The Upper Tana – Nairobi Water Fund Trust

KENYA

Carbon Project Validation Report

Final Version Nov 12, 2022

Working in 4 counties in Kenya

Murang'a. Nyeri. Nyandarua. Laikipia

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Terms of Reference for Project Validation against the Plan Vivo Standard V2.1

Introduction

Independent third-party validation is required by all projects as part of the process of registration under the Plan Vivo Standard and before issuance of Plan Vivo Certificates (PVCs) can take place. Validation consists of the initial review of a project's design against the Plan Vivo Standard and verification of the accuracy of the description of the proposed project, the project area and potential beneficiaries and of the governance system put in place for its implementation. The validation will be conducted by an independent expert reviewer (the validator) who has been approved by Plan Vivo for this role prior to undertaking the validation. These Terms of Reference (ToR) provide guidance for validators undertaking initial project validation against the Plan Vivo Standard (2013) and for preparing the validation report for submission to Plan Vivo.

Objectives

The purpose of validation is to ensure a thorough, independent assessment of project design against the Plan Vivo Standard. This includes confirmation that the project area is physically as described in the project documentation, that project partners have sufficient capacity and understanding to achieve the stated project objectives by implementing the planned activities and that the intended project impacts are likely to be delivered. The validation also makes observations and recommendations based on field visits to the project and identifies any corrective actions necessary before the project can be approved under the Plan Vivo Standard.

Scope and Methods

The validation process involves application of auditing techniques including:

i. A critical review of project documentation and any other relevant documentation or supporting evidence to enable the project to be properly assessed against the Plan Vivo Standard.

ii. Field visits to the project area taking into account the requirements described in Annex 1, in order to:

- Verify that the project's physical site description and governance structure is as described in the project design document and technical specification(s)
- Identify objective evidence of conformance with each of the requirements in the Plan Vivo Standard by:
    - Interviewing and interacting with the project coordinator (in-country manager)
    - Interviewing relevant stakeholders such as participating householders, community members and leaders, local government officials, government forestry agencies and extension services and other projects working in the same area

- Identifying and assessing available supplementary project documentation and tools e.g. planning documentation, databases, templates, legal agreements etc.
- Cross-checking results from interviews with project documentation to ensure that documentation reflects ground realities and staff awareness of project goals and procedures.

- Fully understand the project context and the views of other local stakeholders and experts regarding the project's likely impact and benefits

iii. Preparation of the validation report in the outline given in Annex 2 and submission of this with any supporting evidence to Plan Vivo

Validation questions in four broad themes (governance, carbon, ecosystems and livelihoods) are given in the validation report template (Appendix 2). Validators are expected to answer all these questions with information taken from the field visits undertaken as part of the validation. Sources of information should be identified and, wherever possible, cross-checked with other sources to ensure that the validation report represents an accurate and relevant assessment of the project.

Outputs

The output of the validation is a **Plan Vivo Validation Report**. Along with any supporting documents, it presents the review findings and details of the project's compliance with each of the requirements in the Plan Vivo Standard. The template for the validation report is given in Appendix 2. The validation report template includes the following sections in each of the broad themes. All these need to be completed:

A. Requirement

The validation report should describe how the project meets each requirement of the Plan Vivo Standard (2013). This section gives the specific questions that need to be answered by the validator for each theme/sub-theme. Refer to the Plan Vivo Standard for further clarification of these.

B. Guidance notes for validators

This section indicates how the specific questions might be answered by the validator by giving some suggestions about where the necessary validation information might be obtained. Other sources or means of answering the validation question might also be possible if available.

C. Findings

In this section the validator should answer the validation questions. This should be a comprehensive response (rather than a simple yes/no) explaining the reason for the answer given. The findings should be used to justify the decision given under 'conformance'.

D. Conformance

In this section the validator should indicate whether conformance with the Plan Vivo Standard has been achieved.

E. Corrective Actions

Where the validator finds that the project is not compliant with a given requirement of the Plan Vivo Standard, the report should specify the corrective actions needed for compliance and propose a timescale within which it must be implemented. For each corrective action identified, the report should specify whether, in the opinion of the validator, a major or minor corrective action is required.

Major Corrective Action Request (CAR): A non-conformance with the Plan Vivo Standard that

is likely to result in the failure of the project or is likely to materially reduce its ability to deliver the benefits intended. A major CAR may include a collection of several less significant non-conformances that collectively suggest critical failings in the project.

Minor Corrective Action Request: A non-conformance that is unlikely to materially affect the project's delivery of the intended benefits but which still needs to be corrected in order to reach the requirements of the Plan Vivo Standard. This may include a single or small number of lapses in maintaining systems, minor omissions or inconsistencies in documentation.

Observations/recommendations

The reviewer may find areas where procedures, data or documentation could be clarified or improved, but which are not deemed material enough to impose a corrective action. In this case, the reviewer should make observations or recommendations, which the Plan Vivo Foundation will follow up with the project coordinator at its discretion. These should also be included in the report.

F. Project Coordinator Response

In the draft validation report, this section should be left blank in order for the Project Coordinator to provide a reply to the specific CAR/Observation raised. The Project Coordinator must ensure they explain why they believe compliance has been achieved and why the CAR/Observation has been addressed. Tables, PDD or Technical Specification extracts of text, photos, Excel tables and so on may be inserted in this section to demonstrate compliance.

G. Status

After the Project Coordinator's response to the CAR have been delivered, the reviewer should assess whether the reply has sufficiently (CLOSED) or not sufficiently (OUTSTANDING) addressed the CAR/Observation raised. The reviewer should also provide supporting arguments for the decision by explaining what steps have been taken by the Project Coordinator in order to demonstrate compliance.

Validation Opinion

The validation report will include a summary validation opinion, as to whether:

i. The project documents represent an accurate and clear description of the project and its activities.

ii. Based on an objective assessment of the project, the project meets the Plan Vivo Standard.

A project may receive a positive validation opinion with open minor CARs where an agreed time-frame is reached for meeting them, unless the validator considers that the number of minor CARs is so large to suggest that systemic failure is likely.

Projects with open major CARs (OUTSTANDING) should resolve the CARs with the validator before a positive validation opinion can be given.

Project Documentation and Supporting Evidence

The project coordinator will make all project documentation needed for the validation (e.g. PDD, technical specification and any other supporting evidence to show compliance with the Standards) available to the validator at least 2 weeks before the field visit.

The validator reviewer is expected to use his/her expert knowledge and professional judgment to evaluate all the available evidence to determine which of the requirements of the Plan Vivo Standard are satisfied by the project as designed and documented. The reviewer shall refer to indicators provided in the Plan Vivo Standard for guidance and also any other supporting materials provided by the project.

Publication of Validation Reports

The validation report, all of its contents and any drafts will remain confidential until the Plan

Vivo Foundation publishes its contents following its decision regarding project registration. All validation reports will be published on the Plan Vivo website and comments invited.

Appendix 1: Requirements for Project Visit

The field visit to the project must include:

i. Visits to at least one area covered by each technical specification e.g. if the project has 3 technical specifications for woodlots, boundary planting and fruit orchards, then each of these land-use systems must be visited and observed by the validator including interactions with project participants (household members) in each

ii. In the case of projects involving multiple smallholders, at least 5 smallholders must be visited in each project area (a project area is defined by an area where a technical specification or set of technical specifications apply). Smallholders to be visited should be selected at random

iii. At household level, interactions should take place with a range of household types with particular emphasis on those that are most disadvantaged e.g. poor, women-headed, landless, ethnic minorities or otherwise socially excluded

iv. In the case of projects with community-based activities and community-managed land e.g. for control of locally-driven deforestation

    - For projects involving up to 3 community-managed areas, every community and community-managed area must be visited
    - For projects involving more than 3 community-managed areas, a minimum of 3 communities and 3 community-managed areas must be visited, chosen randomly

Appendix 2: Project Validation Report Template

The project validation report should be completed using the following template as a guide. Additional material such as photographs, copies of documents or parts of documents (providing material evidence) may also be added if relevant to the validation. **Please, do not modify the format of this report.**

Name of Reviewers: Michael Kiama Gachanja

Date of Review: Desk review (5 – 13 July); Site visit (14 – 23 July); and draft report preparation (1 -18 August)

Project Name: Upper Tana – Nairobi Water Fund

Project Description: The project is located in the Upper Tana watershed covering an area of 10,000 km^2 in four Kenyan counties; Murang'a, Nyeri, Nyandarua and Laikipia. Within this landscape, a pilot area of 3,300km^2 has been prioritized based on potential for conservation and increasing carbon storage in trees. The aim of the Upper Tana-Nairobi Water Fund Trust is to achieve a well conserved Upper Tana River watershed with improved water quality and quantity for downstream water users, maintain biodiversity and enhance ecosystem services – contributing to food security, climate change mitigation and livelihood improvement for local communities. This will be achieved by the landowners through sustainable land management activities that include agroforestry, terracing of steep farmlands, riverbank restoration, establishment of permanent grass strips, reforestation, rainwater harvesting and improved agricultural practices. The Plan Vivo project aims to generate carbon credits from agroforestry activities to help finance Water Fund activities in the Upper Tana under five project agroforestry interventions: • Fruit orchards • Alley cropping • Enrichment fallows • Dispersed interplanting • Boundary planting The project currently has 44,893 smallholder farmers who have since 2017 (the proposed start date of the Plan Vivo project) planted 3.6 million seedlings of native and non-native tree and shrub species. The project is implemented by the Water Fund, will technical support from contracted Non-Governmental Organizations - Sustainable Agriculture Community Development Program (SACDEP), and Catholic Diocese of Murang'a (CARITAS), Ndakaini Dam Environmental Conservation association (NDEKA) and County Governments of Muranga, Nyeri, Laikipia and Nyandarua. The carbon sequestered in the agroforestry interventions of current and future participants will be quantified over a 20-year period and monitored for at least 10-years. In the project, project participants are required to engage in the project through Farm Specific Plans drawn

and agreed upon by the two parties. The Water Fund is a charitable trust created to undertake this work. The finance generated through the sale of Plan Vivo Certificates will be managed via a long-term endowment fund to generate annual interest for investment in supporting conservation work and other direct benefits to participating farmers under the leadership of the Water Fund.

List of Principal documents reviewed (including list of sites visited and individuals/groups interviewed):

- The Upper Tana – Nairobi Water Fund Trust (UTNWFT) Plan Vivo Project Design Document, and its annexes
- Plan Vivo Technical Specification
- Plan Vivo Standard
- Plan Vivo agreement
- Monitoring and Evaluation UTNWFT
- UTNWFT Financial Statement FY 2021
- Farm Specific Plans
- Engagement Review Forms

Visited sites: The three project sites

- Thika Chania watershed
- Maragua River watershed
- Sagana – Gura watershed

List of individuals interviewed:

- Project management and project partners – 16 project and partners staff (See Annex 2.1)
- Thika Chania watershed project participants – 18 farmers (See Annex 2.2)
- Maragua River watershed – 18 farmers (See Annex 2.3)
- Sagana – Gura watershed – 31 farmers (See Annex 2.4)

Description of field visit: The field visit covered all areas covered by the PDD technical specification including the five project interventions supported by project. A random approach was used to identify farms to be visited. Key Informants Interviews (KIIs), Focus Group Discussions (FGDs) and field observation were used to generate the required data and information. In total, 16 project and partner staff and 67 farmers were involved through the following mechanisms:

- 16 KIIs were conducted
- 19 farms were visited
- 6 FGD were held comprising of between 5 to 10 farmers each, 3 in Sagana – Gura and 2 in Thika Chania, the two largest watersheds and 1 in smaller watershed of Maragua watershed.

The itinerary of the field mission is presented in Annex 1.

Validation Opinion: The carbon project has a huge potential of transforming local community livelihoods in the three watersheds as demonstrated by the initial results from

the interventions supported by the project since 2017. To conform to the Plan Vivo standard the project has attended to minor and major Corrective Actions indicated in Table 1.

Table 1. Summary of draft report major and minor Corrective Actions (Insert Numbers)

Theme	Major CARs	Minor CARs	Observations
Governance	0	4	0
Carbon	4	2	0
Ecosystem	0	0	0
Livelihoods	0	0	0

Table 2 - Report Conformance (Delete Yes/No as appropriate)

Theme	Conformance of Draft Report	Conformance of Final Report or Forward Actions Required
Governance	No	Yes
Carbon	No	Yes
Ecosystem	Yes	Yes
Livelihoods	Yes	Yes

Table 3– Summary of open Forward Actions (if any)

Forward Action Requirement (FAR)	Description	Process to Resolve	Time Frame to be Closed By
List the FAR number (and the CAR it relates to if not obvious)	*Describe the non-compliance*	*Describe how this is to be resolved and who the evidence should be submitted to for review*	*When should the FAR be closed by*
FA01 (CAR01 in Table 4): Capacity building among farmer group representatives on their roles and responsiblities within the group under the plan vivo sales agreement prior to (e.g, by sms) and during the signing of the agreement will be undertaken and evidence provided in Annual Reports.	Some of the farmer group representatives interviewed during the field mission were not aware of their role in signing of Plan Vivo sales agreements (see Table 4 for additional details).	The proposed action should be resolved by providing information to group farmer representatives of their roles and responsibilities prior to the signing of the Plan Vivo agreements through meetings, SMS or any other means and during the actual signing of the agreements. Evidence that this has taken place should be provided in Annual Reports and submitted for approval to Plan Vivo.	Within 1 year of closing of validation and signing of the report.
FA02 (CAR03 in Table 4): Project to provide evidence that training on technical specification of PDD to technical project partners involved in delivery of project extension services has been undertaken to Plan Vivo.	The agricultural extension officers and project technical partners such as NDEKA, and Caritas and agriculture extension are not fully aware of the technical specifications of the project.	Provide evidence that training on technical specification of PDD to technical project partners involved in delivery of project extension services has been undertaken to Plan Vivo.	Within 1 year of validation
FA03 (CAR08 in Table 4): Project to provide evidence that training on technical specification of PDD to individual farmers has been undertaken to Plan Vivo.	Individual farmers are not fully aware of the PDD technical specifications of the project, and their roles and responsibilities in implementing them.	Provide evidence that training on technical specification of PDD to individual farmers has been undertaken to Plan Vivo. Cluster based farmer trainings is proposed. The training should also cover Nature and content of PES agreements.	Within 1 year of validation

Table 4– Assessments requested by reviewers from PDD and/or technical specification review process

Relevant requirements within Standard	Description of concern	Validator comments	Corrective actions (if any)	Coordinator response	Resolved?
		After assessing the project against the raised concerns, please include comments on whether any aspects of the project are non-compliant with the Plan Vivo Standard.	Please write "none" if no correction actions required.	If corrective actions required, coordinator must provide response detailing changes made to address concerns.	(for validator) Has the coordinator's response resolved the concerns.
Requirement 3.5 **The project coordinator must have the legal and administrative capacity to enter into PES agreements with participants and to manage the disbursement of payments for ecosystem services.**	The project coordinator has the legal and administrative capacity to enter into agreements with participating farmers. However, the plan vivo agreement indicates that farmer group representatives who the project coordinator enters into agreement with on behalf of the communities are freely chosen by participants (individual farmers). In some cases, such as in Gathanje in Sagana Gura Watershed, this is the case, but in other areas, farmer representatives according to the Muranga Agriculture Extension Staff seconded to the project by the County Government of Muranga and the Ndakaini Dam Environmental Conservation Association (NDEKA) coordinator, a project partner, the selection is based on farmers interests, trust by communities, leadership skills and capacity to mobilise farmers to participate. In some few places, those selected through this process, apart from being the central points in seedling collection, are not aware of additional	Farmer representatives should be made aware of their role in signing of Plan Vivo sales agreements and they should be endorsed or selected by individual farmers in order to comply to the standard	• CAR01 Minor: Capacity building among farmer group representatives on their roles and responsiblities within the group under the plan vivo sales agreement. • CAR02 Minor: Project to provide evidence that all farmer representatives have been selected or endorsed by farmers to represent them in the project and sign Plan Vivo agreements.	CAR01: PVCs will only be claimed for Plan Vivo Agreements where the farmer representative has recived information describing their roles and responsibilities. Evidence of this will be included in Annual Reports. CAR02: The validator has been provided with the results of an SMS survey that was sent to all participating farmers to indicate that they endorsed their representative.	**CAR01: Converted into Forward Action** FA01: Capacity building among farmer group representatives on their roles and responsiblities within the group under the plan vivo sales agreement prior to (e.g, by sms) and during the signing of the agreement will be undertaken and evidence provided in Annual Reports. CAR02 Minor: Closed

	roles such as entering into carbon contracts as shown during interviews with farmer group representatives in Mbogiti farmers group (Thika – Chania watershed), and Bancy Wanjiru Karanja, one of the farmers playing the farmer representative role in Maragua Githambara area. However, all those interviewed are willing to play this role. The Chairman of the Gathanje farmers group was aware that he will be signing the agreement on behalf of the group. The sales agreement has provided mechanisms for dispute resolution for riparian buffer area conflicts. Other conflicts are to be addressed by the County Government and courts. However, interviews with project partners and discussion with local administration revealed the need to be more specific, and list specific other institutions mandated by law to resolve conflicts as highlighted in Section 1.1, Theme 1. Effective and Transparent Project Governance.				
Requirement 3.4 **The project coordinator must have the capacity to support participants in the design of project interventions, select appropriate participants for inclusion in the project, and develop effective participatory relationships including providing ongoing support as required to sustain the project.**	Discussions with agricultural extension officers and project technical partners such as NDEKA, Caritas and agriculture extension staff indicated some level of awareness on technical specifications, but in some cases, what is being promoted is not in line with the technical specifications. Interviews with farmers also indicated that tree spacing varies, sometimes in line with the technical specification and sometimes not.	The PDD and the Technical Specifications were finalised in 2022 and for this reason the project partners may not be very conversant with the requirements. Awareness through fact sheets among other tools should be used to create this awareness.	• CAR03 Minor: Ensure that all project partners involved in providing technical services are familiar with carbon project technical specifications and only farmers provided with technical services are enrolled and participate in the carbon project.	CAR03: The technical specifications provide a proposed planting plan, but it is acknowledged that planting densities will be adapted to suit the context of each project area. The calculation of carbon benefits for which PVCs are claimed is based on actual number of trees planted and not the proposed planting densities in the technical specification.	A training plan for capacity building of project partners has been developed and is under implementation. CAR03 is closed and a Forward Action has been added. FA02: Provide evidence that training on technical specification of PDD to technical

				All farmers that have developed a Farm Specific Action Plan have received technical services, and PVCs will only be claimed for farms with FSAPs. Training will be provided to all project partners involved in providing technical services to ensure familiarity with the carbon project technical specifications within 1-year of validation. The validator has been provided with a training plan for capacity building of project partners.	project partners involved in delivery of project extension services has been undertaken to Plan Vivo.
Requirement 3.9 **A transparent mechanism and procedures for the receipt, holding and disbursement of PES funds must be defined and applied, with funds intended for PES earmarked and managed through an account established for this sole purpose, separate to the project coordinator's general operational finances.**	Discussions with the project staff indicated that a carbon trading account that provides information on sales, quantities, income and tax will be opened. A project carbon trading annual summary income expenditure account will also be open for scrutiny.	In order to conform to Plan Vivo requirement, a transparent mechanisms and procedures for the receipt, holding and disbursement of funds must be defined.	• CAR04 Minor: Create a carbon trading mechanism / procedure that among other provide information on how sales, income and carbon funds will be managed.	CAR04: SOPs for managing receipt, holding and disbursement of funds from the sale of Plan Vivo Certificates have been added as an Annex to the PDD and is referenced in Section J2.	CAR04: In addition, the SOPs now indicate that carbon funds account will be separate from UTNWF general account. CAR04 Closed.
Requirement 5.11 **Projects must identify and describe where uncertainty exists in quantifications of ecosystem services and estimate the approximate level or range of uncertainty. The level of uncertainty must be factored into the level of conservativeness**	Most of the area covered by the project is of high agricultural productivity around Aberdare and Mt. Kenya forests. However, the agricultural potential is low in a small part of the area covered by the project in Laikipia (Solio settlement scheme and Ragati) and in Nyandarua. Climatic conditions, a key	There is a very high potential risk of over-estimating carbon in dry parts of the watershed and this risk should be mitigated.	• CAR05 Major: Apply a more conservative growth rate parameter / model in carbon benefit estimation in drier parts of the catchment. • CAR06 Minor: If possible, the project should seek to separate the survival	CAR05: Technical Specifications have been updated so that a more conservative growth rate is applied in dry areas of the watershed – equivalent to 75% of the expected growth rate in areas with high agricultural productivity.	CAR05 Major: Closed. CAR06 Minor: Closed.

applied in the accounting method for quantifying ecosystem services.	factor in determining tree and shrub growth and survival rates therefore differ, and this is well illustrated in photographs that are presented in Annex 3.1. The likelihood that estimated climate benefits are significantly overestimated in these low potential / drier areas where tree and shrub growth rates is considerably lower than in the high potential areas of Muranga, Maragua, Othaya and Mukurweini is therefore high. Appropriate tree growth and biomass allometric models taking into account these different climatic conditions should be taken into account in estimation of carbon benefits. It is also important to note (as also observed in the field) that there is a strong culture of tree planting in the project area, as opposed to planting of shrubs for livestock fodder for example and this has a strong influence in tree and shrub seedling survival rates. In many of the farms visited, tree survival rates was observed to be much higher than that of shrubs and therefore an appropriate adjustment to reflect this should be considered.			rates of trees and shrubs when polling / in future survey as these seem to vary and as such have some level of influence in carbon benefit computation.	CAR06: Technical Specifications have been updated so that a more conservative survival rate is applied for shrubs - equivalent to 75% of the survival rate assumed for trees.	
Requirement 5.4 **Ecosystem services forming the basis of Plan Vivo projects must be additional i.e. would not have been generated in the absence of the project, which involves as a minimum demonstrating that:** **5.4.1. Project interventions are not required by existing laws or**	The project also provides grants to NGOs such as SACDEP and Caritas and Community Based Organisations such as NDEKA to facilitate implementation of its activities on the ground. According to the project staff, this support cannot be sustained without additional financing. The project therefore seeks to break the reliance	The five project interventions are currently funded through donations and grants and a strong justification for additionality may be needed to conform to the Plan Vivo Standard	•	CAR07 Major: Project to share its business model indicating future financing of current and future agroforestry activities to justify additionality.	CAR07: The validator has been provided with a summary of the carbon project's business model.	CAR07: Closed.

regulations, unless it can be shown that those laws are not enforced or commonly met in practice and the support of the project is therefore justified; 5.4.2. There are financial, social, cultural, technical, scientific or institutional barriers preventing project interventions from taking place.	of agroforestry financing from donors and switch to more sustainable sources such as carbon financing. The PDD has included the financial, social, cultural, technical, institutional/political and ecological barriers that prevent smallholder farmers from engaging in agroforestry; but has since 2017 been supporting farmers to overcome these barriers through donor and grant financing. Since the project is already financing agroforestry practices in absence of carbon funds, a strong justification on additionality is needed.				
Requirement 6.1 **Risks to the delivery of ecosystem services and sustainability of project interventions must be identified and appropriate mitigation measures described.**	Many of the individual farmers are aware that they will enter into formal sale agreements with the project cordinator. The project will enter into sales agreement with farmers through farmers representative. Some of the individual farmers as confirmed during the Focus Group Discussion (FGD) at Ndakaini are not aware of conditions that they need to comply with in order to get carbon benefits. Although farmers in this FGD and others are aware that trees must be managed for a particular period of time during the lifetime of the project, almost all the farmers met are not convesant with specific conditions that they need to comply with and this could be a potential risk to the permanence of carbon stocks. This is in part attributed to the fact that the technical specification was drafted recently and awareness about specific conditions for interventions	Conformance to this requirement is needed to ensure permanence of carbon stocks.	• CAR08 Minor: Capacity building and awareness creation to individual farmers and project partners on the conditions set in the PDD Technical Specifications and their roles and responsibilities prior to issuance of Plan Vivo certificates.	CAR08: PVCS will only be claimed for project participants that have received information regarding the conditions of the Plan Vivo agreements. Evidence of this will be provided in Annual Reports. The validator has been provided with a capacity building and awareness creation plan.	A training plan for capacity building of project partners has been developed and is under implementation. CAR08 has been closed and a Forward Action has been added. FA03: Project to provide evidence that training on technical specification of PDD to individual farmers has been undertaken to Plan Vivo.

	have not been created beyond the projects staff. The project staff is however aware of this and is exploring ways of ensuring that all farmers and technical staff are conversant with all conditions set for the five interventions.				
Requirement 5.14 **To avoid 'double counting' of ecosystem services, project intervention areas must not be in use for any other projects or initiatives, including a national or regional level mandatory GHG emissions accounting programme, that will claim credits or funding in respect of the same ecosystem services, unless a formal agreement is in place with the other project or initiative that avoids double-counting or other conflicting claims, e.g. a formal nesting agreement with a national PES scheme.**	In Muranga, one of the people interviewed was aware of a carbon project in the area but did not have details about the project. Discussion with the manager of The International Small Group & Tree Planting Program (TIST) programme later indicated some level of overlap in areas where the two projects are working, specifically in Muranga (Gatanga and Kigumo) and Laikipia (Ragati) where both are promoting the growing of Grevillea and Avocado, the same species promoted by the Water Fund. In Muranga, TIST is working with 3,000 farmers. It is therefore possible to have double counting if some farmers are enrolled in the two projects. Indeed, one of the farmers met in Ragati indicated that he is a beneficiary of TIST and this year he received KES 37,000 for the eucalyptus trees that he has planted in his farm. Water Fund has assisted this particular farmer (James Ndirangu Nyuguto) to plant Grevillea, Bamboo, Calliandra and Avocado, but these have not been enrolled in the TIST programme. One of the best ways of avoiding double counting is to have a clear mechanism with TIST to avoid double counting. This may	Avoiding double counting is a major requirement in all carbon standards and appropriate mitigation measures must be taken.	• CAR09 Major: Establish formal mechanisms with overlapping carbon projects to avoid double counting.	A comparison of farmers in the TIST and UTNWF programme databases has been carried out and 916 farmers enrolled in both the TIST and UTNWF projects were identified and removed from the project database. A clause excluding project areas that are part of another carbon project has been added to the Plan Vivo Agreement template	CAR09 Closed.

	include ensuring that individual farmers can only be enrolled in one project, since it will be difficult to differentiate trees planted by each of the project especially if they are of the same species in a farm.				
Requirement 4.4 **Community groups participating in the project must have a governance structure in place whereby they have the capacity to develop a plan vivo collectively and make a decision to participate in the project and enter into a PES Agreement as a group, e.g. participate via an established community structure and nominate representatives to sign the PES Agreement on behalf of the group.**	The Plan Vivo agreement indicates that participants should have developed Farm Specific Plans for implementing project activities. In many places visited these are available. However, there are areas where these are not in place and farmers are not aware of them as observed during the interview with Mbogiti farmers group, and individual farmers such as James Kariuki Wanguhi in Ndakaini and Antony Muriuki and Samuel Nganga in Muranga.	Farm Specific Plans are used to set target and form the main basis of engagement farmers to the carbon project and hence critical to delivery of ecosystem services under this standard requirement.	• CAR10 Major: Ensure that only farmers with Farm Specific Plans are enlisted and participate in the carbon project	The farmer database has been updated to indicate whether FSAPs have been completed. PVCs will only be claimed for project participants that have a Farm Specific Action Plan. Evidence of this will be provided with Annual Reports.	CAR10: Closed.
8.2.10. Agreed upon mechanism to resolve or arbitrate any conflict arising from the implementation of the project, following established community practices or legal rules in the country	The sales agreement has provided mechanisms for dispute resolution for riparian buffer area conflicts. Other conflicts are to be addressed by the County Government and courts. However, interviews with project partners and discussion with local administration revealed the need to be more specific. In Muranga and Laikipia county where land sizes are small, disputes associated with boundary planting were noted. In Laikipia, these disputes are resolved by Assistant Chiefs and elders. As per existing laws, water related issues should be resolved by Water Resource Authority in addition to County Government, agriculture and livestock issues by County Government,	The Plan Vivo sales agreement section on conflict resolution could be improved by specifically outlining the institutions mandated to resolve some of the envisaged conflicts.	• CAR11 Minor: Specify the institutions and structures to be used to resolve conflicts in the sales agreement and in the Project Design Document (PDD).	Additional information on structures to be used to resolve conflicts has been added to the Plan Vivo Agreement template, and Section E3 of the PDD.	CAR11: Closed

	forestry by Kenya Forest Service (KFS). CAC) is another mechanism that can be used to resolve conflicts.

Theme	1. Effective and Transparent Project Governance
Ensuring that the project meets requirements 3.1-3.16 of the Plan Vivo Standard (2013)	
A. Requirement	**1.1 Administrative capabilities** Is there a legal and organizational framework in place that has the sufficient capacity and a range of skills to implement all the administrative requirements of the project? Aspects of this framework may include: 1.1.1 A legal entity (project coordinator) that is able to enter into sale agreements with multiple producers or producer groups for carbon services 1.1.2 Standard sale agreement templates for the provision of carbon services 1.1.3 Systems for maintaining transparent and audited financial accounts able to the secure receipt, holding and disbursement of payments to producers 1.1.4 All necessary legal permissions to carry out the intended project activities 1.1.5 Mechanisms for participants to discuss issues associated with the design and running of the project 1.1.6 Procedures for addressing any conflicts that may arise 1.1.7 Ability to produce reports required by Plan Vivo on a regular basis and communicate regularly with Plan Vivo
B. Guidance Notes for Validators	Organizational and administrative capacity may be demonstrated through: • A record of managing other projects - especially those involving the receipt, safeguarding and management of funds and disbursement of these to smallholders/community groups • Project staff who can explain the legal status of the organisation and its management and financial structure i.e. how funds will be held and transferred – backed up by evidence of setting up bank accounts and record-keeping systems etc. • The views of others who have worked with the organisation in the past (such as government, other project partners or other NGOs) • A visibly efficient and functioning office with all necessary staff
C. Findings (describe)	• The project coordinator is the Upper Tana – Nairobi Water Fund Trust (Water Fund) which was registered as a fully incorporated charitable trust in 2017 as required by Kenya's Land Act. This allows the Trust to enter into agreements with multiple producer groups for carbon services. A sales agreement (Version 3) dated 18 May 2022 has been prepared and is currently being signed by farmer group representatives. Key findings include: • The agreement indicates that farmer group representatives are freely chosen by participants (individual farmers). In some cases, such as in Gathanje in Sagana Gura Watershed, this is the case, but in other areas, farmer representatives according to the Muranga Agriculture Extension Staff seconded to the project by the County Government of Muranga and the Ndakaini Dam Environmental Conservation Association (NDEKA) coordinator, a project partner, the selection is based on farmers interests, trust by communities, leadership skills and capacity to mobilise farmers to

	participate. In some few places, those selected through this process, apart from being the central points in seedling collection, are not aware of additional roles such as entering into carbon contracts as shown during interviews with farmer group representatives in Mbogiti farmers group (Thika – Chania watershed), and Bancy Wanjiru Karanja, one of the farmers playing the farmer representative role in Maragua Githambara area. However, all those interviewed are willing to play this role. The Chairman of the Gathanje farmers group was aware that he will be signing the agreement on behalf of the group. • Systems for maintaining transparent and audited financial accounts exist and the annual report and financial statement for the year ended 30th June 2021 was provided as evidence. Funds appropriation is formally done by the trustees based on proposals developed by staff and approved by the BOD. • The project also has financial and administration staff. Two accounts are operated by the project coordinator; an operational account for running of the Trust and an endowment fund with Cooperative Bank where donor and carbon funds will be accounted from. The project will create a carbon trading account and reports that among other provide information on sales, quantities, income and tax which will be shared openly. A project carbon trading annual summary income expenditure account will also be open for scrutiny. • The project has been in the past managed through The Nature Conservancy (TNC) offices, but it is now independent and running a field office in Sagana and four satellite offices (one in Ndakaini provided by the Nairobi Water Company, Wambugu farm Training Centre and Njabini Famers Training Centre, both provided by the Ministry of Agriculture; and a fourth office in Solio Settlement Scheme which is provided by area Chiefs Office). The project's head office in Nairobi will be provided by the Athi Water Works Development Authority. The project has 10 staff (including five agriculture extension officers seconded by the County Governments of Muranga, Nyandarua, Laikipia and Nyeri and one by Water Resources Authority- WRA) initially for 5 years but renewable. One of the Board of Management members is acting as the CEO. The project's priority is to recruit the CEO and have a fully functional head office by September 2022. The project therefore have adequate capacity to produce reports required by Plan Vivo on regular basis. • Various mechanisms are used to engage farmers to participate in the running of the project. These include regular visits by County Government extension officers who are sometimes provided with additional staff by the County Governments depending on needs, use of eco-mobile platform to share information, public open meetings (Barazas) and churches. One of the Assistant Chiefs in Solio settlement scheme indicated that he organises at least two meetings per month and invites occasionally project staff to participate. Focal Area Team (FAT) stakeholders' meetings are also organised on monthly basis. Community engagement is also achieved through the quarterly County Advisory Committee (CAC) meetings where they are represented by two members, who are selected through the County Government recognised community engagement structures taking into account

<table>
<tr><td></td><td colspan="3">gender and youth considerations. Currently the two members are women, one representing the youth and the other gender.
• The sales agreement has provided mechanisms for dispute resolution for riparian buffer area conflicts. Other conflicts are to be addressed by the County Government and courts. However, interviews with project partners and discussion with local administration revealed the need to be more specific. In Muranga and Laikipia county where land sizes are small, disputes associated with boundary planting were noted. In Laikipia, these disputes are resolved by Assistant Chiefs and elders. As per existing laws, water related issues should be resolved by Water Resource Authority in addition to County Government, agriculture and livestock issues by County Government, forestry by Kenya Forest Service (KFS). CAC is another mechanism that can be used to resolve conflicts.</td></tr>
<tr><td>D. Conformance</td><td>Yes ☐</td><td>No x</td><td>N/A ☐</td></tr>
<tr><td>E. Corrective Actions (describe)</td><td colspan="3">Minor
• CAR01: Capacity building among farmer group representatives on their roles and responsiblities within the group under the plan vivo sales agreement
• CAR02: Project to provide evidence that all farmer representatives have been selected or endorsed by farmers to represent them in the project and sign Plan Vivo agreements.
• CAR11: Further specify the institutions and structures to be used to resolve conflicts in the sales agreement and in the Project Design Document (PDD).
• CAR04: Create a carbon trading mechanism / procedure that among other provide information on how sales, income and carbon funds will be managed.</td></tr>
<tr><td>F. (Insert Project Coordinator's Name) Response</td><td colspan="3">• CAR01: PVCs will only be claimed for Plan Vivo Agreements where the farmer representative has received information describing their roles and responsibilities. Evidence of this will be included in Annual Reports.
• CAR02: The validator will be provided with the results of an SMS survey that was sent to all participating farmers to indicate that they are endorsed their representative.
• CAR11: Additional information on structures to be used to resolve conflicts will be added to the PDD.
• CAR04: SOPs for managing receipt, holding and disbursement of funds from the sale of Plan Vivo Certificates will be developed prior to claiming PVCs. These SOPs will be included in the first Annual Report.</td></tr>
<tr><td>G. Forward Actions (describe, if applicable)</td><td colspan="3"><table><tr><th>Forward Action</th><th>Why Unresolved</th><th>How to resolve</th></tr><tr><td>FA01: Capacity building among farmer group representatives on their</td><td>First annual report not provided,</td><td>Project to send information on their roles and responsibilities</td></tr></table></td></tr>
</table>

	roles and responsiblities within the group under the plan vivo sales agreement	hence evidence not provided.	prior to (e.g, by sms) and during the signing of the agreements will be undertaken and evidence provided in Annual Reports.
H. Status	CAR01: Convereted into Forward Action. CAR02: The validator has been provided with the results of an SMS survey that was sent to all participating farmers to indicate that they endorsed their representative. CAR02 Closed. CAR11: Additional information on structures to be used to resolve conflicts has been added to the Plan Vivo Agreement template, and Section E3 of the PDD. CAR11 Closed. CAR04: SOPs for managing receipt, holding and disbursement of funds from the sale of Plan Vivo Certificates have been added as an Annex to the PDD and is referenced in Section J2. The SOPs have specified that carbon money will be managed separately from the UTNWF general account. CAR04 closed.		
A. Requirement	**1.2 Technical capabilities** Is the project through its staff or partners able to provide timely and good quality technical assistance to producers and/or communities in planning and implementing the productive, sustainable and economically viable forest management, silvicultural and agroforestry actions proposed for the project and for any additional livelihoods activities that are also planned?		
B. Guidance Notes for Validators	Technical capabilities may be determined through: • Discussions with project staff who should be able to define clearly who is responsible for the provision of technical support • Interviews with project staff to demonstrate that they are familiar with the content of project technical specifications e.g. species to be planted, spacing requirements, management systems and any potential issues • Feedback from farmers/communities who have been supported in the past • On-site evidence of project activities (possibly from other projects) that have benefited from technical support		
C. Findings (describe)	• The Water Fund is comprised of a board of trustees, which meets twice per year, a Board of Management (BOM) which is comprised of sector specialists to deal with technical issues and ten technical staff (five employed by the trust – Acting Executive Director, conservation manager, field coordinator, Monitoring and Evaluation (M&E) officer, and a finance/admin officer, four agricultural extension staff seconded by the County Governments, and one staff seconded by WRA to deal with water quality and quantity monitoring. The Board has three sub committes; M&E, resource mobilisation and finance committees. • Four manuals are used to govern the Water Fund; human resources, governance manual, finance manual and operational investment manual. • Discussion with farmers in many parts of the three watershed indicated that agriculture extension services are provided. However, in some areas,		

	such as in Muranga - Karega farmers such as Antony Muriuki and Samuel Nganga Ngonde indicated that this is lacking and as a result they are not conversant with the project, and have no Farm Specific Plans. • Discussions with agricultural extension officers and project technical partners such as NDEKA indicated some level of awareness on technical specifications, but in some cases, what is being promoted is not in line with the technical specifications. For example, the NDEKA coordinator promotes dispersed planting spacing of 6 metres (TC specifies 10m), harvesting of Grevellia boundary tree planting after 20 years (TC specifies 50), Avodado spacing of 8 metres (TC specifies 9m). Spacing of bamboo planting and its management was in line with TC requirements. Interviews with farmers also indicated that for Avocado spacing varies, through most have adopted the 9m by 9m spacing promoted by the TC. David Njoro, a farmer in Mbogiti uses 15m by 15m spacing for Avocado while James Kariuki Wanguhi from the same group uses 7m by 7m spacing. Both farmers (and members of Mbogiti farmers group) also indicated that they are not conversant with technical specification requirements and also do not have Farm Specific Plans. Individual farmers from Friends of Conservation and Ecosystem Group in Sasumua have good understanding of tree planting spacing requirements. They are aware that only trees planted from 2017 can participate in the carbon project. In Maragua, the project extension officer of Caritas also showed good level of knowledge in fruit (Avocado) and boundary (Grevillea) tree spacing requirements. However, most farmers in the area are not conversant with technical specification requirements as observed during the farmers group meeting held at Githambara. • The field coordinator, George Njugi is very conversant with technical specifications, and this capacity could be utilised to develop the same capcity to project agriculture extension officers and project partners. • Most of the farmers met indicated that they have undertaken training from the Water Fund, mostly on trees/fruits/bamboo planting and management, terracing, and water pan establishment. • Some of the 44,893 farmers in the project data base have not planted trees and shrubs though they are engaged in other Water Fund activities. These are therefore not eligible to be members of the carbon project until they engage in agroforestry practices. • Most of the farmers interviewed in the field, were provided with trees and shrubs seedlings and quantity provided matched with that in the data base but their survival rates in general was observed to be low when compared with the 78% survival rate established by the September 2021 poll.		
D. Conformance	Yes ☐	No [x]	N/A ☐
E. Corrective Actions (describe)	• CAR03: Minor: Ensure that all project partners involved in providing technical services are familiar with carbon project technical specifications and only farmers provided with technical services are enrolled and participate in the carbon project before issuance of carbon certificates.		
F. (Insert Project Coordinator's Name) Response	• CAR03: The technical specifications provide a proposed planting plan, but it is acknowledged that planting densities will be adapted to suit the		

<table>
<tr><td></td><td>context of each project area. The calculation of carbon benefits for which PVCs are claimed is based on actual number of trees planted and not the proposed planting densities in the technical specification. All farmers that have developed a Farm Specific Action Plan have received technical services, and PVCs will only be claimed for farms with FSAPs. Training will be provided to all project partners involved in providing technical services to ensure familiarity with the carbon project technical specifications within 1-year of validation.</td></tr>
<tr><td>G. Forward Actions (describe, if applicable)</td><td>CAR03 rephrased and a Forward Action introduced

<table><tr><th>Forward Action</th><th>Why Unresolved</th><th>How to resolve</th></tr><tr><td>FA02: Project to provide evidence that training on technical specification of PDD to technical project partners involved in delivery of project extension services has been undertaken to Plan Vivo.</td><td>Some of the project partners are not fully aware of the technical specifications and no training has been carried out since the validation mission (undertaken in July 2022).</td><td>Share evidence that training has been carried out.</td></tr></table></td></tr>
<tr><td>H. Status</td><td>CAR03: A training plan for capacity building of project partners has been provided. CAR03 Closed and a forward Action added (see above).</td></tr>
<tr><td>A. Requirement</td><td>1.3 Social capabilities
Is the project, through its staff or partners able to demonstrate an understanding of the social conditions of the target groups/communities and likely implications of the project for these? This might include:
1.3.1 A demonstrated ability to select appropriate target groups through stakeholder analysis and to understand the implications of the project for specific groups e.g. poor, women, socially disadvantaged etc.
1.3.2 Groups/communities that are well-informed about the Plan Vivo System and the nature of carbon and ecosystem services
1.3.3 Local groups/communities that can demonstrate effective self-governance and decision-making
1.3.4 Well-established and effective participatory relationships between producers and the project coordinator
1.3.5 Demonstrated ability to establish land-tenure rights through engaging with producers/communities and other relevant organisations
1.3.6 Ability to consult with and interact with producers/communities on a sustained basis through participatory ‘tools’ and methods
1.3.7 Established system for conflict resolution</td></tr>
</table>

B.	**Guidance Notes for Validators**	Social capabilities may be determined through: • Records/minutes/photographs of community meetings and training workshops etc. • Project staff able to explain (in line with PDD) how land tenure is checked by the project • Project staff and communities able to explain how communities/target groups were selected and involved in the development of the project and in the choice of activities • Project staff able to demonstrate that they are familiar with the communities/target groups and able to interact with them easily through meetings facilitated during the validation • Meetings held with specific target groups e.g. women, socially disadvantaged etc.		
C.	**Findings (describe)**	• The County Governments of Muranga, Nyeri, Laikipia and Nyandarua, NGOs and Community Based Organisations such as SACDEP, NDEKA and Caritas are key project partners working with local communities in the three catchements. Interviews with these partners indicated good knowledge of the social conditions of the farmers and this has helped in implementation of activities on the ground based on their local level knowledge of the area. For this reason, some of the activities are not promoted uniformly. For example, land sizes in some parts of Muranga such in Githambara are small and conflicts often arise over boundary tree planting. Caritas therefore promotes alley croping as opposed to boundary tree planting. Conflicts of the same nature have also erupted in Solio ranch where individual families have been allocated 0.5 acres for homestead and 4 acreas for farming away from the homesteads. • By working with partners who on daily basis interacts with the target communities, the project is therefore very conservant with their social conditions. The County Government of Muranga, who leads agricultural extension work in Muranga indicated that she works with SACDEP, NDEKA and Caritas as well as 22 agricultural officers, two water engineers, KFS and livestock offices in six sub counties who are very conversant with social issues in these areas. • Partners such as SACDEP has many years working in parts of the three watersheds, especilly in Thika Chania watershed where they are invoved in community mobilisation for the carbon project. They provide farmers with training on soil fertility, and agroforestry tree planting and management. Caritas on the other hand provides farmers with business plan and sustainable land management training, and on regular basis provides tree nursery management support as well as conducts farmer field visits to support riparian land rehabilitation and terracing of farms. • As noted earlier systems for confict resolution are there but the PDD and Plan Vivo agreement need further elaboration as recommended in Section 1.2.		
D.	**Conformance**	Yes [x]	No [ ]	N/A [ ]
E.	**Corrective Actions (describe)**	*None*		

F.	**(Insert Project Coordinator's Name) Response**	*N/A*	
G.	**Forward Actions (describe, if applicable)**	*None*	
H.	**Status**	*N/A*	
A.	**Requirement**	**1.4 Monitoring and Reporting capabilities** Does the project have an effective monitoring and reporting system in place that can regularly monitor progress and provide annual reports to the Plan Vivo Foundation according to the reporting schedule outlined in the PDD? 1.4.1 Accurately report progress, achievements and problems experienced 1.4.2 Transparently report sales figures and demonstrate resource allocation in the interest of target groups	
B.	**Guidance Notes for Validators**	Monitoring and reporting systems and capabilities may be determined through: • Staff and participating communities able to explain the monitoring system (how each of the indicators in the PDD will be monitored) • Records of any monitoring already undertaken e.g. baselines or other information • Project staff showing an understanding of the importance of annual reporting to Plan Vivo as a requirement for issuance of certificates • Demonstrated ability to produce simple reports (e.g. for other projects)	
C.	**Findings (describe)**	• The project has employed a full time Water Engineering Master of Science degree holder M&E officer who is incharge of record keeping and monitoring data. The M&E officer uses the District Health Information System – Version 2 (DHIS2) data base software. This software among others provides details of farmers, location, acreage and interventions carried out, species planted and system adopted. The total number of farmers in the database is 44,893. • The project runs a survey on need basis to determine tree survival rates among other socio-economic data, the recent having been undertaken in September 2021 by Caritas in Muranga. Different tools are used depending on locations, either manual or digital but data collected is uniform. Currently, the project has given out 3.6 million seedlings with a 78% survival rates. Where the survival rates are low, reasons behind are investigated and correction actions given, mostly through the eco-mobile platform. The project seeks to intensify tree based monitoring after every three years on existing farmers. • The project baseline was undertaken in 2017 using the Multi – Poverty Assessment Tool (MPAT) and this is saved in a cloud platform.	
D.	**Conformance**	Yes [x]	No [ ] N/A [ ]
E.	**Corrective Actions (describe)**	*None*	

F. (Insert Project Coordinator's Name) Response	*N/A*
G. Forward Actions (describe, if applicable)	*None*
H. Status	*N/A*

Theme	**2. Carbon Benefits**
Ensuring that the project meets requirements 5.1-5.20 of the Plan Vivo Standard (2013)	
A. Requirement	**2.1 Accounting methodology** Have the carbon benefits been calculated using recognised carbon accounting methodologies and/or approved approaches and are the estimates of carbon uptake/storage conservative enough to take into account risks of leakage and reversibility?
B. Guidance Notes for Validators	Check the carbon accounting methodology used including: • The level of understanding of the methodology used amongst technical project staff • Whether all references and sources of information are available (include copies with the validation report if possible) • Whether the carbon accounting models are clear and transparent i.e. are the spreadsheets available and readily understandable? Can project staff answer and explain any technical questions about these? • Are local experts able to comment on the accounting methodology and on the sources of information used?
C. Findings (describe)	• All project interventions are implemented in a way not to displace agricultural activities but rather to enhance agricultural productivity in existing land. Risks of leakage and reversibility have been assumed to be zero. • The equations used to calculate carbon benefits are clear and well outlined in the PDD Technical Specification. References and sources of information is provided as footnotes in the Technical Specification. Carbon spreadsheets for each of the five interventions are provided as annexes to the Technical Specification. • Most of the area covered by the project is of high agricultural productivity around Aberdare and Mt. Kenya forests. However, the agricultural potential is low in a small part of the area covered by the project in Laikipia (Solio settlement scheme and Ragati) and in Nyandarua. Climatic conditions, a key factor in determining tree and shrub growth and survival rates therefore differ, and this is well illustrated in photographs that are presented in Annex 3.1. The likelihood that estimated climate benefits are significantly overestimated in these low potential / drier areas where tree and shrub growth rates is considerably lower than in the high potential areas of Muranga, Maragua, Othaya and Mukurweini is therefore high. Appropriate tree growth and biomass allometric models taking into account these different climatic conditions should be taken into account in estimation of carbon benefits.

	• It is also important to note (as also observed in the field) that there is a strong culture of tree planting in the project area, as opposed to planting of shrubs for livestock fodder for example and this has a strong influence in tree and shrub seedling survival rates. In many of the farms visited, tree survival rates was observed to be much higher than that of shrubs and therefore an appropriate adjustment to reflect this should be considered.		
D. Conformance	Yes ☐	No [x]	N/A ☐
E. Corrective Actions (describe)	• CAR05: Major: Apply a more conservative growth rate parameter / model in carbon benefit estimation in drier parts of the catchment. • CAR06: Minor: If possible, the project should seek to separate the survival rates of trees and shrubs when polling / in future survey as these seem to vary and as such have some level of influence in carbon benefit computation.		
F. (Insert Project Coordinator's Name) Response	• CAR05: Technical Specifications will be updated so that a more conservative growth rate is applied in dry areas of the watershed - equivalent to 75% of the expected growth rate in areas with high agricultural productivity. • CAR06: Technical Specifications will be updated so that a more conservative survival rate is applied for shrubs - equivalent to 75% of the survival rate assumed for trees.		
G. Forward Actions (describe, if applicable	*None*		
H. Status	• CAR05: Technical Specifications have been updated so that a more conservative growth rate is applied in dry areas of the watershed – equivalent to 75% of the expected growth rate in areas with high agricultural productivity. CAR05 Closed. • CAR06: Technical Specifications have been updated so that a more conservative survival rate is applied for shrubs - equivalent to 75% of the survival rate assumed for trees. CAR06 Closed.		
A. Requirement	**2.2 Baseline** Are the carbon benefits of the project measured against a clear and credible carbon baseline (for each project intervention)?		
B. Guidance Notes for Validators	Check the baseline scenario in the technical specifications of the PDD: • Check that baseline measurements have been carried out and information properly recorded • Check that the information from the baseline matches that in the PDD/Technical specifications and corresponds to the situation on the ground (by discussing with local experts and others)		
C. Findings (describe)	• The carbon benefits uses two carbon pools (woody biomass pool – above ground and below ground biomass) and soil organic carbon. Baseline emissions and removals from the woody biomass and soil organic carbon		

	are accounted as zero as guided by the AR-Tool14 and AR-AACM003 respectively. • The quantification of carbon benefits should take into account correction actions presented in Section 2.1		
D. Conformance	Yes ☐	No x	N/A ☐
E. **Corrective Actions (describe)**	• See CARs presented in Section 2.1		
F. (Insert Project Coordinator's Name) Response	• See responses in Section 2.1		
G. Forward Actions (describe, if applicable)	*See Section 2.1*		
H. Status	*See Section 2.1*		
A. Requirement	**2.3 Additionality** Are the carbon benefits additional? Would they be generated in the absence of the project? Will activities supported by the project happen without the availability of carbon finance?		
B. Guidance Notes for Validators	Assess whether the project simply owes its existence to legislative decrees or to commercial land-use initiatives that are likely to be economically viable in their own right i.e. without payments for ecosystem services. Also, assess whether without project funding there are social, cultural, technical, ecological or institutional barriers that would prevent project activities from taking place.		
C. Findings (describe)	• According to project staff, the project seeks to build on activities that are already on-going and its additionality comes from the scaling of those activities in other areas, and new planting something that would not happen in the absence of additional financing from carbon credits. Apart from the growing of Avacados (which is a key activity supported by County Governments especially in Thika Chania and Maragua watersheds), all the other agroforestry interventions could not have taken place in absence of the Water Fund and cannot be sustained or scaled out in absence of carbon credits. • County Governments can still perform their extension services but not actively as they do through the Water Fund. Though seconded to the project, the four County Government agriculture extension officers could not have been provided with the infrastructure that they have (motobikes, computers, operational satelite offices etc) to support farmers to implement projects interventions. • The project also provides grants to NGOs such as SACDEP and Caritas and Community Based Organisations such as NDEKA to facilitate implementation of its activities on the ground. According to the project staff, this support cannot be sustained without additional financing. The project therefore seeks to break the reliance of agroforestry financing from		

	donors and switch to more sustainable sources such as carbon financing. The PDD has included the financial, social, cultural, technical, institutional/political and ecological barriers that prevent smallholder farmers from engaging in agroforestry; but has since 2017 been supporting farmers to overcome these barriers through donor and grant financing. Since the project is already financing agroforestry practices in absence of carbon funds, a strong justification on additionality is needed.		
D. Conformance	Yes ☐	No x	N/A ☐
E. Corrective Actions (describe)	• CAR07 Major: Project to share its business model indicating future financing of current and future agroforestry activities to justify additionality.		
F. (Insert Project Coordinator's Name) Response	• CAR07: The Plan Vivo and validator will be provided with a summary of the carbon project's business model.		
G. Forward Actions (describe, if applicable)	*None*		
H. Status	CAR07: The business model has been shared and looks adequate. CAR07 Closed.		
A. Requirement	**2.4 Permanence** Are potential risks to the permanence of carbon stocks identified in the project technical specifications and are effective and feasible mitigation measures included in the project design?		
B. Guidance Notes for Validators	Assess whether members of the community/producers are aware that they will enter into formal sale agreements with the project coordinator and that they therefore need to comply with the monitoring and mitigation requirements of the project. Check whether the risk buffer proposed in the PDD and technical specifications for each intervention (that will be deducted from the saleable carbon of each producer) conforms to the recommended percentages in the Plan Vivo Standard or other Plan Vivo documentation. Check with Plan Vivo if this is unclear.		
C. Findings (describe)	• Many of the individual farmers are aware that they will enter into formal sale agreements with the project cordinator. The project will enter into sales agreement with farmers through farmers representative. Some of the individual farmers as confirmed during the Focus Group Discussion (FGD) at Ndakaini are not aware of conditions that they need to comply with in order to get carbon benefits. Although farmers in this FGD and others are aware that trees must be managed for a particular period of time during the lifetime of the project, almost all the farmers met are not convesant with specific conditions that they need to comply with and this could be a potential risk to the permanence of carbon stocks. This is in part attributed to the fact that the technical specification was drafted recently and awareness about specific conditions for interventions have not been created beyond the projects staff. The project staff is however aware of this		

<table>
<tr><td></td><td>and is exploring ways of ensuring that all farmers and technical staff are conversant with all conditions set for the five interventions.
• The senior project management that include the Conservation Programme Manager and the Field Project Coordinator are very conservant with the PDD Technical Specification for project interventions. There is also some good level of knowledge among project implementers (Muranga County Government and Caritas agricultural extension officers and NDEKA coordinator). However, interviews with these staff indicate some capacity gaps in relation to technical specification requirements (e.g timelines within which trees should be mainted and spacing).
• The PDD has outlined risk factors (social, economic, environmental, technical and adminstrative) that have a bearing in permanence of carbon stocks and their mitigation measures and these have been considered low. A 20% risk buffer has been adopted.</td></tr>
<tr><td>D. Conformance</td><td>Yes ☐ | No ☒ x | N/A ☐</td></tr>
<tr><td>E. Corrective Actions (describe)</td><td>• CAR08 Minor: Capacity building and awareness creation to individual farmers and project partners on the conditions set in the PDD Technical Specifications and their roles and responsibilities prior to issuance of Plan Vivo certificates.</td></tr>
<tr><td>F. (Insert Project Coordinator's Name) Response</td><td>• CAR08: PVCs will only be claimed for project participants that have received information regarding the conditions of the Plan Vivo agreements. Evidence of this will be provided in Annual Reports.</td></tr>
<tr><td>G. Forward Actions (describe, if applicable)</td><td>
<table>
<tr><th>Forward Action</th><th>Why Unresolved</th><th>How to resolve</th></tr>
<tr><td>FA03: Project to provide evidence that training on technical specification of PDD to individual farmers has been undertaken to Plan Vivo.</td><td>Capacity building has not yet been carried out</td><td>Share evidence that capacity building and awareness has been carried out.</td></tr>
</table>
</td></tr>
<tr><td>H. Status</td><td>CAR08: The validator has been provided with a capacity building and awareness creation plan. CAR08 Closed. A Forward Action has been added.</td></tr>
<tr><td>A. Requirement</td><td>2.5 Leakage
Have potential sources of leakage been identified and are effective and feasible mitigation measures in place for implementation</td></tr>
<tr><td>B. Guidance Notes for Validators</td><td>Check the sources of leakage and the effectiveness of mitigation measures:
• By discussions with local experts, the project coordinator and others.
• Assess whether there is a good understanding of the importance of addressing leakage amongst project participants
• Assess whether the mitigation measures proposed are really effective and likely to be implemented. Have they already started?</td></tr>
</table>

C. Findings (describe)	• So long as the project applicable conditions are met (4 conditions are presented in the Technical Specification), risk of leakage is determined to be zero since all project interventions are implemented in agricultural farms with the intention of increasing agricultural productivity and not displacing agriculture. Field observation showed that the likelihood of this being met and maintained is high, however frequent checks will be necessary to ensure that all the conditions and requirements specified in the Technical Specification for the five interventions are met (see section 2.4 above).		
D. Conformance	Yes [x]	No [ ]	N/A [ ]
E. Corrective Actions (describe)	None		
F. (Insert Project Coordinator's Name) Response	*N/A*		
G. Forward Actions (describe, if applicable)	*None*		
H. Status	*N/A*		
A. Requirement	**2.6 Traceability and double-counting** Are carbon sales from the project traceable and recorded in a database? Are the project intervention areas covered by any other projects or initiatives (including regional or national initiatives)? Are there formal mechanisms in place to avoid double counting?		
B. Guidance Notes for Validators	Check the possibility of double counting and whether the carbon sales are traceable by: • By discussions with local experts, the project coordinator and other projects (including any national or regional level GHG coordination unit) • Understanding the project system for maintaining records of carbon sales and keeping records and determining whether this is sufficiently robust and transparent (through discussions with project staff and local participants)		

C. Findings (describe)	• The project has developed a data base of project participants and has indicated that it will be developing a clear carbon trading account that among other things will provide information on carbon sales and revenues as well as a project carbon trading annual summary income expenditure account.
	  • Farmers involved in planting of trees under this project since 2017 are aware that among other products and services, these trees are being planted to generate carbon credits as another additional benefit.
	  • In Muranga, one of the people interviewed was aware of a carbon project in the area but did not have details about the project. Discussion with the manager of The International Small Group & Tree Planting Program (TIST) programme later indicated some level of overlap in areas where the two projects are working, specifically in		

<table>
<tr><td></td><td>Muranga (Gatanga and Kigumo) and Laikipia (Ragati) where both are promoting the growing of Grevillea and Avocado, the same species promoted by the Water Fund. In Muranga, TIST is working with 3,000 farmers. It is therefore possible to have double counting if some farmers are enrolled in the two projects. Indeed, one of the farmers met in Ragati indicated that he is a beneficiary of TIST and this year he received KES 37,000 for the eucalyptus trees that he has planted in his farm. Water Fund has assisted this particular farmer (James Ndirangu Nyuguto) to plant Grevillea, Bamboo, Calliandra and Avocado, but these have not been enrolled in the TIST programme. One of the best ways of avoiding double counting is to have a clear mechanism with TIST to avoid double counting. This may include ensuring that individual farmers can only be enrolled in one project, since it will be difficult to differentiate trees planted by each of the project especially if they are of the same species in a farm.
• Discussions with KFS Muranga County Forest Conservator (new in the area) and senior forester indicated that the forester is aware of the project and that there is no possibility of double counting with forests managed by KFS. Although Water Fund is supporting tree planting in gazetted forests such as Gatare through contract performance with Community Forest Associations (CFAs) and so far have planted around 10 hectares, these areas are not included in the carbon project. Currently, there is no formal agreement with KFS.
• KFS recommended that areas the Water Fund should in future upload areas planted in KFS online platform so that these areas are captured in KFS national tree planting data base.</td></tr>
<tr><td>D. Conformance</td><td>Yes ☐ | No ☒ x | N/A ☐</td></tr>
<tr><td>E. Corrective Actions (describe)</td><td>• CAR09 Major: Establish formal mechanisms with overlapping carbon projects to avoid double counting.</td></tr>
<tr><td>F. (Insert Project Coordinator's Name) Response</td><td>• CAR09 A comparison of farmers in the TIST and UTNWF programme databases has been carried out, and PVCs will only be claimed for project participants that are not enrolled in the TIST programme.</td></tr>
<tr><td>G. Forward Actions (describe, if applicable)</td><td>(Please, delete table and write "None" if there were no Corrective Actions were identified or all Corrective Actions were closed)
<table><tr><th>Forward Action</th><th>Why Unresolved</th><th>How to resolve</th></tr><tr><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>H. Status</td><td>A comparison of farmers in the TIST and UTNWF programme databases has been carried out and 916 farmers enrolled in both the TIST and UTNWF projects were identified and removed from the project database. A clause excluding project areas that are part of another carbon project has also been added to the Plan Vivo Agreement template. CAR09 Closed.</td></tr>
<tr><td>A. Requirement</td><td>2.7 Monitoring</td></tr>
</table>

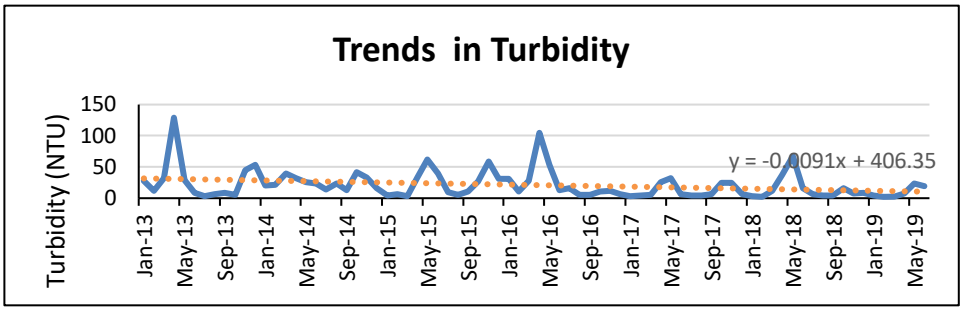
	Does the project have a monitoring plan in place? Is it being implemented and does it seem to be an effective system for monitoring the continued delivery of the ecosystem services? Does the project coordinator prescribe and record corrective actions where monitoring targets are not met and are these effectively followed up in subsequent monitoring?		
B. Guidance Notes for Validators	Check whether the monitoring plan is effective and likely to be fully implemented: • Assess the level of understanding of project staff and participating communities of the monitoring system and ensure that there are responsibilities for monitoring are matched by sufficient capacity • Are the selected indicators (covering all aspects of monitoring) SMART? I.e. Specific, Measurable, Achievable, Relevant and Time-bound? • Do the selected indicators properly measure impacts of the project or are they only able to measure inputs/activities? • Are communities effectively involved in monitoring and do they understand their role?		
C. Findings (describe)	• A monitoring and evaluation plan is in place and output and outcome level indicators in the plan have been designed based on theory of change. The Technical Advisor indicated that a sampling plan is yet to be developed to guide the monitoring of indicators. The PDD (Section K1) however, presents a simple approach that will be used and this looks reasonable. • Kombo collect tool has been uploaded in smart phones to collect household and tree data by agricultural extension officers. Household data is collected and analysed on quarterly basis, water quality data after every six months. All other indicators are collected annually. • Water quality and quantity monitoring is undertaken by an officer seconded to the project from WRA. The project has since 2014 installed water monitoring stations in several rivers, such as in Gura, Gathanji, Sagana, Thigi, Kamahuri, Rongai, and Iruri stream. These stations have been upgraded with automatic recorders. By 2015, the project had good water quality and quantity baseline data. • The Muranga County Government extension officer and the Project General Manager indicated that for farmers to participate in the project, a Farm Specific Plan (FSP) has to be developed by individual farmers, a process that is facilitated by agricultural extension officers. These plans are used to identify interventions at farm level and have agroforestry set targets, e.g the number of trees to be planted in a farm. Not all farmers in the data base and on the ground have these plans (see Section 2.8 below).		
D. Conformance	Yes [x]	No [ ]	N/A [ ]
E. Corrective Actions (describe)	*None*		
F. (Insert Project Coordinator' Name) Response	*N/A*		

G. Forward Actions (describe, if applicable)	*None*
H. Status	*N/A*
A. Requirement	***2.8 Plan Vivos*** Are the *plan vivos* (or land management plans) clear, appropriate and consistent with approved technical specifications for the project? Will the implementation of the plans cause producers' overall agricultural production or revenue potential to become unsustainable or unviable?
B. Guidance Notes for Validators	Where small-holder farmers have prepared individual *plan vivos*, check a sample of these on the ground (in the company of the farmer) to determine whether they have really been prepared by the farmer and what the farmer expects to be the results of implementation. For community-projects managing a common (forest) resource, check the management plan for the forest area and assess the extent to which target groups within the community have been involved in preparing it (especially women and disadvantaged groups) and the extent to which its future impacts have been discussed and agreed.
C. Findings (describe)	• Farm Specific Plans for individual farms are used to engage farmers. Farmers are mobilised and trained and later facilitated by agricultural extension officers from County Government or project partners such as NDEKA to develop the plans. Interviews with farmers who have these plans in place indicated this to be the case. • Some of the farmers groups met who indicated that they have Farm Specific Plans (and some displayed them – See annex 3.1) include: Gathanje farmers group, Friends of Conservation Restoration Ecosystem Group and the Solio Settlement Rehema farmers group. • The Plan Vivo agreement indicates that participants should have developed Farm Specific Plans for implementing project activities. In many places visited these are available. However, there are areas where these are not in place and farmers are not aware of them as observed during the interview with Mbogiti farmers group, and individual farmers such as James Kariuki Wanguhi in Ndakaini and Antony Muriuki and Samuel Nganga in Muranga. • Developed in 2017/2018, Farm Specific Plans in Mukurweini West were used to get the Rainforest Certification for 8,500 coffee farmers.
D. Conformance	Yes ☐ | No ☒ | N/A ☐
E. Corrective Actions (describe)	• CAR10 Major: Ensure that only farmers with Farm Specific Plans and who are utilising them are enlisted and participate in the carbon project
F. (Insert Project Coordinator's Name) Response	• CAR10: PVCs will only be claimed for project participants that have a Farm Specific Action Plan. Evidence of this with Annual Reports.

<table>
<tr><td>G. Forward Actions (describe, if applicable)</td><td><table><tr><th>Forward Action</th><th>Why Unresolved</th><th>How to resolve</th></tr><tr><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>H. Status</td><td>CAR10: In addition to the project response above, the project has also updated the farmer database has been updated to indicate whether FSAPs have been completed. CAR10 Closed.</td></tr>
</table>

Theme	3. Ecosystem benefits
Ensuring that the project meets requirements 2.1-2.4 of the Plan Vivo Standard (2013)	
A. Requirement	**3.1 Planting native and naturalised species** Are the planting activities of the project restricted to native and naturalised species? If naturalised species are being used are they invasive and what effects will they have on biodiversity? Have the species been selected because they will have clear livelihoods benefits?
B. Guidance Notes for Validators	Check this using a number of sources: • Visual observations of local tree-growing practices • Discussions with communities and project staff • Discussions with local experts (forestry and biodiversity experts) • Published information (refer to this in the validation report if used)
C. Findings (describe)	A combination of native and non native species are promoted in the fire interventions. • Fruit orchards – all fruits promoted are non native and have not been listed in the global invasive species database. They are Mango (*Mangifera indica*), Hass Avocado (*Persea americana*), Orange (*Citrus sinensis*) and Macadamia (*Macadamia integrifolia*). They have been selected, because they generate income which sustains local community livelihoods. The most prefered fruit being Avocado because of the international market demand followed by Macadamia. • Alley croping – four non native trees and shrubs are promoted – *Grevillea robusta* (is very popular and intercrops well with crops and is the most common naturalised tree species in the three watershed, mostly used for timber). It is invasive in some countries, but not in Kenya. *Leucaena trichandra* and *calliandra calothyrsus* – both are naturalised shrubs prefered because of their high protein fodder for livestock and their nitogen fixing capability which improves soil fertility. They are mostly planted as hedges and used to stabilise soils in slopy areas; bamboo (*Dendrocalamus asper*) is another species planted in farms especially in riverine areas to stabilise soils, but also provides construction materials and serves as a wind break. Bamboo is performing well in the high potential areas compared to dry areas of the Sagana – Gura watershed. • Enrichment fallows – both native and non native trees and shrubs are promoted. Of all species promoted, only *Casuarina equsetifolia* is invasive, but this is restricted to coastal areas and not in highlands and this is therefore not a threat. Trees promoted include *Markhamia lutea*, while shrubs include Calliandra and *Sesbania sesban*, the later being native and like Calliandra provides high protein fodder, improves soil fertility as a nitrogen fixer, intercops well with crops and is a good soil stabiliser. Markhamia provides shade for crops such as bananas and beans. • Dispersed interplanting – almost all trees promoted are native apart from *Fraxinus pennsylvanica* which is non native and has been naturalised in the area and intercrops well with crops. All trees promoted have been selected because of the multiple benefits they provide to farmers such as acting as wind breaks, crop shade and soil stablisers; and are sources of construction – timber and poles - and fulewood materials.

	Though promoted, *Olea europaea* can be invasive, but it is native to Northeast Africa and is not expected to become invasive. • Boundary planting – four tree species are being promoted, Grevillea, *Croton megolocarpus* (native), Casuarina, and Markhamia. All these trees provide similar multiple benefits like those mentioned under dispersed interplanting.		
D. Conformance	Yes [x]	No [ ]	N/A [ ]
E. Corrective Actions (describe)	*None*		
F. (Insert Project Coordinator's Name) Response	*N/A*		
G. Forward Actions (describe, if applicable)	*None*		
H. Status	*N/A*		
A. Requirement	**3.2 Ecological impacts** Have the wider ecological impacts of the project been identified and considered including impacts on local and regional biodiversity and impacts on watersheds?		
B. Guidance Notes for Validators	Check this using a number of sources: • Visual observations of the environment in the project area • Discussions with communities and project staff • Discussions with local experts (environmental experts) • Published information (refer to this in the validation report if used)		
C. Findings (describe)	An environmental and biodiversity baseline was conducted in 2019 and this will be used to monitor ecological impacts. The project has wider ecological impacts, and some of these are being experienced such as the following: • Riverine protection and stabilisation: This is being achieved through control of soil erosion across the slopey ridges in the watersheds especially in Maragua and Thika Chania watershed, and along the riverine areas by alley cropping of shrubs, and planting of bamboo along riverine. See Annex 3.3. • Soil stabilisation and fertilisation: Growing of nitrogen fixing shrubs such as Calliandra, Sesbania and Leucaena is improving soil fertility and therefore agricultural productivity. See Annex 3.4. • Biodiversity conservation: Growing of diversified tree species especially indigenous native species is increasing biodiversity in the landscape and offering multiple benefits to local communities such as those mentioned in section 3.1. Annex 3.6 and 3.7 shows some of the indigenous tree species planted on farms.		

	• Water quality and quantity improvement: Water Fund monitors water quality and quantity regularly through gauges installed in some of the rivers and streams and over time water quality and quantities have improved as indicated by the following graphical illustration based on data collected in 2019 in Ndakaini water treatment plant.  • The average maximum turbidity level recorded in the treatment was observed to decrease, indicating improved water quality.	
D. Conformance	Yes [x]	No [ ]	N/A [ ]
E. Corrective Actions (describe)	*None*		
F. (Insert Project Coordinator's Name) Response	*N/A*		
G. Forward Actions (describe, if applicable)	*None*		
H. Status	*N/A*		

Theme	**4. Livelihood Benefits**
Ensuring that the project meets requirements 4.1-4.14, 7.1-7.5 and 8.1-8.10 of the Plan Vivo Standard (2013)	
A. Requirement	**4.1 Community-led planning** Has the project has undergone a producer/community-led planning process aimed at identifying and defining sustainable land-use activities that serve the community's needs and priorities?
B. Guidance Notes for Validators	Assess this by discussions with project staff and communities and by looking at any records of the planning process. It may be useful to conduct a time-line exercise with communities to understand the planning process that has taken place.

C. Findings (describe)	• The Water Fund was initited in 2012 and in 2014, a business case to support its establishment was developed. It started as a pilot in 2014 in Maragua working with farmers along the Maragua River (1st site). The 2nd site was in Gatanga where farmers were encouraged to practice agroforestry and engage in water harvesting technologies. By 2016, the project had included another small part of Sagana – Gura in Mukurweini West. From 2017, the project scaled up to cover other areas in Muranga, Nyeri and Laikipia (Solio Settlement Scheme). • Although not all farmers have these plans, as noted elsewhere in this report (Section 2.8), sustainable land uses is determined during development of Farm Specific Plans which are driven by farmers and facilitated by County Government agriculture extension staff, and project partners – Caritas, SACDEP, and NDEKA.		
D. Conformance	Yes [x]	No [ ]	N/A [ ]
E. Corrective Actions (describe)	*None*		
F. (Insert Project Coordinator's Name) Response	*N/A*		
G. Forward Actions (describe, if applicable)	*None*		
H. Status	*N/A*		
A. Requirement	**4.2 Socio-economic impact assessment/monitoring plan** Is there a robust socio-economic impact assessment and monitoring plan in place that can measure changes against the baseline scenario?		
B. Guidance Notes for Validators	Discuss with project staff and communities to understand how the baseline assessment was conducted and how the socio-economic monitoring plan developed out of this. Assess in particular: • Whether the livelihoods indicators can effectively monitoring socio-economic changes takeing place • The extent to which women, disadvantaged people and other social groups have been involved project processes and whether the selected indicators will enable impacts on them to be determined • Whether any groups in the community are likely to be adversely affected by the project and whether there are any mitigation meausures in place to addres this		
C. Findings (describe)	• Socio-economic baseline survey was undertaken in 2017, and will be undertaken every five years to assess progress and impacts in relation to livelihoods, agricultural productivity and income.		

	• The project has a monitoring plan (see Section 2.7) to monitor changes against the baseline. The Technical Specification has also identified the progress indicators to be monitored every three years and correction measures to be undertaken. • The project runs a poll on need basis to generate among other things socio economic data of participants of the project. The project uses Engagement Review Form to monitor implementation of Farm Specific Plans. For example, after a major activity is completed in a farm, the Agriculture Extension Officer visits the farmer to document the status of the activity in this form. The form is then used to update the projects data base. • The project is involving many social groups such as the youth who are encouraged to engage in seedling production for commercial purposes. In Gatare forest, the project is working with the Gatare CFA to rehabilitate the forest through a performance contract where the CFA is paid KES 53 per seedling for pitting and weeding. 10 ha has been rehabilitated through this process. In Othoya, the project is purchasing seedlings from Thuti CFA.		
D. Conformance	Yes [x]	No [ ]	N/A [ ]
E. Corrective Actions (describe)	*None*		
F. (Insert Project Coordinator's Name) Response	*N/A*		
G. Forward Actions (describe, if applicable)	*None*		
H. Status	*N/A*		
A. Requirement	**4.3 Sale agreements and payments** Does the project have clear procedures for entering into sale agreements with producers/communities based on saleable carbon from *plan vivos*? Does the project have an effective and transparent process for the timely administration and recording of payments to producers?		
B. Guidance Notes for Validators	Check the systems that are being proposed by the project and make an assessment of whether these are fully functional already or whether they can be made functional when required? Are communities/producers aware of the system and do they understand it? Are documents and materials readily available to producers/communities?		

C. Findings (describe)	• The project has prepared a sale agreement for carbon but has not developed the procedures for recording payments. See CAR in Section 1.1. • According to the Water Fund Technical Advisor, Plan Vivo Certificates are aimed at delivering over 60% of the proceeds of sales to communities. • A survey undertaken in 2014 and others conducted from 2017 through training and SMS platforms indicate that farmers would like in-kind payment as opposed to cash payment for carbon credits. Some of the farmers met (e.g Mbogiti famers group) during the field visit did not participate in this survey and would want to have this discussion once they are aware of the price. Many of the farmers met however prefered the in-kind payment (e.g, Wathinji farmers group, Gathanje, and Friends of Conservation and Restoration Ecosystem group at Sasumua) . Some of those who voted for cash payment such as Githinji Mureithi in 2014 are willing to take in-kind contribution if this is the wish of the majority. • In the in-kind contributions proposed by the project (provision of tree seedlings, escavation of water pans, stabilisation of terraces and riverbanks through agroforestry practices) according to those interviewed are very appropriate since they are all aimed at improving agricultural productivity at farm level.		
D. Conformance	Yes [x]	No [ ]	N/A [ ]
E. Corrective Actions (describe)	*None*		
F. (Insert Project Coordinator's Name) Response	*N/A*		
G. Forward Actions (describe, if applicable)	*None*		
H. Status	*N/A*		
A. Requirement	**4.4 Benefit sharing and equity** Will the project have livelihoods benefits for the local community? Are these benefits likely to accrue to all community members and/or are benefits targeted at particular groups within the community? What other actions is the project taking to ensure that disadvantaged groups e.g. women, landless households, poor people will benefit from sales of Plan Vivo certificates?		
B. Guidance Notes for Validators	Whilst there may be livelihoods benefits resulting from the project aspects of benefit sharing are critical to ensure that benefits are equitably shared. This can be assessed by: • Checking whether a local stakeholder/well-being analysis has been conducted to identify socio-economic groupings in the communities		

	• Assessing the level of governance of local groups (are issues of equity and benefit sharing discussed during meetings? • Discuss with a small sample of households from different socio-economic groups to determine their level of understanding of the benefits they are likely to get from the project.		
C. Findings (describe)	• Farmers are benefiting from the project in various ways. First, through improved income sources, such from sale of Avocados. The growing of Avocado has a long history dating to 1990s/2000 when a former Minister of Agriculture introduced it in Kandara. Today, Muranga is the leading county in production of Avocado and prices to farmers have improved in time from KES 1 per piece paid by Kakuzi limited in 2013/14 to KES 15 today and though this farmers have largely engaged in Avocado production to an extent where over production could be a risk in future. However, international demand continues to grow. • Benefit sharing will be through the carbon funds in the endowment fund from sale of carbon credits and will equity based (ie based on trees planted by farmers) and most farmers interveiwed are agreeable to this model. • Target communities in the target area contributes 30% of total costs to construction of water pans and 50% to biogass construction. The project plan is to support farmers with water pan and biogass materials worth 70% and 50% respectivelly and free tree seedlings from carbon funds as in-kind contribution. However, the project plans to subsidize this to elderly (people over 65 years), people with disability and other vulnerable groups.		
D. Conformance	Yes [x]	No [ ]	N/A [ ]
E. Corrective Actions (describe)	*None*		
F. (Insert Project Coordinator's Name) Response	*N/A*		
G. Forward Actions (describe, if applicable)	*None*		
H. Status	*N/A*		

The Validator: Michael Gachanja

Signature: _____ **Date:** **12.11.2022**

Annex 1: Field visit itinerary

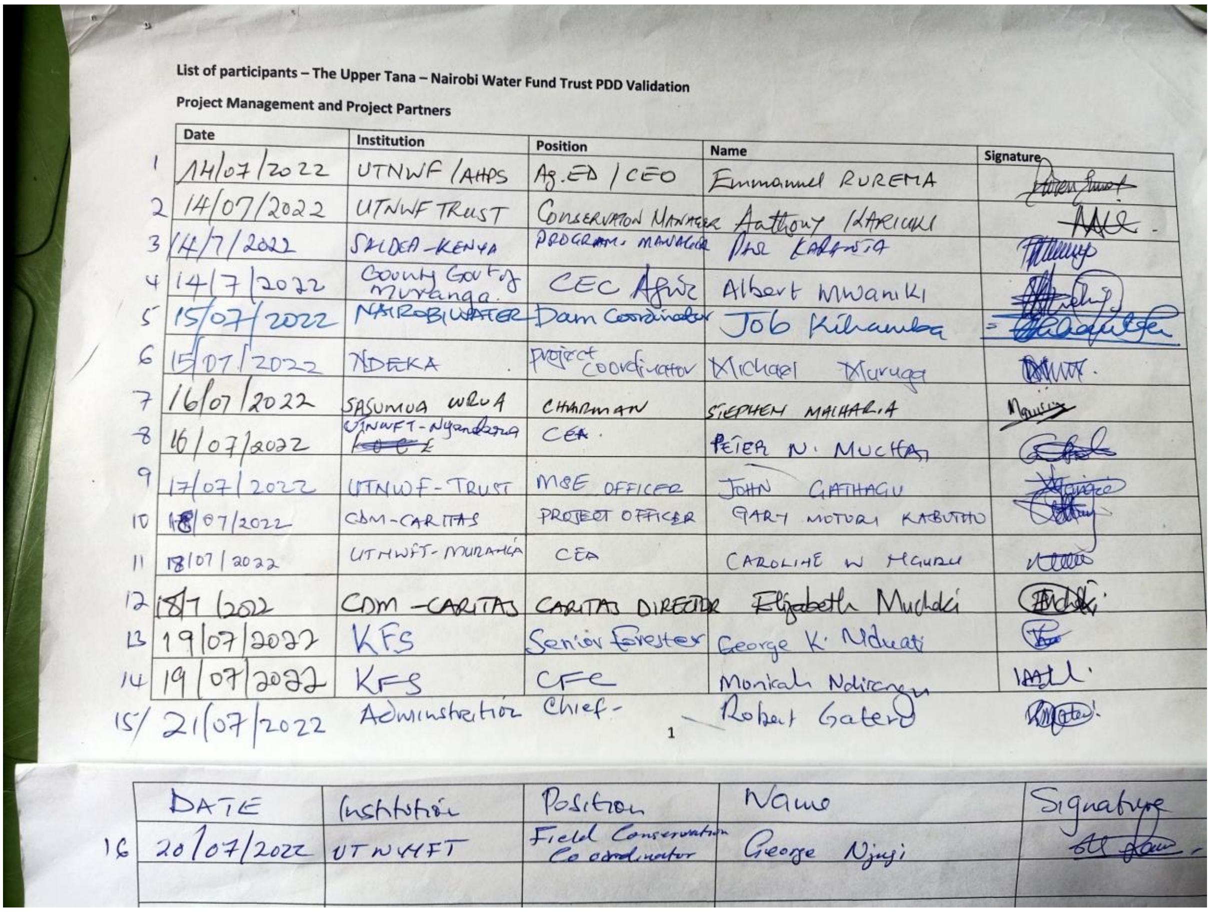
DATE	DESCRIPTION
14th July 2022	Thursday
9:00 – 10:00 AM	Entry meeting with Interim Executive Director at Ruaka (KII #1)
10:00 – 11:30 PM	Drive to Thika, Sustainable Agriculture Community Development Programmes (SACDEP)
12:00 – 1:00 PM	Meeting with Anthony Kariuki – Water Fund Conservation Programme Manager (KII #2)
1:00 – 2:00 PM	Lunch
2:30 – 3:30 PM	Meeting with SACDEP Deputy Director – Paul Karanja (KII #3)
16:00 - 18:00 PM	Meeting with Council of Governors Committee member on Agriculture and Cooperatives- Chairman / Muranga County Executive Committee (CEC) Agriculture – Albert Mwaniki (KII #3)
15TH JULY 2022	FRIDAY
8:00 – 9:00 AM	Drive to Ndakaini
9:00 – 10:00 AM	Meeting with Nairobi Water Company Ndakaini dam Coordinator – Job Kinamba(KII #4)
10:00 – 10:15 AM	Drive to Ndakaini Environment Conservation Association (NDEKA) office
10:15 – 11:15 AM	Meeting with the NDEKA Project Coordinator – Michael Muruga (KII #5)
11:15 – 11:45 AM	Drive to Mbogoti Farmers' Group
11:45 – 12:45 PM	Focus Group Discussion with a farmers' group at Mbogiti (FGD #1)
12:45 – 1:45 PM	Visit farmer at Kimandi (David Nyoro) (#1)
1:45 – 2:45 PM	Lunch
2:45 – 3:45 PM	Visit farmer at Wanyaga (James Kariuki Wanguhi) (#2)
3:45 – 5:00 PM	Drive to Naivasha
16TH JULY 2022	SATURDAY
8:00 – 10:00 AM	Drive to Sasumua, Nyandarua
10:00 – 11:00 AM	Meeting with Sasumua Water Resource User Association (WRUA) Chairman at Magumu, Stephen Macharia (KII #6)
11:00 – 11:30 AM	Drive to Njabini
11:30 – 12:30 PM	Meeting with the Nyandarua County Extension Assistant, Peter Muchai (KII #7)
12:30 – 1:30 PM	Lunch
1:30 – 2:00 PM	Drive to a farmers' group
2:00 – 3:00 PM	Focus Group Discussion with a farmers' group at Ndothua - Friends for Conservation and Restoration of Ecosystems (FGD #2)
3:00 – 4:00 PM	Visit the groups chairman farm, James Maina Gichia at Ndothua (#3)
4:00 – 5:00 PM	Visit a farmer Sasumua Dam - Serah Wangari (#4)
5:00 – 7:00 PM	Drive back to Naivasha
17TH JULY 2022	SUNDAY
9:00 – 11.00 AM	Meeting with Project Technical Advisor- Fred (KII 8)

12:00 - 15:00 PM	Meeting with John Gathagu (M&E) officer - UTNWF Farmers database review (KII 9)
16:00 – 18:00 PM	Cross checking data collected
Evening	Dinner
18TH JULY 2022	MONDAY
8:00 – 10.00 AM	Drive to Kenol/Murang'a
10:00 - 11:00 AM	Meeting with Murang'a County Extension Assistant, Caroline Nguru (KII #10)
11:00 – 12:00 PM	Drive to Murang'a Town
12:00 – 1:00 PM	Meeting with Caritas Focal person, Gary Muturi Kabutho (KII #11)
1:00 – 2:00 PM	Farm visit, Bancy Wanjiru Karanja farm (#5)
2:00 – 3:00 PM	Drive to a farmers' group
3:00 – 4:00 PM	Focus Group Discussion with a farmers group at Githambara - (FGD #3)
4.00 – 5.00 PM	Farm visit, Peter Gitau Farm ((#6) and Nancy Wangare (#7)
5:00 – 6:00 PM	Drive back to Murang'a Town
19TH JUNE 2022	TUESDAY
9:00 – 10:00 AM	Meeting with KFS Officials, Monicah Ndirangu, County Forest Conservator - Muranga (KII #12) and Senior Forester - George Nduati (KII #13)
10:00 – 10:30 AM	Drive to Nginda Ward
10:30 – 11:30 AM	Visit farmer at Githambara, Kaihura Karanja (#8)
11:30 – 1:30 PM	Drive to Kangari with lunch along the way
1:30 – 2:30 PM	Visist a Farmer at Ikumbi, Samuel Nganga Ngonda (#9)
2:30 – 3:00 PM	Drive to Karega Village
3:00 – 4:00 PM	Visit a farmer, Antony Muriuki (#10)
4:00 – 5:00 PM	Drive back to Murang'a town
20TH JUNE 2022	WEDNESDAY
9:00 – 10:00 AM	Meet the Field Conservation Coordinator at Sagana, George Njugi (KII #14)
10:00 – 11:30 AM	Drive to Othaya town
11:30 – 12:30	Focus Group Discussion with a farmers group and CFA Chair at Gathanji (FGD #4)
12:30 – 2:30 PM	Visit farmers at Gathanji, Joshua Mwangi (#11) and Isaac Ndegwa (#12)
2:30 – 3:30 PM	Lunch
3:30 – 4:30	Visit a farmer at Kamanda, Mercy Thongori farm (#13)
4:30 – 5:30	Drive to Nyeri town
21ST JUNE 2022	THURSDAY
8:30 – 9:00 AM	Drive to Mukurweini
9:00 – 10:00 AM	Meeting with Coffee Factory Vice Chairman at Mukurweini, Baptist Mugatha (KII #15)
10:00– 10:30 AM	Drive to Wanjithi
10:30 – 11:30 AM	Focus Group Discussion with coffee farmers at Wanjithi (FGD #5)

11:30 – 12:30 PM	Visit a Farmer at Wanjithi, Hellen Wanjira (#14),
12:30 – 2:30 PM	Drive to Kabaru with lunch along the way
2:30 – 4:30 PM	Visit a Farmer at Mitiro and Gatagati, James Ndirangu Nyaguto (#15), Robert Kimani Wanyika (#16)
4:30 – 6:00 PM	Drive to Nyeri town
22ND JUNE 2022	FRIDAY
8:30 – 9:30 AM	Drive to Solio in Laikipia
9:30 – 10:30 AM	Focus Group Discussion with farmers at Rehema, Solio Settlement Scheme (FGD #6)
10:30 – 11:30 AM	Visit a Farmer, Felishinah Wangari (#17)
11:30 – 11:45 AM	Visit a Farmer, Josphat Mwangi (#18)
11:45 – 12:45 PM	Visit a Farmer, Catherine Wangithi (#19)
12:45 – 1:00 PM	Drive to Local Chief's office in Tetu Village
1:00 – 2: 00 PM	Lunch
2: 00 – 3: 00 PM	Meeting with the chief, Robert Gateru (KII #16)
4:00 – 5:00 PM	Rap up the field mission
5: 00 – 6: 00 PM	Meeting with Fred Kihara and Nick Berry
23RD JUNE 2022	SATURDAY
9:00 – 11:30 AM	Virtual meetings with Farmers (gaps filling)
12:30 – 14:00 AM	Key informants data cross -checking following farmer interviews
14:30 – 16:30 AM	Drive to Nairobi

Annex 2: List of participants

Annex 2.1: Project management and project partners

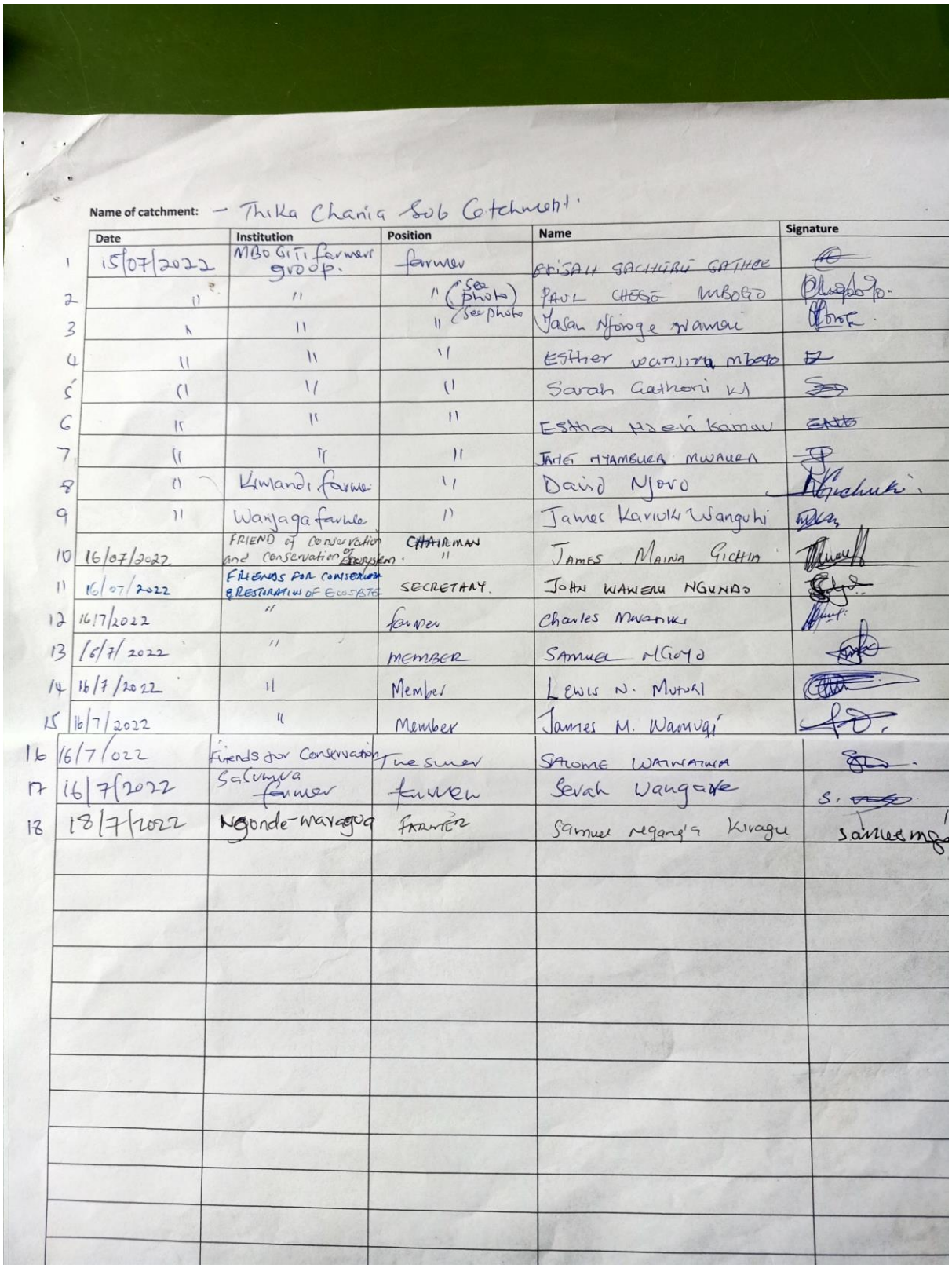


List of participants – The Upper Tana – Nairobi Water Fund Trust PDD Validation

Project Management and Project Partners

	Date	Institution	Position	Name	Signature
1	14/07/2022	UTNWF / AHPS	Ag.ED / CEO	Emmanuel RUREMA	
2	14/07/2022	UTNWF TRUST	CONSERVATION MANAGER	Anthony KARIUKI	
3	14/7/2022	SALDEA-KENYA	PROGRAM. MANAGER	PAUL KARANJA	
4	14/7/2022	County Govt of Muranga.	CEC Agric	Albert Mwaniki	
5	15/07/2022	NAIROBI WATER	Dam Coordinator	Job Kihamba	
6	15/07/2022	NDEKA	project coordinator	Michael Muruga	
7	16/07/2022	SASUMUA WRUA	CHAIRMAN	STEPHEN MAINARIA	
8	16/07/2022	UTNWFT-Nyandarua	CEA.	PETER N. MUCHAI	
9	17/07/2022	UTNWF-TRUST	M&E OFFICER	JOHN GATHAGU	
10	18/07/2022	CDM-CARITAS	PROJECT OFFICER	GARY MOTURI KABUTHU	
11	18/07/2022	UTNWFT-MURANGA	CEA	CAROLINE W MGURU	
12	18/7 /202	CDM-CARITAS	CARITAS DIRECTOR	Elizabeth Muchiki	
13	19/07/2022	KFS	Senior Forester	George K. Nduati	
14	19/07/2022	KFS	CFE	Monicah Ndirangu	
15	21/07/2022	Administration	Chief-	Robert Gatere	
16	20/07/2022	UTNWFT	Field Conservation Coordinator	George Njuji	

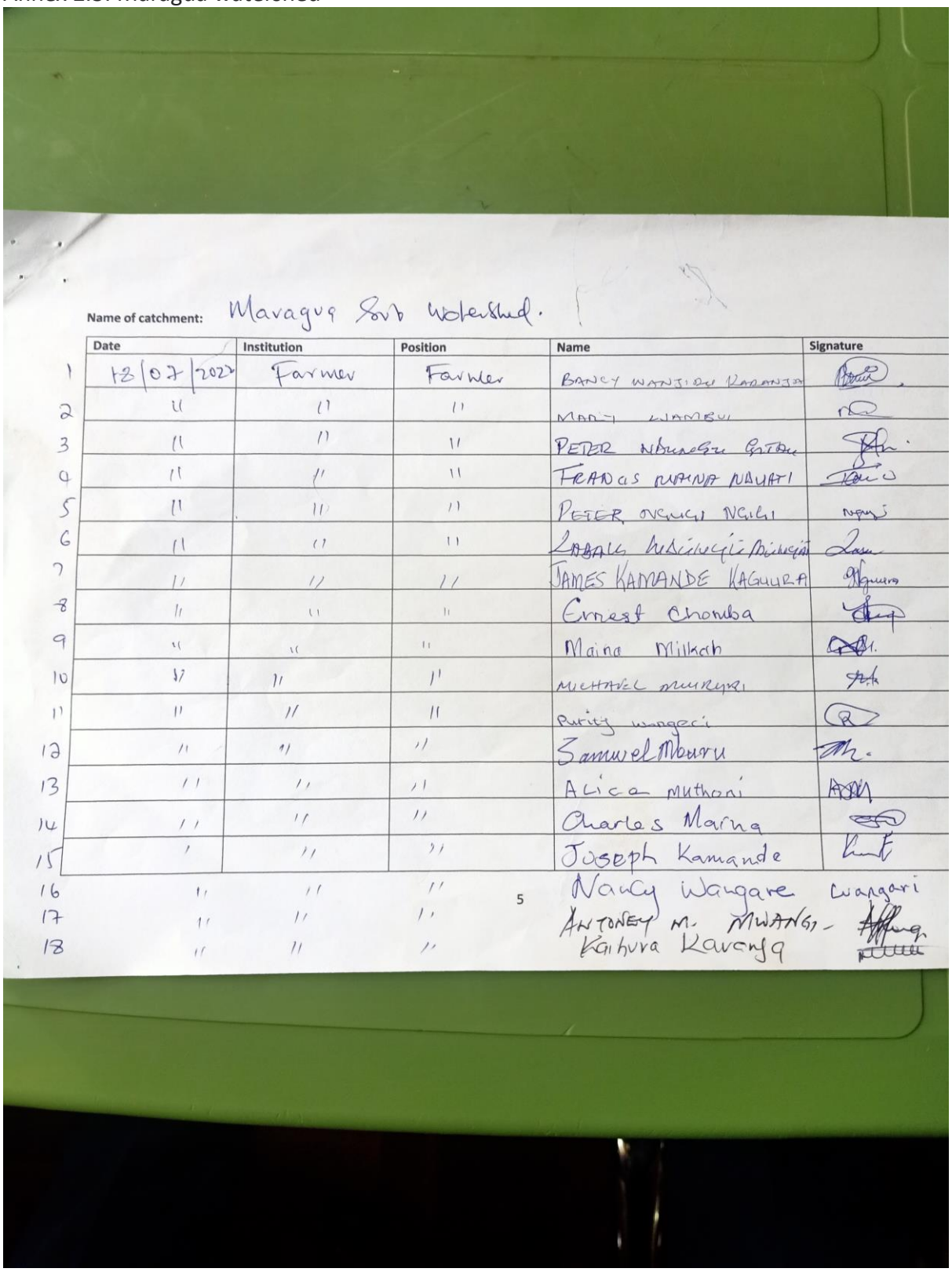
Annex 2.2: Thika Chania watershed



Name of catchment: – Thika Chania Sub Catchment.

	Date	Institution	Position	Name	Signature
1	15/07/2022	MBOGITI farmers group.	farmer	ERISAH SACHIRU GATHEE	
2	"	"	" (See photo)	PAUL CHEGE MBOGO	
3	"	"	" (See photo)	Yasan Njoroge Wamai	
4	"	"	"	Esther Wanjiru Mbogo	
5	"	"	"	Sarah Gathoni W.	
6	"	"	"	Esther Njeri Kamau	
7	"	"	"	JANET NYAMBURA MWAURA	
8	"	Kiwandi farmers	"	David Njoro	
9	"	Wanjaga farmers	"	James Kariuki Wanguhi	
10	16/07/2022	FRIEND of CONSERVATION and CONSERVATION of ECOSYSTEM.	CHAIRMAN "	JAMES MAINA GICHIA	
11	16/07/2022	FRIENDS FOR CONSERVATION & RESTORATION OF ECOSYSTEM	SECRETARY.	JOHN WAWERU NGUNJO	
12	16/7/2022	"	farmer	Charles Mwaniki	
13	16/7/2022	"	MEMBER	SAMUEL NGEYO	
14	16/7/2022	"	Member	LEWIS N. MUTUA	
15	16/7/2022	"	Member	James M. Waruvai	
16	16/7/022	Friends for Conservation	Treasurer	SALOME WAIWAIRA	
17	16/7/2022	Sakuma farmer	farmer	Sarah Wangare	S.
18	18/7/2022	Ngonde-Waragwa	FARMER	Samuel Ngang'a Kiragu	Samuel Ng

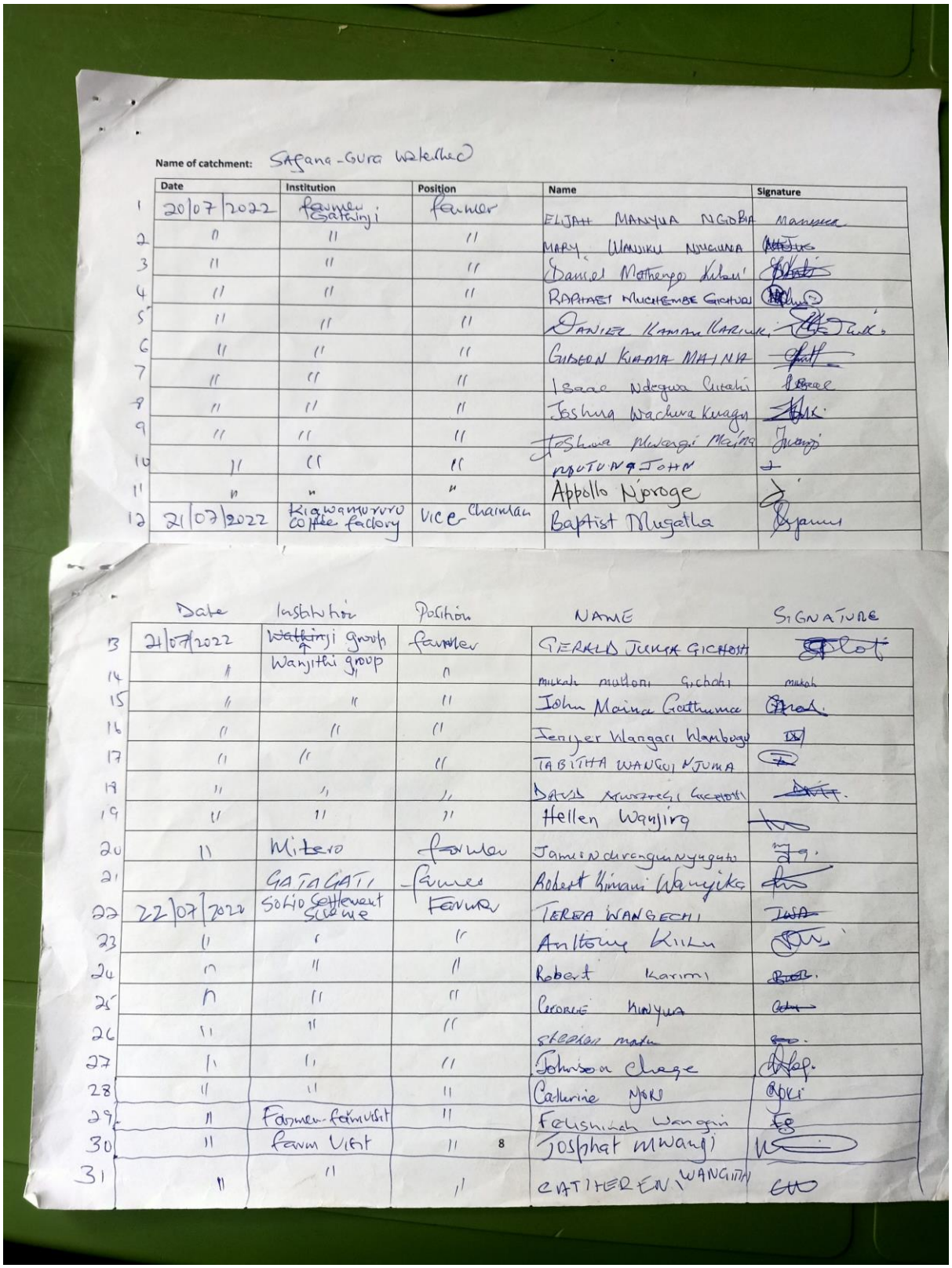
Annex 2.3: Maragua watershed



Name of catchment: Maragua Sub Watershed.

	Date	Institution	Position	Name	Signature
1	13/07/2023	Farmer	Farmer	BANCY WANJIRU KARANJA	
2	"	"	"	MARY WAMBUI	
3	"	"	"	PETER NDUNGU GITAU	
4	"	"	"	FRANCIS MAINA NJUAI	
5	"	"	"	PETER NGUGI NGARI	
6	"	"	"	[illegible]	
7	"	"	"	JAMES KAMANDE KAGUURA	
8	"	"	"	Ernest Chomba	
9	"	"	"	Maina Milkah	
10	"	"	"	MICHAEL MWIRIGI	
11	"	"	"	Purity wangari	
12	"	"	"	Samuel Mburu	
13	"	"	"	Alice Muthoni	
14	"	"	"	Charles Maina	
15	"	"	"	Joseph Kamande	
16	"	"	"	Nancy Wangare	Wangari
17	"	"	"	ANTONEY M. MWANGI	
18	"	"	"	Kaihura Kavenja	

Annex 2.4: Sagana Gura watershed



Name of catchment: Sagana-Gura Watershed

	Date	Institution	Position	Name	Signature
1	20/07/2022	Farmer Gathinji	farmer	ELIJAH MANYUA NGOBA	
2	"	"	"	MARY WANJIKU NJUGUNA	
3	"	"	"	Daniel Mathenge Kuburi	
4	"	"	"	RAPHAEL MUCHEMBE GICHUKI	
5	"	"	"	DANIEL KAMAU KARIUKI	
6	"	"	"	GIDEON KIAMA MAINA	
7	"	"	"	Isaac Ndegwa Gitahi	
8	"	"	"	Joshua Wachira Kuaga	
9	"	"	"	Joshua Mwangi Maina	
10	"	"	"	MUTUNGA JOHN	
11	"	"	"	Appollo Njoroge	
12	21/07/2022	Kiawamururu coffee factory	Vice Chairlan	Baptist Mugatha	

	Date	Institution	Position	NAME	SIGNATURE
13	21/07/2022	Wathinji group	farmer	GERALD JUNIOR GICHOHI	
14	"	Wanjithi group	"	MUKAH MUTHONI GICHOHI	
15	"	"	"	John Maina Githumo	
16	"	"	"	Jenifer Wangari Wambugu	
17	"	"	"	TABITHA WANGUI NJUMA	
18	"	"	"	DAVIS KIRUTHU GICHOHI	
19	"	"	"	Hellen Wanjiru	
20	"	Mitero	farmer	JAMES NDIRANGU NYAGAH	
21		GATAGATI	farmer	Robert Kimani Wanjiku	
22	22/07/2022	Sofio Settlement Scheme	FARMER	TERESA WANGECHI	
23	"	"	"	Anthony Kiiru	
24	"	"	"	Robert Karimi	
25	"	"	"	GEORGE MANYUA	
26	"	"	"	STEPHEN MAKU	
27	"	"	"	Johnson Chege	
28	"	"	"	Catherine Njoki	
29	"	Farmer-farmvisit	"	Felishmah Wangui	
30	"	Farm Visit	"	Josphat Mwangi	
31	"	"	"	CATHERINE WANGITHI	

Annex 3: Photographs

Annex 3.1: *Grevillea robusta* trees planted in 2017 in Maragua watershed (Right) and in Solio settlement scheme (Middle and Left) in Sagana – Gura watershed



Annex 3.2: One of the farmers in Ragati, Sagana – Gura watershed (Left) and another from the Friends of Conservation and Restoration Ecosystem Group in Sasumua (Thika – Chania watershed) displaying Farm Specific Plans


Annex 3.3: Riparian restoration using bamboo (*Dendrocalamus asper*) in Thika – Chania watershed


Annex 3.4: Alley cropping of *Leucaena trichandra* and *Calliandra calothyrus* in Sasumua (Left) and Ndakaini in Thika Chania watershed (middle). Use of Calliandra in soil stabilization (in Thika – Chania) is presented in the photograph on the right



Annex 3.6: Dispersed interplanting of indigenous tree species in Sasumua (Thika Chania watershed). Chairman of Friends for Conservation and Restoration of Ecosystems and Water Fund Technical Advisor inspecting one of the species, rose wood (Left) and other species grown on the same farm


Annex 3.7: Alley cropping of Grevillea (middle) row and boundary planting of *Croton megalocarpus* in the background supported by a water pan in one of the farms visited in Solio Settlement Scheme in Sagana – Gura watershed

Annex 3.8: A fruit (Avocado) orchard in Thika - Chania watershed

Annex 3.9: Tree seedling nursery managed by the Chairman of the Sasumua Water Resource User Association in Thika Chania watershed