PV CLIMATE

PROJECT IDEA NOTE

ARDHI NJEMA AGROFORESTRY

Version 1.3
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Developed by:

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Overview

Project Title:	Ardhi Njema Agroforestry
Location:	Central Kenya (Nyeri, Laikipia and Kirinyaga counties).
Project Coordinator:	Name: Green Earth Climate Action (GECA) Website: https://gecaction.org/ Phone no: +1 (610)-551-8801 Email address: larisa@gecaction.org
Project Area:	The project started with 600 smallholder farmers located in Nyeri, Kirinyaga and Laikipia Counties in Central region of Kenya. Each farmer will be availing an average of one (1) acre for the project activities. The project is ongoing work, and the final project area will extend up to 30,000 hectares within the same Counties in Central Kenya.
Project Participants:	The initial project participants are 600 smallholder farmers, there is potential to add up to 60,000 smallholder farmers in existing agricultural supply chains in Central Kenya. These farmers are trained on sustainable agroforestry practices that enhance the sequestration of carbon above and below the ground, increase soil productivity, conserve the environment, and earn extra income from the sale of carbon credits.
Project Intervention(s):	The proposed project interventions are *restoration* through agroforestry for soil restoration, and *improved land management* through sustainable agricultural land management (SALM). Agroforestry for soil and agrobiodiversity restoration The project promotes the integration of diverse tree species alongside crops, which contributes to the restoration of soil fertility, structure, and overall ecosystem health. The planted trees facilitate the accumulation of organic matter, enhancing soil fertility. Moreover, in our agroforestry systems, we incorporate native tree species, promoting biodiversity and re-establishing ecological balance in spaces where this balance had been disturbed. To the greatest extent possible, farmers are encouraged to incorporate fruit trees in their farms, which provide a continuous source of food and income without the need for harvesting. Some of these species include pawpaw (papaya), mango and avocadoes. These have the added advantage of providing essential pollination services as they have a well-elaborated flowering calendar. Data will be collected in accordance

	to Plan Vivo Carbon Standard (PV Climate) and the team will use "Jaza Miti app" to track the trees planted and their survival rate. <u>Sustainable land management practices through agroforestry</u> The project promotes Sustainable Land Management (SLM) practices through the integration of trees within agricultural crop fields that provides a natural buffer, protecting crops and soil from the adverse impacts of environmental factors such as wind and runoff. Agroforestry trees also help with the creation of microclimates within the farms, thereby reducing extreme temperatures. Sustainable land management practices are adapted practices for the range of existing land use systems- and rainfed and irrigated cropping, grazing and forest. Sustainable land management implies, as appropriate, the integrated management of crops (including trees and forage species), livestock grazing/browsing, soil, biodiversity, diseases and pests to optimize and sustain the delivery of a range of ecosystem services (provisioning, regulating, cultural and supporting). Agroforestry also promotes efficient water and nutrient use, reducing competition between crops and trees while fostering mutual benefits. The integration of trees contributes to improved soil health, pest control, and increased resilience to environmental stressors. An additional benefit is the enhancement of aesthetic values, providing the farmers with a beautiful, natural environment that fosters health and wellbeing. <u>Sustainable agriculture land management (SALM)</u> These are measures and practices aimed at protecting, conserving and using natural resources sustainably as well as restoring degraded natural resources and their ecosystem functions. To foster the uptake and adoption of SALM, Ardhi Njema Agroforestry (ANA) is promoting a holistic process that includes providing technical options suitable for different farm conditions while also enhancing the socio-economic environment. Farmers are trained to adopt the following practices as part of SALM: 1. Minimum tillage: Minimum tillage is a soil conservation system like strip-till with the goal of minimum soil manipulation necessary for a successful crop production. It is a tillage method that does not turn the soil over, in contrast to intensive tillage, which changes the soil structure using ploughs. 2. Mulching: The objective of mulching is to conserve soil moisture, reduce runoff flows, reduce evaporative losses, reduce wind erosion, prevent weed growth, enhance soil structure, and control soil temperature. Common mulches include: cut grass, crop residues, straw and other plant material.

	3. Use of green manure: Green manure refers to plants that are grown to improve or protect the soil. These plants tend to grow fast, cover the ground, and have deep roots, but are not left to flower or harvested for food. The deep roots bring – to the surface – nutrients that the plants with shallow roots cannot reach. Some of these plants also take nitrogen from the atmosphere and deposit this in the soil. By covering the ground, these plants also prevent the growth or spread of weeds and can be used to break disease cycles; some have beneficial microbes. The plants can also be cut and placed on the compost heap. Whichever way, green manure increases the levels of organic matter in the soil. 4. Soil nutrient management: Nutrient management is the process of maintaining and/or enhancing soil fertility, and it is done through the use of the nutrients already in the soil or adding nutrients through organic fertilizers (application of compost). The purpose of nutrient management is to increase soil and crop productivity and increase climate resilience. 5. Composting: this is the natural process of turning organic materials such as crop residues and farmyard manure into plant food or humus. Compost is a cheap and effective organic mulch that can be used as an alternative to commercial fertilizers to improve the soil. Humus is the organic matter component of soil that is being destroyed and eroded throughout much of the world. 6. Integrated Pest Management (IPM): is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment, using cultural, mechanical, chemical and biological means to control pests. The above methods aim to achieve the following primary objectives: ● Prevent and mitigate land degradation and restore degraded soils; ● Control soil erosion; ● Improve soil-water storage; ● Manage soil organic matter for soil carbon sequestration; ● Manage and enhance soil fertility.
Expected Benefits:	The trees planted act as a carbon sink, aiding in climate change mitigation by capturing and storing atmospheric carbon dioxide. The project baseline of 600 farmers, each to plant an average 100 trees, totalling to 60,000 trees projected to sequester approximately 2000 tCO_2e per year. This is expected

	to grow to 60,000 farmers with 6 million trees and a projected sequestration potential of over 580,000 tCO_2e in the next 10 years. Simultaneously, the integration of trees with crops improves soil health and water retention, enhancing a resilient and sustainable ecosystem. The diverse plant species promote biodiversity by creating micro-habitats for various organisms and enhancing overall ecosystem stability. Additionally, the project directly affects the livelihoods of smallholder farmers. Crop diversification will lead to improved yields, hence promoting food and nutritional security. Farmers can also sell the surplus to earn additional income. Farmers will also gain income from the sale of carbon credits when certified. Fruit trees will provide produce for sale in the market, as well as enhancing the diet diversity for the farming families. Additionally, the introduction of flowering plants will greatly increase pollination efficiency on the farms. The sustainable management of agroforestry systems and SALM provides a long-term source of livelihood by merging economic productivity with environmental conservation. Furthermore, this project empowers local communities through training initiatives, building capacity for effective agroforestry and SALM practices, and ensuring long-term sustainability beyond the project cycle. The combination of these different additional attributes could potentially contribute to such additional income streams like apiculture, which will be encouraged but not covered as part of the project.
Methodology:	Agriculture and Forestry Carbon Benefit Assessment Methodology (PV Climate PM001)
PIN Version:	3.0
Date Approved:	27th June 2025

1 General Information

1.1 Project Interventions

Table 1.1 – Project Interventions

Intervention Type	Project Intervention	Expected Benefits
Improved Land Management	**Agroforestry**: Agroforestry systems- Border planting, alley planting and woodlots. For non-cereal agronomy systems there is potential to carry out intercropping. Majority of the farmers in our project, over 80% prefer planting trees at the boundary which act as buffer zones to safeguard the agricultural and silvicultural components from external threats, as well as marking boundaries between farms or between farm segments. This agroforestry system helps to mitigate the impacts of pollution, pesticide drift, encroachment, and other potential hazards.	**Climate**: The buffer zone contributes to climate resilience by protecting against adverse weather events such as extreme temperature fluctuations and windstorms. The established trees aid in carbon sequestration, contributing to climate change mitigation efforts. **Livelihood:** By protecting crops from external stressors, the border trees/buffer zone help maintain stable yields, securing the livelihoods of smallholder farmers. This intervention reduces the risk of crop loss due to soil erosion, pollution, windstorms, and extreme temperatures, ensuring a more consistent income for local communities. **Ecosystem**: Establishing boundary trees enhances overall ecosystem health by preserving biodiversity and creating habitats and biodiversity islands for beneficial organisms such as bees. The protective barrier mitigates the spread of pests and diseases, contributing to the resilience of the agroforestry system and promoting sustainable coexistence between agriculture and the surrounding environment. Furthermore, buffer trees help to prevent pesticide drift, which helps to safeguard the integrity of organic farms.
Restoration (of soil)	Planting of native tree species, such as *Markhamia Lutea* (Nile Tulip), *Vitex keniensis* (Meru oak) and *Croton*	**Climate:** Agroforestry trees act as carbon sinks significantly contributing to climate change mitigation. SALM

	megalocurpus (Croton), within agroforestry systems, aims to counteract land degradation and promote ecosystem rehabilitation, fostering a more resilient and sustainable agroecosystem. SALM practices such as mulching, crop rotation, cover crops, terracing, and composting help restore soil fertility by improving soil physiochemical and biological properties.	practices on the other hand positively contribute to carbon sequestration in soil. Additionally, the increased vegetation cover creates microclimates spread out across the community. **Livelihood:** Marketable products from trees the trees, such as *Croton megalocurpus* nuts, provide additional sources of revenue. SALM practices lead to increased farm productivity hence securing food and income for farmers. **Ecosystem:** The project fosters biodiversity and ecological balance by integrating native tree species. This promotes the conservation of flora and fauna, creating healthier ecosystems that support pollinators and natural predators.
Improved Land Management	This includes strategic planning and design of agroforestry systems for farmers to optimize the utilization of land resources. The project employs a careful consideration of the arrangement and combinations of tree and crop species, aiming to maximise synergies within the agroecosystem. This reduces nutrient and water competition between crops and trees while enhancing overall sustainability. Farmers are also encouraged to plant agroforestry friendly trees such as *Grevilia robusta* and *Moringa oleifera.* *Benefits of Grevilia* *Grevillea robusta* is naturalised species in Kenya and an excellent agroforestry tree due to its rapid growth, soil improvement capabilities, and drought tolerance. It enhances soil structure, prevents erosion, and contributes to	**Climate:** Optimized agroforestry planning contributes to climate resilience by creating a balanced and diversified landscape. Such systems help regulate microclimates, reducing temperature extremes and minimizing the risk of climate-related crop failures. The enhanced carbon sequestration potential of the project design aids in climate change mitigation. **Livelihoods:** This agroforestry and SALM practices directly impacts livelihoods by increasing overall farm productivity and income opportunities. Thereby enhancing economic resilience and reducing the vulnerability of smallholder farmers to environmental uncertainties. **Ecosystem:** The intervention promotes ecosystem health by optimizing the use of natural resources and minimizing

	nutrient cycling through its leaf litter. The tree provides valuable shade and shelter for crops and livestock, acts as a windbreak, and supports biodiversity by attracting pollinators. Additionally, its resilient nature against pests and diseases, makes it a versatile and beneficial choice for sustainable agroforestry systems. An additional benefit lies in its potential for sale upon maturity. *Trainings/capacity development* Farmers are also offered trainings in the following areas: 1. Introduction to the carbon project, to include a deep dive into the carbon cycle and anthropogenic drivers of emissions. 2. Agroforestry systems, to include an exploration of methods, types, benefits. 3. SALM systems, with both theoretical and practical examples. This includes capacity building towards carrying out these interventions on-farm. 4. Carbon benefit sharing, including financial issues, responsibilities and bundled values for man and nature. This will also include GHG reduction and abatement systems. 5. Diverse micro-enterprises, such as community seedling, apiaries, village savings and loans schemes. The aims of these training include creating enablers in the community for enhanced participation in the project,	negative environmental impacts. Efficient water and nutrient management contribute to improved soil health, benefiting both agricultural productivity and the surrounding ecosystems. The integration of native species fosters biodiversity, creating habitats for beneficial organisms and promoting ecological balance within the farm setting.

	towards getting self-driven initiatives which the farmers can own and invest. As part of co-development, ANA seeks to develop robust partnerships with each farmer and local/village groups, creating benefit-sharing schemes and social safeguards that deliver the durability and project longevity needed for achieved emission reductions, paving the way for greater market integrity and project accountability, effective environmental management, and empowerment of those segments of the community most vulnerable to the adverse effects of climate change.	

Agroforestry Species for Consideration

During the initial workshops and trainings farmers are asked to select the tree species that they would like to plant in their farms and after selecting, the species are confirmed using the ‘’*Jaza Miti app*” that matches tree species with locations in Kenya, with the project providing requisite technical expertise. The following are the recommended tree species for consideration: *Grevilia robusta*, *Markhamia lutea, Moringa Oleifera Croton megalocarpus, and Olea africa*

Proposed and accepted agroforestry systems by the farmers include; border planting accepted and practised by over 80%; alley cropping 15% and woodlots planting 5%. The intercropped incidents are negligible at less than 1%.

SALM Issues for implementation

The following will constitute the integrated set of interventions on the adopter farms, and will inform the core content of trainings to be conducted in the project zones:

- Soil and water conservation;
- Sustainable agronomic practices;
- Nutrient management;
- Tillage and residue management;
- Restoration and rehabilitation;
- Integrated livestock management;
- Integrated pest management;
- Sustainable energy.

These activities will be driven by both theoretical as well as practical approaches.

Short description of key challenges on the initial project sites:

Most of these project sites indicate increasingly degrading landscapes, with soils, which have decreasing productivity, widespread deforestation and ever reducing farm sizes due to the travails of inheritance. Degrading soils have led to increasing use of fertilizers, especially chemical fertilisers that are widely available and are heavily subsidised and distributed by the government.

Some areas have quite steep and rocky slopes, and the bushland vegetation is poor in biomass and biodiversity. In these areas, fertile soils are frequently carried away by runoff, especially with the recent flood cycles. At the project initiation, it was realised that trees are still scarce in this area, and many people combined agriculture with some livestock keeping including small animals. Field observations before the start of the project indicated that a number of farmers have invested in trees, but not in a pragmatic agroforestry system. Usually, these are grevillea and blue gum trees. The climatic conditions are very suitable for tree growth, which supplies timber and firewood to the local market.

1.2 Project Boundaries

Table 1.2 Project Boundaries

Location:	The project's baseline started with 600 smallholder farmers in 56 villages in Nyeri, 10 villages in Kirinyaga and 4 villages in Laikipia Counties in Central region of Kenya. Each farmer will be availing an average of one (1) acre for the project activities. The project is ongoing work, and the final project area will extend up to 30,000 hectares within the same Counties in Kenya.
Project Region(s):	30,000 Ha, which will be distributed as follows: Nyeri: 15,000 Ha, Kirinyaga: 10,000 Ha, and Laikipia: 5,000 Ha. There is scope for some adjustment, as it is likely that there may be greater interest from farmers once mobilisation begins. These numbers may increase slightly. It is also likely that some farmers may have more than one acre to avail for the project activities. The expansion is an ongoing work and tree-planting activities shall be done within 10 years with a target of 3,750 Ha per year.
Project Area(s):	The project's baseline started with 600 smallholder farmers in 56 villages in Nyeri, 10 villages in Kirinyaga and 4 villages in Laikipia Counties in Central region of Kenya. Each farmer will be availing an average of one (1) acre for the project activities. The project is ongoing work, and the final project area will extend up to 30,000 hectares within the same Counties in Kenya. **Area Descriptors:** Nyeri County:

	Nyeri County is a county located in the central region of Kenya. Its capital and largest town is Nyeri Town. It has a population of over 800,000 people, mainly drawn from the Kikuyu community. The Kenya National Bureau of Statistics national census (2022), indicated that there were 49 percent males and 51 percent females out of this demographic. The main livelihood pursuits include subsistence farming of crops such as maize and beans, assorted vegetables, sweet potatoes, bananas and arrow roots. Key cash crops grown are coffee and tea. The county is renowned for horticulture farming. The county lies between two water towers, Mt. Kenya and the Aberdare Ranges. It covers an area of 3325 Km^2 and is situated between longitude 36' 038" east and 37' 020" south. It borders Laikipia County to the North, Kirinyaga County to the East, Murangá County to the South Nyandarua County to the West and Meru County to the Northeast. <u>Kirinyaga County:</u> Kirinyaga County is located in the central region, and it covers a total area of 1478.1 Km^2, of which 308.2 Km^2 are under forest cover. The total land area under agricultural production is 801.7 Km^2 (KNBS, 2019). Kirinyaga County is home to 610,411 people. The county lies between 1,158 metres and 5,380 metres above sea level in the South and at the Peak of Mt. Kenya respectively. Mt. Kenya which lies on the northern side greatly influences the landscape of the county as well as other topographical features. <u>Laikipia County:</u> According to the 2019 Kenya Population and Housing Census (KPHC) by KNBS, Laikipia County had a total population of 518,560 persons comprising of 259,440 males, 259,102 females and 18 intersex. This population is projected to be 561,223 persons in 2023 and is expected to rise to 583,033 and 605,600 in 2025 and 2027 respectively. The County borders seven other counties and has a land area of 9,532.2 Km^2. The County is endowed with pastureland, rangeland, forests, wildlife, undulating landscapes and rivers among others. The arable land, which is suitable for crop farming, stands at 1,998.7 Km^2 while non-arable land stands at 7,511.3 Km2 constituting 20.9 per cent and 79.1 per cent of the total County's total land area respectively. The non-arable land is suitable for livestock, wildlife, conservancy and extractive industry. Laikipia County has seven gazetted forests with an area totalling to about 580 Km^2, and 23 non-gazetted forest. Mukogodo Forest reserve in Laikipia North Sub-County covers a landmass of 30,189 Ha. The forest

	cover percentage for the County is 6.71%, which is far below the agreed standard forest cover of 10% for the whole country. Laikipia County is richly endowed with wildlife, widely distributed in most parts of the County extending to Aberdares Forest, Samburu, Meru, and Mt. Kenya wildlife corridors. Most of the wildlife is found in the large-scale private ranches, which occupy over 50 per cent of the total land area of the County. To avoid project overlaps only farmers who are not registered with other carbon projects will be registered and all the registered farmers will sign an agreement with ANA.
Protected Areas:	The project boarders key protected areas including Ol Pejeta conservancy and Mount Kenya Forest.

Project area map

The map below shows the project area in 3 counties: Kirinyaga, Laikipia and Nyeri. The map also shows the pilot plots with a clear show that none of the plots is inside the protected areas. The map also shows the potential areas of expansion with the three counties and considerations will be put in place to ensure that farmers registered in the Ardhi Njema Agroforestry projects are not registered in any other similar project to avoid overlap and double counting.

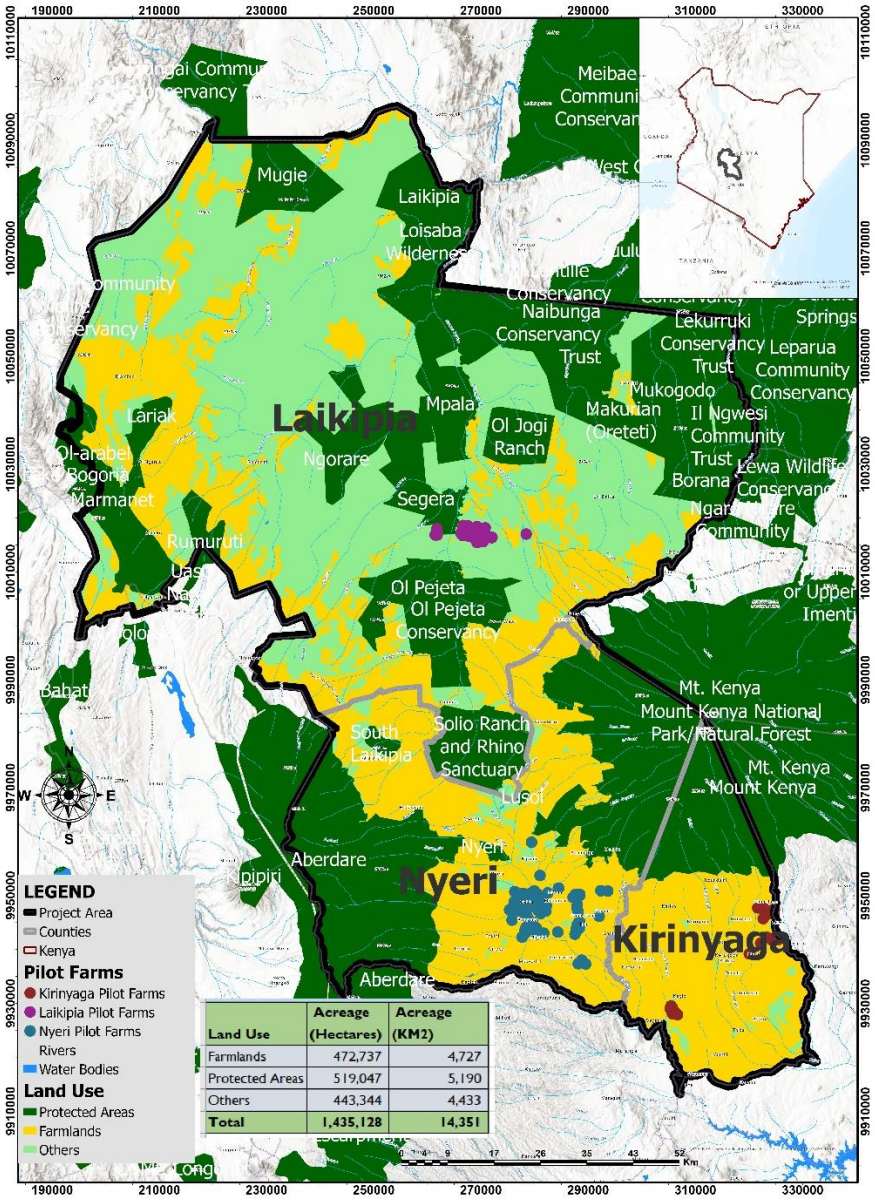


Figure 1 Map of pilot plots and expansion plots for Ardhi Njema Agroforestry.

Planting Plan for the next 10 years

The table below shows the Planting Plan to plant 6 million trees in the next 10 years in the project areas.

Year	No. of trees	Area (Ha)	No. of Farmers
2020 - 2025	60,000	300	600
2026	200,000	1000	1000

2027	300,000	1500	1500
2028	300,000	1500	1500
2029	400,000	2000	2000
2030	600,000	3000	3000
2031	800,000	4000	4000
2032	800,000	4000	4000
2033	800,000	4000	4000
2034	800,000	4000	4000
2035	800,000	5000	5000
Total	6,000,000	30025	30000

1.3 Land and Carbon Rights

The project is implemented with smallholder farmers who have a freehold land tenure system. One of the conditions for enrolling the farmers in the project is by voluntary declaration of their ownership of the land. Before enrolling farmers in the program, ANA ensures that farmers are aware of these land tenure requirements for registration and enrolment. Therefore, only farmers who have the absolute ownership evidenced through land title deeds or have inherited the land from forefathers and are waiting to process the title deeds are registered in the program.

2 Stakeholder Engagement

2.1 Stakeholder Identification

Apart from the smallholder farmers who are the primary stakeholders, other stakeholders who will be essential in the implementation of the project will include county governments of Nyeri, Laikipia and Kirinyaga who we will collaborate with to facilitate extension services and community mobilization. We also aim to collaborate with the national government in the facilitation of the overall carbon project and research institutions such as NEMA, KFS, KEFRI, and KALRO who will offer support in farmer engagement and regulation. The local authorities will also be key in the project; this includes the sub-chiefs and the chiefs. They are responsible for ensuring safety during mobilization, workshops and trainings. The table below contains an analysis of the stakeholders who are expected to be part of the project.

Stakeholder table:

Stakeholder group	Stakeholder type	Impact	Influence	Engagement
Participating Smallholder farmers (Nyeri, Kirinyaga and Laikipia Counties)	Participants/ Beneficiaries	Highly positively impacted by the project, as the project will result in improved soil fertility,	High positive influence on the project as the smallholders will be key implementers of the project planting trees and maintain	Involvement through project participation, workshops, trainings in

		increased food security and income.	the trees on his/her field.	agroforestry and benefit sharing.
Seedling supplier	Local stakeholder	Highly positively impacted as the quality of the seedlings delivered determines the survival rate of the trees.	High positive influence on the project as they will provide quality seedlings of trees to be planted by farmers.	Involvement through project participation and delivery of quality seedlings to farmers.
County Government	Secondary stakeholder	Medium positively impacted by the project as the County does not directly benefit from the project interventions, but the livelihood of the people in the regions will rise which is beneficial for the county economy in general.	High positive influence on the project as the approval of the County government ensures that the project is in alignment with all the county and national laws.	Involvement through operation agreements: letter of approval for agroforestry project with farmers from each County.
NEMA/NDA	Secondary stakeholder	Medium positively impacted by the project as they will need to access the Environmental Impact Assessment (EIA) of the project.	High influence on the project as the result will dictate if the project activities should continue or not.	Engagement through fieldwork activities and field assessments of the project area.

Local Authorities (Sub-chief, chiefs)	Secondary stakeholder	Low positively impacted by the project as they will not be direct	High positive influence on the project as they will help in keeping safety during the meetings.	Involvement during farmer engagements, trainings and workshops.
University Institutions such as Dedan Kimathi and Karatina University	Secondary stakeholder	Moderate positively impacted by the project with increased opportunities to execute research and collect data in the field	High positive influence on the project, as the scientific advice on agroforestry systems and tree species will increase the ecological value and success of the project	Involvement through scientific advice on eligible tree species, and agroforestry systems.
Government Agencies (KEFRI and KARLO)	Secondary stakeholder	High positive impact as the seedlings to be planted by farmers have to come from certified seeds from by KEFRI.	High positive influence to the project because they have scientific knowledge and empirical results on agricultural practices within the project area and have certified tree seeds.	Involvement through scientific advice and certification of tree nurseries for quality seeds.

Farmer and partner mobilisation process:

Working in partnership with local community-based organisations as mobilisation agents, the project shall continue to recruit like-minded farmers through conducting public information dissemination campaigns, word-of-mouth, using local agencies such as churches. This ensures an unbiased, democratic and fully participatory process. For those farmers who own their farms, they will be registered and provided with technical training to implement agroforestry and SALM interventions on their farms.

The project will also invest in capacity building of community tree nursery owners (including community forest association nurseries), with a view to enhance seedling quality and quantity, enable an elaborate access and distribution system and build – in a partnership scheme for the selection and production of appropriate tree species. Private nursery operators are responsible for supplying quality tree seedlings to the farmers. The project is expected to create business opportunities for them by increasing the demand for seedlings as well as diverse inputs to value chains that deliver the SALM interventions.

Secondary stakeholders include the Local County and national governments, diverse agencies and authorities, and resource regulators such as the Kenya Forest Service, and National Environment Management Authority (NEMA) who will offer different services and support according to their mandates. From the onset, these agencies have been partners from the project baseline and have provided a critical resource in facilitating information, knowledge and other project support as per their legal mandates.

2.2 Project Coordination and Management

Ardhi Njema Agroforestry (ANA) is a registered Community Based Organization (CBO) in Kenya that implements projects that help farmers restore their farm productivity whilst contributing to climate change adaptation and mitigation efforts. ANA will be responsible for coordinating and implementing the project. The team has experience in implementing farmer development projects and conducting extensive on-farm research including in-depth analysis of farming practices, opportunities, challenges and household surveys on food security.

Having this in-depth knowledge and understanding the wide range of challenges faced by smallholder farmers led to the creation of ANA. Since its inception, ANA has trained over 600 farmers and planted over 80,000 agroforestry trees on farms across Laikipia, Nyeri, Embu, Kirinyaga and Makueni counties for the past 3 years. These farmers have successfully adopted agroforestry and SALM systems in their farms.

ANA is affiliated with a US registered non-profit organisation, Green Earth Climate Action (GECA), a USA registered non-governmental organization, that provides financial support and oversight. GECA will providing funding the project. A copy of the project coordinator's registration certificate can be found in Annex 2.

Both organizations were founded in partnership in 2019 in response to needed innovations and interventions for the growing climate crisis. The founders believe that while least responsible for climate change, smallholder farmers in the developing world are the most at-risk from our changing environment. They are also key players in creating more sustainable nature-based climate solutions. GECA connects sustainable agriculture systems to international carbon markets for a carbon-neutral society. The organisation works directly with local partners who in turn work with farmers in established agricultural supply chains to engage in agroforestry that improves their farms and increases farm yields while monetarily incentivizing them to engage in sustainable and climate-smart practices.

The GECA operational model:

1. Conduct outreach with interested farmer groups and cooperatives and register them in carbon offsets projects.
2. Engage in sustainable agroforestry trainings where farmers request seedlings that will grow well based on their climatic considerations and cash crops.
3. Work with local nurseries to distribute seedlings to enrolled farmers.
4. Conduct on-farm site visits during bi-annual tree monitoring.
5. Farmers receive additional income for each year the trees grow, and they see 30% increases in their farm yields from replenished soils.

GECA, will provide overall financial and accountability leadership. ANA will provide implementation, mobilisation and project monitoring roles, and will work closely with GECA in quality assurance and project delivery.

ANA has the following expertise:

Director of Carbon Programs

Responsible for coordinating the project activities including developing the documents related to plan vivo standard and ensuring the project is aligned with the standard requirements.

Director of Climate - Smart Agriculture

Responsible for overall coordination of the project activities including mobilization, training and farmer workshops, Coordinating procurement of seedlings and planting of agroforestry trees.

Monitoring and Evaluation expert - will design the MRV protocols for the project and implement the digital tools for data collection to prepare reports for the certification process. The expert will work with the field data agents to ensure precise and accurate data collection.

Community Engagement Specialist - the specialist will organise training and capacity building workshops and knowledge exchange between stakeholders to ensure the social and economic benefits for participating farmers.

Agronomist - Responsible for offering technical support to the farmers in regard to agroforestry systems.

Finance and accounts - Responsible for financial operations, budgeting and financial reporting.

GIS specialist – Manage geographical information system including data collection and analysis for informed decision-making.

Table 2.2 Responsibility for Project Coordination and Management Functions

Project Coordination and Management Function	**Responsible Party/Parties**
Stakeholder engagement during project development and implementation. This requires extensive engagement and facilitation of community-level discussions, farmer mobilisation, developing partnerships	ANA
Ensuring conformance with the Plan Vivo Carbon Standard (PV Climate) and compliance with applicable policies, laws and regulations. This role incorporates liaison with different partners, project implementation teams, local communities and consultants who may be hired upon need.	ANA

Developing technical specifications, land management plans and project agreements with project participants.	ANA
Ensuring that the PDD is updated with any changes to the project	ANA and GECA
Registration and recording of land management plans, project agreements, monitoring results, and sales agreements	GECA and ANA
Managing project finances and dispersal of income to project participants as described by the benefit sharing mechanism. GECA has the requisite administrative and governance structure to adequately deliver on this function.	GECA
Managing Plan Vivo Certificates in the Plan Vivo Registry	GECA
Preparing annual reports and coordinating validation and verification events	ANA
Securing certificate sales and other means of funding the project	GECA and ANA
Assisting Project Participants to secure any legal or regulatory permissions required to carry out the project	ANA
Providing technical assistance and capacity building required for project participants to implement project interventions	ANA
Monitoring progress indicators, livelihood indicators and ecosystem indicators and providing ongoing support to project participants	ANA
Measurement, reporting and verification of carbon benefits	ANA

2.3 Project Participants

The main Participates in this project include smallholder farmers from Nyeri, Kirinyaga and Laikipia Counties in Kenya. The farmers are intended to be the primary drivers towards achieving the project objectives. While the farmers hire seasonal casual labour, the registered farmers reside on their farms and are the owners of the pieces of land to be used in this project or have proof of land tenure rights.

Nyeri County:

Nyeri county is a predominantly agricultural county with over 70%of the population being dependant on agriculture the county is divided into sub-counties and covers a total area of 2475.4 km2. The main food crops grown in the county are maize, beans, Irish potatoes and vegetables while the major cash crops include; coffee tea horticultural crops and cut flowers. The average farm size for smallholder farmers is 1.5-2 acres. The project participants come from the following areas within the county:

5 constituencies in Nyeri County: Mathira, Mukurweini, Othaya, Tetu, Kieni and Nyeri Town.

56 Villages in Nyeri County: Mathira, Ngaine, Kamatu, mutathini, itiati, Vichi, Kilema, Kahiga, General China, Thaiti, Mahiga, Mutathini, LoweKahiga, Liamuhari, Karogoto, Githii, Karura, Narumoru, Kaiyaba,

Kabendera, Kiuu, Rititi, Kianderi, Ngandu, Kiambashi, Kirimukuyu, Mutwewathi, Gachika, Kalundu, Kiawaithanje, Kamuiri, Gatitu, Kahuruko, Muruguru, Kiaraho, Gichira, Gathaiti, Githoithiru, Muruguru-Githinguri, Marua, Kangaita, Gichira, Kiriti, Muthinga, Githiru, murogoro, Kiriti, Githiru, Muthinga, Kambora, Kihuru, Kahuruko, Mbogoini, Thaithi, Kangwaci, Kiaruihiu, Kiunyu, Kianjogu, Mbugwa, Kiawara and Kamunyaka.

Laikipia County:

Laikipia County, which is located in the leeward side of Mounty Kenya, is significantly dry most of the small-scale farmers practise subsistence mixed farming with rain fed crop cultivation and livestock keeping. The crops grown in this region include maize, beans, and potatoes where the dominant system of farming is inter-cropping between the major crops. The small holder farms in Laikipia represent 27.21% of the total land area in the county with most of the small holding land being between 2-5 acres. The small holder farming in the county is often challenged by climate variability, human-wildlife conflict and limited access to markets and water resources. Efforts such as conservation agriculture and agroforestry are therefore being promoted in the region to help farmers adapt to climate change and improve their productivity due to improved soil health and water retention.

2 Constituencies in Laikipia County: Laikipia East and Laikipia West

Four Villages in Laikipia County: Endana, Mbogoini, Matanya and Kiburuti

Kirinyaga County:

Kirinyaga county is a key agricultural area in Kenya well known for cash crops i.e. coffee, tea and horticultural crops as well as food crops maize, rice and bananas. Smallholder farmers dominate the landscape in both the cash crop and subsistence farming. The county which has three agro-ecological zones is situated between 1,158 and 5380 meters above sea level with a bimodal rainfall pattern. The kind of crops planted in the area are heavily influenced by the agroecological zones. According to previous studies conducted in the area most smallholder farmers prefer agroforestry for windbreaks and buffer-zones with the least of them being inclined to woodlots. The project participants come from the following areas within the county.

3 Constituencies in Kirinyaga County: Mwea, Gichugu and Ndia.

10 Villages in Kirinyaga County: Kagio, Muthigini, Cieni, Gaciongo, Kianjiru Kanjuu, Kiaragana, Kiaumbui, Mbiri, and Muburi

General profile of the farmers:

Most of the smallholders operate at subsistence levels, with a majority having land sizes that range between 1 and 6 acres. Chiefly, these farmers grow food for the household, with the surplus for sale. Typically, labour is provided by the family, with women providing much of the farm labour. Major crops grown include maize, beans, bananas, tea, coffee, potatoes, arrow roots, and sweet potatoes. Some farmers have invested on horticultural enterprises or other forms of agribusiness. Majority have elementary (primary) and secondary education level of school. Some of the farmers have income streams from outside the farms, which may include small businesses, professional occupations (e.g. carpentry, plumbing) and pensions.

Gender and Youth Considerations

Secure land tenure rights are a crucial factor for registration into this project, and GECA/ANA recognise that women and youth are often disadvantaged in this regard as they usually do not own the land. In many traditional settings, land ownership is transferred through patriarchal systems. Hence, women are less favoured than men in terms of registration. However, the project activities involve households rather than individuals hence integration of gender and youth into the project, since their enrolment into the project is allowable through family ownership. During trainings and workshops, we encourage women and youths to attend the trainings and more than two members from the same households are allowed to attend trainings. Furthermore, it is well documented that women are the ones that take care of the farm and the agroforestry trees; therefore, they benefit most from the agroforestry trainings.

Poverty Indicators

Nyeri County

In 2021, Nyeri County had an overall poverty rate of 26.4% with an estimated 203,000 people living in poverty. The County was estimated to have a hardcore poverty rate of 0.5% with roughly 4,000 people living in extreme poverty, and a food poverty rate of 17.5% (135,000 people).

Laikipia County

In Laikipia County, agriculture and livestock are the main sources of livelihood. They contribute more than 75% of household incomes and employ more than 60% of the county's population. The headcount poverty rate was 34.8% in 2021 (188,000 people living in poverty) and a hardcore poverty rate of 4% (22,000 people living in extreme poverty). Laikipia also had a food poverty rate of 27% in 2021, with around 145,000 people were living in food poverty.

Kirinyaga County

The overall headcount poverty rate in Kirinyaga County was 19.3% in 2021, representing an estimated 119,000 people living in poverty. The County had a hardcore poverty rate of 0.2%, with a total of 1,000 people estimated to live in extreme poverty. While the food poverty rate in Kirinyaga County in 2021 was 18.9%, with an estimated 116,000 people living in food poverty.

Data from various sources indicates that over 95% of smallholder farms from the project areas have severely depleted soil nutrients, such as nitrogen, phosphorous, and potassium. This has caused a gradual reduction in farm productivity, coupled with an ever-increasing need of using fertilizers. Smallholder farmers often face challenges accessing finance, including living in remote areas and being unable to qualify for finance. Despite the high digital penetration in the country, these farmers face constraints when adopting digital technologies, such as limited internet penetration, inconsistent power supply, and limited access to smartphones and computers.

Considering the combination of these issues, the project seeks to address some of these gaps through holding participatory sessions in partnership with other key stakeholders and agencies, seeking to discourse on the following key issues:

- General awareness of climate change, its drivers, impacts, GHG abatement, adaptation and mitigation; Specific awareness on the issues of carbon and carbon financing, and the place of farming in the carbon discourse;
- Sustainable agricultural land management systems, and their role in positively improving farming, including soil improvement, water conservation, nutrient enhancement and emission reduction;
- An exploration of agroforestry systems, building consensus on the accrual of benefits over time, to include the different types, approaches, species selection and imperatives of enrolment (including obligatory tree retention period);
- Risks wrought by the system, including such issues as erroneous species selection that may create competition for resources, investment costs, underinvestment in extension, securing land and tree tenure, time to financial return, continuous development of knowledge and capacity, pests and diseases.

It would only be upon holding these discussions, building consensus and verification of family ownership of land, that a farmer will be enrolled. The project will seek to use the peer-to-peer learning approach to encourage community benefit. A core issue will be mainstreaming the inclusion of women and youth in the project activities.

2.4 Participatory Design

This project employs a participatory design approach to engage various stakeholders in the development of project interventions, ensuring inclusivity from the outset public participation of the stakeholders will follow the guidelines of Kenya constitution to ensure that the project abides to the law of the land. To kickstart this process, farmers are mobilized through community outreach meetings in the targeted villages. The initial community meeting serves as a platform for project sensitization, introducing farmers to the project's objectives and scope. Farmers can then voluntarily express interest in adopting agroforestry practices on their farms.

Upon expressing interest, and meeting the land rights requirement, they register for the program, subsequently participating in an intensive agroforestry design training. Throughout this training, farmers delve into various agroforestry designs, openly discussing challenges faced on their farms and collectively exploring potential solutions. Notably, farmers create a map of their crop farms, allowing them to visualize and articulate their preferred agroforestry designs.

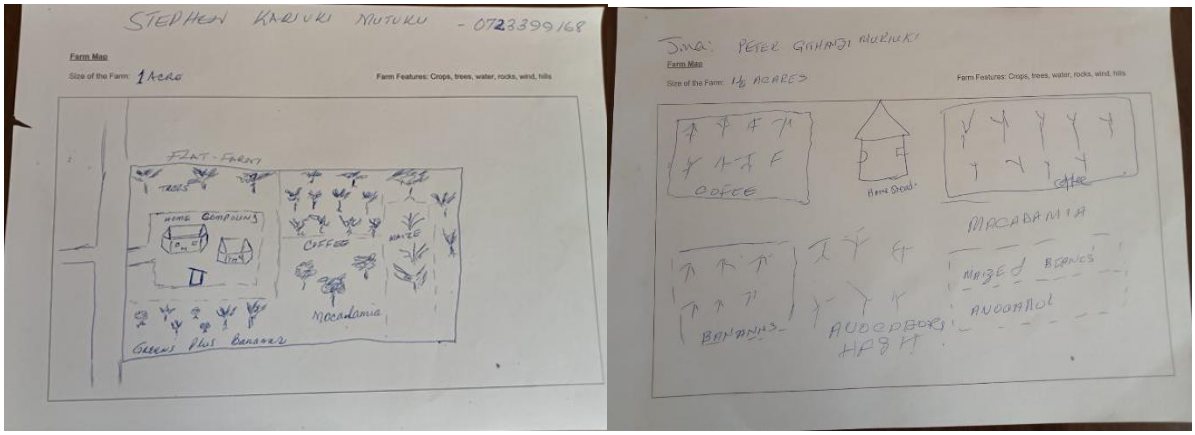


Figure 1. Sample of a farm map drawn by farmers during trainings

Under the guidance of a trained agronomist, participants receive valuable insights into optimal agroforestry designs, suitable tree species, and tree quantities, empowering them to make informed decisions tailored to their farms. This collaborative process will involve collecting, analysing, and representing spatial data, and will be used to identify and communicate farm development needs, and to support locating the agroforestry trees for optimising production. As the project progresses, there will be continuous agronomic and silvicultural extension support to the farmers

The participatory process extends beyond initial training, incorporating a series of community meetings, workshops, and focus group discussions. These gatherings include diverse participants such as farmers, community leaders, local authorities, and representatives of marginalised groups based on gender, age, ethnicity, religion, and social status. These platforms facilitate open dialogues where participants express their concerns, aspirations, and priorities.

Furthermore, to maintain ongoing communication and support, enrolled farmers are provided with a designated communication number, enabling direct interaction with the designated project coordinator via calls or SMS. The integration of the ***Telerivet*** mobile communications system enhances our ability to effectively communicate with farmers. This communication channel is also used for grievance resolution.

Importantly, our operations prioritize gender sensitivity, ensuring equal rights and inclusion for both men and women. Meeting sensitization includes use of local language, using written, graphic and audio-visual communication tools to ensure that every member of the community gets the message regardless of their literacy level. As in many projects, lack of sensitivity to these issues often leads to elite capture, thus limiting the greatest project benefits to a small clique of individuals who have the resources to invest in the project actions and leaving out the majority who are in greatest need of development benefits.

2.5 FPIC Process

Free, Prior, and Informed Consent (FPIC) Process:

The Free, Prior, and Informed Consent (FPIC) process is a crucial element within the project's framework, ensuring the active involvement of farmers with statutory or customary rights to land or resources in decision-making. This process comprises a series of transparent and inclusive steps that

empower farmers to negotiate the terms governing the project's design, implementation, monitoring, and evaluation.

Before project development farmers are a trained on the project processes and requirements in a language which they understand, mostly Swahili or in their local dialects. These Trainings happens in their respective villages where farmers are gathered in a central place making it accessible to all the farmers. The attendance is normally high with over 60% of the attendants being women.

The following are the key aspects of the FPIC for Ardhi Njema project:

1. **Inclusive Training and Capacity Building**

   Training sessions are conducted within the farmers' respective villages to maximize accessibility. These sessions are designed to be inclusive, where farmers are consulted on their availability and the best time/ day for conducting trainings, this ensures high participation rates, with over 60% of attendees being women. To support full participation, local leaders are involved in the programme and farmers are allowed to ask questions and provide comments and recommendations for the projects, writing materials all attending farmers, promoting a conducive learning environment.

2. **Agreement and Responsibilities**

   Following the initial training, farmers are presented with an agreement outlining their responsibilities in tree care and detailing the project's commitments. This includes the project's role in monitoring, evaluation, maintaining communication, and fulfilling its obligation to pay carbon dues once credits are sold.

   The agreement is an important element in the FPIC process and a collective decision-making mechanism that allows farmers to consent to and engage with the project on an informed basis.

   Sample of the responsibilities outlined in for agreement

   Ardhi Njema Agroforestry responsibilities

   - *Register and enrol tree growers in the carbon offset program*
   - *Provide seedlings and tree tags*
   - *Monitor tree growth*
   - *Provide timely payments for tree growth incentives and carbon offset payments*
   - *Communicate program updates to tree growers*

   Farmers responsibilities

   - *Correctly plant seedlings and tag the trees at 6 months*
   - *Maintain the health of the seedling including watering when necessary*
   - *Provide Ardhi Njema Agroforestry with access to the shamba to monitor the trees*
   - *Provide Ardhi Njema Agroforestry with updates on tree health as requested*

3. **Affirmative Inclusion Practices:**

The project recognizes the patriarchal nature of land tenure in the region and strives to address this through an affirmative process. Opportunities are framed as 'family' driven rather than tradeable commodities, aiming to include a broader demographic and avoid privileging those who traditionally qualify under existing norms.

4. **Consent Form and Community Involvement:**

   Enrolment in the project is contingent upon the signing of an FPIC consent form. This form, witnessed by a community member, signifies the farmers' acceptance of and commitment to the project guidelines throughout its duration. And willingness to voluntary participates in project activities.

5. **Transparency and Awareness:**

   The project team has developed a comprehensive process for information dissemination and awareness creation (detailed in section 2.3). This ensures that all core disclosures are made and that the FPIC process is adhered to, reinforcing the project's commitment to transparency and respect for farmers' rights.

6. **Participatory monitoring**

   Farmers are involved in the monitoring of the project process, like in the case of agroforestry they are involved in counting the number of trees surviving and updating field officers. As seen in the photo 1. Below. Farmers also take the field officers round their farms and both parties takes the coordinates/ polygons of the planted areas.

Figure 4 farmers trainings on agroforestry systems in Laikpia County in 2021

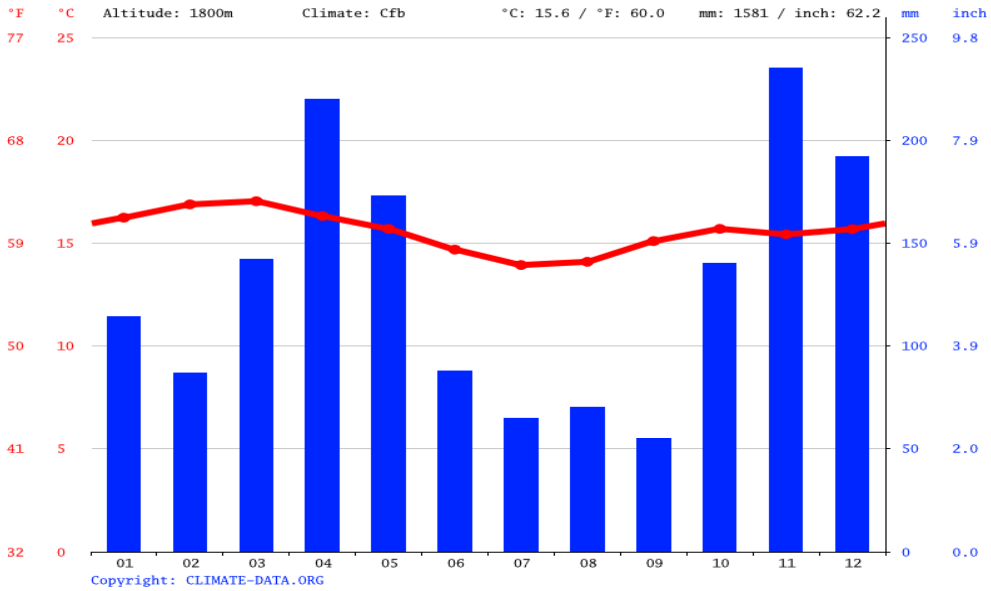
3 Project Design

3.1 Baseline Scenario

In the area(s) of the project zone, without the interventions of this project that will enhance the capacity of smallholder farmers to practice sustainable agricultural practices, there is a likelihood that future land use and land management will continue with the trend of unsustainable agricultural practices like monocropping, extensive tillage, limited composting, improper use of synthetic fertilizers and unguided agroforestry practices if the proposed project intervention does not take place. Soil degradation and environmental risks occasioned by present farming techniques are employed by smallholder farmers within this locality. This means that issues such as soil erosion, nutrient depletion, and loss of biodiversity are made worse by the absence of sustainable land management practices, thereby leading to a decline in the land's long-term productivity.

Business as usual cultivation approaches, which often involve poor soil conservation methods; extensive tillage and monoculture, coupled with unplanned agroforestry, result in reduction in soil fertility which increase the ecosystems vulnerability to extreme weather conditions. These actions have negative implications on ecosystems such as water quality impairment, habitat destruction and loss of biodiversity including beneficial organisms.

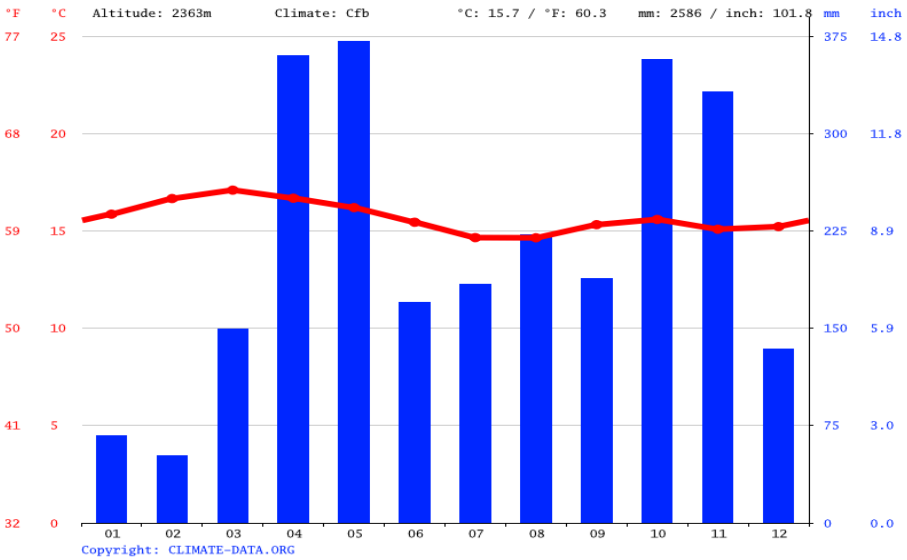
New and modified approaches to these actions are necessary especially in the face of climate change. The project offers a solution by implementing SALM and agroforestry which will reverse these effects in the long term. More so, this is aimed at ending such cycles by re-introducing sustainable and ecologically friendly systems that are beneficial not just to the environment but to communities as well. Due to the effects of climate change currently affecting the country’s agricultural productivity, several SALM initiatives both government and NGO led have been implemented among them is the National Agroforestry Strategy 2021-2030 which facilitates programmes that aim to integrate trees into individual farms to combat soil degradation, and the Kenya Climate Smart Agriculture project funded by the world bank which targets soil and water improvement in drought prone regions like Laikipia. Previous efforts have not yielded much fruit as the participation levels of the community was reduced to mere tokenism, including providing land without a substantial investment in community environmental education and high implementation costs coupled with weak land tenure policies. ANA seeks to address these existing challenges by concentring on community awareness, and encouraging community ownership of the project, programs which increase participation in the project and working with local governments to encourage land tenure security to improve long term stewardship of the project areas.



Annual climate averages for Nyeri County

In Nyeri, the climatic conditions are categorized as mild and moderate. There is significant rainfall throughout the year in Nyeri. Even the driest month still has a lot of rainfall. This location is classified as Cfb by Köppen and Geiger. In Nyeri, the mean yearly temperature amounts to 15.6 °C | 60.0 °F. The annual precipitation in this location is approximately 1581 mm | 62.2 inch.

Nyeri experiences a moderate climate, and the summers are not easy to define as the seasons merge almost seamlessly.

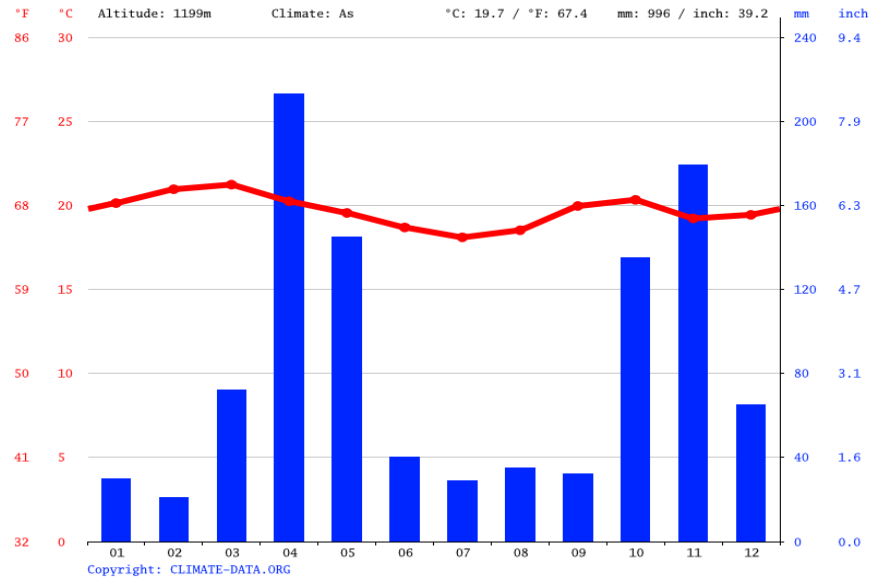


Annual climate averages for Nyahururu station in Laikipia, 2023.

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	15.9 °C (60.5) °F	16.7 °C (62) °F	17.1 °C (62.8) °F	16.7 °C (62) °F	16.2 °C (61.1) °F	15.4 °C (59.8) °F	14.7 °C (58.4) °F	14.6 °C (58.4) °F	15.3 °C (59.6) °F	15.6 °C (60.1) °F	15.1 °C (59.1) °F	15.2 °C (59.4) °F
Min. Temperature °C (°F)	9.5 °C (49.2) °F	9.4 °C (48.9) °F	10.3 °C (50.5) °F	11.7 °C (53) °F	11.7 °C (53) °F	10.9 °C (51.6) °F	10.2 °C (50.3) °F	10.1 °C (50.2) °F	9.8 °C (49.7) °F	10.4 °C (50.7) °F	10.9 °C (51.6) °F	10.2 °C (50.4) °F
Max. Temperature °C (°F)	22.2 °C (72) °F	23.7 °C (74.7) °F	23.9 °C (75) °F	22.3 °C (72.2) °F	21.4 °C (70.6) °F	20.6 °C (69) °F	19.5 °C (67.1) °F	19.6 °C (67.3) °F	21 °C (69.8) °F	21.1 °C (70) °F	20 °C (68) °F	20.7 °C (69.3) °F
Precipitation / Rainfall mm (in)	67 (2)	52 (2)	149 (5)	360 (14)	371 (14)	170 (6)	184 (7)	222 (8)	188 (7)	357 (14)	332 (13)	134 (5)
Humidity(%)	59%	53%	56%	68%	70%	70%	73%	74%	67%	69%	76%	69%
Rainy days (d)	5	4	7	12	13	13	17	17	11	13	14	9
avg. Sun hours (hours)	9.8	10.3	9.9	8.7	8.7	8.5	7.7	7.7	8.9	8.5	7.5	8.6

Data: 1991 - 2021 Min. Temperature °C (°F), Max. Temperature °C (°F), Precipitation / Rainfall mm (in), Humidity, Rainy days. Data: 1999 - 2019: avg. Sun hours
Between the driest and wettest months, the difference in precipitation is 319 mm | 13 inch. During the year, the average temperatures vary by 2.4 °C | 4.4 °F.

It has been determined that November exhibits the highest relative humidity, with a percentage of 76.36. On the other hand, it is observed that during February, there is an extremely low level of relative humidity at only 52.86 percent. The wettest month is August (22.57 days), whilst the driest is February (5.27).



Annual climate averages for Kirinyaga County

The averages, taken for Sagana station, are classified as tropical. The summers here have a good deal of rainfall, while the winters have very little. This climate is considered to be Aw according to the Köppen-Geiger climate classification. In Sagana, the mean yearly temperature amounts to 19.7 °C | 67.4 °F. Approximately 996 mm | 39.2 inch of rainfall occurs on a yearly basis.

3.2 Livelihood Baseline

From the baseline conducted, farmers in the selected project area are smallholder/subsistence farmers, cultivating crops such as maize, beans, bananas, Irish potatoes, and coffee. They also keep livestock such as cattle and chicken. They cultivate the food crops for home consumption, and occasionally they sell some of the surplus that they get from the farm. Chiefly, though, a great majority of these farmers practice subsistence farming, where farmers grow crops on smallholdings to feed themselves and their families. The food produced is primarily consumed by the farming household, with little or no surplus available for sale or trade. The farming characteristics observed include:

- Small farm holdings: most of the farmers have small farm holdings;
- Family work: much of the work in farming is often carried out by family members as a part-time or supporting activity;
- Self-sufficiency: mostly, the farmers primarily seek self-sufficiency, even if there are other sources of income.
- Small capital/finance requirements, with multiple uses for any income derived from farming or other external revenue streams;
- Mixed cropping, usually with little planning, no consideration of feedback loops such as flowering calendars or plant nutrient demand, and a focus on what is usable at the household level;
- Limited use of agrochemicals (e.g. pesticides and fertilizer);
- Unimproved varieties of crops and animals, often limited to sharing of farmers seed. Many of the farmers who solely depend on their farms are usually limited to saving seeds for propagation in subsequent seasons;
- Use of crude/traditional tools (e.g. hoes, machetes, and cutlasses), with limited capacity in their ability to invest in mechanisation or technology;
- Mainly the production of crops for primary consumption;
- Reliance on unskilled labour, usually with limited ability to invest in skilled labour or extension; and
- Generally low yields characterised by an absolute dependence on rain-fed agricultural systems.

Over the years, yield production on these small holdings has declined due to factors such as land degradation and the impacts of climate change. Over 90% of the farmers' practise mixed farming where they cultivate crops and keep some livestock on the same farm. They sell milk to cooperatives or to local consumers at farm-gate price to earn a living. However, the majority of the farmers live slightly above the monetary poverty index (USD 2.15 per day). Less than 10% of the farmers have formal jobs, such as teachers, while the majority rely on casual labour. The income level in the project areas reflects fairly the national baseline which is indicated by approximately 70 percent of the population living in the rural area, with poverty indices averaging 50 percent in this demographic.

About 240 farmers participating in the project were interviewed on the current sustainable agricultural practices such as the Climate Smart Agricultural (CSA) practices that they are

implementing in their farms, and the results are shown below. Of the practices agroforestry and crop rotation are the most practised. However, they are not practiced in a sustainable manner.

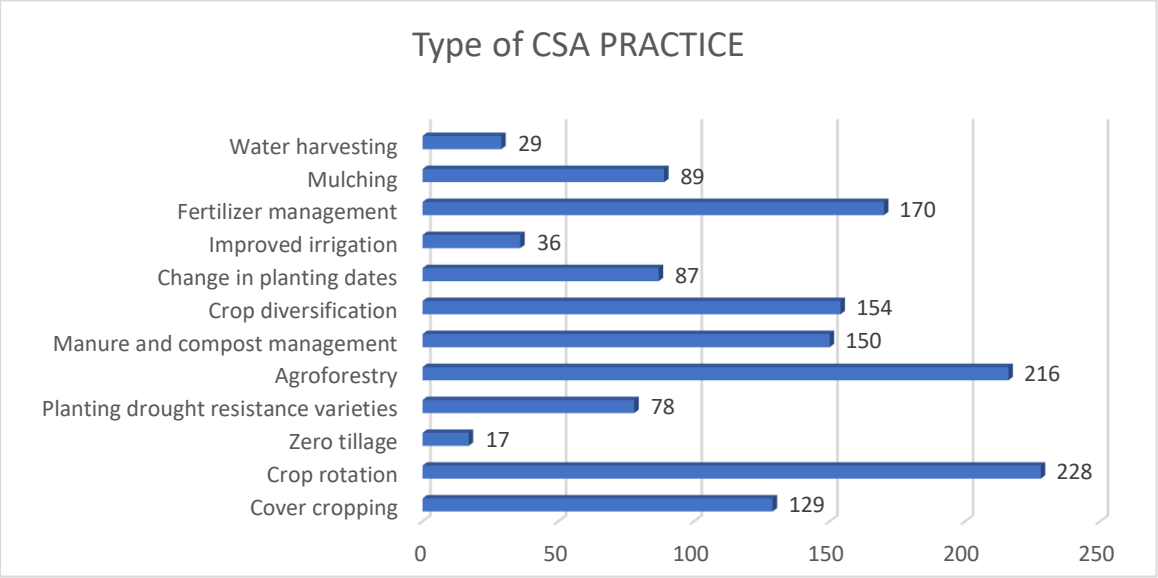


Figure 5 Prevalence of CSA practices in the project area

This project aims to improve the livelihood of the farmers by introducing sustainable SALM and agroforestry practices that will enable farmers to reap benefits such as improved soil fertility and moisture, reduced soil erosion, and improved biodiversity and macroclimate regulation, which lead to increased production yields and improved resilience to the effects of climate change. Farmers receive annual incentives for keeping the trees alive which improves their ability to buy inputs for their farms. Additionally, the project will continue to provide green jobs to the farmers with tree nurseries who are the suppliers of seedlings. The certification of the project with Plan Vivo will enable farmers to earn an extra income through the sale of carbon credits which they will use to further improve their livelihoods.

3.3 Ecosystem Baseline

The ecological conditions of the areas where this project is being implemented are currently characterised by degraded soils, loss of biodiversity due to land degradation, and the effects of climate change. It was observed that human practices have negatively impacted the integrity of the land, which, coupled with natural processes, has reduced its value, productivity, and ecological complexity. It can be surmised that this has affected the land's ability to support food production, livelihoods, and ecosystems.

Some causes of this degradation include:

- Human activities: These include unsustainable resource management, overgrazing, deforestation, urbanization and settlements.
- Extreme weather: Extreme weather conditions have also contributed to land degradation, especially flooding, droughts and famine.

• Agricultural and livestock production: These activities have contributed to land degradation as they are not practiced with sensitivity to sustainable management. Key degradation drivers include; land clearance, such as clearcutting and deforestation; agricultural depletion of soil nutrients through poor farming practices such as exposure of naked soil after crop harvesting, overstocking and grazing beyond the carrying capacity of the land, use of chemical fertilizers and pesticides. Some of these practices, for example, have cleared important habitats for pollinators, which has long term consequences for reproduction in flowering plants. These practices can also be partly attributed to limited agronomic knowledge, since farmers generally see insects as pests and often do not differentiate between beneficial organisms and others, for example. An interaction with a farmer, for example, revealed that they perceive a carpenter bee as an enemy and actively destroy dry woody matter where these insects live, and will also spray them with pesticides as soon as they are seen.

Farmers in the study area practise subsistence mixed farming which does not perform optimally. There has been significant loss of tree cover, and poor use of synthetic fertilizers and soil conservation techniques render the lands less productive over time, necessitating the farmers to farm on new lands (often through renting) leading to more deforestation. Lack or poor implementation of fallow systems exhausts the land as well, by not giving it appropriate time to recover. Use of crop residue as animal feed further exacerbates loss of nutrients from the soil. Poor manure management coupled with limited composting skills deny the soil the much-needed resources to recover from overuse.

Loss of biodiversity as a result of degradation renders the ecosystem less resilient to shocks such as extreme weather events, new pests and diseases that have become a common phenomenon with increasing incidence of extreme climate events. Habitat loss and degradation are major causes of biodiversity loss, which frequently occurs when a natural habitat is destroyed, fragmented, or thinned, which can reduce or eliminate the food and habitat for many species. Species that can't migrate are often wiped out when ecological boundaries are breached, or when the changes are drastic. In a large part of the project site, deforestation, intensive monocultures, agriculture and human settlement have been major drivers of habitat loss, as has been the use of pesticides and chemical fertilisers. With integrated actions combining agroforestry and SALM interventions, it is expected that the land attributes will improve and that these nature-based activities will result in more resilient and robust landscapes.

This project aims to accelerate SALM and agroforestry in these ecosystems to improve soil fertility and promote climate change reliance among the smallholder farmers. The re-introduction of native species will boost the biodiversity of the ecosystems including soil biodiversity hence improve resilience to climate change. This will also lead to the maintaining of food production and restoration of tree cover, our farmer trainings will support the reduction of dependence on land clearing by creating long term incentives for the project.

3.4 Project Logic

Table 3.4 Initial Project Logic

Aim

The project aims to improve soil fertility by reducing land degradation and promote climate change resilience among the smallholder farmers. The project simultaneously, supports environmental conservation through carbon sequestration while increasing livelihoods for rural communities through the implementation of agroforestry systems.		
	Description	**Assumptions/Risks**
Outcomes – Intended overall project aim		
Carbon Benefit- Increased carbon removal by the trees planted	The estimated 6 million trees to be planted in agroforestry systems will sequester atmospheric carbon from the atmosphere through photosynthesis and storage in biomass. SALM practices such as minimum tillage will improve the soil ability to sequester carbon that will be stored below ground. SALM cycles. Aerating manure stockpiles is also expected to reduce methane emissions by inhibiting methanogens. Through this project, the carbon absorbed will be monetized adding extra income to the farmers.	Trees planted by farmers will survive and grow, achieving expected carbon sequestration rates. Adoption of agroforestry practices will lead to reduced deforestation and land degradation. Adoption of various SALM practices will be done simultaneously in the same farms. The project will be registered with Plan Vivo and certified to sell carbon credits**.**
Livelihood Benefit- Increased crop yields and diversified farm products	The estimated 6 million trees that will be incorporated into the agricultural farms is expected to enhance soil fertility, therefore increasing food production. Additionally, availability of fruits trees from the estimated 500,000 fruit trees to be planted will provide diversified products from the farm. Farmers will enjoy economic stability due to reduced	Farmers will take care of the trees to grow to maturity. Farmers will adopt SALM successfully. There will be sustained markets for agroforestry products such as Croton nuts.

	dependency on single crops and additional income from incentives and carbon credit benefits which lessens their vulnerability to market and climate shocks.	Farmers will enjoy additional income paid from incentives and sale of and carbon credits.
Ecosystem Benefit	The agroforestry systems will enhance biodiversity by supporting a variety of species, which leads to promotion of ecological balance and pest control. Native trees provide habitat and food for local wildlife, including birds, insects and small animals. The wildlife that could be considered as pests, such as rodents, are being managed using mechanical means. SALM will help restore soil biodiversity balance and promote beneficial organisms.	Farmers will take care of the trees to ensure a high survival rate. Farmers will adopt SALM successfully.
Outputs	**Outputs**	**Risks/assumptions**
Intermediated outcome Improved climate change resilience among the farmers due to enhanced biodiversity, microclimates and soil fertility.	Estimated 30,000 Ha of agricultural land restored with agroforestry systems and SALM Estimated 6 million trees planted Estimated 60,000 farmers trained on agroforestry systems. Estimated 3 different tree species with a total of about 250 trees/Ha added into the agricultural farms to enhance biodiversity.	Incomplete adaptation of SALM and agroforestry by farmers. This will be mitigated by disbursing technical knowledge to farmers on how they can leverage SALM and agroforestry systems to achieve climate change resilience. This work will be carried out in partnership with lead agencies as including NEMA, KALRO and KFS. By way of partnerships with relevant state and non-state actors, the resilience gaps will be addressed by providing practitioners with relevant information and pragmatic models of best practices.

Intermediated outcome Increased efforts to mitigate climate change due to reduction and removal of GHGs emissions.	**Output 2** Number of CO2e sequestered annually	The trees planted in this project will grow into maturity and remove carbon dioxide from the atmosphere.
Intermediated outcome Improved livelihoods for project participants due to improved land management, income from PVCs, diversified income from fruits of agroforestry, and better community governance systems.	60,000 households implement agroforestry in the farmers 500,000 fruit trees planted	All farmers will be willing to implement the project. All the fruits trees planted will survive and yield fruits.

3.5 Additionality

Table 3.5.1 Additionally

The pursuit of smallholder agriculture livelihoods has not been a very profitable enterprise for many farmers, and their 'business-as-usual' approach has often resulted in repeated production failures. Most of these farmers depend on rainfed agriculture, leaving them to the ravages of changing seasons and widely varying weather patterns. In Nyeri, Laikipia and Kirinyaga Counties, the occurrence of droughts has increased with very short recovery periods. Increasingly, government and other agencies have been forced to revert to emergency relief food when famine strikes, often in areas which just a few months previously faced devastating floods.

This knee-jerk response system by government and agencies has informed food systems security especially for the drier parts of the country. The management of this sector, despite the massive support from various bilateral and multilateral partner, has usually been addressing deficiencies and gaps as opposed to surplus and market access aspects. The complex scientific, financial, technical and policy shifts that are needed have often seemed insurmountable, leaving most peasant farmers hapless and with minimal options.

This project seeks to utilize the well-proven agronomic and landscape management practices to improve the farming experience, by carrying out interventions that will enhance soil fertility and water efficiency, optimise pollination, provide much needed capital and bridge the knowledge gaps that could make agriculture a more profitable enterprise. Agroforestry has been documented to

offer all-round wins, benefiting the farmer as well as diverse landscape issues, and when using the same as a window to sell carbon credits, can proffer global benefits in sequestration. This is the additionality that the project offers.

Table 3.5.2 Initial Barrier Analysis

Project Intervention	**Main Barriers**	**Activities to Overcome Barriers**
Improved Land Management Through SALM	Farmers have limited knowledge on sustainable agricultural practices about soil and water conservation techniques that can boost production.	This will be addressed during training and awareness sessions and will include both the project technical staff and relevant stakeholders. Ardhi Njema shall partner with tech companies to offer technology for on-farm data collection and monitoring that will be coupled with ground truth data.
Restoration through agroforestry	Insufficient financial resources to procure seedlings, planting, maintenance, monitoring and training of staff and community. Limited finances to implement the project due to high upfront finances needed.	Ardhi Njema team has been enrolled in the Plan Vivo accelerator program which will equip the team members with the knowledge required in developing the PDD. The team will continue with the resource mobilisation activities to ensure sufficient upfront funds to scale up the project. The sale of credits through the plan vivo certificate will help secure finances to repay the investment fund. Farmers are provided with seedlings free of charge to ensure that everyone willing to implement agroforestry is equipped with seedlings.

3.6 Exclusion List

The project will not include any activities listed in the Plan Vivo Exclusion List. Please see Annex 3 for the Exclusion List in full.

3.7 Environmental and Social Screening

Please see Annex 4 for the Environmental and Social Screening and review.

3.8 Double Counting

Table 3.8 National Level Legislation, Policies and Instruments

	Yes/No/ Unsure	Details
Is there a national registry for land-based carbon projects?	Yes	The registry is managed by the Designated National Authority that was recently appointed. It is still under development but will ensure that double counting does not occur.
Are carbon rights defined in national legislation?	Yes	Carbon rights are linked to land and tree tenure. Therefore, those who participate in the project will need to demonstrate private ownership via a 'certificate of title/lease' issued by the Government Registrar of Land Titles.
Are there any carbon pricing regulations existing or in development (e.g. emissions trading scheme or carbon tax)	No	Current regulation does not put a cap on carbon pricing for voluntary markets.
Does the country receive or plan to receive results-based climate finance through bilateral or multilateral programs?	Unsure.	Unsure when the existing agreements affect voluntary carbon markets, but there is scope to obtain climate finance from some carbon mechanisms including the Adaptation Fund. The use of such funds is subject to decisions made by various national entities and is outside the control of ANA and GECA.
Are there any other relevant regulations, policies or instruments?	Yes	There's climate change Act and regulation on carbon markets.

4 Governance and Administration

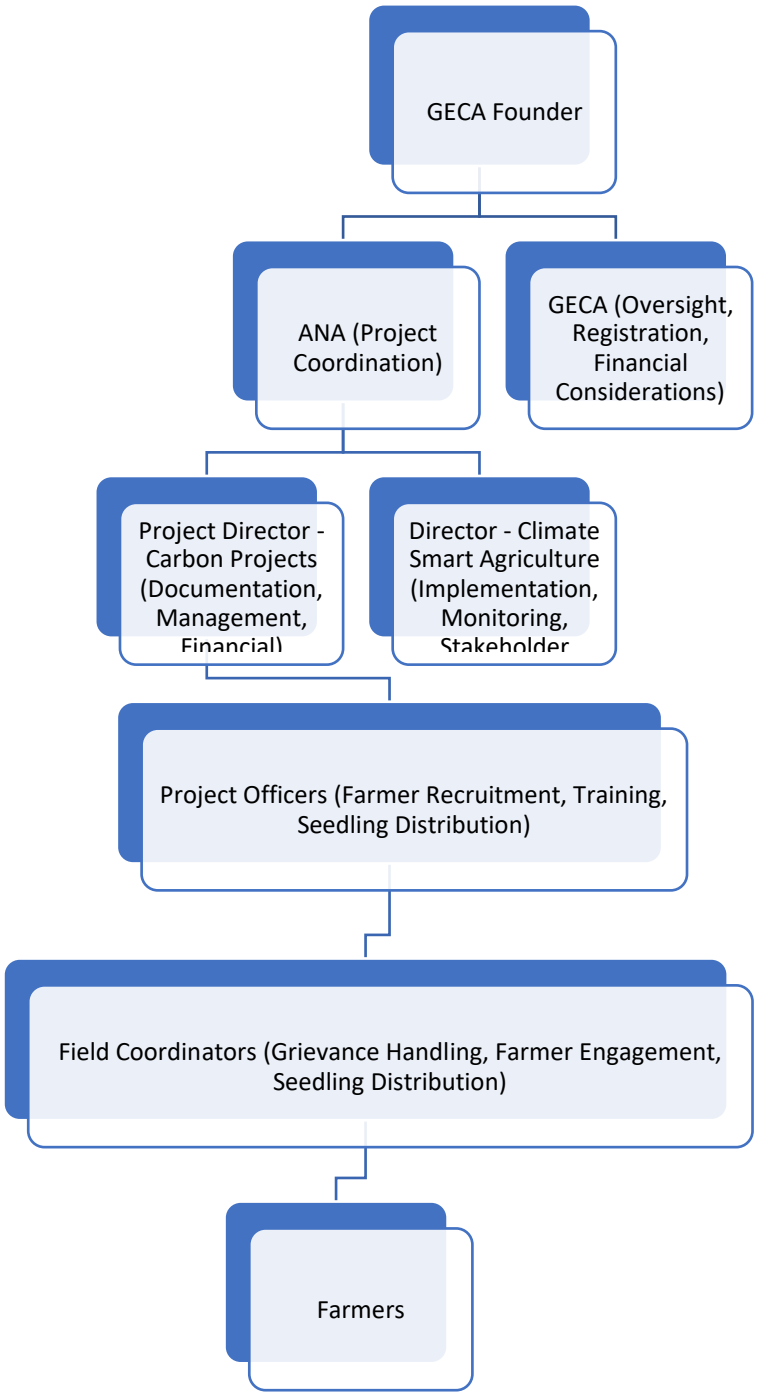
4.1 Governance Structure

ANA will oversee the project coordination and implementation. ANA's project director for Carbon Projects is responsible for project documentation, management and financial reporting. ANA's director for Climate Smart Agriculture is responsible for Project implementation and monitoring activities which include stakeholder engagements and management of Project officers. Project officers are responsible for farmer recruitment, training and distribution of seedlings through field coordinators. The field coordinators are also responsible for receiving grievances from farmers and resolving them or escalating them to the project officer through the specified channel. Field

coordinators are drawn from the local community. Both directors report to the founder of GECA while project officers report to the directors and the field coordinators report to the project officers. GECA will provide oversight of the project, registration and financial considerations.

4.2 Legal and Regulatory Compliance

The primary legislation on climate change response in Kenya is the Climate Change Act from 2016. The recently released Climate Change (Amendment) Act, 2023 and the Climate Change (Carbon Markets) Regulations, 2024 are regulating voluntary carbon market projects in Kenya. Both the Act and Regulation give the mandate of overseeing carbon projects in the country to Designated National Authority (DNA) which has been recently gazetted to be National Environment Management Authority (NEMA). NEMA also through the Environment Management



and Coordination Act of 1999 amended in 2015 (EMCA) is the regulator for environmental integrity in the country and requires all carbon projects to be compliant.

The Ardhi Njema Agroforestry project will be compliant to all above laws and regulations, as well as Plan Vivo requirements, throughout the project's lifetime.

4.3 Financial Plan

This project has been funded from grants and donations. We have received a grant of $25,000 from EcoFix(K). We also receive funds from private donors through our partner organization Green Earth Climate Action at ~$25,000/year. We will continue to seek additional funding from grants and donations as well as seek out other potential project funders as we develop a financial plan for the PDD.

Annexes

Annex 1 – Project Boundaries

Provide geospatial data files for project region and project area boundaries.

Project boundary: Nyeri, Kirinyaga and Laikipia Counties

https://drive.google.com/file/d/1xbhAoJGH1dtrkMFyRfpMt9IIVpEVvQ26/view?usp=sharing

Nyeri coordinates
https://drive.google.com/file/d/1sIIRb5cZYbg4Y6yjgBgSC29ur5PYzfNN/view?usp=sharing

Kirinyaga coordinates

Kirinyaga input data for map.csv - Google Drive

Laikipia coordinates

https://drive.google.com/file/d/1hRQWRS0fLdp8VxOhmFzEVWuMKgkOf0HD/view?usp=sharing

Kirinyaga polygons SR2022

Kirinyaga polygons - Google Drive

Annex 2 – Registration Certificate

Certificate No. 02648

Republic of Kenya

MINISTRY OF LABOUR AND SOCIAL PROTECTION
STATE DEPARTMENT FOR SOCIAL PROTECTION
DEPARTMENT OF SOCIAL DEVELOPMENT

Certificate of Registration of Community Based Organization (CBO)

This is to Certify that

ARDHI NJEMA AGROFORESTRY COMMUN ITY BASED ORGANISATION

Group Name / Project

NTURUKUMA		CENTRAL
Sub-Location / Ward	Location	Division
LAIKIPIA EAST	NANYUKI	LAIKIPIA
Sub-County	Constituency	County
NUK/HUDC/061	LAIKIPIA EA ST	26/11/2019
Registration No.		Date of Registration

Is registered with the Department of Social Development by:

Name WAWERU MWANGI
County / Sub County Social Development Officer

20/05/2021
Date of Issue

Signature

DEPARTMENT OF SOCIAL DEVELOPMENT LAIKIPIA 20 MAY 2021

Note: *The Contents of this Certificate should not be erased, altered or defaced in any way.*

Annex 3 – Exclusion List

Activities	**Included in Project**
Any project activities leading to or requiring the destruction [1] of critical habitat [2] or any forestry project which does not implement a plan for improvement and/or sustainable management.	No
Any activity which could be associated with the significant impairment of areas particularly worthy of protection of cultural heritage (without adequate compensation in accordance with international standards).	No
Trade in animals, plants or any natural products not complying with the provisions of the CITES/Washington convention [3].	No
Illegal, harvesting or trading in any wildlife resources.	No
Destructive fishing methods or drift net fishing with a net more than 2.5 km in length, explosives and/or poison.	No
Large-scale commercial logging operations for use in primary tropical moist forest.	No
Production or trade in wood or other forestry products other than from sustainably managed forests [4].	No
Exploitation of diamond mines and marketing of diamonds where the host country has not adhered to the Kimberley Process, and exploitation of other conflict minerals [5]	No
Activities involving harmful or exploitative forms of forced labour, [6] harmful child labour [7], modern slavery and human trafficking [8].	No
Projects that include involuntary physical displacement and/or forced eviction.	No
Production or activities that encroach on lands owned, or claimed or occupied by Indigenous Peoples, without full documented Free, Prior and Informed Consent (FPIC) of such peoples [9].	No
Harmful and unsafe production, use, sale or trade of pharmaceuticals, ozone layer depleting substances [10], and other toxic [11] or dangerous materials such as asbestos or products containing PCB's [12], wildlife or products regulated under CITES, including all products that are banned or are being progressively phased out internationally	No
Production or trade of arms, ammunition, weaponry, controversial weapons, or components thereof (e.g., nuclear weapons and radioactive ammunition, biological and chemical weapons of mass destruction, cluster bombs, anti -personnel mines, enriched uranium).	No

Procurement and use of firearms.	No
Provision of finances to military institutions involved in conservation or security activities.	No
Production or trade of strong alcohol intended for human consumption or other alcoholic beverages (excluding beer and wine).	No
Production or trade of tobacco and other drugs	No
Gambling, gaming establishments, casinos or any equivalent enterprises and undertaking [13].	No
Any trade related to pornography, prostitution or sexual exploitation of any form.	No
Production or trade in radioactive material. This does not apply to the procurement of medical equipment, quality control equipment or other application for which the radioactive source is insignificant and/or adequately shielded	No
Production or trade in unbound asbestos. This does not apply to the purchase or use of cement linings with bound asbestos and an asbestos content of less than 20%.	No
Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals. Hazardous chemicals include gasoline, kerosene, and other petroleum products.	No
Transboundary trade in wastes, except for those accepted by the Basel Convention and its underlying regulations [14].	No
Any activity leading to an irreversible modification or significant displacement of an element of culturally critical heritage [15].	No
Production and distribution, or investment in, media that are racist, antidemocratic or that advocate discrimination against a part of the population.	No
Projects involving the planting or introduction of invasive species	No
Projects that increase the dependency of primary participants and other stakeholders on fossil fuels.	No

Notes:

[1] Destruction means (1) the elimination or severe reduction in the integrity of a habitat/area caused by a major and long-term/prolonged change in land-use or water resources or (2) the modification of a habitat such that this habitat's ability to fulfil its function/ role is lost.

[2] The term critical habitat encompasses natural and modified habitats that deserve particular attention. This term includes (1) spaces with high biodiversity value as defined in the IUCN's classification criteria, including, in particular, habitats required for the survival of endangered species as defined by the IUCN's red list of threatened species or by any national legislation; (2) spaces with a particular importance for endemic species or whose geographical range is limited; (3)

critical sites for the survival of migratory species; (4) spaces welcoming a significant number of individuals from congregatory species; (5) spaces presenting unique assemblages of species or containing species which are associated according to key evolution processes or which fulfil key ecosystem services; (6) and territories with socially, economically or culturally significant biodiversity for local communities. Primary forests or high conservation value forests must also be considered as critical habitats

[3] https://cites.org/eng/disc/text.php

[4] Sustainably managed forests are forests managed in a way that balances ecological, economic and socio-cultural needs.

[5] Conflict minerals, including tin, tungsten, tantalum and gold, can be used to finance armed groups, fuel forced labour and other human rights abuses, and support corruption and money laundering. See the EU Regulation on conflict minerals: https://policy.trade.ec.europa.eu/development-and-sustainability/conflict-minerals-regulation/regulation-explained_en

[6] Forced labour means all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.

[7] Harmful child labour means the employment of children that is economically exploitive, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health, or physical, mental, spiritual, moral, or social development. Employees must be at least 14 years of age, as defined in the ILO's Declaration on the Fundamental Principles and Rights at Work (C138 – Minimum Age Convention, Article 2), unless local laws require compulsory school attendance or a minimum working age. In such circumstances, the highest age requirement must be used.

[8] Modern slavery is comprised two key components: forced labour and forced marriage. These refer to situations of exploitation that a person cannot leave or refuse due to threats, violence, deception or coercion. (https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---ipec/documents/publication/wcms_854733.pdf)

[9] https://www.fao.org/indigenous-peoples/our-pillars/fpic/en/

[10] Any chemical component which reacts with, and destroys, the stratospheric ozone layer leading to the formation of holes in this layer. The Montreal Protocol lists Ozone Depleting Substances (ODS), their reduction targets and deadlines for phasing them out.

[11] Including substances included under the Rotterdam Convention, Stockholm Convention and WHO "Pharmaceuticals: Restrictions in Use and Availability".

[12] PCBs (polychlorinated biphenyls) are a group of highly toxic chemical products that may be found in oil-filled electrical transformers, capacitors and switchgear dating from 1950 to 1985.

[13] Any direct financing of these projects or activities involving them (for example, a hotel including a casino). Urban improvement plans which could subsequently incorporate such projects are not affected.

[14] Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their disposal (1989).

[15] "Critical cultural heritage" is considered as any heritage element recognised internationally or nationally as being of historical, social and/or cultural interest.

Annex 4 – Environmental and Social Screening

Guidance on use

Background

- The questionnaire includes questions aligned with the Plan Vivo Standard Environmental and Social Safeguards (Section 3.9, V5.0) and other Safeguard Provisions that are embedded in V5.0 of the Standard (namely Stakeholder Engagement, Stakeholder Consultation, Free Prior and Informed Consent, Grievance Redress Mechanism).

  The questionnaire also draws from the Plan Vivo Environmental and Social Policy Framework (ESPF)

- The questionnaire is structured around the IUCN ESMS Questionnaire, which itself is designed to be aligned with the IUCN ESMS (2016), and the World Bank Environmental and Social Framework (2017), including World Bank Standards 1-10.
- The number of questions has been limited in this version of the questionnaire to ensure that it is practical and user-friendly.
- The purpose of the questionnaire is to establish: 1) the project risk rating; 2) the significance of risks and impacts; 3) alignment with safeguard provisions; 4) the need for further E&S assessment during project design; 5) the likely safeguard plans that should be developed.
- Due to the early stage in project design, the questionnaire is not designed to assess alignment with the Plan Vivo Standard requirements, but rather prompt projects as to what will be expected regarding those requirements that relate to E&S safeguards.
- Any social and environmental risks must inform the design of the *Project*.

Requirement

- As per the Plan Vivo Standard v5, every project must conduct a screening of environmental and social risks and impacts at the PIN stage of project design. The questionnaire and screening report are to be submitted alongside the PIN to the Plan Vivo Foundation.

Process for use of the E&S questionnaire

- The Project Coordinator is to fill in the "Project coordinator response" section of the questionnaire. This is the column shaded light grey.
- Once completed by the Project Coordinator, the Plan Vivo Foundation Project Officer and E&S reviewer is to fill in the "E&S reviewer comments" section of the questionnaire. This includes filling in the "E&S reviewer conclusions".
- The screening report is then completed at the end by the Plan Vivo Foundation E&S reviewer, and the results are shared and discussed with the Project Coordinator.

Establishing significance of risks and impacts

Table 1 illustrates how risk significance can be established based on an estimate of likelihood of something happening, and the impact should it occur. This likelihood-magnitude matrix can be used by the Project Officer and the E&S reviewer to estimate the risk and impact significance of the E&S risk areas indicated in the E&S questionnaire **Section B**, below. Note that while the questionnaire focuses on key topics and issues that are common to natural resource management projects, the project coordinator should include other known E&S risks and impacts associated with the planned project.

Likelihood represents the possibility that a given risk event is expected to occur. The likelihood should be established using the following five ratings:

- *Very unlikely to occur (1)*
- *Not expected to occur (2)*
- *Likely – could occur (3)*
- *Known to occur - almost certain (4)*
- *Common occurrence (5)*

Impact (or consequence) refers to the extent to which a risk event might negatively affect environmental or social receptors – see below criteria distinguishing five levels of impacts:

Table 1: Rating impact of a risk area

Severe (5)	Adverse impacts on people and/or environment of **very high magnitude**, including **very large scale** and/or spatial extent (large geographic area, large number of people, transboundary impacts), cumulative, **long-term (permanent and irreversible**); **receptors** are considered **highly sensitive**; examples are severe adverse impacts on areas with high biodiversity value[1]; severe adverse impacts to lands, resources and territories of indigenous peoples; significant levels of

	displacement or resettlement with long-term consequences on peoples' livelihood; impacts give rise to severe and cumulative social conflicts with long-term consequences.
Major (4)	Adverse impacts on people and/or environment of **high magnitude**, including **large scale** and/or spatial extent (large geographic area, large number of people, transboundary impacts), of certain duration **but still reversible** if sufficient effort is provided for mitigation; receptors are considered sensitive; examples are adverse impacts on areas with high biodiversity value; adverse impacts to lands, resources and territories of indigenous peoples; significant levels of displacement or resettlement with temporary consequences on peoples' livelihood; impacts give rise to social conflicts which are expected to be of limited duration.
Medium (3)	Adverse impacts of **medium magnitude**, **limited in scale** (small area and low number of people affected), **limited in duration** (temporary), impacts are relatively predictable and can be avoided, managed and/or mitigated with known solutions and straight forward measures.
Minor (2)	Adverse impacts of **minor magnitude, very small scale** (e.g. very small affected area, very low number of people affected) and only short duration, may be easily avoided, managed, mitigated.
Negligible (1)	Negligible or no adverse impacts on communities, individuals, and/or on the environment.

Table 1: Rating significance of a risk area (Source: IUCN ESMS questionnaire, 2020)

		Likelihood of occurrence				
		Very unlikely to occur (1)	*Not expected to occur (2)*	*Likely – could occur (3)*	*Known to occur - almost certain (4)*	*Common occurrence (5)*
Magnitude	*Severe (5)*	Moderate	Substantial	High	High	High
	Major (4)	Low	Moderate	Substantial	Substantial	High
	Medium (3)	Low	Moderate	Moderate	Moderate	Substantial
	Minor (2)	Low	Low	Moderate	Moderate	Moderate
	Negligible (1)	Low	Low	Low	Low	Low

Establishing project risk category

The project risk category will be determined based on an understanding of the types of potential E&S risks and impacts associated with the project, and the availability of appropriate and known mitigation measures. Most Plan Vivo projects are thought to be of either low or moderate risk. If high risk projects are identified, the E&S impact assessment would look to understand the alternative project designs available to reduce the potential risks and impacts.

Table 2: Rating significance of a risk area (Source: IUCN ESMS questionnaire, 2020)

Risk Category	**Definition**
Low	Insignificant or low potential environmental and social risks and impacts have been identified. No additional management measures are required; no Environmental and Social Management Plan (ESMP) section of the PDD required.
Moderate	Moderate and/or substantial potential adverse risks and impacts have been identified, in one or more risk areas. These risks and impacts can be mitigated through known mitigation measures, such as a Stakeholder Engagement Plan, livelihood restoration plan, or through the project's ESMP.
High	High risks and impacts that are potentially diverse and irreversible, and for which standard solutions are not sufficient to manage, and for which specialist safeguard plans and expertise is required.

Alignment with safeguard provisions

Section C of the questionnaire refers to the Plan Vivo Standard (V5.0) safeguard provisions which are integrated into the Standard. These include:

- *Stakeholder engagement and consultation*

- *Free, Prior and Informed Consent*
- *Grievance Redress Mechanism*

The project coordinator will answer the questions related to these provisions, and clarify the project's intentions to meet these Standard requirements during the project design phase.

Environmental and Social Assessment

The E&S questionnaire should determine what E&S assessment is required during the project design phase (PDD development). For low and moderate risk projects, a tailored E&S assessment is required. For high-risk projects, an Environmental and Social Impact Assessment (ESIA) is required. The project coordinator should consider in responses what further assessment of risks and impacts is required, and the E&S reviewer will comment on this and include a summary in the Screening Report section.

Safeguard Plans

The E&S questionnaire should determine which Safeguard Plans are required by the project. For low risk projects, it is unlikely that an ESMP will be required. For moderate risk projects, and ESMP will be required. Projects will, according to the Standard, also require a mandatory Stakeholder Engagement Plan and a Grievance Redress Mechanism.

Some projects might require specialist plans, such as an Indigenous Peoples Plan (IPP) or a Livelihood Restoration Plan.

SECTION A: PROJECT INFORMATION	
Project title:	**Ardhi Njema Agroforestry**
Project coordinator:	**Green Earth Climate Action**
Country:	**Kenya**
Geography/ landscape:	**Central Kenya; Nyeri, Laikipia and Kirinyaga counties.**

Project summary:	**The project works with ANA Community Based Organisation to implement an agroforestry activity. Protection of crops by restoring agroforestry crops around ~600 smallholders' farmlands, over 300 ha. Improved land management intervention also to train farmers in planting and management techniques. Potential to expand in the future to ~60,000 smallholders over 30,000 ha.**
Name and role of project coordinator staff member filling this questionnaire:	**Filled in with v1 of PIN (submitted 08/07/24).**
Confirm that the Plan Vivo Exclusion List is appended to this E&S questionnaire:	**Yes, copied from PIN.**

SECTION B: POTENTIAL E&S RISKS AND IMPACTS			
Topic	**Question**	**Project coordinator response**	**E&S reviewer comments**
E&S Risks and Impacts			
Vulnerable Groups	Are there vulnerable or disadvantaged groups or individuals, including people with disabilities (consider also landless groups, lower income groups less able to cope with livelihood shocks/ stresses) in the project area, and are their livelihood conditions well understood by the project?	*Yes. The project has undertaken baseline assessment of the target area and any vulnerable groups will be taken into consideration when making any project decisions.* *The extent of vulnerability can be understood from various perspectives, mainly from gender, youth or poverty lenses. Census data sheets have been used to provide poverty baselines, and*	*OK – this has been realised at PIN stage and is expected to be fleshed out during the project design process. The PDD should demonstrate how these assessments and consultations have impacted on the projects' design.*

		gender disaggregation has also been derived from the same documents.	
	Is there a risk that project activities disproportionately affect vulnerable groups, due to their vulnerability status?	*No. Careful consideration is done to ensure that vulnerable groups benefit from project activities as well.* *There will be flexibility in developing safe landing spaces for women and youth, who will be encouraged to participate as family members owning land with clear title.*	*OK*
	Is there a risk that the project discriminates against vulnerable groups, for example regarding access to project services or benefits and decision-making?	*No. All groups will have free access to the project and voluntarily choose to participate.* *It should be noted that project enrolment will be limited to those who have absolute ownership of their land, which carries the inherent risk of excluding those who do not have secure land tenure: this category could potentially include the poorest members with no documented rights to the land, women and youth who's ownership of land is limited and controlled by older male family members. The model adopted is one*	*OK – this is good to hear. Do you know how to project will ensure this yet? If so, please describe. If not, please provide thorough details at PDD stage.*

		that treats farms as 'family –owned' hence providing space for women and youth to participate even if titles may be in the names of the husbands.	
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 2, the project has done well to assess the vulnerable and marginalised groups in the area at PIN stage and the documentation shows the extent of the consultation. Implementation of the outputs of these meetings into project design through PDD stage means this risk is unlikely to occur.* *Estimated magnitude of risks (1-5) & justification: 3, if this risk were to occur it would impact a significant number of people in a substantial way.* *Risk significance:* ***Moderate***			
Gender equality	Is there a risk of adverse gender impacts due to the project/ project activities, including for example discrimination or creation/exacerbation or perpetuation of gender-related inequalities?	*No. The project considers gender inclusivity in the stakeholder engagement process.* *There will be deliberate actions towards affirmative action to enhance gender and youth inclusivity. The project will engage a GESI specialist to drive this.*	*OK – a description of these actions should be included at PDD stage. The GESI specialist should also be identified and their impact quantified through the project design process.*
	Is there a risk that project activities will result in adverse impacts on the situation of women or girls, including their rights and livelihoods? Consider for example where access restrictions disproportionately affect women and girls due to	*No. Women and girls will benefit from various activities in the project.* *As mentioned above affirmative action and GESI will be core activities for mainstreaming. The project team*	*OK – as above.*

	their roles and positions in accessing environmental goods and services?	*recognises that much of the work on farm is carried out by women and this will be a major plank in the action plan.*	
	Is there a risk that project activities could cause or contribute to gender- based violence, including risks of sexual exploitation, sexual abuse or sexual harassment (SEAH)? Consider partner and collaborating partner organizations and policies they have in place. Please describe.	*No. Careful screening of partner organisations that may be involved in the project will be done to ascertain that their policies are in line with the project coordinator on SEAH.*	*OK – this is good to hear, thank you.*
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 2, the project has a good understanding on the position and opinions of women and girls in the project area and management provisions are already in place. More detail needs to be provided through the project design phase, but this consultation mean this risk is unlikely to occur.* *Estimated magnitude of risks (1-5) & justification: If this risk were to occur it would impact a moderate number of people in a relatively minor way.* *Risk significance:* ***Low***			
Human Rights	Is there a risk that the project prevents peoples from fulfilling their economic or social rights, such as the right to life, the right to self-determination, cultural survival, health, work, water and adequate standard of living?	*No. The project enhances human rights, especially enhancing the right to food, health and income from the project activities. It is envisaged that since the project activities will lead to greater empowerment, enhanced access to capital and information, the participating communities will benefit by enlarging their negotiated agency*	*OK – how?*

		and hence increase their access to life supporting opportunities.	
	Is there a risk that the project prevents peoples from enjoying their procedural rights, for example through exclusion of individuals or groups from participating in decisions affecting them?	*No. The project enhances human rights and promotes inclusivity. These risks will be mitigated by the affirmative actions mentioned above. Further, as mentioned above, the community support is expected to result in a more empowered populace, with more robust and granular interaction with management bodies, and with increased agency in driving change and making decisions where resources are concerned.*	*OK – how? A description of how the project plans to be inclusive and non-discriminative during its design and implementation should be included at PDD stage.*
	Are you aware of any severe human rights violations linked to project partners in the last 5 years?	*No. Not applicable.*	*OK*
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 1 – the nature and values of the project and experience of the project coordinators mean that this risk is very unlikely to occur.* *Estimated magnitude of risks (1-5) & justification: 4 – if this risk were to occur, it would substantially impact a significant number of people.* *Risk significance:* ***Low***			
Community, Health,	Is there a risk of exacerbating existing social and stakeholder conflicts through the implementation of project activities?	*No. Project will be implemented on privately owned lands.*	*OK*

Safety & Security	Consider for example existing conflicts over land or natural resources, between communities and the state.		
	Does the project provide support (technical, material, financial) to law enforcement activities? Consider support to government agencies and to Community Rangers or members conducting monitoring and patrolling. If so, is there a risk that these activities will harm communities or personnel involved in monitoring and patrolling?	*No. Project does not envisage providing support to law enforcement agencies.*	*OK*
	Are there any other activities that could adversely affect community health and safety? Consider for example exacerbating human-wildlife conflict, affecting provisioning ecosystem services, and transmission of diseases.	*No. The project will not exacerbate human-wildlife conflict or impact existing ecosystem services.*	*OK*
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 2 – due to the project activities and nature of the planned interventions, this risk is very unlikely to occur.* *Estimated magnitude of risks (1-5) & justification: 2 – if this risk were to occur, it would have a marginal impact on a relatively small number of people.* *Risk significance:* ***Low***			
Labour and working conditions	Is there a risk that the project, including project partners, would lead to working conditions for project workers[25] that are not aligned with national labour laws or the International Labor Organization's (ILO) Declaration on the Fundamental Principles and Rights at Work (discriminatory working conditions, lack of equal opportunity, lack of clear	*No. Project will follow set out laws and guidelines for labour including national and international labour laws.*	*OK*

	employment terms, failure to prevent harassment or exploitation, failure to ensure freedom of association etc.)?		
	Is there an occupational health and safety risk to project workers while completing project activities?	*Yes. Occupational health and safety guidelines will be followed to ensure safety of workers.*	*OK*
	Is there a risk that the project support or be linked to forced labour, harmful child labour, or any other damaging forms of labour?	*No. The project does not support forced labour, harmful child labour or any other damaging labour practices.*	*OK*
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 2 – due to the nature of the planned project activities and their commitment to abiding by relevant labour laws, this risk is very unlikely to occur.* *Estimated magnitude of risks (1-5) & justification: 2 – if this risk were to occur it would have a limited impact on a relatively small number of people.* *Risk significance:* ***Low***			
Resource efficiency, pollution, wastes, chemicals and GHG emissions	Is there a risk that project activities might lead to releasing pollutants to the environment, cause significant amounts of waste or hazardous waste or materials?	*No. The project does not envisage generation of any hazardous pollutant wastes.*	*OK*
	Is there a risk that the project will lead to significant consumption of energy, water or other resources, or lead to significant increases of greenhouse gases?	*No. The project does not envisage consumption of energy, water and other resources by households beyond*	*OK*

		what they use before the project implementation.	
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 1 – the project activities and values mean this risk is negligible.* *Estimated magnitude of risks (1-5) & justification: 2 – if this risk were to occur, it would have a minimal impact on a relatively small number of people.* *Risk significance:* ***Low***			
Access restrictions and livelihoods	Will the project include activities that could restrict peoples' access to land or natural resources where they have recognised rights (customary, and legal)? Consider projects that introduce new access restrictions (e.g. creation of a community forest), reinforce existing access restrictions (e.g. improve management effectiveness and patrolling of a community forest), or alter the way that land and natural resource access restrictions are decided (e.g. through introducing formal management such as co-management).	*No. The project does not propose any new land management that would restrict access to land or negatively impact livelihoods.*	*OK – the project intervention has been well-consulted and designed to not negatively impact the project participants or area in any way. Information on how this has been achieved should be provided at PDD stage.*
	Is there a risk that the access restrictions introduced /reinforced/altered by the project will negatively affect peoples' livelihoods?	*No. The project does not propose any restrictions.*	*OK – as above.*
	Have strategies to avoid, minimise and compensate for these negative impacts been identified and planned?	*Yes. Strategies to minimise any possible negative impacts that may*	*OK – please describe the potential negative impacts that may arise. The management of these*

		arise will be addressed in the management plan.	*potential risks can be discussed at PDD stage.*
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 3, more information should be provided at PDD stage on how this risk is being managed and how impacts are being minimised through the project activities. As such, this risk is assigned as being possible.* *Estimated magnitude of risks (1-5) & justification: 2, if this risk were to occur, it would have a significant impact on a relatively small number of people.* *Risk significance:* ***Moderate***			
Cultural heritage	Is the Project Area officially designated or proposed as a cultural site, including international and national designations?	*No. The project area is private farmers lands.*	*OK*
	Does the project site potentially include important physical cultural resources, including burial sites and monuments, or natural features or resources of cultural significance (e.g. sacred sites and species, ceremonial areas) and is there risk that the project will negatively impact this cultural heritage?	*No. The project area is private farmers lands.*	*OK*
	Is there a risk that the project will negatively impact intangible cultural heritage? Consider for example cultural practices, social and cultural norms in relation to land and natural resources.	*No. The project compliments cultural heritage.*	*OK*

E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 1 – the nature of the project region and activities mean that this risk is negligible.* *Estimated magnitude of risks (1-5) & justification: 2 – if this risk were to occur it would have a relatively minor impact on a small number of people.* *Risk significance:* ***Low***			
Indigenous Peoples	Are there Indigenous Peoples[26] living within the Project Area, using the land or natural resources within the project area, or with claims to land or territory within the Project Area?	*No. Land is under private freehold in the project area.* *There are no indigenous groups in the project area.*	*OK – no indigenous groups identified within the project area or which the project activities could have a direct or indirect impact on. Any changes to this should be identified immediately and discussed at PDD stage.*
	Is there a risk that the project negatively affects Indigenous Peoples through economic displacement, negatively affects their rights (including right to FPIC), their self-determination, or any other social or cultural impacts?	*No. The project will not cause any effects on indigenous peoples.*	*OK – as above.*
	Is there a risk that there is inadequate consultation of Indigenous Peoples, and/or that the project does not seek the FPIC of Indigenous Peoples, for example leading to lack of benefits or inappropriate activities?	*No. Consultation with stakeholders is free for everyone to participate in.* *There are no indigenous people in the project sites. The project thrust is on farmlands that are owned by individuals who have either purchased*	*OK – the FPIC process and stakeholder engagement already shown at PIN stage confirms this. Please continue this work through PDD stage!*

		the land or inherited it from their parents/grandparents.	
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 2, due to the nature of this project and the project area, this risk is very unlikely to occur.* *Estimated magnitude of risks (1-5) & justification: 2, if this risk were to occur the project would have ample resources to identify and manage it through the safeguarding provisions already in place, therefore it would have a relatively limited impact.* *Risk significance:* ***Low***			
Biodiversity and sustainable use of natural resources	Is there a risk that project activities will cause adverse impacts on biodiversity (both in areas of high biodiversity value, and outside of these areas) or the functioning of ecosystems? Consider issues such as use of pesticides, construction, fencing, disturbance etc.	*No. The project will enhance biodiversity.* *The following are examples of tree species that will be considered:* *Markhamia Lutea* *Grevillea robusta* *Guava* *Moringa oleifera* *Croton megalocarpus* *Meru Oak* *Additionally, there will be other plants introduced such as Tithonia, which are*	*OK – please provide a bit more detail on how the project aims to enhance biodiversity, e.g. the kinds of plants being used, the flora and fauna being considered, the impact on the surrounding project region, etc.*

		excellent border shrubs and are fodder supplements.	
	Is there a risk that the project will introduce non-native species or invasive species?	*No. The project will not introduce any invasive species.*	*OK*
	Is there a risk that the project will lead to the unsustainable use of natural resources? Consider for example projects promoting value chains and natural resource-based livelihoods.	*No. The project does not promote over reliance on any specific value chain.*	*OK*
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 2 – the project activities and values mean that the risk of negatively impacting on biodiversity in the project area and region is unlikely.* *Estimated magnitude of risks (1-5) & justification: 2 – if this risk were to occur, it would impact a small number of people in a potentially substantial way.* *Risk significance:* ***Low***			
Land tenure conflicts	Has the land tenure and use rights in the project area been assessed and understood?	*Yes. Land is under freehold ownership or lease.*	*OK*
	Is there a risk that project activities will exacerbate any existing land tenure conflicts, or lead to land tenure or use right conflicts?	*No. Participation on the project is voluntary.*	*OK – is there any history of land tenure conflicts or any potential issues concerning documentation, protected areas in or near the project region, or legal ownership over private lands, etc.? This*

			should be further discussed at PDD stage if so. Please also note expansion in the project area will require an update to this.
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 3, where this risk is well-managed and very unlikely considering the project activities and requirements for participants, it remains more pressing as the project may plan an expansion and has not fully considered the possibility of land tenure disputes just yet. This is fine to leave for now as very thorough consultations have taken place at PIN stage, but a useful thing to keep an eye on as the project progresses and potentially grows.* *Estimated magnitude of risks (1-5) & justification: 1, this risk will have a relatively minor impact should it occur due to the features of the project design itself, therefore a very low magnitude.* *Risk significance:* ***Low***			
Risk of not accounting for climate change	Have trends in climate variability in the project areas been assessed and understood?	*Yes. There's available publications of recent climate variability in the area as well as primary data that has been collected by ANA team.*	*OK –this is well included in the baseline scenario section in this PIN document.*
	Has the climate vulnerability of communities and particular social groups been assessed and understood?	*Yes. There's available publications of recent climate variability in the area as well as primary data that has been collected by the ANA team.*	*OK*

	Is there a risk that climate variability and changes might influence the effectiveness of project activities (e.g. undermine project-supported livelihood activities) or increase community exposure to climate variation and hazards? Consider floods, droughts, wildfires, landslides, cyclones, etc.	*No. The project would have a positive impact on climate resilience for the communities.*	*OK*
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: 2, this risk is well identified and well managed so is unlikely to occur.* *Estimated magnitude of risks (1-5) & justification: 2, if this risk were to occur it would have a relatively limited impact on a significant number of people.* *Risk significance:* ***Low***			
Other – e.g. cumulative impacts	Is there a risk that the project will contribute cumulatively to existing environmental or social risks or impacts, for example through introducing new access restrictions in a landscape with existing restrictions and limited land availability?	*No.*	*OK*
	Are there any other environmental and social risks worthy of note that are not covered by the topics and questions above?	*No.*	*OK*
E&S reviewer conclusions *Estimated likelihood of risks (1-5) & justification: N/A – no risks further identified.* *Estimated magnitude of risks (1-5) & justification: N/A – no further risks identified.* *Risk significance:* ***Low***			

SECTION C: SAFEGUARD PROVISIONS			
Stakeholder engagement: requirements 2.1.1-2.1.3	Has a stakeholder analysis been conducted that has identified all stakeholders that could influence or be affected by the project, or is this still to be completed? Please describe.	*The stakeholder analysis is still ongoing, however initial stakeholders have been identified.* *A more substantial stakeholder analysis and an interest-power matrix will be provided in the PDD.*	*OK – please provide any available updates to the project participants section of the PIN, and further details of the stakeholder engagement and participatory processes at PDD stage.*
	Are the local community and indigenous peoples statutory or customary rights to land or resources within the project area already clear and documented, or is further assessment required? Please describe.	*The project at this time doesn't include IPLC with statutory or customary lands rights. All project participants hold legal title to their land.*	*OK*
	Are local governance structures and decision-making processes described and understood (including details of the involvement of women and marginalized or vulnerable groups), or is further assessment required? Please describe.	*Yes. The project takes into account local governance structures and local chiefs and/or county governments are included in project consultations.*	*OK – please provide descriptions of these structures, and how the project plans to utilise and work with them, in sections 2.3 and 4.1 of this PIN. More details will be required at PDD stage.*
	Are past or ongoing disputes over land or resources in the project area known and documented, or is there need for further assessment? Please describe.	*No. There are no known land or resource disputes in the project area.*	*OK*

Stakeholder consultation: requirements 2.5.1 and 2.5.2	Does the project have a Stakeholder Engagement Plan with clear measures to engage Vulnerable Groups, or is this plan still to be developed? Please describe.	*The project has used an inclusive and participatory process but an official Stakeholder Engagement Plan still needs to be developed to document current practices.*	*OK – looking forward to reading about this plan at PDD stage.*
	Has the Project Coordinator informed all stakeholders of the project, through providing relevant project information in an accessible format, or does this still need to be completed? Please describe.	*Yes, the Project Coordinator provides project information in an accessible format - various languages, both oral and written agreement - for project stakeholders.*	*OK – if possible, it would be great to see evidence of this exchange/the agreement that is being used. You can attach it as an Annex to the PIN if you wish.*
Free, Prior and Informed Consent: requirements 2.6.1-2.6.4	Has the project analysed and understood national and international requirements for Free Prior and Informed Consent (FPIC)? Please describe.	*The project coordinator has a basic understanding of FPIC but further analysis is needed to ensure the project is meeting both national and international requirements. If need be, ANA will identify and engage with a consultant to fill any gaps especially in analysis of the project design and document preparation.*	*OK – please get in touch if you have further questions around the FPIC process. Looking forward to reading about the details of this process at PDD stage.*
	Has the project identified potential FPIC rightsholders and potential representatives in local communities and among indigenous peoples, or is this still to be completed? Please describe.	*Yes, the project has assessed any potential FPIC rightsholders.*	*OK – please ensure they are included in detail in section 2.5 of this PIN.*

	Has the project worked with rightsholders and representatives of local communities and indigenous peoples to understand the local decision-making process and timeline (ensuring involvement of women and vulnerable groups), or is this still to be completed? Please describe.	*The project has partnered with local farmer representative groups, local government structures (e.g. local chiefs), churches, CBOs and NGOs, and key government agencies which provide oversight and ensure that policy is followed.*	*OK – please ensure outputs of these consultations are included in project design and detailed at PDD stage.*
	Has the project sought consent from communities to 'consider the proposed Project', and if so, where is this in principle consent documented? Please describe.	*Yes - the project obtains signed consent from each project participant. Signed forms are stored with ANA.*	*OK – again, it would be great to see evidence of this/the contracts that were signed. This should also be described in detail in the* Project Participants *section of the PIN.*
Grievance Redress Mechanism: requirements 3.16.1	Does the project already have a Grievance Redress Mechanism (GRM), or is this still to be established? Please describe.	*A formal grievance mechanism still needs to be established. ANA regularly engages with its project stakeholders and farmers can communicate with ANA through phone, text or Telerivet. Farms are also monitored on a yearly basis that also gives farmers the opportunity to air any grievances.*	*OK – looking forward to reading about the design of the grievance mechanism and its details at PDD stage.*
	For projects with a GRM, is this accessible to project affected people? Please describe.	*N/A*	*OK - Please ensure the grievance mechanism is*

			designed to be accessible to all project participants, particularly the most vulnerable. This detail can be provided at PDD stage, but the project design process should utilise engagement, participatory and FPIC processes to design an accessible and suitable grievance mechanism.

E&S reviewer conclusions for safeguard provisions

Are the project Safeguard Provisions adequately addressed, or to be adequately addressed during the project design phase? YES

What additional actions need to be conducted during the project design phase? N/A - PLEASE SEE BELOW COMMENTS IN SCREENING SUMMARY

Any other comments - N/A

SECTION D: SCREENING REPORT (E&S REVIEWER TO COMPLETE)	
Name of E&S reviewer	***AMELIA EVANS***
Date of E&S screening:	***COMPLETED 22/10/24***
Project risk rating:	*LOW – the project risk rating is overall assigned as low, with some moderate risks identified and required to be managed through project design and PDD-writing stage.*
Principle risks and impacts	*Where risks have been identified, primarily to vulnerable groups, including women and girls, the project shows competent management and good knowledge of the local context, meaning these risks are well-managed, well-engaged with within the affected communities and groups, and should be mitigated against*

via project design features throughout the project period. Where access restrictions have been identified as a moderate risk as well, thorough community, participants and stakeholder consultation means this risk is being well-managed by the project. This is required to be further evidenced and worked on through the project design and PDD stage.

E&S topic/ risk area	Likelihood (1-5)	Magnitude (1-5)	Significance (low, moderate, severe, high)
Vulnerable Groups	2	3	Moderate
Gender equality	2	3	Moderate
Human Rights	1	4	Low
Community, Health, Safety & Security	2	2	Low
Labour and working conditions	2	2	Low
Resource efficiency, pollution, wastes, chemicals and GHG emissions	1	2	Low
Access restrictions and livelihoods	3	2	Moderate
Cultural heritage	1	2	Low
Indigenous Peoples	2	2	Low
Biodiversity and sustainable use of natural resources	2	2	Low
Land tenure conflicts	3	1	Low
Risk of not accounting for climate change	2	2	Low
Other – e.g. cumulative impacts	-	-	Low

Likely safeguard plans required	*The ESA, ESA report and ESMP (all included in the PDD template) should be filled out, with an additional consideration to the risks assigned as 'moderate' here.*

[1] For the definition see IUCN ESMS Standard on Biodiversity Conservation and Sustainable Use of Natural Resources.

Annex 5 – Notification of Relevant Authorities

As the Kenya Carbon Registry is a brand-new law, we are still establishing where we need to register the project at the national level and which authorities need to be addressed. We will include the relevant correspondence when we receive it.

PVF note – we are working with the project to obtain a sufficient letter of approval from the relevant authorities in Kenya.