

SMARTFARM - A data and digital technology driven and farm management solution for climate resilience.

Review CEO Endorsement and Make a recommendation

Basic project information

GEF ID

10965

Countries

Regional (Ethiopia, Rwanda)

Project Name

SMARTFARM - A data and digital technology driven and farm management solution for climate resilience.

Agencies

IFAD

Date received by PM

1/31/2023

Review completed by PM

4/30/2023

Program Manager

Aloke Barnwal

Focal Area

Climate Change

Project Type

MSP

PIF
CEO Endorsement

Part I ? Project Information

Focal area elements

1. Does the project remain aligned with the relevant GEF focal area elements as presented in PIF (as indicated in table A)?

Secretariat Comment at CEO Endorsement Request

Please add countries Rwanda and Ethiopia also under the tab "Countries". So, it can be Regional, Ethiopia, Rwanda.

GEFSEC 10 April: Thanks. Comment cleared.

Agency Response This is done

Project description summary

2. Is the project structure/design appropriate to achieve the expected outcomes and outputs as in Table B and described in the project document?

Secretariat Comment at CEO Endorsement Request

- Given that the 200,000 smallholder farmers is the estimated target of the project, it is better to remove this number from the objective statement. Also, it is inconsistent with the project's estimated target which has been revised down to 130,000.

- The outcomes and outputs described under all the three components lack clear adaptation focus. The revisions to the outcomes from the PIF to the CER introduces more general language on climate impact. For example, outcome 1.1 refers to ?farmers adopting improved and sustainable agricultural practices? and 2.1 refers to ?improved crop and livestock

productivity in pre harvest and post-harvest losses?, but does not mention if this is for climate adaptation or resilience. To ensure the focus on climate adaptation and resilience and justify LDCF funding, please explicitly reference the focus on climate change adaptation and resilience in the outcome and output statements, as well as their brief descriptions.

- Under outcome 1.1, the project can directly support adaptation by integrating climate data in the SMARTFARM tool to provide climate informed agriculture services to the vulnerable farmers. This focus is currently missing in the outputs pertaining to this outcome. Please add this as an output and also in the activities to align the project with 30% climate information services focus mentioned in the meta information sheet. The proposed integration of WACS could be explicitly added as an output.

GEFSEC, 10 April, 2023

Please update Outcome 2.1 also to reflect the clear adaptation objective.

Please report only unique number of farmers. The reduction from the PIF stage can be attributed to reducing number of countries from 3 to 2.

All other comments are addressed.

GEFSEC 29 April 2023

Thanks. Comment is cleared now.

Agency Response

28 April 2023

Updated the outcome, the total number of beneficiaries is 130,000

20 March 2023

Agreed. While the total number of farmers receiving the services in 2years will remain 200,000, the unique number of farmers is 130,000. The breakup is as follows:

Year 1: 50000 (Ethiopia)+ 20000 (Rwanda)

Year 2: 70000 (old registered farmers) +50000(Ethiopia new) +10000 (Rwanda new) = 130,000 unique households

Total services year 1 +year 2= 200,000

Will change the total number everywhere to 130,000 unique households in all the documents.

Agreed on the outcomes and outputs. Have changed the log frame, ToC, results sheet in CER accordingly. CropIn will provide both Digital advisory and weather and climate advisory services to all the farmers.

3. If this is a non-grant instrument, has a reflow calendar been presented in Annex D?

Secretariat Comment at CEO Endorsement Request NA

Agency Response

Co-financing

4. Are the confirmed expected amounts, sources and types of co-financing adequately documented, with supporting evidence and a description on how the breakdown of co-financing was identified and meets the definition of investment mobilized, and a description of any major changes from PIF, consistent with the requirements of the Co-Financing Policy and Guidelines?

Secretariat Comment at CEO Endorsement Request Yes

Agency Response

GEF Resource Availability

5. Is the financing presented in Table D adequate and does the project demonstrate a cost-effective approach to meet the project objectives?

Secretariat Comment at CEO Endorsement Request Yes

Agency Response

Project Preparation Grant

6. Is the status and utilization of the PPG reported in Annex C in the document?

Secretariat Comment at CEO Endorsement Request Yes

Agency Response

Core indicators

7. Are there changes/adjustments made in the core indicator targets indicated in Table E? Do they remain realistic?

Secretariat Comment at CEO Endorsement Request

Please provide the reason for reducing the target beneficiaries from 200,000 to 130,000.

Also, please fill in the sub outputs under each Outcome in the portal entry.

In the meta-information sheet, please specify how health and disaster risk management is linked with this project. It is not very obvious. These percentages could be added to Agriculture which is the primary focus of this project.

GEFSEC, 10 April 2023

Please provide only unique number of beneficiaries and refer to the comment in the previous question.

Under 1.1.3 sub-indicators, please tick the relevant "climate hazards", "climate information systems" and other sub-indicators which look quite relevant to this project.

All other comments are addressed.

GEFSEC 29 April 2023

Thanks. Comment cleared.

Agency Response

28 April 2023

The total number of beneficiaries is 130,000

20 March 2023

The main justification for this is that the farmers receiving services in year 1 will continue on for the second year as well.

Year 1: 50000 (Ethiopia)+ 20000 (Rwanda)

Year 2: 70000 (old registered farmers) +50000(Ethiopia new) +10000 (Rwanda new) =
130,000 unique households

Total services year 1 +year 2= 200,000

Agreed, will change the meta information sheet accordingly.

Part II ? Project Justification

1. Is there a sufficient elaboration on how the global environmental/adaptation problems, including the root causes and barriers, are going to be addressed?

Secretariat Comment at CEO Endorsement Request

Given the focus on the two countries Ethiopia and Rwanda, please provide some country specific climate vulnerabilities which the project will tackle. Currently, it includes global data and information only in para 1, 2 and 3 of the Project Description section.

GEFSEC 10 April 2023

Thanks. Comment cleared.

Agency Response

20 March 2023

Agreed and updated.

2. Is there an elaboration on how the baseline scenario or any associated baseline projects were derived?

Secretariat Comment at CEO Endorsement Request

- Please note there is project also supported through the second round of the GEF Challenge Program for Adaptation Innovation implemented by FAO in partnership with CIAT titled ?Scaling Financial and Information Services for Smallholder Adaptation?, with a focus on Uganda and Zambia, as well as Africa regional (project ID 10954). This project has some complementary aspects with potential for cross learning and leverage. Please include some opportunity for learning and cross fertilization with this project, as part of component 3 or otherwise. This comment will also be conveyed to FAO and CIAT.

-

- GEFSEC 10 April 2023: Thanks. Comment cleared.

Agency Response

20 March 2023

Agreed and updated. Page 43 and in component 3 description.

3. Is the proposed alternative scenario as described in PIF/PFD sound and adequate? Is there sufficient clarity on the expected outcomes and components of the project and a description on the project is aiming to achieve them?

Secretariat Comment at PIF/Work Program Inclusion

Please revise the theory of change in line with the comments made above regarding establishing a strong climate adaptation linkage in the project activities, outputs and outcomes.

In the WACS, please elaborate if it will factor in climate change projections. A number of climate models exist which the tool can integrate for more climate change informed weather and climate advisory services. This was suggested at the time of PIF development also.

Component 1 says 200,000 beneficiaries whereas the indicator sheet mentions 130,000. Please make it consistent.

GEFSEC 10 April 2023

In the TOC- please be consistent in defining the goals. Poverty reduction is not clearly articulated as an intended objective and also it requires a number of other factors. It could be elaborated in the socio-economic benefits section. I suggest limiting it to climate resilience and adaptation.

In the project development objective, please remove reference of "130,000" target. Just smallholder farmers will be fine. We suggest the following for your consideration : "Enable smallholder farmers in Ethiopia and Rwanda to adapt to climate change and improve their crop productivity and food and nutrition security.

GEFSEC 29th April, 2023

Thanks. Comment cleared now.

Agency Response

28 April 2023

Updated the TOC and the Project Development goal and adapted the suggested project objective

20 March 2023

1-Agreed and updated.

2-WACS details have been added. CropIn deploys SMARTFARM application to offer hyper local weather forecasts. CropIn will set up weather based rule engines in the Climate Sense module which gets activated if the weather conditions match for the plot. This will trigger a SMS to the farmers. CropIn has global partnerships with the likes of IBM that have weather stations for every 500 m x 500 m grid which is nearly for every 60 acres we get weather data specific to that location. Besides, synergies with local meteorological organizations will be explored in the programme. The underlying technology deploys a mix of AI, remote sensing and in-situ data for climate projections.

3- The numbers have been updated in all places for consistency.

4. Is there further elaboration on how the project is aligned with focal area/impact program strategies?

Secretariat Comment at CEO Endorsement Request

Yes

Agency Response

5. Is the incremental reasoning, contribution from the baseline, and co-financing clearly elaborated?

Secretariat Comment at CEO Endorsement Request

Yes.

Agency Response

6. Is there further and better elaboration on the project's expected contribution to global environmental benefits or adaptation benefits?

Secretariat Comment at CEO Endorsement Request

Yes.

Agency Response

7. Is there further and better elaboration to show that the project is innovative and sustainable including the potential for scaling up?

Secretariat Comment at CEO Endorsement Request

On the Sustainability aspect- please elaborate how will the smallholder framers continue to benefit from the climate and agri-advisory services after the project grant ends.

GEFSEC 10 April 2023

Thanks. Comment cleared.

Agency Response

20 March 2023

Updated on page 21 of the CER.

Project Map and Coordinates

Is there an accurate and confirmed geo-referenced information where the project intervention will take place?

Secretariat Comment at CEO Endorsement Request

Yes.

Agency Response

Child Project

If this is a child project, is there an adequate reflection of how it contributes to the overall program impact?

Secretariat Comment at CEO Endorsement Request

NA

Agency Response

Stakeholders

Does the project include detailed report on stakeholders engaged during the design phase? Is there an adequate stakeholder engagement plan or equivalent documentation for the implementation phase, with information on Stakeholders who will be engaged, the means of engagement, and dissemination of information?

Secretariat Comment at CEO Endorsement Request

•Please expand on the engagement with banking institutions and insurance institutions, as is briefly referenced in the section on private sector engagement. What will be the nature of this engagement, what specific banking and insurance institutions will be engaged, and which

have been consulted to date through project preparation? For example, will climate information generated be made available to financial institutions for them to design and/or monitor lending and insurance products for small holder farmers to transition to more climate resilient practices. Please elaborate on this, both in the stakeholder engagement and private sector engagement strategy sections, as well as any other relevant sections.

-
- GEFSEC 10 April 2023- Please confirm if this project will indeed engage with Indigenous Peoples and Local Communities. If yes, please elaborate on the safeguards. In this portal section, we couldn't see the reference to engagement with financial and insurance institutions. Please add some key stakeholders in the table, extracted from the "private sector" section.
- GEFSEC 29th April 2023- Comment cleared.

Agency Response

28 April 2023

Updated the working with local communities. Both countries do not have identified indigenous communities on page 40 and 41 under the Risk Matrix

The project has referred on working with finance and insurance institutions, these have been updated in the Stakeholder matrix table

20 March 2023

Updated on Page: 25 and 28

Gender Equality and Women's Empowerment

Has the gender analysis been completed? Did the gender analysis identify any gender differences, gaps or opportunities linked to project/program objectives and activities? If so, does the project/program include gender-responsive activities, gender-sensitive indicators and expected results?

Secretariat Comment at CEO Endorsement Request

The gender analysis needs more elaboration and clarity. While the background information about women's vulnerability from climate vulnerable agriculture is useful, there is not much analysis regarding their access to agri services and climate services. Given that the later is a focus of the project, please add this analysis.

Typically, we require a detailed gender action outlining and listing specific activities that will lead to 1) women empowerment and capacity building and 2) women being the targeted beneficiaries of the project. IFAD may like to refer to gender analysis of similar projects and add some more information.

GEFSEC 10 April 2023:

Thanks. To be further reviewed by the gender expert.

Agency Response

20 March 2023

Developed and included in the package

Private Sector Engagement

If there is a private sector engagement, is there an elaboration of its role as a financier and/or as a stakeholder?

Secretariat Comment at CEO Endorsement Request

The section primarily describes how the private sector will benefit from the project. Please elaborate how will they be engaged during the project implementation.

GEFSEC 10 April 2023

Thanks. Comment cleared.

Agency Response

20 March 2023

Added on Page 28

Risks to Achieving Project Objectives

Has the project elaborated on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved? Were there proposed measures that address these risks at the time of project implementation?

Secretariat Comment at CEO Endorsement Request

As per guidance of the GEF, please add an analysis related to COVID-19 on the project. Please add the following:

- The COVID-19 context of the project
- Potential risks in project operations and mitigation strategy

- Opportunity to support a green and resilient recovery

GEFSEC 10 April 2023

Thanks for including this in the risk sections. Please add a para on how this project provides opportunity to contribute to resilient recovery.

GEFSEC 29th April- thanks. Comment is cleared.

Agency Response

28 April 2023

Updated on Section 5 -Risks

20 March 2023

Added in the IPRM on page 29 for Ethiopia. Already included for Rwanda on page 35 and updated.

Coordination

Is the institutional arrangement for project implementation fully described? Is there an elaboration on possible coordination with relevant GEF-financed projects and other bilateral/multilateral initiatives in the project area?

Secretariat Comment at CEO Endorsement Request

Yes.

Agency Response

Consistency with National Priorities

Has the project described the alignment of the project with identified national strategies and plans or reports and assessments under the relevant conventions?

Secretariat Comment at CEO Endorsement Request

Yes

Agency Response

Knowledge Management

Is the proposed ?Knowledge Management Approach? for the project adequately elaborated with a timeline and a set of deliverables?

Secretariat Comment at CEO Endorsement Request

Yes.

Agency Response

Environmental and Social Safeguard (ESS)

Are environmental and social risks, impacts and management measures adequately documented at this stage and consistent with requirements set out in SD/PL/03?

Secretariat Comment at CEO Endorsement Request

Yes

Agency Response

Monitoring and Evaluation

Does the project include a budgeted M&E Plan that monitors and measures results with indicators and targets?

Secretariat Comment at CEO Endorsement Request

Yes

Agency Response

Benefits

Are the socioeconomic benefits at the national and local levels sufficiently described resulting from the project? Is there an elaboration on how these benefits translate in supporting the achievement of GEBs or adaptation benefits?

Secretariat Comment at CEO Endorsement Request

Yes

Agency Response

Annexes

Are all the required annexes attached and adequately responded to?

Secretariat Comment at CEO Endorsement Request

- ANNEX B: RESPONSES TO PROJECT REVIEWS: The table is not visible. Please paste again.

GEFSEC 10 April 2023: Thanks.

Agency Response

As informed by email we have issues in uploading this Annex. We were constantly in contact with your IT and they are trying to see where is the issue and to solve it.

The document is uploaded in the portal under Documents: GEF10965-ANNEX B-SMARTFARM-responses to GEF Review-PIF.

Project Results Framework

Secretariat Comment at CEO Endorsement Request Added.

Agency Response

GEF Secretariat comments

Secretariat Comment at CEO Endorsement Request

Please paste Annex B

GEFSEC 10 April 2023: Thanks.

GEFSEC 10 May 2023

1. On Co-financing: The letter of support from Cropln is lacking a date. Please request agency to provide a letter with a date or to provide an updated estimation of the actual amount that the agency think will go to the project considering the timeframe for both ? the co-finance and the GEF project.

2. On gender: It is not clear if component 2 will benefit women. Please specify this under the project component section.

On below screenshot, the project speaks about improving women?s participation (in a number of capacity-building activities, etc.). If this is the case, please respond ?Yes? to the line on

Improving women's participation and decision-making below.

3. On the utilization of the PPG: please request the agency to provide an additional level of details on what the PPG funds were used for (i.e. type of consultancies).

4. On monitoring and evaluation: it seems 35k have been reserved for M&E but this information does not seem to be explicitly mentioned in the overall project budget in Annex E. Please request the agency to include this information in the column M&E.

GEFSEC May 17, 2023

Thanks. Comment cleared for final review by PPO.

Agency Response

17 May 2023

1-Co Financing letter has been updated and resubmitted

2-Gender aspect added under component 2 with 25% women agripreneurs expected to benefit

The line on improving women participation has been checked in the document

3-Table has been updated with details of the expenses used under PPG

4-M&E allocations included

As informed by email we have issues in uploading this Annex. We were constantly in contact with your IT and they are trying to see where is the issue and to solve it.

The document is uploaded in the portal under Documents: GEF10965-ANNEX B-SMARTFARM-responses to GEF Review-PIF.

Council comments

Secretariat Comment at CEO Endorsement Request Please paste Annex B

Agency Response We don't see council comments in the portal

STAP comments

Secretariat Comment at CEO Endorsement Request

Please paste Annex B

GEFSEC 10 April 2023- Thanks

Agency Response We don't see council comments in the portal
Convention Secretariat comments

Secretariat Comment at CEO Endorsement Request

Agency Response
Other Agencies comments

Secretariat Comment at CEO Endorsement Request

Agency Response
CSOs comments

Secretariat Comment at CEO Endorsement Request

Agency Response
Status of PPG utilization

Secretariat Comment at CEO Endorsement Request Yes.

Agency Response
Project maps and coordinates

Secretariat Comment at CEO Endorsement Request Added.

Agency Response
Does the termsheet in Annex F provide finalized financial terms and conditions? Does the termsheet and financial structure address concerns raised at PIF stage and that were pending to be resolved ahead of CEO endorsement? (For NGI Only)

Secretariat Comment at CEO Endorsement Request

NA

Agency Response

Do the Reflow Table Annex G and the Trustee Excel Sheet for reflows provide accurate reflow expectations of the project submitted? Assumptions for Reflows can be submitted to explain expected reflows. (For NGI Only)

Secretariat Comment at CEO Endorsement Request NA

Agency Response

Did the agency Annex H provided with information to assess the Agency Capacity to generate and manage reflows? (For NGI Only)

Secretariat Comment at CEO Endorsement Request NA

Agency Response

GEFSEC DECISION

RECOMMENDATION

Is CEO endorsement recommended? (applies only to projects and child projects)

Secretariat Comment at CEO Endorsement Request

Not yet. The Agency is requested to address the technical comments and resubmit the project for further review.

The Agency is requested to address a few other comments and resubmit the project in the portal.

Yes, the project is recommended for CEO's approval.

May 10, 2023

Please address additional comments from PPO and resubmit the project for endorsement. The comments are added under the GEF Secretariat comments box above.

May 17, 2023

PPO's comments have been addressed by the Agency. The project is cleared by PM for CEO approval/endorsement.

Review Dates

	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
First Review	2/13/2023	3/31/2023

	Secretariat Comment at CEO Endorsement	Response to Secretariat comments
Additional Review (as necessary)	4/11/2023	4/28/2023
Additional Review (as necessary)	4/29/2023	5/17/2023
Additional Review (as necessary)	5/10/2023	
Additional Review (as necessary)	5/17/2023	

CEO Recommendation

Brief reasoning for CEO Recommendations

"SMARTFARM" is an innovative LDCF funded project introducing innovative digital climate advisory services in the agriculture sector to make smallholders farmer resilient to the impacts of climate change. The IFAD and CROPIN project aims to increase adoption of climate resilient agriculture practices in Rwanda and Ethiopia by making real-time weather and climate data along with data-driven farm advisory available to smallholder farmers. The project has a strong focus on engaging with the private sector for adaptation and is well aligned with the objectives of the challenge program for adaptation innovation.

While Ethiopia and Rwanda is highly vulnerable to climate change with small holders farmers particularly vulnerable to drought and flooding, these two countries also have a strong baseline to adopt innovative data driven climate and agri advisory services. Successful implementation of the project in these two countries can lead to large scale replication in the region thereby enhancing resilience of a large number of smallholders.

Building on the successful experience of CROPIN in Asia region and IFAD's digital agriculture efforts for smallholder farmers globally, the project will create an enabling environment for adoption of digital technologies for climate and agri-advisory services in the two countries with a significant potential to replicate in other countries, It will create opportunities for the private sector to offer technical services to smallholder farmers to support increased crop production, access to knowledge and access to innovative finance including credits and insurance. The project will also develop and deploy a digital agriculture platform, and connect nearly 130,000 farmers with the platform to provide them crop advisory services, connect them with financing and other technical institutions and strengthen their technical knowledge on climate resilient agriculture practices. It will also train 2000 extension workers and agri-preneurs to use the platform and provide last mile services to smallholder

farmers in sustainable manner. More specifically, the project will provide four specific technical services to smallholder farmers to support climate resilient agriculture.

- Weather and climate services (WACS) to provide valuable and actionable information to smallholder farmers on weather forecasts, weather nowcasts, climate predictions and early warnings. The information will be provided through mobile SMS. The climate data and services will be provided in synergy with local met organizations and using global climate databases.

- Data-driven agriculture services (DDAS) to provide agriculture intelligence services to farm level decision making by building on traditional agricultural advisory services and complementing it with precision agriculture uses hyperlocal data sources, such as sensors and UAV imagery, to optimize on-farm activities, and may involve elements of mechanization, such as solar irrigation.

- Agri digital financial services (Agri DFS) to support agricultural credit products and agricultural index insurance that can help smallholder farmers become more climate resilient. For the index insurance, CropIn will deploy SMARTRISKS and PLOTTRISKS to score farmers and farms out of 100 to gauge the risks associated with the particular farmer.

- Digital Agri-Market services (DAMS) include complete farm to fork traceability and horizon on harvest and yield for off-takers and buyers to participate in business relationships with smallholder farmers institutions through traceability, digital procurement, and e-commerce platform. CropIn will deploys ROOTTRACE and MARKETPLACE applications under this component. It will be a highly innovative application and first of its kind in Africa which will test use of Blockchain technology for climate resilient agriculture.

Overall, it's a highly innovative and could be a beacon project in the two countries demonstrating application of digital technology for making agriculture sector more climate resilient. The project will lead to enhanced capacity of small holder farmers and extension workers, and by creating a platform to connect various stakeholders in agri value chain, it will further create space to develop further innovative adaptation solutions. With a direct link with improving agriculture productivity and supporting sustainable livelihoods, the project will contribute to resilient recovery and building back better from the COVID-19 pandemic. The project is aligned with national adaptation priorities of Rwanda and Ethiopia including NAPAs and NDCs. It will focus strongly on women smallholder farmers, strengthen private sector engagement through the digital platform and support a strong knowledge management system on climate resilient agriculture.