INDEPENDENT EVALUATION DIVISION
OFFICE OF EVALUATION AND INTERNAL OVERSIGHT

INDEPENDENT TERMINAL EVALUATION

UGANDA

REDUCING VULNERABILITY OF BANANA PRODUCING COMMUNITIES TO CLIMATE CHANGE THROUGH BANANA VALUE ADDED ACTIVITIES

UNIDO PROJECT ID: 140015
GEF PROJECT ID: 5603

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Acronyms and abbreviations

Acronym	Meaning
AfDB	African Development Bank
BCCA	Reducing vulnerability of Banana Producing Communities to Climate Change Through Banana Value Added Activities
CCA	Climate Change Adaptation
COVID-19	Corona Virus 2019
DLGs	District Local Governments
FAO	Food and Agriculture Organizations
GEF	Global Evaluation Facility
LDCF	Least Developed Countries Fund
GIZ	German Society for International Cooperation Limited
GoU	Government of Uganda
HH	Household
IPCC	International Panel on Climate Change
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MTIC	Ministry of Trade, Industry and Cooperation
MTR	Mid-Term Review/ Report
MoUs	Memorandum of Understanding
M&E	Monitoring and Evaluation
NARO	National Agricultural Research Organization
NISSP	National Industry Sector Strategic Plan
PMU	Project Management Unit
PSC	Project Steering Committee
SME	Small and Medium Enterprise members
TE	Terminal Evaluation
ToC	Theory of Change
UNBS	Uganda National Bureau of Standards
UNDAF	United Nations Development Assistance Framework
UNIDO	United Nations Industrial Development Organizations
USAID	United States of America's Agency for International Development
VA	Value added

Glossary of evaluation-related terms

Term	Definition
Baseline	The situation, before an intervention, against which progress can be assessed.
Effect	Intended or unintended change due directly or indirectly to an intervention.
Effectiveness	The extent to which the development intervention's objectives were achieved or are expected to be achieved.
Efficiency	A measure of how resources/inputs (funds, expertise, time, etc.) are converted to results.
Impact	Positive and negative, intended and non-intended, directly and indirectly, long term effects produced by a development intervention.
Indicator	Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.
Lessons learned	Generalizations based on evaluation experiences that abstract from the specific circumstances to broader situations.
Log frame (logical framework approach)	A management tool used to facilitate the planning, implementation, and evaluation of an intervention. It involves identifying strategic elements (activities, outputs, outcome, impact) and their causal relationships, indicators, and assumptions that may affect success or failure. Based on RBM (results-based management) principles.
Outcome	The likely or achieved (short-term and medium-term) effects of an intervention's outputs.
Outputs	The products, capital goods, and services which result from an intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Relevance	The extent to which the objectives of intervention are consistent with beneficiaries' requirements, country needs, global priorities, and partners' and donor's policies.
Risks	Factors, generally outside the scope of an intervention, which may affect the achievement of an intervention's objectives.
Sustainability	The continuation of benefits from an intervention, after the development assistance, has been completed.
Target groups	The specific individuals or organizations for whose benefit an intervention is undertaken.
Theory of Change	A set of hypotheses on how and why an initiative works.

Key project data

Project title	Reducing Vulnerability of Banana Producing Communities to Climate Change Through Banana Value Added activities
UNIDO ID	140015
GEF Project ID	5603
Region	Eastern Africa
Country(ies)	Uganda
Project donor(s)	GEF
Project implementation start date	04 December 2015
Expected duration	36 months (against the actual duration of 66 months)
Expected completion date	31 December 2018
Actual completion date	30 June 2021
GEF Focal Areas and Operational Project	Climate Change (CC)
Implementing agency(ies)	UNIDO
Government coordinating agency	Ministry of Agriculture, Animal Industry and Fisheries
Donor funding	USD 2,820,000
Project GEF CEO endorsement / approval date	13 August 2014
UNIDO input (in kind, USD)	USD 188,254
Co-financing at CEO Endorsement, as applicable	USD 7,065,502
Mid-term review date	January 2018
Terminal evaluation date	March - November 2021

Executive Summary

Evaluation purpose and methodology

This document constitutes terminal evaluation (TE) of the project ***Reducing Vulnerability of Banana Producing Communities to Climate Change Through Banana Value Added Activities – Enhancing Food Security and Employment Generation*** (**BCCA**).[1] The project, a joint endeavour between the Government of Uganda, the Global Evaluation Facility/Least Developed Countries Fund (GEF/LDCF), and United Nations Industrial Development Organization (UNIDO), focused on increasing resilience to climate change through more effective climate change adaptation strategies.

The objectives of this TE are twofold (See Annex 1 for terms of references (ToR)):

1. **Assess project performance**, based on the evaluation criteria laid out in the TOR.
2. **Contribute to learning**. The TE synthesizes key findings and lessons learned from the project assessment. These will be used to develop recommendations for improving the identification, design and implementation of future projects.

The TE is based on an analytical framework centered on nine evaluation questions. The evaluation framework is centered around three higher level evaluation areas: quality of design, quality of implementation, and takeaways from the project to inform future operations (Figure A). The UNIDO evaluation criteria are contained within each of these evaluation questions.

QUALITY OF DESIGN	QUALITY OF IMPLEMENTATION	TAKEAWAYS
• What is the **theory of change** for the project and has it changed over time? • How **relevant** are the project's **objectives** to Uganda's CCA? How relevant is the **design** of the project to these objectives? • How **coherent** is the project with ongoing and planned interventions?	• 4. How **effective** has the project been in reaching its objectives? • What **progress has been made to impact**? • What are the risks (and how severe are they) to the **sustainability** of the project's outputs, outcomes and impact(s)? • How **efficient/cost effective** has the project been?	• What are they **key findings and lessons learned** from the project? • What **recommendations** can be made for future project identification, design and implementation

Figure A: Evaluation framework

The TE is based on a desk review of relevant documentation, online/phone interviews and a field mission including visits to facilities and farms, in-person interviews, and focus group discussions. Because of Covid-19 restrictions, the mission was undertaken by the national evaluator, whereas the team leader's work was home-based.

[1] In Uganda, the project is known as the Banana Livelihoods Diversification Project.

The evaluation met with significant challenges, including data collection compromised by poor connectivity affecting online meetings, severe restrictions in traveling which affected the field visit as well as the national evaluator's meetings in Kampala, the significant time lapse since project conception and, not least, the paucity of regular, standardized and organized M&E.

Key findings and recommendations

Project background

Banana producing communities in Uganda are highly vulnerable to climate change. Bananas play a key role for both food security and incomes, especially for vulnerable households. However, extreme weather events, higher temperatures and humidity, contribute to production losses and higher incidence of pest and disease and is increasing the vulnerability of the banana sector as a whole. Helping vulnerable banana producing communities by assisting them adopt adaptive strategies is consequently an important task for the Ugandan government and is linked to its national policy framework for climate change adaptation.

The objective of the BBCA as described in the Project Document (PD), was "*to support vulnerable communities in Western Uganda to better adapt to the effects of CC through banana value addition activities, to provide greater opportunities for income generation, poverty reduction and food security*". The Evaluation Team has included a second objective that is not articulated as such in the PD but implicit in the project set-up: *"Increasing the climate change resilience in the agro-business and rural development sector more generally, through activities to strengthen climate change awareness and national development policies affecting these sectors."*

The BCCA was designed to contribute to addressing the challenges associated with climate change adaptation in the banana value chain. The BCCA was approved in 2015 with a total budget of just over USD 9 million, including USD 2.8 million from the GEF and around USD 7 million co-financing. The project ended in June 2021, 2.5 years later than originally planned. The project was implemented by UNIDO and the Government of Uganda, in particular the Ministry of Agriculture, Animal Industries and Fisheries (MAAIF), and local government representatives in the Bushenyi, Buhweju, Isingiro, Mbarara, Mitooma, Ntungamo, Rubirizi, and Sheema districts.

The project was structured around four components:

Component 1. Mainstreaming climate change and gender in national policy documents (agriculture) and CCA strategies adopted for actors in rural development sector (local governments, SMEs, etc.).

Component 2. Engendering value addition activities for banana through (i) sensitization activities on CCA for farmers (ii) Value added (VA) facility upgrading, training, and marketing activities (iii) energy production based on banana waste to be used to support energy supply for banana value addition activities and provide fertilizers to farmers (iv) water purification and water harvesting technologies for community and value added facilities (v) establishing community based tissue culture to support higher demand for bananas.

Component 3. Project dissemination, scale-up and replication through guidelines on best practices and project knowledge disseminated within the country and sub regions through websites, publications and communication products in various languages.

Component 4. Quality control, monitoring and evaluation (M&E).

Evaluation findings

The TE concludes that BCCA has several strong points as a development project:

- **Objectives** of fostering CCA through livelihood diversification and mainstream climate change and gender in policy **are highly relevant** to Uganda, important from both climate change, poverty and inclusion perspective. The project was **coherent** with ongoing work at the national level in banana value chain sector and with ongoing programs managed by other major donors.
- **The BCCA is well-seen in the Government and among donors in Uganda, owned by the Government and anchored in Uganda's national adaptation policies**. Implementation on the ground has largely been undertaken as part of the MAAIF's regular extension services. The strong ownership at central and local MAAIF level, together with dedicated UNIDO project team efforts, helped sustain implementation during Covid-19, which must be seen as a significant achievement. The BCCA approach has been disseminated and is considered, by the Government and donors, to have significant potential for replication. From a reputational perspective, the project has established the basis for scale-up and sustainability of the model.
- **With the exception of a significant delay in signing the agreement between MAAIF and UNIDO, partnerships have been of good quality.** Overall, partnerships have been functional with involvement of different Government entities and a good working relationship between UNIDO and the Government. UNIDO and the Government have shared responsibility for coordination and implementation. Other government entities, in particular the Uganda National Bureau of Standards and the Ministry of Industry, Trade and Cooperatives (MITC), have contributed significantly to the project implementation. The delay in signature of the financing agreement between MAAIF and UNIDO (due to contractual issues) was beyond the control of the main Government project partner, MAAIF.
- **The BCCA shows some moderate success in supporting expansion and quality of banana processed products in five supported banana wine and juice facilities**. The project has successfully delivered analytical reports, facility upgrading, training, sensitization workshops and similar planned outputs, and has done so within budget allocated. Production has increased in five out of nine supported facilities, although the timing of production growth appears to reflect productivity gains from facility upgrading and training rather than from new equipment which is the costliest item in the budget. 13 of products have been certified. Qualitative evidence collected during field mission suggests the expansion of production also indirectly benefited some suppliers (farmers). Thus, the basic business proposition of improving livelihoods through banana value addition is sound.

At the same time, the BCCA has overall not succeeded in its objectives of achieving higher resilience for farmers and communities and has reached a limited number of beneficiaries. External or partially external factors (COVID-19, government delay in signing) have influenced BCCA deliveries. However, weaknesses in project design, including insufficient targeting and poor M&E framework, have been the main reasons for the failure to achieve intended outcomes. The project took two and a half years more than foreseen to be completed, and major project activities were not delivered until 2020, in the midst of a pandemic. Unfortunately, some problems were difficult to address once the project was being implemented. This resulted in moderately unsatisfactory outcomes, to the extent these could be measured. The most important critical findings regarding project design and implementation are as follows:

- **The theory of change would have needed to be better developed to transform the project from an agri-business project to a CCA project**. The BCCA was born as a livelihoods diversification project and has been adapted to include a climate change adaptation focus. The transformation is not a problem in itself as income diversification through value addition is a valid CCA strategy. However, the transformation requires a significant effort to merge partner visions around project objectives and adapt a new set of requirements. The ToC would have benefited from a more explicit logic as to how different activities would achieve income diversification and – especially – CCA outcomes for the target population, and what timeframe could be expected for changes. Looking at implementation, the BCCA comes across a "green" industrial development/livelihoods project, with limited climate change adaptation mechanisms incorporated.
- **The project suffered from an overly complex design with many implicit but weak links between parallel activities that partly unraveled during implementation**. Complex design, especially coupled with decentralized implementation structures, requires high capacity (resources) to plan, implement, monitor and evaluate in the field, that were not available to the team. The design assumed significant and rapid behavioral changes with beneficiaries integrating new knowledge gains with new assets and income opportunities to invest in value addition activities. That households would make further investment in climate change adaptation assets was taken for granted. During project implementation, some of these links fell apart which resulted in a more fragmented set of activities, all requiring significant implementation capacity (i) policy development (ii) sensitization of farmers (iii) support to value added facilities (iv) tissue culture distribution, and (v) provision of bio-digesters to households. As implemented, these activities had few synergies between them. Project activities related to tissue culture industry and bio-digesters can be very valuable in their own right but could have been removed from the project without affecting the overall logic of strengthening access to value addition activities to enhance investment in CCA - which is at the center of the project ToC and the most complex and costly component of the project.
- **With fewer activities, freed up resources could have been used to strengthen other weak links in the project logic.** These include activities related to market access for VA facilities which is a binding constraint to VA growth. To strengthen community benefits, more resources should have been directed to supporting rural households in starting up value added activities or supply semi-processed input to value-addition facilities (see example of juice facility) and foster community investment in climate change assets, including water harvesting techniques, given the importance of water shortages for value addition.
- **Project preparatory work did not pay sufficient attention to some critical issues.** The behavior of the market for bananas and the impact of price fluctuations on farmers' income and incentives could play an important role for project sustainability – history shows that when harvests are good, prices may drop to the point where banana farmers are not willing to sell. Thus, focusing exclusively on increasing productivity and output may not, in fact, increase benefits to farmers. Likewise, bio-gas was chosen as the technology solution to mitigate the high risk of energy supply constraints in the targeted communities and reduce banana peel waste, but was, in the end, not suited for this purpose (although it is a climate change supportive technology in its own right). Water availability remains a key constraint for start-up of value addition activities in the targeted districts (as well as for agricultural productivity and household overall welfare), yet, the project does not address this key constraint at a community level.
- **A lack of targeting strategy curtailed the project's opportunities for achieving some key outcomes**. Although the project aimed to support vulnerable households (from a CC and poverty perspective), vulnerable facilities, and women, there was no clear targeting strategy to describe how to identify these groups, how to reach them with project activities, or monitor outcomes specifically for them. Recommendations from the gender

analysis undertaken as part of project inception were not incorporated into the design. Lack of indicators against which to measure higher level progress for these groups contributed to swaying project monitoring focus from outcome/impact to outputs.

- **Project implementation was largely production and output focused.** Implementation focused on increasing production and quality of products in the value-added facilities and in ensuring the tissue culture distribution. This was a necessary but not sufficient condition to achieve project outcomes. The project logic hinges on rapid increase in sales by value added facilities that will increase demand for bananas from farmers and thus improve their livelihoods. The technical upgrading, training and collaboration with UNBS was successful in achieving higher product standards, which is important for increasing access to markets. However, as standards needed to be achieved before marketing activities could begin, there was limited time for market activities. Other constraints faced by SMEs in accessing markets such as linking up with larger buyers, was not considered. CCA or gender sensitization with other value chain actors were limited to a validation workshop. Although water access is a key constraint for farmers everywhere, water harvesting assets were not provided to communities, only to facilities, and there is no evidence that communities were inspired or had the resources to undertake such investments on their own.
- **The pay-off to training and facility upgrading, in terms of increased productivity and production, appears to be higher than that of equipment**. The provision of new equipment is likely a significant benefit for value added facilities but it is also the single most costly line item in the budget. At the same time, project monitoring data, such as it is, suggest that facilities increased their production already after facility upgrading and training activities and before new equipment arrived (mostly in 2019). If this is the case, the value of investing in equipment should be compared with alternative such as providing training and facility upgrading to more beneficiaries.
- **The limited impact on communities and farmers also resulted in a higher than planned cost per beneficiary**. The project was significantly delayed in implementation, reflecting delay in signature but also likely unrealistic expectations regarding local capacity, the impact of knowledge transfer, etc. Once on the ground, the project has remained within budget and the allocation of resources has remained relatively close to budgeted amounts. Ultimately, the project has not been able to involve a sufficient number of farmers or community members to credibly have impacted community-level vulnerability or achieve good value for money, however. The project set-up overestimated the potential of facilities to incorporate large numbers of farmers over a short period of time, and the number of farmers de facto engaged in value added activities was much smaller. The number of indirect beneficiaries from tissue culture activities significantly higher but the impact of this activity on farmers income depends on higher demand for bananas from increased value addition activities – which has not taken place to a significant extent. This resulted in relatively high costs per beneficiary, so far.
- **The project would likely have needed more capacity building to accompany the decentralized implementation structure.** The project did well to tap into local government structures and activities; however, in doing so, lost some control over project implementation. This could be compensated for by intense capacity building, technical assistance and monitoring, but given the project's many activities, this would have over-stretched PMU capacity.
- **The weak M&E framework has derailed project M&E through implementation and limited the ability to measure project progress.** The BCCA's M&E framework suffers from lack of baselines and unclear targets, especially with respect to higher order development objectives and impact. Some of the recommendations in the MTR (e.g., resolving gender issues or identifying farmers' income) have remained unresolved. Ongoing M&E has centered on reporting achievements with respect to activities and

outputs, but not outcomes or impact. The quality of monitoring and documentation in terms of standardized and complete reporting has also been weak, even for activities. The project has not adapted to the recommendations from the MTR on remedial action for gender mainstreaming or incomplete M&E framework.

Recommendations

A key objective of a terminal evaluation is to provide recommendations and lessons learned. Given that the project has ended, the terminal evaluation is not intended to provide recommendations for improvement of the BCCA, with the exception of two remedial/follow-up actions. Beyond these, recommendations to the Government focus on measures that could be taken to revise and scale up BCCA in the future. Recommendations for UNIDO and GEF focus on improving project design and, for UNIDO, implementation issues that are applicable to a broader set of development projects.

UNIDO and the Government of Uganda– remedial and follow-up action on BCCA

Repair or replace malfunctioning equipment. Action is needed to review with suppliers and replace the malfunctioning equipment in the chips factories.

Support to developing local climate change adaptation action plans. A joint strategy has been prepared for the 8 districts, but no further actions have been taken. In order not to lose this investment, the Government and UNIDO should look for opportunities to channel the analytical work prepared into locally owned and adapted action plans. Synergies with other donors, including UN agencies, should be explored as resources will be needed.

The Government – strengthening and scaling up BCCA

Support livelihoods diversification projects in the context of CCA. Livelihood diversification as a means of reducing vulnerability to climate change remains a highly relevant project approach. In the case of perishable crops, such as bananas, value added activities incorporating good climate change adaption practices increase the shelf-life of the crop and contribute to higher and more stable earnings.

Reduce knowledge gaps to strengthen project preparation. Uganda has a strong technology focused research agenda on bananas. Complementary analytical work is needed to identify (i) the most critical CCA assets for the target population and key constraints to CCA investments (income, information, capacity) (ii) factors behind demand and supply in banana markets and the role of information and coordination constraints, neither of which were clearly identified in project preparation.

Reduce complexity and focus on key constraints and beneficiary targeting. A streamlined version of this model focusing on linking climate change adaptation strategies for farmers with value added activities would reduce capacity constraints. A leaner version could focus on value addition and strive for a less fragmented approach supporting fewer project components with stronger synergies and more beneficiaries, and clear strategies for how to maximize community benefits, ensuring stronger vertical (results chain) integration as opposed to horizontal (synergies between parallel activities with different objectives).

A lean BCCA replication could adopt one of two approaches (i): focus on supporting a few higher capacity facilities (as was the approach now) that can be expected to achieve quality standards over a short time and increase their sales, and concentrate on strengthening community spillovers (ii) reach out to more actual/potential entrepreneurs with smaller transfers for each beneficiary, and help these farmers integrate into higher value-added

chains, with access to larger players. The experience from BCCA suggests that training – on processing techniques as well as hygiene – and certification helped some facilities achieve significantly higher production. Thus, the Government may wish to evaluate whether it makes sense to directly target more SMEs (existing or potential) with basic training and coaching in such projects, rather than concentrating on a few facilities with expensive equipment upgrading. Whichever approach is chosen, the focus should be on reaching vulnerable and female farmer and community beneficiaries directly or indirectly.

Prioritize capacity building for supported processors and farmers. The experience from BCCA suggests that training – on processing techniques as well as hygiene standards – and certification, together with physical upgrading, helped facilities achieve significantly higher production even before the installation of new equipment was completed (in 2019 and 2020), and the Government should prioritize project activities accordingly.

UNIDO and GEF – strengthening project design

Establish project ToCs that provide a shared vision between partners, are outcome focused and have credible result chains between outputs and outcomes. This process will help identify and reduce key constraints and risks to project implementation and effectiveness and help design actions that support weaker links. It will also help review whether project timeframes for expected results are realistic. Ensuring common visions is even more important when two distinct approaches are merged, as in the case of BCCA (agri-business value chains/livelihoods, vs. CCA). CCA should not be just an add-on but should be clearly defined and integrated throughout project design.

Ensure high quality preparatory work supports the ToC. Analytical work supporting project design for livelihoods and value chain interventions needs to move beyond output-oriented analysis (productive capacity, product quality) and focus more on market-oriented approaches such as constraints to increasing sales. Technology solutions should be appropriate for the project context. Gender mainstreaming analysis must address critical constraints to female participation.

Strengthen targeting strategies to ensure that the project reaches the intended beneficiaries, and at the level of scale expected. To achieve cost effectiveness, poverty focus and gender mainstreaming, projects supporting a small number of value addition activities/facilities need to ensure significant spillovers to the community – through more jobs, suppliers to value addition activities, shared assets, demonstration effects resulting in more enterprises, etc. Gender mainstreaming efforts go much beyond setting gender targets for beneficiary participation. Project design must critically evaluate how female beneficiaries are best reached, what activities are likely to attract them, and what specific constraints they are facing to engage project activities.

Ensure quality of proposed M&E framework and plan and safeguard resources for M&E. The M&E plan should, inter alia, (i) set out the responsibility of M&E within the team (collection of data, organization of data) (iii) ensure that SMART (Specific, Measurable, Attainable, Relevant, Time-based) target indicators are used and their sources specified (iv) establish baseline data (v) specify regular monitoring and documentation activities and processes for organizing information (v) ensure sufficient resources.

UNIDO – strengthening project implementation

Safeguard sufficient resources to ensure capacity building and project oversight. To support the decentralized implementation structure, UNIDO needs to ensure sufficient human resources are available to provide high quality technical assistance and undertake monitoring activities to ensure that priorities are aligned, and due diligence procedures followed. Gaps in monitoring quality, for example, need to be highlighted and addressed early on in project implementation.

Project ratings

The ratings of the TE for the different criteria summarized in Table A. The project is relevant and coherent with ongoing operations, and partnerships have been productive during project implementation. As a result of gaps in design (reflecting overambition), limited effectiveness and efficiency, questionable sustainability, and poor targeting, the overall rating of the project is Moderately Unsatisfactory, however.

Table A: Terminal Evaluation: Ratings

Index	**Evaluation** criteria	Rating
A	**Progress to Impact**	**Moderately Unsatisfactory**
B	**Project design**	**Moderately Unsatisfactory**
1	• Overall design	Moderately Unsatisfactory
2	• Logframe	Unsatisfactory
C	**Project performance**	**Moderately Unsatisfactory**
1	• Relevance	Satisfactory
2	• Effectiveness	Moderately Unsatisfactory
3	• Efficiency	Moderately Unsatisfactory
4	• Sustainability of benefits	Moderately Unsatisfactory
5	• Coherence	Moderately Satisfactory
D	**Cross-cutting performance criteria**	
1	• Gender mainstreaming	Moderately Unsatisfactory
2	• Environment and socio-economic aspects	Moderately Unsatisfactory
2	• M&E: (focus on Monitoring) ✓ M&E design ✓ M&E implementation	Unsatisfactory
3	• Results-based Management (RBM)	Moderately Unsatisfactory
E	**Performance of partners**	
1	• UNIDO	Moderately Unsatisfactory
2	• National counterparts	Moderately Satisfactory
3	• Donor	Moderately Unsatisfactory
F	**Overall assessment**	**Moderately Unsatisfactory**

1. Introduction

1.1 Objectives of the evaluation

This document constitutes terminal evaluation (TE) of the project ***Reducing Vulnerability of Banana Producing Communities to Climate Change Through Banana Value Added Activities – Enhancing Food Security and Employment Generation*** (**BCCA**).[2] The project, a joint endeavour between the Government of Uganda, the Global Evaluation Facility (GEF), and United Nations Industrial Development Organization (UNIDO), focused on increasing resilience to climate change through more effective climate change adaptation strategies. Definitions of adaptation and resilience used in this report are presented in Box 1 below.

Box 1: Adaptation and resilience: definitions.

The BCCA project documentation does not define climate change adaptation or resilience. However, following GEF, this evaluation uses the definitions of climate change adaptation and resilience established by the International Panel on Climate Change (IPCC):

Adaptation: In *human systems*, the process of adjustment to actual or expected *climate* and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects.

Resilience: The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure while also maintaining the capacity for *adaptation*, learning and *transformation*.

Source: IPCC, 2018: Annex I: Glossary [Matthews, J.B.R. (ed.)].

A key part of UNIDO's monitoring and evaluation system, the TE is intended to provide inputs to UNIDO's work to strengthening its performance and the impact of its operations. The objectives of this TE are twofold (See Annex 1 for terms of references):

3. **Assess project performance**. The TE identifies the project's performance in terms of relevance (of objectives and of design), coherence, effectiveness, efficiency, progress to impact, and sustainability. Across these criteria, the evaluation will incorporate assessments of gender mainstreaming, socio-economic and environment aspects, as well as monitoring and evaluation.
4. **Learning**. The TE synthesizes key findings and lessons learned from the project assessment. These will be used to develop recommendations for improving the identification, design and implementation of future projects.

The TE report is organized in four sections. The remainder of the introductory section presents (i) the project context and basic information about the project and (ii) a brief presentation of the evaluation approach and implementation. The second section concentrates on the quality of project design. The third section discusses the quality of implementation and the project's main achievements. The fourth section provides the main takeaways from the evaluation, to serve UNIDO, GEF, and the Government of Uganda in future projects aiming to strengthen climate change adaptation in rural areas.

[2] In Uganda, the project is known as the Banana Livelihoods Diversification Project.

1.2 Project context

Background

Uganda is heavily exposed to climate change. Over the past 60 years, the mean average temperature has increased by 1.3°C. The increase is steepest in the hottest months (January-February). Changing temperature patterns are linked to higher frequency and duration of droughts, especially in the western, northern and north-eastern regions. Rainfall has decreased and become more erratic, and other extreme weather events such as floods and landslides have become more commonplace.[3] The warming trend is projected to continue.

Uganda's economy and its population are highly vulnerable to these changes. Some two thirds of Uganda's jobs are in agriculture, the vast majority in low productivity subsistence activities.[4] Poverty fell significantly for agricultural households between 2006-2013[5], but these improvements risk a reversal, not least since the onset of COVID-19 has taken an additional toll on the country. The economy, livelihoods and overall food security depend on largely rain-fed agriculture which is becoming increasingly unreliable. High population growth puts pressure on land, including forests and wetlands, with potential negative effects on carbon emissions. Droughts have also impacted hydroelectricity production and water resources more generally. Recognizing the serious implications for Uganda's prospects of growth and prosperity, the Ugandan Government has taken significant steps towards implementing progressive climate change adaptation policies.

The production of banana, a main food staple in Uganda and a major source of rural income, is highly exposed to climate change. Bananas and plantains play a significant role in calorific and nutritional intake in Uganda, and in the farming economy (Box 2). Rising temperatures and more humidity associated with these changes are depressing the productivity of banana production in traditional banana producing areas and increasing post-harvest losses due to poor storage and transportation conditions, however. Higher variability in weather conditions, including both unpredictable rain season and more frequent and severe extreme weather events, contributes to production losses as well as higher incidence of pests and diseases. These changes are already visible - due to declining soil fertility and pest and disease problems in banana cultivation in the Central region, production has gradually shifted into the Western region of Uganda, which now accounts for two thirds of the entire banana production in the country.

Increasing the resilience of banana producing communities to climate change is a priority. Some 24 percent of agricultural households in Uganda concentrate on banana production and a majority of producers operate near subsistence levels. These households generally have limited resources to buffer, adapt or recover from different shocks, including those caused by climate change. A study of climate change risks from 2012 suggested that southwestern regions are likely to suffer disproportionately due to small farm sizes and limited livelihood alternatives.[6] Thus, households may have to rely on short-term coping strategies with long term negative effects, such as selling off productive assets. There is consequently a need to increase the resilience of vulnerable banana producing communities by helping them adopt adaptive strategies is consequently an important task for the Ugandan government.

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[3] GoU, 2015. National Climate Change Policy.

[4] Merotto, D., 2020. Uganda : Jobs Strategy for Inclusive Growth. World Bank, Washington, DC.

[5] https://www.worldbank.org/en/country/uganda/brief/uganda-poverty-assessment-2016-fact-sheet

[6] Bagamba, F., B. Bashaasha, L. Claessens, and J. Antle. 2012. Assessing Climate Change Impacts and Adaptation Strategies for Smallholder Agricultural Systems in Uganda. African Crop Science Journal, Vol. 20, Issue Supplement s2, pp. 303 - 316

Box 2: Uganda Banana Facts

Bananas are a main source of calorific intake in Uganda, and hold a key role in food security. Average intake amounts to 0.61kg per day and person. As a staple food, bananas are low in protein level compared to other major cereal crops like maize, or millet, but have a high carbohydrate and micronutrient content.

The majority (70 percent) of bananas are consumed at home by farmers, another 20 percent are sold as fresh produce, and the remaining 10 percent are for processing into country. Some 20% of banana produced are sold fresh to traders who supply local, national (urban) and export markets. The remaining 10% are processed into gin, beer, wine, juice, confectionaries, etc.

Source: UNIDO, 2014. Vulnerability Assessment for the Banana Supply and Value Chain and the Banana Sub-sector in South-Western Uganda. UNIDO, 2015. BCCA Project Document

From the perspective of climate change adaptation, value addition activities can help foster both higher and more secure income from banana produce. Value addition activities producing good quality products that fetch a higher price than others is likely to increase income for banana farmers supplying different facilities. Higher income builds resilience to climate change by allowing beneficiaries opportunities to invest in coping strategies that do not have negative long-term consequences. Value addition also directly reduces vulnerability as it increases the shelf life of an (increasingly) perishable fruit.

The market for bananas as food is characterized by inelastic demand which emphasizes the need for expanding markets. When supply changes, prices adjust instead, suggesting that demand is fixed and not responsive to price changes. Interviews with banana producers during the field mission indicates that when the number of bananas is reduced due to unfavourable weather conditions, pest, or other disasters, prices increase. When harvests are abundant, prices fall, sometimes to the point of farmers withdrawing their produce from markets. Research also shows that poor infrastructure, coordination and information constraints incur heavy losses in the supply chain that have a major impact on banana farmers (and food insecurity).[7] These features have important implications for the BCCA and other projects in the banana sub-sector. Merely expanding banana production is not a reliable strategy to increase the value of sales for banana farmers. Expanding markets is necessary – whether by supplying additional bananas to rapidly expanding value addition activities that can pay competitive prices for bananas, or by tapping into larger national or international markets.

Women form an important part of the banana producing community as farmers as well as banana value chain actors. According to the data collection exercise undertaken by the project team in May 2021, a majority of actors involved in value added activities in the targeted districts are women. However, a gender analysis prepared for the project showed that women's access to productive opportunities is held back disproportionately by low levels of education and business skills, lack of working capital, land and key inputs such as clean water (needed for production), and lack of access to technology that might reduce the physical burden of processing (e.g. wine).

[7] Ssennoga, F., G. Mugurusi, and P. N. Oluka. 2019. Food insecurity as a supply chain problem. Evidence and lessons from the production and supply of bananas in Uganda, Scientific African, Volume 3.

1.3. Project overview

The BCCA was designed to contribute to addressing the challenges associated with climate change adaptation in the banana value chain. The project was initially conceived in 2010, when the Government of Uganda approached UNIDO to propose an agriculture value-chain project in the banana sector. The project did not move ahead until 2012, at what time the project had been adapted to incorporate climate change aspects. The BBCA was approved in 2015 and the first Project Steering Committee meeting was held in May 2016. The project ended in June 2021, 2.5 years later than originally planned (Table 1). Project implementation was significantly delayed, largely due to delays in finalizing the agreement with the main Government counterpart, the Ministry of Agriculture, Animal Industries and Fisheries (MAAIF), which in turn were due to disagreements in how the Government would receive the funding from GEF for project implementation. In the last year of implementation, the impact of COVID-19 caused further delays.

Table 1: Project milestones

Project milestones	Planned	Actual
Signature with GoU	Sept/2015	Dec/2015
Planned Mid-Term Review (MTR)	June/2017	Jan/2018
Planned project closure	Dec/2018	June/2021

Source: project monitoring and evaluation (M&E)

The project was designed to be financed through a grant from the Global Environment Facility (GEF) and more specifically the Least Developed Countries Fund (LDCF), as well as through co-financing from the Government of Uganda and from three private sector partners. The total budget (at entry) stood at 9.68M USD, a majority of which planned to be provided by the Government of Uganda (63%) and GEF (27%) (Table 2). However, Government cash financing was never provided, and the contribution of the Government is now considered to have been provided as in-kind contributions. The monetized value of the in-kind contribution of the Government has not been monitored, however (see section on effectiveness below).

The project has been implemented by UNIDO and Ugandan partners. Together with UNIDO, implementing partners are: The MAAIF, the Ministry of Trade, Industry and Cooperatives (MTIC), Ministry of Finance, Planning and Economic Development (MFPED, official signatory), Ministry of Water and Environment (MWE, custodians of climate change agenda), Uganda National Bureau of Standards (UNBS), and National Agriculture Research Organization (NARO), and the district local governments (DLGs) of Bushenyi, Buhweju, Isingiro, Mbarara, Mitooma, Ntungamo, Rubirizi, and Sheema districts

Table 2: Budget at entry and expenditures at project closure

	BUDGET				**ACTUAL**			
	T. USD			**%**	**T.USD**			
	Cash	**In-kind**	**TOTAL**		**Cash**	**In-kind**	**TOTAL**	
TOTAL	8,896	784	9,681	*100*	2,829	951	3,780	*100*
GEF	2,615	0	2,615	*27*	2,615	0	2,615	*69*
Total Co-financing	6,281	784	7,066	*73*	214	951	1,165	*31*
UNIDO	44	188	233	*2*	44	188	233	*6*
GoU	6,090	36	6,126	*63*	0	239	239	*6*
Private sector	147	560	707	*7*	170	524	694	*18*

Source: provided by project team. Budget details are provided in Annex 2.

The objective of the project as stated in the Project Document (PD) (Project Objective 1) was:

> "*To support vulnerable communities in Western Uganda to better adapt to the effects of CC through banana value addition activities, to provide greater opportunities for income generation, poverty reduction and food security*." (UNIDO, 2015. Project Document [PD], p. 40)

Project Objective 1 is underpinned by activities to support livelihood strengthening and diversification in the banana sector. However, based on activities included in the project log-frame, the Evaluation Team included a second objective that is implicit in the project set-up (Project Objective 2):

> *"Increasing the climate change resilience in the agro-business and rural development sector more generally, through activities to strengthen climate change awareness and national development policies affecting these sectors."* (TE Team's definition).

Project Objective 2 was supported by activities to develop national and local policy with respect to climate change.

The project was structured around four components:

Component 1. Mainstreaming climate change and gender in national policy documents (agriculture) and CCA strategies adopted for actors in rural development sector (local governments, SMEs, etc.).

Component 2. Engendering value addition activities for banana through (i) sensitization activities on CCA for farmers (ii) VA facility upgrading, training, and marketing activities (iii) energy production based on banana waste to be used to support energy supply for banana value addition activities and provide fertilizers to farmers (iv) water purification and water harvesting technologies for community and value added facilities (v) establishing community based tissue culture to support higher demand for bananas.

Component 3. Project dissemination, scale-up and replication through guidelines on best practices and project knowledge disseminated within the country and sub regions through websites, publications and communication products in various languages.

Component 4. Quality Control, M&E.

The distribution of the budget is provided in Annex 2. As seen, the main bulk of the total budget was allocated to Component 2 (88 percent), with Component 1, 3 and 4 absorbed 4, 6 and 2 percent respectively. The Government's distribution was expected to support, in particular, sensitization work with value chain actors and the tissue culture industry under component 2.

A mid-term review (MTR) of the BCCA was undertaken in December 2017. At that time, the project activities had just begun to be implemented. The MTR concluded that the project objectives remained relevant but flagged significant challenges with respect to collecting co-financing from the Government and the private sector, lack of attention to gender mainstreaming, resistance to and suitability of some of the project's technology solutions, delays in implementation, and the time lapse for delivering impact on farmers' incomes. The MTR also emphasized problems with the M&E design (especially the choice of indicators), which resulted in difficulties in evaluating the project's effectiveness. Weaknesses in M&E have persisted throughout project implementation.

During the last year of the project's execution, COVID-19 has curtailed project implementation and monitoring. Traveling restrictions has limited opportunities for travel, has locked down markets, and has complicated project monitoring and support.

1.4. Terminal evaluation approach

Evaluation approach

The terminal evaluation has been guided by good evaluation practice as outlined by participating institutions evaluation policy: the UNIDO Evaluation Policy and Evaluation Manual, the GEF Guidelines in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Standards.

Based on the evaluation objectives, the evaluation guidelines cited above, and the evaluation questions posed in the TOR, the TE-team established an evaluation framework with key evaluation questions in the inception stage (Annex 3). The evaluation questions are based on the six DAC Criteria for Evaluation (relevance, coherence, efficiency, effectiveness, progress to impact and sustainability) and have served as the main basis for the evaluation. The evaluation framework is centered around three higher level evaluation areas: quality of design, quality of implementation, and takeaways from the project going forward (Figure 1: Evaluation framework). The TE team has assessed the evidence against these questions. Note that to avoid duplication, Component 4 is not addressed separately (unlike the other components) but is covered under other sections, especially evaluation questions 2 and 7.

Figure 1: Evaluation framework

1.QUALITY OF DESIGN	QUALITY OF IMPLEMENTATION	TAKEAWAYS
•What is the **theory of change** for the project and has it changed over time? •How **relevant** are the project's **objectives** to Uganda's CCA? How relevant is the **design** of the project to these objectives? •How **coherent** is the project with ongoing and planned interventions?	•How **effective** has the project been in reaching its objectives? •What **progress has been made to impact**? •What are the risks (and how severe are they) to the **sustainability** of the project's outputs, outcomes and impact(s)? •How **efficient/cost effective** has the project been?	•What are they **key findings and lessons learned** from the project? •What **recommendations** can be made for future project identification, design and implementation

Data collection

The TE has consisted of desk review of relevant documentation (team leader and national evaluator), online/phone interviews (team leader and national evaluator), and a field mission including visits to facilities and farms, in-person interviews, and focus group discussions (national evaluator).

Desk research. The documentation has included key project documentation such as the PD, and the MTR, as well as project M&E reports including meeting minutes, annual reports, and other documents related to different project activities. The desk review has also included policy documents and analytical work related to climate change adaptation, banana value chain development, and the combination of the two. A list of documentation is provided in Annex 4.

Online interviews. The team has held in total ten online meetings, not including those held with the project team. The list of meetings held is provided in Annex 5. These meetings included key stakeholders from project partners as represented in the Project Steering Committee (5 interviews), local government representatives- district focal persons (3 interviews), and beneficiary entrepreneurs of upgraded facilities (2 interviews).

The field visit/mission (20th -28th May 2021). The TE team opted to visit a selection of districts and focused on the Rubirizi, Bushenyi, Isingiro, Mbarara and Ntungamo districts. For lack of time and resources and the complication caused by COVID pandemic, the TE team decided not to include the Mitooma, Sheema and Buhweju districts. The national evaluator met with local district government representative (7 interviews) and visited 8 facilities that had received assistance for upgrading through the project, to discuss the project benefits and challenges with owners/managers, and to inspect achievements in terms of improved infrastructure or other assets provided by the project. With the assistance of the district focal persons, the national evaluator also organized 7 focus group discussions with farmer beneficiaries (57 persons in total, of which 25 females).

Table 3: Field mission visits

District	Facility/ies	Interviews and Focus groups
Bushenyi	Forest Fruit Foods (juice)	Farmers as suppliers to FFF (access to distilled water) Facility owners (bio-digester)
	Kiaga (U) Limited (winery)	Facility owners (bio-digester) Neigbouring farmers
Isingiro	Rockhill winery	Facility owners (Bio-digester) Farmers as suppliers of Rockhill
	Ankole Fresh foods (chips)	Group members (Bio digester)
Mbarara	Silgard Winery	Facility owners Farmers as suppliers of Silgard (Mother gardens) Farmers interested in supplying
	Fruits of the Nile, Mbarara (Chips)	Chairperson of the group (Bio-digester)
Ntungamo	Rutunguru group (Chips)	Group members
	Rwentobo group (Chips)	Group members
Rubirizi	Mother gardens	Farmers as beneficiaries of the mother gardens
	Household based bio-digester	Farmer as a beneficiary of a domestic bio-digester

The interviews were semi-structured, following interview guides prepared separately for each informant group (central government representatives/Project Steering Committee (PSC) stakeholders, local government representatives, value addition beneficiaries, farmers).

Field Mission Picture 1: Focus Group Discussion with Banana Suppliers for Wine, Mbarara

Limitations

COVID-19 has significantly impacted the quality of data collection. The evaluation was planned with travel and time restrictions related to COVID-19 in mind. However, the repercussions of the pandemic were more profound than expected. Online meetings were marred by poor connectivity, as many key informants were outside Kampala during partial and full lockdown. Most importantly, because of extensive process requirements for national travel, the field mission was delayed several times and therefore had to be reduced in scope. In the final stages of the evaluation, a full lockdown as well as personnel losses due to COVID-19 in Uganda has further slowed down communication and information flows. Although foreseen at the outset, the fact that the evaluation Team Leader has not visited Uganda is an additional constraint for the depth of the evaluation.

The significant time lapse that has passed since project conception (2010) has resulted in some loss of information. This is due to recall difficulties as well as some turnover among project stakeholders. For example, several members of the PSC are now retired and could not be reached.

The paucity of regular and organized monitoring and evaluation information has affected the evaluation process and the opportunity to draw reliable conclusions on project effectiveness. As will be discussed below, the M&E framework was weak from the outset with inadequate indicators, lack of baseline data and clear procedures for regular reporting. These problems have persisted throughout project implementation. Lack of comprehensive information on key project outcomes and outputs, and some inconsistencies in data, has curtailed the ability to form a full assessment of the contribution of the project to its higher-level objective, more specifically improvements in local communities.

The complexity of activities included in the project, as well as the marriage of CCA and livelihoods approaches, complicates project oversight. In combination with weak M&E, the

high complexity of the project makes it particularly challenging to disentangle the result chain and the actual contribution of the project.

Despite the limitations in data collection, it is the TE team's view that the evaluation has reliable foundations. The team has constructed evidence maps and consulted with the project team to fill information gaps where possible, and the project team has collected additional data (in May 2021) to support the evaluation process. During the field mission, the TE team collected pertinent data such as changes in income for farmers that were not monitored by the project (although the small scale of FGDs means data are not representative). Moreover, the main messages emerging from document review, different interviews and on-site visits have been consistent.

Against this background, the remainder of the document presents the evaluation team's assessment of the BCCA across the three evaluation areas: (1) Quality of design (2) Quality of implementation, and (3) Takeaways for future project engagement.

2. Evaluation Area 1. Quality of design

Under evaluation area 1, the report presents the TE teams understanding of the theory of change (ToC) for the project, how it has been modified during implementation, and how this has impacted the project logic. It subsequently discusses the relevance of the objectives of the BCCA to Uganda's climate change adaptation agenda, and the relevance of the project's design to achieving those objectives.

Q1. What is the theory of change for the project and has it changed over time?

A first version of the ToC at project inception was developed for the TE inception report (Figure 2). The BCCA project was born as a value addition/livelihoods project, and later morphed into a climate change project. The underlying project logic, at approval, was that sensitization at central government level as well as local government and community level, together with opportunities for higher productivity farming and value addition (VA) activities, would increase income and hence investment in climate change adaptation techniques. VA activities would also be supported by higher availability of disease-free tissue culture from banana plantations, to counter the impact of higher incidence of pest due to CC. Banana peel-based bio-digesters, a green source of energy, would support facilities with electricity, which is a key constraint to production, and partially replace dirtier forms of energy production (wood burning). They would also support households by replacing wood for household uses (to reduce wood burning and wood collection time, and free up time for productive activities) and by providing a source of energy that could enable households to engage in small-scale VA activities at home.

The project logic is based on underlying assumptions regarding behavioral changes along the result chain. These include, inter alia:

1) Lack of information and lack of income are the binding constraint for farmers to adopt CCA techniques. Hence, together with sensitization, activities to raise incomes from livelihoods will lead to CCA.
2) Relevant actors have the capacity to transform sensitization, training or policy development activities into concrete action (farmers invest in and adopt CCA techniques, all actors in the rural development sector from central and local government to private sector actors implement CCA strategies that have been developed).
3) Poor infrastructure (especially water and energy), lack of access to new technology and know-how, and limited market access hold back value addition activities (i.e., constraints are on the supply-side rather than demand-side).
4) Green technology solutions embedded in the project increase project efficiency - biogas digesters and solar panel driers mitigate the risk of weak energy supply.
5) Improved quality and efficiency of VA activities will (therefore) lead to increased sales which will lead to an increase and more stability in demand for bananas, which will impact banana producers' income favorably and will encourage further investment in CCA technologies.
6) Project gains traction through dissemination and other investors (or government, or donors, CSO) emulate the approach.

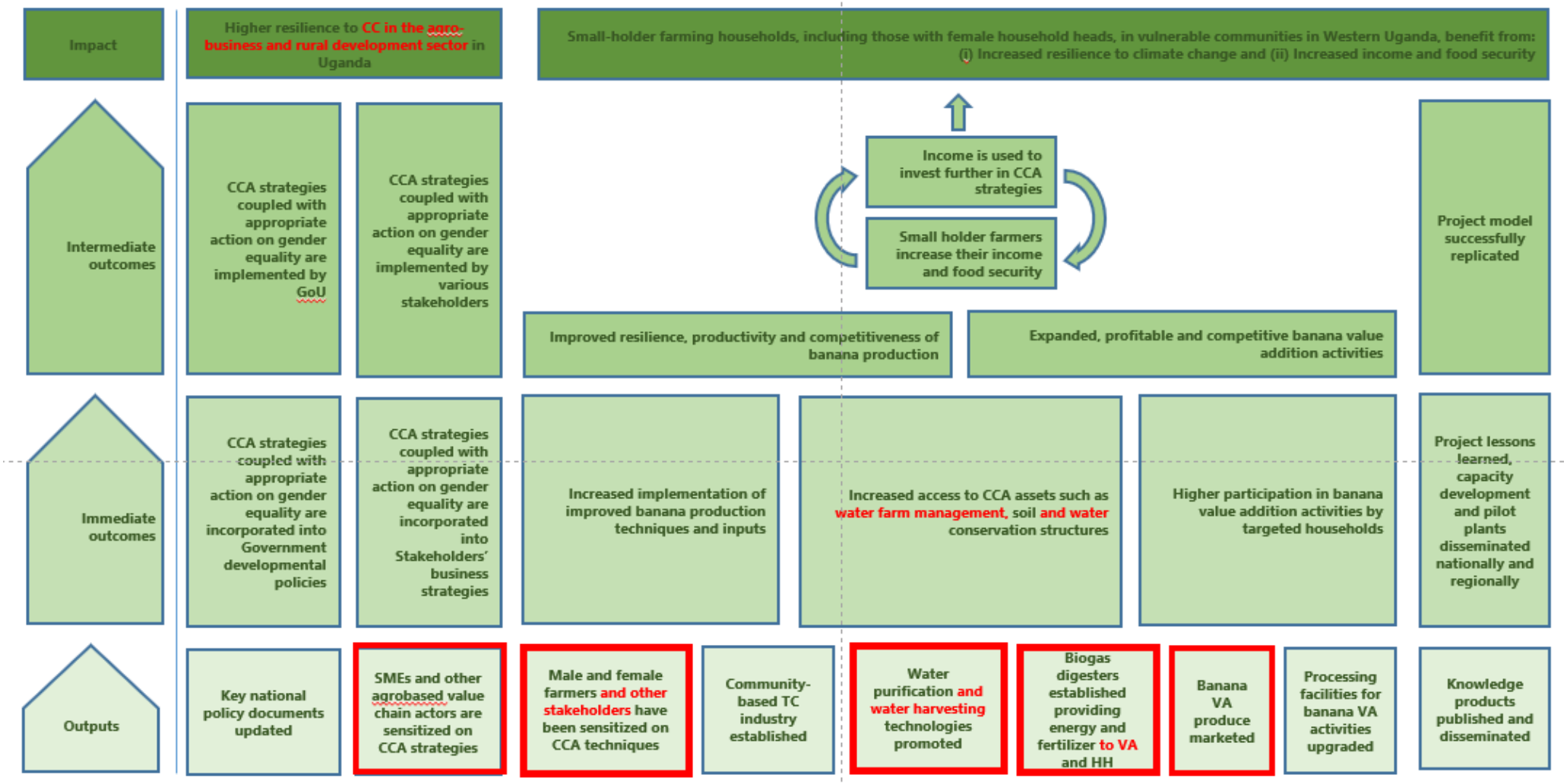
The project set-up was highly complex. It included a multitude of activities across different areas including policy development, banana production, banana value addition, energy production, water harvesting, project scale-up and monitoring systems established by local communities. These components were linked and interdependent. For example, banana peel was expected to be used to service VA facilities with energy.

After collecting more information on project implementation, the team has modified the ToC (Figure 3). The underlying logic remains the same, but some activities were not undertaken,

and some links that integrated the project have been removed. As a result of these changes, the project ended up with several parallel tracks of activities, each with a value for project objectives, but with limited scope for synergies and efficiency gains. Missing activities will be discussed in more detail in section 2, but some key modifications include:

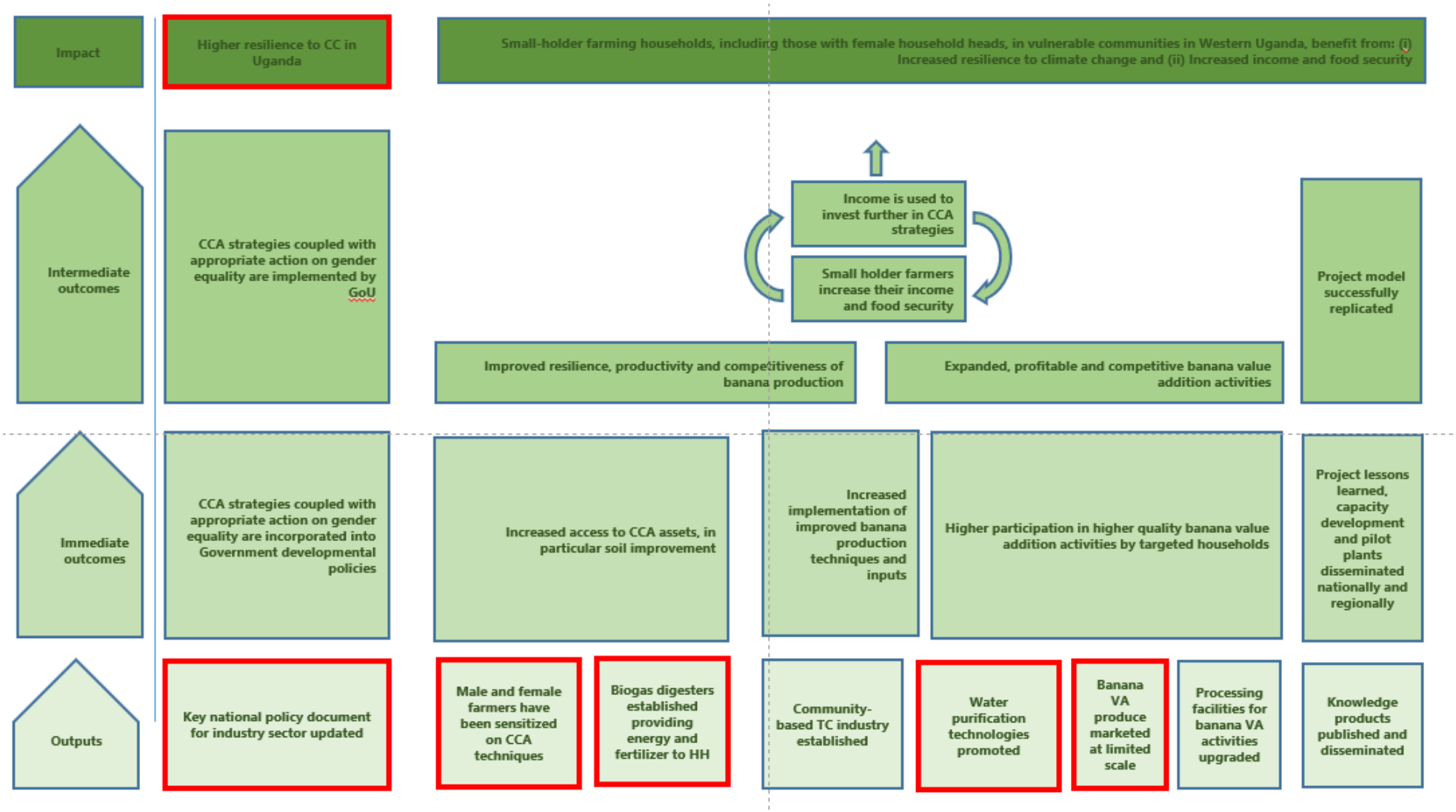
1) **The sensitization of private sector and other stakeholders in the value chain and marketing activities of the VA produce were limited**. Thus, the project assured sensitization at the government level (inputs into policy) and the farmer level (sensitization trainings), but not value chain actors that would intermediate transformation of the broader agri-business sector. As marketing activities did not take place the opportunity for rapid business expansion was undermined.
2) **Some sub-components were de-linked from the project logic without removing components.** The climate change adaptation assets such as water management, conservation and purification structures, as well as soil conservation, were supposed to be integrated in activities related to community/farmers and value-added facility beneficiaries. However, water purification and water harvesting techniques were provided for the 8 supported VA facilities, but not at community level. The bio-digester technology could not supply sufficient energy to replace wood fuel. Bio-digesters were adopted at household level, predominantly by farming households with livestock animal whose dung is used as input, not banana peel. As the digesters help reducing time needed to collect firewood, they could free up female labor. However, no specific activities targeted bio-digester households to encourage value addition activities although this was part of project logic.

Figure 2: Theory of Change at Project Inception



Source: Evaluation team, based on PD. Boxes and text marked in red highlight modifications to the project (red text indicates that the activity was modified or did not take place).

Figure 3: Modified Theory of Change



Source: Evaluation team, based on project M&E and data collection for the TE.

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Q2a. How relevant was the BCCA to Uganda's climate change adaptation agenda?

The project objective(s) were to increase climate change resilience in the rural development sector by supporting vulnerable communities with banana livelihood activities and strengthen awareness in agricultural value chains. **These objectives were relevant to the priorities of key project partners (Uganda's Government, GEF/LDCF, and UNIDO).**

The BCCA was relevant to Uganda's national adaptation strategies both at project entry and exit, including the Uganda's National Adaptation Programmes of Action (NAPA) and the Uganda National Climate Change Policy (NCCP):

- **NAPA (2007)** is the key policy document guiding climate change adaptation policy in Uganda. The plan points out that despite abundant natural resources, Western Uganda is severely affected by climate change which increases poverty and hunger. This calls for adaptation strategies, including sensitization and active support to adaptation activities. Overall, the program is focused on land and water management, but also on adaptation strategies in agriculture. The BCCA is linked to NAPA's drought adaptation project (no. 6), in which alternative livelihood options and smart agricultural practices are promoted. It is also linked to the vectors, pest, disease (VPD) control project (no. 7) which promotes management strategies for communities vulnerable to VPD.
- **NCCP (2015)** highlights the importance of promoting (i) highly adaptive and productive crop varieties and hybrids in drought-prone, flood-prone and rain-fed crop farming systems and (ii) diversification and improved post-harvest handling, storage and value addition activities to mitigate rising climate change related losses and improve food security and household incomes.

Uganda's nationally determined contributions (NDCs) include nine priority areas for the agriculture sectors (excluding forestry), including expansion of value-addition to agriculture.

From a livelihood/economic growth perspective, bananas were one of 12 priority crops in the Second National Development Plan (2015/16 – 2019/20). In the Third National Development Plan (2020/21-2024/25) the banana sector was no longer a priority for agri-business development initiatives.[8] It remains a key crop for food security, however.

The BCCA design was relevant for all three objectives in the GEF-LDCF strategy, namely (i) reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation (the bio-digesters, training and facility upgrading in the BCCA form part of this); (ii) mainstream climate change adaptation and resilience for systemic impact (sensitization activities and policy development activities), (iii) foster adaptation capacity by supporting NAPAs. The BCCA design also aligned with GEF/LDCF focus on opportunities to leverage support, align with national strategies, geographical balance and private sector engagement.

Finally, the BBCA design was consistent with the United Nations Development Assistance Framework (UNDAF)[9] for 2016-2020, and more specifically on strategic intent #3 Sustainable and inclusive economic development and outcome 3.1, natural resource management and climate change resilience. Although the UNDAF mentions the need to help establish alternate livelihoods for communities, the CCA related activities spelled out in the UNDAF focus more on natural resource management than value addition activities. This underscores how the project was transformed from a value addition into a CCA project.

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[8] The NDP focuses on nine commodities: coffee, tea, fisheries, cotton, vegetable oil, beef byproducts, maize and dairy (provide export earnings) and cassava (resilient).

[9] Now referred to as "UN Sustainable Development Cooperation Framework".

Given the urgency of climate change in Uganda, the importance of banana production for food security and climate change vulnerability, and the role of agri-business as a diversification and mitigation strategy in different policy documents, the BCCA was a relevant project with respect to climate change adaptation.

- **BCCA relevance is rated satisfactory.**

Q2b. How relevant is the design of the project to achieve these objectives?

Overall design

There is a valid rationale behind different project activities and approach. The BCCA was originally conceived as an agriculture livelihoods project but was adapted into a climate change project. This does not invalidate the project logic: value addition activities prolong shelf-life of a vulnerable crop, can contribute to reducing price volatility for banana farmers and can raise incomes that, in given contexts, can be used to invest in more climate change adaptation assets. Mainstreaming CCA in central and local government policy, and sensitizing SMEs and other actors in agricultural value chains, is a high priority for building climate change resilience. The project was designed to tap into ongoing priorities and activities in the MAAIF, thus ensuring strong ownership and sustainability as well as establishing opportunities for cost savings and synergies. As a government-initiated project, it complied with GEF requirements that there be a base-line project in place.

Whereas each component is supported by a logic, the design of the project was overly complex, given human and financial resource constraints. Although individual components and sub-components of the project potentially were relevant, the number of activities and the weak links between these activities likely overstretched capacity. Thus, the project design assumed that tissue culture industry would increase productivity of banana production, which would be absorbed by increased demand from the VA activities; VA facilities get access to markets through networks; bio-digesters would be used to capitalize on banana peels used by the VA facilities and would fuel these facilities, thus compensating for variable electricity supply; improved access to clean water through harvesting and purification techniques would help farmers engage in value addition activities and ensure higher quality of produce in the existing facilities.

The project did not have a clear targeting strategy. Beyond the geographical targeting focused on vulnerable, banana-dependent localities in Western Uganda, the project did not devise a strategy for identifying beneficiaries. Given the project development objectives, *the* central task of the project was to reach many farmers, especially vulnerable farmers, and including women, with spillovers from value addition activities. (The expected positive impact on incomes from the tissue culture activity also depended on higher demand for bananas from VA.) However, the project did not identify who these farmers were, what would be the operational definition of vulnerable, and especially how to ensure that they could be reached directly or indirectly through the project. The number of VA facilities to be supported was not specified in the PD (this was to be specified during inception) but the original approach involved helping farmers create new cooperatives and incorporate farmers in existing cooperatives. VA facilities were supposed to be chosen according to capacity of facilities to function as training centers once capacitated, but also according to cooperative's vulnerability to CC. However, there was no analytical support to define what would be a CC vulnerable farmers group. In the end, vulnerable facilities were not targeted, and the creation of cooperative did not take place. Instead, the team worked with established enterprises that could deliver results within the project time frame. Finally, recommendations from the gender analysis undertaken as part of project inception were not incorporated into the design of the project which contained no strategy for mainstreaming gender beyond separating out gender in target indicators.

The risk analysis was incomplete. The risk analysis correctly included lack of reliable energy supply, lack of interest in CCA among farmers and other stakeholders, and a risk of low adoption

of new technologies. However, the risk analysis omitted the risks with co-financing not forthcoming (apparently not uncommon for GEF projects and thus identifiable ex ante), risks related to weak implementation capacity (likely to be binding in a highly complex project with counterpart implementation), and the impact of fluctuations in banana prices on farmer incentives. Finally, the risk analysis incorrectly included limited dissemination and technical incompatibility as key risks. These areas are within the realm of project design and should be addressed through adequate project preparation.

At design stage the project only partially incorporated key challenges that would affect project implementation and impact, resulting in gaps in project logic. A comprehensive vulnerability assessment undertaken 2014 served as a central analytical input for the project. The assessment highlighted the importance of value addition as a CCA strategy, the low quality of products currently produced, and the significant infrastructure constraints present (electricity, water, storage, transport). However, interviews with VA facilities show that electricity supply remains a key bottleneck to facility functioning, as the bio-digesters were not adequate to fill electricity needs, and that access to markets remains a critical problem (also before COVID-19) but was insufficiently addressed in project design. For banana farmers that cannot sell to local value addition industries, market information and market access appear to be a major constraint not addressed by project design. Recommendations from a gender analysis undertaken for the project were not integrated.

The links between higher household income and climate change investment were underdeveloped in the design. The project is based on the assumption that higher farmer income would lead to investment in CCA assets, such as water and soil conservation structures or water harvesting structures. Other constraints (e.g., access to affordable appropriate technology for CCA assets or information or coordination constraints preventing farmers from acquiring this technology) were not considered. Consequently, the design did not provide a strong results chain for how the project could influence or improve the likelihood of farmers investing in CCA assets.

- **The overall design of BCCA is rated Moderately Unsatisfactory.**

Logical framework

As noted, the project logical framework provided a large number of parallel activities but with weak result chains between, in particular, outputs and outcomes, given the ambitious objectives of the project. A leaner version of the project would have freed up financial and human resources to strengthen weaker links including (i) more and more targeted sensitization activities to foster CCA in the value chain sector (ii) support to farmers in engaging in value-added activities and/or (iii) community investment in CCA.

Project indicators and targets were inadequately defined. Weaknesses in the logical framework targets and indicators, flagged already in the MTR, has constituted a critical problem for project monitoring and evaluation and actually precludes a comprehensive analysis of the project's contributions. Project target indicators were not sufficiently SMART – specific, measurable, achievable, relevant and time-bound. Specifically, the framework suffered from a lack of focus on outcomes and overall low relevance of indicators. Specifically, the logical framework suffered from:

- **Indicators that did not credibly support the results chain from output to outcome**, especially with human and financial resources constraints. Indicators and actual project monitoring were activity and output focused. For example, CCA included in a consultant report on local government strategy documents is an output from the project activities. In a context of resource constraints this activity will not lead to imply implementation of said strategy (outcome 1.2). Increased production does not automatically result in expanded markets given potential demand side constraints (outcome 2.3). Purchases of TC plants (indicator 2.4.1) do not lead to a TC industry that supports demand generated from CC

livelihoods activities (outcome 2.4). This lack of an outcome focus is perhaps particularly detrimental for adaptation work, which is invariably dependent on longer-term, qualitative data.

- **Weak coherence,** for example the consistency between the objective of reaching 2,500 (and over time 5,000) households, with an objective of increasing households active in VA activities by 30 percent.
- **Missing relevant indicators**, especially for climate change adaptation under component 2. The Project M&E does not measure investment in climate change assets by farmers, which underpins the project logic. Other missing relevant indicators include those for market expansion under component 2 (see above point), e.g. increase in sales, and the lack of gender targets, reflecting the lack of gender mainstreaming in project design.
- **Insufficiently specific indicators** (e.g., indicator 2.3.1 effective marketing of banana-based products reflected in the expansion of local and regional markets) does not specify what "effective marketing" is or how it should be assessed and verified; what does "CCA streamlined" imply (1.1.1)
- **Lack of baseline for a majority of indicators** including farmer income levels and households in value added activities. This is a minimum requirement for GEF projects and the lack of baseline is a serious flaw as it implies that progress cannot be measured on the project's key target groups and objectives.
- **Undefined or unclearly defined targets for several outcome indicators**, e.g. products with UNBS standards, number of bio-gas digester users, number of TC derived plant material purchased per year.
- **Unclear (unrealistic) timing,** for example on the ability to observe CCA/gender mainstreaming in key national policy documents, as the development of these take time and the project was not involved in the policy development process, or on the impact of tissue culture industry on farmers' income and food security.
- **General lack of targets for female participation**.

➢ **The BCCA logical framework is rated unsatisfactory**.

Q3. How coherent is the project with ongoing and planned interventions?

The Government has strong ownership over the project which fits within its agricultural agenda. The project originated within the Government, and more particularly the MAIIF. As discussed above, climate change and agro-industrialization is central to government policy as clearly expressed in the national development plans. Extension services to farmers are provided through district offices which were also in charge of the implementation of the BCCA. The Presidential Initiative on Banana Industrial Development from 2005 has resulted in pilot-processing plants for banana flour and the national agricultural research organization (NARO) runs research and technical assistance programs on banana production and value addition activities.

The project was consistent with donor community approaches but also complementary in terms of regional coverage. In Uganda, all major donors (UNDP, FAO, World Bank, AfDB USAID, GIZ, Gates Foundation, …) work with agriculture and climate change including climate smart agricultural practices and increasing resilience in farming systems through diversification. However, many donors undertaking agriculture projects are concentrating on rural development in Northern Uganda where poverty is the highest and cereal, rather than bananas, dominate production. Several donors and in particular UNDP and FAO focus on building capacity in Uganda's government for implementing international treaties on Climate change, in particular the UN Framework Convention on Climate Change and the Paris Agreement. In spirit, the BCCA was therefore both coherent with, but also complementary to, other projects.

Synergies with donors have not been sufficiently explored. UNIDO reported on the BCCA, to much interest, in different UN and other donor forums. However, UNIDO and its UN sister organizations UNDP and FAO might have chosen to align their more closely, to ensure additionality, especially of the policy level work, and/or establish more synergies in e.g. sensitization work, at the local level. The vulnerability assessment undertaken prior to project implementation mentions these organizations' long-standing commitment to work with climate change adaptation at central policy and local government level, such as the Territorial Approach to Climate Change (UNDP) project or the Change Alliance project (FAO).

UNIDO achieved synergies with another UNIDO project. The African Agribusiness and Agro-industries Development Initiative (3ADI) seeks to promote banana-based food and beverages products for domestic and export markets. Some BCCA upgrading activities related to wine processing were financed by the Japanese Government under 3ADI.

- **The coherence of BCCA is rated moderately satisfactory**.

3. Evaluation Area 2. Quality of implementation

This section discusses the performance of the BCCA during implementation and the likely long-term impact. To what extent has the project fulfilled its targets? What progress has been made to impact? How sustainable are the achievements? Has the project been efficient and cost effective in producing results?

Q4. How effective has the project been in delivering its objectives?

Details of assessment of final outcomes against targets are presented in the annotated logical framework in Annex 6. The ratings for each outcome target is summarized in Table 4 below. As discussed under Q2 above and Q7 below, problems with the M&E and logical framework makes evaluation of program achievements difficult. Where target indicators cannot be evaluated (as in the case of most indicators), the TE team has collected additional evidence, mostly through interviews and FDGs, to support an assessment.

Achieving outcomes

Component 1 results

Component 1 sought to strengthen the implementation of CCA strategies at central government level, at local government level, and among private sector actors in rural development, and ensure gender mainstreaming into these strategies. Three outputs were expected: (i) National Industry Sector Strategic Plan (NISSP) updated with action on CCA and gender mainstreaming for adaptation; (ii) district level strategies on adaptation produced, and (iii) eight district development plans setting priorities on reducing vulnerability to CC along the value chain.

The policy impact from Component 1 is limited over the short term is due to limited relevance of inputs and lack of follow up actions for implementation. The project has delivered a report providing recommendations on how to strengthen the National Industry Sector Strategic Plan (NISSP), with CCA mainstreaming as one component. The NISSP review report, more in the nature of an action plan, was well received and considered useful by the MITC. However, the review provides comparatively brief recommendations regarding CCA and gender at a general level. A more focused review that centered on mainstreaming CCA and gender may have been more adequate. A new National Industry Plan (NIP) was launched in December 2020. Climate change adaptation and gender mainstreaming as priorities are included in the new NIP, but only at a very general level (e.g., "invest in ways that tackle the adverse effects of climate change", p. 4, and "advancing schemes that provide equal opportunity for both men and women in training, employment", p. 19). It is in a possible future implementation strategy (not yet available) that the impact of mainstreaming efforts can be evaluated.

For the local governments, lack of inclusion of other development actors and lack of resources may limit ability to take the action plan on value chain resilience forward. No project activity has been undertaken to support development of CCA strategies at local level (output 1.2). A report on banana value chain resilience (output 1.3), was prepared jointly for all 8 districts. More in the nature of a detailed action plan, the report focuses on how to organize implementation of adaptation strategies, but provides no recommendations on gender mainstreaming, severely limiting the contribution of the project. Several informants pointed out that additional activities and resources would have been needed to implement the findings from strategy work. Investors, SMEs and other stakeholders in the banana VA chain participated in a validation workshop for this strategy but did not participate in any other sensitization activities. Hence, the impact on local value chains can only be assumed to have been negligible.

Component 2 results

Component 2 aimed at increasing the participation in resilience building activities for income diversification in vulnerable communities through a multitude of loosely connected activities. This component was highly complex with many activities all intended to

support income diversification: (i) sensitization of farmers to CCA risks and adaptation techniques; (ii) establishment of banana VA activities for income diversification and (iii) effective marketing of these; (iv) establishment of community-based tissue culture industry; application of (v) biogas digesters and (vi) water purification and harvesting techniques, to support income diversification activities. To deliver these components the project provided analytical support, capacity building on several different issues (training on manufacturing, hygiene, study tours on tissue culture), asset transfers, infrastructure upgrading and more. Implementation was led by MAAIF locally, which is commendable from many perspectives, but generally calls for significant capacity building, coaching and supervision to ensure effectiveness and compliance with fiduciary standards. A general conclusion is that Component 2 was moderately successful in supporting five beneficiary enterprises (out of 9 benefitting from the project) in increasing their production and upgrading the quality of their products to receive certification, but was less successful in helping them achieve access to markets – necessary to expand sales – as well as wider development gains for the community, including increasing the involvement of male and female farmers in VA activities (see Annex 6).

BCCA delivered several sensitization activities across all districts, with some outreach to female banana farmers as well. In total, 630 farmers, of which 231 female farmers, participated in sensitization workshops in the 8 districts organized by MAAIF. These sensitizations workshops focused on actions such as biogas fuel, water harvesting, and "smart agriculture", but appear not to have encouraged VA activities as a strategy for CCA. No data has been collected on whether participants felt or were informed on CCA, whether they had taken steps towards CCA by, e.g., engaging in VA activities or increasing efforts to collect water, increase soil fertility, etc, or whether there were positive spill-overs in the broader community (by word of mouth or demonstration).[10]

The planned training on basic business skills was not provided. As potential service providers ended up being too expensive. MAAIF adapted and offered basic training to processors, but it was not well adapted to the low capacity level and readiness of beneficiaries and was therefore dropped.

The BCCA supported the upgrading of 9 existing value addition facilities but only 5 facilities were operating with the upgraded equipment at the time of the evaluation. The project supported 9 established companies - 4 wine producers, 1 juice producers, and 4 chips producers. The support provided by UNIDO involved infrastructure strengthening, provision of modern equipment, and training (hygiene practices, manufacturing techniques, etc.). None of the chips factories are currently working with the assets provided by the project, because the solar panels provided for drying did not work and have not been replaced by the provider company. One chips factory is not operating at all, whereas the remaining three are working with the old equipment.

Due to significant delays in project implementation, the upgrading of processing equipment was not fully completed until 2020 (July). This suggests that increases in production and quality of products in VA activities for direct (facilities) and the positive impact on indirect (farmer) beneficiaries are due to other project components including infrastructure upgrading and training, or to external factors. This is a significant finding as equipment is the single most expensive item in the project (grant) budget.

Up until the pandemic struck, wine and juice makers increased their production significantly. Data from six facilities (4 wine, 1 juice, and 1 chips) collected during the field visit suggests that compared to the period prior to project support, wine and juice producers were able

[10] Interviews and FGDs indicate that climate change awareness varies among farmers (who had not been sensitized) depending on the extent to which they are directly affected.

to increase their production substantially up until the Covid-19 pandemic struck.[11] At that time, the only project activity that could have meaningfully impacted production was the upgrading of production facilities, as training and equipment installation was undertaken in 2019 and 2020. The chips factories lowered their production levels, however. Due to COVID-19 production in all facilities was lower or stopped altogether at the time of TE. Given this external shock, the impact on production of project activities undertaken in 2019, 2020 (training, equipment) cannot be verified.

The project achieved only a very modest increase in the number of households that participate in the value chain activities, however. The target set for farmer households engaged (as suppliers) in value addition was 2,500 households. Almost half of these households were expected to be involved in juice manufacturing, although the project only supported one juice factory. A survey undertaken by the project team in 2021 showed that the project had managed to increase the number of households engaged in VA activities by around 250 households.

The project successfully supported the facilities in achieving national certification standards. Training and involvement of the Uganda National Bureau of Standards (UNBS) helped 6 facilities achieve national certification for in total 13 products (10 wine, 3 juice). Given that the poor reputation of local banana produce had been identified as a major constraint for access to markets, this is an important achievement.

Marketing activities did take place but on a limited scale, although market access was identified as a major constraint by VA facility managers. BCCA beneficiaries participated in 3 agriculture and agribusiness fairs in Uganda, one farmers market, and in one international food exhibition in Milan. No other activities were undertaken to increase access to market, strike partnerships with local microcredit institutions or private sector partners as planned. Business skills trainings provided under the project were discontinued as they were not well adapted (too advanced) for the level of development of the supported facilities. Lack of business skills may leave the facilities less prepared for a potential expansion to "the next level", however.

Bio-digesters have benefited a number of farming households but are no longer linked to banana value chain activities. The bio-digesters proved insufficiently powerful for the facilities and were distributed to households (some 200 in total), primarily those with livestock as the digesters can be fuelled with dung and households generally have insufficient other waste with which to feed them. One facility uses the bio-digester to produce bio-slurry and uses it as soil fertilizer on own farm land. For the most part, the bio-slurry produced by households is not yet being shared with other farmers. There is no monitoring data to confirm whether bio-digester beneficiary households have been able to engage in more VA activities given new sources of energy and reduced time constraints. This component is now delinked from the banana production and value chain activities.

Tissue culture gardens have been established to provide disease free suckers to a comparatively large number of farmers, but there are no links to value addition activities. Five districts have established "mother gardens" to support the distribution of clean (but not pest resistant) tissue culture to banana farmers. There is a strong incentive to share clean tissue as this prevents the spread of the banana wilt disease in the community. The activity lacked a target against which to measure progress. However, the number of direct beneficiaries (receiving plantlets for mother gardens) amounts to 141 farming households, with an estimated 2600 indirect beneficiary farming households (receiving suckers from gardens). Very few women appear to have benefitted (around 2 percent of all indirect beneficiaries, and an estimated 10 percent of all direct beneficiaries). In practice, the tissue culture component was hence delivered as a standalone component with no links to other Component 2 activities.

[11] The exact increase is uncertain as data differ between project monitoring information and mission interviews. For example, for one winery, mission interviews indicated a 20% increase on average, per month, whereas some monitoring data indicate increases many times that (300%).

Field Mission Picture 2: Mother Garden in Rubirizi

Communities have limited access to clean water from the project's installations. Taking into account the importance of clean water for food value addition, the project initially planned to install water harvesting and purification processes in facilities to ensure food quality standards, and clean water source centres for smaller communities. During implementation, this changed to focusing on water purification and water harvesting structures for facilities. In 2 out of 8 facilities with water infrastructure, part of the community has been given access to clean water, although in one of them – juice – access is restricted to the suppliers. Overall, the water harvesting and purification units are small and insufficient for serving communities, however.

Component 3 results

Component 3 aimed to engender replication and scale-up of good practices by disseminating experiences from the project. Given the onset of COVID-19 during the final stages of the project, the opportunities for showcasing the project have been limited. Within Uganda, nonetheless, the BCCA approach is seen as a promising and important pilot.

Dissemination activities have helped showcase the project. A website, information briefs, and a video has been prepared by the project team. As discussed above, the project approach has been showcased as beneficiaries participated in five events (4 national and 1 international fair).

The project has gained traction at policy as well as private sector level. At policy level, the Minister of Agriculture is interested in promoting similar initiatives in other banana growing areas of Uganda. The BCCA was also used as an example when the agriculture sector NAPA was prepared. At the local levels, district officers report that a few individuals who have benefited from training provided at the facilities have started enterprises in juice and wine sectors, inspired by the project. During COVID-19, the facilities have provided training (when allowed by restrictions), that have been well attended, demonstrating the interest in the value addition activities. A limited number of farmers have purchased bio digesters after observing their value for both producing bio-gas and soil fertilizer.

Component 4 results

The weaknesses in project monitoring are discussed in more detail under Q2 on design above and Q7 on efficiency below concluding that the project has underperformed on M&E. The baseline vulnerability assessment undertaken does not provide the baseline information needed to establish the monitoring framework. Project monitoring training has been provided to district officers but it is not clear whether resources (by MAAIF) have been earmarked for these tasks,. VA facilities or other community members have not been trained to provide information to the project, and the overall quality of monitoring information is low.

Table 4 below presents ratings for different components (outcomes), using the narrative above and additional evidence presented in the annotated logical framework in Annex 6. Based on the assessment of achievements against targets (where available) or additional evidence, the project is rated **Moderately Unsatisfactory** for overall effectiveness, despite many diligently carried out activities. The rating reflects ratings on different components and underscores weaknesses in achieving progress on adaptation policy implementation, especially at local level, and achieving sufficiently large positive spillover effects for communities. (

Table 4: Ratings on effectiveness.

	KPIs/Indicators output)	**Rating**
Component 1: CCA strategies coupled with appropriate action on gender equality are incorporated into developmental policies and implemented by stakeholders in various sectors		**Unsatisfactory**
Output 1.1: National policy documents such as the Agriculture Sector Strategic Plan (ASSP) updated with action on CCA and gender mainstreaming for adaptation.	1.1.1 CCA captured in the ASSP 2015/16-2019/20 and the National Industrial Sector Strategic Plan.	Moderately unsatisfactory
	1.1.2. District level strategies on adaptation produced.	Unsatisfactory
	1.1.3. 8 DLG development plans setting priorities on reducing vulnerability to CC along the banana value chain.	Unsatisfactory
Output 1.2: CCA coping strategies including gender equality for adaptation promoted among investors and other stakeholders in the agro-industries and rural enterprise development sector.	1.2.1. SMEs increased gender equality awareness.	Highly unsatisfactory
	1.2.3. 8 DLG development plans setting priorities on reducing vulnerability to CC along the value chain.	Not rated (same as 1.1.3)
Component 2: Vulnerable communities are increasingly participating in resilience-building activities for income diversification		**Moderately Unsatisfactory**
Output 2.1: Sensitization of female and male farmers in the target districts on CCA coping strategies to build resilience to CC	2.1.1. % of targeted population awareness of predicted adverse impacts of climate change and appropriate responses, disaggregated by gender (No target, no baseline, not monitored)	Moderately satisfactory
Output 2.2: Small scale processing facilities established in target regions for vulnerable communities to engage in income diversification value addition activities	2.2.1 30% increase in number of farming HHs disaggregated by sex of head of HH, engaged in banana value addition (No baseline)	Unsatisfactory
	2.2.3. Number of banana-based products from the target region meeting UNBS (Not target, no baseline)	Moderately satisfactory

	KPIs/Indicators output)	Rating
Output 2.3: Banana based products from income diversification activities effectively marketed in locations with good marketing potential	2.3.1. 40% increase in banana products (wine, Chips) produced in the target area per annum and reflected in the expansion of local and regional markets (Unclear baseline) (No indicator for expansion in local/regional markets)	Moderately unsatisfactory
Output 2.4: Community based tissue culture (TC) industry established to support the demand generated from CCA coping livelihoods diversification activities	2.4.1. Number of TC derived plant material purchased per year by small holder farmers from established mother gardens (Not target, no baseline)	Moderately satisfactory
Output 2.5: Bio-digesters to convert banana waste into biogas established to support income diversification activities and resulting in digested slurry to be used for soil fertility	2.5.1. Number of farming HH disaggregated by HH head, applying bio-digest residue as fertilizer for banana plantations (No target, baseline 0?) (No indicator for support for income diversification)	Moderately unsatisfactory
Output 2.6: Water purification and water harvesting technologies to support livelihoods diversification and income generating activities	2.6.1. Increase in number of water harvesting facilities set up in vulnerable communities (No baseline, unclear target) (No indicator for support for income diversification)	Moderately unsatisfactory
Component 3. Lessons learned and best practices from policy changes, capacity development initiatives and pilot plants disseminated		**Satisfactory**
Output 3.1: Guidelines on best practices and project knowledge disseminated within the country and sub regions through websites, publications and communication products in various languages	Number of similar projects and initiatives started as a direct result of or citing the project (no target)	Satisfactory
	Number of external events, conferences, and show where project results are highlighted (no target)	Satisfactory
Component 4. Quality control and efficient monitoring of project intervention to support adoption by CC vulnerable communities		**Unsatisfactory**
Output 4.1. Quality control and efficient monitoring of project intervention to support adoption by CC vulnerable communities	Baseline assessment of measurable indicators in the eight Districts	Unsatisfactory
	Number of communities based primary processing/farming groups, district and governmental agency staff, disaggregated by sex, trained to monitor the project (no target)	Unsatisfactory

Source: Annex 6

- **BCCA is rated Moderately Unsatisfactory on Effectiveness**

Beneficiary targeting and gender mainstreaming

The project did not sufficiently reach the target population. The project focused on improving the CCA through income diversification among small holder farmers in vulnerable communities and set out to support farmers groups that were particularly vulnerable to climate change, by helping them develop value addition activities. However, a weak targeting strategy together with time and resource constraints affected project outreach to these groups.

Among the facilities supported, only two enterprises were cooperatives and the remainder conventional private enterprises. Supporting comparatively well-established enterprises may be a rational approach given limited resources and objectives of achieving important growth and spillovers. It was not necessarily consistent with the project's objectives of supporting facilities that were more vulnerable to CCA, however, and did not support the original focus of supporting farmers cooperatives.

The project reached a limited number of farmer beneficiaries, and their vulnerability level is not known. There is no baseline or monitoring information available on income status, food insecurity or climate change vulnerability of farmers that participated in tissue culture or VA activities. The only assessment that can be done relative to socio-economic impact of the project is related to the bio-digesters. Since the bio-digesters were distributed to households with livestock, they are more likely to benefit comparatively well-off farmers.

There is no negative environmental impact of the project.

The project has generally failed to mainstream gender. A gender assessment was produced providing recommendations on mainstreaming. Women were well targeted by sensitization activities, where they made up 37 percent of the participants, but have not been sufficiently represented in any of the productive activities, whether value added or tissue culture. In value added activities, one third (33 percent) of participating farmers were females, but this share was lower than the average for value added activities in the banana value chain in these regions. In the tissue culture component, females are highly underrepresented, making up only 10 percent of direct beneficiaries and 2 percent of indirect beneficiaries.. It is striking that gender issues are not even comprehensively discussed in the reports produced as output by the project, especially under component 1.

- **BCCA is rated Moderately Unsatisfactory on Environment and Socio-economic aspects**
- **BCCA is rated Unsatisfactory on Gender mainstreaming**

Q5. What progress has been made to impact?

Progress to impact should assess progress towards increased resilience to climate change and achieved income and food security (impact as expressed in the logical framework). The specific targets were (i) at least 5000 small-holder farmers disaggregated by sex with improved assets* (such as soil and water conservation structures, water harvesting structures) to adapt to CC and (ii) at least 5000 small-holder farmers disaggregated by sex reclassified as income and food secure. Unfortunately, there is no baseline or project monitoring data to establish income levels, food security or investment in climate change assets. During the field mission, the team collected information from group discussions with farmers on current income vs income 5 years ago. The information shared by farmers suggests that the experiences were varied. These groups are very small and therefore non-representative samples and should not be seen as definite evidence.

The participation in value chains – even short and local ones – appears to have positive effects for farmers income. Farmers supplying juice to the juice factory had increased their earnings almost five-fold. For wine supplier farmers, earnings have also increased, but more modestly, around 10 percent. The discussions suggest these increases are linked to increased demand from VA facilities. However, given the delay in project implementation, and as mentioned in relation to production increases, there is not a strong basis for concluding that these outcomes can be attributed to the project.

Field Mission Picture 3: Banana Juice Income: Funding a House and Supporting University Education

Access to clean banana plants has not yielded positive impacts on income. The impact of distributing pest/virus free plants is likely long-term and not measurable during project life-time. The experience of tissue culture beneficiaries is nonetheless interesting as those interviewed during the field mission, none of which were involved in VA activities, earned less than 5 years ago. At that time, bananas were in short supply due to pest which resulted in high prices. At the time of the evaluation, bananas were in high supply, with very low prices. This suggests that support to banana production/productivity without additional activities to expand markets (demand) is not a straightforward endeavor as price fluctuations distort incentives.

The limited outreach to a broader community of farmers holds back progress to impact. The BCCA demonstrates that higher demand for bananas from value addition activities can raise farmers income. Yet, the project has only succeeded in reaching a fraction of intended farmers and there are no compelling arguments to expect a sudden acceleration in these numbers, given market access constraints. Nothing is known about these farmers food insecurity or income levels, although the income levels reported in the interviews cited above suggest that they belong to poor households. In addition, there is no evidence – for or against – that the income is further invested in climate change assets.

The TE identified a second implicit objective in the BCCA ToC, namely the implementation of climate change strategies and gender mainstreaming in the agri-business and rural development sector. Although a central activity under component 1, this impact is not measured by the project. The lack of activities at the level of value chain actors more generally, as well as on DLGs strategy implementation, indicates that impact will be limited even over time, however.

- **Progress to impact is limited and rated moderately unsatisfactory.**

Q6. What are the risks to sustainability?

Project results are not fully achieved in many areas. On many areas, sustainability of achievement is not the immediate concern that needs addressing: progress on achievements would first need to accelerate, or remedial action is needed (such as the nonfunctional chips factories), before sustainability can be discussed.

There are several factors supporting the sustainability of activities, First, the project is characterized by strong government ownership and remains a flagship project ten years after its inception. Other donors (FAO) working with national policy development have shown interest in the BCCA model, specifically the value addition approach to increasing resilience. Second, local government officers have been instrumental in implementing the project. A value chain resilience document/strategy has been produced that, if implemented, could guide local actors involved in the banana value chain.

Other factors threaten sustainability, however. First and foremost, COVID-19 continues to curtail mobility of input (bananas to facilities) and final products (to markets). This could not have been foreseen but remains a critical risk to development outcomes. A second threat to sustainability is the limited business and marketing capacity of the VA facility managers. A third factor is sharp price volatility of bananas, which affect farmers' incentives to sell. A fourth threat is the limited engagement in value addition activities outside of these facilities and the lack of (an identified) micro-business ecosystem to support other potential entrepreneurs.

Remedial and mitigation actions are needed and will require additional financing. The farmer group running a chips drying factory are worse off now than before the project started as new solar dryers are not functioning while original dryers now require renovation. Local governments will need more support to develop action plans for implementing strategies for the banana value chain, making use of the existing action plan, and to continue collaboration with the beneficiaries. Whereas COVID-19 is limiting opportunities for marketing, there is a need to devise a strategy to increase marketing activities for VA facilities.

- **Project progress sustainability is rated Moderately Unsatisfactory.**

Field Mission Picture 4: Chips factory showing faulty equipment

Q7. How efficient and cost effective has the project been?

Budget and Cost effectiveness

The funds from GEF, UNIDO and the private sector have been provided, with some modifications on the latter. The GEF and UNIDO contributions have been provided according to plan. From the private sector side, changes have been made among counterparts (as described above) which resulted in reduced financing. If in-kind contributions of project beneficiaries (Value added facilities), largely in the form of land, are taken into account, the reduction in counterpart financing is compensated for.

The status of Government co-financing and how it should be accounted for is unclear. Monitoring data are incomplete and regarding government co-financing, which made up the largest share of the budget and which, in the project document approved by GEF, is listed as planned to be contributing virtually all in cash (except staff-time). There have been no cash transfers into the project from the Government, however. The project team and the Government consider contributions in-kind through activities under 2.4 (establishment of TC culture gardens) to be equivalent to exactly the outstanding sum of 6,090 T.USD. Government contributions also include routine banana extension services and monitoring and evaluation of the project through staff time. That the Government should be contributing in-kind rather than cash is not surprising, and this should likely have been specified in the design. However, the ex-post valuation of the in-kind contributions appears to be somewhat ad-hoc and it is not really clear how the Government contributions (except staff time) for especially tissue culture have been valued.[12] These uncertainties complicate project monitoring and evaluation of efficiency and cost-efficiency.

[12] See Annex Table

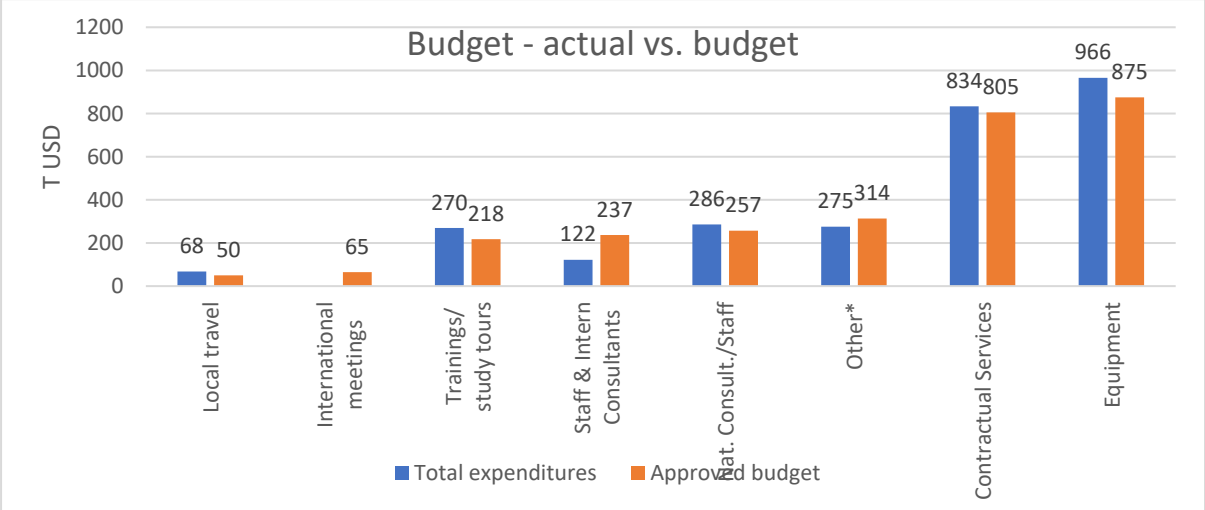
Table 5: Budget vs actual (T. USD)

	BUDGET			ACTUAL			GAP
	Cash	In-kind	TOTAL	Cash	In-kind	TOTAL	
TOTAL	8,896	784	9,681	2,829	951	3,780	-5,900
GEF	2,615	0	2,615	2,615	0	2,615	0
Total Co-financing	6,281	784	7,066	214	951	1,165	-5,900
UNIDO	44	188	233	44	188	233	0
GoU	6,090	36	6,126	0	239	239	-5,887
Private sector	147	560	707	170	524	694	-13
Private sector - counterpart	132	150	282	120	41	161	-121
Private sector - beneficiaries	15	410	425	50	484	533	108

Source: Project M&E, May 2021. Note: does not account for Government co-financing in the form of in-kind support.

Focusing on the grant money, the project has spent more than expected on equipment, and training/study tours, but less than expected on international consultants and travel. Expenditures have been the highest in 2017 (for contractual services, for upgrading) and in 2019 (due to expenditures on equipment). Spending on equipment for the facility upgrading was, together with contractual services, the two most significant budget items at inception. Both these categories exceeded their budget, as did spending on training, workshops and study tours, and on national consultants. This was compensated for by underspending on international consultants (at half of the budgeted expenditures) and international meetings.

Figure 4: Budget execution versus planned budget, by main category.



Source: UNIDO project management database. Does not include co-financing. *Other includes other direct costs and premises.

The high spending on equipment, while more or less in line with budget, is pertinent as value added facilities increased production before the equipment was in place. Access to modern equipment is very likely an important and productivity enhancing factor for facilities. Yet, the project monitoring data suggests that production increased significantly before equipment was (fully) installed in facilities during 2020, which then begs the question if the equipment upgrading, while valuable, is the most cost effective way of delivering project objectives.

Project financial management complied with requirements. The team has not been able to verify procurement and financial reporting procedures beyond what is available in project annual reports and the final budget execution from UNIDO's. The available documentation suggest that the project has followed standard procedures: procurement guidelines have been followed with public tenders for different activities such as water purification, facility upgrading, equipment etc., and expenditures have been monitored regularly. The MTR, which was undertaken in the field, also stated that the project follows guidelines and regulations imposed by UNIDO and GEF. A concern in terms of resources management is the installation of faulty equipment at the chips factories, however, and the fact that these have not yet been replaced.

The cost effectiveness of the project cannot be rigorously estimated. The two key outcomes of interest are number of farmers with access to higher income through VA diversification, and investment in CCA assets. There is no baseline or project monitoring of either income levels or CCA investment that would permit an evaluation of project impact in monetary terms against its costs.

An estimate of cost per community beneficiary shows relatively high costs. The project aimed to involve 5000 farmers in value addition activities over time. With the budget of 9M USD, this implied just under 2,000 USD per beneficiary. In reality, the number of direct beneficiaries (including farmer supplying the VA facilities, farmers receiving plantlets to establish mother gardens, and households receiving bio-digesters) was much lower, at just under 600. With actual expenditures around 3.8M USD, the cost per beneficiary is several times higher, reaching 6,400 USD. Looking only at VA activities which accounts for most of actual expenditures, the cost per beneficiary is higher. If, conversely, the in-kind contribution of the Government is considered to have fully materialized, the cost per beneficiary increases by a factor of three.

The limited involvement of community members in project activities thus lowers the cost effectiveness of the project substantially. For the project to pay off over, say, 5 years, each direct beneficiary would need to earn an additional 1,200 USD (approximately 9M Uganda shillings per year) from value addition activities, tissue culture, or, in the case of bio digesters, from savings or other benefits such as additional earning opportunities or higher productivity from bio-slurry. These are unrealistically high levels of income. These back-of-the-envelope estimates serve to show that for development projects to achieve cost effectiveness and motivate select investment in private enterprises, there is a strong need to achieve community level benefits beyond the direct beneficiaries.

- **BCCA is rated moderately unsatisfactory on efficiency,** mainly due to low cost effectiveness and despite adequate financial management.

Project Management

Project management set-up was comparatively effective. The team leader was based in Vienna and the project management unit in Kampala. The project was implemented largely by local government officers. The Project Steering Committee functioned as a coordinating and information mechanism for a wide variety of stakeholders including MAAIF, MITC, NARO, UNBS, etc. No private sector stakeholders (not direct beneficiaries, but e.g. representatives of farmers or value addition industries) were involved, however.

The synergies with MAAIF's locally implemented activities in banana cultivation should enhance, efficiency, all else equal. By tapping into MAAIF's presence in the field and ongoing activities to strengthen productivity and resilience in the banana crop sector, the project could draw on existing agricultural expertise as well as local government knowledge for context adaptation and thus lower implementation and coordination costs.

Strong local ownership has implied some difficulties in merging project partner visions and procedures. The set up with implementation led by MAAIF requires coaching and supervision to ensure procurement and fund management principles are followed according to GEF and UNIDO rules. MAAIF leadership also meant the project team had to reconcile and coordinate GEF and MAAIF visions. Given that the project was conceived in Uganda, is still seen as

a livelihoods project, this may have required additional efforts to lift CCA aspects in design and implementation.

The complexity of the project has spread resources thin, with resulting difficulties in implementing and monitoring all activities. The high degree of local implementation is effective for ownership and sustainability but may require much more capacity building and support than the project could provide, especially given the many activities implemented simultaneously. The project did incur important implementation delays also prior to COVID-19, with equipment installed during 2019 and 2020. The project and was terminated 2.5 years later than planned.

Some activities were not implemented as planned. Some of the missing activities have repercussions on the overall capacity of the project to deliver impact**.** For example, the limited outreach to value chain actors undermined the efforts to gain broader traction for CCA strategies, the role of VA approaches in such strategies, and gender mainstreaming. Capacity building for business management skills, and local promotional activities (promotion events, contractual agreements with other SMES, local partnerships for finance) would have contributed to the financial sustainability of facilities, and potentially built opportunities for more business in the local communities. In addition, the project document spells out ambitions to look for synergies with, e.g., MITC on trade promotion, the World Bank on extension services and technology in agriculture, and the UNDP/MWE on climate change. These were not explored.

Table 6: Missing activities and impact on overall project

Missing activities:	**Comments on impact of missing activity**
Agricultural sector strategic plan support Changed to NISSP	None- ASSP was already being revised with UNDP, replaced with NISSP (NIP).
Targeted sensitization workshops for SMEs, investors and other agro-based value chain actors on incorporating CCA strategies in their operations	SMEs and other value chain actors not directly supported are not involved Lack of sensitization along value added chain limits impact on CCA in the banana value chain and rural development sector as a whole
Train banana processors in basic business management skills including preparation of business plans, financial planning among others	Growth opportunities and financial sustainability of facilities threatened
Contractual agreements with other SMEs and facilities, local partnerships for access to finance, investment forums. Instead, focused on agricultural fairs	Banana processors not accessing markets as needed Limited local demonstration effects

The MTR provided several recommendations that were not acted upon. Mid-term reviews play a critical role in monitoring and adjusting projects to improve performance. Unlike the TE, the MTR was undertaken in the field, albeit – given the delay in take-off - too early to make an informed judgement on project activities, especially with respect to value addition activities. The ToC developed in the MTR has not been used in this evaluation, reflecting both diverging understanding of the project's logic between the evaluation teams, and changes in the actual project deliveries since 2017. At the time of the MTR, facility beneficiaries had been identified, but the process had gone no further than establishing MoUs. Whereas the MTR recognized the high relevance of the project, it also raised important flags regarding gender mainstreaming, weak

M&E framework, government financing gaps and inadequate technology solutions, which already had become apparent, despite the project's early stage. The TE team could not find that MTR recommendations had been implemented, but this may partly reflect the fact that while relevant, the MTR recommendations were not all operational. Two of the key constraints (M&E, technology) were difficult to address once the project had started, one (government funds) was outside of project control. The project has not been able to address the weaknesses related to gender mainstreaming, possibly reflecting capacity constraints among the main implementors (local governments). The findings by the MTR on Government funding, which are not consistent with the more recent interpretation that Government did provide its co-financing, but as in-kind contributions, were clearly not disputed by the project team before the finalization of the report.

Table 7: MTR recommendations and follow-up

Recommendation	Actions
Recruit an M&E specialist to look into ToC, logframe & performance indicators; Revise log-frame with relevant indicators	Action not taken
Set gender targets alongside the logframe and share them with PSC	Action not taken
Include indicator on farmer revenue together with an appropriate methodology to measure data	Action not taken
Assess the implication of the limited GoU co-financing on implementation and devise strategy to address this	Action not taken
Develop an implementation plan needed to bridge the gap lost (6-9 months) due to delay in signing of the agreement	Action not taken
Develop a communication plan and objectives for the project	Action not taken

- **BCCA is rated moderately unsatisfactory on results-based management.**

Partners

UNIDO

UNIDO has proved both agile and flexible played a in identifying and adapting the BCCA project to secure funding. The project idea had originated with the Government in 2010 already, and UNIDO's innovative and timely support helped transform the BCCA from an agricultural to a climate change adaptation project. While this support was instrumental, UNIDO let the Government retain the main responsibility which has contributed to the strong ownership and sustainability of the project and the dissemination of the results. Some planned private sector partnerships fell through (especially Afri Banana Products) but in lieu, the project team successfully struck a partnership with Biogas Solutions, a social enterprise active in the biogas sector which provided installation, capacity building and some bio-digesters to households.

However, the quality at entry was weak as reflected in gaps in project logic and in poor M&E framework. This should have been addressed through quality control at entry. The project design displays UNIDO's strengths such as technology transfer in agriculture and industrial sectors, but also insufficient attention to "softer" areas such as market access, business and entrepreneurial skills, and, importantly, climate change adaptation issues. The project team could have sought support from more expertise for these areas during the design phase.

UNIDO has held a central coordinating role, but the Government has remained in the driver's seat. UNIDO has convened the PSC and coordinated the project but has also continued to let the Government lead activities and decide on follow-up actions. Stakeholders and beneficiaries

in the field view both the project team in UNIDO HQ and the local project team as engaged, responsive and solution oriented. Several informants highlight how the project team handled the complex challenges related to COVID-19 with considerable efficiency, reorganizing activities to adapt to restrictions. During 2020, many activities were upheld (adapted in a COVID-compatible manner) and the project could, inter alia, deliver equipment to the facilities.

The quality of monitoring and recording and corrective action based on information has also been low. As reiterated through this report, a poor M&E framework from the outset complicates monitoring in practice. The challenges of a decentralized and government-owned implementation, divergent views on project objectives and fragmented activities have led to activity and output focus with little attention to the transition to outcomes and very weak recording and follow-up including on urgent recommendations made in the MTR.

- **UNIDO's contribution is rated Moderately Unsatisfactory,** on account of the weak quality at entry and weak M&E.

The GEF shares responsibility for quality at entry with Uganda. Initial proposal reviews should have recognized the difficulties relating to ambitious design and limited resources in view of the expected outcomes as well as the problems inherent in the logistical framework, especially the limited quality of indicators or proposed means to measure them, and the potential project logic gaps in linking activities to climate change adaptation. GEF funds have been released on request and on time. However, GEF has not responded to MTRs or actively engaged in strengthening the project, especially on the climate change adaptation work.

- **GEF's contribution is rated Moderately Unsatisfactory.**

The Government of Uganda

The Government, especially MAAIF, has initiated, implemented and led the BCCA and has been instrumental in building project sustainability. The MAAIF has held ownership of the project, providing expertise through its district officers in production and productivity of banana, together with the National Agriculture Research Organization (NARO). Collaboration with the PMU and the team in Vienna has been productive and effective. The MTIC, also part of the PSC, brought in UNBS to provide training, and information on regulations, which proved instrumental in achieving the product certifications which are necessary for successful marketing. The Ministry for Water and Environment (custodians of the CCA agenda) formed part of the PSC but has not been very actively involved, however.

However, there was a significant delay in getting the Government to sign off on the project. Delays occurred because of disagreements in how the Government would receive GEF funding. The contract needed to pass by the Solicitor General, removing it beyond the reach of MAAIF. The Government did not co-finance the project with cash as planned but has integrated BCCA activities in its regular extension and research services.

The office of the GEF OFP within the Government has participated in the PSC but has not been actively involved in the project. The focal persons in the Ministry of Finance formed part of the PSC. They have followed the project as observers and see it as a strong model for replication across agricultural sectors.

- **The Government's contribution is rated Moderately Satisfactory.**

Monitoring and evaluation

As noted, the M&E framework established at the outset was weak. Specifically, the framework suffered from a lack of focus on outcomes and overall low relevance of indicators. The lack of a clear M&E framework indicating what constitutes evidence for outputs and outcomes, and what should be the source of such evidence and the poor choice of indicators contributed to project monitoring focusing on outputs and activities, rather than the objectives of the project.

Notwithstanding significant quality gaps, the project has followed basic due diligence in terms of undertaking M&E activities. Seven PSC meetings have been held between 2016 and 2019, biannually in 2017-2019 in line with the M&E plan. Annual progress reports are available for 2017-2020. A mid-term review was undertaken in 2017 (delivered January 2018). Local representatives (district officers) have been trained on project monitoring.

In practice, project monitoring practices have been insufficient to provide good oversight and evaluation material and support results-based management. The project has been monitored regularly by the project team, but the day-to-day responsibility of M&E has rested on the capacity of local government. A weak M&E framework established at the outset, the delay in take-off, the need to satisfy several different reporting requirements, the complexity of activities under the project, and low local M&E capacity, has resulted in insufficient documentation of project monitoring information.[13] Part of the problem originates in the M&E design, but insufficient monitoring and mere record keeping during implementation is also to blame. For example, (i) minutes are only available for two of the seven PSC meetings (ii) annual reports differ in reporting format and sometimes on indicators and data, which makes it difficult to track progress across years. The TE team takes the opportunity to reiterate the tremendous challenges this has posed for the evaluation work.

- **M&E is rated Unsatisfactory.**

[13] Some information was also lost due to technical problems, but that this happens also points to inadequate information management practices.

4. Evaluation area 3 - main takeaways

Q8. What are they key findings from the project?

Overview

The BCCA has several strong points. Its objectives are highly relevant to Uganda, important from both climate change and poverty perspective. The project has successfully helped upgrade 5 facilities and raise quality of wine and juice products, and anecdotal data suggest farmers have benefited from these interventions, albeit at a much more modest scale than expected. 8 out of 9 facilities remain active at the time of the terminal evaluation, despite the hardship imposed by the pandemic. Notwithstanding the restrictions related to travel and social distancing, the project team has managed to continue to implement and monitor the project during the project's final year. The BCCA was largely implemented by the MAAIF, is well anchored in Government policy, and is well known and in fact considered a flagship diversification/agri-business project within the Government as well as by other stakeholders. The BCCA approach is seen as having significant potential for replication in other regions and for other crops.

The high profile of the project makes it even more important to critically examine areas for improvement. Four broad conclusions can be drawn from the terminal evaluation.

First, government ownership and participation in implementation has built the basis for project sustainability and the potential for replication. The BCCA largely originated in the Government and reflects Uganda's priorities. Implementation on the ground has largely been undertaken as part of the MAAIF's regular extension services. Although this may have introduced serious capacity constraints (see below), it has built a basis for project sustainability.

Second, an overly complex project design has taxed human and financial resources, to the point where some key activities were not delivered in the form intended, capacity building with implementing agencies (local government) has not been sufficient, inadequate technology solutions were selected, and different project activities have been de-linked into parallel but unrelated tracks, reducing opportunities for synergies.

Third, the project design contained important gaps in the results chain which affected implementation and performance. Important examples include links between strategy development and implementation, the importance of constraints such as market access and infrastructure availability for value addition, the impact of price fluctuations on farmer incentives, and the mechanisms to increase spillover effects from value added activities.

Fourth, the lack of targeting strategy has resulted in insufficient benefits for vulnerable households, women, and communities. As a result of the two previous points, project delivery has centered on activities rather than outcomes, which has reduced the community spillovers from the project. The project has successfully delivered analytical reports, facility upgrading, training, sensitization workshops and similar outputs, but has not focused sufficiently on pursuing the community-wide benefits, whether in terms of income diversification and climate change adaptation, that support its logic. Gender mainstreaming has fallen through in both design and implementation, and the project has not been able to involve a sufficient number of farmers to credibly have impacted community-level vulnerability or achieve good value for money.

Detailed findings

The theory of change would have needed to be better developed to transform the project from an agri-business project to a CCA project. The BCCA was born as a livelihoods diversification project and has been adapted to include a climate change adaptation focus. The transformation is not a problem in itself as income diversification through value addition is a valid CCA strategy. However, the transformation requires a significant effort to merge partner visions around project objectives and adapt a new set of requirements. The ToC would have benefited from a more explicit logic as to how different activities would achieve income diversification and – especially – CCA outcomes for the target population, and what timeframe could be expected for

changes. Looking at implementation, the BCCA comes across a "green" industrial development/livelihoods project, with limited climate change adaptation mechanisms incorporated.

The project suffered from an overly complex design with many implicit but weak links between parallel activities that partly unraveled during implementation. Complex design, especially coupled with decentralized implementation structures, requires high capacity (resources) to plan, implement, monitor and evaluate in the field, that were not available to the team. The design assumed significant and rapid behavioral changes with beneficiaries integrating new knowledge gains with new assets and income opportunities to invest in value addition activities. That households would make further investment in climate change adaptation assets was taken for granted. During project implementation, some of these links fell apart which resulted in a more fragmented set of activities, all requiring significant implementation capacity (i) policy development (ii) sensitization of farmers (iii) support to value added facilities (iv) tissue culture distribution, and (v) provision of bio-digesters to households. As implemented, these activities had few synergies between them. Project activities related to tissue culture industry and bio-digesters can be very valuable in their own right but could have been removed from the project without affecting the overall logic of strengthening access to value addition activities to enhance investment in CCA - which is at the center of the project ToC and the most complex and costly component of the project.

With fewer activities, freed up resources could have been used to strengthen other weak links in the project logic. These include activities related to market access for VA facilities which is a binding constraint to VA growth. To strengthen community benefits, more resources should have been directed to supporting rural households in starting up value added activities or supply semi-processed input to value-addition facilities (see example of juice facility) and foster community investment in climate change assets, including water harvesting techniques, given the importance of water shortages for value addition.

Project preparatory work did not pay sufficient attention to some critical issues. The behavior of the market for bananas and the impact of price fluctuations on farmers' income and incentives could play an important role for project sustainability – history shows that when harvests are good, prices may drop to the point where banana farmers are not willing to sell. Thus, focusing exclusively on increasing productivity and output may not, in fact, increase benefits to farmers. Likewise, bio-gas was chosen as the technology solution to mitigate the high risk of energy supply constraints in the targeted communities and reduce banana peel waste, but was, in the end, not suited for this purpose (although it is a climate change supportive technology in its own right). Water availability remains a key constraint for start-up of value addition activities in the targeted districts (as well as for agricultural productivity and household overall welfare), yet, the project does not address this key constraint at a community level.

A lack of targeting strategy curtailed the project's opportunities for achieving some key outcomes. Although the project aimed to support vulnerable households (from a CC and poverty perspective), vulnerable facilities, and women, there was no clear targeting strategy to describe how to identify these groups, how to reach them with project activities, or monitor outcomes specifically for them. Recommendations from the gender analysis undertaken as part of project inception were not incorporated into the design. Lack of indicators against which to measure higher level progress for these groups contributed to swaying project monitoring focus from outcome/impact to outputs.

Project implementation was largely production and output focused. Implementation focused on increasing production and quality of products in the value-added facilities and in ensuring the tissue culture distribution. This was a necessary but not sufficient condition to achieve project outcomes. The project logic hinges on rapid increase in sales by value added facilities that will increase demand for bananas from farmers and thus improve their livelihoods. The technical upgrading, training and collaboration with UNBS was successful in achieving higher product standards, which is important for increasing access to markets. However, as standards needed to be achieved before marketing activities could begin, there was limited time for market activities.

Other constraints faced by SMEs in accessing markets such as linking up with larger buyers, was not considered. CCA or gender sensitization with other value chain actors were limited to a validation workshop. Although water access is a key constraint for farmers everywhere, water harvesting assets were not provided to communities, only to facilities, and there is no evidence that communities were inspired or had the resources to undertake such investments on their own.

The pay-off to training and facility upgrading, in terms of increased productivity and production, appears to be higher than that of equipment. The provision of new equipment is likely a significant benefit for value added facilities but it is also the single most costly line item in the budget. At the same time, project monitoring data, such as it is, suggest that facilities increased their production already after facility upgrading and training activities and before new equipment arrived (mostly in 2019). If this is the case, the value of investing in equipment should be compared with alternative such as providing training and facility upgrading to more beneficiaries.

The limited impact on communities and farmers also resulted in a higher than planned cost per beneficiary. The project was significantly delayed in implementation, reflecting delay in signature but also likely unrealistic expectations regarding local capacity, the impact of knowledge transfer, etc. Once on the ground, the project has remained within budget and the allocation of resources has remained relatively close to budgeted amounts. Ultimately, the project has not been able to involve a sufficient number of farmers or community members to credibly have impacted community-level vulnerability or achieve good value for money, however. The project set-up overestimated the potential of facilities to incorporate large numbers of farmers over a short period of time, and the number of farmers de facto engaged in value added activities was much smaller. The number of indirect beneficiaries from tissue culture activities significantly higher but the impact of this activity on farmers income depends on higher demand for bananas from increased value addition activities – which has not taken place to a significant extent. This resulted in relatively high costs per beneficiary, so far.

The project would likely have needed more capacity building to accompany the decentralized implementation structure. The project did well to tap into local government structures and activities; however, in doing so, lost some control over project implementation. This could be compensated for by intense capacity building, technical assistance and monitoring, but given the project's many activities, this would have over-stretched PMU capacity.

The weak M&E framework has derailed project M&E through implementation and limited the ability to measure project progress. The BCCA's M&E framework suffers from lack of baselines and unclear targets, especially with respect to higher order development objectives and impact. Some of the recommendations in the MTR (e.g., resolving gender issues or identifying farmers' income) have remained unresolved. Ongoing M&E has centered on reporting achievements with respect to activities and outputs, but not outcomes or impact. The quality of monitoring and documentation in terms of standardized and complete reporting has also been weak, even for activities. The project has not adapted to the recommendations from the MTR on remedial action for gender mainstreaming or incomplete M&E framework.

Q9. Recommendations for project identification, design and implementation?

A key objective of a terminal evaluation is to provide recommendations and lessons learned. Given that the project has ended, the terminal evaluation is not intended to provide recommendations for improvement of the BCCA, with the exception of two remedial/follow-up actions. Beyond these, recommendations to the Government focus on measures that could be taken to revise and scale up BCCA in the future. Recommendations for UNIDO and GEF focus on improving project design and, for UNIDO, implementation issues that are applicable to a broader set of development projects.

UNIDO and the Government of Uganda– remedial and follow-up action on BCCA

Repair or replace malfunctioning equipment for chips factories. Action is needed to review with suppliers and replace the malfunctioning equipment in the chips factories.

Support to developing local climate change adaptation action plans. A joint strategy has been prepared for the 8 districts, but no further actions have been taken. In order not to lose this investment, the Government and UNIDO should look for opportunities to channel the analytical work prepared into locally owned and adapted action plans. Synergies with other donors, including UN agencies, should be explored.

The Government – strengthening and scaling up BCCA

Support livelihoods diversification projects in the context of CCA. Livelihood diversification as a means of reducing vulnerability to climate change remains a highly relevant project approach. In the case of perishable crops, such as bananas, value added activities incorporating good climate change adaption practices increase the shelf-life of the crop and contribute to higher and more stable earnings.

Reduce knowledge gaps to strengthen project preparation. Uganda has a strong technology focused research agenda on bananas. Complementary analytical work is needed to identify (i) the most critical CCA assets for the target population and key constraints to CCA investments (income, information, capacity) (ii) factors behind demand and supply in banana markets and the role of information and coordination constraints, neither of which were clearly identified in project preparation.

Reduce complexity and focus on key constraints and beneficiary targeting. A streamlined version of this model focusing on linking climate change adaptation strategies for farmers with value added activities would reduce capacity constraints. A leaner version could focus on value addition and strive for a less fragmented approach supporting fewer project components with stronger synergies and more beneficiaries, and clear strategies for how to maximize community benefits, ensuring stronger vertical (results chain) integration as opposed to horizontal (synergies between parallel activities with different objectives).

A lean BCCA replication could adopt one of two approaches (i): focus on supporting a few higher capacity facilities (as was the approach now) that can be expected to achieve quality standards over a short time and increase their sales, and concentrate on strengthening community spillovers (ii) reach out to more actual/potential entrepreneurs with smaller transfers for each beneficiary, and help these farmers integrate into higher value-added chains, with access to larger players. The experience from BCCA suggests that training – on processing techniques as well as hygiene – and certification helped some facilities achieve significantly higher production. Thus, the Government may wish to evaluate whether it makes sense to directly target more SMEs (existing or potential) with basic training and coaching in such projects, rather than concentrating on a few facilities with expensive equipment upgrading, as this would also reduce cost per direct beneficiary and likely make the project more scalable. Whichever approach is chosen, the focus should be on reaching vulnerable and female farmer and community beneficiaries directly or indirectly.

Prioritize capacity building for supported processors and farmers. The experience from BCCA suggests that training – on processing techniques as well as hygiene standards – and certification, together with physical upgrading, helped facilities achieve significantly higher production even before the installation of new equipment was completed (in 2019 and 2020), and the Government should prioritize project activities accordingly.

UNIDO and GEF – strengthening project design

Establish project ToCs that provide a shared vision between partners, are outcome focused and have credible result chains between outputs and outcomes. This process will help identify and reduce key constraints and risks to project implementation and effectiveness and help design actions that support weaker links. It will also help review whether project timeframes for expected results are realistic. Ensuring common visions is even more important when two distinct approaches are merged, as in the case of BCCA (agri-business value chains/livelihoods, vs. CCA). CCA should not be just an add-on but should be clearly defined and integrated throughout project design.

Ensure high quality preparatory work supports the ToC. Analytical work supporting project design for livelihoods and value chain interventions needs to move beyond output-oriented analysis (productive capacity, product quality) and focus more on market-oriented approaches such as constraints to increasing sales. Technology solutions should be appropriate for the project context. Gender mainstreaming analysis must address critical constraints to female participation.

Strengthen targeting strategies to ensure that the project reaches the intended beneficiaries, and at the level of scale expected. To achieve cost effectiveness, poverty focus and gender mainstreaming, projects supporting a small number of value addition activities/facilities need to ensure significant spillovers to the community – through more jobs, suppliers to value addition activities, shared assets, demonstration effects resulting in more enterprises, etc. Gender mainstreaming efforts go much beyond setting gender targets for beneficiary participation. Project design must critically evaluate how female beneficiaries are best reached, what activities are likely to attract them, and what specific constraints they are facing to engage project activities.

Ensure quality of proposed M&E framework and plan and safeguard resources for M&E. The M&E plan should, inter alia, (i) set out the responsibility of M&E within the team (collection of data, organization of data) (iii) ensure that SMART (Specific, Measurable, Attainable, Relevant, Time-based) target indicators are used and their sources specified (iv) establish baseline data (v) specify regular monitoring and documentation activities and processes for organizing information (v) ensure sufficient resources.

UNIDO – strengthening project implementation

Safeguard sufficient resources to ensure capacity building and project oversight. To support the decentralized implementation structure, UNIDO needs to ensure sufficient human resources are available to provide high quality technical assistance and undertake monitoring activities to ensure that priorities are aligned, and due diligence procedures followed. Gaps in monitoring quality, for example, need to be highlighted and addressed early on in project implementation.

Lessons learned

Some of the lessons learned from the project are inherent in the recommendations above with respect to strengthening project design and implementation. More broad lessons are defined as follows:

The importance of quality control at entry including ToC/logical framework development, targeting strategies and M&E framework cannot be understated. Ongoing projects are difficult to amend**.** Some of the more significative flaws in the BCCA design should have been easy to detect such as inadequate target indicators and the lack of means of verification. Others, such as appropriate targeting strategies, need more deliberation. The TE team is not familiar with GEF

or UNIDO project quality at entry procedures, but standardized approaches may help to identify obvious gaps.

Targeting techniques must be mainstreamed in project design and should be integrated with monitoring and evaluation framework. Development oriented projects are generally aimed at poor and vulnerable households but fail to identify what "poor and vulnerable" means and how the concept can be operationalized in both targeting and M&E frameworks. This is a critical problem in projects as it was in BCCA. In country level statistics, poverty and vulnerability are generally estimated on information emanating from comprehensive household level surveys beyond the reach of project monitoring systems. Like many other donors, UNIDO needs to reflect on what vulnerability more concretely means in terms of household composition and characteristics, and how to measure it. In poor countries/regions/districts, geographical targeting may be sufficient. If not, operational methods of collecting information on beneficiaries so as to determine eligibility and/or best methods for targeting should be developed. This may require developing a form of "rapid income survey", with key correlates of poverty, to be able to establish baselines and undertake monitoring.

Annex 1: Terms of Reference

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE

Independent terminal evaluation of project

Reducing Vulnerability of Banana Producing Communities to Climate Change Through Banana Value Added Activities

UNIDO ID: [Status]

GEF Project ID: 5603

March 2021

Contents

I. PROJECT BACKGROUND AND CONTEXT

1. Project factsheet[14][15]

Project title	UGANDA-GEF-UNIDO_ BCCA Terminal Evaluation
UNIDO ID	
GEF Project ID	5603
Region	Eastern Africa
Country(ies)	Uganda
Project donor(s)	GEF
Project implementation start date	04 December 2015
Expected duration	36 months (against the actual duration of 60 months)
Expected implementation end date	31 December 2020
GEF Focal Areas and Operational Project	Climate Change (CC)
Implementing agency(ies)	UNIDO
Government coordinating agency	Ministry of Agriculture, Animal Industry and Fisheries
Donor funding	USD 2,820,000
Project GEF CEO endorsement / approval date	13 August 2015
UNIDO input (in kind, USD)	USD 188,254
Co-financing at CEO Endorsement, as applicable	USD 7,065,502
Mid-term review date	January 2018
Planned terminal evaluation date	January – April 2021

(Source: Project document)

2. Project context

It is well documented that agriculture (and the agroindustry sector in general) plays a significant role in the socio-economic development of Uganda. Therefore, the project was designed to have a strong socioeconomic dimension, centering on the banana sub-sector and its value chain actors. Uganda is indeed the second largest producer of bananas in the world and the banana production occupies 30% of the national cropped land, by almost 1 million farm households, representing 24% of the total agricultural households.

Over the past 100 years, rising temperatures of about 0.5°C have been recorded in East Africa; mean annual temperatures of 0.7°–1.5°C are predicted by the 2020s. The mean annual temperature for Uganda increased by 1.3°C since 1960, an average rate of 0.28°C/decade. Climate change is predicted to have a significant impact on Uganda and while the poor and vulnerable groups are mostly likely to be impacted through damages to their assets, livelihoods, and food security.

The Government of Uganda (GoU) has therefore requested UNIDO to implement a climate-resilient livelihoods diversification project within its banana value chain development programme in order to achieve a number of key national adaptation goals, in line with national

[14] Data to be validated by the Evaluation team.

identified key strategies of food preservation, alternative livelihood systems and changes in agriculture practices.

The project was designed to have an impact in the country by contributing to an increased resilience of small holder farming households to climate change (CC) and further contribute to income and food security. The project developed capacities for communities to engage in livelihood diversification value addition activities, such as vacuum packing and solar drying of fresh bananas, banana juice and wine making. The additional income created though these activities is estimated to stimulate further investments into Climate Change Adaptation (CCA) coping strategies by communities, such as on improving agricultural practices, construction of reservoirs for water harvesting and soil conservation, to strengthen adaptive capacities and resiliency to CC. In addition, the project also supports the closed-loop banana production through the conversion of banana waste to biofuel for the processing facilities as well as domestic use. The project seeks to boost production and revenues by increasing banana yields and production and by reducing the levels of pre- and postharvest losses due to the effects of CC.

In line with the mandate of UNIDO, the project is conceived to allow for an environmentally sustainable growth of the banana industry in the districts of Isingiro, Mbarara, Ntungamo, Bushenyi, Sheema, Rubirizi, Mitooma and Buhweju, by supporting additional value added technologies. Furthermore, the use of Tissue Culture (TC) derived planting material to replace disease plantation, ensures the sustainable supply of fresh bananas for food security and the envisaged demand for value added banana products.

3. Project objective and expected outcomes

The project aims to build resilience to climate change among vulnerable communities in Western Uganda, and contribute to their income and food security. Operational principles guiding the project are below:

- Ensuring national leadership and ownership – High degree of participation and engaging stakeholders will ensure high-level support and a strong sense of ownership;
- Ensuring multi-stakeholder participation and consultation – Participation is critical to generate sense of ownership;
- Building on existing and on-going work – Avoiding duplication and maximizing past investments by GEF, UNIDO, the government and donor community in relevant areas of support;
- Adopting a long-term approach – Finding strong links with critical development policy frameworks for long term policy change, developing critical capacities at local and national levels and leveraging a follow-up funding.

The project has four main components:

Component 1: Climate Change Adaptation (CCA) and gender equality for adaptation mainstreamed into National Development Policies/Strategies.

Outcome 1: CCA strategies coupled with appropriate action on gender equality are incorporated into developmental policies and implemented by stakeholders in the various sectors.

Outputs 1.1 National policy documents such as the Agriculture sector strategic plan updated with action on CCA and gender mainstreaming for adaptation.

Output 1.2 CCA coping strategies including gender equality for adaptation promoted among investors and other stakeholders in the agro-industries and rural enterprise development sector.

Component 2: CC resilience building of vulnerable communities in major banana producing regions and contribute to food and income security thorough livelihood diversification.

Outcome 2: Vulnerable targeted communities are increasingly participating in resilience building activities for income diversification and adopting alternative agricultural practices to tackle the high incidence of diseases affecting bananas, maintain soil fertility and sustain their agriculture-based livelihoods.

Output 2.1 Sensitization of female and male farmers in the target district on CCA coping strategies to build resilience to CC

Output 2.2 Small scale processing facilities established in target regions for vulnerable communities to engage in income diversification banana value addition activities

Output 2.3 Banana-based products from income diversification activities effectively marketed in locations with good marketing potential

Output 2.4. Community-based banana Tissue Culture (TC) industry established to support the demand generated from CCA coping livelihood diversification activities introduced to the vulnerable farming community

Output 2.5. Bio-digesters to convert banana waste into biogas established to support income diversification activities, and the resulting digestate used for soil fertility

Output 2.6 Water purification and water harvesting technologies to support livelihoods diversification and income generating activities promoted

Component 3: Dissemination of information and expansion of the strategy and project benefits.

Outcome 3: Lessons learned and best practices from policy changes, capacity development initiatives and pilot plants disseminated

Output 3.1 Guidelines on best practices and project knowledge disseminated within the country and the sub-region through websites, publications and communication products in various languages

Component 4: Quality Control Monitoring and Evaluation.

Outcome 4: Quality control and efficient monitoring of project intervention to support adoption by CC vulnerable communities

Output 4.1 Timely quarterly and annual reports prepared; midterm and final evaluation [using Adaptation Monitoring and Assessment Tool (AMAT)] of project activities completed

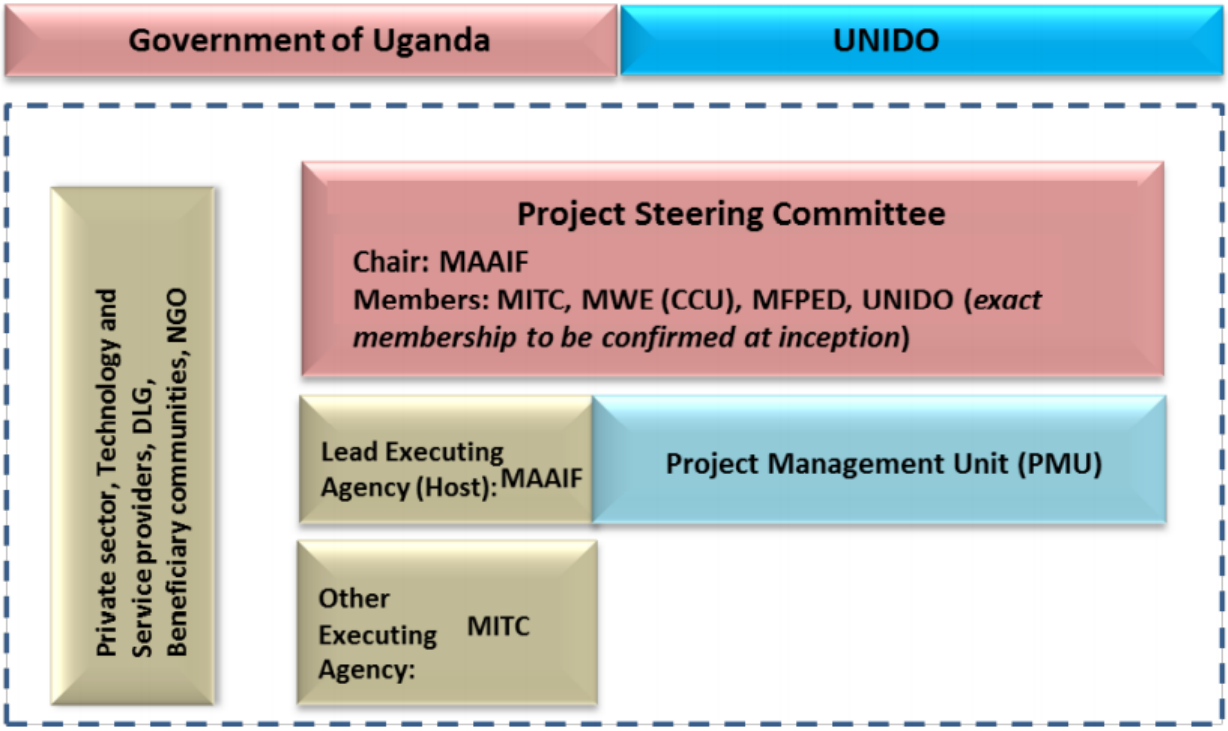
4. Project implementation arrangements

Ministry of Finance, Planning and Economic Development (MFPED) is the signatory of the project on behalf of the GoU (GEF focal point) and the Ministry of Water and Environment (MWE) coordinates the implementation and monitoring of national CC actions on mitigation and adaptation in different sectors. Other public and private sector stakeholders include: Uganda National Bureau of Standard (UNBS); Uganda Industrial Research Institute (UIRI); Micro Finance Support Centre (MFSC); Agro Genetics Technologies Ltd (AGT); Fruits of the Nile (FoN); Afri Banana Products Limited (ABP); Uganda Cooperative Alliance (UCA); Uganda Export promotion board (UEPB); District Local Governments (DLGs) of Isingiro, Mbarara, Ntungamo, Bushenyi, Sheema, Rubirizi, Mitooma and Buhweju districts. The project also partnered with the relevant CSOs such as UCA and Farm Radio International to provide services on information dissemination, training and incubation of farmers in aggregated processing groups.

A Project Steering Committee (PSC) was established with the responsibility of coordination among Government agencies and to provide the necessary guidance on project execution. The PSC ensures the high level support and participation of key stakeholders both at national and sub-national levels. The PSC is composed by representatives from key beneficiaries and stakeholders and has both executive and oversight roles.

A Project Management (PMU) is responsible for the day-to-day execution of all project activities, including direct monitoring of those activities contracted to consultants and other vendors. The PMU consists of a National Project Coordinator (NPC), a Project/ Administrative Assistant, Office Attendant and a Project Driver, as well as international and national experts, as required.

The project implementation arrangements are simplified in the diagram below.



5. Main findings of the Mid-term review (MTR)

A mid-term review of the project was conducted in January 2018. Main findings are listed below:

Relevance. The project is aligned with GoU, GEF, and UNIDO development priorities in relation to CC. The Banana Livelihoods Development project is highly relevant.

Effectiveness. The project's outputs are being delivered but are delayed due to the time it took to finalize the agreement with MAAIF. At outcome level, the project is doing exactly what it says it would be doing: building the resilience of banana producing households to cope with the effects of CC and be more resilient.

Efficiency. UNIDO and GEF procurement procedures are being used. The project ensures that it gets the best price for the goods and services it purchases. The PMU was set up early enough in the process and is fully operational. However, at ground level, implementation is coordinated by the staff of the DLGs. There did not seem to be any coordination with other GEF-funded projects in the country or other CC projects. Significant delays were noted because of the time it took to

finalize the agreement with MAAIF. The project's PSC meets regularly. The PMU and DLG staff also do routine monitoring to keep abreast of project performance and issues, and how to solve them when needed.

Gender. The project does not have a gender mainstreaming strategy, although both men and women are actually benefitting.

The main recommendations issued by the MtR are:

- Regarding the performance indicators, it is important for UNIDO to include in the design of its projects the mobilization of a M&E specialist to look at the theory of change, logframe, and performance indicators that are being proposed.
- Although the project did a thorough gender assessment at the beginning of the project, none of the findings is actually being used during project implementation. The PMU should set its gender targets and share them with the Project Steering Committee (PSC). Those targets should appear in the new logframe and be monitored for the remaining life of the project
- To help project teams do better work on M&E, for all projects that lack an M&E specialist UNIDO should appoint such a person based at headquarters to provide ad-hoc support to the team and help them establish a simple M&E system during the inception phase.
- The indicator regarding the revenue of the farmers has been dropped. Since the project goal is, partially, to increase farmers' revenues, UNIDO should bring that indicator back and set an appropriate method to measure it
- It is highly unlikely that the GoU will release all of its co-financed funds that were agreed during project design. UNIDO and the GoU should start assessing the implications of the lack of mobilization of those funds and, if necessary, review their targets with this project
- Because it took time for the project to finalize the agreement with MAAIF, it is important for the project to stay on top of the implementation of those activities now that the agreement has been signed.

6. Budget information

Table 1. Financing plan summary - Outcome breakdown[16]

Project components	Donor (GEF/other) (USD)	Co-Financing (USD)	Total (USD)
PC1- CCA and gender equality for adaptation mainstreamed into National Development Policies/Strategies	140000	200000	**340000**
PC2- CC resilience building of vulnerable communities in major banana-producing regions and contribute to food and income security thorough livelihood diversification	2205000	6247000	**8452000**
PC3- Dissemination of information and expansion of the strategy and project benefits	150000	412000	**562000**

[16] Source: Project document.

Project components	Donor (GEF/other) (USD)	Co-Financing (USD)	Total (USD)
PC4- Quality control M&E	120000	106502	**226502**
Project management	205000	100000	**305000**
Total (USD)	**2,820,000**	**7,065,502**	**9,885,502**

Source: CEO endorsement document

Table 2. Co-financing table

Name of Co-financier (source)	In-kind	Cash	Total Amount (USD)
UNIDO *Implementing Agency*	188,254	44,248	**0**
MAAIF *Government Agency*	36,000	6,090,000	**6,126,000**
Agro Genetics Technologies Ltd (AGT) *Private sector*		120,000	**120,000**
Afri Banana Products Limited (ABP) *Private sector*	150,000	12,000	**167,000**
Forest Fruit Foods Ltd *Private sector*	410,000	15,000	**425,000**
Total Co-financing (USD)	**784,254**	**6,281,248**	**7,065,502**

Source: CEO endorsement document

Table 3. UNIDO budget execution

Items of expenditure	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total expend.**	**%**
Contractual Services		121,876	434,419	154,158	-39	123,349	**833,763**	29,9
Equipment		77,638	65,210	105,212	704,277	11,693	**964,030**	34,6
International meetings			-38				**-38**	≤1
Local travel		12,055	11,618	17,041	22,272	3,358	**66,344**	2,4
Nat. Consult./Staff		50,246	67,078	71,467	50,988	37,069	**276,848**	9,9
Other Direct Costs	2,498	42,928	76,767	37,487	26,767	5,330	**191,777**	6,9
Premises			-1	28,589	111	54,396	**83,095**	2,9
Staff & Intern Consultants		2,238	18,314	30,330	48,132	4,979	**103,993**	3,8
Train/Fellowship/Study	45,000	79,178	96,397	5,395	45,913	-2,072	**269,811**	9,6
Grand Total	**47,498**	**388,175**	**771,781**	**451,697**	**900,440**	**240,122**	**2,789,623**	**100%**

Source: UNIDO Project Management database as of 20th November 2020

II. Scope and purpose of the evaluation

The purpose of the evaluation is to independently assess the project to help UNIDO improve performance and results of ongoing and future programmes and projects. The independent terminal evaluation (TE) will cover the whole duration of the project from its starting date in December 2015 to the completion date in December 2020.

The evaluation has two specific objectives:

(i) Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and progress to impact; and
(ii) Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO.

III. Evaluation approach and methodology

The TE will be conducted in accordance with the UNIDO Evaluation Policy[17] and the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle[18]. In addition, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies will be applied.

The evaluation will be carried out as an independent in-depth evaluation using a participatory approach whereby all key parties associated with the project will be informed and consulted throughout the evaluation. The evaluation team leader will liaise with the UNIDO Independent Evaluation Division (ODG/EIO/IED) on the conduct of the evaluation and methodological issues.

The evaluation will use a theory of change approach and mixed methods to collect data and information from a range of sources and informants. It will pay attention to triangulating the data and information collected before forming its assessment. This is essential to ensure an evidence-based and credible evaluation, with robust analytical underpinning. The theory of change will identify causal and transformational pathways from the project outputs to outcomes and longer-term impacts, and drivers as well as barriers to achieve them. The learning from this analysis will be useful to feed into the design of the future projects so that the management team can effectively manage them based on results.

1. Data collection methods

Following are the main instruments for data collection:

(a) **Desk and literature review** of project related documents, including but not limited to:
- The original project document, monitoring reports (such as progress and financial reports, mid-term review report, output reports, back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.
- Notes from the meetings of committees involved in the project.

(b) **Stakeholder consultations** will be conducted through structured and semi-structured interviews and focus group discussion. Key stakeholders to be interviewed include:
- UNIDO Management and staff involved in the project; and
- Representatives of donors, counterparts and stakeholders.

(c) **Field visit** to project sites in Uganda.
- On-site observation of results achieved by the project, including interviews of actual and potential beneficiaries of improved technologies

[17] UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)

[18] UNIDO. (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006)

- Interviews with the relevant UNIDO Country Office(s) representative to the extent that he/she was involved in the project, and the project's management members and the various national [and sub-regional] authorities dealing with project activities as necessary.

2. Evaluation key questions and criteria

The key evaluation questions are the following:

(a) What are the key drivers and barriers to achieve the long-term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long-term objectives?
(b) How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money?
(c) What have been the project's key results (outputs, outcome and impact)? To what extent have the expected results been achieved or are likely to be achieved? To what extent the achieved results will sustain after the completion of the project?
(d) What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

The evaluation will assess the likelihood of sustainability of the project results after the project completion. The assessment will identify key risks (e.g. in terms of financial, socio-political, institutional and environmental risks) and explain how these risks may affect the continuation of results after the project ends. Table below provides the key evaluation criteria to be assessed by the evaluation. The details questions to assess each evaluation criterion are in Annex 2 of the UNIDO Evaluation Manual.

Table **5.** Project evaluation criteria

Index	Evaluation criteria	Mandatory rating
A	**Progress to Impact**	**Yes**
B	**Project design**	**Yes**
1	• Overall design	Yes
2	• Logframe	Yes
C	**Project performance**	**Yes**
1	• Relevance	Yes
2	• Effectiveness	Yes
3	• Efficiency	Yes
4	• Sustainability of benefits	Yes
5	• Coherence*	Yes
D	**Cross-cutting performance criteria**	
1	• Gender mainstreaming	Yes
2	• Environment and socio-economic aspects[19]	
2	• M&E: (focus on Monitoring) ✓ M&E design ✓ M&E implementation	Yes
3	• Results-based Management (RBM)	Yes
E	**Performance of partners**	
1	• UNIDO	Yes
2	• National counterparts	Yes
3	• Donor	Yes
F	**Overall assessment**	Yes

[19] All GEF-4 and GEF-5 projects have incorporated relevant environmental and social considerations into the project design / GEF-6 projects have followed the provisions specified in UNIDO/DGAI.23: UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP)

* Coherence is added reflecting the changes in the updated DAC evaluation criteria. See annex 7 for more details.

Performance of partners

The assessment of performance of partners will ***include*** the quality of implementation and execution of the GEF Agencies and project executing entities (EAs) in discharging their expected roles and responsibilities. The assessment will take into account the following:

- Quality of Implementation, e.g. the extent to which the agency delivered effectively, with focus on elements that were controllable from the given GEF Agency's perspective and how well risks were identified and managed.
- Quality of Execution, e.g. the appropriate use of funds, procurement and contracting of goods and services.

Other Assessments required by the GEF for GEF-funded projects:

The terminal evaluation will assess the following topics, for which ***ratings are not required***:

a. **Need for follow-up**: e.g. in instances financial mismanagement, unintended negative impacts or risks.
b. **Materialization of co-financing**: e.g. the extent to which the expected co-financing materialized, whether co-financing was administered by the project management or by some other organization; whether and how shortfall or excess in co-financing affected project results.
c. **Environmental and Social Safeguards**[20]: appropriate environmental and social safeguards were addressed in the project's design and implementation, e.g. preventive or mitigation measures for any foreseeable adverse effects and/or harm to environment or to any stakeholder.

3. Rating system

In line with the practice adopted by many development agencies, the UNIDO Independent Evaluation Division uses a six-point rating system, where 6 is the highest score (highly satisfactory) and 1 is the lowest (highly unsatisfactory) as per Table 6.

Table 6. Project rating criteria

Score		Definition	Category
6	Highly satisfactory	Level of achievement presents no shortcomings (90% - 100% achievement rate of planned expectations and targets).	SATISFACTORY
5	Satisfactory	Level of achievement presents minor shortcomings (70% - 89% achievement rate of planned expectations and targets).	
4	Moderately satisfactory	Level of achievement presents moderate shortcomings (50% - 69% achievement rate of planned expectations and targets).	
3	Moderately unsatisfactory	Level of achievement presents some significant shortcomings (30% - 49% achievement rate of planned expectations and targets).	UNSATISFACTORY
2	Unsatisfactory	Level of achievement presents major shortcomings (10% - 29% achievement rate of planned expectations and targets).	
1	Highly unsatisfactory	Level of achievement presents severe shortcomings (0% - 9% achievement rate of planned expectations and targets).	

[20] Refer to GEF/C.41/10/Rev.1 available at: http://www.thegef.org/sites/default/files/council-meetingdocuments/C.41.10.Rev_1.Policy_on_Environmental_and_Social_Safeguards.Final%20of%20Nov%2018.pdf

IV. Evaluation process

The evaluation will be conducted from mid-February to May 2021. The evaluation will be implemented in four phases which are not strictly sequential, but in many cases iterative, conducted in parallel and partly overlapping:

i. Inception phase: The evaluation team will prepare the inception report providing details on the methodology for the evaluation and include an evaluation matrix with specific issues for the evaluation; the specific site visits will be determined during the inception phase, taking into consideration the findings and recommendations of the mid-term review and the actual situation in the country, and travel restriction by the national government caused by the Covid pandemic.
ii. Desk review and data analysis;
iii. Interviews, survey and literature review;
iv. Field visit to project sites by the national evaluator (which will follow the rules and regulations on Covid by the national government, the UN and UNIDO);
v. Data analysis and report writing.

IED Final evaluation report issuance and distribution with the respective management response sheet and further follow-up, and publication of evaluation report in UNIDO intra/internet sites.

V. Time schedule and deliverables

The evaluation is scheduled to take place from mid-February to May 2021. The tentative timelines are provided in Table 7.

The evaluation team will give an online debriefing and presentation of the preliminary findings of the terminal evaluation to the relevant stakeholders. The draft TE report is to be shared with the UNIDO PM, UNIDO Independent Evaluation Division, the UNIDO GEF Coordinator and GEF OFP and other stakeholders for receipt of comments. The ET leader is expected to revise the draft TE report based on the comments received, edit the language and form and submit the final version of the TE report in accordance with UNIDO ODG/EIO/EID standards.

Table **7.** Tentative timelines

Timelines	Tasks
February 2021	Recruitment of the evaluation team
Mar 2021	Desk review Writing of inception report and briefing with UNIDO project manager and the project team based in Vienna through Skype/Zoom
Mid-Mar – April 2021	Online interviews and other data collection tools as per Inception Report Field visit
Mid- May 2021	First Draft evaluation report. Internal peer review of the report by UNIDO's Independent Evaluation Division and other stakeholder comments to draft evaluation report
Early June 2021	Debriefing to the stakeholders on the evaluation findings and recommendations (hybrid meeting including both physical and virtual meeting, as Covid and budget situation allow).
June	Final evaluation report

VI. Evaluation team composition

The evaluation team will be composed of one international evaluation consultant acting as the team leader and one national evaluation consultant. The evaluation team members will possess relevant strong evaluation experience and skills together with expertise and experience in climate change and value chains. Both consultants will be contracted by UNIDO.

The tasks of each team member are specified in the job descriptions annexed to these terms of reference. The ET is required to provide information relevant for follow-up studies, including terminal evaluation verification on request to the GEF partnership up to three years after completion of the terminal evaluation.

According to UNIDO Evaluation Policy, members of the evaluation team must not have been directly involved in the design and/or implementation of the project under evaluation.

The UNIDO Project Manager and the project team in Uganda will support the evaluation team. The UNIDO GEF Coordinator and GEF OFP(s) will be briefed on the evaluation and provide support to its conduct. GEF OFP(s) will, where applicable and feasible, also be briefed and debriefed.

An evaluation manager from UNIDO Independent Evaluation Division will provide technical backstopping to the evaluation team and ensure the quality of the evaluation. The UNIDO Project Manager and national project teams will act as resourced persons and provide support to the evaluation team and the evaluation manager.

VII. Reporting

Inception report

This Terms of Reference (ToR) provides some information on the evaluation methodology, but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager, the Team Leader will prepare, in collaboration with the national consultant, a short inception report that will operationalize the ToR relating to the evaluation questions and provide information on what type of and how the evidence will be collected (methodology). It will be discussed with and approved by the responsible UNIDO Evaluation Manager.

The Inception Report will focus on the following elements: preliminary project theory model(s); elaboration of evaluation methodology including quantitative and qualitative approaches through an evaluation framework ("evaluation matrix"); division of work between the International Evaluation Consultant and national consultant; people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable[21].

Evaluation report format and review procedures

The draft report will be delivered to UNIDO's Independent Evaluation Division (the suggested report outline is in Annex 4) and circulated to UNIDO staff and national stakeholders associated with the project for factual validation and comments. Any comments or responses, or feedback on any errors of fact to the draft report provided by the stakeholders will be sent to UNIDO's Independent Evaluation Division for collation and onward transmission to the project evaluation team who will be advised of any necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the evaluation team will prepare the final version of the terminal evaluation report.

The ET will present its preliminary findings to the local stakeholders and take into account their feed-back in preparing the evaluation report. A presentation of preliminary findings will take place virtually.

The TE report should be brief, to the point and easy to understand. It must explain the purpose of the evaluation, exactly what was evaluated, and the methods used. The report must highlight

[21] The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by the UNIDO ODG/EVQ/IEV.

any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should provide information on when the evaluation took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

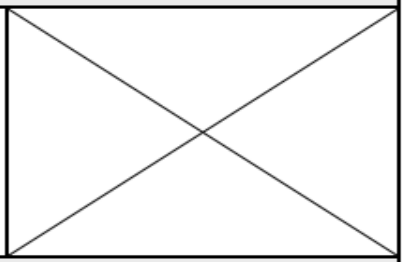
Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The evaluation report shall be written in English and follow the outline given in annex 3.

VIII. Quality assurance

All UNIDO evaluations are subject to quality assessments by UNIDO Independent Evaluation Division. Quality assurance and control is exercised in different ways throughout the evaluation process (briefing of consultants on methodology and process of UNIDO Independent Evaluation Division, providing inputs regarding findings, lessons learned and recommendations from other UNIDO evaluations, review of inception report and evaluation report by UNIDO's Independent Evaluation Division).

The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality, attached as Annex 4. The applied evaluation quality assessment criteria are used as a tool to provide structured feedback. UNIDO Independent Evaluation Division should ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is compliant with UNIDO's evaluation policy and these terms of reference. The draft and final evaluation report are reviewed by UNIDO Independent Evaluation Division, which will submit the final report to the GEF Evaluation Office and circulate it within UNIDO together with a management response sheet.

Annex 1: Project Logical Framework

Intervention logic	Verifiable indicators	Sources of verification	Assumptions
Impact			
Increased resilience to CC, income and food security of small holder farming households in Western Uganda	• At least 5000 small-holder farmers disaggregated by sex with improved assets* (such as soil and water conservation structures, water harvesting structures) to adapt to CC • At least 5000 small-holder farmers disaggregated by sex reclassified as income and food secure	• Baseline and Impact assessment study • UNBS	
Objective			
To support vulnerable communities in Western Uganda to better adapt to the effects of CC through banana value addition activities, **to provide greater opportunities for income generation, poverty reduction and food security**	• Average income of banana producing households in target districts increased by 30% at project completion (baseline will be established at inception phase); disaggregated by sex of head of household • 30% increase in the banana value addition in the target region (baseline will be established at inception phase)	• Inception baseline, midterm and final reports • MTIC, MAAIF reports	• Government continuous to prioritise development of the agro industries as a means to poverty reduction
Component 1: CCA and gender equality for adaptation mainstreamed into National Development Policy/Strategies.			
Outcome 1: CCA strategies coupled with appropriate action on gender equality are incorporated into developmental policies and implemented by stakeholders in the various sectors	• CCA captured in the new Agriculture Sector Strategy Plan (ASSP) (2015/16-2019/2020): the National Industrial Sector Strategic Plan (NISSP); and District level strategies on adaptation produced • Eight DLG development plans setting priorities on reducing vulnerability to CC along the value chain	• Actual policy documents/ strategies	• Government stakeholders and private sector partners are willing to engage in the development of CCA strategies
Component 2: Climate Change resilience building of vulnerable communities in major banana producing regions and contribute to food and income security thorough livelihood diversification.			

Outcome 2. Vulnerable communities are increasingly participating in resilience building activities for income diversification	• 30% increase in number of farming households, disaggregated by sex of head of household, engaged in banana value addition (baseline established at inception) • 40% increase of banana wine and juice, 40% increase in of banana chips produced in the target area per annum and reflected in the expansion of local and regional markets (baseline established at inception) • # of banana based products from the target region meeting Uganda Bureau of Standards • # of processors meeting minimum requirements (UNBS food Safety and quality standards (US;2002) • # of UNBS certified products from beneficiaries on the market(baseline established at inception) • Number of TC derived plant material purchased/year by smallholder farming households, disaggregated by sex of head of household, from established nurseries/mother gardens (baseline at PPG zero). • Number of farming households, disaggregated by sex of head of household, applying biodigestate residue in fertilisation of banana plantations and adopting improved farm management practices • Increase in number of water harvesting facilities setup in vulnerable communities (baseline established at inception)	• Project, midterm and final reports • UBS certificates awarded to project beneficiary and processors • NAAD, MTIC, MAAIF reports	• It is much more profitable for farmers to participate in value addition activities compared to selling fresh banana bunches on the markets • Commitment of service providers, and beneficiaries to adopt proposed technologies for planting material and banana waste utilisation • Higher profit margins for banana due to value addition activities will provide an incentive for investing in increased banana production incl. disease free plant materials
Component 3: **Dissemination of information and expansion of the strategy and project benefits**			

Outcome 4. Lessons learned and best practices from policy changes, capacity development initiatives and pilot plants disseminated.	• Number of similar project and initiatives started as a direct result of or citing the project • Number of external events, conferences, and show where project results are highlighted	• MAAIF, MWE reports	• Successful implication of proposed project and demonstration of easy of replication
Component 4: Quality Control Monitoring and Evaluation			
Outcome 5. Quality control and efficient monitoring of project intervention to support adoption by CC vulnerable communities	• Baseline assessment of measurable indicators in the eight Districts • Number of communities based primary processing /farming groups, district and governmental agency staff, disaggregated by sex, trained to monitor the project(baseline established at inception)	• Baseline assessment study • Project reports • Project training certificate	• Key stakeholders actively participate in the project inception study • Stakeholders at national district and community levels able to implement recommendations of baseline/inception study

* Assets defined as environmental, social, human, financial, and physical capital resource base with which the community is able to adapt to CC. The stronger the asset base the higher the adaptive capacity of the community while a poor asset base indicates high vulnerability to CC and an urgent need for planned adaptation.

Annex 2: Job descriptions

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
TERMS OF REFERENCE FOR WHEN ACTUALLY EMPLOYED PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	International evaluation consultant, team leader
Main Duty Station and Location:	Home-based
Start of Contract (EOD):	1 March 2021
End of Contract (COB):	31 May 2021
Number of Working Days:	33 days spread over the above mentioned period

1. ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EIO/IED) is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides factual information about result and practices that feed into the programmatic and strategic decision-making processes. Independent evaluations provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. ODG/EIO/IED is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

2. PROJECT CONTEXT

Detailed background information of the project can be found the terms of reference (TOR) for the terminal evaluation.

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
1. Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data); determine key data to be collected and adjust the key data collection instrument if needed; Define technical issues and questions to be addressed prior to the field visit. Determine key data to collect in the field and adjust the key data collection instrument if needed. In coordination with the project manager, the project management team and the technical evaluators, determine the suitable sites to be visited and stakeholders to be interviewed.	• Adjust table of evaluation questions, depending on country specific context; • Prepare a map of stakeholders to interview.	3	Home-based
2. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders. Prepare materials, tools and method to collect data in the field visits by the national consultant- if circumstances allow-, detailed	• The inception report. Submitted to evaluation manager. • Detailed evaluation schedule (incl. list of stakeholders to interview).	4	Home-based, online

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
evaluation methodology confirmed, draft theory of change, and tentative agenda. Provide training to national evaluator on the evaluation method to assess project impacts.	• Division of evaluation tasks with the team members. • Online survey questionnaire		
3.Participate in interviews, as agreed with the team member online, when possible Take part as a resources person to answer questions and provide clarification to the stakeholder workshops/ focus group meetings on identifying conditions necessary for transformational changes to take place Review meeting and workshop notes prepared by the evaluation team member during field work; provide the team technical advice to collect appropriate data and information in a real time manner; and to keep abreast with feedback from the stakeholders from the field.	• Agreement with the team members on the structure and content of the evaluation report and the distribution of writing tasks;	6	Home-based
5. Prepare the evaluation report, with inputs from the team member, according to the TOR; Coordinate the inputs from the team member and combine with her/his own inputs into the draft evaluation report; Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.	• Draft evaluation report.	16	Home-based
4. Prepare and present overall findings and recommendations to the stakeholders online.	• Presentation slides, feedback from stakeholders obtained and discussed	2	Home-based, online
6. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and edit the language and form of the final version according to UNIDO standards.	• Final evaluation report.	2	Home-based

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education:

Advanced degree in business management, value-chain, environment management, engineering, development studies or related areas.

Technical and functional experience:

- Minimum of 12 years' experience in evaluation of development projects and programmes
- Good working knowledge in environmental management, knowledge of climate change adaptation an advantage
- Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards

- Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset
- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks
- Working experience in developing countries

Languages:

Fluency in written and spoken English is required. All reports and related documents must be in English and presented in electronic format.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the UNIDO Independent Evaluation Division.

REQUIRED COMPETENCIES

Core values:

WE LIVE AND ACT WITH INTEGRITY: work honestly, openly and impartially.
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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
TERMS OF REFERENCE FOR WHEN ACTUALLY EMPLOYED PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	International Climate Change Adaption Advisor
Main Duty Station and Location:	Home-based
Start of Contract (EOD):	1 March 2021
End of Contract (COB):	30 June 2021
Number of Working Days:	2 days spread over the above mentioned period

3. ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EIO/IED) is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides factual information about result and practices that feed into the programmatic and strategic decision-making processes. Independent evaluations provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. ODG/EIO/IED is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

4. PROJECT CONTEXT

Detailed background information of the project can be found the terms of reference (TOR) for the terminal evaluation.

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
1. Review the project document and mid-term review report, focusing on Climate Change Adaptation perspectives 2. Critically review the evaluation team's Inception Report and advise the team on questions and information that the team should answer and collect from the field related to CCA and resilience. 3. Advise the evaluation team, through online meeting, once in a while, on evaluating the project with CCA lens to make sure the team is on track to cover CCA perspectives. 4. Critically review the draft evaluation report and provide comments and suggestions on how to reflect CCA and resilience issues in the assessment.	• Comments and suggestions on evaluation questions and information to be collected in the field on CCA and resilience. • Comments and suggestions to better reflect CCA into the assessment in the draft evaluation report.	2	Home-based

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education:

Advanced degree in business management, value-chain, environment management, engineering, development studies or related areas.

Technical and functional experience:

- Minimum of 12 years' experience in environment management and Climate Change adaptation and resilience
- Good working knowledge in environmental management and climate change adaptation
- Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards
- Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset
- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks
- Working experience in developing countries

Languages:

Fluency in written and spoken English is required. All reports and related documents must be in English and presented in electronic format.

Absence of conflict of interest: According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the UNIDO Independent Evaluation Division.

REQUIRED COMPETENCIES

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
TERMS OF REFERENCE FOR WHEN ACTUALLY EMPLOYED PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	National evaluation consultant
Main Duty Station and Location:	Home-based
Mission/s to:	Travel to potential sites within Uganda
Start of Contract (EOD):	1 March 2021
End of Contract (COB):	31 May 2021
Number of Working Days:	33 days spread over the above mentioned period

ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EIO/IED) is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides factual information about result and practices that feed into the programmatic and strategic decision-making processes. Independent evaluations provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. ODG/EIO/IED is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

PROJECT CONTEXT

The national evaluation consultant will evaluate the projects according to the terms of reference (TOR) under the leadership of the team leader (international evaluation consultant). S/he will perform the following tasks:

MAIN DUTIES	**Concrete/measurable outputs to be achieved**	**Expected duration**	**Location**
Desk review Review and analyze project documentation and relevant country background information; in cooperation with the team leader, determine key data to collect in the field and prepare key instruments in English (questionnaires, logic models); Adjust the evaluation framework and Theory of Change in order to ensure their understanding in the local context.	Evaluation questions, questionnaires/interview guide, logic models adjusted to ensure understanding in the national context; A stakeholder mapping, in coordination with the project team.	4 days	Home-based
Carry out preliminary analysis of pertaining technical issues determined with the Team Leader. In close coordination with the project staff team verify the extent of achievement of project results prior to field visits. Develop a brief analysis of key contextual conditions relevant to the project	• Report addressing technical issues and question previously identified with the Team leader • Tables that present extent of achievement of project outputs • Brief analysis of conditions relevant to the project	5 days	Home-based

MAIN DUTIES	**Concrete/measurable outputs to be achieved**	**Expected duration**	**Location**
Support the Team Leader in prepare materials, tools and method to collect data in the field. Coordinate the evaluation mission agenda, ensuring and setting up the required meetings with project partners and government counterparts, in close cooperation with project counterparts in the field.	• Key tools and materials • Detailed evaluation schedule. • List of stakeholders to interview during the field missions.	5 days	Home-based, online
Lead and conduct the field mission to meet and discuss with project key-stakeholders and beneficiaries in project sites, to the extent possible these meetings should be organized so that the Team Leader could participate online. Consult with the Team Leader on the meeting/interview protocol and guide to collect data and information in the format agreed in advance with the team leader. Design, administer, and analyze open-ended interviews and focus groups to gather qualitative information Facilitate stakeholder workshops and focus group meetings Prepare meeting notes and data based on the format requested by the team leader. Close exchange and discussion with the team leader on data and information collected from the field	• Agreement with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks. • Systematic data and information from the field	12 days (including travel days)	Uganda (the sites to be identified later)
Follow up with stakeholders regarding additional information promised during interviews Prepare inputs to help fill in information and analysis gaps (mostly related to technical issues) and to prepare tables to be included in the evaluation report as agreed with the Team Leader. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and proof read the final version.	• Part of draft evaluation report prepared.	7 days	Home-based

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: Advanced university degree in economics, agriculture, business management, environmental science, engineering or other relevant discipline like developmental studies.

Technical and functional experience:

- Minimum of 12 years of experience in evaluation, monitoring and evaluation.
- Excellent knowledge and competency in the field of livelihoods development, agriculture, business management or environmental management.
- Good experience in facilitating stakeholder workshops, focus group.
- Experience and knowledge in climate resilience and agriculture value chain analysis is an asset.
- Familiarity and experience in development projects and programmes and working experience with international development agencies is a must.

Languages: Fluency in written and spoken English and the local language and is required.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the UNIDO Independent Evaluation Division.

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Annex 3: Outline of an in-depth project evaluation report

Executive summary (maximum 5 pages)
Evaluation purpose and methodology
Key findings
Conclusions and recommendations
Project ratings
Tabular overview of key findings – conclusions – recommendations

1. **Introduction**
   - 1.1. Evaluation objectives and scope
   - 1.2. Overview of the Project Context
   - 1.3. Overview of the Project
   - 1.4. Theory of Change
   - 1.5. Evaluation Methodology
   - 1.6. Limitations of the Evaluation
2. **Project's contribution to Development Results - Effectiveness and Impact**
   - 2.1. Project's achieved results and overall effectiveness
   - 2.2. Progress towards impact
     - 2.2.1. Behavioral change
       - 2.2.1.1. Economically competitive - Advancing economic competitiveness
       - 2.2.1.2. Environmentally sound – Safeguarding environment
       - 2.2.1.3. Socially inclusive – Creating shared prosperity
     - 2.2.2. Broader adoption
       - 2.2.2.1. Mainstreaming
       - 2.2.2.2. Replication
       - 2.2.2.3. Scaling-up
3. **Project's quality and performance**
   - 3.1. Design
   - 3.2. Relevance
   - 3.3. Efficiency
   - 3.4. Sustainability
   - 3.5. Gender mainstreaming
4. **Performance of Partners**
   - 4.1. UNIDO
   - 4.2. National counterparts
   - 4.3. Donor
5. **Factors facilitating or limiting the achievement of results**
   - 5.1. Monitoring & evaluation
   - 5.2. Results-Based Management
   - 5.3. Other factors
   - 5.4. Overarching assessment and rating table
6. **Conclusions, recommendations and lessons learned**
   - 6.1. Conclusions
   - 6.2. Recommendations
   - 6.3. Lessons learned
   - 6.4. Good practices

Annexes (to be put online separately later)

- Evaluation Terms of Reference
- Evaluation framework
- List of documentation reviewed
- List of stakeholders consulted
- Project logframe/Theory of Change
- Primary data collection instruments: evaluation survey/questionnaire
- Statistical data from evaluation survey/questionnaire analysis

Annex 4: Checklist on evaluation report quality

Project Title:

UNIDO ID:

Evaluation team:

Quality review done by: Date:

Report quality criteria	UNIDO IEV assessment notes	Rating
a. Was the report well-structured and properly written? (Clear language, correct grammar, clear and logical structure)		
b. Was the evaluation objective clearly stated and the methodology appropriately defined?		
c. Did the report present an assessment of relevant outcomes and achievement of project objectives?		
d. Was the report consistent with the ToR and was the evidence complete and convincing?		
e. Did the report present a sound assessment of sustainability of outcomes or did it explain why this is not (yet) possible? (Including assessment of assumptions, risks and impact drivers)		
f. Did the evidence presented support the lessons and recommendations? Are these directly based on findings?		
g. Did the report include the actual project costs (total, per activity, per source)?		
h. Did the report include an assessment of the quality of both the M&E plan at entry and the system used during the implementation? Was the M&E sufficiently budgeted for during preparation and properly funded during implementation?		
i. Quality of the lessons: were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
j. Quality of the recommendations: did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can these be immediately implemented with current resources?		
k. Are the main cross-cutting issues, such as gender, human rights and environment, appropriately covered?		
l. Was the report delivered in a timely manner? (Observance of deadlines)		

Rating system for quality of evaluation reports

A rating scale of 1-6 is used for each criterion: Highly satisfactory = 6, Satisfactory = 5, Moderately satisfactory = 4, Moderately unsatisfactory = 3, Unsatisfactory = 2, Highly unsatisfactory = 1, and unable to assess = 0.

Annex 5: Guidance on integrating gender in evaluations of UNIDO projects and Projects

A. Introduction

Gender equality is internationally recognized as a goal of development and is fundamental to sustainable growth and poverty reduction. The UNIDO Policy on gender equality and the empowerment of women and its addendum, issued respectively in April 2009 and May 2010 (UNIDO/DGB(M).110 and UNIDO/DGB(M).110/Add.1), provides the overall guidelines for establishing a gender mainstreaming strategy and action plans to guide the process of addressing gender issues in the Organization's industrial development interventions.

According to the UNIDO Policy on gender equality and the empowerment of women:

Gender equality refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not suggest that women and men become 'the same' but that women's and men's rights, responsibilities and opportunities do not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. It is therefore not a 'women's issues. On the contrary, it concerns and should fully engage both men and women and is a precondition for, and an indicator of sustainable people-centered development.

Empowerment of women signifies women gaining power and control over their own lives. It involves awareness-raising, building of self-confidence, expansion of choices, increased access to and control over resources and actions to transform the structures and institutions which reinforce and perpetuate gender discriminations and inequality.

Gender parity signifies equal numbers of men and women at all levels of an institution or organization, particularly at senior and decision-making levels.

The UNIDO projects/projects can be divided into two categories: 1) those where promotion of gender equality is one of the key aspects of the project/project; and 2) those where there is limited or no attempted integration of gender. Evaluation managers/evaluators should select relevant questions depending on the type of interventions.

B. Gender responsive evaluation questions

The questions below will help evaluation managers/evaluators to mainstream gender issues in their evaluations.

B.1. Design

- Is the project/project in line with the UNIDO and national policies on gender equality and the empowerment of women?
- Were gender issues identified at the design stage?
- Did the project/project design adequately consider the gender dimensions in its interventions? If so, how?
- Were adequate resources (e.g., funds, staff time, methodology, experts) allocated to address gender concerns?
- To what extent were the needs and priorities of women, girls, boys and men reflected in the design?
- Was a gender analysis included in a baseline study or needs assessment (if any)?
- If the project/project is people-centered, were target beneficiaries clearly identified and disaggregated by sex, age, race, ethnicity and socio-economic group?
- If the project/project promotes gender equality and/or women's empowerment, was gender equality reflected in its objective/s? To what extent are output/outcome indicators gender disaggregated?

B.2. Implementation management

- Did project monitoring and self-evaluation collect and analyze gender disaggregated data?
- Were decisions and recommendations based on the analyses? If so, how?
- Were gender concerns reflected in the criteria to select beneficiaries? If so, how?
- How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries?
- If the project/project promotes gender equality and/or women's empowerment, did the project/project monitor, assess and report on its gender related objective/s?

B.3. Results

- Have women and men benefited equally from the project's interventions? Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision making authority)?
- In the case of a project/project with gender related objective/s, to what extent has the project/project achieved the objective/s? To what extent has the project/project reduced gender disparities and enhanced women's empowerment?

Annex 6. OECD Revised and Updated Evaluation Criteria

The OECD Development Assistance Committee (DAC) first developed evaluation criteria in 1991 for evaluating international development co-operation. They have since become a cornerstone of evaluation practice and are widely used, beyond the DAC. The 2018 UNIDO Evaluation Manual was based on the OECD-DAC criteria[22].

In 2019 the criteria were revised to improve the quality and usefulness of evaluation and strengthen the contribution of evaluation to sustainable development. The adaptation involved a far-reaching global consultation and built on learning gathered over more than 25 years of applying the criteria. The update also reflected new policy priorities including the 2030 Agenda for Sustainable Development and the Paris Climate Agreement. The adapted definitions are clearer and will support more rigorous, nuanced analysis, including of equity issues and synergies, in line with current policy priorities. This adaptation also addresses confusion, by adding an introduction on the intended purpose of the criteria and guiding principles for use.[23]

The new globally adopted criteria now include six evaluation criteria – relevance, coherence, effectiveness, efficiency, impact, and sustainability – and two principles for their use. There have also been some adjustments in definitions and guidelines of the existing criteria.

Given that UNIDO follows the OECD-DAC criteria, this evaluation will follow the updated criteria and has included coherence in the standard UNIDO evaluation rating table and will include analysis of coherence during the evaluation based on the OECD-DAC guidance. This is summarized below.

PRINCIPLES FOR USE There are two main principles that guide the use of the criteria:

1) The criteria should be applied thoughtfully to support high quality, useful evaluation. They should be **contextualized** – understood in the context of the individual evaluation, the intervention being evaluated, and the stakeholders involved.
2) Use of the criteria **depends on the purpose** of the evaluation. The criteria should not be applied mechanistically. Instead, they should be covered according to the needs of the relevant stakeholders and the context of the evaluation.[24]

NEW CRITERION - Coherence: How well does the intervention fit? The extent to which other interventions (particularly policies) support or undermine the intervention, and vice versa. Includes internal coherence and external coherence:

Internal coherence addresses the synergies and interlinkages between the intervention and other interventions carried out by the same institution/government, as well as the consistency of the intervention with the relevant international norms and standards to which that institution/government adheres.

External coherence considers the consistency of the intervention with other actors' interventions in the same context. This includes complementarity, harmonization and co-ordination with others, and the extent to which the intervention is adding value while avoiding duplication of effort.[25]

[22] UNIDO Independent Evaluation Division – Evaluation Manual - Page 18, 3.1 Evaluation Criteria.

[23] Ibid.

[24] https://www.oecd.org/dac/evaluation/evaluation-criteria-flyer-2020.pdf

[25] https://www.oecd.org/dac/evaluation/revised-evaluation-criteria-dec-2019.pdf

The Coherence criterion captures a perspective that was not covered previously. A lack of coherence can lead to duplication of efforts and undermine overall progress. Adding the criteria will help raise the bar on analysis of these important issues.

Including coherence also incentivizes evaluators to understand the role of an intervention within a particular system (organization, sector, thematic area, country), as opposed to taking an exclusively intervention- or institution-centric perspective.[26] This is in line with the articulated principles for applying the criteria.

[26] Ibid.

Annex 2: Project budget

A: Budget at entry and expenditures at project closure (T.USD and %)

	BUDGET				ACTUAL			
	T. USD			%	T.USD			%
	Cash	In-kind	TOTAL		Cash	In-kind	TOTAL	
TOTAL	8,896	784	9,681	*100*	2,829	951	3,780	*100*
GEF	2,615	0	2,615	*27*	2,615	0	2,615	*69*
Total Co-financing	6,281	784	7,066	*73*	214	951	1,165	*31*
UNIDO	44	188	233	*2*	44	188	233	*6*
GoU	6,090	36	6,126	*63*	0	239	239	*6*
Private sector	147	560	707	*7*	170	524	694	*18*
Counterpart	*132*	*150*	*282*	*40*	*120*	*41*	*161*	*23*
Beneficiary	*12*	*410*	*425*	*60*	*50*	*484*	*533*	*77*

Source: compiled from data provided by project team (project document and project team rapid assessment, May 2021)

B. Budget at entry, by component.

	T. USD			% SHARE		
	Grant amount	Co-financing	Total	Grant amount	Co-financing	Total
Component 1	140	200	340	5%	3%	4%
Component 2	2205	6247	8452	84%	90%	88%
Component 3	150	412	562	6%	6%	6%
Component 4	120	107	227	5%	2%	2%
All components	2615	6966	9581	100%	100%	100%
Project management	205	100	305			

Source: project document

C. Budget at entry and expenditures at project closure, detailed (T.USD).

Organization/ Institution	Planned Co-Financing		Actual		Activity/ Item supported
	Cash	**In-Kind**	**Cash**	**In-Kind**	
Government Executing Agency					
MAAIF	6,090			(6,090)?	Establishment of mother gardens
				41	Control of banana pests and diseases
				162	Routine banana extension services
					Banana research
					Supply of banana planting materials
					Monitoring and evaluation
		36		36	Staff time
Private sector Counterparts					
Agro Technologies	120		120		Development of Tissue Plantlets
Afri Banana Products	12	150	0	0	Technical support and access to their processing facility
Biogas Solutions				26	HH contribution to supply and installation of 9m3 bio digesters
				15	Professional fees, subsistence, reports, travel and transportation during the supply and installation of bio digesters
Beneficiaries					
Forest Fruit Foods Ltd	15	410	15	410	Land, buildings factory infrastructure
			9		Customizing of equipment
Silgad Investments (U) Ltd				18	Land for the establishment of wine processing
			7		Landscaping, tree planting and external amenities
			4		Customizing of equipment

Organization/ Institution	Planned Co-Financing		Actual		Activity/ Item supported
	Cash	In-Kind	Cash	In-Kind	
St. Peters Rockhill				3	Land for the establishment of wine processing
			1		Landscaping, tree planting and external amenities
Bana Beverages				7	Land for the establishment of wine processing
			2		Landscaping, tree planting and external amenities
Ankole Foods				2	Land for the establishment of wine processing
			1315		Landscaping, tree planting and external amenities
Rwentobo farmers				7894	Land for the establishment of wine processing
			789		Landscaping, tree planting and external amenities
Kiaga (u) Ltd				31000	Land for the establishment of wine processing
			1578		Landscaping, tree planting and external amenities
Rutunguru Cluster				2631	Land for the establishment of wine processing
			789		Landscaping, tree planting and external amenities
Mbarara Fruits of the Nile				2631	Land for the establishment of wine processing
			6757	0	Landscaping, tree planting and external amenities

Source: compiled from data provided by project team (project document, and project team rapid assessment, May 2021)

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Annex 3: Evaluation questions

From evaluation TOR	Team elaboration of guiding questions
What are the key drivers and barriers to achieve the long term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long term objectives	1. What is the theory of change for the project and has it changed over time? 2. How **relevant** is the project's **objectives** to **Uganda's CCA**? 2.1. Is the project aligned with Uganda's national climate change adaptation strategy (NAPA), with GEF's climate change objectives and strategies and UNIDO's country development and CCA priorities? 3. How **relevant** is the **design** of the project to these objectives? 3.1. What are the main drivers and barriers to climate change adaptation among vulnerable communities in the banana production and value addition chain? How were these identified at the design stage? 3.2. Does the project theory of change reflect actions that affect these drivers and barriers? What key assumptions underpin the theory of change and the logical framework? 3.3. What are the main risks and possible mitigation strategies? Were they identified at the design stage? 3.4. Were adequate targets set for different outcomes? [No: new indicators were chosen mid-project as several original indicators were not possible to monitor.] 3.5. Has gender and environment been mainstreamed in project design?[27] 3.6. Are there alternative project designs that would have met the overall objectives better? 4. How **coherent** is the project with ongoing and planned interventions? 4.1. What are the Government, the private sector, and other donors doing in the rural sector on CCA resilience, broadly and specifically in banana production and value-added sector(s) in Western Uganda? 4.2. How well does the intervention fit with (create synergies or complementarities with) these activities? What efforts have been made for harmonization and coordination?
How well has the project performed? Has the project done the right things? Has the project done the	5. How **efficient/cost effective** has the project been? 5.1. Have all project activities (construction, training, sensitization, etc.) been undertaken fully and outputs delivered in a timely manner? If not, why not?

[27] GEF also requires an assessment of socio-economic aspects – the objective of increased income and food security is central.

From evaluation TOR	Team elaboration of guiding questions
right things, with good value for money?	5.2. Has the project been effectively managed by UNIDO? What has been the quality of execution: procurement procedures, use of funds, etc.? 5.3. How have project partners (GEF, GoU, private sector stakeholders) performed in terms of delivering on their commitments, financial or other? 5.4. Has promised co-financing, including in-kind, been forthcoming? 5.5. Are there any alternative and more cost-effective means to achieve the objectives? 5.6. How effective has the M&E been (design and implementation)? Were the recommendations from the MTR adhered to?
What have been the project's key results (outputs, outcome and impact)? To what extent have the expected results been achieved or are likely to be achieved? To what extent will the achieved results be sustained after the completion of the project? What are the key risks (financial, socio-political, institutional and environmental) that may affect sustainability?	6. How **effective** has the project been in reaching its objectives? 6.1. To what extent has the project achieved its objectives of increasing beneficiaries' resilience through income diversification and improved banana production methods? 6.2. Who has benefited from the project? To what extent has the project delivered on gender mainstreaming in national policies and in terms of direct beneficiaries? 6.3. How well has the project achieved its expected outcomes (against old and revised targets)? What accounts for possible shortfall? 6.4. Are there alternative explanations ("Theory of Change") outside of project activities, that could explain results? 6.5. Is the project being scaled up or replicated as "good practice"? 7. What **progress has been made to impact**? 7.1. To what extent has the project increased overall resilience and changed beneficiaries' approach to climate change adaptation (individual farmers, government)? 7.2. Have incomes increased (or are likely to increase) for participating farmers? 7.3. Are these incomes invested (or likely to be invested) in CCA? 7.4. What has the impact been on (i) female vs. male beneficiaries? (ii) equity and poverty? (iii) the environment? 7.5. Is the project accountable for any unintended effects (positive or negative) in the communities? 8. What are the risks (and how severe are they) to the **sustainability** of the project's outputs, outcomes and impact(s)? 8.1. What exit strategies exist for funding and implementing partners?

From evaluation TOR	Team elaboration of guiding questions
	8.2. What are the financial needs for project sustainability and replication? 8.3. What is the necessary political, economic, social and institutional context to support continued strengthening of banana production and value-added activities? 8.4. How might any risks to sustainability be mitigated?
What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project.	9. What are they key findings and lessons learned from the project? 9.1. What are the key drivers, positive or negative, behind project results? 9.2. If internal to the project, what were the key issues in design and implementation? 9.3. If external, could they have been foreseen and better leveraged or mitigated? 10. What recommendations can be made for future project identification, design and implementation?

Annex 4: Documentation

Category	Title
Policy documents	1. National Industrial policy 2008 2. National Industrial Sector Strategic Plan 3. National Industrial Sector Strategic Plan (NISSP_ - Review report on the Gap analysis and recommendations for developing the revised NISSP, June 2017 4. GoU's climate change National Adaptation Programme of Action, 2007 5. Ministry of water and environment's Uganda National Climate Change Policy; April 2015 6. Ministry of water and environment's Uganda National Climate Change Policy; Summary version; September 2018 7. 3rd National Development Plan (NDP III) 2020/21 – 2024/25: January 2020
UNIDO documents	1. Vulnerability Assessment 2. UNIDO's Evaluation Manual, e-book 3. Applying Evaluation criteria thoroughly 4. UNIDO's Uganda Country Programme Framework 2014 – 2017
GEF Documents	1. Recommended Minimum Fiduciary Standards for GEF implementing and executing Agencies; May 2007 2. GEF Programming Strategy on adaptation to climate change for the LDCF and special Climate Change fund and Operational improvements July 2018 to June 2022 3. GEF Theory of Change premier; December 2019 4. The GEF and Climate Change Catalysing Transformation 5. GEF 5 Focal Area Strategies 6. The GEF Evaluation Policy; 2019 7. Guidelines for GEF Agencies in conducting Terminal Evaluations; Document 3 2008
Project related documents	1. Selection of beneficiaries July 2016 2. UNIDO's gender analysis report 3. Strategy for resilience in the Banana Value chain 4. Banana wine sites pre- equipment delivery site assessment for chips and flour, Feb 2020 5. Handbook on banana value addition and utilization in Uganda February 2020 6. Africa Banana Products; Good manufacturing and hygiene practices training for wine processing facilities in Western Uganda, August 2020 7. HACCP instruction manual for Forest Fruit Foods Ltd 8. Training of banana processors in good manufacturing practices and good hygiene practices, July 2017 9. Proposed Standard Operating Procedures for Banana Juice production operations at Forest Fruit Foods 10. Report on training of Banana processors in good manufacturing and good hygiene practices July 2017

Category	Title
	11. Training report on Banana juice, October 2018 12. Training manual in wine production 13. Training of Trainers' report on Banana enterprises in Uganda, Feb 2016 14. Distribution of Banana plantlets 15. Progress reports on the Africa Banana Project, Aug 2020 16. Terms of Reference for the supply of banana plantlets 17. Delivery note of Banana tissue culture, Sept 2017 18. Documents on construction of facilities (ToRs, needs and report) 19. Training report for stoves – operation of energy saving stoves; Nov 2018 20. Report on installation of stoves; Nov 2018 21. Utilization of Banana waste in Uganda, feasibility report; Oct 2014 22. Technical services and works to provide material needed; install and provide training on the use and maintenance of bio-digester; Jan 2019 23. Supply and install water storage and water treatment equipment 24. Verification of supply and install of water purification and treatment systems; Aug 2019 25. Terms of Reference for the production of a documentary film 26. Banana project performance 27. Annual reports for 2017,2018 and 2019-2020 28. Mid-Term Review report for the project; January 2018 29. Project Steering Committee minutes of the meetings for June 2017 and July 2018 30. Back-to-office report on participation at the National Agricultural Trade show; July 2019 31. Back-to-office report on the Israel agri-business training; June 2019 32. Back-to-office report on the study tour to Thailand; March 2016 33. Field mission report, May 2018 34. Project Fact sheet, 2018 35. Project Fact Sheet, 2017
Climate change/ adaptation focused	1. Sensitization on climate change 2. Training report on stoves 3. Utilization waste report 4. Biogas installation and use report 5. Water treatment systems 6. Advocacy materials
Other documents	1. IPCC, 2018: Annex I: Glossary [Matthews, J.B.R. (ed.)]. 2. Options and opportunities to make food value chains more environmentally sustainable and resilient in Sub-Saharan Africa

Category	Title
	3. USAID Uganda's Country Development Cooperation Strategy 2016 – 2021 4. Integrating Agriculture in National Adaptation Planning Programme; case study Uganda; October 2020 5. Scientific Africa – Food insecurity as a supply chain problem. Evidence and lessons from the production and supply of bananas in Uganda; April 2019 6. African Crop Science Journal Volume 20; issue supplement pages 303 – 316: Assessing Climate Change impacts and adaptation strategies for smallholder agricultural systems in Uganda; 2012 7. Practical guidance for using EX-ACT B_VC tool for banana value chain; FAO October 2016 8. Merotto, D., 2020. Uganda : Jobs Strategy for Inclusive Growth. World Bank, Washington, DC. 9. Bagamba, F., B. Bashaasha, L. Claessens, and J. Antle. 2012. Assessing Climate Change Impacts and Adaptation Strategies for Smallholder Agricultural Systems in Uganda. African Crop Science Journal, Vol. 20, Issue Supplement s2, pp. 303 - 316 10. Ssennoga, F., G. Mugurusi, and P. N. Oluka. 2019. Food insecurity as a supply chain problem. Evidence and lessons from the production and supply of bananas in Uganda, Scientific African, Volume 3.

Annex 5: Interviews held

A. Key Informants

Name	**Title**	**Organization**	**Type of meeting**	**Dates**
Ms. Yvonne Lokko	Project manager	UNIDO	Virtual (V)	15/4/2021
Mr. Amin Eisa	Project Associate	UNIDO		3/5/2021
Ms. Rebecca Nanjala	National Project Coordinator	UNIDO	V	30/4/2021
Mr. Stephen Biribonwa (RIP)	Principal Agricultural Officer	MAAIF	V	21/4/2021
Dr. Kephas Nowokunda	Head, Food Bio-sciences Research Programme	NARO	V	30/4/2021
Mr. Suudi Kizito	Commissioner Industry and Technology	MTIC	V	28/4/2021
Mr. Bbosa	Climate Change Adaptation Unit	MWE	V	8/6/2021
Mr. Juvenille Muhumuza Mr. Denis Mugagga	GEF contact person	MFPED	V	8/6/2021
Ms. Vastina Kyompairwe	District Production & Marketing Officer	DLG Mitooma	V	5/5/2021
Mr. Robert Tumwesigye	District Agricultural Officer	DLG Mbarara	V	5/5/2021
Mr. Mwesigye Darius	Senior Agricultural Officer	DLG Rubirizi	Face-to-face (FF)	20/5/2021
Mr. Aloysius Karugaba	Principal Agricultural Officer	DLG Isingiro	FF	25/5/2021
Mr. Amon Natwebembera	Senior Agricultural Officer	DLG Bushenyi	FF	21/5/2021

B. Facilities

Name	Facility	Type of meeting	Date
Mr. Paddy Mwesigwa	Rwentobo Mbarara Farmers Group	Virtual FF	7/5/2021 27/5/2021
Mr. David Mugabi	Mbarara Fruits of the Nile Growers Association	FF	27/5/2021
Mr. Gad Atuhairwe	Silgand Investments (U) Ltd, Mbarara	FF	26/5/2021
Mr. Alan Amumpe	Bana Beverages (U) Ltd, Sheema	V	7/5/2021
Mr. Mujuzi Ssalong	Rutunguru Cluster, Ntungamo	FF	27/5/2021
Kano Naijuka	Forest Fruit Foods Ltd, Bushenyi	FF	21/5/2021
Ms. Francesca Kamanzi	Kiaga (U) Ltd, Bushenyi	FF	24/5/2021
Mr. Bruce Rutaremwa	St. Peters Rockhill, Isingiro	FF	25/5/2021
Mrs. Winie Kagwa	Ankole Foods, Isingiro	FF	25/5/2021

C. Focus Group Discussions.

Mother garden beneficiaries in Rubirizi 12(4F)	**Districts**	**Participants (of which female)**
Mother Garden and Bio-digester beneficiaries	Rubirizi	7(2F)
Farmers that supply banana juice to Forest Fruit Foods	Bushenyi	12(6F)
Farmers as suppliers of Rockhill winery	Isingiro	6 (3F)
Farmers as suppliers of Silgard	Mbarara	9 (4F)
Farmers interested in supplying to Silgard	Mbarara	11(5F)
Group members of Rutunguru	in Ntungamo	6 (3F)
Group members of Rwentobo	Ntungamo	6 (2F)

Annex 6: Annotated Log-Frame

Highly Satisfactory Satisfactory Moderately Satisfactory
Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory

Impact: Increased resilience to CC, income and food security of small holder farming households in Western Uganda	At least 5,000 small-holder farmers disaggregated by sex with improved assets* such as soil and water conservation structures, water harvesting structures) to adapt to CC At least 5,000 small-holder farmers disaggregated by sex reclassified as income and food secure	No evidence available on target indicators. Rated moderately unsatisfactory.
Objective: To support vulnerable communities in Western Uganda to better adapt to the effects of CC through banana value addition activities, to provide greater opportunities for income generation, poverty reduction and food security	Average income of banana producing households in target districts increased by 30% at project completion, disaggregated by sex of head of household 30% increase in the banana value addition in the target region	No evidence available on target indicators. Rated moderately unsatisfactory.

Outcome 1: CCA strategies coupled with appropriate action on gender equality are incorporated into developmental policies and implemented by stakeholders in various sectors			
Output	**KPIs/Indicators Revised in Green**	**What happened**	**Outcome achieved?**
Output 1.1: National policy documents such as the Agriculture Sector Strategic Plan (ASSP) updated with action on CCA and gender mainstreaming for adaptation.	1.1.1 CCA captured in the ASSP 2015/16-2019/20 and the National Industrial Sector Strategic Plan.	A review report of NIP (2017) A review report of NISSP (2017) including stakeholder assessment.	Changed from ASSP and NISSP to NIP NISSP Review report has limited recommendations on CCA and none on gender. No information on NISSP/implementation strategy NIP 2020 makes very limited reference to CCA and gender
	1.1.2. District level strategies on adaptation produced.	A report presenting a strategy for banana value chain resilience, consolidating all 8 districts (2020) Validation workshop, facilitated by UNDP	No district plan strategies for adaptation or banana VC established
	1.1.3. 8 DLG development plans setting priorities on reducing vulnerability to CC along the value chain.		Local Governments have no budget to develop action plan for implementation
Output 1.2: CCA coping strategies including gender equality for adaptation promoted among investors and other stakeholders in the agro-industries and rural enterprise development sector.	1.2.1. SMEs increased gender equality awareness.	No activity took place (except participation in validation workshop for the strategy above)	Activity not undertaken
	1.2.3. 8 DLG development plans setting priorities on reducing vulnerability to CC along the value chain.	Same output as above	Same as 1.1.3

Outcome 2: Vulnerable communities are increasingly participating in resilience-building activities for income diversification			
Output	**KPIs/Indicators output)**	**What happened**	**Outcome achieved?**
Output 2.1: Sensitization of female and male farmers in the target districts on CCA coping strategies to build resilience to CC	2.1. % of targeted population awareness of predicted adverse impacts of climate change and appropriate responses, disaggregated by gender (No target, no baseline)	By November 2019 sensitization activities had been undertaken in all 8 districts involving 630 (231 female) banana farmers. No data collection undertaken to test awareness	Lacks target and baseline. Sensitizations were delivered and women participated to a significant degree Interviews indicate that CC awareness varies among farmers depending on intensity of effect.
Output 2.2: Small scale processing facilities established in target regions for vulnerable communities to engage in income diversification value addition activities	2.2. 30% increase in number of farming HHs disaggregated by sex of head of HH, engaged in banana value addition (No baseline in PD) PIR 2019: 2,500 household to be engaged in banana VA o/w 347 in wine 1200 in juice 675 in banana chips	9 upgraded facilities (wine 4, juice 1, and chips 4) 1 chips factory not functional b/c dryers 3 chips factory functioning but with not upgraded equipment.	The engagement of farmers households in targeted facilities has increased as follows (total/ow female/% of target)) • Wine 117/25/34% • Juice 70/18/6% • Banana chips 63/40/9% In total 250 HH
	2.3. Number of banana-based products from the target region meeting UNBS standards (Not target, no baseline)	Training provided to wine and juice makers 214 actual/potential processors trained in standards 13 banana-based products with a Q-mark from UNBS by 2020	Lacks baseline but assumed to be 0. 6 facilities achieved national certification for 13 products: • 10 wine • 3 juice

Output	KPIs/Indicators output)	What happened	Outcome achieved?
Output 2.3: Banana based products from income diversification activities effectively marketed in locations with good marketing potential	40% increase in banana products (wine, Chips) produced in the target area per annum and reflected in the expansion of local and regional markets (Baseline data and monitoring data unclear No indicator for expansion in local/regional markets)	Upgraded facilities participated in annual agricultural shows Business training activities were discontinued as not well adapted to needs	Significant increase in production according to latest data collection (May 2021), much above 40% targets), but data vary significantly between project M&E sources No information on sales to regional markets or national markets which is the most critical issue.
Output 2.4: Community based tissue culture (TC) industry established to support the demand generated from CCA coping livelihoods diversification activities	Number of TC derived plant material purchased per year by small holder farmers from established mother gardens Baseline: 18. (Not target, no baseline)	The project partner Agro-Technology Industries (AGT) was contracted to supply 71,000 Tissue Culture banana plantlets in September 2017. Districts established mother/ demonstration gardens Some 141 farming households have been selected to host these gardens	Lacked target. Districts established mother/ demonstration gardens to be able to multiply the materials for the benefit of the wide community. Farmers are generally able to access these plantlets. The TC material give much fewer suckers than the native banana plants, however. The distribution of plantlets has consequently restricted the expansion of the mother gardens. Data differ between sources. The PT rapid assessment (May 2021) showed (i) 141 direct beneficiaries (women around 10 percent); (ii) 2597 indirect beneficiaries (2% women) No evidence that these plants are being used for VA

Output	KPIs/Indicators output)	What happened	Outcome achieved?
Output 2.5: Bio-digesters to convert banana waste into biogas established to support income diversification activities and resulting in digested slurry to be used for soil fertility	Number of farming HH disaggregated by HH head sex, applying bio-digest residue as fertilizer for banana plantations Baseline: 30 (No target)	200 HH bio-digesters distributed (not broken down by gender of HH or by district)	Lacked target Delinked from banana VC activities as households are using animal bio-slurry Bio digesters distributed to 200 HH (of which 1/5 female) BD installed at facilities but could not be used (or not only used) as not enough waste to fuel them The bio-digesters were successfully used for farmers who had livestock. The use of bio-slurry will soon benefit other farm households
Output 2.6: Water purification and water harvesting technologies to support livelihoods diversification and income generating activities	Increase in number of water harvesting facilities set up in vulnerable communities	Project report 2019 notes that 8 processing facilities have been equipped with water harvesting technologies, and water purification have been installed in juice factory and wineries	With the exception of two facilities, the community does not have access to the water collected. No other water harvesting facilities set up.

Output	KPIs/Indicators output)	What happened	Outcome achieved?
Outcome 3. Lessons learned and best practices from policy changes, capacity development initiatives and pilot plants disseminated			
Output 3.1: Guidelines on best practices and project knowledge disseminated within the country and sub regions through websites, publications and communication products in various languages	Number of similar projects and initiatives started as a direct result of or citing the project (no target)	A handbook on Banana value addition and utilization with the aim of building resilience to climate change for banana value chain actors has been developed. Dissemination through website, hearsay. Etc.	MAAIF indicated that there have been discussions with minister for agriculture on the need to get a similar initiative in other banana growing areas. District focal persons indicated that there are some few individuals who have started some enterprises like wine and juice that are inspired by the project results. In Mitooma, 15 farmers have adopted the bio gas establishment through contracting the service provider themselves and this number is likely to increase because of the usefulness of the bio-gas and bio-slurry as fertilizer. The project is seen as an important component in developing the NAP. COVID-19 has limited further dissemination.
	Number of external events, conferences, and show where project results are highlighted (no target)	3 National Agricultural shows where beneficiaries were also supported to exhibit, 1 farmers market 1 international food exhibition (Milan) A documentary on the impact of the project intervention has been finalized	

Outcome 4. Quality Control, Monitoring and Evaluation			
Output	**KPIs/Indicators output)**	**What happened**	**Outcome achieved?**
Output 4.1. Quality control and efficient monitoring of project intervention to support adoption by CC vulnerable communities	Baseline assessment of measurable indicators in the eight Districts	A vulnerability assessment was undertaken in 2014 but was not used.	The baseline assessment has no information that has been used to set important baselines for number of farmers, income of farmers, current investment in climate change assets, etc. Monitoring reports have been prepared. Either these reports were incomplete, or they have not been aggregated into a consistent monitoring framework. Supporting background information has not been consistently filed. Annual reports have been prepared for 2017-2020, and an MTR was undertaken in 2018.
	Number of communities based primary processing /farming groups, district and governmental agency staff, disaggregated by sex, trained to monitor the project(baseline established at inception)	Project monitoring training provided to local government focal points (not farmers groups) who have been in charge of regular monitoring.	