Rwanda, and Tanzania). This ecoregion was formed from the movement of tectonic plates, includes many freshwater lakes and mountain ranges, and contains the highest levels of endemic fauna in Africa such as various bird species, frogs and the rare mountain gorilla. This ecoregion has a temperate climate due to the high mountains, with rainfall ranging between 1,200 and 2,200 mm per year.

The habitats of the ecoregion is mostly tropical moist broadleaf forest biome, with the higher altitude portions of the mountains separated into another ecoregion (see Rwenzori-Virunga Montane Moorlands below). Common vegetation includes Euphorbiaceae, Rubiaceae, and Meliaceae families. Depending on the mountains altitude and volcanoes present, vegetation changes from low elevation dense forests to montane forests of moss and ferns, to sections of giant bamboos at high peaks. Most land within this ecoregion is classified as a protected area, apart from rugged and inaccessible areas and farmland.

Northern Congolian forest-savanna mosaic

The Northern Congolian forest-savanna mosaic eco region located on 70,766 hectares if land in central Africa (Central African Republic, South Sudan, Cameroon, Democratic Republic of the Congo, Uganda, Nigeria) has experienced many climatic fluctuations that have expanded and contracted the rainforests and savanna, causing plant and animal extinctions. This ecoregion now experiences intensification of human activities and armed poachers that threaten to native wildlife further, particularly elephants and rhinos. The ecoregion is located within the tropical savanna climate. This

region only has one wet and one dry season, with an average rainfall of 1,200mm to 1,600mm a year. Temperatures range from 34°C in the rainy season to 13°C in the dry season. Forest, woodland, and secondary grassland are found throughout this ecoregion and are dependant on periods of water stress and fires in the dry season.

Common species that are found throughout this region include Berlina grandiflora, Cola laurifolia, Cynometra vogelii, Diospyros elliotii, Parinari congensis, and Pterocarpus santalinoides. Rainforested areas are home to species such as Afzelia africana, Aningeria altissima, Chrsophyllum perpulchrum, Cola gigantean, Morus mesozygia, and Khaya grandifolia, while wooded grasslands support the following species genera Andropogon, Hyparrhenia, and Loudetia. This ecoregion has a high diversity of fauna species including the red-flanked duiker, giant eland, bongo, and northern savanna giraffe, as well as lionsand elephants.

Rwenzori-Virunga montane moorlands

The Rwenzori-Virunga montane moorlands spans across 52 hectares and extends up to approx 5,100m at the summit of the Margherita (Africas third highest peak) and occupies the high elevation portions of the Rwenzori (Uganda) and Virunga Mountains along the borders of southwestern Uganda, the Democratic Republic of Congo, and Rwanda. Thi ecoregion has an extremely rugged landscape made up of basement rocks and often glaciers and snowfields. This region has an extreme climate because of its close proximity to the equator and high altitude. Often night temperatures dip below freezing and then rise above freezing during the day. However, the temperature fluctuations are not as intense because of the more frequent cloud cover. The areas in this ecoregion are often either World Heritage sites or biosphere reserves. Not man people live within this ecoregion as it falls within national parks, although population densities are increasing outside the parks.

The main vegetation formations are recognized: ericaceous woodland and wooded grassland with Philippia and Erica arborea, Dendrosenecio woodland and wooded grassland, tussock grassland, Helichrysum scrub, and swamp or mire vegetation. Hagenia-Hypericum woodland occurs on the more humid slopes in the south and west of Volcanoes Ntaional Park between 2,600 and 3,600 m elevation. This ecoregion has high rates of endemism (especially bird species), with the evolution of species () due to glacial cycles that compressed and expanded these montane populations. Fourteen plant species are strictly endemic to the Rwenzoris and five to the Virungas in the Afromontane and altimontane zones. Larger mammals in this ecoregion are often visitors and regularly move between lowland or montane forests including elephant, buffalo, leopard, African golden cat, and side-striped jackal.

Part E: Project Baseline Assessment

Number of participants surveyed		Total number of project participants	Percentage of total participants included in baseline		
100		8623	1.16%		
Area	Indicator	Metric	Source	SDG	Result
Local livelihood	**Farmer income from carbon finance**	Revenue from CRU sales	Survey (information collected on	1, 2, 8	To be determined after

			the Acorn platform)		farmer payment
	Nutritional variety	Number of food groups in the diet (see Appendix 7.9)	Household Dietary Diversity Score (HDDS) index survey[3]	1, 2	Farmer consume on average 4 food groups.
	Women's empowerment	Score and weights of empowerment indicators	Survey (e.g. women employed by local partner or women in project councils)	5	See question 3 – 10% of farmers are women.
Environmental improvement	**Agricultural biodiversity**	Crop/animal/pollinators count	Gini-Simpson Index survey[4]	2, 15	54.66 - Average

*Metrics and sources provided are suggestions only; projects are allowed to select other, more suitable metrics.

1. Famer income from carbon finance
   I.)   Fill in the table below based on the carbon credits received by farmers
Table be completed after first farmer payment 3 years after baseline.

Farmer	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.

Common food crops grown by farmers in the Mt Elgon region are cassava, bananas, potatoes, beans, and maize. These are grown seasonally and in most cases bananas are integrated with coffee. Farmers also sometimes use secondary tree branches for firewood to cook the available food. They grow crops on subsistence basis and in most cases consume all farm produce at household level and thus less income is generated from sale of food crops harvested. Of the 100 farmers surveyed, more than 50% of farmers believe they do not have enough food, lack variety and have to skip meals, 35% feel they have enough food but lack variety as most only eat what they grow, 15% feel they have an adequate and plentiful diet. On average a farmer consumes approximately 4 food groups with a diet consisting of porridge, greens, cooking oil and milk. Less than a third of the farmers surveyed consume fruit and if they did it usually is only one type. The fruit trees planted in this project will offer farmers an

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[3] *Swindale & Bilinsky, 2006*
[4] *Izsák & Papp, 2000*

additional on-farm produced source of nutrition they are significantly lacking to increase the nutritional value and variety of the food they consume. The extra streams of revenue from generated CRUs and increased income from changes in farm productivity, will help farmers and their families in the Mount Elgon region afford to purchase a wider variety of food that is not grown on their farm, such as sources of protein and spices etc.

II.) HDDS Index Survey Results combined with agricultural productivity.

Food group type	Amount of farmers consuming each food group (%)	Description of foods consumed
Cereals	92%	Posho, Chapati, and porage, millet, mandazi, rice,
Root and tubers	20%	Yams, cassava, irish potatoes
Vegetables	82%	Greens, amaranthus, cabbage, black night shade, Sukuma wiki,
Fruits	34%	Watermelons, passion fruit, guava, orange, pineapple, mango, lemon
Meat, poultry, offal	0%	n/a
Eggs	16%	eggs
Fish and seafood	33%	Silver fish
Pulses, legumes, nuts and seeds	0%	n/a
Milk and milk products	84%	Milk and sour milk
Oils and fats	94%	Cooking oil
Sweets	1%	sweets
Spices, condiments and beverages	0%	n/a
Average number of food groups consumed:		4 food groups

3. Women's Empowerment

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

In the project area it is not culturally accepted that women are in the lead of their household. The male is always in charge of the household, even though the women will do most of the work in terms of the maintenance on the farm. The men will control all decisions made in the end (i.e. where the money that they receive from carbon finance will go). These barriers that women face were identified during the needs assessment that Solidaridad performed (see Part H - Question 4). In this project, Solidaridad focus 30-40% of the target group on women to be a part of the agroforestry and climate smart trainings and receipts of tree seedlings so they have the capacity and a key role in the transition to agroforestry and are not left in the background. Solidaridad also promote women involvement in the planting of trees on farm, and management of these agroforestry systems through sensitization and awareness training for the men of the household. Solidaridad are interested in collaborating with Acorn to determine a manner in which women have an active say in the decision of which trees are planted on the farm and where the CRUs are spent etc.

II.) Fill in the table below based on women involvement in the project.

Number of women	Number of women	Number of women working	Areas where women are employed in the project (nurseries, agronomists, project coordinators etc.)

farmers/ participants	participating in project council	for Solidaridad Uganda	
36/368 (10%)	5/13 (38%)	10/20 (50%)	Solidaridad's tree seedling supplier employs women in nursery work such as; potting, pricking, seed bed preparation, root pruning and watering. Solidaridad use mostly female enumerators for collecting onboarding data and baseline surveys. Female staff are involved in all project trainings. Solidaridad also have a fully-fledged gender thematic lead and gender officer (both ladies) involved in the planning and execution of activities.

4. Agricultural Biodiversity

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

Of the 100 farmers surveyed, 60 described the state of biodiversity on their farm as moderate and 40% as low. Based on the Gini-Simpson Index below, the state of biodiversity in the project area is classified as 54.66 (acceptable). This Gini-Simpson result is a result of farmers not growing on one species as a monoculture but instead intercropping coffee with bananas and growing maize as a secondary cash crop, the large amount of dairy cows in the project area, and the moderate spread of natural vegetation in the productive area of the majority of farms. The impact from project interventions will be positive for biodiversity due to the increase of tree species and the positive impacts that has on habitat suitability for native flora and fauna species. The only potential negative side effect may be the increase shade resulting from trees planted, leading to increases in pest outbreaks. To mitigate this Solidaridad have integrated pest and management practices in farmer training that consider methods for prevention, identification and organic treatment.

II.) How many farmers perform beekeeping?

11/100 farmers perform raised beekeeping

III.) Gini-Simpson Index Results.

Crops	Area	pi	p2	Livestock	number	equivalent	pi	p2
Maize	57.5	.2424	.0587	cows	261	261	0.8664	.7506
banana	76.9	.3241	.1050	chickens	870	26.1	0.0866	.0074
coffee	83.8	.3532	.1248	pigs	47	14.1	0.0468	.0021
matooke	1.6	.0067	.0000	rabbits	1	0.020	0.0000	.0000
Irish potatoes	8.1	.0341	.0011	**Total**		**301.22**		**0.7601 (76%)**
beans	8.5	.0358	.0012					
cabbage	0.81	.0034	.0000					
Total	**237,21**		**.2908 (29%)**					
Average of crop/livestock indices				**52.5**				
Natural vegetation, trees and pollinators								
				Value				
Productive area with natural vegetation				Medium, 0.5				
Pollinator Presence				Significant, 0.66				

Beekeeping	Raised, 1
Total	2.16
Agricultural Biodiversity Score	**54.66**

IV.) List pollinator species in the project area.

Present in project area	Pollinator type
Regularly	Bees
Moderately	Beetles, Butterflies, Mosquitos
Sometimes	Moths, Bats, Ants, Flies, Sunbirds
Rarely	Monkeys

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

Species (*latin name*)	Prevalence (*Regularly/Sometimes/Rarely*)
monkeys	Rarely
snakes	Rarely
squirrels	Rarely
fox	Rarely

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 (If negative influence)
No valuable species have ever been identified by farmers of the local partner in the project area.	N/A	N/A	N/A

VII.) Describe the project's plan for monitoring of species with a high local environmental and social conservation value in the project area (who will perform this, how will they perform this and how often)

There have been no sightings of animals with a high local environmental and social conservation value in the project area by both farmers and Solidaridad. However, for free range cattle rearing, Solidaridad will work with Local government structures to improve land governance such as formulating Bye laws that control crop and tree destruction from livestock. All wild animal species and flora/fauna with high conservation/cultural value will continue to be monitored by surveying a sample of farmers every 3 years using the project baseline assessment template that Acorn provides. Any species listed by farmers will be entered into the IUCN red list website to determine their significance (other than cultural).

5. 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 fruit trees planted that provide an accessible source of food for farmers. The expected increases in productivity and income diversification from project intervention will increase farmer income and their ability to afford a variety of nutritious food.	N/A	All indicators will be monitored by technical officers and field staff with the support of a sample of farmers at least every 3 years in accordance with the Acorn Framework using surveys, photos etc.	Solidaridad Uganda is responsible for monitoring all indicators in this table
Agricultural biodiversity	Will increase due to the planting of diverse shade and fruit trees among coffee crops that provide a suitable habitat for local species and pollinators. However excessive shading may reduce coffee productivity. A potential negative side effect may be the overcrowding of shade trees, leading to increases in pest outbreaks. To mitigate this Solidaridad have integrated pest and management practices in farmer training.	To mitigate pest outbreaks, Solidaridad have integrated pest and management practices in farmer training.		
Farmer financial state	Project intervention will help build farmer and crop resilience against the damaging effects of climate change, such as shade trees protecting from harsh weather conditions. The marketable products derived from the trees planted and the carbon credit received for sequestration will offer	N/A		

	diversification in income streams and act as a buffer for farmers in times of financial hardship.			
Women's empowerment	Gender equality should increase due to the strong focus Solidaridad place on ensuring women are part of the agroforestry and climate smart trainings and receipts of tree seedlings (see Part H). Solidaridad also promote women involvement in the planting of trees on farm, management of these agroforestry systems and their profitable engagement in timber and non-timber forest products value chain.	N/A		

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 semi-arid environment on which coffee is the main cash crop. The planting of shade, fruit and medicinal trees is prioritised in this system.
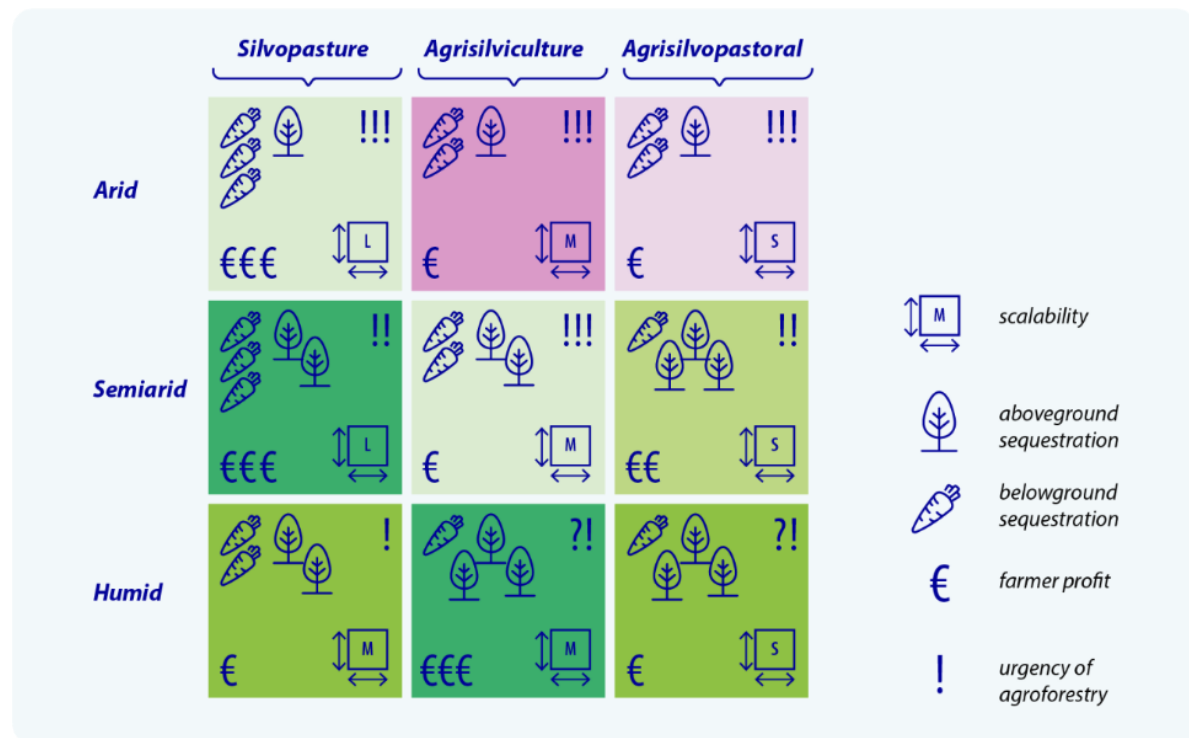
2. For each agroforestry system fill out Table 2 below (use additional tables if necessary):

Type	Species	Species details		
		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
Tree	*Cordia Africana*	Native	Medicinal (yellow fever), firewood.	Shade for coffee Soil fertility improvement
Tree	*Albizia coriaria*	Native	Medicinal (yellow fever), firewood.	Soil fertility (Nitrogen fixing) Shade for coffee.
Tree	*Artocarpus heterophyllus*	Naturalised	Produces the nutritious jackfruit which can be consumed by the	Reduce the risk of pests and soil erosion. The scent of the

			household or sold at the market. The fruit from this tree is also known for its medicinal properties. The tree requires minimal pesticide application.	jackfruit attracts pollinators such as bats, flies and beetles and dispersal species such as birds and primates.
Tree	*Ficus natalensis*	Native	Medicinal, barkcloth material, fodder for livestock, firewood	Soil fertility (Nitrogen fixing) Shade for coffee.
Tree	*Mangifera indica*	Naturalised	This tree provides shelter for crops and farmers and the fruit mango which is consumed and increase nutritional variety in the farmers diet or sold to support farmer income and finances. Mango leaves also contain medicinal properties (treating asthma and diabetes).	Mangifera indica is integral for biodiversity as it is an evergreen perennial tree and provides food and shelter for diverse fauna and insects (e.g. spiders, ladybird beetles, mantids and ants) that maintain ecosystem equilibrium. Mango is a cross-pollinated crop and increases presence of insect pollinators who preserve genetic diversity.
Tree	*Persea americana*	Naturalised	Supplies a highly nutritious fruit (avocado) and oil (from skin and seeds) that farmers can consume or sell as it has a high economic value. The products of this tree therefore contribute to financial and food security. This plant can also be used for traditional medicines (anti toxicity/inflammation).	Addition in agroforestry increases tree species diversity.
Tree	*Grevillia robusta*	Naturalised	Provides high shade for coffee plantations and is very compatible with crops. Provides firewood and seeds that have antifungal properties.	This is a nitrogen-fixing tree that also helps retain soil moisture and promotes a healthy root system.
Growth management				
Preparation and Planting			If crops exists on farm and already being managed well, trees are planted at wide spacing of 12mx12m or more and pits are dug at 2ft x 2ft. Manure is inserted into planting holes then seedlings are	

	planted 2 weeks after. Farmers are regularly trained by Solidaridad on best bet planting regimes per species and per agroforestry practice/portfolio.
Tree/Shrub Management	Trainings on on-farm tree management are conducted with farmers to ensure survival and performance of trees. Frequent monitoring is done to capture mortality rates and reasons for mortality using our digital monitoring systems. Coffee is pruned during off season between February and May. Fruit trees like mangoes and Avocado are harvested between May-August.
Crop Management	Trees are planted in a scattered style among crops (see prep and planning above). Agronomist advice is included in the agroforestry training farmers receive. This educates farmers on the interactions between crops and tree species (i.e. shading, water requirements and nitrogen fixation). Species are selected based on these training concepts.

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

See Annex 4.

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)
Cordia africana	13.7 CO2e kg	10 years
Albizia coriaria	11 CO2e kg	10 years
Ficus natalensis	34.1 CO2e kg	10 years
Persea Americana	31.6 CO2e kg	10 years
Mangifera Indica	63.2 CO2e kg	10 years
Artocarpus heterophyllus	2.3 CO2e kg	10 years
Grevillia robusta	16.1 CO2e kg	10 years

*These figures will not be used to issue CRUs

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

The impact from project interventions will be overwhelmingly positive for biodiversity due to the increase of tree species and the positive impacts that has on habitat suitability for flora and fauna species. The only potential negative side effect may be the overcrowding of shade trees, leading to increases in pest outbreaks. To mitigate this Solidaridad have integrated pest and management practices in farmer training.

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?

Advice from an agronomist has been collected after assessing the current tree species found in the project area. Selection of trees to be planted ensures the new species are not invasive or competitive and are planted with adequate spacing to ensure no overshading.

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.

The project council will be based on an already existing structure, where Solidaridad local project staff meet with lead/promoter farmers who have been elected by farmers in 9 separate project councils spread out geographically. These project council meetings will also have other farmers and community members present to provide input and witness these discussions. These meeting will now occur a minimum of two times a year and the agenda of these meetings will now include extra livelihood and project design discussion points as required under the Acorn Framework. The lead farmers in this project council have the most access to project information (i.e. farmer feedback and input) and are based upon the existing structure where members were elected in their certain locations to speak on behalf of their representative groups.

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

During the project council meetings lead/promoter farmers will be encouraged to provide feedback on farmer experience, technology, agroforestry training and activities. Local project staff will be present and consider and note (in meeting minutes) each point raised by the promoter farmers. After each council meeting, the project council will informing their representative farmer groups on the decisions made through their meetings that are normally held either weekly or bi-weekly during VSLA (Village Savings and Loan Association) days. The farmer cooperatives present at the project councils meetings will also inform their farmer members of the meeting outcomes.

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.

Farmer	Gender ratio	District(s)
Project council 01	2 female/21 male	Arua
Project council 02	14 female/16 male	Kasese
Project council 03	4 female/21 male	Kapchorwa, Kween, Sironko, Bukwo,
Project council 04	3 female/20 male	Oyam, Dokolo, Lira, Apac, Kwania, Kole
Project council 05	7 female/25 male	Kapchorwa, Kween, Sironko, Bukwo, Bulambuli
Project council 06	5 female/20 male	Nebbi, Zombo
Project council 07	9 female/18 male	Omoro, Amuru, Gulu, Nwoya
Project council 08	7 female/21 male	Masaka, Kalungu, Kyotera, Rakai
Project council 09	12 female/20 male	Kanungu

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

Phone-text messages, meetings with the local project staff, and during farmer trainings.

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

The topics of grievances and complaints and the method for communicating them is raised at all

meetings and trainings with farmers and solidaridad or promoter farmers.

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

Solidaridad have a participatory approach that involves the raising and dealing of grievances in a transparent and fair manner actively with farmer, promoter farmers and the Solidaridad team. Farmers communicate grievances to promoter farmers or local staff in Uganda. If they cannot be resolved at this stage they are escalated to the Uganda Project associate for management action.

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

Farmers are sent text messages to inform them that they can use that communication style if they want to report grievances. The topic of grievances is raised at every meeting with farmers and promoter farmers and they are encourage to communicate them in the meeting or via text message after.

5. List any grievances that have been raised outside of project council meetings and the actions taken to resolve them. Of the grievances raised below, Acorn will only treat

Grievance reported	Action (to be) taken	Responsible party
Drought and sometimes floods.	Plant trees and practice climate smart agricultural technologies.	Participants
Slow or no adoption to climate resilient practices.	Encourage farmers adopt climate resilient practices through continuous sensitization and established of demos to promote adoption.	Solidaridad
Destruction of newly planted tree seedling by animals.	Animal owners to be sensitized and warned against leaving their animal to wonder freely resulting into destruction of newly planted trees.	Solidaridad
Limited access to extension services.	Farmers to be encouraged to embrace any avail extension services to improve productivity and production of crops and access to market	Solidaridad
Limited financial support to investment in CSA and purchase of resilient varieties.	To lobby from government and development organizations for intervention.	Solidaridad
A member complaint that much as he has not intention to cut down his trees in the coffee garden but whenever he is away his wife cut down some of the trees from his coffee garden.	Members advised him to have a family meeting and explain the benefits of the coffee and the trees to his wife and children abd also invovle the family in the work of the project so that they understand it and will stop cutting down the trees	Participant
The farmers were not satisfied that the first payment was not yet made.	The payments for both year one and year two will be combined and be paid at once. The process of carbon sequestration and CRU generation and the reason for delay was explained to members and this information is to be shared with other participants.	Solidaridad
Lack of Agricultural credit.	Members will manage to access a revolving fund through the carbon	Participants

	financing aspect of the project.	
Poor/low agricultural productivity	Members were encouraged to increase on the responsible use of organic and inorganic fertilizers.	Participants
Many farmers had not yet been profiled by the time the District Council had her meeting	Project Associate SOLIDALIDAD gave assurance that there was still time to profile all farmers who qualify.	Solidaridad
Farmers have scattered land holdings due to land fragmentation, this disqualifies some farmers from being profiled and onboarded	This also was left to the local partner to handle, if it can be possible to profile more than one part of the area, because Kanungu farmers have coffee in small plots but in different areas.	Solidaridad and Acorn
Some farmers inquired why other participants received coffee and shade seedlings	The local partner indicated that it is possible for participans to receive seedlings in the form of loan to be later paid with the CRU earnings. However, distribution has been halted due to the dry conditions	Solidaridad

6. Provide all project council reports that have been produced in the last 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).

All 9 reports are included in the Annual report for year 2 with an attendee list and photos for each meeting.

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 with over 50 years of experience in developing solutions to make communities more resilient.

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

Solidaridad have been promoting agroforestry practices in Uganda for 10 years. Solidaridad have a strong presence in the project area as evidenced by their 9 years of experience actively engaging with the local communities. Under their sustainability strategy, Solidaridad aim to develop local social capital, strengthen local institutional structures such as farmer groups, Village Savings and Loan associations, commercial community tree nurseries, and undertake lobbying and business development. Solidaridad uses a lead farmer approach where lead farmers provide information to project leadership and farmer groups, host agroforestry demos and offer sensitisations during training preparations.

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

Our current projects are centred towards improving coffee yield, and linking farmers to premium prices which in turn improves incomes for farmers and their families. We also use the Village saving and Loans approach where farmers are encouraged to save money in pools encouraging community cohesiveness and building social capital.

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 has conducted a needs assessment with participants to determine what is most important for them regarding training and implementation. To identify what the farmers needed to successfully implement agroforestry practices and any potential negative impacts they may face, Solidaridad used:
- *Key informant interviews*
- *Training session interactions*
- *On-farm visits*
- *Focus Group Discussions*
- *Local government interactions*

Solidaridad used the findings from these communications to develop a tailor made training program for farmers.

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 farmer and project data will be securely stored in our digital data systems such as PLAZA for data storage and monitoring.

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

The NDC of Uganda (2021), the National Forestry Policy 2001 (statement 6), the National Forestry and Tree Planting Act 2003, the National Adaptation Plan for the Agricultural Sector 2018, and the National Climate Change Policy 2015 all aim to preserve and restore forests in Uganda. Many of these policies aim to reduce/eliminate deforestation behaviours and encourage agroforestry initiatives. Project intervention aims to achieve both these goals by helping smallholder farmers to transition to agroforestry and rewarding them for their efforts with CRUs. This income diversification from the CRUs and products from trees planted will reduce the occurrence of farmers needing to cut down trees in times of financial hardship.

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.

The barriers that marginalised groups face were identified during the needs assessment that Solidaridad performed (see Question 4 above). Solidaridad focus 30-40% of the target group on women, youths and marginalised to be a part of the agroforestry and climate smart trainings and receipts of tree seedlings. Solidaridad also promote women and youth involvement in the planting of trees on farm, and management of these agroforestry systems. Currently, approximately 10% of participants are women (36/368).

8. Describe process for onboarding participants.
a) *Prepilot to understand farmer eligibility to ACORN marketplace*
b) *Generate list of those that meet the criteria*
c) *Undertake biomass inventories for 100 plots*
d) *Undertake polygon on farm verification of the intended farmers*
e) *Upload the data to Solidaridad servers*
f) *Send data to Rabobank kiteworks data place.*

9. Describe project employment policies regarding employment of youths, women, and disadvantaged groups.
The Solidaridad Uganda project does not have any official employment policies in place regarding employment of women, youths and disadvantaged groups. However, they abide by the Solidaridad Code of Conduct available online.

10. Describe how women are involved in the project but NOT as farmers (i.e. partnering nurseries, training).
Solidaridad's tree seedling supplier employs women in nursery work such as; potting, pricking, seed bed preparation, root pruning and watering. Solidaridad use mostly female enumerators for collecting onboarding data and baseline surveys. Female staff are involved in all project trainings. Solidaridad also have a fully-fledged gender thematic lead and gender officer (both ladies) involved in the planning and execution of activities.

11. Describe how the project will promote knowledge sharing among participants and the community add to Colombia and ivory and certification assessment
We use our promoter farmers and a demo farms approach that act as central pivot to information delivery. We train these as promoter farmers (ToTs) that later disseminate the information to other farmers. This is done in farmer groups.

Part I Part I: Financial Feasibility

1. Provide a detailed business case for the project, including:
   o The expected annual income from agricultural production and carbon sequestration
   o The expected costs associated with the transition to agroforestry and the generation and trading of CRUs (e.g. planting materials, fertilizer costs, temporary labor cost)
   o The expected productivity changes that will result from project interventions

A detailed business case has been completed for both the local partner and participant, with a specific plan and forecast for new and existing agroforestry. While both business cases are shared at the end of this document (See Annex 5 Local partner and farmer business case), the following section will give an overview of the expected income, costs and productivity impact for existing agroforestry, as the transition to agroforestry practices not only comes with costs but also initial decrease on productivity.

The annual income of the project can be divided between the income generated by the CRU generation and their revenue, as well as the output of the agroforestry system. When it comes to CRU's generation, the first 5 years of the project will not generate any CRU's, as the existing agroforestry was not part of ACORN and the existing biomass is not considered in the estimation of the carbon removal units. More specifically, ACORN will generate CRU's based on the carbon sequestration that occurs once the project is onboarded. In this case, the generation of CRU's being in the end of 2022 and beginning of 2023. Departing from here, the project is expected to generate on average, 10000 CRU's per year which by the end of the project life span will lead to a total amount of 840000 CRU's generated. It is important to note that, the local partner (Solidaridad) is entitled to receive 10% of the CRU's revenue, while farmers receive 80% and the 10% remaining pertains to ACORN. As previously explained, the revenue of the project is also composed by the agroforestry system output in term of cash crops. In this regard, this project is mostly focused on coffee plantations, both Robusta and Arabica species. For them, an average prices of 1,25 and 2 euros/ha is assumed, with an average productivity of 2250 and 3750 kg/ha respectively. Furthermore, the average size per farmer is estimated to be approximately 1 hectare. In the end, each farmer can be expected to perceive the income derived from their coffee plantation plus the carbon removal units, which are to some extent variable. The reason for this is two fold, firstly Acorn retains 15% for its carboon pool and secondly, it allows farmers to receive payment equivalent to a round number of CRU's. As a result, farmers accumulate percentages of CRUs until they reach the full unit, which is then paid out by Acorn. With these considerations, farmers are expected to perceive between 16 and 32 euros per year as a result of carbon sequestered in their lands plots.

The costs for the project are distributed between the local partner and the farmers. When it comes to the the local partner, Solidaridad, the costs can be differentiated based on the stages on which they take place. Therefore, these are distributed among the a. project selection , b. Project preparation , c. Project start and d. Project maturity. From all these different instance , only the costs of the ''project maturiry'' are annual recurring costs, whereas for the rest of the costs have to be met only once. The case for farmers costs is a bit different, as most of the costs take place within the first three years after being onboarded to Acorn. The main In terms of tree planting, the cost of planting per hectare is 17,50 euros for the farmer. On top of this, each farmer requirements for tree distribution is 3,75 euros and approximately 7 euros for diverse trainings. In a similar manner, the planting related costs are also faced by the local partner. Naturally, the total cost for the local partner is

considerably higher. However, when all those costs are aggregated the total value per hectare is 140 euro , which result from different logistics and labour costs.
It is also relevant to point out the specific costs that arise for those plots that want to transition to agroforestry. As part of this transition, the following activities will represent a cost at a farm level that can reach a value of 238 euros. This derives from seedling costs (18 euros/ha) , tree planting including labour costs (74 euros/ha), training costs (7 euros) and additional labor for pruning or maintaining activities (140 euros).

Overall, the productivity of the agroforestry system declines in the first 2 years due to the transition to agroforestry and initial growth of new species. Nonetheless, the impact of the transition is expected to bring farmers an additional 63% in terms of profits. Furthermore, this improvement starts off with a decrease of 3% on their profits for the first two years. After that, the impact will begin to increase up to the point in which at the third year farmes can benefit from an 8% profit increase. Ultimately, the highes increase as compared to the baseline will be on their 7th year after their transition to agroforestry. At this point, the improvement will be around 78% . In the end, taking into account the initial decrease farmers would reach an average additional profit of 68% , as previously mentioned.

2. What measures are in place to ensure that you do not draw more than 10% of sales income for ongoing coordination, administration and monitoring costs? (e.g. earmarked funds or separate account for farmer payments).
*To make a clear and transparent traceability of the Solidaridad's income derived from CRU's generation and selling , a specific bank account will be set in place.*

Part J: Payments and Benefit Sharing

1. Provide evidence on how CRU payments have been disbursed to participants and equate to at least 80% of proceeds.*Acorn Rabobank will pay the farmer's share to the local partner with earmarked funds. Then, the Solidaridad will carry out payments to farmers through mobile money or platforms such as Yo-payments and M-pesa, which allow traceability. This has been confirmed during the project council. It was also decided after the first project council meetings that some farmers would like the possibility of bank transfers if they are able to open an account. Therefore, this will also be an option in addition to physical cash payment for those without access to mobile money or a bank account.*

2. Describe what proportion of cash payments have been disbursed to farmers.
The proportion of cash payments will differ between the farmers. The reason is that, as a first option payments will be done through the previously mentioned platforms or mobile operatos. Contrary to this, for those farmers who do not have a phone Solidaridad will pay through coffee cooperative in the form of physical cash or bank transfer. Direct cash to farmers will be done once a financial monitoring system is available, in order to make traceability possible.

3. Describe what proportion and type of in-kind benefits have be provided to farmers.
No in-kind payment will be given to farmers due to use of direct mobile payment.

Benefit	Examples	Description
Inputs	• Seedling costs • Sapling costs • Fertilizer	n/a
Education	• Training costs • Agronomist consultation costs	n/a
Operation	• Mobile communication costs • Mobile payment costs • Fencing	n/a
Livelihood	• Land tenure consultation costs	n/a

Part K: Stakeholder Analysis
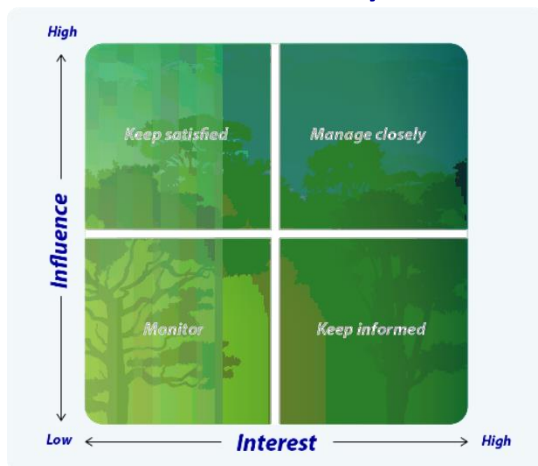
1. Referring to the stakeholder analysis figure above, describe the interest and influence each stakeholder has in the project and justify the reason for this in the table below. All stakeholders that receive outcomes other than "Monitoring" must be informed of the project (e.g. newsletters) and their 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 must be informed and engaged in a participatory manner. They are the end users and property owners. They are informed through both community and cooperatives meetings and also radio sensitization messages.	Manage closely	Y
Local communities	High	High	Local communities must be informed and engaged in a participatory manner. These influence Community buy in of the ACORN. They are informed through both community and cooperatives meetings and also radio sensitization messages.	Manage closely	Y
National Government (MINISTRY OF AGRICULTURE,	Low	High	A letter has been sent to the national government to inform them of the	Keep satisfied	Y

ANIMAL INDUSTRIES AND FISHERIES (MAAIF) ; MINISTRY OF WATER AND ENVIRONMENT (MWE) , UGANDA COFFEE DEVELOPMENT AUTHORITY (UCDA))			project and its intention to generate and trade CRUs on the voluntary carbon market (See Annex 6). Alito is disconnected from the community agroforestry component. Policy influencer.		
Local government Districts of :Mbale, Bulambuli, Sironko, Kapchorwa, Gulu , Oyam , Lira, Zombo , Bushenyi)	High	High	Local government structures directly linked with the farmers. They are updated on a regular basis through the extension officers of Solidaridad, who collaborate with them closely.	Manage closely	Y
Donors	High	High	Focus of funding driven towards carbon finance. They are updated on the project and other Solidaridad activities through annual reports. Sometimes, Solidaridad reports to a consortium lead, which then reports to donors.	Manage closely	Y
NGOs	High	Low	Strategic Partnership	Keep informed	Y
Technical/ agronomical partners	Low	High	Currently more effort towards enhancing Climate smart practices is required. They are updated through their work with Solidaridad's extension officers.	Keep satisfied	Y
Financial partners/ institutions	Low	High	Financial institutions interest is low because of the lack of insurance for agroforestry (risk attached to tree financing). While	Keep satisfied	Y

			their interest is low, some organizations collaborate with Solidaridad to support trainings on financial literacy.		
Procurements services (nurseries) (BUSHIKA INTERGRATED ACE , MT. ELGON WOMEN IN SPECIALTY COFFEE , NILE FORESTRY AGRO-INPUTS AND ENGINEERING SERVICES LTD , KALUNGU YOUNG COFFEE GROWERS ASSOCIATION , SHEEMA INTEGRATED COMMUNITY DEVELOPMENT ORGANISATION)	High	High	Provision of tree seedling services provides income to nursery operators. The communication takes place on a regular basis, as Solidaridad informs them of different requirements in terms of quality and quantities.	Manage closely	Y
Local authorities	Low	High	These give confidence to farmers on positive efforts and plans of the projects. They influence farmer decisions to be a part of new interventions. They are informed and updated through the cooperation with Solidaridad's on ground support activities and the cooperation with governmental extension officers.	Keep satisfied	Y
Input providers	Low	High	These will provide inputs through rewards from carbon credit however this will be in case farmers are rewarded with inputs rather	Keep satisfied	Y

			than cash for their carbon credit		
Corporate buyers	High	Low	Some cooperate buyers such as Mitsubishi are interested but we need to build a bigger and wider evidence case	Keep informed	Y

Part L: Reversal Risk Assessment

Project phase	Drivers behind reversal risk	Risk level	Justification
Project adoption/ start	Limited education or inadequate understanding of agroforestry	Low	Solidaridad incorporate social and cultural aspects into their training through farmer interactions and learning perceptions towards certain species and the kind of traditional attachments farmers have to certain tree species. Solidaridad have project agronomists that integrate all aspects of climate smart agriculture into the training. They also have an agroforestry specialist who incorporates agroforestry components into their commodity programs.
	Marginal community support or low community involvement	Low	See Part H – Question 3. To promote the Acorn agroforestry initiative and its positive social and economic impacts, Solidaridad have run sensitizations with the community during the Acorn pilot. They are also putting in place a sustainable scaling up strategy which will detail steps to promote agroforestry in the community further.
	Inadequate operational capacity (limited experience, no local presence)	Low	Solidaridad have been promoting agroforestry practices in Uganda for 10 years. Solidaridad have a strong presence in the project area as evidenced by their 9 years of experience actively engaging with the local communities. Under their sustainability strategy, Solidaridad aim to develop local social capital, strengthen local institutional structures such as farmer groups, Village Savings and Loan associations, commercial community tree nurseries, and undertake lobbying and business development. Solidaridad uses a lead farmer approach where lead farmers provide information to project leadership and farmer groups, host agroforestry demos and offer sensitisations during training preparations.
	Insufficient (local) nurseries	Low	Solidaridad work in close contact with accredited government nurseries such as the National Tree seed Centre, national forestry Research institute, etc. They are also in touch with community accredited nurseries to procure quality validated and audited seedlings.
	Animal or human interference	Low	There are very limited land disputes/arguments in the project area because most land is family owned and divided among family members. In cases of disputes Solidaridad link directly with local council committees before carrying out agroforestry project to make sure land tenure is well sorted. There is no risk to crops

			from wild animals, only a low risk from livestock that are under free range.
Project progress	Negative project cash flow	Low	Solidaridad has received start-up funding for their agroforestry project from the PFC coffee. This funding was used to finance farmer trainings and has supported in initial tree seedling provision and distribution. Solidaridad have received agroforestry grants and continue to receive mainstream funding from the Ministry of foreign affairs of the Dutch Government. Solidaridad undertake an array of business model development around Natural resource management.
	Poor agroforestry schemes	Low	As part of their agroforestry scheme, Solidaridad promotes agroforestry practices and portfolios depending on farmer needs, land size, crop diversity and current challenges to address. It promotes scattered trees on farms, alley cropping, wind breaks, boundary planting, depending on the factors above. They also conduct a seedling preference assessment and merge this with technical backstopping to provide the tree seedlings for the right places. Solidaridad have project agronomists that integrate all aspects of climate smart agriculture and an agroforestry specialist who incorporates agroforestry components into their commodity programs. Tree species adopted under the agroforesty design include mainly Albizia and Cordia whose water use potential has been proven to be friendly in coffee systems for example cordia Africana doesn't undergo reverse water flows as discussed by Buyinza et al, 2019[5].
	Change of land ownership and coverage	High	A farmer owns the sole decision on use and sale of land although if its inherited the decisions can be influenced by clan members. Solidaridad will work with local government structures to monitor land ownership.
	Political instability (e.g. war, economic crisis)	Low	Solidaridad are in collaboration with district level political structures and always involve political personnel in project launches and community engagements.
	Natural risks: - Fires - Pests & disease - Extreme weathers	Low	Solidaridad have undertaken a Climate Risk score assessment for coffee farmers using their Climate Adaptation Index. The results of this assessment have been used to train farmers in natural risks from climate change and how to adapt to and mitigate these risks using their agroforestry system based on the information in the UNEP Adaptation Gap Report 2021.

[5] J. Buyinza, C. W. Muthuri, A. Downey, J. Njoroge, M. D. Denton & I. K. Nuberg
(2019) Contrasting water use patterns of two important agroforestry tree species in the Mt Elgon
region of Uganda, Australian Forestry, 82:sup1, 57-65, DOI: 10.1080/00049158.2018.1547944

	- Other events		
Project maturity	Logging risk	High	Deforestation is common in the region of the project due to land expansion for agriculture and for wood products like (Timber, poles, fuel wood, etc). Solidaridad take measures to keep this risk low by offering capacity development on the benefits of agroforestry, providing tree seedling germplasm, and working to provide energy saving cookstoves.
	Waning or short-lived local partner commitment	High	Agreements are signed as part of this project with the local partner, demonstrating their commitment to the longevity of this project. However, not all participant agreements have been signed.

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

Risk type	Risk description	Mitigation action
Change of land ownership and coverage	There is a risk that land inherited is not in the name of the participant but instead the clan, who can make decisions on behalf of the land.	Solidaridad will work with local government structures such as sub county assistant secretaries to enhance sustainability of the monitoring of land ownership throughout the project and ensuring farmers participants have clear land tenure and rights after land is inherited.
Waning or short-lived local partner commitment	Not all participant agreements have been signed, therefore commitment to the project is a risk.	Solidaridad Uganda has a plan to get every single participant agreement signed by farmers by the end of 2023.
Logging risk	Deforestation is common in the region of the project due to land expansion for agriculture and for wood products like (Timber, poles, fuel wood, etc).	Solidaridad offers sensitization on the benefits of agroforestry, provides seedlings and promote the use of saving cookstoves. In the case of the latter, Solidaridad also promotes the use of pruning by products (branches) as fuel for the cookstoves, avoiding the harvesting of full trees. In terms of sensitisation, Solidaridad makes use of different communication channels, such as radios messages, community meetings and also through producer cooperatives who pass on the message to farmers , promoting the aforementioned actions. In all of them, they inform participants that cutting of trees can lead to

		disqualification in the Acorn program and its impact on CRU measurement.

Part M: 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	As elaborate in part F project activities
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 and are not on wetlands.	Yes	Confirmed through polygon checks
D	All land within the Project Area is either cropland or degraded land 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 than10% of a plot that is under any of the following types of land: - Land containing organic soils; - Land which, in the baseline, is subjected to land-use and management practices and	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 4,80% and limited clay 35%

	receives inputs listed in Annex 4 of Acorn Methodology		

2. Adjustment Factors

This table below gives an overview of the adjustment factors applied for this specific project.

AdjF	Factor (%)	Reasoning
Leakage	0%	See question 3.1 below
Uncertainty	0%	Aggregated uncertainty is calculated to be 1.9%, which is below 50% and therefore no adjustment factor needs to be taken.
Pre-project	0% 25%	Original approach (2021) Pre-existing biomass was not considered significant. Approach going forward This year, we started building a more data-driven approach for determining this adjustment factor. For this analysis, the project lifespan is estimated to be 30 years (this time span is used for all projects within Acorn unless deemed otherwise) and the latest agroforestry design of up to 115 trees is applied. Our initial 0% adjustment is considered to be insufficient by the data-driven approach from 52Impact. Going forward new calculations with be done with an adjustment factor of 25%. For a detailed analysis, we refer to the instruction slide deck and the source below. Source: *Uganda_30plots_biomass_split_2017-2047_design-115trees*

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
0	Coffee	65%	N/A

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

Productivity would be expected to drop if the incorrect agroforestry techniques were used regarding shading of crops. Coffee yields tend to increase under shaded systems whereas beans yields are better with minimal shaded fields. As coffee is the main cash crop, covering roughly 65% of the productive area, the agroforestry design promotes the increase of shade in this area and therefore an increase in coffee productivity of 15% over the life of the project. If bean crops are in the same shaded area as coffee and are experiencing a reduced yield, they may have to be relocated to a partially shaded area on the farm or be replaced with another shade-loving crop. Farmer productivity will be monitored regularly to identify negative impacts on crops from the trees planted.

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

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

Shrub land	Grass land	Crop land	Built-up	Bare/Sparse vegetation	Herbaceous wetland	Tree cover <60%	Tree cover >60%
27.824	32.078	6.057	1.394	0.006	1.023	31.423	0.190

III.) List farmer activities (performed before project implementation) that will 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
Consider unlikely to take place	Therefore, it is not applicable

3. 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 and ecoregion map
Provided. Concealed for data protection purpose

Annex 2: Organisational structure

Provided. Concealed for data protection purposes

Annex 3: Land Tenure Documentation

Provided. Concealed for data protection purposes

Annex 4: Agroforestry system design/implementation plan

Provided. Concealed for data protection purposes

Annex 5: Local partner and farmer business case

Provided. Concealed for data protection purposes

Annex 6: Letter to national government

Provided. Concealed for data protection purposes

Annex 7: Project Council Reports

Provided. Concealed for data protection purposes.

Annex 8: Participant consent forms and contract

Provided. Concealed for data protection purposes

Annex 9: Local partner contract

Provided. Concealed for data protection purposes

Annex 10: Additionality evidence

Provided. Concealed for data protection purposes