

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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WETPA Acorn Design Document

Kenya - Busia, Bungoma, and Kakamega

Date of Submission: 2023

Part A: Project Summary

Question	General Information	Answer
1	Project title	ACORN Pilot Project WETPA
2	Organisations involved	<p>Western Tree Planters Association (WETPA) is the local partner in this project. They are a member based smallholder farmer organization that has partnered with FFSPAK for financial support and capacity building. WETPA are the ones who engage with the participants in the project area. They are a donor-driven and donor-dependent organization, also working closely with FAO, Vi Agroforestry and Agriterra.</p> <p>Farm Forestry Smallholder Producers Association of Kenya (FF-SPAK) is a pioneer umbrella organization working with grassroots associations in Kenya to promote farm forestry. FFSPAKs role in this project is to strengthen the capacity of WETPA and financially support them to be able to help farmers transition to and maintain agroforestry systems.</p> <p>Vi Agroforestry is an NGO focused on promoting agroforestry to improve livelihood in Kenya. They are a traditional donor in terms of funding agroforestry trainings, providing technical assistance and payment of WETPA staff salaries. The contract between WETPA and Vi Agroforestry ran from January 2018 to 31st December 2022. Therefore, carbon finance is required now that the Vi Agroforestry funding is no longer able to supply funding.</p> <p>Agriterra is an international, not-for-profit agri-agency works in emerging and developing countries to provide long-term expert advice in terms of project design, implementation and operations. For example, they have been working together with Acorn to build a strong business case for an agroforestry system where eucalyptus is not prioritised and training those on the ground that need to collect groundtruthing etc.</p>
3	Project location - country, region & district (attach map if possible)	Kenya, Western Region, Busia County, Bungoma County, and Kakamega County (see Annex 1).

4	Ecoregion(s)	Victoria Basin forest-savanna mosaic (see Annex 1).
5	Local partner representative (name & position)	<i>Information removed for data protection purposes</i>
6	Local partner mission statement	<p>Vision: An economically empowered and just community living in a sustainably conserved environment</p> <p>Mission: To improve livelihoods of women, men and young farmers through sustainable environmental conservation, bee keeping, tree commercialization, capacity building and financial services while embracing value chain.</p> <p>Overarching goal: Sustainable and improved livelihoods and resilience to climate change of small holder farmer families in western Kenya.</p>
7	Contact details (phone, email, & address)	<i>Information removed for data protection purposes</i>
8	Main cash crop(s)	About 70% of famers plant maize as their main crop and around 30% plant sugarcane as their main cash crop. The maize farmers are mostly farmers with small land sizes while the farmers with sugarcane have larger land sizes.
9	Project target group	Smallholder Farmers, only members of Western Tree planters Association(WETPA). WETPA was involved in two other Carbon Projects, namely: KACP (Kenya Agricultural Carbon Project) ¹ & MT. Elgon Livelihoods Project. ² The first project has ended. The second project does not aim to pay the farmers for carbon credits. It was decided to primarily focus only on members of WETPA in the regions where both these projects have not been active (Busia, Bungoma, and Kakamega), to avoid double counting. All smallholder farmers that are members of WETPA and commit to planting trees were selected for this project as long as they weren't included in the previous programs mentioned.
10	Number of existing participants	1771 farmers
11	Potential number of additional participants	2,000 every year from onwards until they reach approx. 8,000 additional farmers.

¹ <https://viagroforestry.org/what-we-do/carbon-offsetting/kenya-agriculture-carbon-project/>

² https://viagroforestry.org/app/uploads/2019/09/web_livelihoods-mt-elgon-brochure_a4.pdf

12	Estimated total size of project area (ha)	2,233 hectares.
13	Describe the project's aims and objectives (e.g. the problems this project will address)	To overcome the barriers farmers face in terms of poverty, land degradation, etc. (see row 32 below), the project aims to improve tree cover within the project area and by doing so the trees will contribute to a reduction in carbon emission and the restoration of degraded soil. The smallholders farmers will benefit from carbon credit as transitional finance, and the agro-ecological impact of the trees (increased productivity due to the fruits grown on the trees, less inputs needed, fodder production and stable yields of cash crops from shade). In 2012, WETPA, supported by Vi Agroforestry promoted the planting of eucalyptus in the region for commercial purposes. They learnt in this former project that this system was unsustainable long-term. In this new project with Acorn (with different farmers etc.), WETPA and Vi agroforestry aim to increase awareness in the region for Sustainable Agriculture Land Management based on agroforestry practices not planting for commercial purposes, especially focusing on moving away from eucalyptus and more to trees that offer other livelihood benefits such as fruit and shade. As part of this project, WETPA also wants to set up a local agro-vet (input store) for agroforestry input and supplies, which can be sold to their famer groups.
14	Describe how smallholder farmers/communities were involved during the design of the agroforestry project. (Provide evidence of participation, e.g. workshops, meetings)	The smallholder farmers were involved during project inception where meetings were held to introduce and discuss the idea for the ACORN project. WETPA have had regular meetings with farmers (existing community leads) through the design and now during the implementation of the project to discuss their feedback on proposed agroforestry designs (see Annex 7). For example, this engagement has been important for gaining insight into how farmers view eucalyptus trees and what they believe is necessary for long term projects, in addition to increasing farmer understanding about the concept of carbon credit/receiving money. (e.g. training and capacity building). Moving forward, regular stakeholder consultations meetings for the specific Acorn project will organised to include the existing community leads that have already been appointed by members of WETPA, both FFSPAK, WETPA, Vi Agroforestry, Kenya Forest Service and more. During these meetings the participants will be given flyers and brochures that can be shared with all participants to encourage knowledge sharing pre and post meetings. Therefore,

		all participants will continue to be engaged in some manner.
15	Provide a general description of current socioeconomic conditions in the project area (income, poverty level etc.)	The current socioeconomic conditions in the project area are poor, with farmers having very low income seen by the rate of multidimensional poverty rate at approximately 67%. This poverty level is an underlying factor of climate vulnerability, as it limits both resilience and adaptive capacity. There is currently a trend of loss of fertile land in the project area (soil degradation) due to climate change. By 2030, Kenya's population is forecasted to grow to 60.4 million people, leading to increasing food demand and limited land availability. Farmers are facing rapidly increasing input prices with pesticides and synthetic fertiliser increasing in value by x 6 in the last year. The major economic activity is maize farming making the county a vital component of the county basket, other income earning activities include sugarcane farming and beekeeping. WETPA farmers are mainly women. Men and youths form a small proportion. Majority have gone up to primary education level. The farmer households are generally composed of man who is the household head, the woman and the children. There is joint household planning and decision making where the important decisions on income utilization, farm mechanization, agricultural production involve both the family.
16	Describe how the agroforestry intervention proposed is expected to impact the following;	<p>a. Food security/nutritional intake: Farmers will be advised to mainly plant fruit and nut trees which will have direct positive impacts on food availability for the farmer and their family.</p> <p>b. Farmer financial state: By planting more trees yearly, farmers will receive a more stable and reliable income from carbon credit and income diversification through the selling of tree derived products such as fodder, fruits, and medicine.</p> <p>c. Gender equality: the project is not targeting gender transformation in the region, however they are aiming to ensure that future hires within WETPA and FFSPAK are 50/50 regarding men and women. Fortunately, this project has just as many female as male participants, supporting involvement of both women and men equality. Therefore, gender equality is not expected to reduce the project intervention but is also not expected to significantly increase from the baseline.</p>

		<p>d. Farmer access to resources: In this project, farmers will receive digital payments which allows farmers to access credits from a bank. It has been confirmed that all WETPA members, no matter their status and resources, have access to digital payments. This is evidenced by the innovation that has taken over the whole country in this area, Mpesa.</p> <p>e. Biodiversity on farms: Diversification from trees planted, agricultural crop promoted for intercropping, and livestock farming under the project intervention creates favourable conditions for biodiversity to increase (providing habitat and increasing health of soil and native fauna and flora – protection from impacts of climate change).</p>
17	Describe any known local land degradation/deforestation processes or trends, and drives of these (e.g. population increase, fire, conversion for agriculture)	The local land degradation in the area is driven by increase population and expansion of agricultural lands under poor farming methodologies/practices. Transitioning to agroforestry reduces the challenges that the lack of land and degradation pose.
18	Describe whether there is a low, medium or high risk of deforestation in the region where the project is located	Deforestation risk outside the project is low and would only occur due to conversion of land to agriculture. Therefore, it is not a threat to the project area as all farmers have rights to their land and it is already used for agriculture historically. In the project area, WETPA members are continually doing afforestation on yearly basis. This means every year new farmers are joining the project and planting trees, while existing farmers are planting more trees every year too. It is not a high risk of deforestation on farmers plots as farmers understand the benefits that trees offer in terms of reducing land degradation and increasing crop health etc. Most farmers had insignificant tree cover on their land before transitioning to agroforestry (some farms only have 2 or 3 trees), therefore deforestation was not an issue.
19	Please select the following type of land use that best describes the project area	Existing Agrosilvopastoral agroforestry (integration of agricultural crops, trees, animals and/or bees). The main cash crop in the area is sugarcane and maize.
Land Tenure		
20	Estimated average plot size per farmer (ha)	0.55 hectares.
21	How is land tenure organised among participants (formal titling, informal titling or land mapping)	The land tenure among the farmers is legal, that is formal titling and informal (land inherited) (see Annex 2).

The Agroforestry System		
22	Is this project new or existing agroforestry or a combination	Farmers have been transitioning to agroforestry since 2018 as a way of mitigating climate change. All members of WETPA have planted at least one tree on their land when they join. However, farmers will continue planting trees on their land as most do not have well-designed agroforestry systems but more a farm with a few trees randomly planted on the boundary not considering an agroforestry design or interactions etc. Therefore, many are new to the concept of an agroforestry system as a whole. Most existing agroforestry systems were failing (trees dying due to poor choice, competition or poor care etc.) before joining with Acorn. This project will enhance these systems for long-term success.
23	Type of trees that have/will be planted under agroforestry scheme (shade, fruit-bearing, medicinal)	WETPA has been working with VI Agroforestry to determine a suitable AF system. The current trees species farmers began planting were <i>Eucalyptus grandis</i> (Timber/Energy), <i>Cupressus lusitanica</i> (Timber), <i>Acacia mearnsii</i> (Timber), <i>Grevillea robusta</i> , <i>Markhamia lutea</i> (Firewood, Soil Conservation), <i>Persia americana</i> (Avocado), <i>Calliandra calothyrsus</i> (Soil Conservation, Fodder), <i>Croton megalocarpus</i> (Fencing, Bee-fodder), <i>Sesbania sesban</i> (firewood, soil conservation) and <i>Mangifera indica</i> (Mango, Medicinal), and other indigenous species like <i>Prunus africana</i> which is medicinal and bamboo. Farmers have now been advised not to plant eucalyptus and now plant only fruit trees, shade trees, medicinal trees fodder trees and other crop friendly species like Grevillea. The approx. ratio farmers should follow will be determined soon after an assessment by Agriterra and explained in detail in Part F – Project activities of the ADD. The tree planting system is on the boundaries, with shade and fruit trees within the homestead.
24	Describe how the agroforestry system is expected to impact the land (e.g. more shade, less pests, less inputs – fertilisers, presence of pollinators)	The agroforestry species which will be planted by farmers will provide benefit to agricultural crops and even livestock by provision of manure/humus and fodder for animals. It will also benefit farmers in provision of shade and some of the trees are insect and pest repellents.
Project Additionality		
25	Is the project incorporated by any other accounting program (e.g. compliance, voluntary or national GHG program)? If yes, describe how project ensures no	No, the project is not incorporated by any other accounting programme. The former carbon projects of VI-agroforestry and WETPA excluded these farmers. These projects had a dairy focus. Therefore, the 4005 farmers in the Acorn project never got the opportunity to join.

	double counting will take place.	
26	In what year and season will/were the first trees planted?	Farmers have been continually planting trees since inception of this project in 2018. New farmers are onboarded every year and plant at different moments of the year, either during the long rains (April-early June) or short rains (August- early Oct). Most farmers have gradually begun planting agroforestry trees in the last 2 years.
27	Was the project established with the intention of receiving carbon finance for trees planted?	WETPA was not established with the intention of encouraging agroforestry for carbon finance. They believe this is not a sustainable motivation alone and that a deeper drive for environmental and livelihood improvement is their main priority. In 2018, when WETPA and Vi agroforestry had the idea to start this agroforestry project, majority of farmers that wanted to join had the intention of planting only Eucalyptus trees to be harvested. WETPA wanted this project to move away from eucalyptus as the regions WETPA operated in where full with only eucalyptus trees, which was having detrimental impacts on biodiversity. Since 2018, there were many meetings with farmers to discuss what farmers would want and need to move away from eucalyptus and plant instead trees with fruits, fodder, medicine etc. Through this regular farmer engagement it was determined that farmers wanted extra compensation on top of tree derived products to outweigh the financial benefits that eucalyptus trees offered. Farmers were happy to switch to the new agroforestry design that moved away from eucalyptus if compensated with carbon finance. This was seen with the positive result from the carbon credit project in dairy farming in another region with WETPA members. Agriterra has been performing extensive research on behalf of WETPA in the voluntary carbon market since 2018 to build a business case demonstrating the benefits of carbon income, however, were not successful in finding an option until contact with Acorn in 2021. Agriterra believed 2 years ago it was still impossible to seek carbon credits for this project due to the costs of certification (approx. 200,000) with hardly any money flowing back to the farmers (unlike 80% in the case of Acorn). An example of someone they contacted with a negative outcome is Unique, a German carbon credit consultancy.
28	Is this project mandatory under any national or local laws? (List relevant forestry	No. FFSPAK work with key partners like Kenya Forest Service who guide the project in the compliance of the laws and regulations in respect to farm forestry in

	regulations, national climate change commitments etc.)	Kenya. See the UNFCCC nationally determined contribution of Kenya (also listed in Part C).
29	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?	Farmers within WETPA are already motivated to plant trees, but farmers have inadequate resources and skills (i.e. poor access to planting materials and no knowledge on the type of trees that should be planted, spacing, shading etc.). For example farmers would plant mainly eucalyptus trees and at such poor spacing that competition would arise and trees were dying and soil moisture was lacking due to the requirements of the eucalyptus and the lack for farmer knowledge on maintenance of the trees and soil. Farmers were also not planting enough trees to actually see the benefits of an agroforestry system, with many planting a few trees on their boundary. Therefore, project involvement ensures farmers have the knowledge and skills to implement a proper functioning agroforestry system and the carbon finance allows farmers to afford planting materials and an incentive to continue to plant trees that are not eucalyptus and one that provide livelihood benefits such as fruit, fodder and medicine.
30	What is the main driver encouraging farmers to transition to agroforestry?	The main driver here is the financial benefits farmers will receive for implementing a functioning agroforestry that is not dependant on eucalyptus in their existing farms. The high investment costs of an agro-forestry system without the reward of selling eucalyptus are a large barrier which can be overcome through ACORN and the offer of carbon finance as seen in the business case created in partnership with Agriterro and WETPA. The main long-term goal for farmers as a result of this project even after farmers generate CRUs is that agroforestry farmers will increase production (in terms milk from fodder trees planted), improved food security and nutrition (from fruit trees), and resilience from climate change (protection of farms and farmers from extreme weather).
31	Was the promise of carbon credits the enabling factor for farmers to transition to agroforestry?	No, not to begin the transition and start planting their first trees. As this is an existing project, farmers had already planted some trees on their farm before carbon finance was an option. However, carbon finance was the enabling factor for farmers to transition to a sustainable agroforestry system (where fruit, fodder and medicine trees are planted) instead of randomly planting eucalyptus trees on their farm to be harvested. Therefore, it was crucial for farmers to transition to a more long-lived and sustainable agroforestry system.

32	<p>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.)</p>	<p>The main challenges faced by these farmers are increasing input prices (e.g. synthetic fertilizer and herbicide x 6 in price in the last years due to COVID-19 and the war in Ukraine) and not enough availability of resources to purchase seeds from farmer-owned nurseries, and unreliable weather (erratic rain, shifting of short and long rain seasons, and increasing temperatures) due to climate change leading to low productivity. Other challenges include shrinking land sizes due to increased population, poor access to resources, low knowledge on environmental protection and the importance of long-lived agroforestry systems, financial illiteracy, lack of market for farmers agricultural products and pest and diseases (e.g. locusts). See row 13.</p>
High-over business case		
33	<p>If existing agroforestry, how has this project been funded to date? (financed by the local partner, the farmers, grants/funding, or a combination)</p>	<p>To date, FFSPAK and WETPA have been funded by different donors: FAO, Vi Agroforestry, Agriterra.</p>
34	<p>Briefly describe the costs for the farmer in this project (e.g. seedlings, fertilisers, labour)</p>	<p>Nursery materials = EUR 0.02 per tree Transport cost = EUR 0.02 per tree Labour (tree planting) cost = EUR 0.5 per tree Labour (transitioning to AF) cost = EUR 40 per hectare Fertiliser = 0 cost due to training on using compost manure</p>
35	<p>Briefly describe the costs for the local partner in this project (e.g. seedlings, onboarding, data collection, training, farmer engagement, planting materials etc.)</p>	<p>Recurring costs = 49968</p> <ul style="list-style-type: none"> • Project Baseline • Project Council reporting • Grievance Mechanism reporting • Project Reporting • Reversal Risk Assessment <p>Farmer onboarding = 24,500 Data collection hardware = 11,034 Tree seedling costs (if funding secured), training & administration = 644,558</p>
36	<p>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)</p>	<ul style="list-style-type: none"> • CRU income for LP over life of project: EUR 980,000 • ACORN/Rabobank: in terms of data collection for groundtruthing. • Agriterra: will also support WETPA financially with onboarding farmers into the ACORN program. • Vi agroforestry: provides small grants to support operations like tree census and cooperative formation and assorted inputs.

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Part B: Eligibility Checklists

WETPA (local partner) checklist

Topic	Sub-topic	Requested information	Result
	Organizational structure	Provide a description of your organizational structure and roles of each organization involved for the project (attach diagram/table in annex).	<p>Western Tree Planters Association (WETPA) is a member-based organization registered with the registrar of societies of the republic of Kenya on 15th September 2006, under registration number 26762. The association has its headquarters located at Webuye town in Bungoma County and operates in four counties in western region of Kenya namely Bungoma, Busia, Trans Nzoia and Kakamega with specific areas of concentration within these counties.</p> <p>The association is led by a chairman, deputy chairman, secretary and treasurer. WETPA has a technical staff that is composed of:</p> <ol style="list-style-type: none"> 1. 1 Project Coordinator 2. 1 M&E Officer 3. 1 Accountant 4. 2 Project officers 5. 23 Field Extension officers <p>WETPA members are organized 253 farmer groups consisting of roughly 35 farmers per group, lead by a community lead farmer. The association has 175 farmer-owned tree nurseries in different levels of operationality amongst its members. See the organisational structure that describes representation through district leaders and farmer groups (Annex 4).</p>
Organizational capacity	Organizational capacity	Provide a description of your “on the ground” capacity to undertake long-term community-led project(s) and implement agroforestry.	Western Tree Planters Producers Association (WETPA) has the experience and capacity to undertake this long term project through its membership with farmers and communities in the project area. As an association they have been in

		fore front in promotion of Agroforestry in Kenya since 2016.
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	Describe how the project is organized, or in the process of being organized, into cooperatives, associations, community-based organizations or other organizational forms able to contribute to the social and economic development of the participants and their communities, and which is democratically controlled by the participants.	The board of management is the ultimate authority within the organization. The overall goal of the association is to sustainably improve livelihoods and resilience to climate change of small holder farmer families in Western Kenya. The core mandate is to support farmers with tree planting on their farms. This includes farmers who have recently begun this transition and farmers that are new to agroforestry. Farmers are organized into farmer groups of roughly 35 farmers by WETPA.
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	Yes

	government, local organizations and institutions.	
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	Yes

		Acorn formally approves a waiver.	
	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	The type of land tenure among the target farmers/group is formal private/individual land tenure where the owner has control rights and user right for growing subsistence crops and on - farm tree growing. Therefore the House hold members have right to carbon rights since she/he have the ownership of the land and each and every farmer has a Title deed.
	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.	The current land use activities by participants are the integration of agricultural crops, trees, animals and/or bees in an agrosilvopastoral agroforestry system. The main cash crops in the area are sugarcane and maize.
	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	Yes

	ensures a durability period of 20 years.	
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 species of the project area.	This project is in the western region of Kenya with tropical climate because of variation in altitude. All three counties experience heavy rainfall all year round. Mean annual temperatures range between 18°C and 28° Celsius across the region year-round. Higher temperatures are registered in March, whereas lower temperatures are registered in June-August. Kenya's rainfall seasons are heavily affected by the Inter Tropical Convergence Zone (ITCZ) which determines four different seasons (JF: warm dry season; MAM: warm wet season; JJAS: cool dry season; OND: short wet season). The main tree species found in this region include but not limited to; Eucalyptus spp, Elgon teak, Casuarina equisetifolia, Cupressus spp, Acacia mearnsii, Grevillea robusta, Makhamia lutea, Persea americana, Calliandra callothyrsus, Croton spp, Sesbania sesban and Mangifera indica, and other indigenous spp.description of current ecosystem and species. Fauna species include various species of local

birds and monkeys. Not much wildlife is present on the farm land but instead other more suitable habitat land types.

Participant eligibility checklist			
Topic	Sub-topic	Requested information	Result
Organizational Capacity	Smallholder labour force	Participants are not structurally dependent on permanent hired labor, and manage their land mainly by themselves with the help of their families.	Yes
	Smallholder farm size	The cultivated land of participants does not exceed 10 ha.	Yes
	Resources	Participants have the ability to mobilize the necessary resources to implement the project.	Yes
	Data collection	Participants can allow reliable data to be collected for the project (i.e. GPS polygons, phone numbers, other KYC data).	Yes
	Condition (i)	Participants are aware that their decision to participate in the project is entirely voluntary.	Yes
	Participant identity	Participants are able to provide proof of their identity.	Yes
Tenure & rights	Land-tenure and carbon rights (i)	Provide a description of how land tenure is organized.	The land tenure system among the targeted farmers is formal individual/private land tenure where the farmer has ownership, control, access and benefit rights for implementing sustainable agriculture based on agroforestry practices including growing subsistence crops and on-farm tree growing. This is an assurance that the household members have the right to carbon rights since S/he has the land title deed giving them the ownership of the land (see Annex 2).
	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.	The current land use activities by participants are the integration of agricultural crops, trees, animals and/or bees in an agrosilvopastoral agroforestry system. The main cash crops in the area are sugarcane and maize.
Deforestation	Participants confirm that no deforestation has taken place five years before the start of the project intervention (project baseline). If this cannot be confirmed, a description of the cause of the deforestation is provided, including the measures that have been taken to prevent deforestation from happening again.	Yes
Additionality	Participants ensures project additionality and is aware that the project has a durability period of 20 years.	Yes
Existing agroforestry (i)	Participants confirm agroforestry at the farm level has been implemented less than 5 years ago.	Yes
Existing agroforestry (ii)	Participants confirm that previously sequestered CO ₂ on the land has not yet been monetized.	Yes
Current habitat	Provide a description of the current ecosystem and species of the project area.	This project is in the western region of Kenya with tropical climate because of variation in altitude. All three counties experience heavy rainfall all year round. Mean annual temperatures range between 18°C and 28° Celsius across the region year-round. Higher temperatures are registered in March, whereas lower temperatures are registered in June-August. Kenya's rainfall seasons are heavily affected by the Inter Tropical Convergence Zone (ITCZ) which determines four different seasons (JF: warm dry season; MAM: warm wet season; JJAS: cool dry season; OND: short wet season). The main tree species

found in this region include but not limited to; Eucalyptus spp, Elgon teak, Casuarina equisetifolia, Cupressus spp, Acacia mearnsii, Grevillea robusta, Makhamia lutea, Persea americana, Calliandra callothyrsus, Croton spp, Sesbania sesban and Mangifera indica, and other indigenous spp.description of current ecosystem and species. Fauna species include various species of local birds and monkeys. Not much wildlife is present on the farm land but instead other more suitable habitat land types.

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 ³ below or equal to 0.8.	The HDI score of Kenya is equal below 0.8, measuring 0.584.	
(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.	FFSPAK work with key partners like Kenya forest service who guide the project in the compliance of the laws and regulations in respect to farm forestry in Kenya. See the UNFCCC nationally determined contribution of Kenya, under which agroforestry projects are not mandatory.	
(c) The project is located in a region with a mean annual precipitation of less than 600 mm.	No Busia and Bungoma both receive 2109mm rainfall and Kakamega receives 2494mm.	
(d) The project area is (predominantly) located in a country or region with a recent UNDP Human Development Indicator below or equal to 0.6.	The HDI score of Kenya is below 0.6, measuring 0.584.	
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	<ul style="list-style-type: none"> WETPA are financially limited in terms of quality training they can offer farmers in agroforestry and capacity building. Farmers try to seek additional income from planting eucalyptus trees, and without knowledge and supplies for maintenance, these trees are dying. Farmers are unable to afford and lack access to quality seedlings/germplasm and depend on limited planting materials from small-scale local nurseries run by farmers/families 	<p>Acorn and Agriterra are creating a business case with WETPA and FFSPAK to secure further funding for the creation at least 3 new central nurseries within each sub county of the ACORN project areas in 3 years' time and supporting the existing nurseries to aid in seed collection and remove the constraint farmers face by depending only on unreliable small-scale local nurseries run by farmers/ families. This business case/model will create independent income for FFSPAK and WETPA, which will be used for enhancement of training and access to planting materials and scaling of the project. Farmers will also be trained by FFSPAK to develop their own nurseries for a sustainable supply of seedlings for new nurseries.</p>

Ecological barrier

Rainfall events have become more extreme, episodic, and intense, making it challenging to predict the quantity of rainfalls in season and crop cycles. Increasing trends in heavy rainfall have been detected by the meteorological stations in Kakamega County. These periods of heavy rainfall often lead to flash floods and a loss of top soil and biodiversity, and increased pests and disease outbreaks. Although such a significant amount of rain is received in the project area, farms also undergo periods of drought between intense rainfall episodes, further degrading the soil in terms of reduced water and soil moisture availability. In addition to extreme weather, most of the farms have exhausted soil fertility due to intensive use for agricultural activities. The strong trend of farmers only planting eucalyptus trees in project area are further reducing soil health and biodiversity due competition of crops and native flora and fauna with eucalyptus trees for nutrients/water. With increasing surface temperatures and flooding from climate change, crop production is expected to decline, with losses from decreased productivity possibly ranging between 32\$ha and 178\$ha⁴.

Agroforestry is an upcoming sustainable farming practice that is known for restoring soil health and fertility. This is due to the trees acting as a barrier to heavy rainfall and preventing erosion of soil, while adding nutrients to the soil if the right types and mix of trees are integrated. The trees also shade the soil and crops from the increasing temperatures and act as a refuge for native fauna who are fleeing the extreme weather conditions. Before this project, farmers were set on planting just eucalyptus trees for commercial purposes on their farm, without knowledge on how to prepare the land, how to plant and how to maintain the trees. Therefore, their existing agroforestry systems were failing them, with trees dying and no benefits seen for the soil. The carbon finance farmers will receive from WETPA in partnership from Acorn provides farmers with the incentive to transform their land from crops and a few eucalyptus trees to a fully functioning agroforestry system with a mix of trees that are beneficial for soil (nitrogen fixing), that provide fruit and seeds for farmers and shade for crops and soil. WETPA will use the carbon finance they receive to ensure farmers continue to receive high quality seedlings (that are ideal for soil regeneration and protection) to continue planting year after year, regular training on how to maintain their trees in the long term (20+ years) and awareness on the importance of shifting away from eucalyptus to build climate resilience and biodiversity. In comparison with crops, many fruit trees (i.e. mango and avocado) show high and increasing suitability to the rainfall conditions arising from climate change, therefore, providing farmers with a source of food or product to sell even in times with extreme weather events. In

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<https://openknowledge.worldbank.org/bitstream/handle/10986/7276/wps4334.pdf?sequence=1&isAllowed=y>

	<p>this agroforestry system, farmers will have less soil erosion, low on farm temperatures, less reduction in productivity, more access to food. The carbon finance offered also offers farmers a stable source of income in times of drought and flooding and a means to alter and adapt their farm infrastructure to be more resilient to climate change.</p>
<p>Social barrier</p>	<p>There has been increased demographic pressure on land due to an increase in population in the project areas and unsustainable farming practices and climate changes creating more unfavourable land with degraded soil and less favourable land. By 2030, Kenya's population is forecasted to grow to 60.4 million people, leading to increasing food demand and limited land availability in the project area.</p> <p>Through the project, more farmers will be recruited and sensitized on agroforestry and can integrate agricultural crops with trees that supply fodder, medicine and fruit on the same piece of land. In addition to these marketable and consumable tree-derived products, farmers will receive an additional and more stable income from carbon finance, keeping them motivated to optimize and maintain their system within their existing land in the long term without the need for expansion of farmland. This removes the barrier farmers are currently facing in terms of a lack of area to optimal farm productivity. In this project farmers will be regularly taught how to optimize land use for productivity, such as advice on specific trees types and combinations and how many can be planted among crops for the most benefits (emphasizing spacing and shading requirements). WETPA will use the carbon finance they receive to invest in high quality seedlings such as those for fruit trees to ensure farmers have their own supply of nutritious fruits in times where food insecurity is high due to the increasing food demand in the region.</p>
<p>Cultural barrier</p>	<ul style="list-style-type: none"> • Farmers in the targeted area have limited skills and knowledge on the importance of agroforestry in terms of conservation of natural resources, climate resilience, increased soil health, farmer livelihood etc. • Farmers would only plant eucalyptus trees on their land for commercial purposes only without <p>Farmers will receive training on how to implement a successful agroforestry system and awareness and sensitization to educate farmers on the benefits of such a system in terms of conservation of natural resources, climate resilience, increased soil health, farmer livelihood etc. To be sure that this knowledge is strengthened further, farmers will undertake exchange & benchmarking visits which allow farmer to farmer</p>

the project due to the high trend of this in the project area.

- Farmers were unaware that they could receive carbon finance for planting trees and maintaining them in a long-lived agroforestry system.

learning and exchange of knowledge among farmers and the community. The business case that is being created by Acorn and Agriterra, will demonstrate that the integration of trees for fodder medicine and fruit in an agroforestry system and the reward of carbon finance is more financially interesting to farmers in comparison with eucalyptus harvesting. Therefore, farmers have necessary proof to commit to the transition of their agroforestry system and maintain and enhance it over the life of the project.

Overall conclusion:

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

Tree Level

This agroforestry project led by WETPA was established in 2018. At this time farmers were planting predominantly eucalyptus trees for commercial purposes, however WETPA wanted to move away from this invasive spread of eucalyptus to a more sustainable system including trees for fruit, fodder and medicine. When engaging with farmers about what they wanted or needed to transition away from eucalyptus, carbon finance became a favourable option. The idea for compensating farmers for their sustainable change in agricultural practices and planting of trees arose from a positive experience WETPA had in securing carbon credits for dairy farmers in another region of Western Kenya. Therefore, the promise of carbon credit is what is enabling farmers to transition to a more sustainable long-term agroforestry system. The first trees were planted by in 2018 during the short rains(August- early Oct). Depending on the availability of resources such as seedlings, rainfall patterns and land availability, farmers plant additional trees gradually over many years. This contributes to varying ages of trees on farms (young, middle, and mature). If farmers have optimal conditions and resource they on average plant 50-100 seedlings each year for 5 years. The carbon credits farmers receive for the trees planted in the project are ex-post based and will only be derived from one year before CRU issuance. 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

In the project area, the poverty rate is 32.4%. Farmers have very low income and struggle with access to finance leading to poor standards of living. There is currently a rapid trend of loss of favourable (fertile) land in the project area due to soil degradation from climate change and a limited land availability in general due to population increase. This lack of land results in farmers unable to expand their farms and generate more income. Without project intervention, farmers faced barriers to transitioning to a long-term and sustainable agroforestry systems, such as inadequate knowledge on the role of agroforestry in environmental protection, climate resilience, food production, soil conservation and in promotion of resilient livelihoods. Therefore, farmers would plant only eucalyptus trees on their farms for commercial purposes, however, without support there was a high occurrence trees failing to thrive and competition with crops. Farmers also struggle to afford planting materials and inputs and are facing a significant increase

in inputs costs, with pesticides and synthetic fertiliser increasing by 6 times the original amount in the last year alone. Planting materials, such as seedlings, are also in limited supply in the project area with farmers depending on locally run farmer/family nurseries.

Although farmer have been implementing agroforestry systems already for the past few years (which was possible thanks to grant funding from FAO, Vi Agroforestry and Agriterra), farmers are still planning to grow more and better quality trees on their farms. Until now they haven't been able to plant as much as they want because they are lacking a financial resources to do so. An additional income stream in the form of carbon finance will allow and motivate these farmers to plant more trees on their plots. Furthermore, more advice will be given to farmers on successful agroforestry models, which will lead to more sustainable long-term agroforestry systems. Acorn and Agriterra are working with WETPA to build a strong business case that clearly demonstrates to farmers that carbon finance, the benefits of tree derived products (fodder, fruit, medicine etc), and the increase in productivity are more financially interesting for these farmers than eucalyptus.

Farmers will also be educated on the long-term benefits of an agroforestry system in terms of conservation of natural resources, climate resilience, increased soil health, farmer livelihood etc. To be sure that this knowledge is strengthened further and farmers understand the importance of ecosystem service benefits, farmers will undertake exchange & benchmarking visits which allow farmer to farmer learning and exchange of knowledge among farmers and the community. However, knowledge alone is not enough, which is why WETPA will use their share of the carbon finance to create at least 3 new central nurseries within each sub county of the ACORN project areas and supporting the existing nurseries in different localities. This support will aid in seed collection and remove the constraints farmers face depending on limited farmer/community run local nurseries. WETPA will also ensure farmer receive high quality seedlings that are ideal for soil regeneration and protection, and provision of fodder, fruit, medicine etc. to continue planting year after year, and regular training on how to maintain their trees in the long term.

The additional income stream from carbon finance will aid in transforming the economic status of these families, especially in the face of climate change and the impact of flooding and drought on productivity. Farmers are also able to use this extra income for better farm management, such as adapting infrastructure to climate change. Additionally, this more stable income from carbon finance will keep farmers motivated to optimize and maintain their system within their existing land in the long term without the need for expansion of farmland. This removes the barrier farmers are currently facing in terms of a lack of area for optimal farm productivity.

FFSPAK and WETPA's activities are currently funded by donors which can be irregular and whom have their own impact agenda. ACORN will enable FFSPAK and WETPA to develop a sustainable business model that will create independent income for FFSPAK and WETPA which can be used to further their mission and vision at scale. ACORN income (10% of CRUs) will be used by WETPA to improve advisory services to the members and improve and expand the existing nurseries.

Project level

WETPA does not work with a fixed number of smallholder farmers but with a constantly growing and expanding network of members with access to at least 10,000. WETPA's aim for this project is help farmers increase permanent tree cover in the area (thereby reducing carbon in the atmosphere) by transitioning to an agroforestry system where farmers benefit from carbon credits as transitional finance, the agro-ecological impact of the trees, and the tree-derived products. The first trees planted in the first years of this project are few compared with what will be planted over the following years with farmers committed to planting annually and WETPA's

intention to onboard more members from more villages and districts in Western Kenya. The Acorn project in the region will act as an eye opener to many farmers on how they can access the carbon market and carbon credits and understand the importance of ecosystem services offered by trees. Only focusing on the initial farmers who planted some trees in 2018, takes away from the additionality of the full project. The farmers expected to transition to agroforestry with the scaling of the project must also be considered. If farmers who transitioned to this long-term agroforestry system are not rewarded with income from the carbon credits as agreed, they may be discouraged from maintaining and scaling up their agroforestry interventions (continuing planting) after all their hard work and lack of significant benefits in comparison with what they would receive with planting eucalyptus only for commercial purposes. This lack of reward will reinforce unsustainable agroforestry concepts based around harvesting of eucalyptus in the community and among farmers, resulting in a barrier to scaling up.

There is still some doubt in the network of WETPA members as to whether they should move away from a eucalyptus only system. The solid business case that Acorn are helping to create for the project will work as a stronger incentive for more farmers to continue moving away from eucalyptus and to a more sustainable long-term agroforestry system. The success of the first farmers who will be financially compensated for the carbon they have sequestered will work as an extra stimulus to increase the participation of the wide range of farmers that WETPA could reach with the support of FFSPAK and Vi agroforestry. This has been demonstrated with farmers in this project happy with the idea of receiving carbon finance for their change in practices due to a former successful carbon credit program with WETPA in another location working with dairy farmers. Acorn provides carbon finance to the farmers and WETPA to overcome their financial barriers on a larger scale. The receipt of carbon finance by farmers will also work as a proof of and faith in the carbon credit system as a payment for investment for organisations willing to invest in the project as a whole to enable significant scaling in the future. Providing carbon finance to compensate Kenyan farmers is the only practical way to achieve scale and proof of concept.

Part D: Project Baseline Assessment

Number of participants surveyed		Total number of project participants	Percentage of total participants included in baseline		
46		1771	2.6		
Area	Indicator	Metric	Source	SDG	Result
Local livelihood	Farmer income from carbon finance	Revenue from CRU sales	Survey (information collected on the Acorn platform)	1, 2, 8	Not applicable at the start of the project.
	Nutritional variety	Number of food groups in the diet (see Appendix 7.9)	Household Dietary Diversity Score (HDDS) index survey ⁵	1, 2	Farmers consume on average 6-7 food groups
	Agricultural land use productivity	Farm output value per hectare per crop type [kg/ha/crop]	Survey (information collected on the Acorn platform), FAO TAPE Tool ⁶	1, 2, 8	Sugarcane = 25333kg/ha maize = 800kg/ha
Environmental improvement	Agricultural biodiversity	Crop/animal/pollinators count	Gini-Simpson Index survey ⁷	2, 15	54% (acceptable)

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

1. Farmer income from carbon finance

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

The current socio socioeconomic conditions in the project area are poor, with farmers having very low income seen by the rate of multidimensional poverty rate at approximately 67%. This poverty level is an underlying factor of climate vulnerability, as it limits both resilience and adaptive capacity. Farmers are facing rapidly increasing input prices with pesticides and synthetic fertiliser increasing in value by x 6 in the last year. The major economic activity is maize farming making the county a vital component of the county basket, other income earning activities include sugarcane farming and beekeeping. An average WETPA farmer household has a low financial income averaging to below 2 dollars a day and relies more on the food crops grown than those for commercial production. As part of project intervention, farmers will plant more trees yearly and receive a more stable and reliable income from carbon credit and income diversification through the selling of tree derived products such as fodder, fruits, and medicine.

This table will be complete in 2023 when farmers receive their first CRU payment.

⁵ [Swindale & Bilinsky, 2006](#)

⁶ [FAO, 2019](#)

⁷ [Izsák & Papp, 2000](#)

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

2. Nutritional Variety

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

By 2030, Kenya's population is forecasted to grow to 60.4 million people, leading to increasing food demand and limited land availability. Before project intervention, farmers would grow main food crops like beans, indigenous vegetables and maize crops on their farm with hardly any growing fruit trees. Farmers rely on the crops they produce on their farm for consumption, however the quantities are insufficient to feed the family until the next harvest during the two/one season(s) in a year. Out of the 46 interviewed participants, only 26 reported having enough food supply each day (2 meals a day). Of these 26 that have sufficient supply of food normally, they still have trouble feeding their family during May and June every year when they are out of stock/harvested farm produce. Farmer diets consist essentially of vegetables and cereals and lack variety. Less than 30% of farmers consume meats, fish, seafood, eggs, and sweets. In the case of fruits, consumption is expected to increase due to the proposed agroforestry trees, where farmers are advised to plant mainly fruit and nuts trees including avocado and mango. The higher production of fruit will increase variety in farmer diets and increase access to nutritious foods. In addition, project intervention is expected to improve farmers' financial status and diet through additional revenue from carbon finance and marketable products from trees.

II.) HDDS Index Survey Results.

Food group type	Amount of farmers consuming each food group (%)
Cereals	100%
Root and tubers	54%
Vegetables	100%
Fruits	48%
Meat, poultry, offal	26%
Eggs	22%
Fish and seafood	22%
Pulses, legumes, nuts and seeds	50%
Milk and milk products	83%
Oils and fats	80%
Sweets	22%
Spices, condiments and beverages	60%
Average number of food groups consumed: 6.7 food groups	

3. Agricultural Biodiversity

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

According to the Gini-Simpson index score of 54% the biodiversity is considered acceptable in the project area. However, there is currently a trend of loss of fertile land in the project area (soil degradation) due to climate change resulting in a reduction in biodiversity, especially in soil and flora species. Currently, the farmers farms grow food crops, cash crops, few agroforestry fruit trees and keep livestock. As part of project intervention, the diversity of tree species and number of trees will increase, agricultural crops promoted for intercropping will increase, and livestock farming will remain the same under the project intervention. This creates favourable conditions for biodiversity to increase (providing habitat and increasing health of soil and native fauna and flora – protection from impacts of climate change).

- II.) Do farmers undertake beekeeping on their land?

Yes, approximately 19% of surveyed farmers participate in beekeeping; WETPA farmers in the project areas are in bee keeping value chain as one of income generating enterprises. Though this is practiced by only few farmers in the area who got the support of the organization on beehives, some farmers also have their own individual beehives. Beekeeping has been part of initiatives promoted by WETPA towards increased food productivity in the project area.

- III.) Gini-Simpson Index Results.

Crops	Area	pi	p2	Livestock	number	equivalent	pi	p2
Maize	69,5	0,4595 041	0,211	Cows	199	199 x 1 = 199	0,91582 7	0,838739
Banana	26,45	0,1748 76	0,031	Chickens	490	.014 x 490 = 6.86	0,03157 1	0,000997
Cotton	1	0,0066 116	0,000	Pigs	25	.3 x 25 = 7.5	0,03451 6	0,001191
Millet	3	0,0198 347	0,000	Rabbits	9	0.02 x 9 = .18	0,00082 8	0,000001
Sugarcane	24,5	0,1619 835	0,026	Goats/ sheep	36	0.1 x 36 = 3.6	0,01656 8	0,000274
Beans	24,25	0,1603 306	0,026	Ducks	15	0.01 x 15 = .15	0,00069	0,000000
Cassava	0,25	0,0016 529	0,000					

Coffee	1	0,0066 116	0,000					
Groundnuts	0,3	0,0019 835	0,000					
Sweetpotatoes	1	0,0066 116	0,000					
Total	151,25		.30 (70%)	Total		217.29		.84 (16%)

Natural vegetation, trees and pollinators		
	Description	Value
Productive area with natural vegetation	On average, most farmers report to have around 75% of their farm covered by crops and other type of vegetation.	0.5
Pollinator Presence	Almost all farmers witness a regular presence of pollinators, being bees the most common type. Next to this, other species such as sunbirds ,hummingbirds ,mosquitos and ants are present but to a lesser extent. Finally, in a few cases monkeys have also been reported with occasional presence.	0.75
Beekeeping	Beekeeping is not a common practices among farmers. More specifically, 19% of surveyed farmers have indicated to have either wild or raised bees within their farms.	1
Average natural vegetation, trees and pollinators		75%
Agricultural Biodiversity Score		54%

IV.) List pollinator species in the project area.

Present in project area	Pollinator type
Regularly	Bees, sunbirds, hummingbirds , bats
Moderately	Ants , moths
Sometimes	Butterflies
Rarely	

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

Species (latin name)	Prevalence (Regularly/Sometimes/Rarely)
Sunbirds	Regularly
Monkeys	Rarely
Mongoose	Sometimes
Birds	Regularly
Snake	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	Project Influence (Positive)	Monitoring Objectives/Plan
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		(Culturally Significant/Vulnerable/Endangered/Critically Endangered)	/Negative)
Grey crowned crane	Endangered	The project promotes and encourage biodiversity and ecosystem conservation through agroforestry (tree planting and crop diversification) hence this is a positive impact	Monitoring and Evaluation Officer will ask Lead farmers/Community facilitators in the project areas twice a year about the availability of the HCV (High Conservation Values especially with own farm forest/trees conservation and the biodiversity including threatened wild animals, birds, insects like butterflies) of the threatened animal species, whether they have seen such species in the last 6 months in the project area then analyze this data and compile and document a report for sharing with the recipient. This will be through a simple questionnaire tracking on the biodiversity of the threatened species which will be developed and administered to lead farmer/Community Facilitators to collect data and then report to M&E Officer. This will be through online data collection app (Kobo Collect app).
Black crowned crane	Endangered		
Martial eagle	Endangered		
Ruppels vulture	Endangered		
White backed vulture	Endangered		
Falcon	Endangered		
Southern ground hornbill	Endangered		
Golden monkey	Endangered		
Arican grey parrot	Endangered		

4. Agricultural land use productivity

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

Productivity was low in the project area with unstable and low yields impacted from soil which had been degraded from intensive farming practices. Since the first trees have been planted in 2018, the farmers have experienced an increase in farm productivity (See Part L – 3.1). The impact of project intervention would be positive due to the promotion of the sustainable land use management/methods including nutrient management technologies (composting, mulching), agroforestry practices, agronomic practices, water control and management. All of which increase yield of the crops. In

addition, the tree-based products will contribute to overall farm productivity after the trees are fully productivity (5-7 years).

II.) Please fill in the table below.

Cash crop type	Yield of cash crop (kg/ha)	Amount of farmers cultivating cash crop (%)	Other crops contributing to productivity and their amount (%)
Beans	186.7	15%	Tomatoes, potatoes, sorghum and millet contribute to approximately 11% of total productivity
Maize	800.5	95%	
Bananas	850.0	20%	
Cassava	90.0	5%	
Groundnuts	97.5	10%	
Sugarcane	25333.3	30%	

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 <u>negative impact expected</u>)	Monitoring frequency	Responsible party
Nutritional Variety	The impact would be positive; this is because, the project is more concerned with setting up an agroforestry system/design to the participants/smallholder farmers. In this case agrosilvopastoral system would be most preferred. Farmers will be able to grow fruit trees (orchards) from the seedlings/saplings distributed to them, adopt sustainable methods of farming, diversifying crop varieties (legumes, corn, indigenous vegetables),	n/a	Annual	Nutritional variety will be monitored by WETPA through surveys collected as required by ACORN at least every 3 years.

	apiculture, livestock. All this will contribute to farmers having strong and reliable nutritional variety.			
Agricultural biodiversity	The project intervention will support the variety and variability of animals, plants (both domestic and wild, threatened animal species including birds) and micro-organisms at the ecosystem levels. This will result into a sustained ecosystem structures, functions and processes in and around production systems and that provide food and non-food agricultural products. This will be managed/monitored closely by farmer (s)/host (s).	n/a	Annual	Nutritional variety will be monitored by WETPA through surveys collected as required by ACORN at least every 3 years.
Farmer financial state	The impact of the interventions will be positive as the project intends to improve the livelihoods of the farmers through agroforestry and sale of CRUs which will pay farmers for the carbon credit. Majority of the smallholder farmers depend on agriculture for their livelihoods, growing mainly food crops. These farmers have low financial income (leaving below 2 dollars on a daily basis) realized from the agricultural produce.	n/a	Bi-annually	Financial state will be monitored by WETPA through surveys collected twice a year.
Agricultural land use productivity	The impact would also be positive as the project interventions will promote the sustainable land use	n/a	Annually	This indicator will be monitored by WETPA

	<p>management/methods including nutrient management technologies (composting, mulching), agroforestry practices, agronomic practices, water control and management This will be done once every year using survey (information from the ACORN platform)</p>			<p>through surveys.</p>
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Part E: Carbon Baseline Assessment

Carbon Baseline	
Requested information	Answer
Description of how eligibility of the land has been demonstrated	<p>The land tenure system among the targeted farmers across the WETPA ACORN project areas is individually/privately owned where the farmer (s) has/have ownership, control, access and benefit sharing rights of the land and resources on the land including forest, crop production. Some farmers have land that is in the name of their father/grandfather as it has been inherited with their passing. WETPA is supporting those farmers to obtain land tenure documentation in their name.</p>
Describe potential land tenure issues and measures taken to mitigate these	<p>The land ownership and control rights for a household is mainly by men. Women and Children has the accessibility and user rights to grow subsistence crops, trees and any other crops. This may result in the following issues:</p> <ul style="list-style-type: none"> • Poor benefit sharing within the household; WETPA will run awareness creation programs on gender equity and equality and having gender dialogue forums in resource access, utilization and ownership. They will also create awareness among households on equitable sharing of resource benefits. Gender equity/equality program involve activities including Gender Training workshops consisting of Gender mainstreaming, gender concept, and training on household joint planning and decision making and Fair Resource Allocations (FRAS+). Gender dialogue forum involves organizing Focused Group Discussions (FGDs) at community level with manageable groups of at least 15 and utmost 20 farmers per FGD each categorized with similar gender i.e groups of women, groups of men alone, groups of young females/girls, and groups of young males, and groups with special cases like PLWD. The sizes of the group depends on the participants and the facilitator ability to handle the groups. Discussions may be both in person or group dependent on the topic. Topics of discussion may vary with the demand/issues e.g Environmental Socio Economic Assessment (ESIA) of the project impacts, Community participation on policy (s) review e.g. environment, gender, child protection policies • Decision making on land use system; WETPA will hold capacity development programs focusing on joint planning and decision making to encourage adoption of family farming and participatory decision making in the household. WETPA will use the CRUs payments, inputs e.g. seedlings and trainings on tree nursery establishment and tree management, open learning/exchange visit, financial literacy and credit management as an incentive to onboard more farmers hence more agroforestry trees established

	<p>and increased participatory in planning and decision making by farmers. ; Furthermore, a follow up on the above will be done to justify the status/outcome for the trainings.</p>
<p>Description of current land use</p>	<p>The current land use activities by participants are the integration of agricultural crops, trees, animals and/or bees in an agrisilvipastoral agroforestry system. The main cash crops in the area are sugarcane and maize which represent only 10% of the land, the remainder is used for subsistence crops. Other cultivated species in the project area include beans, onions, kale, avocado and other indigenous vegetables. Tree species present in the project area include <i>Grevillea robusta</i>, <i>Cupressus lusitanica</i>, <i>Eucalyptus grandis</i>, <i>Calliandra calothyrsus</i> and others listed in Annex 10. Agroforestry trees are to be planted on roughly $\frac{3}{4}$ of the farm.</p> <p>Pests are controlled on the farm through the use of herbicides, insecticides, and fungicides. On average, approx. 2,500 L of pesticides are used in the project area per year, of which approx. 32% are fungicides, 36% are insecticides, and 32% are herbicides. Farmers also report using fertilizers, both organic and inorganic. Some examples include DAP, cow dug, compost manure, farmyard manure, green manure for organic fertilizers, and CAN, calcium ammonium nitrate, and folia spray for inorganic options. On average, participants use approx. 42,000 L of fertilizers in their farms yearly, of which 32% accounts for organic fertilizers and the remaining 68% for inorganic options.</p> <p>As many farmers use fertilizers and herbicides, these also leach into the Lake, damaging the ecosystem, causing proliferation of invasive algae and hyacinth, and encouraging eutrophication. With increasing surface temperatures and flooding, crop production is expected to decline, with losses from decreased productivity possibly ranging between 32\$ha and 178\$ha⁸.</p> <p>Without project intervention, the amount of land used for sugar cane would increase (which is against new agroforestry design). Instead of cover $\frac{3}{4}$ of their land in agroforestry trees, they would instead plant much less trees (due to costs of inputs and increase in sugar cane area) and those trees would be just eucalyptus as has been demonstrated in the past (something WETPA are changing with this project). Planting of only eucalyptus trees would have a negative impact on biodiversity and crops as it is an invasive species and has a high profit resulting in farmers cutting down their trees for profit</p>

8

<https://openknowledge.worldbank.org/bitstream/handle/10986/7276/wps4334.pdf?sequence=1&isAllowed=y>

<p>Description of current habitat species</p>	<p>This project is in the western region of Kenya with tropical climate because of variation in altitude. All three counties experience heavy rainfall all year round. Mean annual temperatures range between 18°C and 28°Celsius across the region year-round. The main tree species found in this region include but not limited to; <i>Eucalyptus grandis</i>, <i>Elgon teak</i>, <i>Casuarina equisetifolia</i>, <i>Cupressus lusitanica</i>, <i>Acacia mearnsii</i>, <i>Grevillea robusta</i>, <i>Markhamia lutea</i>, <i>Persea americana</i>, <i>Calliandra calothyrsus</i>, <i>Croton megalocarpus</i>, <i>Sesbania sesban</i> and <i>Mangifera indica</i>, and other indigenous spp (see Annex 10). In addition the project area is also known for being home to different animal species. In this regard, the most common pollinators are for example bees, moths , butterflies , bats and to a lesser extent monkeys, which have been seen in rare occasions. Next to this, some relevant species due to their conservation status are vulture species , falcons , african grey parrott and martial eagle.</p> <p>Without project intervention, the biodiversity would decrease because farmers would plant only eucalyptus trees that are invasive and compete against and kill important native species that provide food and shelter for native wildlife. Without diverse agroforestry trees and crop diversification (project goals), there would be a lack of complete ecosystem functions, hence a lack of abundance and diversity of flora and fauna species. In addition, farmers would continue to use pesticides and fertilizers unsustainably resulting in damage to lake ecosystems.</p>
<p>Description of deforestation potential</p>	<p>WETPA, FFSPAK, Agriterra and Vi Agroforestry, all confirm that no deforestation is or has taken place in the project area through tree survival surveys conducted in 2020 and 2022. This subjective data paired with the technical data received from the T-5 check (see question 2 below) demonstrated no deforestation in the past 5 years. Please see Part K for project mitigation measures to ensure deforestation remains a low risk in the project area.</p>
<p>Description of trees species <2m and their distribution</p>	<p>In the project area, the trees species smaller than 2 metres and their approx. distribution in the project area include:</p> <p>Low distribution</p> <ul style="list-style-type: none"> • Banana trees (<i>Musa spp</i>) • Indigenous tree spp (e.g <i>Markhamia lutea</i>, <i>Casuarina equisetifolia</i>, <i>Maesopsis eminii</i>) • Fruit trees/Orchard (e.g <i>Mangifera indica</i>, <i>Persea americana</i>, oranges, <i>Casimiroa edulis</i>) • <i>Cupressus spp</i> <p>Medium distribution</p> <ul style="list-style-type: none"> • <i>Grevillea robusta</i> <p>High distribution</p> <ul style="list-style-type: none"> • <i>Eucalyptus grandis</i> (woodlots) <p>The Eucalyptus below 2m (young trees), are higher. This is due to; (i) their high survival rates compared to other tree species, (ii) they</p>

	do well in a woodlot (s) set up of many trees (iii) farmers perceived eucalyptus to bring high returns. The trees are set in woodlots late last year before implementation of ACORN at WETPA. Farmers have section of their farm especially outside cropland either in waste land, boundaries & woodlots separate where they establish the eucalyptus woodlot
Number of existing trees $\geq 2m$	25830
Number of existing trees older than 5 years	7221
Coverage percentage of existing trees older than 5 years	28

1. Existing tree species list.

Species >2m (Latin name)	Number	Species >2m (Latin name)	Number
<i>Acacia brevispica</i>	7	<i>Ficus sycomorus</i>	187
<i>Acacia drepanolobium</i>	34	<i>Ficus thonningii</i>	11
<i>Acacia polyacantha</i>	12	<i>Fraxinus berlandieriana</i>	52
<i>Acacia pycnantha</i>	5	<i>Gmelina arborea</i>	73
<i>Acacia senegal</i>	10	<i>Grevillea robusta</i>	2912
<i>Acacia spp.</i>	132	<i>Grevillea spp.</i>	2249
<i>Acer palmatum</i>	7	<i>Grewia bicolor</i>	18
<i>Acer spp.</i>	16	<i>Grewia mollis</i>	11
<i>Acrocarpus spp.</i>	21	<i>Grewia spp.</i>	19
<i>Afrocarpus spp.</i>	5	<i>Hyphaene compressa</i>	6
<i>Albizia coriaria</i>	485	<i>Jacaranda mimosifolia</i>	336
<i>Albizia glaberrima</i>	18	<i>Jacaranda spp.</i>	52
<i>Albizia gummifera</i>	79	<i>Jatropha spp.</i>	29
<i>Albizia julibrissin</i>	10	<i>Julbernardia paniculata</i>	7
<i>Albizia spp.</i>	150	<i>Kigelia africana</i>	2
<i>Albizia zygia</i>	54	<i>Lantana camara</i>	19
<i>Annona sp.</i>	1	<i>Leucaena leucocephala</i>	20
<i>Apodytes dimidiata</i>	6	<i>Leucaena spp.</i>	5
<i>Araucaria araucana</i>	1	<i>Macadamia spp.</i>	4
<i>Artocarpus heterophyllus</i>	290	<i>Maesopsis eminii</i>	37
<i>Asimina triloba</i>	105	<i>Maesopsis spp.</i>	3
<i>Asphodeline lutea</i>	7	<i>Mangifera indica</i>	1148
<i>Azadirachta indica</i>	143	<i>Markhamia lutea</i>	1918
<i>Balanites aegyptiaca</i>	10	<i>Melia azedarach</i>	54
<i>Balanites spp.</i>	4	<i>Milicia excelsa</i>	18
<i>Bamboo</i>	36	<i>Millettia dura</i>	9
<i>Bambusa sp.</i>	8	<i>Moringa spp.</i>	4
<i>Bambuseae</i>	4	<i>Musa acuminata</i>	584
<i>Bidens pilosa</i>	2	<i>Musa spp.</i>	1576

<i>Bidens spp.</i>	35	<i>Olea capensis</i>	80
<i>Bischofia javanica</i>	7	<i>Olea europaea</i>	70
<i>Blighia unijugata</i>	8	<i>Olea welwitschii</i>	2
<i>Bridelia micrantha</i>	12	<i>Parkia filicoidea</i>	19
<i>Bridelia spp.</i>	10	<i>Paulownia spp.</i>	35
<i>Calliandra calothyrsus</i>	51	<i>Paulownia tomentosa</i>	49
<i>Calliandra spp.</i>	8	<i>Pericopsis angolensis</i>	9
<i>Callistemon salignus</i>	7	<i>Persea americana</i>	1634
<i>Carica papaya</i>	499	<i>Piliostigma thonningii</i>	1
<i>Casimiroa edulis</i>	55	<i>Pinus spp.</i>	297
<i>Cassia spp.</i>	8	<i>Platanus occidentalis</i>	67
<i>Cassipourea ruwensorensis</i>	1	<i>Podocarpus falcatus</i>	101
<i>Casuarina equisetifolia</i>	34	<i>Podocarpus latifolius</i>	201
<i>Casuarina spp.</i>	14	<i>Podocarpus spp.</i>	8
<i>Cecropia angustifolia</i>	6	<i>Polypteris senegalus</i>	16
<i>Cecropia spp.</i>	5	<i>Polyscias spp.</i>	2
<i>Celtis africana</i>	30	<i>Prosopis cineraria</i>	1
<i>Citrus limon</i>	1	<i>Prunus africana</i>	5
<i>Citrus sinensis</i>	56	<i>Psidium guajava</i>	1015
<i>Coffea arabica</i>	9	<i>Rauvolfia spp.</i>	3
<i>Combretum aculeatum</i>	1	<i>Rhus natalensis</i>	5
<i>Combretum collinum</i>	128	<i>Rhus vulgaris</i>	8
<i>Combretum molle</i>	15	<i>Ricinus communis</i>	5
<i>Cordia africana</i>	131	<i>Saba comorensis</i>	3
<i>Cordia alliodora</i>	13	<i>Sapium ellipticum</i>	2
<i>Cordia spp.</i>	4	<i>Saraca asoca</i>	10
<i>Croton macrostachyus</i>	917	<i>Sarcocephalus latifolius</i>	1
<i>Croton megalocarpus</i>	18	<i>Schefflera volkensii</i>	403
<i>Cupressus lusitanica</i>	7	<i>Sesbania grandiflora</i>	158
<i>Cupressus sempervirens</i>	6	<i>Sesbania sesban</i>	105
<i>Cupressus spp.</i>	663	<i>Sesbania spp.</i>	18
<i>Diospyros mespiliformis</i>	2	<i>Sideroxylon inerme</i>	13
<i>Diospyrus scabra</i>	3	<i>Solanum betaceum</i>	3
<i>Dombeya rotundifolia</i>	113	<i>Spathodea campanulata</i>	400
<i>Dombeya torrida</i>	5	<i>Spathodea spp.</i>	4
<i>Dovyalis caffra</i>	5	<i>Strombosia scheffleri</i>	2
<i>Elaeis guineensis</i>	17	<i>Strychnos spinosa</i>	17
<i>Elaeodendron buchananii</i>	2	<i>Sueda monoica</i>	21
<i>Eriobotrya japonica</i>	24	<i>Swietenia mahogoni</i>	37
<i>Erythrina abyssinica</i>	95	<i>Syzygium cumini</i>	316
<i>Eucalyptus globulus</i>	19	<i>Syzygium sp.</i>	305
<i>Eucalyptus spp.</i>	3631	<i>Tamarindus indica</i>	4
<i>Euclea divinorum</i>	21	<i>Teclea nobilis</i>	3
<i>Euphorbia candelabrum</i>	22	<i>Tithonia diversifolia</i>	12
<i>Euphorbia sp.</i>	1	<i>Trema orientale</i>	7
<i>Euphorbiaceae</i>	2	<i>Trema orientalis</i>	4

<i>Fabaceae</i>	4	<i>Trichilia emetica</i>	5
<i>Ficus glumosa</i>	15	<i>Vachellia abyssinica</i>	10
<i>Ficus lyrata</i>	91	<i>Vachellia seyal</i>	5
<i>Ficus natalensis</i>	9	<i>Vachellia xanthophloea</i>	3
<i>Ficus platyphylla</i>	18	<i>Vangueria infausta</i>	10
<i>Ficus religiosa</i>	11	<i>Vangueria spp.</i>	5
<i>Ficus spp.</i>	42	<i>Vepris nobilis</i>	3
		<i>Vernonia amygdalina</i>	36
		<i>Vitex doniana</i>	1
		<i>Vitex keniensis</i>	64
		<i>Vitex madiensis</i>	35
		<i>Warburgia ugandensis</i>	52
		<i>Ximenia americana</i>	3
		<i>Zanthoxylum gillettii</i>	35

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

Outcome	Number	Plot ID	Reason for failure
PASS	1771		
FAIL	0	n/a	n/a

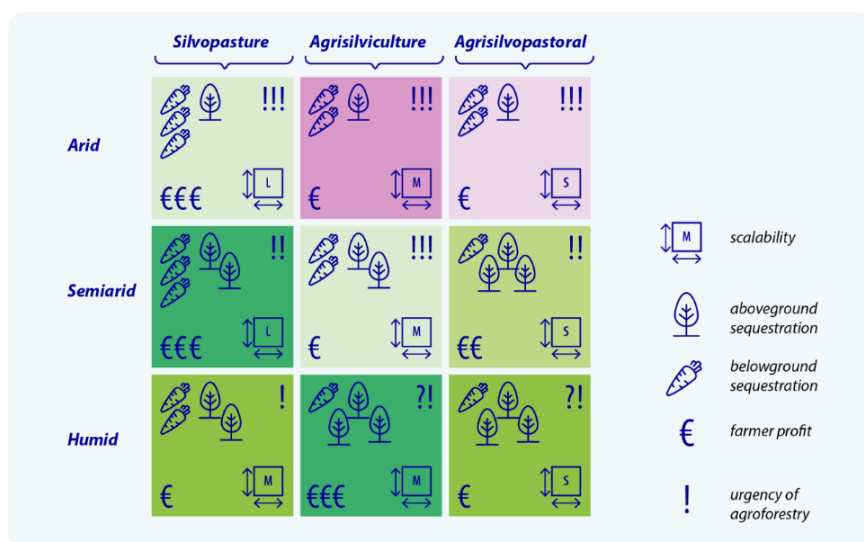
3. Provide a description of the ecoregion(s).

The Victoria Basin forest-savanna mosaic is centred around Lake Victoria and is most predominant in Uganda but also covers an area of Western Kenya and multiple other neighbouring countries. This eco region has a tropical climate with temperatures averaging from 27 to 15 degrees Celsius. The majority of rain is expected in two seasons, March to May and August to November. This ecoregion is home to significant areas of savanna and woodland and some small forested areas, such as transitional rainforests which have both high and lowland species present. The section of the ecoregion covering Western Kenya contains forest at an elevation between approx. 1500 to 1700m with low rates of endemic flora and fauna species. Commonly found flora species include alangium, peacock flower, pear wood, bastard white/red stinkwood, drum tree, Budongo mahogany, orange-milk tree, river macaranga, umbrella tree, calabash nutmeg, East African newtonia, aningeria, jumping seed tree, Guinea waterberry and lemonwood. Common fauna species include elephants, primates, water birds, amphibians and reptiles.

Part F: Project Activities

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

The agroforestry system that the project will implement with WETPA is Agrosilvicultural (trees and crops). However, farmers do have livestock but this area of the farm will be separate to the agroforestry plot. The project will improve the yield of food crops and food security as well as putting more money in the farmers pocket/increased income through sale of farm produce and CRUS generated by own farm agroforestry trees. The system is also inclusive of apiculture which are ecosystem service providers. The project is located in a hot and humid location in Western Kenya.



- For each agroforestry system fill out Table 2 below (use additional tables if necessary):

Type	Species	Species details		
		Native, naturalised or invasive?	If <u>naturalised</u> , 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	<i>Grevillea Robusta</i>	Naturalised	Require less labour	Soil conservation increase soil fertility, wind break
Tree	<i>Markhamia Lutea</i>	Native	Not applicable	Not applicable
Tree	<i>Persea americana</i>	Naturalised	This tree provides a source of highly nutritious calorie rich fruit (avocado) to ensure the farmer and their family can have an adequate diet.	This tree contributes to the conservation of soil and protects against erosion.

Tree	<i>Mangifera indica</i>	Naturalised	This tree provides a fruit rich in vitamins and antioxidants that the farmer and their family can consume, enhancing food security. Rotting fruit can also provide a source of food for livestock.	This tree contributes to the conservation and amendment of soil through shade and organic matter and protects against erosion.
Tree	<i>Calliandra calothyrsus</i>	Naturalised	When this tree is pruned it is used as a source of fodder for livestock. It is also a bee forage plant. multipurpose use	This tree contributes to erosion and weed control, provision of shade, and soil improvement (i.e. nitrogen fixation and storing moisture)

Growth management	
Preparation and Planting	<p>Planting a tree begins with; (i) site assessment (cropland, woodlot site, boundary/homestead), (ii) soil improvement/humus to be used in planting preparation, (iii) Dig the planting holes of at least 15 cm in depth. The diameter of the hole varies from the tree species, (iv) Space for root development. The larger the tree, the more the top soil and tree soil will be needed for root development. (v) Prepare the vegetation. Control competing vegetation before tree planting. Vegetation control will vary in density and height. Having all these factors considered, plant your tree in the morning or late in the afternoon in equatorial regions.</p> <p>Trees/shrubs spacing; (i) larger shade trees need at least 10 meters (35ft) between trees for proper growth and root formation. (ii) Larger agroforestry/or any agroforestry trees like Avocado, <i>Grevillea robusta</i>, require at least 6 meters of space between the trees. (iii) Shrubs; space the shrubs closer together to create a dense refuge for birds, livestock feed and other wildlife as well as for nitrogen fixation on cropland where it is grown in lines across the farm.</p>
Tree/Shrub Management	Some tree species like <i>Grevillea</i> are pruned once a year, around October in most areas in Western region of Kenya just after their major spring flowering flush. <i>Markhamia lutea</i> are self pruned (natural pruning where the low-lying side branches naturally fall off/detach from the main stem of the tree). Avocados are harvested from March to September. Mangoes harvesting begins in November and peaks in December, through January and ends in March.
Crop Management	Farmers grow food crops (beans, maize, vegetables) intercropped with agroforestry trees and planted in boundary lines, alley cropping and ridges.

- Describe the project's agroforestry design/implementation plan (pruning, harvesting, spacing etc.).

Farmers in this project are following sustainable agricultural land management practices (SALM). WETPA promote 3 main/key SALM practices, thus Agroforestry (on farm tree growing on crop land),

nutrient management (Mulching, composting and manure) and soil and water conservation (harvesting and storage of rain water e.g dams, wells, terraces, contour bunds, trenches etc). Farmers must be able to understand what causes the deterioration of their livelihoods, in this case climate change, and how they can adapt to and mitigate it (SALMs) based on agroforestry. Farmers plant trees among crops such as beans, maize and vegetables (with spacings of >or=6m within rows /between trees) or on boundary lines over a period of 3 years to achieve a total of 122 per hectare as seen below:

Specie type	# trees/ha year 1	# trees/ha year 2	# trees/ha year 3	Survival rate (%)
<i>Grevillea robusta</i>	20	20	20	85%
<i>Persea americana</i>	5	0	0	70%
<i>Markhamia lutea</i>	15	10	10	70%
<i>Calliandra calothyrsus</i>	5	5	5	80%
<i>Mangifera indica</i>	5	2	0	65%

Seedlings are sources from 4 central tree nurseries along other 171 small tree nurseries that are often run by farmers and their families (56 Bungoma,53 Kakamega, 12 Busia, 50 Trans Nzoia 50). However, WETPA intends to support the establishment of at least 3 new central nurseries within each sub county of the ACORN project areas in 3 years' time and supporting the existing nurseries too. WETPA has been supporting their tree nursery farmers to obtain starter tree seeds from certified suppliers like Kenya Forest Research Institute (KEFRI).that promote diversity of parent trees. WETPA also trains farmers on seed collection/harvesting and processing. Some WETPA farmers could harvest tree seeds from their own farm trees. WETPA has 1 tree seed stand established in 2019 in Webuye East sub county of Bungoma county. However, WETPA intended to establish 1 in each county of operation. This would mean that WETPA has a deficit of 2 tree seed stands/seed bank to establish within 3 years one in Kakamega and another in Busia. Seed sourcing begins each year in March as trees are seasonal and varied. Between 2020 and 2021, the average production of seedlings increased by up to 40% and is constantly increasing as farmers are onboarded to the project. With the establishment of such nurseries/seedbanks/orchards, WETPA will promote farmers to continue planting to achieve an optimal density of 300 trees per hectare. Farmers can therefore use their carbon income to increase the number of trees planted on their land for maximum benefit of the agroforestry system. Please refer to the Sustainable Agriculture Land Management (SALMs) based on Agroforestry system manual for information on agroforestry practices, available upon request from Acorn.

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

Project intervention/tree species	Expected carbon benefit/ha	Project period used
<i>Grevillea robusta</i>	31.56	5 years for all species
<i>Persea americana</i>	24.19	
<i>Markhamia lutea</i>	21.20	
<i>Calliandra calothyrsus</i>	1.82	
<i>Mangifera indica</i>	31.32	

**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 agroforestry species which will be planted by farmers will provide benefit to agricultural crops and soil in terms of shade (for farmer and farm), nitrogen fixation, erosion, weed and moisture control,

natural pest control (insect repellent trees), and even livestock by provision of manure/humus and fodder for animals. This creates favourable conditions for enhancing ecosystem service and biodiversity in the face of climate change.

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?).

The 5 trees promoted in the agroforestry design are either native or naturalised and have been selected based on their existence with each other in the landscape. The combination of these trees has been witnessed in other successful agroforestry farms in western Kenya. To ensure trees can grow harmoniously with crops, farmers will follow the spacing practices when planting (to avoid competition for resources such as nutrients and light) and undertake pruning (to avoid overshadowing) as tree fodder is part of the agroforestry design this gives farmers extra motivation to keep their trees well pruned so they benefit from this tree product. To combat the risk of water scarcity with the planting of the avocado tree, WETPA is promoting water harvesting technology and structures like digging wells, boreholes, water ditches which has increased land productivity and income at household level.

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 on their behalf and determine a decision-making mechanism for the project council.

The project council will consist of local partner, Chairman WETPA, Project Contact person/Coordinator Acorn, and project Accountant, field officers, influential community members and elected project council lead farmers. The local partner selects representative lead farmers in each district based on their capacity to lead and engage with farmers in their district and communicate with WETPA. These farmers will be voted into the council by a random sample of participants in each district. The project council meetings will take place twice a year during the beginning of the wet and dry season in the center of the town with least travel distance for farmers. The decision making mechanism for the council will be decided upon mutually by all members during the first meeting.

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

The organization project council will be run in an open and transparent participatory manner including active discussion of all members on the topics listed in the Acorn Project Council Slides. WETPA will only facilitate discussion instead of disseminating information. Participating farmers will be asked for their opinion and feedback on each topic required by acorn (i.e. agroforestry design, farmer payments, monitoring etc.) and this will be recorded in the minutes.

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	District	Years participating in council
Farmer 1	Male	Webuye East	0
Farmer 2	Female	Webuye East	0
Farmer 3	Male	Kakamega Malava	0
Farmer 4	Female	Kakamega Malava	0
Farmer 5	Female	Lugari	0
Farmer 6	Male	Busia Teso South	0
Farmer 7	Male	Busia Teso North	0

4. Describe the grievance mechanism for this project, including;
 - a. The method for communicating grievances (whatsapp/phone, email, facebook, meeting, letters, anonymous box etc.)
 - b. How you ensure that complaints and/or recommendations can be done at any time and can be identified or be anonymous.
 - c. The process in place to ensure grievances raised are dealt with in a transparent, fair and timely manner (e.g. chain of escalation).
 - d. How the grievance mechanism is communicated to participants.

This project has a structured communication running bi-directionally between management and farmers. At the management level is a WhatsApp group page composed by executive and technical staff. Each technical staff are in charge of farmer groups. The farmer groups are headed by community facilitators. There are approx. 177 farmer groups across the WETPA_ACORN project areas (Webuye East 15, Kakamega – Lugari 50, Kakamega – Malava 48, and Busia 64). This way, the information/update flows from management, staff, through Community facilitators down to farmers and community members for any project updates/ knowledge and for any feedback and grievances

information flows from community and farmers back the same way to management (community facilitators are often informed by preference of farmer verbally and in person).

WETPA has in place a whistle blower policy (available upon request from Acorn) to help farmers to whistle blow their issues freely and confidently to the organization without fear of being exposed. Farmers can do this through letters, email, or some farmers who don't want their identity kept unknown could also opt to express their grievances through WhatsApp, phone calls/SMS, or book appointment with the management/key officials. Farmers can submit grievances at any time through farmer group leader or community group leaders, who will then communicate this to WETPA (field officers and management), or they can raise it in project council meeting to be discussed and resolved in a participatory manner if it does not require urgent action. The chain of escalation involves farmer to community leader, community leader to field officer, and field officer to management. 3 executive members and the chairman make up the management team at the top, however the chairman appoints a temporary independent conflict management/resolution team (that is well represented in terms of gender, geographical area etc.) for grievances raised who will sit in a hearing of the grievance and contribute to the solution. The grievance mechanism is communicated to farmers during onboarding, farmer group meetings, project council meetings, Annual General Meetings (AGM) and/or during any other important gatherings involving farmer groups such as trainings.

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

Grievance reported	Action taken	Responsible party
Farmers were not happy having WETPA scan and store their land tenure documentation.	WETPA stopped scanning and collecting documentation and instead has explained to farmers that the documentation needs to be seen by WETPA and available on request during audits.	WETPA.

- 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).

Please see Annex 7 for project council reports and photos.

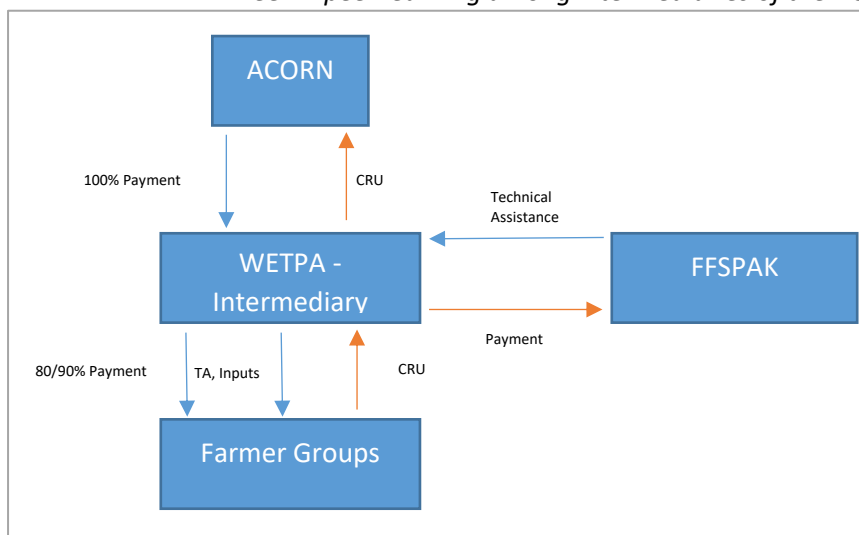
Part H: Organisational Capacity

1. Describe the relationship between FFSPAK and WETPA.

An MOU has been signed between FFSPAK and WETPA as FFSPAK (an apex organisation with 13 community-based organisations and over 25.000 members) will provide back end support to WETPA (the local partner engaged with members). The project is executed based on the implementation plan in Annex 3, involving different roles and responsibilities for FFSPAK and WETPA. ACORN will pay CRU income directly to WETPA and they will transfer this electronically to participants. FFSPAK are supported by grant funding and do not require any of the 10% CRU income that is directed to WETPA during the first year the data collection costs to establish the Acorn project at baseline. After baseline and during the long-term implementation of the project, WETPA will pay FFSPAK for services rendered regarding ACORN activities as displayed in the figure below. The services must be justifiable for payment to FFSPAK and will be assessed on an annual basis.

FFSPAK will support WETPA with capacity building regarding:

- Tree Nursery establishment and nursery,
- Species selection and site matching,
- Agro-forestry Model design,
- ACORN Platform support,
- Development of the business case,
- Enumerator Training,
- Trainers of Trainee(ToT),
- Peer-2-peer learning among intermediaries of the ACORN platform.



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

Western Tree Planters Association (WETPA) is a member-based organization registered with the registrar of societies of the republic of Kenya on 15th November 2006, under registration number 26762. The association has its headquarters located at Webuye town in Bungoma County and operates in four counties in western region of Kenya namely Bungoma, Busia, Trans Nzoia and Kakamega with specific areas of concentration within these counties.

Farm Forestry Smallholder Producers Association of Kenya (FF-SPAK) is a pioneer umbrella organization working with grassroots associations in Kenya to promote farm forestry. It was set up in April 2013 to primarily strengthen the capacity of other local member associations for them to be able to support farm forestry producers to improve their livelihoods. They have internal expertise on agroforestry systems and can advise the member organisations. They do not have the personal details of all the members of their member associations. They don't have local boots on the ground.

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

WETPA was formed as an association in 2006. It then began implementing agroforestry project from 2012 when it entered into partnership agreement with Vi Agroforestry. It is from the year 2012 when WETPA recruited farmers in the community from all the project areas to join the agroforestry implementation. WETPA has been active in the country for 10 years and our relationship with farmers and community has been great. WETPA has a good working relationship with its members. This relationship has been fostered through several initiatives including trainings on agroforestry, provision of beehives and marketing of honey. In addition to the strong engagement with community leaders and groups, WETPA have an online platform for communication with their members. They are also communicating with their farmers members through phone calls and social media such as WhatsApp group pages.

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

WETPA sustainably improve community and farmer livelihood and resilience to climate change of small holder farmer families in Western Kenya through helping them transition to agroforestry. In addition to agroforestry, their aim to improve the livelihoods of women, men and young farmers through sustainable environmental conservation, bee keeping, tree commercialization, capacity building and financial services. WETPA with the support of Vi Agroforestry, provides deliberate trainings on SALM practices/systems, Household Road Map/gender development which furnishes the farmers with enough skills for social development. WETPA also supports the farmers to establish home tree nurseries and capacity to develop farmers on village savings and loaning models. These services aim to improve the financial status of the small-scale farmer through sale of tree seedlings, honey and get accessibility to credit facilities (loans/savings) with no collaterals but using savings as security.

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

WETPA have been helping small scale farmers in the project area transition to agroforestry for the last 5 years with the support of FFSPAK, Vi Agroforestry and Agritererra. This includes providing trainings on sustainable agricultural land management (agroforestry bets practices) and creating an agroforestry design that is expert based and involved input from community during farmer group discussions.

6. 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.

The project has a monitoring and evaluation officer who will be solely in charge of the data/monitoring results and important documents. The project information with all the project documents will be securely backed up on Google drive and Cloud as well. All the farmers information and data will be

kept in a more convenient, confidential, safe and retrievable manner according to GDPR. The financial management of WETPA is computerized and uses Quick Book and Dev Indicator Planning and Reporting software. However, the archive system is not yet computerized.

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

The project is aligning with measures and actions for responding to climate change at local level/county level. WETPA is one of the key actors working with Vi Agroforestry in Bungoma, and Kakamega counties that promote resilience to the effects of climate change which is a joint effort through planting of agroforestry trees and adopting sustainable methods of farming. WETPA participated in the Bungoma County Climate Change Bill 2021 and in Draft Agriculture and Livestock Sectoral Plan 2023 – 2032 in 2022, Consultative meeting on Agriculture, livestock and crop regulation bills Bungoma and Busia public participation in 2021.

8. 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.

FFSPAK also holds AGM (annual general meetings) where issues related to the above under this parameter are discussed and addressed accordingly/fairly without any form of discrimination to determine how to support WETPA in creating an inclusive project.

WETPA engages farmers/members through community structures including Churches, Schools, Chiefs barazas where farmers/participants gather during important briefings, discussions, trainings, and events such as Focused Group Discussions. A main reason for FGDs with farmers and community during group meetings is to identify issues and challenges they may face onboarding to the project and as a result of project intervention. In these meetings together a solution is created to address the challenges such as providing gender equity and equality programs and household decision making as women are hesitant to join when the male of the household will want to receive the money. During these FGDs, we would also opt to carry out farmer needs assessment, having a Question and Answer (Q&A) session during the meetings, where those attending can be separated into smaller groups for youth, women, community non-participants etc. The findings from the needs assessment are integrated into the agroforestry design or the farmer trainings etc. Due to the identification of youths as a group often discriminated against, Youth farmers are now involved through several initiatives;

- *Provision of tree seeds of assorted species to promote agroforestry.*
- *Through capacity development youth have also been empowered to take up leadership positions and promote joint decision making at farmer groups and household levels.*
- *Youth in recruited groups have been encouraged to join and or form Village Savings and Loaning Associations (VSLA) which has enhanced their capacity to save and access credit.*
- *Plans are in place to sensitize youths practicing village saving and loaning to access youth enterprise fund so as to invest in profitable projects at household level.*

9. Describe process for onboarding participants.

All farmers that show interest to join the Acorn program may be onboarded given they meet the requirement in the Acorn framework and are WETPA members. Agriterra supports WETPA in the onboarding process. Onboarding a farmer takes roughly 1.5 hours. An enumerator can therefore onboard 5 farmers per day. The goal is to onboard WETPA's farmers in the Kakamega, Bungo (Webuye East) and Busia regions within three months. Farmers are recruited in both groups and as individual,

assessment done by Field Officer (s) and thereafter trainings and follow ups by field officer (s), Community facilitators, and M&E team after the farmer met all the below selection criteria;

- Voluntary participation; Farmer consent in accepting to be part of the ACORN project implementation
- Farmer Land size; at least 0.5 acres and utmost 10 hectares of cultivated land
- Prove of land ownership; Formal land ownership/ informal land ownership by the farmer
- Farmer ability and willingness to adopt/implement the agroforestry system or has been implementing in the last 5 years
- Ability to demonstrate that S/he would maintain and protect the additional agroforestry trees that will be planted and not cut them down. Accept to take care of the agroforestry system adhering to the best Sustainable Agroforestry Land Management (SALM) practices elaborated by WETPA.
- Be convinced about the benefits of an agroforestry system for your farm;

After onboarding the first 4000 farmers, WETPA will develop a strategy to onboard new farmer groups on the ACORN Platform.

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

As described in the human resource manual of WETPA, the minimum working age is 18. This manual also stipulates “when eligible candidates have equal or nearly equal qualifications the intention to have gender balance within the Organization shall be taken into account”, and encourages reporting grievances such as sexual harassment that are not tolerated. WETPA’s extensive Human Resource Manual is available upon request from Acorn. This manual describes the principles of staff recruitment as follows:

“Western Tree Planters Association subscribes to the policy of providing equal opportunity for all applicants and respects the doctrine of non-discrimination in employment, regardless of race, colour, tribe, religion, gender, age, HIV/AIDS status and physically challenged. To promote equal opportunity in the Western Tree Planters Association, the management will ensure;

1. There will always be equal opportunity for all applicants for employment in the organization.
2. It will be the duty of the Chairman to ensure that fair employment policies and practices are adopted, implemented and monitored.
3. The management from time to time reviews the existing employment policies and identify the steps to be taken to address the following issues:
 - a) The composition of the workforce. Whether the composition is broadly representative e.g. sex, disabled, national demographic etc.
 - b) The measures to be taken to eliminate the effects of past discrimination.
 - c) The measure to be taken to promote equal opportunity and treatment in the future.
 - d) The measure to be taken to accommodate employees who are physically challenged, HIV/AIDS positive etc.
 - e) The regular auditing of the plan.
 - f) The Chairman will ensure that all policies against discrimination are clearly communicated to all employees.”

From 2020 to 2021, WETPA demonstrated enhanced capacity of women, children and youth in leadership and decision making at farmer level. Four women were elected in management positions,

representing an increase of 36%. The four women were elected as treasurer, project management chairperson, Vice Secretary, farmer representative, and 2 youths in project management member. From the organization progressive survey report, there are 4 women and 2 young people out of 11 management positions representing 36% and 18% women and youth increase respectively. WETPA is gender sensitive and has all its staff trained on gender development and also gender focal point person and a staff in charge of women, children and youths. They have been monitoring their strength/progress in gender mainstreaming through surveys on number of households in joint decision-making processes etc.

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

Majority of the farmers in the project are women and between 2020 and 2021 there was a 10% increase in female participation. Women are engaged in the project enterprises including tree nursery operations like during potting/tube filling exercise, and pricking out. Women also take part in events and trainings/capacity development programs in the project. The project is not targeting gender transformation in the region as a KPI, however they are aiming to ensure that future hires within WETPA and FFSPAK are 50/50 regarding men and women. From 2020 to 2021, WETPA demonstrated enhanced capacity of women, children and youth in leadership and decision making at farmer level. Four women were elected in management positions, representing an increase of 36%. The four women were elected as treasurer, project management chairperson, Vice Secretary, farmer representative, and 2 youths in project management member. From the organization progressive survey report, there are 4 women and 2 young people out of 11 management positions representing 36% and 18% women and youth increase respectively.

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

When carrying out trainings WETPA ensure they first train trainers of trainees (ToTs) / Community Facilitators and or group leaders with a mission to further train other farmers. For every farmer group (approx. 35 farmers) we train at least 2 to be a TOT. The Community resource persons/TOTs/farmer group leaders are chosen by farmers within the community.

During the trainings, they encourage our ToTs/ facilitators and co-facilitators to get the right timing and use of local language and verbal communication (so to not discriminate) to ensure farmers participation and understanding the content. The project will promote use of farmer field schools/learning sites where farmer to farmer learning will be enhanced. Farmer group to other farmer group learning is also promoted during Focused Group Discussion (FGD) meetings and also through community level/project council meetings. There are 177 farmer groups across the WETPA_ACORN project areas (Webuye East 15, Kakamega – Lugari 50, Kakamega – Malava 48, and Busia 64)

Part I: Payments and Benefit Sharing

1. Provide a detailed business case for the project, including:
 - Financial analysis
 - For the farmer, the increased annual income from both agricultural production and carbon sequestration needs to exceed the costs associated with the transition to agroforestry and the generation and trading of CRUs (1.3)
 - Financial feasibility that ensures local partner will not draw more than 10% of sales income for ongoing coordination, administration and monitoring costs
 - The seen/expected productivity changes that will result from project interventions

The business case was created based on the 5 tree species to be planted over a period of at least 3 years on an average of 0.5 hectares, with the minimum of 122 trees per hectare.

The costs for farmers in the project include seedlings, additional labor (for tree pruning and maintenance, and planting). However, farmers are expected to generate CRUs already as of 2023 with the income from carbon finance outweighing their costs for planting additional trees. Farmer profit is expected to begin at an extra 6% and increase over the life of the project to 62%.

In terms of maize cultivation, a 7% reduction over the life of the project in terms of inputs costs for the farmer (i.e. fertiliser) due to training on nutrient management (e.g. compost and mulching). Total farm yield is expected to increase by 10% and remain stable over the life of the project. For the cultivation of sugarcane a 10% reduction in input costs is expected and a 10% increase of total farm yield. However, the increase in yield will be more gradual than that seen in the case of maize. The reduction in input costs are expected as a result of the training on nutrient management (e.g. compost and mulching) and the enhancement of soil (e.g. nitrogen fixation and health) from the trees planted.

With an additional 2,000 farmers joining each year until 2024, WETPA will be able to use the carbon income to cover project costs over the life of the project. However, this does not take the initial high costs of implementation in the first years with Acorn. Considering this factor, WETPA will need to fund 25% of their total project costs externally. WETPA will use the business case created to obtain this additional funding. The business case is available upon request from Acorn (Annex 5).

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

ACORN will pay CRU income directly to WETPA who will in turn pay the farmers through electronic bank transfer payments or through Mpesa (mobile phone-based money transfer service) if in any case there are justifiable failures with E-payments. This is to ensure farmers are paid by the local partner and those body that is also involved most in on the ground farmer engagement. The payment method has been agreed upon by project council members and will provide a transparent means of tracking the payment that farmers receive from the CRUs generated.

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

To be provided after payment from Rabobank to WETPA in 2023.

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

This will be evidenced from records of e payment statements to farmers and in the Acorn platform where the amount farmers receive will be visible.

5. Describe the measures that will be taken to ensure payments are made from the local partner to the farmers in a transparent and traceable manner.

ACORN will pay CRU income directly to WETPA who will in turn pay the farmers through electronic bank transfer payments or through Mpesa (mobile phone-based money transfer service) if in any case there are justifiable failures with E-payments. In addition, all payments are digitally recorded in the Acorn platform for transparency, where farmers approve the amount they have been paid.

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

No in-kind benefits will be provided. Farmers will receive their carbon payment in one easy to measure manner in which they can then choose for themselves how they would best like to spend their money.

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

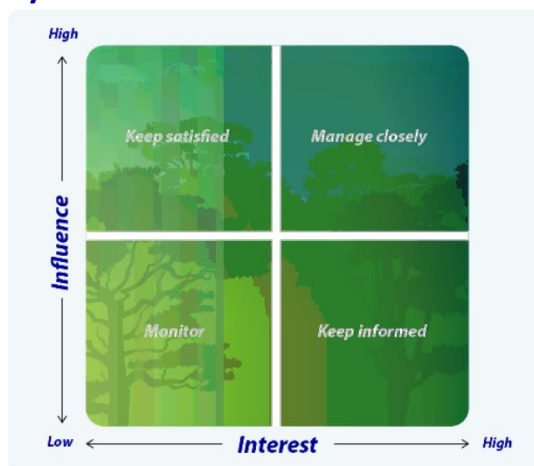
There will be no cash payments, instead all money will be transferred electronically to ensure transparency that farmers have been paid and reduced risks around security and safety.

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

Farmers will not receive any in-kind payments.

Benefit	Examples	Description
Inputs	<ul style="list-style-type: none"> Seedling costs Sapling costs Fertilizer 	Not applicable
Education	<ul style="list-style-type: none"> Training costs Agronomist consultation costs 	
Operation	<ul style="list-style-type: none"> Mobile communication costs Mobile payment costs Fencing 	
Livelihood	<ul style="list-style-type: none"> Land tenure consultation costs 	

Part J: Stakeholder Analysis



- 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 are the primary stakeholders, implementors and/or direct beneficiaries of the ACORN project carbon credit/CRUS, and the agroforestry model. They therefore have a high influence on the project and have been engaged in a participatory manner (see Annex 7)	Manage closely	Y
Local communities	High	High	The acceptance of the local community and involvement in the project design is crucial for success. This is why community leaders are involved in project councils and community members have been engaged during annual general meetings and farmer group discussions.	Manage closely	Y
National Government	High	High	The national government must be aware of the project as they could bring in laws or policies that impacts the project. A	Manage closely	Y

			letter has been sent to the national government, Kenya Forest Service to inform them of the project and its intention to generate CRUs. Please see Annex 6 for a reply to this letter.		
Local government	High	High	Engagement/collaboration with forest agencies including Malava Community Forest Association. WETPA has written letters to the relevant stakeholders: local chiefs, county and sub county and representatives.	Manage closely	Y
Donors e.g. Agriterra/Rabobank/FAO	High	High	This involves financial corporations/organizations with interest and having high influence in supporting the farmers in implementing the agroforestry model.	Manage closely	Y
Technical/agronomical partners	High	High	Vi agroforestry has been assisting WETPA with technical support on agroforestry system/model.	Manage closely	Y
Financial partners/institutions	Low	Low	Sacco's/cooperatives involvement is to avail credit facilities to farmers to enhance accessibility of planting materials	Monitor	Y
Procurements services (nurseries)	High	High	WETPA/Farmer Group tree nurseries/individual nurseries selling planting materials. KIMAET and KEFRI supplies seeds	Manage closely	Y
Local authorities	High	High	The project activities abide by the local laws and regulations and the local area chiefs are part of the project implementation	Manage closely	Y
Input suppliers	Low	High	Universal Entrepreneurs: An input supplier for Centrifuge Machines and harvesting equipment for honey.	Keep satisfied	Y

Corporate buyers	High	High	The corporate buyers of CRUS (Rabobank) and farm agricultural produce (local customers) will determine the income farmers will receive and thus the impact of the income to farmers	Manage closely	Y - ADD
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2. Please identify, together with representative farmers/community members, the local stakeholders groups in the project region (i.e., either participants or non-participants that are different types of farmers, community members and indigenous groups) that may be impacted by the project and determine their interest and influence, in the table below. *Those that have high interest and do not have a high influence, are often the most disadvantaged groups.*

Identified local stakeholders that are involved in or impacted by the project	Do they have high interest in the project and expected impacts?	Do they have high influence and power in the project?
Women	yes	no
Very small land sizes	yes	no
Cannot read or write	yes	no
Youth (aged 18-25)	no	no
Elderly	no	yes
Don't speak local language	yes	no
The most poor & facing poverty	yes	no
Low status or social position in the community	yes	no
Different religion: Most are Christians but few Muslims are involved	yes	no
Different ethnicity/culture: We have different cultures and ethnic groups involved in the project i.e different beliefs concerning tree planting and uses of different kinds of tree species.	yes	yes
Very little or no education	yes	no
Living remotely and furthest from towns	yes	yes
Unemployed	yes	no
Other identified vulnerable	yes	yes

This local stakeholder analysis identified the following disadvantaged groups that efforts will be made to increase their influence in the project and attendance in project councils; women, those with small land sizes, illiterate groups, those who don't speak the local language, those with the highest rate of poverty, those with low social position, Muslims, those lacking education and the unemployed.

Part K: Reversal Risk Assessment

Project phase	Drivers behind reversal risk	Risk level	Potential mitigating measures	Justification
Project adoption/start	Limited education or inadequate understanding of agroforestry	Low	<ul style="list-style-type: none"> • Build on local culture, traditions and markets⁹ • Ensure accessible training • Secure agronomist assistance 	WETPA members benefit from different training offered by Vi agroforestry and FFSPAK e.g. training on tree nursery establishment and management, tree growing establishment and management among other topics and before they plant trees site visit is carried out. WETPA has been promoting agroforestry systems among small holder farmers for 5 years now and with the technical support of Vi agroforestry and FFSPAK, have a robust agroforestry design and trainings for farmers.
	Marginal community support or low community involvement	Low	<ul style="list-style-type: none"> • Explore farmer needs • Promote program • Demonstrate positive impact on social and economic well-being 	This project has a structured communication running bi-directionally between management and farmers. At the management level is a WhatsApp group page composed by executive and technical staff. Each technical staff are in charge of farmer groups. The farmer groups are headed by community facilitators. This way, the information/update flows from management, staff, through Community facilitators down to farmers and community members for any project updates/ knowledge and for any feedback and grievances information flows from community and farmers back the same way to management (community facilitators are often

				<p>informed by preference of farmer verbally and in person). WETPA promote the visibility of acorn project through various initiatives including community sensitization week, farmer group meetings, chief barazas, distribution of brochures, use of enumerators to disseminate information during normal surveys, and other meetings held by WETPA.</p>
	<p>Inadequate operational capacity (limited experience, no local presence)</p>	<p>Low</p>	<ul style="list-style-type: none"> • Use the train-the-trainer principle 	<p>WETPA has been active in the country for 10 years and their relationship with farmers and community has resulted in high level of trust. When carrying out trainings WETPA ensure they first train trainers of trainees (ToTs) / Community Facilitators and or group leaders with a mission to further train other farmers. During the trainings, they encourage our ToTs/ facilitators and co-facilitators to get the right timing and use of local language and verbal communication (so to not discriminate) to ensure farmers participation and understanding the content. The trainers who facilitate the trainings are competent/ have expertise in agroforestry and any other agriculture related field. Training is conducted in person in workshops using the SALM manual (available upon request from Acorn). WETPA recruit technical staff with a highly acceptable agriculture/agroforestry background. Through WETPAs technical staff, the ToTs/community facilitators get skills from the trainings offered by technical staff</p>

				making them to be Resource Persons. Besides, WETPA has been in partnership with other partners including Vi Agroforestry, Kenya Forestry services, FFSPAK, and ministry of Agriculture with expertise in forestry and agriculture and natural resources.
	Insufficient (local) nurseries	Low	<ul style="list-style-type: none"> • Make upfront arrangements • Negotiate purchasing power 	WETPA, supported by Vi Agroforestry, has set up a network of 175 farmer-led nurseries that can be leveraged to harvest and sell seed and seedlings of trees, beneficial to the environment and well-suited for the ACORN platform. WETPA has 4 central tree nurseries along other 171 small tree nurseries (56 Bungoma, 53 Kakamega, 12 Busia, 50 Trans Nzoia 50). However, WETPA intends to support the establishment of at least 3 new central nurseries within each sub county of the ACORN project areas in 3 years' time and supporting the existing nurseries too.
	Animal or human interference	Low	<ul style="list-style-type: none"> • Erect fencing (natural, etc.) • Help mediate disagreements between perceived land boundaries 	There is always a risk of theft or damage to trees from humans in addition to loss of crops due to primates, however WETPA rate this risk as low. This rating comes from experience as there has not been an occurrence of this in the last 5 years reported and mitigation measures are in place such as fencing of plots and observing boundary regulations, and use of domestic dogs as security.

Project progress	Negative project cash flow	Low	<ul style="list-style-type: none"> • Ensure adequate financial planning • Ensure local financing for unforeseen events 	To date, FFSPAK and WETPA have been funded by different donors: FAO, Vi Agroforestry, Agriterra. WETPA got both financial and technical support from Vi Agroforestry to support the implementation of agroforestry project under Agroforestry for Livelihood Empowerment in tree nursery establishment and management, species selection and site matching. See business case in Annex 5 that demonstrates adequate financial planning.
	Poor agroforestry schemes	Low	<ul style="list-style-type: none"> • Encourage species and genetic diversity • Secure agronomist assistance 	<p>FFSPAK work with key partners like Kenya forest service who provide technical support in terms of forestry management and tree planting. Vi agroforestry are expert agronomist who provide training materials and advice for farmers and the agroforestry design in this project such as the SALM training manual. FFSPAK also provide support sensitizing farmers to adopt on-farm tree growing for conservation and as one way of mitigating climate change, including topics such as:</p> <ul style="list-style-type: none"> • Tree nursery establishment and management(use of quality germplasm) • Tree growing establishment and management(species selection and site matching) • Climate change adaptation and mitigation(Agroforestry)

	Change of land ownership and coverage	Low	<ul style="list-style-type: none"> • Involve one entity to manage/track rights status 	The monitoring of land ownership is the task of the Community Facilitators (CFs)/group leaders using a grouped approach at community level as they have the most engagement with farmers and knowledge of the project area. Each farmer group leader (CF) manages 1 group with an average membership of 14 farmers.
	Political instability (e.g. war, economic crisis)	Low	<ul style="list-style-type: none"> • Keep up-to-date on local and national political conditions 	WETPA works in collaboration with county and national government department of agriculture, livestock and fisheries, Environment and natural resources, National Environment Management Authority (NEMA), Kenya Forest Services (KFS), Kenya Forestry Research Institute (KEFRI), County government department of meteorology/weather focus, Local administration (Chiefs, village elders etc) who are constantly updating WETPA in this area.
	<p>Natural risks:</p> <ul style="list-style-type: none"> - Fires - Pests & disease - Extreme weathers - Other events 	Low	<ul style="list-style-type: none"> • Perform historical risk analysis and apply applicable preventive measures • Training in effectively containing natural risks 	In 2018, WETPA conducted a Risk Opportunity Assessment (ROA) in the three project areas and this informed the development of the Sustainable Agriculture Land Management practices (SALM) training manuals for identified risks such as pest and disease outbreaks, wildfires, extreme weather from climate change. The SALM training manual available upon request from Acorn.

Project maturity	Logging risk	High	<ul style="list-style-type: none"> • Ensure alternative fuel for wood • Ensure food productivity of trees 	This agroforestry design does not include eucalyptus trees as they are high risk species to be logged, however, they do exist in the project area.
	Waning or short-lived local partner commitment	Low	<ul style="list-style-type: none"> • Facilitate continuous dialogue and evaluation • Sign commitment agreements 	Agreements are signed as part of this project with Acorn, the local partner and the farmer, demonstrating their commitment to the longevity of this project. The ACORN supply team will keep communication open with the local partner and evaluate their commitment to the project.

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

Risk	Mitigation action	Monitoring Frequency	Responsible party
Lack of consistent seedling supply for scaling of the project	This project will use funding to establish at least 3 new central nurseries within each sub county of the ACORN project areas in 3 years' time and supporting the existing nurseries to remove the constraint farmers face by depending only on unreliable small-scale local nurseries run by farmers/families.	Annual through assessment of the number or existing and potential participants and the number and capacity of seed banks and nurseries.	WETPA supported by FFSPAK. Agriterra will also help to ensure financing is available at scale until CRU income is sufficient for this purpose.
Logging of pre-existing eucalyptus trees	WETPA will ensure that farmers practice agroforestry with crop diversification emphasizing on other farming enterprises including fruit orchards, tree nurseries, and promoting woodlot establishments which	Annually, only if a negative delta is observed during annual biomass measurements, WETPA will visit a sample of farmers to determine occurrence of harvesting.	WETPA.

	<p>would provide the farmer with more than one source of income thereby reducing dependence on own farm tree mass harvesting/logging. WETPA have created a business case that demonstrates the benefits from the acorn project long-term outweigh the benefits of timber harvesting. Farmers will also receive training on the benefits of keeping their trees in the ground.</p>		
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Part L: Technical Specifications

1. Applicability Conditions

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

	Applicability Condition	Met	Reasoning
A	The Project Interventions meet the Agroforestry definition (see Section 3 of Acorn methodology v1.0) and any trees planted are Native or Naturalized species.	Yes	Confirmed by local partner and explained in 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 and confirmed by Acorn
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 and discusses in agroforestry design part F
G	Heavy machinery must not be used for site preparation or management.	Yes	Not applicable for these smallholder farmers and covered in the local partner contract
H	The project intervention must not increase the use of synthetic (nitrogen-containing) fertilizers relative to the baseline scenario.	Yes	Covered in local partner contract
I	Soil disturbance attributable to the project intervention must not occur on more than 10% of a plot that is under any of the following types of land: <ul style="list-style-type: none"> - Land containing organic soils; - Land which, in the baseline, is subjected to land-use and management practices and receives inputs listed in Annex 4 of Acorn Methodology 	Yes	The SoilGrid confirmed that project is not on high organic soils, with the following results thickness detail >200 cm for all three areas, SOC content between 1,9% and 2,6%, limited clay between 32% and 37%.

2. Adjustment Factors

This table below gives an overview of the adjustment factors applied for this specific project. The equation input data is available upon request from Acorn.

AdjF	Factor (%)	Reasoning
Leakage	0%	See land cover assessment results and details given on potential productivity loss in question II. below.
Uncertainty	0%	Aggregated uncertainty has a value of 5,8%, which is below than 50%. Therefore, the final value is considered as 0%. See 'AdjFs_KE_WETPA'
Pre-project	10%	Based on the data-driven assessment performed by 52 Impact the appropriate adjustment factor for existing trees should be 10%. Following the source: 'AdjFs_KE_WETPA' available on the Acorn platform

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%	Maize	60%	Crop land

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

Project intervention will lead to a short term increase in productivity/crop yield at the beginning of the project until the time when the canopy formed by the agroforestry trees provides full shade to the crops. At this point there will be a slight decrease in crop yield, however this should be countered by crop diversification and the marketable products received from the mature agroforestry trees. WETPA, do not expect any form of displacement of farmer (s) associated with the Acorn project interventions as the project's objective is very clear: farmers will plant agroforestry fruit/tree species which are friendly to their crops and do not cause competition. The technical staff will provide agronomical support on how the farmers would implement/adopt a good agroforestry design on their farms without any displacement. In addition, there are plans on the number of agroforestry trees to be planted every year during the project duration to ensure no overshading takes places.

WETPA has been tracking on % increase on agricultural productivity based on the increase on the area farmed using sustainable methods through the progressive surveys carried at the end of every project year since 2018 in partnership with Vi Agroforestry. With reference made to the indicator [8] of the copy of annex result matrix 2021 and WETPA annual report (available upon request from Acorn). WETPA strongly believe in the expectation that the productivity will increase by at least 11% over the life of the project due to the own farm combination of agroforestry trees and fruit trees with marketable products that provide full benefits from 5-7 years. WETPA don't pre-empt the long-term loss in cash/food crop productivity due to shade effect since this effect has always been catered for under tree management (pruning of course and recommended tree spacings) at WETPA. WETPA recorded an average increase of 11% and 1% in 2018-2020 and 2021 respectively. Therefore, WETPA has had an average increase of 12% of agricultural productivity based on agricultural area of land farmed using sustainable methods.

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

Shrubland	Grassland	Cropland	Built-up	Bare/ Sparse vegetation	Permanent waterbodies	Tree cover <60%	Tree cover >60%
49,67	14,60	12,12	0,69	0,75	0,03	21,56	0,51

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
Not applicable	Not applicable

IV. If leakage is like to be significant, outline the leakage mitigation and monitoring plan below

Source of leakage	Mitigation action	Monitoring Frequency	Responsible party
No significant sources	n/a	n/a	n/a

3. Root Shoot

Ratio	Reasoning
0.32	The default value for root-shoot has been applied due to the absence of alternative relevant science based literature.

Annex 1: Map of project location

Information removed for data protection purposes

Annex 2: Land Tenure Documentation

Information removed for data protection purposes

Annex 3: Implementation plan

Project Phase	Cost item	Description	Frequency	Responsible
Project Selection	Project description and documentation	i) project summary, ii) eligibility checklist, iii) additionality checks, iv) reversal risk assessment, v) stakeholder analysis.	Once	WETPA (supported by FFSPAK)
Project Preparation	Farmer engagement	Making farmers aware of Acorn, Agroforestry and CRU benefits	Once	WETPA
	Business Case	A Business Case showing the impact on farmer, project, and LP level according to Acorn template.	Once	WETPA (supported by FFSPAK)
	Community engagement	Ensuring (local) government, village leaders and farmer representatives are aware and support Acorn.	Once	WETPA
	Carbon baseline	The carbon baseline needs to be established for 1% of the participating farmers (minimum of 30) including i) questionnaire, ii) tree count of trees <2m and iii) # of trees older than 5 years.	Once	WETPA (supported by FFSPAK)
	Project Baseline	Questionnaire for 1% of the participating farmers (minimum of 30) covering i) carbon income, ii) nutritional variety, iii) agricultural biodiversity and iv) land tenure documentation	Every 3 years	WETPA (supported by FFSPAK)
	Ground truth data collection	Ground truth data of 100 sample plots (1ha) need to be collected	Once	WETPA
	Grievance mechanism establishment	The establishment of a grievance mechanism including a method for how grievances can be communicated and how grievances are dealt with in a transparent manner.	Once	WETPA
	Project Council establishment	Establish a project council with farmer representatives and/or community groups that represents the participating farmers in the Acorn project, voice concerns and needs and actively engages in decision making	Once	WETPA
	Farmer data collection & consent forms	Including i) eligibility checks, ii) farmer data collection (ID), iii) polygons collection, iv) farmer contracts and consent, v) land tenure documentation, vi) travel expenses for data collection	Once	WETPA

	Setting up loan/in-kind/payment administration	Setting up a payment/loan infrastructure with the farmers.	Once	WETPA
	Additional ground truth data collection	In years 2-4, additional ground truth data needs to be collected for 30 sample plots (1ha)	Annually	WETPA
Project Start	Project Council meetings & reporting	The costs associated with preparing and organising the project council meetings (venue, equipment) plus the follow-up reporting including i) a list of the lead farmers and ii) the minutes of the project council meetings have to be reported upon.	Bi-annually	WETPA (supported by FFSPAK)
	Grievance mechanism reporting	A report on how the LP dealt with grievances and the actions that were taken to resolve them.	Annually	WETPA
Project Maturity	Reversal risk assessment	An assessment of the risks of potential events that can lead to the reversal of previously stored carbon (e.g., wildfires, cutting down trees, pests)	Every 5 years	WETPA
	Project reporting	Annual progress reports including i) # of participants, ii) average hectare per farmer, iii) # of CRUs generated and sold, iv) total payments to participants and v) LP expenditure	Annually	WETPA (supported by FFSPAK)

Annex 4: Organisation structure

Information removed for data protection purposes

Annex 5: Local partner and farmer business case

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Annex 6: Letter to national government

Information removed for data protection purposes

Annex 7: Project Council Reports and evidence of participation

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Annex 8: Participant consent forms and contract

Information removed for data protection purposes

Annex 9: Local partner contract

Information removed for data protection purposes

Annex 10: Tree species present at baseline

No.	Botanical/common name	Local name
1	<i>Markhamia lutea</i>	Lusiola
2	<i>Croton macrostayus</i>	Musutsu
3	<i>Cordia african</i>	Mukomari
4	<i>Syzygium quetzenii</i>	Musioma
5	<i>Maesopsis eminii</i>	Mutere
6	<i>Casuarina equisetifolia</i>	Casuarina
7	<i>Grevillea robusta</i>	Wakhuisi
8	<i>Persia americana</i>	Avocado
9	<i>Mangifera indica</i>	Liembe
10	<i>Psidium quajava</i>	Lipera
11	<i>White sapote</i>	white sapote
12	<i>Azadirachta indica</i>	Mwarubaini
13	<i>Tithonia diversifolia</i>	Emaua
14	<i>Sesbania sesban</i>	Chisubasubi