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CULTIVATE AFRICA'S FUTURE (CULTIAF) PHASE II, EXTERNAL EVALUATION

Final Report

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Le Groupe-Conseil Baastel

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LE GROUPE CONSEIL BAASTEL

Le Groupe-conseil baastel ltée
92, rue Montcalm, Gatineau QC, Canada
Boulevard Adolphe Max 55, Brussels, Belgium
P: +1 (819) 595-1421
W: www.baastel.com

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ABBREVIATIONS & ACRONYMS

ACIAR	Australian Centre for International Agricultural Research
CDPF	Country Development Programming Framework
CEAA	Canadian Environmental Assessment Act
CFO	Chief Financial Officer
CultiAF	Cultivate Africa's Future
EM	Evaluation Matrix
ESA	East and Southern Africa
ET	Evaluation Team
EQ	Evaluation Question
FGD	Focus Group Discussions
FTE	Full-time Equivalent
GC	Governance Committee
IAE	International Assistance Envelope
ICTs	Information, Communication Technologies
IDRC	International Development Research Centre
IR	Inception Report
KII	Key Informant Interviews
NGO	Non-Government Organization
MoU	Memorandum of Understanding
ODA	Official Development Assistance
OECD	Organization for Economic Co-operation and Development
PCR	Project Completion Report
PMF	Performance Measurement Framework
Pro-WEAI	Project-level Women's Empowerment in Agriculture Index
RCT	Randomized Control Trials

RD	Record of Decision
SAC	Scientific Advisory Committee
TOC	Theory of Change
TOR	Terms of Reference
SEA	Strategic Environmental Assessment
UN	United Nations
WEAI	Women's Empowerment in Agriculture Index

EXECUTIVE SUMMARY

The Cultivate Africa's Future (CultiAF) program is a joint initiative between the ***Canadian International Development Research Centre (IDRC)*** and the ***Australian Centre for International Agricultural Research (ACIAR)*** which aims to improve food security, resilience and gender equality across Eastern and Southern Africa. CultiAF is a ten-year, CA$35 million ($38.6 AUD million) partnership, divided into two phases—phase 1 from 2013 to 2017 and phase 2 from 2017 to 2023, that funds applied research aimed at improving food and nutrition security in eastern and southern Africa. The applied research focuses on developing and scaling-up sustainable, climate-resilient, and gender-responsive innovations for smallholder farmers and producers.

The second phase of CultiAF (from 2017-to 2023) builds on the preceding five years of CultiAF phase 1 that spans the 2013-2017 period. The initiative's expected outcome is an increase in high-quality scientific, innovative research focusing on the adoption, testing and scaling-up of existing and new technologies and agribusiness to tackle nutrition and food insecurity. The fund geographically focuses on essentially eight countries—Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Uganda, Zambia, and Zimbabwe, while funding the scale-up of successful innovations from CultiAF-1 as well as new research projects.

The focus of the evaluation had two objectives:

- **Objective 1: To Assess Progress/Results Against Planned Outcome Targets**
- **Objective 2: Inform Future Programming**

The key findings and results from the evaluation helped identify a set of actionable recommendations to better coordinate future activities to achieve CultiAF II's (and potentially future program phases) goals and objectives. The main users of the evaluation findings and recommendations will be CultiAF II staff and the program's funders, ACIAR and IDRC.

Evaluation Key Findings

Relevance: There was a strong alignment between the priority areas of IDRC and ACIAR with CultiAF-II's research theme areas—agricultural water management, increasing agricultural productivity and incomes, linking agriculture, nutrition and human health, reducing post-harvest losses, climate change resilience, along with two cross-cutting themes of gender equality and environmental sustainability. In terms of geographic focus, the program aligns well with both agencies. The projects responded to the food and nutrition security needs in the region, and has potential for high-impact solutions, especially if taken to scale in the future.

Effectiveness: The CultiAF program and its projects were able to support food and nutrition security, however the outcomes were not consistently measured across projects, and the indicators collected to track progress were mostly output indicators. The projects conducted baselines data collection differently and some of them have not completed an end line assessment to measure overall outcomes. Although the Covid-19 pandemic caused challenges to the projects, the majority of the management teams were able to minimally adapt to ensure results were achieved. The evaluation finds:

- ✓ Demonstrated *increased agricultural productivity and incomes* for a number of the projects although for other, this increase was not always formally measured; Indeed, in some cases, there were limited formal methods established and changes were not tracked.

- ✓ CultiAF II was also successfully demonstrated potential to red*ucing both pre-and post-harvest food losses* in the projects, even if the measurement of the food losses could have been more rigorous.
- ✓ Not many projects integrated nutrition as part of their objectives. However, a few projects had specific results linked to nutrient-dense agricultural products (e.g., precooked beans, small fish in Malawi Fisheries), while some other included nutrition as a topic in their research.
- ✓ Only one project supported the optimization of water use (Mozambique Irrigation) while a few other had water management as a secondary result with their primary planned interventions
- ✓ Many projects were able to integrate climate resilience in the project design by selecting *climate resilient* agricultural products and technologies;
- ✓ It was found that policy dialogue to adapt country regulations to innovative solutions was important to ensure their scaling and uptake.

Although tracking was not consistent and could be improved, the projects were able to demonstrate significant uptake; scaled projects (i.e., continued from CultiAF I) were able to reach more people and scale-up within the second phase and some technologies have been taken up widely. In some cases, projects wider uptake was limited due to prohibitive cost of technologies (Malawi fisheries) or due to a lack of a scale-up approach (e.g., some of the projects were focused on developing the innovative products and did not have time to ensure for uptake approaches to be implemented).

Overall, the research is innovative and contributing to some new evidence or evidence that is newly introduced within a country and there has been evidence of these projects informing policies and national standards.

Environmental Risks: The projects put into place required strong environmental safeguards in terms of technology and construction, so environmental risks were very limited and mitigated. Moreover, most projects, by their design, produced positive impacts on the environment, either by reducing the consumption of combustibles, reducing or eliminating the use of fuel and/or firewood, reducing waste, limiting the water used, using solar energy and reducing the use of pesticides and insecticides through integrated pest management practices.

Gender: Compared to Phase I, CultiAF-II made enhanced efforts to address gender inequalities through the hiring of gender experts in each project, staff training, staff and researcher team's gender composition, involving females in activities when possible, and identifying female 'champions' among beneficiaries. Activities were designed in a way that they would allow women to save time for their family and/or become more financially independent; some designed financial products tailored for women. The CultiAF program management team contracted the International Food Policy Research Institute (IFPRI) to support research teams to implement the project-level Women's Empowerment in Agriculture Index (Pro-WEAI)[1]. Others included the Pro-WEAI within their projects baseline with their own organizational expertise. The Pro-WEAI supported the collection of gender sensitive data, which was considered a successful endeavor, even if it

[1] The project-level WEAI (or pro-WEAI) is a tool that agricultural development projects can use to identify key areas of women's (and men's) disempowerment, design appropriate strategies to address identified deficiencies, and monitor project outcomes related to women's empowerment. The 12 pro-WEAI indicators are mapped to three domains: intrinsic agency (power within), instrumental agency (power to), and collective agency (power with). A gender parity index compares the empowerment scores of men and women in the same household. The authors describe the development of pro-WEAI, including: (1) pro-WEAI's distinctiveness from other versions of the WEAI; (2) the process of piloting pro-WEAI in 13 agricultural development projects during the Gender, Agriculture, and Assets Project, phase 2 (GAAP2); (3) analysis of quantitative data from the GAAP2 projects, including intrahousehold patterns of empowerment/disempowerment; and (4) a summary of the findings from the qualitative work exploring concepts of women's empowerment in the project sites.

required some investment in terms of time as well as human and financial resources, that partners did not always anticipate. However, although many activities were implemented and output level results generated, evidence of higher-level results and change related to gender equality was not found. This was to be expected as the projects were not designed to achieve gender transformative changes. Still, the link between the Pro-WEAI data and its influence on strategic decision making for gender in the projects is not evident

Economic Impact: The CultiAF innovations' economic impacts have limited quantification as of yet, a few projects have concrete data. Positive economic impacts have been generated through reduced losses, increased productivity, higher selling prices, diversification of sources of income, etc. even if the Covid-19 slowed down progress. Although there were a few exceptions, these impacts have not been quantified yet.

Efficiency: The donors very effectively communicated with the recipients despite occasional confusion about the division of responsibilities. Guidance regarding the governance, processes, annual work plans and implementation plans, and SOP were clear and straightforward. A few recipients reported issues with the IDRC withholding of 10% of the budget until project activities were completed which presented challenges.

Economy (financial management): IDRC reported that their support for monitoring risks was time consuming and that there is definitely more capacity development needed in financial accounting and risks with some project recipients. In addition, the short project timeline led to inability to capture impacts. IDRC reportedly managed the finances very well. In terms of feedback from the fund recipients most of the projects did not have any issues aside from challenges with agreeing on budgets and teaming arrangements at the proposal development stage.

Lessons learned from the implementation include: to allow for longer project time frames, integrate gender better from the beginning of the project design; plan ahead of time for scaling-up technology use; focus on the enabling environment including support for policy and guideline development; improve monitoring of outputs and measurement of overall outcomes with clearly defined indicators and reporting requirements and regular peer feedback on data collection; the ability to create dynamic teams with varied expertise across countries was appreciated and encouraged; funding flexibility was also appreciated to promote innovations and scale-up innovations; fund recipients also appreciated the research themes that were targeted; finally it was recognized that use of certain technologies for agriculture can save significant time for women.

Recommendations

In light of the findings, accompanying evidence, and conclusions, the ET makes the following recommendations:

Recommendation 1: Increase Project Cycle Length
There was consensus from all fund recipients that the prescribed duration of projects is too short. The program itself will have lasted six years, but the funded individual projects will have had an average duration of three years. IDRC and ACIAR could consider reducing the number of projects funded and increase each project's budget and duration. In this context, the selection process' timeline could be shortened (i.e., because there would be less projects) and more time could be dedicated to the projects' implementation. CultiAF's staff would spend less time and resources on the selection process and would be able to dedicate more support to the

projects themselves. In the context of CultiAF II, it is undeniable that the COVID-19 pandemic affected the projects' ability to scale-up their solutions and to ensure there was uptake among all community members. Nevertheless, even in normal circumstances, projects would mainly benefit from longer project lifecycle.

Linked to the above, it becomes logical to consider the option of continuing the funding of a sample of CultiAF II's projects so that the scaling can continue. Extending the funding and implementation of this sample of projects would mean more time for implementation and hence more chances of scaling the solutions.

Linked to this recommendation, the ET also suggests:

- ***Be ready for Emergencies and Crisis***: In the wake of COVID-19, IDRC/ACIAR thought that it would be best to have a contingency plan for emergencies such as COVID-19 or other shocks, for example aside from extension they could have crisis management strategies in place. Having longer timelines for project implementation would allow for these to take place
- ***More capacity building and training*** in the key areas such as gender, communications, research, and financial reporting.
- ***More Linkages with other IDRD/ACAIR projects:*** Although there were some examples of ongoing coordination, it was suggested to be more interlinked with other IDRC/ACIAR projects-and to link more with the Sustainable Development Goals (SDGs).
- ***Encourage Pre-Teaming Agreements and Better Monitoring:*** It is suggested to have training in and perform pre teaming agreements for consortia, to be able to assess the abilities of the entire team, members' commitment and the monitoring responsibilities.
- ***Institutionalize More Peer Feedback Loops:*** Some of the recipients commented on their need to do more publicity and attend more conferences within the country so people can provide their comments and feedback to stimulate more dialogue and publish more publications. CultiAF II has started this but more needs to be done. Covid-19 did affect the projects' ability to make this more central to the work they did.

Recommendation 2: Improve Project Monitoring and Data Collection to Measure Overall Program Impact

Clearly define indicators, indicator definition and expected baseline and end line data collection in order to report on overall project outcomes and impact. In other words, it is recommended that IDRC and ACIAR develop a clear monitoring framework, with clear guidance on how it needs to be implemented at project level and how the data can and should be "rolled-up" and aggregated, in a logical manner, once it is collected in a harmonized manner.

- Develop a Culti-AF **theory of change** -the program design should be based upon a sound development hypothesis that describes the theory of change, logic, and causal relationships between the building blocks needed to achieve a long-term goal.
- Develop a Culti-AF **results framework** that clearly defines the program goal, strategic objectives, intermediate results and related outcomes[2] and output indicators that align with the research themes. Results frameworks show the causal relationships between the various intermediate results that are critical to achieving the strategic objective. The Results Framework (RF) is a graphical representation of the development hypothesis and includes the Goal, Strategic Objectives (SO), Intermediate Results (IRs) (or Outcomes) and performance indicators (outputs). The effectiveness of these activities can be measured at each step along the way. It is recommended to have about 3-5 outcomes (intermediate results) per strategic objective.

- Develop an indicator definition handbook for the program indicators (can model the U.S. Feed the Future handbook[3])
- Cleary define indicator reporting including reporting roles and responsibilities for project monitoring-this will clearly defined roles and responsibilities for reporting, data collection, data collection forms-contributing to a robust reporting and monitoring system for the program.

Recommendation 3: Strengthen Focus on Scaling-Up the Adoption and use for Nutrition-Sensitive Agricultural Technologies

Integrate more focus on the scaling-up of the adoption and use of nutrition-sensitive agricultural technologies and clear plans to increase uptake of these technologies. This includes a more robust plan to scale-up technologies with a well-defined timeline to scale-up to see real impacts.

- The process of "scaling up" development interventions can take different forms.

[2] Outcomes – are the set of short-term or intermediate results at the population level achieved by the program through the implementation of program/project strategies/activities.

[3] "Feed the Future Indicator Handbook Definition Sheets." Guidance. Washington, D.C.: United States Government, Feed the Future Initiative, October 2014. https://feedthefuture.gov/sites/default/files/resource/files/ftf_handbook_indicators_october2014.pdf.

- Scaling can be understood through pathways (actors and their roles), spaces (enabling factors), and drivers (champions and demand)
- Increase the focus on ***time and labor-saving technologies, equipment***, practices and management techniques that increase, protect, improve and preserve nutrient content of food and dietary diversity while increasing yields, farm outputs and total incomes for smallholder farmers.[4]
  - Nutrition-sensitive agriculture technologies decrease agricultural labor and impact the income of farm and non-farm households in rural areas, which in turn impacts food prices, availability and access to different food products for rural and urban consumers.[5] These technologies and practices assist farmers and particularly women with their domestic chores and with their farming and non-farm activities.
  - It is important to remember that technologies that increase agricultural product yields or incomes —but that do not increase *total income* or improve household food consumption or nutritional status are not nutrition-sensitive.[6]
  - Agricultural technical changes can occur pre-production and during production, involving some combination of research and outreach to develop and disseminate the new technology.[7]
- Consider scaling-up ***post-harvest handling management technologies*** include affordable technologies or management practices that improve or maintain nutrients and reduce post-harvest losses.
  - It is important to remember to '**do no harm'** when selecting appropriate nutrition-sensitive technologies as some technologies create spillovers that affect others (e.g., technologies that impose costs on others).
  - This includes market inefficiencies that lower expected profits from agricultural technology adoption.[8]
- **Increase focus on Financial Services for Nutrition-Sensitive Agriculture:** Financial services that are accessible and tailored to meet the needs for smallholder farmers and women and to diversify livelihoods are needed for nutrition-sensitive agriculture.
  - There are three types of finance products offered by the finance service providers: saving, credit, and risk management.[9]
  - Adequate financing options and capacity building in financial literacy, business management skills, food marketing, or marketing linkages facilitation are needed to improve nutrition through the agriculture sector.[10]

[4] These technologies were adapted from the U.S. Government Feed the Future definitions in the Feed the Future Indicator Handbook. Definition Sheets. June 7, 2011 as well as the Synthesis of Guiding Principles on Agriculture Programming for Nutrition (FAO, February 2013).
[5] From Agriculture to Nutrition: Pathways, Synergies and Outcomes. The International Bank for Reconstruction and Development / The World Bank. 2007. Accessed at: http://siteresources.worldbank.org/INTARD/825826-1111134598204/21608903/January2008Final.pdf
[6] Masset et. al. 2011
[7] An Introduction to Nutrition-Agriculture Linkages. MINAG/DE Research Report 72E. Maputo, Mozambique: Directorate of Economics, Ministry of Agriculture. Chung, K. 2012. Available at: http://fsg.afre.msu.edu/mozambique/WP72Chung.pdf
[8] These include: Externalities, Input and Output Market Inefficiencies, Land Market Inefficiencies, Labor Market Inefficiencies Credit Market Inefficiencies, Risk Market Inefficiencies, Informational Inefficiencies. Source: Market inefficiencies and the adoption of agricultural technologies in developing countries. Agricultural Technology Adoption Initiative. Prepared by B. Kelsey Jack. May 2013. Available at: http://www.atai-research.org/sites/default/files/ATAI%20white%20paper%2020130629.pdf
[9] http://www.ruralfinance.org/fileadmin/templates/rflc/documents/1241106625426_Finance_in_Value_Chain_Analysis.pdf
[10] SOTA recommendations

- Some financial services that have been implemented for nutrition sensitive agriculture include: asset-backed financing, crop risk insurance, microcredit for nutrition-sensitive agriculture, remittances matching programs for agricultural development, value chain financing and in-kind revolving funds or inventory credit.[11]

Recommendation 4: Strengthen Focus on Gender Equity and the Involvement of Women in Project Activities

More Gender Integration: There was also acknowledgement by donors that there is more need to address gender issues and the involvement of women in project activities in particular. As mentioned above, stronger emphasis on gender has been noticed during CultiAF II compared to CultiAF I. Activities and outputs were evidenced and the Pro-WEAI data has been noted as an important step in ensuring monitoring is gender sensitive. However, more in-depth, strategic gender-oriented planning needs to take place to ensure transformative, intermediate outcome-level results are achieved.

[11] FANTA, SCN

- Gender equality and women's empowerment are crosscutting factors in the linkage between agriculture and nutrition and ALL agricultural interventions should mainstream gender equality and women's empowerment.[12] [13]
- Targeting women and addressing gender equity issues contributes to women's empowerment by increasing women's access to – and control over – income, and enhances their role in decision-making related to household expenditures, in communities and society as a whole.[14]
- Women can be empowered through targeted agricultural interventions, especially ones that focus on 'women's crops' including small-scale horticulture.[15] [16]
- Evidence demonstrates that agricultural interventions associated with improvements in household dietary intake and nutritional status had one of two key characteristics: either women played a critical role in the intervention or the interventions included a nutrition education and behavior change component.[17]
- Greater control by women at all stages of the agriculture nutrition pathway will reflect their preferences and priorities more, and potentially lead to their greater control of income to improve household food security and nutrition outcomes.[18] [19]
- **Gender-Sensitive M&E:** Disaggregate all indicators by *Sex and Age Disaggregated Data (SADD)* where relevant
- Gender issues should be addressed in the required Interim Technical reports reporting, with appropriate gender indicators promoted and measured and indicator data disaggregated by sex and, when appropriate, age.
- Resources:
  - Increase Women's Access to Quality Agricultural Inputs
  - Increase Women's Access to Financial Services

[12] Can Interventions to Promote Animal Production Ameliorate Undernutrition? American Society for Nutrition. The Journal for Nutriton. Leroy and Frongillo. 2007. Available at: http://jn.nutrition.org/content/137/10/2311.abstract
[13] The Importance of Gender in Linking Agriculture to Sustained Nutritional Outcomes Agriculture and Nutrition Global Learning and Evidence Exchange (AgN-GLEE) Bangkok, Thailand. Hazel Malapit and Shakuntala Haraksingh Thilsted. March 20 , 2013.
[14] The Micronutrient Impact of Multisectoral Programs Focusing on Nutrition: Examples from Conditional Cash Transfer, Microcredit with Education, and Agricultural Programs. Jef L Leroy, Marie Ruel, Ellen Verhofstadt, Deanna Olney., International Food Policy Research Institute (IFPRI).2008. Available at: http://micronutrientforum.org/innocenti/Leroy-et-al-MNF-Indirect-Selected-Review_FINAL.PDF
[15] Improving Nutrition Through Multisectoral Approaches Agriculture and Rural Development. International Bank for Reconstruction and Development/ International Development Association or The World Bank. January 2013. Accessed at: http://search.yahoo.com/r/_ylt=A0oG7lZL2ndRfTcAettXNyoA;_ylu=X3oDMTE1OWVyNmoyBHNlYwNzcgRwb3MDMwRjb2xvA2FjMgR2dGlkA01TWTAwNV8xMTk-/SIG=14q1pi4i9/EXP=1366837963/**http%3a//www.securenutritionplatform.org/Documents/Improving%2520Nutrition%2520through%2520Multisectoral%2520Approaches_full%2520doc.pdf
[16] GAIN IDS Discussion Paper: Nutritious Agriculture by Design: A Tool for Program Planning. Spencer Henson, John Humphrey, Bonnie McClafferty. April 2013. Accessed at: http://www.ids.ac.uk/files/dmfile/GAIN-IDSDiscussionPaper.pdf
[17] Can Interventions to Promote Animal Production Ameliorate Undernutrition? American Society for Nutrition. The Journal for Nutriton. Leroy and Frongillo. 2007. Available at: http://jn.nutrition.org/content/137/10/2311.abstract
[18] From Nutrition Plus to Nutrition Driven: How to Realize The Elusive Potential of Agriculture For Nutrition? International Food Policy Research Institute IP.Nevin Scrimshaw International Nutrition Foundation. Lawrence Haddad. April 2013. Available at: http://www.ingentaconnect.com/content/nsinf/fnb/2013/00000034/00000001/art00005
[19] From Agriculture to Nutrition: Pathways, Synergies and Outcomes. The International Bank for Reconstruction and Development / The World Bank. Agriculture And Rural Development Department. 2007. Available at: http://siteresources.worldbank.org/INTARD/825826-1111134598204/21608903/January2008Final.pdf

- Income:
  - Increase Women's Income and Intra-household Decision-Making Power and Control over Income
- Time:
  - Address Women's Time Constraints/ and time allocation

1 CULTIVATE AFRICA'S FUTURE (CULTIAF) PROGRAM EVALUATION OVERVIEW

1.1 Cultivate Africa's Future (CultiAF) Program Overview

The Cultivate Africa's Future (CultiAF) program is a joint initiative between the Canadian ***International Development Research Centre (IDRC)***[20] and the ***Australian Centre for International Agricultural Research (ACIAR)***[21] which aims to improve food security, resilience and gender equality across Eastern and Southern Africa (ESA). CultiAF, through its two phases, is a ten-year, CA$35 million ($38.6 AUD million) partnership that funds research aimed at improving food security, resilience, and gender equality, particularly through technology, value chain development, agribusiness, increasing agricultural production and incomes, managing post-harvest losses, improving nutrition and agribusiness while addressing climate resilience, gender equality and environmental sustainability within the agricultural sector.

The second phase of the fund geographically focuses on essentially the same countries as the previous phase—CultiAF I (Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Uganda, Zambia, and Zimbabwe[22]) while funding the scale-up of successful innovations from CultiAF I as well as new research projects

The second phase of CultiAF (from 2017 to 2023) builds on the preceding five years of CultiAF phase 1 that spanned the 2013-2017 period. The program's expected outcome is an increase in high-quality scientific research focusing on the adoption of existing and new technologies, and testing technologies and agribusiness to scale-up proven research innovations to tackle nutrition and food insecurity.

CultiAF funding is allocated to individual projects selected through a two-step competitive process. During the evaluation process, five projects were ongoing – and four projects which were scaled from CultiAF phase 1 had completed their research work. CultiAF II projects ranged from research to the application-ready stage, and were implemented through both pilot projects and through more scaled-up projects. Annex 1 presents a summary of CultiAF II-funded projects in a table that includes the name of the projects, the countries they are implemented in, the relevant research themes, budgets (in CAD$), and the project start and end dates.

The objectives of CultiAF II are as follows:

[20] ***IDRC*** is a Canadian Crown corporation established by an act of Parliament in 1970 to help developing countries find solutions to their problems. Under the International Development Research Act[20] the objectives of IDRC include supporting and conducting research into the problems of the developing regions of the world and into the means for applying and adapting knowledge to the advancement of those regions.

[21] ***ACIAR*** was established in 1982 via The Australian Centre for International Agricultural Research Act (the "ACIAR Act"), to reduce poverty and improve livelihoods through productive and sustainable agricultural systems for the benefit of developing countries and Australia. ACIAR is Australia's leading agency for agricultural research for development. Through partnerships, ACIAR works to improve agricultural productivity and agri-food value chains while building more resilient food systems and long-term scientific capacity to lift people out of poverty in developing countries.

[22] Burundi and Tanzania are not included in the second phase of CultiAF.

- **Objective 1:** Increase food and nutrition security in Eastern and Southern Africa by funding applied research to develop sustainable, climate resilient, and gender-responsive innovations for smallholder farmers.
- **Objective 2:** Develop and implement business models that empower women and youth to scale out innovations that bring equitable benefits to smallholder farmers and consumers.
- **Objective 3:** Use research results to inform food security, nutrition, climate change and water policies and programs.

CultiAF-II focuses on four key thematic research areas and two cross-cutting areas:

1. **Increasing Agricultural Productivity and Incomes and reducing post-harvest losses**
2. **Linking Agriculture, Nutrition and Human Health**
3. **Improved gender equity**
4. **Climate Change and sustainable water management**

In addition to these five research areas there are two cross cutting topics across the main research themes.

- **Improved Gender Equity and Equality:** CultiAF II has adopted a gender strategy[23] (and an addendum) to guide integration of gender in the projects it funds. The strategy contains key questions, practical guidelines, outcomes and indicators to ensure gender is fully considered during the project selection process. Research projects were selected and approved based on gender equality criteria. There was a requirement to hire experts in gender issues in each research project and to train research teams and integrate the topic across all activities. The project team members were also trained during the joint inception workshop on how to integrate the gender dimensions in their activities.
- **Environmental Sustainability:** The proposal selection criteria considered how environmental risks and benefits are integrated into project programming. It also requires projects to follow guiding principles of sustainable land management, integrated water resources management, protection and enhancement of biodiversity, adaptation to and mitigation of climate change, and sustainable livelihoods. Projects were also asked to identify environmental risks and mitigate against them during the implementation of their activities.

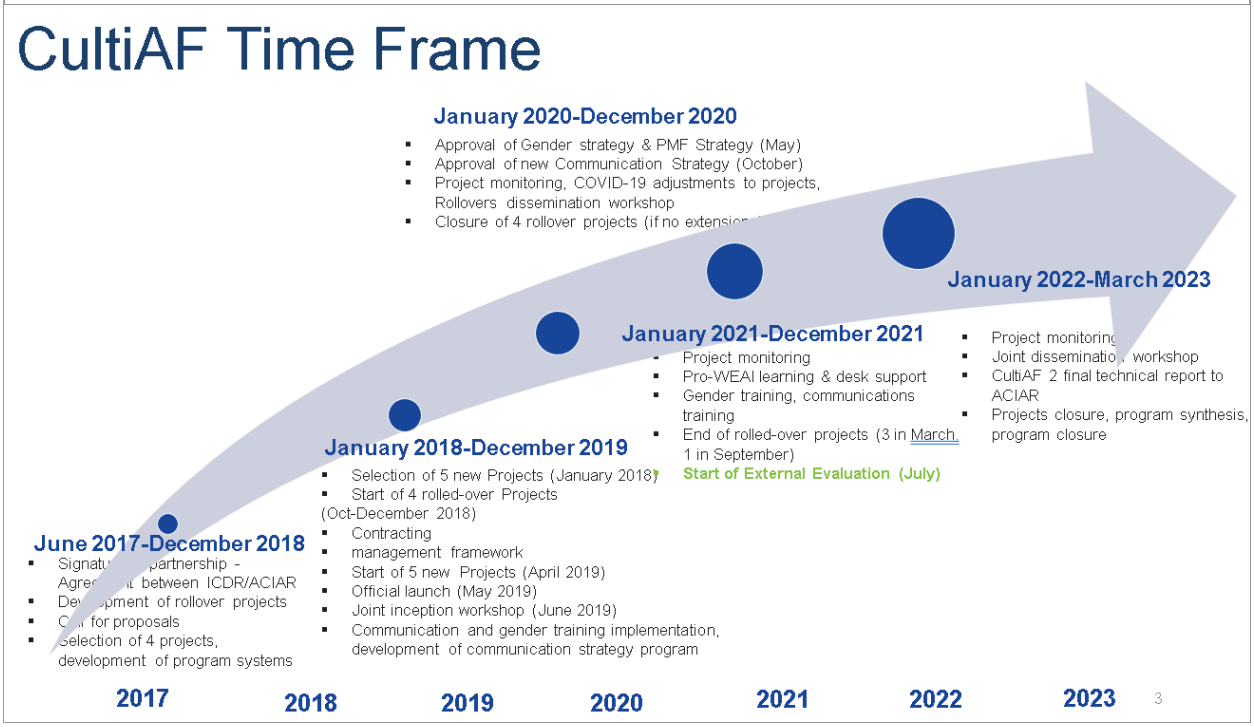
Key implementing consortia partners included: Universities and research centers; partners from civil Society (non-governmental organizations [NGOs], private sector, academia) and governments (including policymakers). Direct beneficiaries include individuals (smallholder farmers (men and women), female and male youth agripreneurs, relevant actors), households and greater communities. Projects were implemented by a consortium of organizations, mixing local country knowledge with experience from renowned international universities and research centers. There were in addition partnerships with organizations from the civil society and with the private sector to test and scale up solutions, as well as to train communities and farmer organizations. Environmental risks and safeguard measures were also considered at every step of the program through risk management and mitigation measures. Research activities, when possible, were conducted with the view of generating sustainable solutions that have low or no impact on the environment and that provided environmental benefits to the communities, when possible. CultiAF II strived to create structures and processes that enabled poor and marginalized individuals, households, and communities to influence policies and practices that had the potential to broaden and diversify income sources. Communities were therefore fully integrated within the

[23] "A Strategy for Gender in Agriculture and Food Security at IDRC." International Development Research Centre (IDRC), 2015.

program and women's economic empowerment as well as gender equality and equity were placed at the heart of the process.

1.2 CultiAF II Project and Activities

Figure 1: CultiAF II Timeline



The second phase of CultiAF started in June 2017, when a new partnership agreement was signed between IDRC and ACIAR. However, the fund was not officially launched until May 2019. In the meantime, as the scaled projects started their implementation from the previous phase — three started in October 2018 while one started in December 2018 — five new projects were selected in 2018, to start their implementation in April 2019. CultiAF II has a total budget of CA$ 20 million and a five-year timeline (Figure 1). The nine CultiAF II projects are testing a total of 19[24] innovations that improve productivity and income of smallholder farmers while promoting gender equality in farming households and communities.

1.3 Evaluation Purpose & Objectives

CultiAF II commissioned this external evaluation during its third year of implementation to fulfill accountability requirements and to inform an understanding of results and implementation of the program. This external evaluation was conducted to identify achievements, performance issues, and constraints related to activity implementation and effectiveness. The main users of this report are CultiAF program staff and IDRC and ACIAR as funders.

[24] IDRC, July 2020. *CultiAF II Annual Report to ACIAR*. P. 2

The evaluation team (ET) sought to assess the extent to which CultiAF II has contributed to outcomes and longer-term results. The evaluation assessed progress based on cumulative outcome-level data (goal and first-level objectives and indicators) reported by CultiAF II and triangulation of qualitative data. The focus of the evaluation had two objectives, intended to meet the needs of users:

- **Objective 1: To Assess Progress/Results Against Planned Outcome Targets:** To assess advancement made toward the achievement of CultiAF II program objectives, expected intermediate results and immediate outcomes to highlight areas of both success and potential improvement for the remaining implementation period;
- **Objective 2: Inform Future Programming:** To formulate lessons learned and recommendations that could inform future programming to CultiAF's Governance Committee (GC) which is responsible to give the program its strategic orientations

The key findings and results from the evaluation helped identify a set of actionable recommendations to better coordinate future activities to achieve CultiAF II's (and potentially future program phases) goals and objectives. This is not an impact evaluation and hence no counterfactuals were used.

1.4 Evaluation Methodology & Approach

1.4.1 Evaluation Criteria & Research Questions

The evaluation aligned with the *Development Assistance Committee of the Organization for Economic Co-operation and Development- Development Assistance Committee (OECD-DAC) Quality Standards for Development Evaluation* (2010)[25] and the IDRC evaluation approach where applicable.[26] The methodological approach was transparent, impartial, inclusive, gender-sensitive, participatory, and utilization-focused. It drew upon mixed methods to gather credible information from a variety of sources. The evaluation design was built around the principles of utility, credibility, independence, impartiality, ethics, transparency, human rights as well as gender equality, and professionalism.

The proposed evaluation questions (EQs) (Table 1) were aligned with the OECD/DAC evaluation criteria.[27] There are nine areas of inquiry linked to the associated evaluation questions (the full list of questions and sub-questions can be found in Annex 4.)

Table 1: Research Evaluation Questions

Criteria	Research Evaluation Questions
1. Relevance	How relevant is CultiAF programming with the mandates of its funders (International Development Research Centre (IDRC) and Australian Centre for International Agricultural Research (ACIAR)? How relevant is CultiAF programming in terms of food & nutrition security priorities in the Eastern and Southern Africa countries that the program targets?

[25] Organisation for Economic Co-operation and Development. "Quality Standards for Development Evaluation." Paris: OECD Publishing, 2010. https://www.oecd.org/development/evaluation/qualitystandards.pdf.
[26] "Evaluation at IDRC." International Development Research Centre (IDRC), January 2017. https://www.idrc.ca/sites/default/files/sp/Documents%20EN/evaluation-at-idrc.pdf.
[27] "Evaluation Criteria - OECD." Accessed April 26, 2021. https://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm.

Table 1: Research Evaluation Questions

Criteria	Research Evaluation Questions
2. Effectiveness	How effectively are the CultiAF program and the projects it supports addressing food and nutrition security priorities to reach expected outcomes?
3.Environmental Risks	What consideration has been given to the potential environmental impacts, both positive and negative, of the projects supported through CultiAF?
4. Gender	How effectively has the funded research recognized and addressed gender issues
5. Economic Impact	What have been the potential positive or negative economic impacts[28] of the CultiAF innovations? Can they be quantified?
6. Efficiency	How efficient and appropriate has the CultiAF-2 program model—including the governance, management, planning and implementation - been in supporting CultiAF objectives?
7. Economy (financial management)	How effectively is the institutional/ reputational risk of fund recipients being managed? To what extent were research partner activities funded equitably and finances managed in a coordinated way among partners?
8. Strategic Recommendations	How can CultiAF improve its overall performance for the remaining implementation time of the program? What are the most important program adjustments that can be made to improve future implementation?

The ET used these EQs to analyze the different CultiAF II funded projects in terms of the program relevance and performance. The team's approach and methodology provided a thorough assessment of the CultiAF II project interventions, by presenting useful and linked findings, conclusions, lessons learned and key recommendations for future programming.

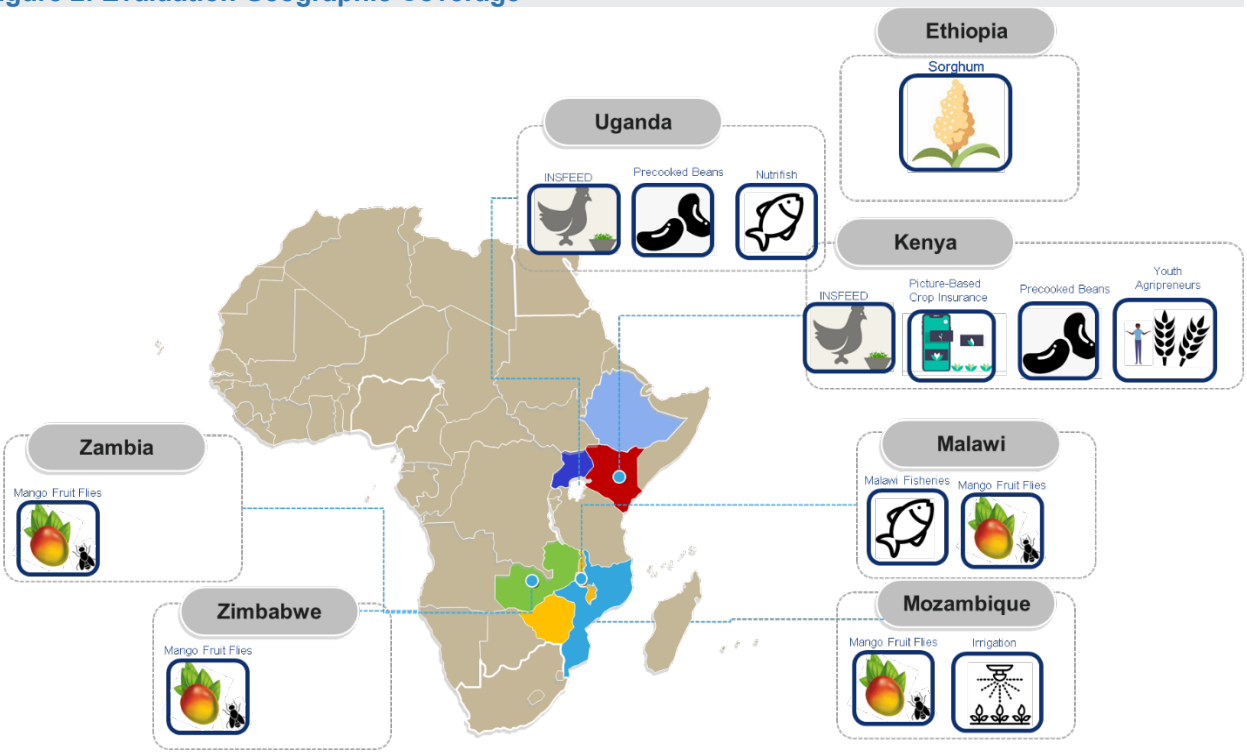
This evaluation of CultiAF II focused on the program's countries (Ethiopia, Kenya, Malawi, Mozambique, Uganda, Zambia, and Zimbabwe). The range of projects to be evaluated included those initiatives or interventions for which results are monitored and stored into the 'Trackify', the IDRC digital monitoring system—results were exported to Excel for analysis by the evaluators.—

The ET used the Theory of Change (TOC) it constructed during the inception phase of the evaluation, presented in Annex 5 and in the inception report, as an addition to the evaluation matrix (EM) framework—which included the questions, sub-questions, indicators, data collection methods and respondents as well as the data analysis methods, (Annex 4) that allowed for a balanced assessment of both the program and project level results. Although the main focus was at the program initiative level, a lot of the data collected came from the individual projects.

The analysis of the key EQs, along with the use of the EM as a guiding tool to conduct the key informant interviews (KIIs) and focus group discussions (FGDs) allowed for a detailed triangulated approach to evaluate CultiAF II and the progress that has been achieved to date. This included examining the partnership arrangements between IDRC and ACIAR, as well as between these IDRC/ACIAR and the consortium that implementing the projects in the targeted countries.

[28] Economic impacts are measured through impact evaluation methodologies. The present evaluation does not apply an impact evaluation methodology and focuses on many other aspects of the program and its projects, such as relevance, effectiveness, efficiency and many others.

Figure 2: Evaluation Geographic Coverage



Source: Authors of this report, 2021.

1.4.2 Evaluation Phases

The ET used a mix-method approach to generate several lines of evidence that incorporated and reflected various factual data and stakeholder perspectives as the foundation for **rigorous triangulation**. The EM functions as the main analytical framework for how each EQ and sub-questions were addressed. The matrix maps the EQs against data collection and analysis methods, indicators and lines of inquiry, data collection tools and sources of information. This matrix guided the analysis and helped with triangulation and the identification of evidence gaps which ensured that the evaluation design was robust, credible, and transparent. This evaluation had three main phases: inception, data collection and analysis and the final reporting phase (Figure 3).

Figure 3. Phases of the Evaluation

Source: Authors of this report, 2021.

Overall, the team used the following steps and activities to carry out this evaluation.

Phase 1: Inception

During the inception phase, the ET worked with IDRC and ACIAR to refine the EQs, finalizing the EM, making sure that the optimal method of gathering data and evidence would be conducted during the evaluative process, and that all objectives and EQs could be answered at the final report stage. The ET used the EQs outlined in the TORs as a starting point to finalize the EM and develop a ToC to help analyze for the evaluation. The EQs were used as a framework to further identify key sub-questions, indicators, relevant data and information sources and also finalize the data collection methods. The EM included reference to OECD's evaluation principles; key questions, sub-questions; performance indicators; proposed data sources; data collection, methods & tools and the methods for data analysis.

Preliminary Literature Review. A preliminary desk/literature review was conducted including reviewing existing CultiAF II monitoring data and materials, program/project technical reports, the CultiAF performance measurement framework (PMF) (Annex 3), Global Canada and Scientific Advisory Committee (SAC) documents, *Research in Action* articles, stories from the fields, annual reports to ACIAR as well as external relevant documents.

Inception Report (IR): The inception meeting and preliminary literature review led to the provision of information for the development and refinement of the IR that was presented to the relevant evaluation coordinators from IDRC and ACIAR to discuss details and needed adjustments.

Phase 2: Data Collection and Analysis

This evaluation used both qualitative and quantitative data. The following is a description of the lines of evidence that were used for data collection by the Baastel team.

An In-depth Literature Review was conducted. The ET reviewed the relevant program, monitoring and evaluation (M&E) documents (Annex 10) and research support projects literature provided by IDRC during the inception phase as well as found online. The documents were reviewed, assessed and data extracted based on the evaluation criteria and systematically classified within through a data collection matrix.

Key Informants Interviews (KII): Starting with key informants from IDRC and ACIAR, the ET used a semi-structured approach tailored to different categories of stakeholders, based on interview protocol designed during the inception phase (Annex 8). Semi-structured interview formats allowed the team to ask a variety of stakeholders the same questions in order to facilitate triangulation but also explore other topics that arise in the interview process or that are specific to a given interviewee. Interviews were conducted virtually in English. The ET conducted a total of 25 KIIs (grouped and individual interviews).

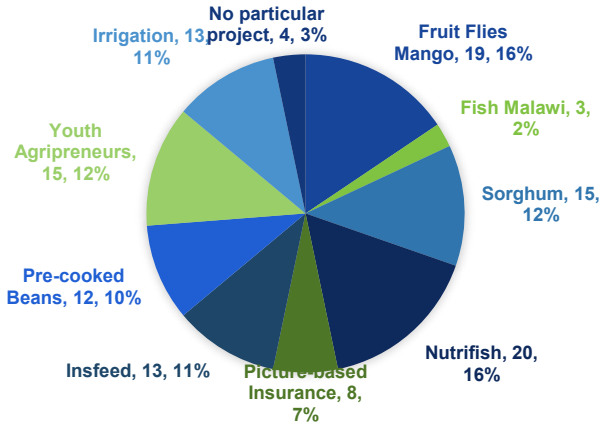
Focus Group discussions (FGD): Four FGDs were organized with several stakeholder groups (see Table 2), in the sampled countries, including with beneficiaries from the communities. Due to COVID-19 related travel restrictions, FGDs were conducted online via WhatsApp/Zoom to encourage maximum participation by all.

Table 2: Data Collection Methods by Type of Respondents

Level of Informant	Respondents
Program (Global) Level *Key informant Interviews*	▪ Donor representatives (IDRC/ACIAR) ▪ Program managers/CultiAF ▪ Governance Committee Members
Project (Country) Level *Key informant interviews as well as* *Online survey* *Focus Group Discussions in a sample of countries*	▪ Key researchers (international/in-country) ▪ Project's staff (incl. technical support) ▪ Gender Specialists
In-country stakeholders *Key informant interviews as well as* *Online survey (when email address is available)* *Focus Group Discussions in a sample of countries*	▪ National Authorities' representatives ▪ Private Sector's representatives ▪ Direct beneficiaries (research users, smallholder farmers) ▪ Community Leaders

Online survey: The online surveys helped gather participants' opinions on a series of subjects directly linked to evaluation questions. A total of 122 stakeholders responded to the survey between October 10th-31st (out of 285 people who had initially received the link). Among them, 100 (82 percent) have completed the survey fully, meaning that 22 did not answer all the questions. Still, their answers have been considered for this analysis, as long as they had completed at least a third of the survey.

Figure 4: Number of Respondents by Project (Total: 122)



Source: IDRC Culti-AF Evaluation online survey, 2021.

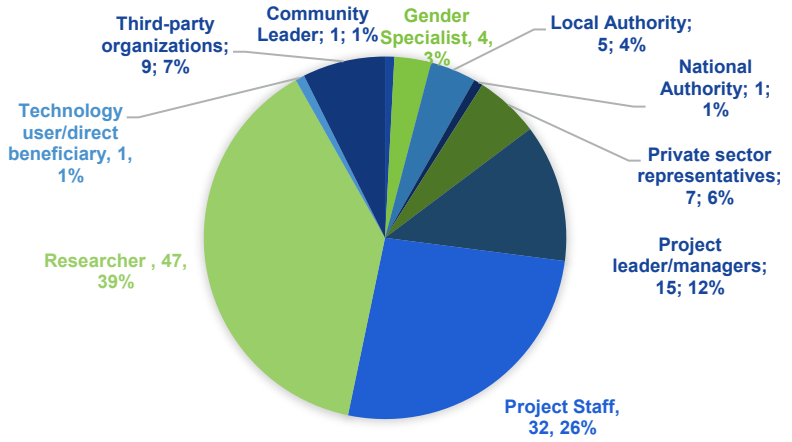
The 122 respondents were selected and mostly evenly distributed across the nine projects in which they have been involved (Figure 4). The only exception was the 'Business Models for Scaling Improved Fish Processing Technologies' (Malawi Fisheries29) who was only represented by four respondents. Furthermore, the most represented projects were Nutrifish (20 respondents), followed by Mango Fruit Flies (18) and Youth Agripreneurs (15). Four respondents declared that they were not attached to any project in particular.

[29] In the rest of the text, the following shortcuts will be used when calling the projects : Climate-smart Interventions for Smallholder Farmers in Ethiopia

In terms of country of duty (Figure 5), 40 percent of the respondents were based in Kenya, which is not surprising since four out of the nine projects were based there, either exclusively or through a transnational project. In the case of Uganda, there were 23 respondents, which hosts 3 different projects, followed by Mozambique (17) and Ethiopia (16). In the latter case, although only one project (*Climate-smart Interventions for Smallholder Farmers in Ethiopia*) is implemented there, 15 people answered the survey.

When asked about their role in the project, the largest number of respondents (47) answered that they were directly related to the research, representing 38 percent of the total population of respondents. They were followed by projects staff (36), among which four of whom were gender specialists, and project managers (15). In addition, there were (9) representatives of third-party organizations, (7) of the private sector and (5) of local authorities who were also relatively well represented, in contrast with technology users/direct beneficiaries[30], community leaders and national authorities, with only one respondent each. The lower response rate from the latter partners was expected because of their lack of access to internet to respond to the survey. The ET conducted the remote KIIs and FGDs to compensate this situation.

Figure 5: Number of Respondents by Role in the Project (Total: 122)



Source: IDRC Culti-AF Evaluation online survey, 2021.

The first figure is the number of peoples, the second the percentage of people related to the total number.

In bold, groups that are part of the projects' teams)

Phase 3: Reporting Phase

The evaluation team presented preliminary findings to IDRC and ACIAR, followed by the submission of a draft report. The present final report incorporates comments from two rounds of comments by IDRC and ACIAR.

It is important to mention that based on the sampling strategy presented below in section 3.5, much of the data presented in the report, supporting the findings, are from projects' examples. The contribution analysis approach used for the evaluation of CultiAF II led to an analysis of the evidence by project. The data is then aggregated and triangulated to generate the findings. For

[30] The 'technology users' terminology was used to include all the final beneficiaries of the projects' innovations, such as the smallholder farmers or the fisherpersons.

the cross-cutting themes, the analysis is more at program level as these elements were integrated into the projects in a more "top-down" approach during implementation.

Limitations: The ET identified limitations to the evaluation process that it mitigated to the extent possible in the context of remote data collection with partners lacking good access to internet.

- The remote data collection process was a challenge because of internet connectivity issues and because of the geographical dispersion of the respondents within and across countries and projects. This was particularly true regarding FGDs with end users, who were not always able to connect on time, or to travel to a single place to work with a single connection. In most cases, the discussions were fluid, despite these limitations. Nonetheless, it is clear that the face-to-face, in-country data collection processes would have had a strong added-value for the evaluation.
- In addition, due to the impossibility to travel to projects' countries to conduct fieldwork, it took more time than usual to coordinate meetings, KIIs, and FGDs, despite the very appreciated effort from the projects' staff to call all the stakeholders individually on time;
- Another limitation was the absence of field visits which prevented the team of evaluators from directly observing some of the innovations, which could have been useful to better understand the technology behind, for instance in the case of the sun dryers or kiln;
- Finally, time differences have been a minor issue to coordinate meetings with IDRC and ACIAR, with participants based in very different time zones, stretching from Canada, to Kenya, to Australia. But the goodwill of participants made it possible to organize some general meetings. Generally speaking, Covid-19 affected the ET's full ability to collect data in the same manner as it would have in normal circumstances. All needed efforts were made to ensure the evaluation would be useful for its intended users and the support received from the field was aligned with this objective as well.

1.5 Sampling Strategy

To ensure the evaluation had a balanced approach to assessing both program and project level achievements, a sampling strategy was developed.

At project-level, a tiered sampling approach was applied to the population of the nine projects to ensure that the evaluation could, with robust confidence, assess the CultiAF Program using data from the targeted countries, while ensuring a representative coverage of the major characteristics of the portfolio of projects. This approach matches specific analytical processes to sampled sub-populations of projects (Table 4).

Table 3: Sampling Approach at Project Level Across Countries

TIERS	SAMPLED PROJECTS	ANALYTICAL PROCESSES INVOLVED
Tier 1 In-Depth Project Analysis	2	▪ Projects Results Assessments: focused on all evaluation criteria and answering all questions detailed in the evaluation matrix ▪ The assessment was informed by a variety of data collection methods: document review, KII (grouped KIIs will increase the number of stakeholders consulted), FGD and Online survey. ▪ FGDs were held with farmers (one per country) and researchers (through a multi-project, multi-country FGD).
Tier 2	4	▪ Project Results Assessment: focused on all evaluation criteria and answering all questions detailed in the evaluation matrix

Table 3: Sampling Approach at Project Level Across Countries

TIERS	SAMPLED PROJECTS	ANALYTICAL PROCESSES INVOLVED
Project Results Assessments		▪ The analysis relied on document review, KIIs (grouped KIIs will increase the number of stakeholders consulted), FGD with researchers (through a multi-project, multi country FGD) and the online-survey.
Tier 3 On-line Survey	9 (all projects)	▪ The assessment was informed by a document review and through the online survey that was administered to different categories of stakeholders, covering relevant evaluation criteria and evaluation questions

Source: Baastel Evaluation Team, 2021.

Using the data from Table 1 the ET summarized the characteristics of the CultiAF II project portfolio. The characteristics are based on the country or countries in which the projects are implemented, their budgets, the research themes, their timeline and whether they are new projects or renewed from CultiAF I.

Using these same characteristics, the sample below was generated to represent, as best possible, the project portfolio for tier 1 and 2 (tier three project stakeholders will be reached through the online survey).

Table 4: CultiAF-II Portfolio Projects and Sample Criteria and Methods

		Criteria for Selection				Evaluation Methods				
Project Name	Country (s)	New or Renewed Project	Criteria: Budget Level (More than or less than 1.5 million)	Criteria: Stakeholders Available	Thematic Areas	Evaluation Matrix Questions Analysis	# KII (grouped)	FDG- (Smallholder farmers – Each FGD will be with beneficiaries from one country only)	FGD- (Researchers – Each FGD will be multi-project, multi country)	Online Survey
Tier 1 Projects										
Nutrifish	Uganda	New	Bigger budget	Good list of stakeholders	Increasing agricultural productivity and incomes, Post-Harvest and CC	Yes	4	FGD A	FGD C	Yes
Youth Agripreneurs	Kenya	Renewed	Smaller budget	Good list of stakeholders	Increasing agricultural productivity and incomes	Yes	4	FGD B	FGD C	Yes
Tier 2 Projects										
Fruit flies Mango	Zambia, Malawi, Zimbabwe, Mozambique	New	Bigger budget	Good list of stakeholders	Post-harvest	Yes	3		FGD D	Yes
Sorghum	Ethiopia	New	Bigger budget	Good list of stakeholders	Increasing agricultural productivity and incomes, Post-Harvest and CC	Yes	3		FGD D	Yes
Fish Malawi	Malawi	Renewed	Smaller budget	List of Only researchers	Increasing agricultural productivity and incomes and Post-Harvest	Yes	3		FGD D	Yes
Pre-cooked Beans	Uganda, Kenya	Renewed	Smaller budget	Mainly list of researchers	Increasing agricultural productivity and	Yes	3		FGD C	Yes

Table 4: CultiAF-II Portfolio Projects and Sample Criteria and Methods

		Criteria for Selection				Evaluation Methods				
Project Name	Country (s)	New or Renewed Project	Criteria: Budget Level (More than or less than 1.5 million)	Criteria: Stakeholders Available	Thematic Areas	Evaluation Matrix Questions Analysis	# KII (grouped)	FDG- (Smallholder farmers – Each FGD will be with beneficiaries from one country only)	FGD- (Researchers – Each FGD will be multi-project, multi country)	Online Survey
					incomes, Nutrition					
Tier 3 Projects										
Insfeed 2	Kenya, Uganda	Renewed	Average budget (for Phase II)	Reduced list of stakeholders (17 persons)	Increasing agricultural productivity and incomes, Nutrition	Yes	0			Yes
Picture-based Crop Insurance	Kenya	New	Average budget	Good list of stakeholders	Resilience, Climate Change	Yes	0			Yes
Irrigation	Mozambique	New	Average budget	Good list of stakeholders	Resilience to Climate, Change Increasing agricultural productivity and incomes	Yes	0			
Total							**20**	**2**	**2**	**6**

2 EVALUATION KEY FINDINGS

2.1 Relevance

How relevant is CultiAF programming with the mandates of its funders IDRC and ACIAR? How relevant is CultiAF programming in terms of food & nutrition security priorities in the ESA countries that the program targets?

- ***CultiAF II alignment with priority areas of both ACIAR and IDRC***

The ET found that there was good alignment with ACIAR and IDRC' geographic scope and ODA's priorities.
Projects are also generally well aligned with CultiAF II's objectives.

The data collected and KIIs information point to a strong alignment between CultiAF II's priority areas and those of both agencies. From the documents available, the ET illustrates the links here:

Keeping in mind the above CultiAF II priorities, for IDRC, the alignment is particularly clear when considering the organization Climate-Resilient Food Systems (links with five of the above priorities) in its Strategy 2030 document[31]. Even though CultiAF II's design was embedded in this division, some of the aspects from the program are also well aligned with other divisions.

As for ACIAR, the priorities are as follows:

- **Food security and poverty (links with all of the above priorities)**
- **Natural resources and climate change (links with three of the above priorities)**
- **Human health and nutrition (links with three of the above priorities)**
- **Gender equity and women's empowerment (links with at least three of the above priorities)**
- **Inclusive value chains (links with four of the above priorities)**
- **Capacity building (links with all of the above priorities)[32]**

The document review strongly underlines the alignment between the program and ACIAR and IDRC's overall objectives.

ACIAR and IDRC has a strong presence in sub-Saharan Africa, which helps support the program's projects and their integration with private sector partners through implementation.

From data collected through KIIs (and a bit from FGDs), it seems all respondents are in agreement that the collaboration between IDRC and ACIAR is relevant and useful. Both organizations learn

[31] *"IDRC Launches Strategy 2030 for a More Sustainable and Inclusive World | IDRC - International Development Research Centre." Accessed December 9, 2021.* https://www.idrc.ca/en/news/idrc-launches-strategy-2030-more-sustainable-and-inclusive-world.
[32] "ACIAR 10-Year Strategy 2018-2027." Accessed December 9, 2021. https://www.aciar.gov.au/publication/corporate-publications/aciar-10-year-strategy-2018-2027.

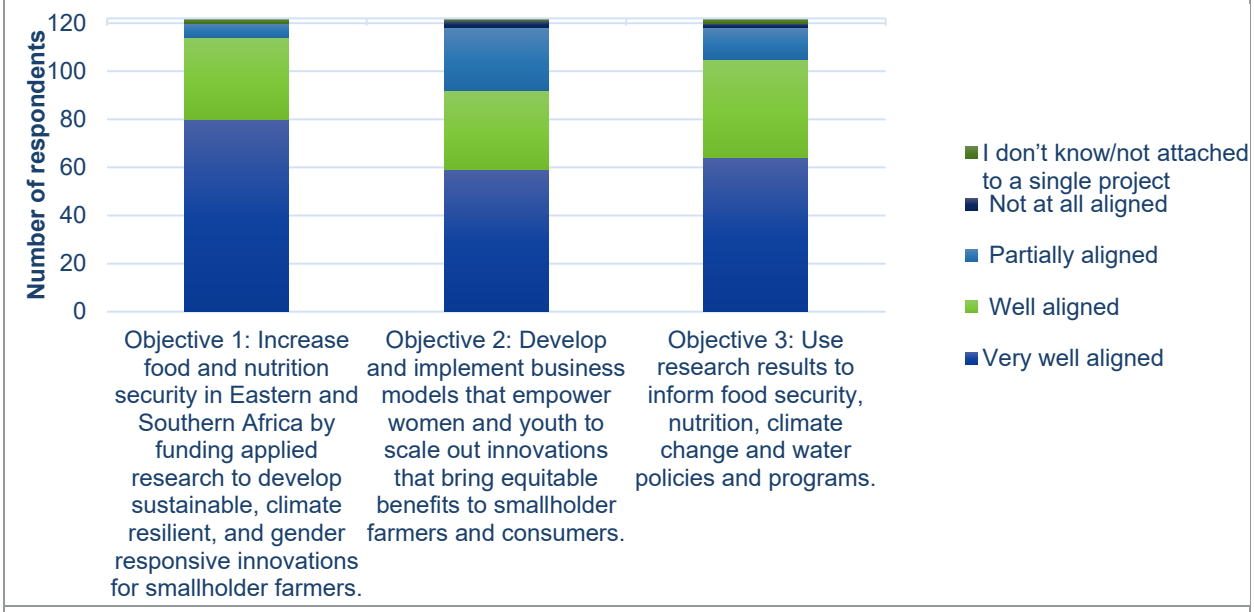
from each other and complement one another. In recent years, ACIAR has focused on capacity building and innovation within their funded initiatives and CultiAF II responds well to these priorities. Both agencies also priorities the integration of gender equality in all their activities; CultiAF II was adapted to this priority, and this is particularly noticeable when comparing phase II to phase I, which mainly focused on food security and agriculture.

In terms of geographic priorities, the focus on Africa is well aligned with IDRC geographical focus on the confinement. Specifically, IDRC's short list of priority countries has CultiAF II's Kenya, Malawi, Mozambique, Zambia and Zimbabwe on it[33]. The region is still important to ACIAR, even though proportional funding to Africa of the organization's full budget has decreased from 15% to 10% of the overall funding over the last years. ACIAR has on its priority list the following CultiAF II countries: Ethiopia, Kenya, Malawi, Mozambique, Uganda, Zambia and Zimbabwe.

- ***Alignment of the projects with Culti-AF II's objectives***

The online survey confirms that projects are largely considered as '*very well'* or '*well'* aligned with the three objectives of the program, in particular with objective 1, for which 80 respondents (65%) consider it as 'very well aligned' and 34 (28 percent) 'well aligned'. This is illustrated in Figure 6 below.

Figure 6: Level of Alignment of the Respondents with CultiAF II's Objectives



Source: IDRC CultiAF Evaluation online survey, 2021.

Regarding **objective 1**, which is more directly focusing on food and nutrition security, **all projects seem to be well aligned**, with no more than 1 respondent per project answering, 'partially aligned'. A researcher from the *Ethiopia sorghum* project explains that: '*It is quite clear that we were not able to ascertain food security at the national level*.' According to this respondent, projects like the CultiAF II ones cannot address national level needs and issues because: '[at project level], we don't have a drought screening facility reaching the national level and this may have a negative impact to generate technologies for drought-prone areas in the country. (…) [in

[33] The evaluation team searched IDRC's website for the countries the organization works in. https://www.idrc.ca/en/search?search_api_fulltext=countries

addition] human capital development in the field of the above-mentioned areas is limited in the country.' This illustrates the fact that the project is clearly focusing on a key national priority regarding food and nutrition security, but as a research project, it takes some time and resources to reach national targets, and interventions like these are therefore not in a position to quickly meet urgent food security and nutrition needs at national level. In other words, projects reach a certain number of beneficiaries at the community level, but it cannot aspire to change the situation at national level as stated in objective 1 (see figure above). Nevertheless, this is one element and again, overall, the data collected through the different lines of evidence point to a logically structured program.

Regarding **objective 2** (see figure 6 for objective 2 and 3 statements) on the development of business models for women and youth, most projects seem well aligned, but two projects show mixed results: the *sorghum* project in Ethiopia is seen as well aligned with objective 2 by 57 percent of the 14 respondents, while this percentage is a bit lower at 54 percent regarding the *irrigation* project in Mozambique. Concerning the latter project, a respondent explains that 'the pandemic also influenced [the situation] because the business models were focused on bringing people (all project stakeholders) together. Instead, the project now focuses on formal and informal partnerships amongst farmers and agribusinesses .' In other words, some of the pre-identified stakeholders were somewhat less involved because of pandemic related issues. Another respondent from the **Sorghum** project states that 'my concern is towards the development of a business model for the concerned stakeholder (smallholder farmers). Therefore, I recommend the project to focus on this area in line with the government's appetite towards mechanization.'

Regarding **objective 3** on the use of research results, all projects seem to be well or very well aligned. A few less aligned elements were mentioned in the answers provided in the open-ended survey questions as well as during the interviews. For example, one researcher from a project explains that it is important 'to empower researchers with further education, (and provide) more information dissemination to agricultural extension officers and horticultural food chain supply system.' The respondent is pointing to the fact that the project should do more of this empowerment and dissemination.

- ***Program and projects' response to the urgent food and nutrition security needs for ESA***

The program and its portfolio respond well to food and nutrition security needs in the ESA region. There was good alignment of the projects with national and regional food and nutrition security policies and regulations.

All projects deal with food and nutrition security needs for ESA and the specific countries where they are implemented: for example, the Ethiopia Sorghum project aims to enhance the use of sorghum in food and improve production of climate change resilient varieties; the pre-cooked beans project aims to facilitate the consumption of beans by local populations, and by doing so, to improve nutrition. In the same line of thought, in terms of nutrition needs in Uganda, the pre-cooked bean varieties helped impoverished communities in the country to have access to protein where it was not easily accessible. The same applies to the Nutrifish project where the poor communities now have enhanced access to smaller fish (the bigger fish is sold in the markets at higher prices). The project helped ensure that the smaller fish were well handled and processed, including through the use of solar dryers provided by the initiative. This helped ensure it was good

for human consumption, hence providing poor communities access to nutriment rich food at a lesser cost. Malawi fisheries is similar in leveraging a safe, solar energy fish processing technology that helps increase consumption of silver small fish that might not otherwise be consumed by average (poor) households.

The table below matches some of the CultiAF II projects with specific strategic documents that show the alignment between the projects and food and nutrition needs in the region.

Table 5: Alignment with Development Assistance (ODA) Priorities

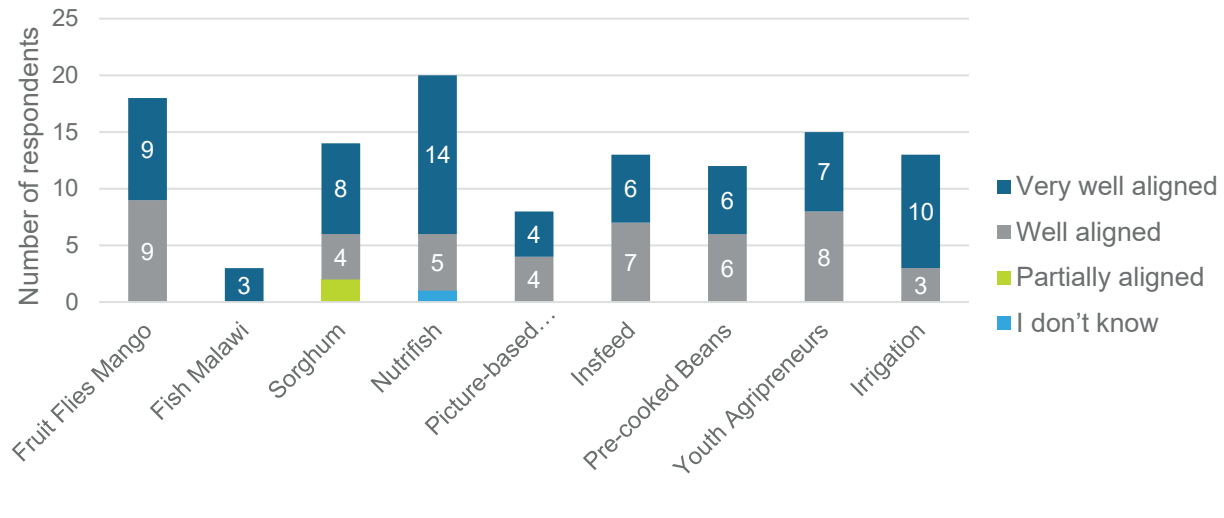
Project	*Documents with which they align*
Climate-Smart Crop Insurance	**Global Level** • UN Sendai Agreement on Disaster Risk and Resilience • G7 Climate Risk Insurance Initiative • Sustainable Development Goal 13 on climate action **Regional Level** • African Risk Capacity (ARC) a specialized agency of the African Union; • Malabo Declaration commitment 6 of the African Union **National Level** • Kenya Agriculture Insurance and Risk Management Program • Enya 2018 National Disaster Risk Management Policy
Ethiopia Sorghum	**National Level** • 2nd Growth Transformation Plan (GTP II) of Ethiopia • Ethiopian government's goal of enabling the country to become food self-sufficient by the end of 2025.
Nutrifish	**Global Level** • Zero hunger (SDG2) • Good health and well-being (SDG3). • Action area 2 of Canada's Feminist International Assistance Policy. **Regional Level** • Africa Nutrition Strategy (2015-2025) • Africa's Agenda 2063 of the African Union which promote strategies to enable the fisheries sector to contribute to sustainable economic growth, better nutrition and poverty reduction. **National level** • Uganda's Fisheries and Aquaculture Policy 2018, • Nutrition Action Plan;
Irrigation Mozambique	**Global Level** • Zero hunger (SDG2) **Regional Level** • Comprehensive Africa Agriculture Development Program (CAADP) Pillar I on sustainable land and water management **National** • Mozambique strategic plan • National Irrigation Plan
Fruit Flies	**Global Level** • Zero hunger (SDG2) **Regional Level** • Pillar 3 of the Comprehensive Africa Agricultural Development Plan, on increased food supply and reduced hunger across the region

Table 5: Alignment with Development Assistance (ODA) Priorities	
Project	***Documents with which they align***
	National • Agriculture policies of the beneficiary countries (Zambia 2012-2030; Zimbabwe 2012-2032, Malawi 2016, and Mozambique 2011- 2019).

The strong alignment demonstrated above is mainly due to how projects have had to go through a thorough approval process that included an in-depth analysis of the context as well as national and regional regulations and policies in which they were to be implemented. Indeed, in the instructions guiding the proposal development, 25% of the overall points are assigned to the validity of the concept and the scientific idea in the sense that it has to "*demonstrate relevance of the research to food security and development challenges and in particular to the most food insecure in eligible Eastern and Southern Africa countries*."[34]

Improving food and nutrition is a priority in ESA countries, and the funded projects are considered by the large majority of stakeholders surveyed during the evaluation process as 'very well aligned' (58 percent) or 'well aligned' (28 percent) with country policies, as illustrated in Figure 7 below.

Figure 7: Answers to the question: To what extent are your project's objective and content aligned with your countries' policies, and priorities in terms of food and nutrition security priorities and needs?



Source: IDRC Culti-AF Evaluation online survey, 2021.

Culti-AF II was not designed to respond to *urgent* needs, in the sense that it has not been conceived as a response to rapid onset disasters and does not address the immediate food and nutrition needs of populations at risks (refugees, disasters victims or displaced persons, for instance). After discussions between the ET and ACIAR and IDRC, it was agreed that the question above for this section uses the word "urgent" as a synonym for "pressing" and "important" needs.

The ET found that Culti-AF responded well to these urgent needs as, in most cases, project interventions target both sides of the market (demand and supply) and the dimension of access and availability of food is not necessarily central to the intervention. An example is the Nutrifish project, which has worked with fisherpersons to improve their handling of small fisheries while working with the communities to improve their consumer acceptability. Another example of a quick

[34] ACIAR, IDRC, January 2018. CultiAF II: *Call for Concept Notes.* P. 15

action approach to reach food security objectives is given by the the INSFEED project that worked to develop cheap protein for livestock feed, working with smallholders to produce and feed own stock, worked with SMEs to commercialize the feed as well as provide a market for smallholder producers; developed a cost-effective yet very rich organic fertilizer from the substrate (waste) to fertilize crops; Developed policy frameworks (standards) to enable farmers and traders produce and trade in both reared insects and processed feeds – i.e., working at every node of the insect feed value chain enables fast uptake of innovations. Protein for livestock is a very urgent need in the regional context where animal sourced protein consumption is on the lower side.

Still, most projects focus on new or newly-introduced agricultural inputs and technologies that will take time to scale-up to be readily available for urgent needs. For example, this is the case of the new climate change resilient sorghum varieties introduced in Ethiopia that will need some time to spread and reach out to farmers in the different regions of the country.

In many cases, the agricultural technologies are only available to populations who benefits from more assets and higher income. The scaling, which allows for the solution to actually respond to food and nutrition security needs of the overall population, is complicated by the cost or availability of the technology (e.g., solar dryers for fish, precooked beans processing, etc.), hindering access to the most impoverished and the most vulnerable populations. All data collected through the evaluation point to the fact that, on average, a three-year timeline (or even six for the scaled projects) is insufficient to ensure the technologies are transferred to a larger portion of the targeted communities. In this context, longer project timeline would be important step to make sure the technology is transferred but this approach would need to be accompanied by other elements, for example, with the coordination of partnerships with private sector to provide access to finance allowing for farmers to buy the technology.

Nevertheless, a few respondents have mentioned that some of the solutions provided in the projects were responding to urgent food and nutrition needs, in the sense of food crisis, including during the Covid-19 lockdown. Indeed, easier access to food (e.g., Pre-Cooked Beans or Nutrifish) helped compensate, to a certain extent, the issues faced in terms reduced trading of food supplies. This alignment was actually even enhanced through project managers' consultations with program representatives and through discussions with relevant stakeholders (i.e., policy makers and the private sector). Indeed, some reorganization of projects took place to ensure they could link their activities to help the governments respond to the crisis.

- ***Examples of potential high impact solutions for food and nutrition security***

It is too early to measure the impacts of the solutions since no end line has been provided to the ET and the magnitude of impacts will depend on the scaling up process. However, several projects have already demonstrated their potential for impact.

There are many potential high-impact solutions for food and nutrition security emerging from the program if and when in the future the technologies promoted by the projects are scaled up and adopted at scale, and to inform new research and policies in other countries and contexts. However, given the relative early stage of many of the interventions on the one hand, and the absence of end line or impact studies on the other hand, most of those impacts are yet to be achieved and confirmed. Annual reports provide examples of potential impacts in 6 categories: Scientific, Capacity, Community, Economic, Social and environmental. Most of the impacts mentioned should rather be categorized as outputs or outcomes, while impacts are already visible in a few cases. The **Young Agripreneurs** project in particular ran a Radom Controlled Trial (RCT)

in order to assess the impact of combinations of training, mentorship, and access to funding, on entrepreneurial performance. Generally speaking, the project helped increase sales, employment and entrepreneurial resilience. The study found that "combining training and mentorship increased monthly sales by KES. 10,242 (CAD$ 117.787 or AUD$ 127.239)[35]."

Other examples of potential for impacts in the longer term do exist: in the Sorghum project, teff is a very nutrient dense grains that can have a high impact on yields, farmers revenues, and food security. Given the properties of the new variety being disseminated by the project (higher production, less diseases, drought tolerance), the potential for high impact is strong. It was noted by respondents consulted through the survey and interviews that there were some issues linked to the regularity of the development and dissemination of the improved threshers, tools which save time for women who are the main process workers. To ensure the potential is achieved, these issues would need to be settled. In addition, more demonstrations on the use of PICS bags need to take place to convince potential users on their advantages as it is not always fully clear initially for these users that these bags will actually have a positive effect for them.

The Integrated pest management (IPM) mango fruit flies project also has potential for high impact due to the massive amounts of the high-volume mango crops that are destroyed by fruit flies each year, hence impacting production immensely. IPM is a low-cost, environmentally friendly solution to manage and reduce the fruit flies pests through several, "green", pest management techniques in combination.

The main challenge remains the scaling of the solutions so that the projects have widespread, equitable and sustainable impact. Even for some of the scaled projects, the problem of the solutions continuing to spread/scale-up in the targeted countries and in ESA without external, donor-driven funding remains. Although the sustainability issue was not part of the key evaluation questions, it does seem like many steps are being taken to ensure the policy framework is conducive for sustained results over time. However, without strong uptake by potential users, it is not clear that the projects will be able to reach impact level changes for the targeted communities.

2.2 Effectiveness

How effectively are the CultiAF program and the projects it supports addressing food and nutrition security priorities to reach expected outcomes?

To clearly answer this question, it is important to remind readers what the expected outcomes are:

1. Increased use of knowledge and resources, by the research community, to address gender-based inequalities, post-harvest loss, nutrition deficiencies, climate variability and agriculture water use.
2. Increased crop, livestock and fisheries productivity, water use efficiency; improved nutrition; and reduced post-harvest losses
3. More gender responsive, environmentally sustainable and climate resilient- informed public policies and programming

The ET relied on available data, included in among other documents, the Trackify data repository data, triangulated with FGDs and KIIs information, to answer the question. However, it was difficult to really measure the progress made by the projects because of the lack of baseline data. It is not necessarily that there were no baseline data at all but the fact that the majority was simply "zero"

[35] United States International University-Africa, Game Center, 2021 [?] *Effectiveness of the Metro Agri-Food Living Lab for Gender Inclusive Youth Entrepreneurship Development in Kenya.* P. 1

which did not help, at the design phase, set aggregate realistic targets for some of the indicators such as "Number of individuals adopting, adapting, and using new technologies" In other words, it was not known how many individuals in the targeted community were already using similar technologies. In certain circumstances, there were also some issues related to harmonization of the data in Trackify. For example, an indicator would call for a percentage and the data provided was a number. Finally, the Trackify indicators were mainly at output level.

Nonetheless, the ET found that the projects were effective at addressing longer-term **food and nutrition security issues** by increasing agricultural productivity and production, preventing post-harvest losses of nutrient-dense agricultural food products as well as repurposing nutrient-dense foods such as small fish that would normally not be consumed by humans.

- Still, evidence that change in practices and how participants actually apply the acquired technical knowledge is not present in every case (the ET estimates that only in half of the projects is this noticeable).

The ET based this finding on the analysis of the following data which was provided in the Trackify tool and discussed during interviews and FGDs (Table 6).

Table 6: Key Indicators from Trackify

Indicator	Total Reached	Males	Females
Number of farmers trained on new applications (technologies) to support the implementation of the projects and its actors.	34,533	**19,220 + 49 male students**	**15,313+ 52 female students**
Number of individuals adopting, adapting, and using new technologies	**440** individuals	**221**	**219**
Number of individuals using applications for increasing their productivity	**3,965** individuals	**1,670**	**2,295**
Number of individuals using post-harvest management applications	**3,903** individuals	**2,064**	**1,839**
Number of individuals **using food products** developed to address nutrition deficiencies	**27,746** individuals	**13,335**	**14,411**
Number of individuals using applications that seek to address water use challenges	**147** individuals	**60**	**87**

Three out of nine projects worked on enhancing the quality of the production so it could find more and better demand in the marketplaces (outcomes 1 and 2). In the majority of the projects, interview respondents were of the opinion that the management teams endeavored to work with the relevant authorities to ensure that the policies, regulations and standards would accompany the fostered innovations (outcome 3). The objective of this approach is to ensure the solutions can be scaled without legal obstacles so that results remain sustainable over time.

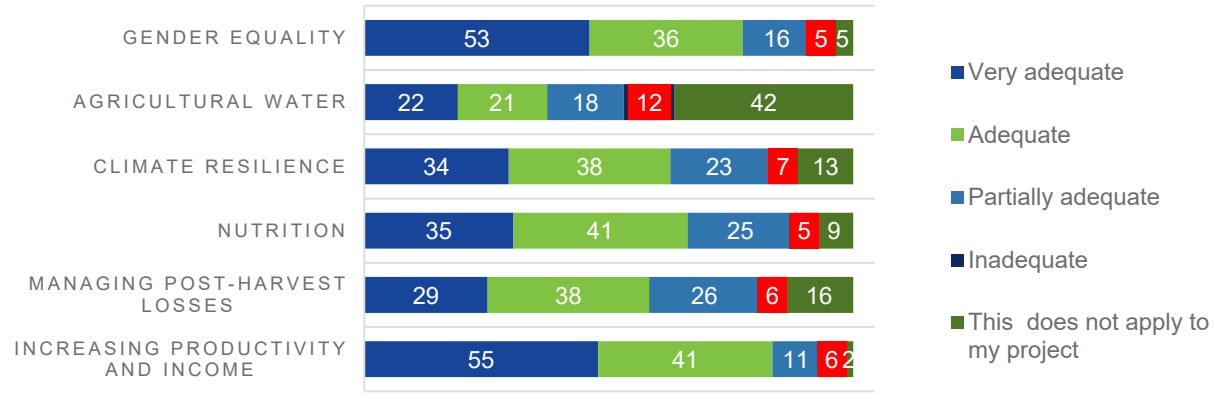
Examples of targeted regulations (Outcome 3) include the work with government authorities in Kenya to change the perspective on insects which is presently that it is a nuisance that needs to be eliminated or trophies for wild game that cannot be tampered with unless one has permission. The standards help to allow farmers to produce them and sell them to traders or businesses that can develop products. Respondents mentioned the importance of these policy dialogue procedures and there were varying degrees of success, depending on the projects. In Kenya and Uganda, the **Pre-Cooked Beans** project had to work with government authorities to make sure that these beans would be regulated and standardized so they could be sold in markets. The

Malawi fisheries project uses a dried and processed fish product which now has set standards and can be sold in the supermarkets and is very well aligned with national Malawi strategies.

All projects had capacity building components (outcome 1), and some worked on the business development elements of agriculture. A challenge that was discussed by many respondents consulted through all data collection processes was the transition from the assimilation of new knowledge and know-how acquired by participants toward changes in the way they went about their daily work. In other words, ensuring that the support provided was transformed into new and better practices has not been an easy task and in some cases, the evidence that this change is actually happening is not fully clear. Still, the Youth **Agripreneurs projects**, working with 1,200 young, showed that combining multiple interventions of training, mentorship and technology applications has proven more effective in increasing sales, employment and entrepreneurial resilience against catastrophic incidences including pandemics, destructive floods, and invasion by locusts. The changes are also clearly noticeable for example in the **INSFEED** project, which has supported 103 private companies, smallholder farmers and young entrepreneurs in Kenya to establish farms to produce black soldier flies for commercial purposes. This would not have been possible without standard changes as it would have been illegal to have the black soldier flies commercialized under the previous legislation.

Figure 9 shows the survey respondents' perspective on how the projects have covered the research themes promoted by CultiAF II. The figure, depicting the opinion of the 115 survey respondents shows that the agriculture water use was the least covered theme of the portfolio, followed by managing post-harvest losses and climate resilience. The majority of respondents considered that the projects they were involved in covered the research theme of increasing productivity and income. The section below looks more closely at the portfolio's contribution to each of these research themes.

Figure 8: Answer to the Question: Has your project adequately covered the following research themes within the areas targeted by CultiAF?



Source: IDRC Culti-AF Evaluation online survey, 2021.

Increasing Agriculture Productivity and Income

Evidence of increased agriculture productivity and income was found in at least four out of the nine CultiAF II funded projects, while 93 percent of all survey respondents, from all projects, consider that their project has thrived to 'increase productivity and income', a least partially. For

example, the **Precooked Beans** project increases both agricultural productivity and incomes by using high yielding bean varieties that are nutritionally dense twinned with training in improved agricultural practices, resulting in a 68 % increase of farmers' income[36]. The **IPM Mango fruit flies** project is increasing revenues derived especially from fresh mangos being sold by women and youth. As stated by relevant respondents, involved in the project, the same applies for **Nutrifish** and the Malawi Fisheries project as the improved quality of the *Rastrineobola argentea* (mukene) fish can be sold at higher prices in markets. In Ethiopia, sorghum yields are reported to have increased by 5% over the project duration. Based on data collected through all lines of enquiry, the **Youth Agripreneur** project has shown signs of youth participants' enhanced capacity to generate higher income for family farms.

Reducing Post-Harvest Loss

Five of the nine projects are aimed at reducing post-harvest food loss but 80 percent of the online survey respondents consider that they project treated that issue, at least partially. Of these five projects, data collected during the evaluation show that:

- **IPM Mango Fruit Flies:** Managing pre- and post-harvest lost is one strategy crucial to the IPM mango fruit flies' project. The methods proposed by the project are easy enough for an average smallholder farmer to use to prevent flies from reproducing so when the approach is scaled-up significantly, it has an important positive effect on reducing food loss.
- The **Precooked Beans** project provides a lot of training in the associated value chain, including support in the management of post-harvest losses, to address climate change but mainly to store crops with the objective of preventing losses.
- **Malawi fisheries** also increases productivity while reducing post-harvest loss. Project managers and extended teams did research on post-harvest losses which were about 40% for small fish. The introduced technology helped reduce the losses extensively (24.2% less physical loss and 15.1% in quality loss).
- Thanks to the **Nutrifish** project, fishers and processors take less time to dry the fish so there are overall less losses in addition to the better use of the fishes' extra parts.
- In Ethiopia, with the support from the **Sorghum project**, close to 250 farmers have improved their agronomic practices, leading to less food losses as reported by project knowledgeable respondents consulted by the ET.
- Although the **Picture Based Insurance project** is not directly focusing on reducing food loss, it does work on reducing financial losses for farmers affected by the changing and unpredictable weather. However, the project is at a pilot phase and its scope was reduced due to Covid-19 restrictions.

Improving Nutrition

Overall, the projects' design integrated nutrition to a lesser degree than other themes; nutrition was an afterthought for some projects e.g. the **Fruit Flies Mango** project has a nutrition theme as a Covid-19 response activity[37]. Three projects mainly addressed nutrition targets. Evidence of improved nutrition can be found in the **Precooked Beans** project that promotes nutrient-dense varieties of beans that are rich in zinc, protein, and iron helping to prevent micronutrient deficiencies with the consumption for own use or sales to the community.

The **Malawi Fisheries** and **Nutrifish** projects also have a focus on improving nutrition through both improving fish quality to preserve the nutrients and through food safety efforts to improve

[36] IDRC, July 2021. *CultiAF II Annual Report to ACIAR*. P. 19.
[37] Ibid. p.3

both nutrition and health status of those consuming the dried fish. KII respondents report that nutrition improvements can be seen in villages where the projects have been implemented.

Optimizing use of Water for Agriculture

The Mozambican **Irrigation project** is directly related to the optimizing of water use in agriculture. However, the project is mainly at a stage where it is generating research findings and not many changes to farmers' practices have yet been fostered to improve effective and efficient water use, with the exception of the use of soil water monitoring tools. These tools are relatively inexpensive and have the potential of being used if results are demonstrated. Some data point to reduced frequency of irrigation thanks to the use of the tools, leading to enhanced savings, although the magnitude of these results is limited. The **Precooked Beans project** is looking at climate resilient strategies, especially with rainfall, examining which technologies and bean varieties are more climate resilient and promoting water harvesting to preserve water for dry periods to use for crop production. The **IPM Mango Fruit Flies** project, while using biological control technologies for fruit flies and involving government agencies, is also looking at water policies such as ways of harvesting water to control fruitflies. The researchers have involved government in the project and are harvesting water to control fruit flies. Regarding the online survey, 42 respondents (representing 36 percent of all the respondents), mentioned that their project was not involved in water management.

Building Climate Resilience

In terms of the **Precooked Beans** project, one major issue examined was the use of energy. Indeed, the promotion of precooked beans saves energy (as they are pre-cooked) by lessening the use of fuel and charcoal/gas that is needed to cook the beans. The **IPM Mango Fruit Flies** project addresses the issue of carbon sequestration to prevent climate warming through the exchange of carbon and oxygen carbon dioxide which can minimally contribute to preventing global warming. Climate resilience is embedded in the **Malawi Fisheries and Nutrifish** projects both by providing fish sun dryers as well as through improved smoking kilns that reduce the use of firewood and/or fuel in fish processing to reduce deforestation. Also, the introduction of a stress tolerant **sorghum** variety in Ethiopia enabled to enhance farmers resilience. The variety also has high biomass, and the stalks are used to feed animals in the season of fodder shortage.

Thus, it is clear that the projects have covered the research themes through innovative approaches. Additional two outstanding examples of innovation are:

- **INSFEED project,** which is using insects for animal feed. Previously, small fish and soybean were used for this same purpose and so by proposing the use of insects, it lowers the cost of livestock nutrition (insects are cheaper than fish and soybean) and it increases the availability of fish and soybean for human consumption. This project has attracted a lot of attention linked to its innovativeness and ACIAR is working on the idea of scaling the concept globally through other initiatives.
- The **IPM mango Fruit Flies** project has been conducting research on chemical ecology of fruit flies. In this context, the importation and release of the parasitoids which have a shared coevolutionary history with the pest for its suppression is new and innovative. The same applies to the identification and validation of the semi-chemical compound for potential use as ovipositional deterrent for native fruit fly species. The evidence collected regarding the nutritional content of small fishes in the **Nutrifish project**, has served for a concrete industrial application: the creation of five types of enriched products based on small fishes for children and adults, that are now out for sales. The same can be said of the **precooked beans project**, which has commercialized five products derived from beans.

The **Youth Agripreneurs project** has promoted innovation in an indirect way: by working with young entrepreneurs to develop and adopt innovative practices that would modernize the sector, attract young people and improve incomes. Examples include the use of mobile technologies

- ***Increased uptake of practices in line with key research theme practices***

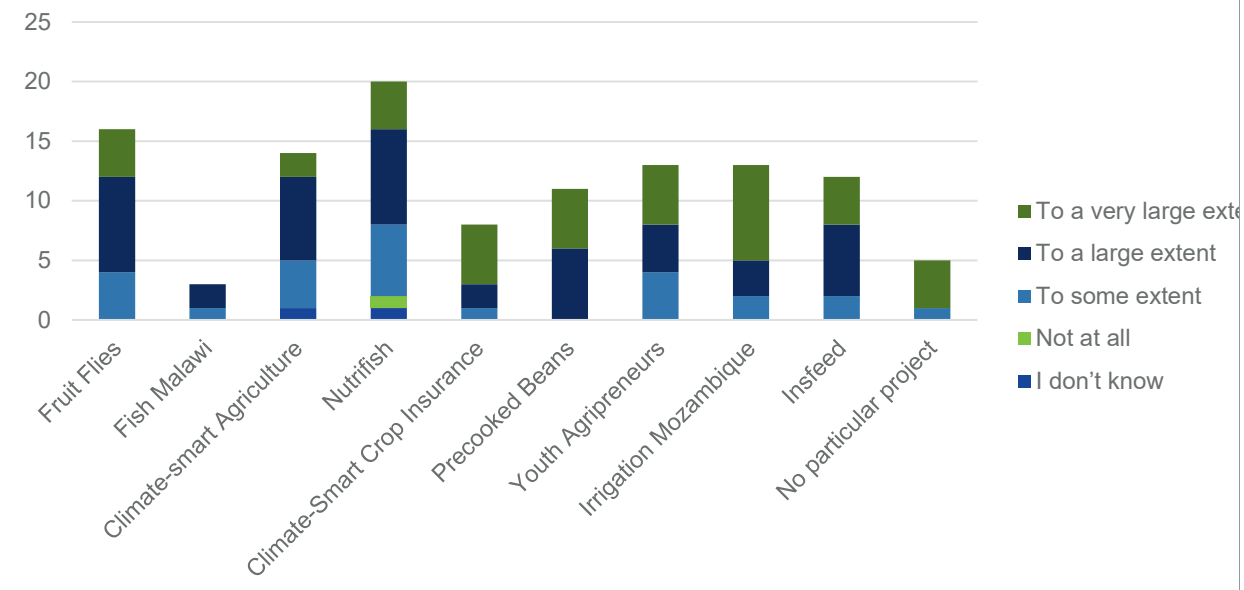
Overall, the evaluation found that scaled projects were better positioned to foster a scaled-up uptake of the innovative solutions than the new projects initiated under phase II.

Some technologies have been taken up widely (e.g., **Youth Agripreneurs** through which participants have generally started using simple business management tools introduced by the project), but the scale of the uptake varies from project to project and within the projects as well. Sometimes, the lack of funding to scale up the use of proposed solutions has generated frustration among communities. An example is the access the solar dryers within the context of the **Nutrifish** project. These dryers have been provided in only two communities and not to all the communities where the project is active.

Still, a strong example of increased uptake of practices proposed by the projects: the **INSFEED** project was able to support 25,000 smallholder farmers' use of the project's technology. As the use of the insects to feed the farmers' livestock was a relatively easy process to assimilate, with strong and quick results, the participants quickly integrated them within their regular daily practices. It is to be noted also that the governments involved have adapted the standards to allow for the use of the insects for the livestock, another important element to ensure uptake. The **IPM mango fruit flies** were already at a more advanced stage in the farm trials so the technologies were already reaching many farmers, making it easier to increase uptake at the beginning of the project as the farmers picked up the IPM solutions. For the **Precooked Beans** project, farmers as well as companies that market them have taken up the improved practices and improved varieties of beans. The uptake of technologies was measured in terms of adoption of materials. Impact studies will need to be conducted however to confirm if the adoption of all these practices is maintained in the longer run.

Stakeholders that took the online survey largely consider that the projects have been successful in increasing the uptake of innovation, solutions and technologies among small farmers, with 76% considering that it has been the case 'to a large' or 'to a very large extent', as illustrated in Figure 9 below. It is noticeable in this data that as explained above, **Nutrifish** has somewhat fewer positive views on the uptake of the projects' solution compared to the other projects.

Figure 9: Answers to the question 'To what extent does the funded research project increase the uptake of innovations, solutions, and technologies among small farmers (…)?'



Source: IDRC Culti-AF Evaluation online survey, 2021.

In some projects however, there can be cost limitations to ensure actual uptake of the suggested practices. For example, the **Malawi Fisheries** project technologies require a lot of capital through loans (about $4,000), making the opportunity-cost so high that the uptake is actually limited, with only about 1/3 of target population which received their loans. Many of the fund recipients also commented during the evaluation process on how the timeframe was constraining and did not allow them enough time to scale-up and increase uptake appropriately.

According to one respondent of the **Fruit Flies** project, 'Limitations and constraints include the slow rate of new technology adoption by some stakeholders, lack of empowerment activities to the local communities, unstable weather conditions in some areas resulting in slow and unsustainable adoption of some technologies like farm management, pheromone trap placement and servicing, lack of readily available market for the fruits etc'.

A respondent from the **Climate-smart Crop Insurance project** has relatively limited uptake because it is based on a technology delivery system. The researcher can generate innovative solutions based on the improved technology. Once the technology has been introduced to the smallholder farmers, the adoption rate is limited because of the actual lack of resources to access the technology (financial capacity to access it) and knowledge on how to use it. The learning curve is steep for the targeted users.

Other limitations mentioned by survey respondents include (except for the first one, each limitation was mentioned minimum twice but usually not more than three or four times):

- **Limited duration of the implementation, mainly for new projects, (**mentioned a dozen times**):** in particular with the effect of Covid-19 which was mentioned by respondents from all the projects as a very important obstacle for uptake. Overall, there was insufficient time for the smallholder farmers to understand the technologies and make informed decisions on the use of the innovative solutions proposed by the projects. The duration of the project is too short for uptake and subsequent achievements. CultiAF II is based on a strong

approach to funding research and development except for the fact that the implementation period is on average 3 years

- **Limited coverage**: in the case of some projects, there were only a few regions/ communities/districts involved. In some of these cases, the total direct beneficiaries being introduced technologies is small. To increase the adoption there is a need to cover more beneficiaries and geographical area to benefit from the word of mouth, for instance.
- **Traditions and cultural/local attitudes** sometimes get in the way of change (e.g., gender specific roles in the fishing sector and more broadly, female participation in agribusiness and unbalanced gender roles such as women selling cheaper goods as opposed to more value-added goods, or lack of experience in using crop insurance) as well as lack of participants' basic educational capabilities;.
- Missing **adequate materials** to fully integrate the new practices and **technical and logistical limitation**: lack of transportation options (for example in the case of the fruit flies).
- The lack of additional **funding** dedicated to promoting the use of the newly acquired technology, and training or communication know how. One respondent mentioned that the project he was involved in 'Lacked a structured way to mobilize financial support to uplift the start-ups.'

The ET would like to add here that in terms of actual or potential large-scale impacts on national food and nutrition security priorities, respondents provided ideas that would contribute to improve the scale of the impact, by:

- Ensuring different levels of **governments and** local authorities buy-into the innovative solutions to spread their use, including to other regions, through facilitating policies and funding;
- **Finding extra sources of funding** through new private investment, grants from the government or to find and promote new financing models;
- Encourage more farmers/practitioners from the communities to **reproduce and demonstrate** the learning acquired during the project to stimulate the adoption of the technologies introduced by the project by other community members, to generate benefits through a multiplier effect and indirect impacts;
- Influencing the development of new policies by **sharing broadly the project produced new data on the different benefits** of the proposed solutions; and
- To **develop business models** that can be reproduced elsewhere.

- ***Knowledge and tools***

The ET found that Culti AF II projects, whether scaled or not, have used a variety of methods to diffuse their knowledge and tools, either to their own technology users, or to communities and authorities.

Examples of diffused project knowledge and tools, even from those that were not scaled, include a public event organized in Zimbabwe by the **Fruit Flies Mango** project which was attended by 143 stakeholders such as farmers and officials. The event received an extensive media coverage.

Also, visibility of CultiAF II projects and results have been fostered through a large range of communication products oriented towards various outlets and audiences: notably print media, television, radio, newsletters, web stories and stories from the field, including a total of a least 40 (general and project-specific) stories appearing in 16 different medias. So far, evidence of the effectiveness of those means to reach their target audience has not been fully conclusive. Nevertheless, it is clear that the project and program managers have worked to enhance CultiAF's visibility, including making sure it was known that both IDRC and ACIAR were contributing financially to the projects. In addition, the program supported projects' management teams to reinforce their communication skills so that they would be better equipped to disseminate clearly the results of their research to their audience (e.g., peers, decision makers). As demonstrated in the below paragraph, the researchers went beyond the traditional scientific ways of disseminating their results. This newly acquired knowledge, for the scaling projects' researchers, was put into practice during a virtual dissemination workshop hosted in 2021. Similar events were held in the context of presentations of Covid-19 related studies (**Precooked Beans, Youth Agripreneurs and Malawi Fisheries** projects were involved). Although respondents already had experience in communicating and popularizing the results of their research, the majority expressed satisfaction with this extra support and mentioned the training had an added value for their work.

Other less conventional communication means have been used. In Malawi, the **Fisheries** project sent their standards for small fish to the WTO for gazetting. In the case of the **Nutrifish** project, the program manager made the case for the consumption of small fishes-derived food products by making them taste by the members of parliament, during an encounter.

In terms of internal communications, several projects have used WhatsApp and Telegram[38] groups that help smallholders exchange information. Respondents that commented this type of communication tool mentioned it was useful but not always accessible to all types of small holder farmers/ producers/ fishers/ processors participating in the projects.

The **IPM Mango Fruit Flies** project distributed 'starter kits' and linked with both local community members and agricultural institutions' representatives training on the management of the fruit flies to increase yields and quality of the mangos.

- ***Promotion within the East and Southern Africa region***

Although it is difficult to benchmark the performance of Culti AF II in terms of its capacity to promote its projects work in the region within the scope of the present evaluation, the available data points to a strong, effective effort from the stakeholders to do so. Indeed, over its duration, a total of **326** organizations requested information from the projects, contributing to the wide dissemination of the technologies developed and project results. In addition, a total of **115** peer-reviewed and non-peer reviewed **publications were reportedly produced-however, the ET could only verify 19 publications that were provided and some are dated quite close to the projects' start which raises the question of their links with the CultiAF II funding; and 67 international and national conferences were** attended.

Table 7: Peer-Reviewed and Non-Peer Reviewed Publications

No.	Project	Citation
1	INSFEED2	Tanga, Dr. CHRYSANTUS, and PROF. DOROTHY NAKIMBUGWE. "INSFEED2: INSECT FEED FOR POULTRY, FISH AND PIG PRODUCTION IN SUB-SAHARAN AFRICA – PHASE 2 [Cultivate Grant No: 108866-001]." USIU-Africa, VACID-Africa, KALRO, KMFRI, Treasure Feed Industries Ltd, Makerere University, May 1, 2021.

[38] Telegram is a freeware, cross-platform, cloud-based instant messaging service. The service also provides end-to-end encrypted video calling, VoIP, file sharing and several other features.

Table 7: Peer-Reviewed and Non-Peer Reviewed Publications		
No.	Project	Citation
2	INSFEED2	Mudalungu, Cynthia M., Chrysantus M. Tanga, Segenet Kelemu, and Baldwyn Torto. "An Overview of Antimicrobial Compounds from African Edible Insects and Their Associated Microbiota." Antibiotics 10, no. 6 (May 22, 2021): 621. https://doi.org/10.3390/antibiotics10060621.
3	INSFEED2	Murugu, Dorothy K., Arnold N. Onyango, Alex K. Ndiritu, Isaac M. Osuga, Cheseto Xavier, Dorothy Nakimbugwe, and Chrysantus M. Tanga. "From Farm to Fork: Crickets as Alternative Source of Protein, Minerals, and Vitamins." Frontiers in Nutrition 8 (August 10, 2021): 704002. https://doi.org/10.3389/fnut.2021.704002
4	INSFEED2	Tanga, Chrysantus M., Jacqueline Wahura Waweru, Yosef Hamba Tola, Abel Anyega Onyoni, Fathiya M. Khamis, Sunday Ekesi, and Juan C. Paredes. "Organic Waste Substrates Induce Important Shifts in Gut Microbiota of Black Soldier Fly (Hermetia Illucens L.): Coexistence of Conserved, Variable, and Potential Pathogenic Microbes." Frontiers in Microbiology 12 (2021): 635881. https://doi.org/10.3389/fmicb.2021.635881. Annex 7
5	INSFEED2	Cullere, Marco, Achille Schiavone, Sihem Dabbou, Laura Gasco, and Antonella Dalle Zotte. "Meat Quality and Sensory Traits of Finisher Broiler Chickens Fed with Black Soldier Fly (Hermetia Illucens L.) Larvae Fat as Alternative Fat Source." Animals: An Open Access Journal from MDPI 9, no. 4 (April 2, 2019): 140. https://doi.org/10.3390/ani9040140. Annex 8
6	INSFEED2	Beesigamukama, Dennis, Benson Mochoge, Nicholas Korir, Changeh J. Ghemoh, Sevgan Subramanian, and Chrysantus M. Tanga. "In Situ Nitrogen Mineralization and Nutrient Release by Soil Amended with Black Soldier Fly Frass Fertilizer." Scientific Reports 11, no. 1 (July 20, 2021): 14799. https://doi.org/10.1038/s41598-021-94269-3. Annex 9
7	INSFEED2	Okello, Afrika Onguko, Jonathan Makau Nzuma, David Jakinda Otieno, Michael Kidoido, and Chrysantus Mbi Tanga. "Farmers' Perceptions of Commercial Insect-Based Feed for Sustainable Livestock Production in Kenya." Sustainability 13, no. 10 (January 2021): 5359. https://doi.org/10.3390/su13105359.
8	INSFEED2	Khaemba, Colleta, Michael Kidoido, George Owuor, and Chrysantus Tanga, eds. Determinants of Consumers' Perception of Eggs Derived from Layer Chickens Fed Commercial Insect-Based Feeds, 2021. https://doi.org/10.22004/ag.econ.315300.
9	Malawi Fisheries	Chiwaula, Levison, Collen Kawiya, and Patrick Kambewa. "Evaluating Economic Viability of Large Fish Solar Tent Dryers." Agricultural Research 9 (June 1, 2019): 1–7. https://doi.org/10.1007/s40003-019-00416-8.
10	Malawi Fisheries	FISH CRP. "Gender Differences in Willingness to Pay for Capital-Intensive Agricultural Technologies: The Case of Fish Solar Tent Dryers in Malawi," May 3, 2020. https://fish.cgiar.org/publications/gender-differences-willingness-pay-capital-intensive-agricultural-technologies-case.
11	Malawi Fisheries	Levison, Chiwaula, Joseph Nagoli, Geoffrey Kanyerere, and Essau Chisale. "Guide to Solar Tent Fishe Dryer (Samva Nyengo) Construction and Use Module: Processing Section," July 2017.
12	Malawi Fisheries	Banda, James, Mangani Katundu, Levison Chiwaula, Geoffrey Kanyerere, Maxon Ngochera, and Kings Kamtambe. "Nutritional, Microbial and Sensory Quality of Solar Tent Dried (Samva Nyengo) and Open Sun Dried Copadichromis Virginalis-Utaka (Pisces; Cichlidae)." International Journal of Marine Science, January 1, 2017. https://doi.org/10.5376/ijms.2017.07.0011
13	Malawi Fisheries	Nagoli, Joseph, Lucy Binauli, and Asafu Chijere. "Inclusive Ecosystems? Women's Participation in the Aquatic Ecosystem of Lake Malawi." Environments 6, no. 1 (January 2019): 3. https://doi.org/10.3390/environments6010003
14	Malawi Fisheries	Likongwe, Martin Charles, William Kasapila, Mangani Katundu, and Placid Mpeketula. "Microbiological Quality of Traditional and Improved Kiln Smoked Catfish (Clarias Gariepinus; Pisces; Clariidae) in Lake Chilwa Basin." Food Science & Nutrition 7, no. 1 (November 8, 2018): 281–86. https://doi.org/10.1002/fsn3.885.
15	Malawi Fisheries	Banda, James, Petros Chigwechokha, Wales Singini, John Kamanula, Orton Msiska, James Correspondence, Banda, and Jupiter Simbeye. "The Shelf Life of Solar Tent Dried and Open Sun Dried Diplotaxodon Limnothrissa (Ndunduma)-Pisces; Cichlidae" 5 (January 1, 2017).
16	Malawi Fisheries	Banda, James, Mangani Katundu, Essau Chisale, Victoria Ndolo, Geoffrey Kanyerere, and Placid Mpeketula. "A Comparative Analysis of the Quality of Solar Tent Dried (Samva

Table 7: Peer-Reviewed and Non-Peer Reviewed Publications		
No.	Project	Citation
		Nyengo) and Open Sun Dried Usipa Fish Engraulicypris Sardella Pisces; Cyprinidae.][Draft Manuscript]," TBD.
17	Mango Fruit Flies	Midingoyi, Soul-kifouly G., Menale Kassie, Beatrice Muriithi, Gracious Diiro, and Sunday Ekesi. "Do Farmers and the Environment Benefit from Adopting Integrated Pest Management Practices? Evidence from Kenya." Journal of Agricultural Economics 70, no. 2 (2019): 452–70. https://doi.org/10.1111/1477-9552.12306.
18	Mango Fruit Flies	"Alien Invasive Fruit Flies in Southern Africa: Implementation of a Sustainable IPM Programme to Combat Their Menaces (CULTIAF-2). IDRC Project Number: 109040, Annex 4 Highlights from the Pro-WEAI Survey in Zambia," May 2021.
19	Mango Fruit Flies	Ndele, Shepard, Samira Mohamad, Beatrice Murithi, Kirscht Holger, Donald Kachigamba, Laura Canhanga, Isaiah Nthenga, and Louisa Makumbe. "Alien Invasive Fruit Flies in Southern Africa: Implementation of a Sustainable IPM Programme to Combat Their Menaces: IDRC Project Number: 109040." International Centre of Insect Physiology and Ecology (ICIPE) (Kenya), Department of Agricultural Research Services (DARS) (Malawi), Eduardo Mondlane University (EMU) (Mozambique), Zambia Agriculture Research Institute (ZARI) (Zambia), Department of Research and Specialist Services (DR&SS) (Zimbabwe), May 7, 2021.

As already mentioned in Section 2 on effectiveness, the projects also contributed to the creation of some standards for key sectors (for example**, INSFEED** contributed to modify standards regarding the use of insects into animal feed), Malawi Fisheries developed smoked and dried fish standards, or other projects produced policy briefs in order to disseminate information to decision makers (e.g. **IPM mango fruit flies, Irrigation Mozambique** and **Nutrifish projects**).

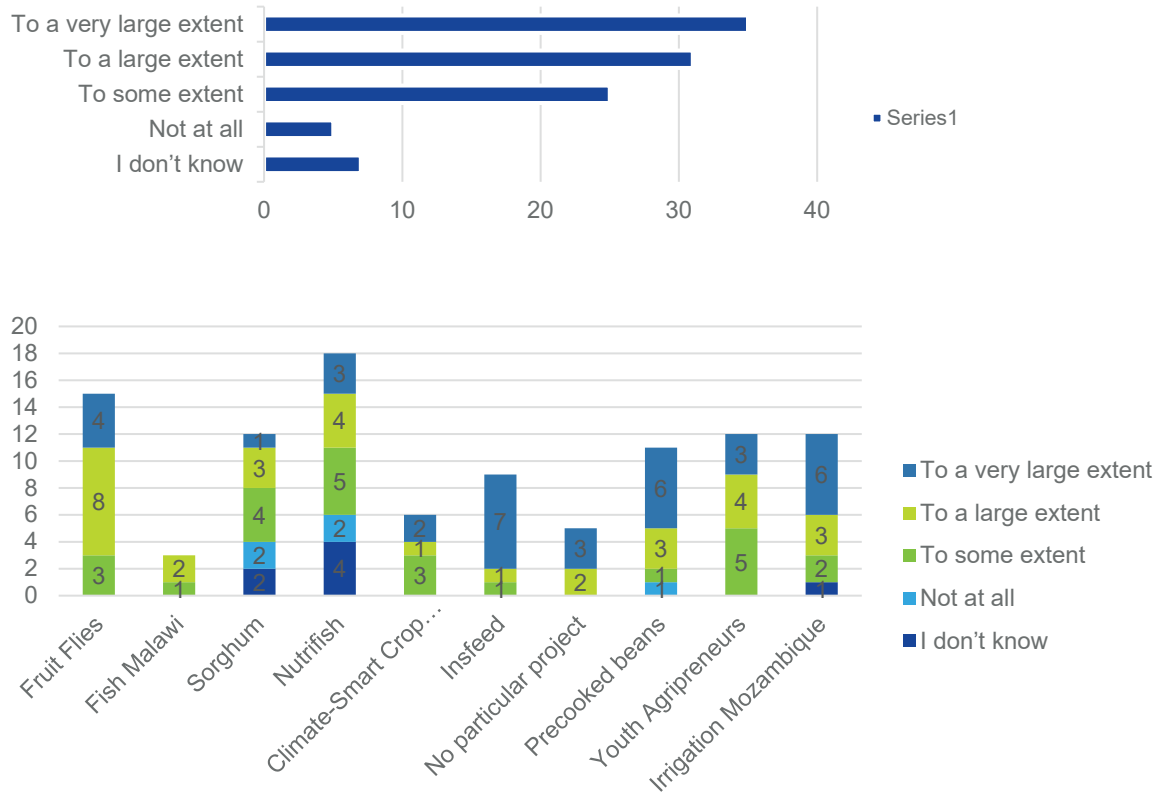
2.3 Environmental Risks

What consideration has been given to the potential environmental impacts, both positive and negative, of the projects supported through CultiAF?

Consideration of the environmental impacts has mostly been positive, especially since most projects were looking to reduce waste or water consumption or were indirectly tackling environmental issues. All constructions and infrastructure supplied and contracted during the projects had to go through Environmental Impact Assessments (EIAs), following Canadian and national regulations, with the view to limit their potential environmental impacts and identify risk mitigation strategies.

Results from the online survey are quite mixed and differ from one project to the other, as shown in Figure 10. According to the respondents of the survey, it seems that the *sorghum* and *Nutrifish* projects are the ones that have given less attention to these aspects of the projects.

Figure 10: To what extent consideration has been given to the potential environmental impacts, both positive and negative, of the project you are associated with? (Total answers: 103)



Source: IDRC Culti-AF Evaluation online survey, 2021.

As most projects have an obvious positive impact on the environment in their design (for instance the use of smoking kilns that use less firewood or the promotion of sustainable practices in the **Nutrifish** project, or the use of larvae for organic fertilizer in the **Insfeed** project), for instance by reducing waste, in some other, projects require to take specific measures to avoid the impact that might be generated indirectly. As one researcher recalls: '*Environmental impact assessment study were conducted at the beginning of the projects and recommendations of the report were followed throughout the implementation process to avoid any negative impacts.'*

Survey respondents have provided several examples of how their projects have avoided the negative impact of the project on the environment. Examples include:

- By supporting **integrated pest management**, including controlled use of chemical pesticide or fertilizer, the use of biocontrol agents and natural fertilizers such as cow dung.
- By **diversifying the crops** used in the project and using adapted material such as metal silos or by integrating activities into a cycle: 'In the dairy sector for example, the interdependence between the cows, waste to generate bio gas, the by product to grow fodder as well as use of cow waste to rear Black Soldier fly which are a rich source of nutrients again for the cows.'
- By using and promoting the use of **renewable energy** or by promoting production techniques that facilitate fuel saving;
- By following international standards for waste management;
- By creating awareness on waste management or encouraging to plant trees has natural wind breakers and avoid deforestation;
- By cleaning fields after harvest and reusing organic waste;

CultiAF Phase I already did take into consideration environmental issues but Phase II has put more emphasis on this aspect.

In the IPM mango fruit flies project, the interventions prevent and reduce synthetic insecticide and pesticide use, with obvious benefits to the environment. Similarly, the **Precooked Beans** project reduces firewood use by both the reduction of wood and fuel in cooking-shifting to gas (an in-house survey showing that 46 percent of project's participants were using gas to cook beans versus 17 percent in the general population), and the use of improved bean varieties. The **Malawi fisheries and Nutrifish** projects aim to reach sustainability of fisheries by limiting losses, reducing waste generation, and improve hygiene when transporting and processing fish. In addition, both projects integrate the idea of using the sun to dry the fish by using solar tents or dryers. Finally, the **Sorghum Ethiopia** project did not identify any environmental risk for its interventions. On the contrary, a p**ositive impact of the intervention is the increase** biomass production, which contributes to carbon contents into soils. Some projects have measured their impact on environment, like the impact of the use of smoking kiln on the quantity of fuelwood usage (**Nutrifish project**). **INSFEED** had developed the idea of recycling, putting the waste out of the cities, but there was the risk of releasing parasitoids. Therefore, the program put in place protocols to avoid damaging the site. The program also promoted the circular economy by reusing the substrate to feed the insects.

Environmental risks have been highlighted in the following projects, and generally speaking mitigated:

- The beans in the **Precooked Beans** project have aflatoxins when the beans get in touch with water, but the smallholder farmers have been trained on safe food production principles; they are more knowledgeable on how to manage the waste water;
- **Nutrifish and Malawi Fisheries projects**: A few respondents mentioned that the use of fuel lamps in some of the project's activities has potential for sea and beach pollution. Others also mentioned that the use of concrete for the solar tents and dryers could minimally affect the beaches where they are built. Still, these potential impacts, which have not been assessed or measured, are minimal.
- Although the project management team tried to tackle this issue but with limited immediate results, a project manager from the Mozambican **Irrigation project** had a negative experience, saying that: '*The irrigation schemes covered by the project use natural resources inefficiently and in a way that causes negative environmental impacts such as waterlogging, salinity and leaching of fertilizers and pesticides into surface and groundwater.'*. Implementing these changes will take time.

2.4 Gender

How effectively has the funded research recognized and addressed gender issues?

Gender inequalities have been dealt with at different project "levels", and a stronger emphasis has been given to the cross-cutting factor during the project's second phase, in relation with the first phase.

- However, the changes perceived by the ET were at lower levels of the results chains (mainly activities and outputs) and no strong transformative change has been evidenced.

All projects have a relatively strong gender component and there are some good examples of gender-sensitivity. The **Fruit flies Mango** project for instance provided targeted training for female decision-makers in mango production and marketing value chains including IPM approaches for the management and post-harvest practices which were much less labor intensive and saved women's time. Project's staff also identified women gender champions who were trained in gender transformative approach tools so after they were trained and given materials they trained or provided outreach to other individuals. A limitation identified was that resources were generally owned by men, and it was difficult to increase women's ownership. To address this issue, the project tried to create other digital platforms to market their products and empower women. From the evidence collected, it is not

Gender Dynamic in agriculture in Kenya

In Kenya, women are the backbone of the economy. If anyone walks around a buzzing market at any day, it will soon realize that ninety percent of the population selling vegetables are women. In the farms, women are working hard as well to produce on land that they generally don't own. In Kenya gender division is particularly visible in terms of land property. Widows inherit their deceased husband's land and women are now allowed to own a piece of land, but most have no money to develop agriculture activities.

Through training and awareness-raising, the *Youth Agripreneurs* project raised the idea that women could engage in large-scale farming activities and along the value chain, by being at the same time the owner of land, the leader, the worked, and the one that benefits from the sales of its production.

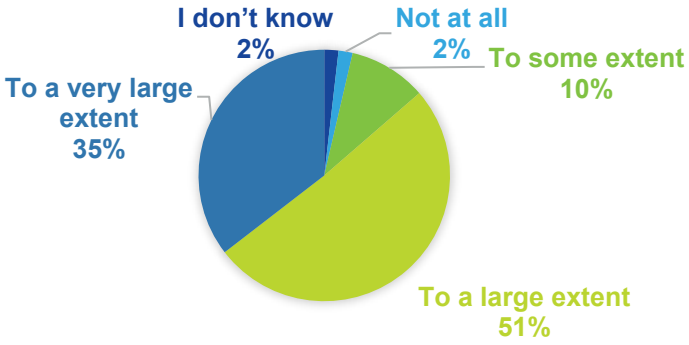
clear what results came out of these efforts. In terms of innovation, the **Picture-Based Crop Insurance project**, provided mobile phones to women who did not previously have mobile phones to take photos of crops to make sure they were included.

An important type of quick result from projects, linked to gender equality, has been the reduction of the time women dedicate to household tasks: it is notably the case of the **Nutrifish** project solar tent dryers that reduced the drying process' labor by five hours, labor that is normally assigned to women in the targeted communities. The introduction of improved bean varieties (**Precooked Beans** project) that reduce cooking time and women's drudgery also had a direct positive effect on women's wellbeing.

Another priority has been to provide women with financial solutions to compensate for the scarce access to funding sources. The **Malawi Fisheries** project partnered with a bank so that women would have access to loans with 2% discounted interest rates to finance the fish technologies. Unfortunately, although many women applied for the loans, they have not yet received them by project closure, with the exception of three women. The bank working with the project actually provided incentives for women to participate and "soften conditions" for them. Overall, many of the fishers did not have bank accounts, but women were even less likely than men to have them.

Most respondents of the online survey acknowledge that CultiAF, in particular during the second phase, has given a strong emphasis on recognizing and addressing gender issues. Eighty-six (86) percent of the respondents consider that this topic has been recognized and addressed to 'a large' or 'a very large' extent, with only two percent of respondents considering that it hasn't been addressed at all and ten only to some extent.

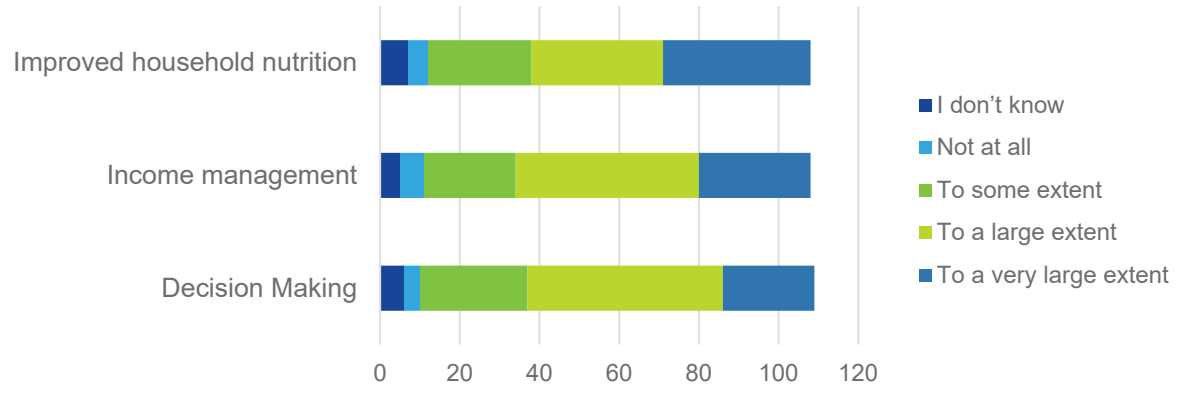
Figure 11: To what extent has the funded research recognized and addressed gender issues?



Source: IDRC Culti-AF Evaluation online survey, 2021.

Also, stakeholders have largely considered that the projects contributed to reducing the gender gap in terms of improved household nutrition, income management and decision making, with about 65 to 68 percent considering that the project contributing to reducing the gaps to 'a large' or 'a very large' extent, with no significant difference between projects.

Figure 62: To what extent does your project contribute to reducing the gender gap in:



Source: IDRC Culti-AF Evaluation online survey, 2021.

Survey respondents provided examples of how the integration of gender has been made abound. Some of these examples include:

- By encouraging **equal participation** of both genders in the project's implementation and 'putting women in **key roles** where decision making is concerned' and ensuring that 'both men and women are involved in all implementation stages. Some respondents recognized that obtaining parity was usually a challenge and that they did not always get the required balanced participation. In some cases, quota for women participation were established at lower levels than 50% to align with reality (e.g., the **Nutrifish** has set the standard at 30%)
- By conducting **gender training** and sensitization to gender related issues in all projects, and facilitating women participation, for instance through the provision of childcare during training sessions e.g., the Youth Agripreneurs project. The **Sorghum** project took an original approach: Managers tried to train participants and provide technologies to couples. For instance, a male farmer would only get training on post-harvest and be provided PICS bag if he comes with his wife to attend the training. They were successful not only to attract women for the technology uptake but also to create male farmers awareness on the fact that women participation is a key for technology dissemination and proper management. Staff from the **Climate-Smart Crop Insurance** project stated that the project farmers were mainly female, with consent from their male spouses.
- By **analyzing factors** that contribute to gender inequalities through the Pro-WEAI study and working on some of the factors of disempowerment identified such as reducing drudgery, reducing work burden and encouraging women to visit important places, attend business training, among others. Also, gendered Value Chain Analysis (VCA) was very helpful in identifying the relevant entry points and opportunities to enhance gender equality in the project.
- By **focusing on technologies** that require limited access to "owned" land which makes it more suitable to women who because of historical, economical, and cultural reasons are less likely to own land. The landing site of the **Nutrifish** project is privately owned, and that makes difficult to use for the project's activity.
- By 'encouraging women to access the financing provided by the Commercial Bank' and directing resources towards areas where women were predominant, for example by installing at least 40% of the soil water monitoring tools in plots owned and managed by women. In the case of the **Youth Agripreneurs** project, the project helped suggest that

leasing land can have a positive effect for women. This has the potential to generate good income for renters which can then be used to eventually buy a piece of land.

- By including women at various levels of project's management teams and inviting gender experts to participate in our planning meetings. As mentioned by a respondent, women made valuable contributions during these meetings.
- Finally, the **Climate-Smart Crop Insurance** project deliberately **recruited more female champions** given their assumption that female champions had more female farmers in their social networks, and that they would also act as role models for their colleagues in the presence of restrictive gender norms.

- ***Pro-WEAI (Project-Level Women's Empowerment in Agriculture Index)***

The WEAI was launched in February 2012 as an innovative tool for measuring, evaluating and learning about women's empowerment and inclusion in the agriculture sector.

Pro-WEIA WEAI is, generally speaking, a useful tool to achieve women empowerment outcomes although in certain cases, the additional work it generated for managers became a challenge compared to its effectiveness.

The WEAI has evolved since its introduction. For a comprehensive set of resources and information about the WEAI, go to https://weai.ifpri.info/. The index indicators presented in the graph below shows how WEAI is used to measure progress. The graph shows how the ten indicators are linked to five overarching ones and how each are pondered.

The figures below show the progress made by some projects when considering the Pro-WEAI indicators although because data sets are not always complete, it is difficult to judge the overall progress. Still, the fact that some of the projects conducted the data collection on the Pro-WEAI indicators is positive. Yet the link between the Pro-WEAI data and its influence on strategic decision making for gender in the projects is not evident. Two examples are also provide looking into more details about the projects' Pro-WEAI results achieved.

Women's Empowerment in Agriculture Index Indicators

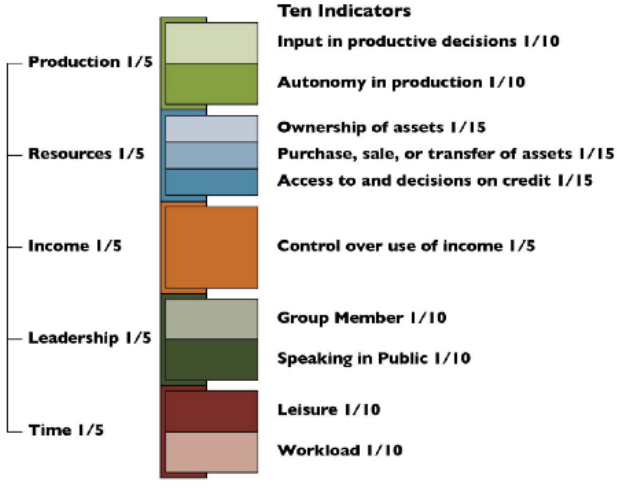


Table 8: Women's Empowerment in Agriculture Index (WEAI) Results by Project

Project	Where it was conducted	Who collected the data?	When was the data collected?		Sample sizes, by sex, by treatment arm	Results
			Baseline	End line		
INSFEED	A peri-urban area adjacent to the City of Nairobi, covering an area of 2,539 km2.	ICIPE Team, Julyann Mutuku Holger Kirscht	August 2019	?	441 farmers (263 women farmers) at 370 farm households	Not empowered: 56% women and 44% men Age, education, and tropical livestock units are significant for empowerment 3 papers[39] 56% Achieving gender parity 44% Not achieving gender parity Self-efficacy: 79%men; 59% women Mobility: 63% men; 59% women Work Balance: 85% men; 84% women Asset Ownership: 68% men; 82% women
Ethiopia Sorghum	Oromia region; Survey from Amhara region Two districts- Fedis and Shanan kolu districts	Truayinet M.	May 2021		96 dual adult and 28 FHH Fedis and Shanan kolu districts: 184 households, 63 female adult only household and 121 dual adult male household were selected. total sample size used was 295 (121 men and 174 women)	Input in productive decisions: women 29%; men 86% Ownership of land and other assets: women 78%; men 41% Access to and decisions on credit: women 22%; men 34% Control over use of income: women 74%; men 76% Autonomy in income: women 39%; 40% men Group membership: women 25%; men 45% Membership in influential groups: women 21%; 39% men Work balance: women 47%; 70% men Visiting important locations: women 68%; 74% men Respect among household members: women 45%; men 62% Attitudes about domestic violence: women 75%; men 72% Self-efficacy: women 48.3%; men 70%
Mango Fruit Flies	Two districts in Zambia Chilanga and Rufunsa	ICIPE Team, Julyann Mutuku Holger Kirscht	March 2021	?	225 interviews 527 individuals 195 men, 208 women in male-headed households and 124 women in female-headed households	57% women and 74% men are empowered In dual households, 63% achieved gender parity while average empowerment gap between men and women was 0.27 Largest contributor to women disempowerment was self-efficacy and autonomy in decision-making and income

[39] Paper 1: Women's empowerment and its correlates; Paper 2: Association between women's empowerment and dietary diversity; Paper 3: Women's land (asset) ownership and its influence on intra-household decision making

Table 8: Women's Empowerment in Agriculture Index (WEAI) Results by Project

Project	Where it was conducted	Who collected the data?	When was the data collected?		Sample sizes, by sex, by treatment arm	Results
			Baseline	End line		
						Largest variations between men and women were for work balance, respect in HH, income and membership in influential groups
IPM Fruit Flies	**Zambia:** Rufunsa and Chilanga Di stricts	A team of 9 enumerators (5 females and 4 males) and two supervisors (1 male and 1 female)	February and March 2021	March/April 2022	A sample of 513 respondents was successfully interviewed; 185 men and 206 women from dual households; and 122 women in female-headed households	
Picture Based Insurance in Kenya	**Kenya:** Western: Bungoma & Busia Upper Eastern: Embu, Meru and Tharaka Nithi Lower Eastern: Machakos & Makueni	Innovations for Poverty Action (IPA) with technical support from IFPRI & ACRE Africa	Long Rains season of 2020 (March 2020), or the Short Rains season of 2020/21 (October 2020), depending on when the farmer entered the project	Tentatively scheduled between May 2022 – July 2022	4,446 respondents 2,353 females 1,893 males	59% women and 65% men achieving empowerment Top 3 contributors to women's disempowerment are control over use of income, work balance, and autonomy in decision making. Gender-friendly interventions[40] Autonomy in income: women-23; men-20%; No Insurance women-20%; men-22% Self-efficacy: women-7%; men-7%; No Insurance women-7%; men-8% Attitudes about intimate partner violence against women: women-19%, men-10%; No Insurance women-15.1%; men-8% Input in productive decisions: women-6%; men-9%; No Insurance women-4%; men-6% Ownership of land and other assets: women-1%; men-0.4%; No Insurance women-1.2%; men-0.5% Access to and decisions on financial services: women-3%; men-5%; No Insurance women-6%; men-6% Control over use of income: women-21%; men-24%; No Insurance women-23%; men-26% Work balance: women-20%; men-17%; No Insurance women-20%; men-18% Ability to visit important locations: women-0.2%; men-3%; No Insurance women-1%; men-24% Group membership: women-1%; men-6%; No Insurance women-1.5%; men-5%

[40] Encouraging more women to join and form their collectives through the project as they feel comfortable working together as women; Encouraging women to register for Mpesa to receive their pay-outs from insurance as this give them more agency; Providing child care that eases women's opportunity to attend trainings; Provision of smartphones for champion farmers, of whom the majority without smartphones are female; Intensify capacity building initiatives around insurance among both male and female farmers

Table 8: Women's Empowerment in Agriculture Index (WEAI) Results by Project

Project	Where it was conducted	Who collected the data?	When was the data collected?		Sample sizes, by sex, by treatment arm	Results
			Baseline	End line		
Precooked Beans	**Kenya and Uganda**	Precooked Bean Team Scolastica Wambua Agribusiness/ Gender expert	Pro-WEAI in 2017 in Kenya and Uganda	2019		71% women and 61% men not achieving empowerment Generally, women have higher disempowerment scores hence less empowered than men. The disempowerment scores reduced for both women (from 0.28 to 0.16) and men (from 0.22 in 2017 to 0.12 in 2019) (Meaning more empowerment for both in 2019 compared to 2017 Work balance, attitudes towards domestic violence, intra-household relationships (respect) and control over use of income and are the biggest sources of women disempowerment in both years Input in productive decisions show the largest improvement by both women and men. Currently (2019) the biggest area of disempowerment for men is attitudes towards domestic violence Input in productive decisions show the largest improvement by both women and men and this can be attributed **increasing access to advisory services** and inputs as a result of private sector engagements 41% women and 38% men not achieving empowerment. The disempowerment scores reduced for both women (from 0.28 to 0.16) and men (from 0.22 in 2017 to 0.12 in 2019) Currently (2019) the biggest area of disempowerment for men is attitudes towards domestic violence. The COVID 19 pandemic might have exacerbated this problem, as men lost their jobs and were forced to stay home
Malawi Fisheries	**Malawi:** Mangochi, Salima (old project districts), Nkhotakoka and Nkhatabay (new project districts)	Jupiter-M & E	February 17 – 28, 2020		721 total 515 females 206 males	63% women and 55% men not achieving empowerment. Generally, women more disempowered than men Largest contributors for disempowerment for both are input in productive assets and work balance. However, work balance contributes more for women than men. Autonomy in decision making, membership in influential groups are other contributors for disempowerment, more for women than men

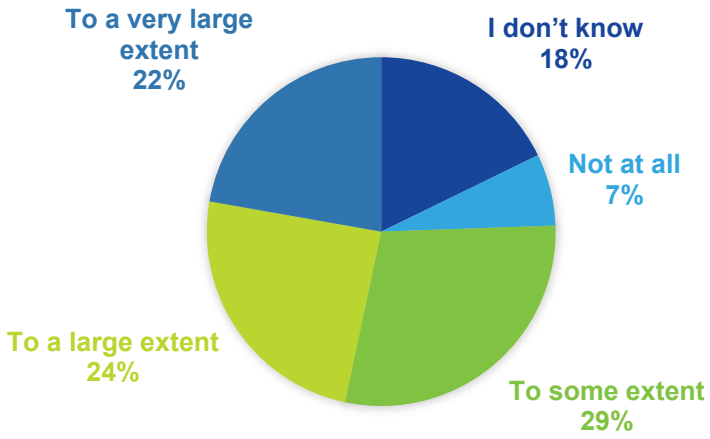
The **Pro-WEAI** tool, which measures women empowerment through 12 indicators covering three types of agencies: intrinsic agency (power within), instrumental agency (power to) and collective agency (power with), has been used by a total of 74 survey respondents, 42 of them considering that the tool has been used to 'some extent' or 'to a large extent' in their projects (see Figure 13).

Eight out of nine projects have used the pro-WEAI during this second phase of CultiAF and staff received physical and follow-on virtual training on the use of the tool and on how to address factors of disempowerment identified during the assessment (see example in figure 15 above). The **INSFEED project** has for instance used the conclusions of Pro-WAEI to refine its approach, for instance by using alternative participation approach since wives could find it particularly difficult to take part to training due to COVID-19.

In the case of the five new projects, the pro-WEAI has been used as a baseline, to better orient the interventions. It is notably the case of the **IPM Mango Fruit Flies**, for which the baseline shows a relative level of disempowerment of women compared to men, in the field of work balance, autonomy in income and respect among household members. The **Precooked Beans** project identifies the gaps that still exist in terms of access to land, decisions for credit and financial account, and work-life balance.

According to online survey respondents, the Pro-WEAI tool has been useful to identify factors of women's disempowerment and to 'identify the gaps and areas of interventions to empower women on sorghum production and use' as one respondent put it. According to respondents, results from Pro-WEAI were mainly used to develop messages that were used during the gender transformative activities.

Figure 7: Answer to: To what extent did the use of the Pro-WEAI (Women's Empowerment in Agriculture Index) tool lead to women empowerment outcomes?



Source: IDRC Culti-AF Evaluation online survey, 2021.

Comments by the respondents have been largely positive. A researcher from the **Precooked beans** project stated for example that 'Pro-WEAI brought out good results with the indication that women can be empowered. We focus on using informed research results to engage in gender transformative activities such as promoting financial inclusion and empowering women to use digital tools.' Also, from responses collected, pro-WEAI has facilitated the development of specific interventions contributing to women empowerment, for example through the introduction of the seed credit model to increase women access to quality seeds and other production inputs and participation in marketing through market linkages.

However, in certain circumstances, the pro-WEAI was not properly integrated throughout the project and was only present as a program obligation to do so. Some considered that using the tool was time consuming during reporting season, which further burdened managers. As a result, teams had to compromise and drop a number of other indicators on which they were reporting and sample sizes were reduced.

2.5 Economic Impact

What have been the potential positive or negative economic impacts of the CultiAF innovations? Can they be quantified?

The CultiAF-II project-generated economic gains have been noticed anecdotally in most cases, but there is limited quantified data as evidence.

CultiAF II program has been looking to improve food security by increasing income for farmers and their families. Out of the nine projects funded by CultiAF II, seven[41] are directly concerned with developing agribusinesses, which gives an idea of the importance CultiAF II gave to this target area. In addition to these direct links with economic impacts, the full portfolio targets value chain activities and results such as reducing post-harvest losses, improving productivity and yield through innovation which indirectly contributes to increasing economic gains for small holder farmers.

19 innovations have been developed and are being tested and a few projects have gathered evidence of the economic impacts these innovations in the targeted communities. For instance, it is expected that the **Picture-Based Insurance** project's application will provide communities with increased revenue through the selling of seeds among farmers' network, but those additional revenue have not yet been assessed or measured.

It is indeed acknowledged by key respondents that the program and its projects have not been able to fully quantify the economic impacts of their endeavor. Nonetheless, some good examples from projects do exist, demonstrating the nature and extent of the economic impacts:

- The **Malawi Fisheries** project conducted an investment analysis looking at fish quality and the enabling environment for fish processors, especially women, to be able to access lucrative markets with better packaging. In the second phase it was noted the capital requirements were high so managers partnered with banks to scale-up the results and make sure they would eventually become sustainable. Indeed, with private sector investments, participants can perpetuate their work. However, the project does not have any data on how much income fishermen made, and the project management did not think that there were able to demonstrate any results "in the time given/the life of the project", before the project was phasing out.
- The **Precooked Beans** project increases both agricultural productivity and incomes by using high yielding bean varieties that are nutritionally dense twinned with training in improved agricultural practices. According to researchers, productivity of beans has increased 30%, while income of producers increased by 68%. The researchers are also in the process of looking at increases in incomes from the value chain producers and the resulting improvement in livelihoods; some farmers reportedly were able to sell their beans to other projects as well. The project introduced the payment service option to empower women. The objective was for

[41] Fish Malawi, Insfeed, Irrigation, Nutrifish, Precooked beans, Sorghum Ethiopia, and Youth agripreneurs.

them to receive cash fast and to create facilitating payments between buyer and producer to make transactions, which, in turn created additional employment opportunities. Some of the women set up mobile businesses for the cash transactions.

- The **IPM Mango Fruit Flies** project reports positive income increases thanks to higher volumes of sales, while mango drying provides additional resources for women even during off mango season. Testimonies have confirmed that the mangos have been used as a source of income to buy additional assets, such as animals. However, as reported by the majority of respondents linked to the project, the increase will only have true results on livelihoods by 2023.
- **Nutrifish:** thanks to safest drying techniques, fishermen and processors have managed to increase the value of small fishes, in particular by selling them for human consumption and for processing. It resulted in important economic gains for the whole value chain. Some respondents brought up the issue that the project did not consider the challenge of land ownership, in particular for women.

The COVID-19 pandemic had an important impact on the economic gains achieved through CultiAF II's projects activities. It is for instance the case for the **Youth Agripreneurs** project: entrepreneurs had to abandon some of their activities, even though they have been supported by mentors, encouraging them to diversify their production and sales to survive through these difficult times.

Respondents of the online survey were asked to provide examples of positive and negative economic impacts of CultiAF innovations:

Examples of **positive economic impacts** were numerous in stakeholders' comments since many projects have a strong economic component. As a result of Culti AF II's activities, many farmers have seen their livelihoods improve.

A respondent mentioned: 'We have seen a number of beneficiaries reporting increased income to meet their social needs including hospital bills, school fees, building new homes, purchase of animals, etc. Therefore, small scale farmers greatly benefited from the project.' The Youth Agripreneur project managers found that training coupled with mentorship would increase sales amongst smallholder farmers (youth) by about 10,800 Kenyan shillings and participants would provide employment to an additional youth. As a result, smallholder farmers were able to turn their farms into firms. Another example comes from the Ethiopian **Sorghum** project where farmers use the project's technologies to generate income by giving a customer hire service to the neighboring farmers.

Negative Economic Impacts were generally unexpected side-effects of some activities. As one researcher states: 'Negative impacts include high expectations from the small holder farmers, especially about financial benefits, in managing their farms. They thought that they would be able to sustainably manage the activities after the project's end. In some cases, participants were under the impression that they would be better off after the project but circumstances affected the results (e.g., COVID-19).

Reflecting several other comments, one respondent from the fruit flies project mentioned that 'we did not evaluate so far the economic impact of the project'.

Positive economic impacts have been generated through reduced losses, increased productivity, higher selling prices, diversification of sources of income, etc. even if the Covid-19 slowed down progress. Although there were a few exceptions, these impacts have not been quantified yet.

2.6 Efficiency

How efficient and appropriate has the CultiAF II program model—including the governance, management, planning and implementation - been in supporting CultiAF objectives?

- ***Communication and coordination between ACIAR and IDRC and with project implementers***

Management, Planning, Communication & Coordination

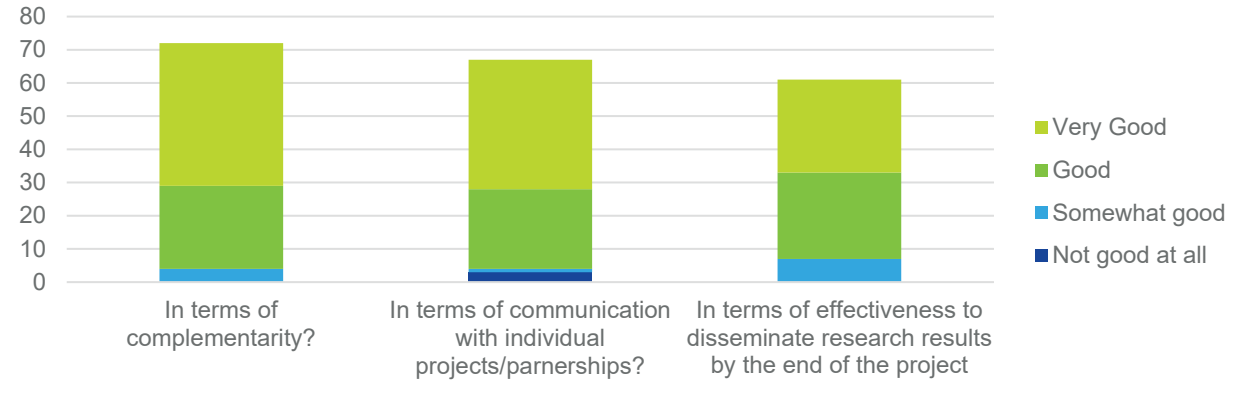
Generally speaking, the comments and feedback from the fund recipients were positive about IDRC/ACIAR who managed the fund portfolio.

- ❖ There was some discussion the added value, responsibilities and added-value of both ACIAR and IDRC at the beginning.

Partnerships are an important component of the projects, in particular to find complementarities between the research and implementation aspects of the projects. Considering implementation, survey respondents generally considered that in terms of:

- ✓ There were a lot of opportunities for interactions among stakeholders that made the implementation of the projects easy, and the donors were very effective to keep the fund recipients abreast of key communications.
- ✓ A few people reported that sometimes there **was confusion about who was responsible for what** and who they should talk to for particular matters especially with some staff attrition and changes.

Figure 14: From your perspective, how was the quality of the partnership between IDRC and ACIAR?



Source: IDRC Culti-AF Evaluation online survey, 2021.

In terms of **communication** among projects and projects' partnerships, 65 out of 68 respondents consider that communication from IDRC and ACIAR has been either 'good' or 'very good', and positive survey comments have been received linked to the fact that 'CultiAF maintained very good communication with the project team, provided training in various areas, connected project teams with other colleagues and that communication channels were very clear. The reporting formats were considered easy to follow and user-friendly. According to some respondents, the level of reporting needs to be adapted so that requirements are equal among groups.

As fund recipients discussed the governance mechanisms and standard operation procedures (SOPs) for their grant management, there was consensus that the guidance was clear and readily available.

IDRC guided the recipients in reporting, financial and technical data and provided oversight. Most people thought that IDRC was flexible for budget re-allocations. Agreements were guided by MOU that stipulated all the requirements of the grants and how to do technical and financial reports.

In most cases, IDRC mainly, and ACIAR, gave their views on how projects should be managed, and the management structure was discussed. There was an openness to feedback and clarifications. Each project had a permanent principal investigator for the management process and IDRC/ACAIR would communicate what was to be provided with periodic supervision. IDRD/ACAIR reportedly provided guidance and training for the development of proposals and for developing presentations.

Some limitations were reported: Project management with co-principal investigators sometimes had issues making sure that jointly they were in compliance with the **governance and SOPs.** However, the ET did not have access to the SOPs.

Most fund recipients acknowledged that the process and guidance was straight forward for annual work plans and implementation plans and they reported that they were submitted timely.

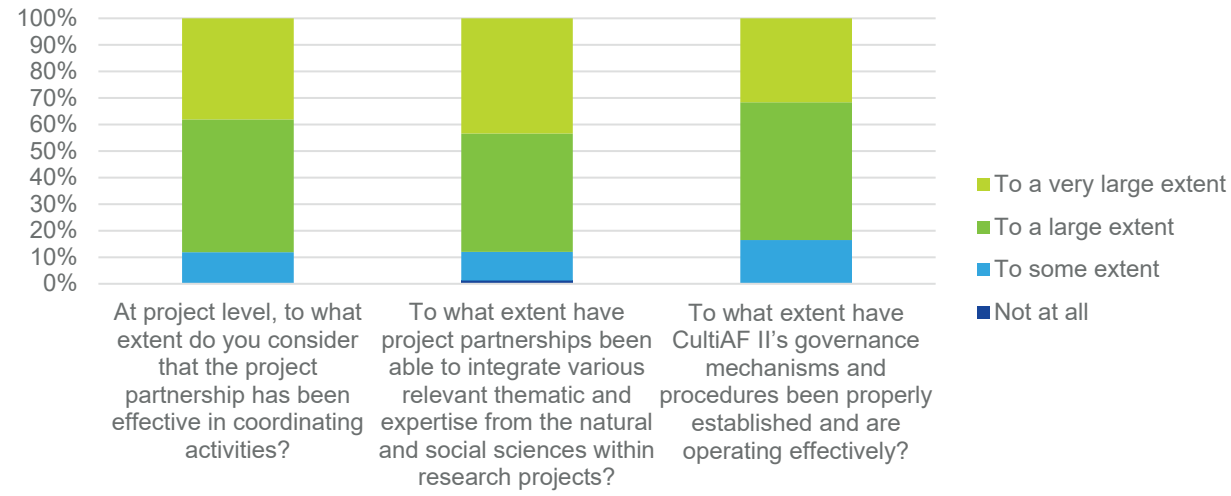
Some of the limitations mentioned by respondents include:

- COVID-19 caused expected delays or in some cases, projects could not implement certain activities.
- Due to donor retaining 10% funding, in one case the fund recipient had to borrow money and implement activities and pay back the funding which presented challenges.

One project recipient acknowledged that they had quite a bit of delays with the financial management and resolving issues with the bank caused lengthy delays in project managemenBeyond these limitations, fund recipients mentioned that they were provided with the right planning tools (Gantt charts, logical frameworks, participatory monitoring and evaluation processes) and they held midterm monitoring and evaluation meetings.

Most respondents (88%) consider that the partnerships formed at project level was effective in coordinating activities. The same proportion applies to the capacity of partnerships to integrate various relevant thematic and expertise from the natural and social sciences and the effectiveness of CultiAF's governance mechanisms and procedures.

Figure 15: Partnership Coordination



Source: IDRC Culti-AF Evaluation online survey, 2021.

In terms of **timeliness**, a very large number of respondents point to the COVID-19 pandemic as an important factor that led to delays that required to speed up activities, including that 'virtual implementation was conducted could not reach everyone; thus, some people did not benefit or participate.' The COVID-19 pandemic should have led to extend all the projects, but this was not possible for donors. Instead, program officers discussed with the partners how to do things differently and to rethink activities so that the program can still be implemented, despite the limitations. An example comes from the Youth Agripreneurs program, where mentorship was adapted to the new realities, providing support tailored to the new situation.

Also, as a researcher from the *sorghum* project mentioned: 'research is a long time and resource-intensive activity and to see the result of the research it may take a longer time.' Another suggestion from the same project: 'Research and demonstration activities are time specific and hence there was a limitation in accessing finance from the project at the right time.' A project manager of the *Nutrifish* project added that 'There were also institutional bottlenecks with regard to procurement of items required for student research. The project team working with the relevant university offices to try to expedite the procurement.' As a researcher from the *Nutrifish* project suggests: 'IDRC and ACIAR could consider a longer project time period to enable projects to achieve impact (e.g., 5-6 years instead of the 3-4 years' period).'

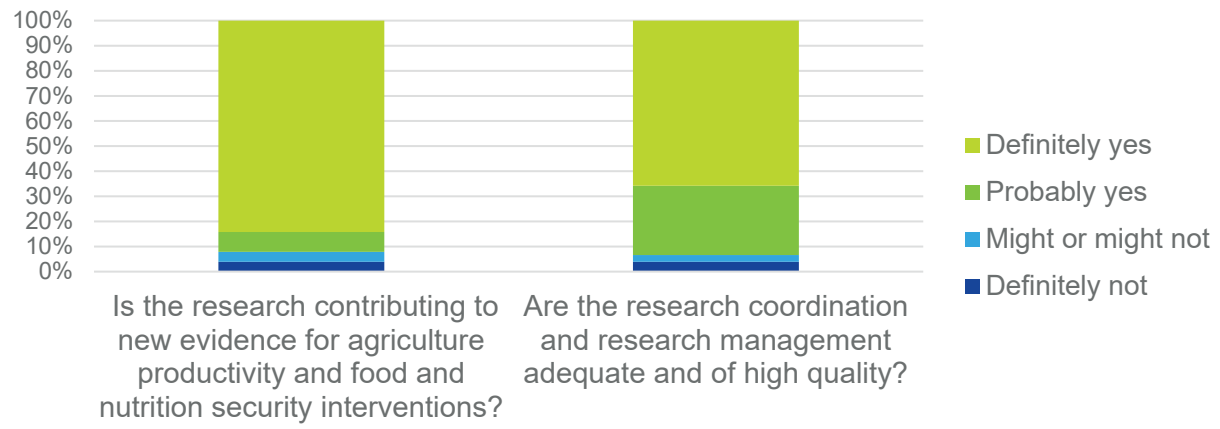
Regarding the participatory process, a representative of a third-party organization stated that: 'the participatory process could have been better. While COVID-19 restrictions have definitely limited participation, this is not the only reason. Management of the project by WEIA standards could have been more pro-active and inclusive. (…) Approval of budgets by IDRC has taken a long time (we acknowledge that this process has been very difficult with COVID-19).'-

From the data collected, the ET finds that the coordination and management of the research was adequate and of high quality. The program level support was appreciated and the project research teams had the needed independence to conduct their work freely. Some respondents would have appreciated a bit more program presence.

Researchers were invited to respond to questions of the online survey as well as through the interviews regarding the contribution of the research to generate new evidence, and the quality of

research evidence and management. From the survey, it results that the views over the quality of the research coordination and management were overly positive, with 70 out of 75 respondents (93 percent) considering ('definitely', or 'probably') that the 'research is contributing to new evidence for agriculture productivity and food and nutrition security interventions' and that about the same proportion consider that the 'research coordination and management have been adequate and of high quality'. Some interview respondents mentioned that they would have appreciated a bit more program "presence" to technically support their research activities. Indeed, the guidance on how to manage their projects in the context of the CultiAF was considered useful but these respondents mentioned they would have appreciated more "content" oriented support.

Figure 8: Quality of the Research coordination and management as a Percentage of the Total (75 respondents)



Source: IDRC Culti-AF Evaluation online survey, 2021.

- ***Benefits of the new nutrition-sensitive and climate-resilient practices and technologies available to them through these projects***

Most CultiAF's end users have highlighted during FGD the benefits that they have regarding introduced technologies. The **IPM mango fruit flies** project was able to conduct socioeconomic FGD in Malawi, Zimbabwe and Mozambique as well as conducting the WEIA in Zambia and beneficiaries were very positive about the technologies. One major barrier is related to markets and market access, in addition if they get access to loans willingness to pay back is low. The **Precooked Beans project** reportedly captured their beneficiaries' perceptions quantitively and qualitatively through FGD and key informant interviews discussing their food preservation roles. They analyzed the issues of taste, the sale and household consumption of beans and cooking food for people in hospital. In order to increase women participation, they marketed at the village level to recruit women.

2.7 Economy (financial management)

How effectively is the institutional/reputational risk of fund recipients being managed?

IDRC reports on program and projects risks every 6 months and if any issue with project recipients are highlighted, support is provided to correct the situation. IDRC would often **spend a lot of time** sending risk reports sent by the projects back and forth to the officers in order to increase the quality of the reports with targeted feedback. This was considered somewhat a bit time consuming.

IDRC reported that there is more **capacity development** needed in financial accounting and risks reporting and managing for the project recipients. IDRC reportedly managed the finances very well except with a country that requires vetting from the government for receipt of external funds. In that specific case, there was a disbursement delay and only a portion of the funding could be used.

In terms of feedback from the fund recipients, most projects did not have any issues, aside from issues with agreeing on budgets and teaming arrangements at the proposal development stage, and coming to agreement on budget with sub-partners. A project recipient stated that "the only issue is managing bureaucracies of other partner institutions". Otherwise, recipients stated that financial matters are reported adequately, that they received their payments on time, and reported about the progress when requested. Again, a few recipients reported issues with IDRC/ACIAR withholding 10% of the final funding, making it difficult to find the cash needed to cover that until they received their final payment.

To what extent were research partner activities funded equitably and finances managed in a coordinated way among partners?

There was not much information shared about the equitable distribution amongst prime and sub-partners as most of the fund recipients just shared that the budgets were discussed at the proposal stage. As one project fund recipient commented, "*the partners agree on the project sub-budgets at the project design phase. However, it was noted that partners are not always clear on their budgets leading to challenges*." The project recipients basically reported that the sub-contractors reported to the prime partner, who then reported to IDRC/ACIAR. Another project

recipient commented, *"It was developed at the beginning of the project we worked on the finances together--everything was agreed upon at the beginning and distributed per quarter, we had MOUs with other partners and they had activities tied to their funding*."

3 LESSONS LEARNED

- ***Lessons to inform IDRC and ACIAR***

Based on the data collected during the interviews as well as through the survey, the ET put together a list of lessons learned, presented here:

- ***Longer Project Time Frames***: All fund recipients mentioned the need for longer timelines for implementation when asked what are the lessons learned from their projects.
- ***More Gender Integration:*** There was also acknowledgement by donors that there is more need to ***address gender issues and the involvement of women in project*** activities in particular. Although the use of the PRO-WEAI was a positive addition to the project, teams n how to use the results of this tool to influence improvements in their project designs. In addition, it was clear that the varying degrees of reporting on the PRO-WEAI and presentation of the data was at different capacity levels, thus if PRO-WEAI is used in the future it is recommended to include training on interpretation of results and how results can influence program activities. In addition, it will be important to include quotas of women's involvement in activities as many activities had many more men participation. It will be important to especially look at women's workload and time to ensure that activities are flexible and modified to allow them to participate. In addition, it will be important to ensure activities 'do no harm' so that if a woman participates it does not affect her negatively. It may also be recommended to conduct a in depth, all-encompassing gender analysis at the beginning of the project.
- ***Scaling up Technologies:*** Another important lesson is to have a more robust plan ***to scale-up technologies*** with a well-defined timeline to scale-up to see real impacts.
- ***Policy Support for Scaling-up Innovations***: One lesson learned was the need for the change in the enabling environment particularly the policies and national guidelines in order to influence scale-up.
- ***Measuring Impact & Monitoring:*** Many fund recipients commented on how "monitoring was mostly at project the level" and it would be good to have high- level indicators defined at the beginning of the project. Sometimes they were asked results on project components that they were not monitoring.
- ***Dynamic Teams & Multiple Countries:*** Many fund recipients commented on how they liked the project because they had dynamic consortia of partners and they learned from each other's expertise bringing together private sector, government and research institutions through the same project.
- ***Initiation and Promotion of Innovation:*** A number of fund recipients said that they appreciated the flexibility to have innovative projects whereas they could initiate, promote and scale-up innovations
- ***Research Thematic Areas:*** Many recipients commented on how they like the technical thematic research areas and aligning with project activities to these areas.
- ***Use of Technology Can Save Time for Women:*** as the evidence-base already demonstrates for improving nutrition thorough agriculture, time and labor-saving technologies can significantly save women's time leading to much more time for caring and feeding practices for her children or to participate in other activities and the implementation of these CultiAF projects supported this.

Lessons can be borrowed to inform IDRC and ACIAR on building and maintaining funding partnerships. One respondent praised the fact that 'inclusiveness of different pertinent disciplines is one of the unique features of CultiAF project, which is not commonly observed in other projects', and that 'large organizations like IDRC and ACIAR working together allows for more resource allocation and partners get to learn from the niches of each.' Among recommendations, a respondent recommends to 'reduce bureaucracy', while other recalls that 'alignment of interests and objectives is very important to work together successfully as partners. Another respondent recommends starting projects' implementation with the conduction of 'a scoping study to ascertain the capacity and capability of each project partner to deliver before start of project.'

4 CONCLUSIONS & RECOMENDATIONS

The Culti-AF II program targeted their results through nine projects, linked to four research themes— increasing productivity and reducing post-harvest losses; linking agriculture, nutrition and human health; gender equality; and climate change and agricultural water management along with two cross-cutting themes of gender equality and environmental sustainability, in eight countries with CAD 20 million in a timeline of less than five years (on average in three years per project). The program operated at both regional and national levels, with each project at the center of multi-stakeholder implementation schemes. CultiAF II fostered enhanced research quality, innovativeness, increased research results' dissemination, up-take of new technological solutions and improving policy contexts for innovation to strive. The ET considers that in this context, resources were somewhat stretched thin and the added value of federating (or bringing together) all its projects under a single program is limited.

1. **Relevance:** All data, KIIs, and FGDs confirm that there was a strong alignment between the priority areas of IDRC (climate-resilient food systems, sustainable inclusive economies) and ACIAR (food security and poverty, climate change, gender equity and women's empowerment, human health and nutrition, inclusive value chains, capacity building) with CultiAF II's research theme areas. In terms of geographic focus, the program aligns well with both agencies despite a recent shift with ACIAR in its focus. The projects responded to the food and nutrition security needs in the region, however not necessarily "urgent" needs (in terms of "humanitarian" or quick response). Most, if not all projects were focused on research, and in many cases, in early cases of research, therefore the technologies did not have time to go to scale or to be directed as solutions for immediate food and nutrition security. Still, overall, the projects had high potential for high-impact solutions for food and nutrition security, especially if taken to scale in the future.

2. **Effectiveness:** The CultiAF program projects were able to support food and nutrition security, however the outcomes were not consistently measured, and the indicators collected to track progress were mostly output indicators. There was a total of 34,533 farmers trained (19,220 male, 15,313 female). The projects each conducted baselines data collection differently and some projects never completed an end line assessment to measure overall outcomes. The research funded under CultiAF has demonstrated *increased agricultural productivity and incomes* for a number of the projects, however, increases could be measured better, and more formally in the future. In some cases, there were limited formal methods established and changes were not tracked. CultiAF II was also successful at potentially *reducing both pre-and post-harvest food losses* in the projects, however, again, the measurement of the food losses could have been more rigorous. Not all projects integrated nutrition as part of their objectives. Nonetheless, a few projects focused their intervention on nutrient-dense agricultural products (e.g., precooked beans, small fish in Malawi Fisheries), while some other included the topic in their research. The **Nutrifish project** has put a strong emphasis on nutritional aspects, by analyzing the nutriment contents of small fishes, developing key messages to communities to adopt those products, and working with the private sector for the development and marketing of enriched food items. Also, the **INSFEED project** provided important evidence regarding insect nutrition and safety, for human and animal consumption.

Only one project focused on optimizing the use of water (Mozambique Irrigation) while a few other had water management as a secondary result with their primary planned interventions. Many projects were able to focus on climate resilience in the project design by selecting *climate resilient* agricultural products and technologies (e.g., drought-resistant sorghum, use of clean energy for precooked beans, implementation of solar tent dryers and of improved smoking kiln, etc.).

In terms of tracking uptake of research theme practices, the projects could have tracked them better, however, they were able to demonstrate significant uptake; scaled projects were able to reach more people and scale-up within the second phase and some technologies have been taken up widely. In other words, scaled projects were more likely to have seen broadening uptake.In some cases, projects were not able to increase due to prohibitive cost of technologies (Malawi fisheries). Furthermore, CultiAF project results were actively promoted with 326 additional organizations that requested information from the projects, 115 publications (peer-reviewed and non-peer reviewed) and in 67 international and national conferences. Overall, the research is innovative and contributing to some new evidence or evidence that is newly introduced within a country. Overall, there has been some evidence of these projects informing policies and national standards. Various tools and technical approaches have been used to promote CultiAF projects including policy briefs, media-print newspapers, radio programs, take home materials/pamphlets through smallholder farmers, local TV, radio, distribution of improved varieties small seed packs at farmers workshops and fairs, through WhatsApp and Telegram groups.

3. Environmental Risks: Overall, the consideration of the environmental impacts has mostly been positive, with a few slightly negative environmental risks within the projects. The projects put into place strong required environmental safeguards in terms of technology and construction, so environmental risks were very limited and mitigated. Moreover, most projects, by their design, have had positive impact on the environment, either by reducing the consumption of combustibles, reducing or eliminating the use of fuel and/or firewood, reducing waste, limiting the water used, using solar energy and reducing the use of pesticides and insecticides through integrated pest management practices.

4. Gender: It is important to note that all the projects were required to address gender inequalities, involve a gender expert in the project cycle and be inclusive for women and youth within the program. All projects considered gender, some of them addressed it better than others. Most projects strived to have a gender balance in terms of beneficiaries. In contrast with phase 1, CultiAF II has made a visible effort to put gender at the forefront of the program's objectives. This effort materialized mainly through staff training, staff and researcher team's gender composition, involving females in activities when possible, and identifying female 'champions' among beneficiaries. Some other activities were also designed in a way that they would allow women to save time for their family and/or become more financially independent; some designed financial products tailored for women. However, although many activities were implemented and output level results generated, evidence concerning gender transformative, higher-level results and change was not found. The projects were actually not developed to generate this type of transformative changes.

The ***Project-based Women's Empowerment in Agriculture Index (Pro-WEAI)*** is an innovative tool for measuring, evaluating and learning about women's empowerment and inclusion in the agriculture sector. The Pro-WEAI was used in CultiAF as a diagnostic tool to identify when women and men were disempowered in the implementing environment in order to target programming and resources to making the project more inclusive. As an aggregate index, collected from individual-level data collected by interviewing men and women within the same households, the Pro-WEAI shows the degree to which women are empowered in their households and communities and the degree of inequality between women and men within the same household. All projects conducted the Pro-WEAI aside from the Youth Agripreneurs project. Some consortia hired gender consultants, reached to the International Food Policy Research Institute (IFPRI), contracted by CultiAF to support research teams to implement the Pro-WEAI and/or included the Pro-WEAI within their projects baseline with their own organizational expertise. In all cases the

Pro-WEAI was a requirement post project design so implementing the tool required some investment in terms of time and human and financial resources, that partners did not always anticipate so sometimes it was difficult to integrate it in the project. Yet with the data available, it was not possible to assess the progress made by the projects and whether the data actually influenced decision-making.

5. Economic Impact: The CultiAF innovations' economic impacts have limited quantification as of yet, a few projects have concrete data. The Sorghum Ethiopia project measured positive gains with 1 Kg teff 50 BUR compared to 1kg of sorghum= 23 BUR which was à potential gain for consumers and injera makers. In the case of negative gains, the Malawi fisheries project had very high capital requirements that were out of the reach of smallholder farmers and even medium enterprises. Nutrifish did not consider the issue of land ownership, which was a barrier to fishing.

6. Efficiency: Overall, the comments and feedback from the fund recipients were positive about IDRC/ACIAR's governance, management, planning, communication and coordination who managed the fund portfolio. There was consensus from the grant recipients that there were a lot of opportunities for communication and interaction that made the implementation of the program easy. The donors reportedly very effectively communicated with the recipients. However, a few people reported that sometimes there was confusion about who was responsible for what and who they should talk to for particular matters especially with some staff attrition and changes. As fund recipients discussed the governance mechanisms and standard operation procedures (SOPs) for their grant management, there was consensus that the guidance was clear and readily available. However, the management of the projects with co-principal investigators sometimes had issues making sure that jointly they were in compliance with the governance and SOPs. IDRC and ACIAR have a CULTIAF management team that is responsible for day-to-day oversight along with a governance committee that approves the workplan and timeline. Most fund recipients acknowledged that the process and guidance was straight forward for annual work plans and implementation plans and most reported that they were submitted in a timely manner with the exception of delays caused by COVID-19. A few recipients reported issues with the IDRC withholding of 10% of the budget until project activities were completed which presented challenges. One project recipient acknowledged that they had quite a bit of delays with the financial elements and resolving issues with the bank (for the international transfers) that caused a lengthy delay since it wasn't a big priority for the bank—which affected their workplan substantially.

7. Economy (financial management): In terms of the institutional/ reputational risk of fund recipients being managed, IDRC reports on the risks every 6 months and if there are any issues with projects, their managers are contacted immediately. IDRC reported that their support for monitoring risks was time consuming and that there is definitely more capacity development needed in financial accounting and risks with some project recipients. In addition, the short project timeline led to inability to capture impacts. IDRC reportedly managed the finances very well. In terms of feedback from the fund recipients most of the projects did not have any issues aside from challenges with agreeing on budgets and teaming arrangements at the proposal development stage.

Lessons learned from the implementation include: to allow for longer project time frames, integrate gender better from the beginning of the project design; plan ahead of time for scaling-up technology use; focus on the enabling environment including support for policy and guideline development; improve monitoring of outputs and measurement of overall outcomes with clearly defined indicators and reporting requirements and regular peer feedback on data collection; the ability to create dynamic teams with varied expertise across countries was appreciated and

encouraged; funding flexibility was also appreciated to promote innovations and scale-up innovations; fund recipients also appreciated the research themes that were targeted; finally it was recognized that use of certain technologies for agriculture can save significant time for women allowing them to have additional time for caring or feeding practices at home.

Most CultiAF projects have reported that most beneficiaries have benefitted from the introduced technologies. There was mostly only informal data collection to gather the insights and perceptions of end beneficiaries through open-ended discussions and site visits rather than baseline and end line data.

In light of the above findings, accompanying evidence, and conclusions, the ET makes the following recommendations:

4.1 Recommendation 1: Increase Project Cycle Length

There was consensus from all fund recipients that the prescribed duration of projects is too short. The program itself will have lasted six years, but the funded individual projects will have had an average duration of three years. IDRC and ACIAR could consider reducing the number of projects funded and increase each project's budget and duration. CultiAF's staff would spend less time and resources on the selection process and would be able to dedicate more support to the projects themselves. In the context of CultiAF II, it is undeniable that the COVID-19 pandemic affected the projects' ability to scale-up their solutions and to ensure there was uptake among all community members. Nevertheless, even in normal circumstances, projects would mainly benefit from longer project lifecycle.

Linked to the above, it becomes logical to consider the option of continuing the funding of a sample of CultiAF II's projects so that the scaling can continue. Extending the funding and implementation of this sample of projects would mean more time for implementation and hence more chances of scaling the solutions.

Linked to this recommendations, the ET also suggests:

- ***Be ready for Emergencies and Crisis***: In the wake of COVID-19, IDRC/ACIAR thought that it would be best to have a contingency plan for emergencies such as COVID-19 or other shocks, for example aside from extension they could have crisis management strategies in place. Having longer timelines for project implementation would allow for these to take place
- ***More capacity building and training*** in the key areas such as gender, communications, research, and financial reporting.
- ***More Linkages with other IDRD/ACAIR projects:*** Although there were some examples of ongoing coordination, it was suggested to be more interlinked with other IDRC/ACIAR projects- and to link more with the Sustainable Development Goals (SDGs).
- ***Encourage Pre-Teaming Agreements and Better Monitoring:*** It is suggested to have training in and perform pre teaming agreements for consortia, to be able to assess the abilities of the entire team, members' commitment and the monitoring responsibilities.
- ***Institutionalize More Peer Feedback Loops:*** Some of the recipients commented on their need to do more publicity and attend more conferences within the country so people can provide their comments and feedback to stimulate more dialogue and publish more publications. CultiAF II has started this but more needs to be done. Covid-19 did affect the projects' ability to make this more central to the work they did.

4.2Recommendation 2: Improve Project Monitoring and Data Collection to Measure Overall Program Impact

As mentioned above, the ET noticed that the Trackify data was collected and reported in a harmonized manner. For example, some indicators asked for percentages and numbers were reported. In addition, many of the indicators were linked to output level results. More comprehensive and potentially qualitative information should inform the changes that are taking place at higher levels in the results chain. In this context, it is recommended to clearly define indicators, indicator definition and expected baseline and end line data collection in order to report on overall project outcomes and impact. In other words, it is recommended that IDRC and ACIAR develop a clear monitoring framework, with clear guidance on how it needs to be implemented at project level and how the data can and should be "rolled-up" and aggregated, in a logical manner, once it is collected in a harmonized manner.

- Develop a Culti-AF **theory of change** -the program design should be based upon a sound development hypothesis that describes the theory of change, logic, and causal relationships between the building blocks needed to achieve a long-term goal.
- Develop a Culti-AF **results framework** that clearly defines the program goal, strategic objectives, intermediate results and related outcomes[42] and output indicators that align with the research themes. Results frameworks show the causal relationships between the various intermediate results that are critical to achieving the strategic objective. The Results Framework (RF) is a graphical representation of the development hypothesis and includes the Goal, Strategic Objectives (SO), Intermediate Results (IRs) (or Outcomes) and performance indicators (outputs). The effectiveness of these activities can be measured at each step along the way. It is recommended to have about 3-5 outcomes (intermediate results) per strategic objective.

- Develop an indicator definition handbook for the program indicators (can model the U.S. Feed the Future handbook[43])
- Cleary define indicator reporting including reporting roles and responsibilities for project monitoring-this will clearly defined roles and responsibilities for reporting, data collection, data collection forms-contributing to a robust reporting and monitoring system for the program. Examples could include more story telling data that would describe how the use of knowledge and resources is actually changing how the beneficiaries conduct their daily work. At the moment, the data collected in the Trackify database is very quantitative. There actually is space in Trackify form for qualitative data so there would be a need to encourage reporters to add details and stories when sending in the forms.

[42] Outcomes – are the set of short-term or intermediate results at the population level achieved by the program through the implementation of program/project strategies/activities.

[43] "Feed the Future Indicator Handbook Definition Sheets." Guidance. Washington, D.C.: United States Government, Feed the Future Initiative, October 2014. https://feedthefuture.gov/sites/default/files/resource/files/ftf_handbook_indicators_october2014.pdf.

4.3Recommendation 3: Strengthen Focus on Scaling-Up the Adoption and use for Nutrition-Sensitive Agricultural Technologies

Integrate more focus on the scaling-up of the adoption and use of nutrition-sensitive agricultural technologies and clear plans to increase uptake of these technologies. This includes a more robust plan to scale-up technologies with a well-defined timeline to scale-up to see real impacts.

- The process of "scaling up" development interventions can take different forms.
- Scaling can be understood through pathways (actors and their roles), spaces (enabling factors), and drivers (champions and demand)
- Increase the focus on ***time and labor-saving technologies, equipment***, practices and management techniques that increase, protect, improve and preserve nutrient content of food and dietary diversity while increasing yields, farm outputs and total incomes for smallholder farmers.[44]
  - Nutrition-sensitive agriculture technologies decrease agricultural labor and impact the income of farm and non-farm households in rural areas, which in turn impacts food prices, availability and access to different food products for rural and urban consumers.[45] These technologies and practices assist farmers and particularly women with their domestic chores and with their farming and non-farm activities.
  - It is important to remember that technologies that increase agricultural product yields or incomes —but that do not increase *total income* or improve household food consumption or nutritional status are not nutrition-sensitive.[46]
  - Agricultural technical changes can occur pre-production and during production, involving some combination of research and outreach to develop and disseminate the new technology.[47]
- Consider scaling-up ***post-harvest handling management technologies*** including affordable technologies or management practices that improve or maintain nutrients and reduce post-harvest losses.
  - It is important to remember to '**do no harm'** when selecting appropriate nutrition-sensitive technologies as some technologies create spillovers that affect others (e.g., technologies that impose costs on others).
  - This includes market inefficiencies that lower expected profits from agricultural technology adoption.[48]
- **Increase focus on Financial Services for Nutrition-Sensitive Agriculture:** Financial services that are accessible and tailored to meet the needs for smallholder farmers and women and to diversify livelihoods are needed for nutrition-sensitive agriculture.
  - There are three types of finance products offered by the finance service providers: saving, credit, and risk management.[49]

[44] These technologies were adapted from the U.S. Government Feed the Future definitions in the Feed the Future Indicator Handbook. Definition Sheets. June 7, 2011 as well as the Synthesis of Guiding Principles on Agriculture Programming for Nutrition (FAO, February 2013).
[45] From Agriculture to Nutrition: Pathways, Synergies and Outcomes. The International Bank for Reconstruction and Development / The World Bank. 2007. Accessed at: http://siteresources.worldbank.org/INTARD/825826-1111134598204/21608903/January2008Final.pdf
[46] Masset et. al. 2011
[47] An Introduction to Nutrition-Agriculture Linkages. MINAG/DE Research Report 72E. Maputo, Mozambique: Directorate of Economics, Ministry of Agriculture. Chung, K. 2012. Available at: http://fsg.afre.msu.edu/mozambique/WP72Chung.pdf
[48] These include: Externalities, Input and Output Market Inefficiencies, Land Market Inefficiencies, Labor Market Inefficiencies Credit Market Inefficiencies, Risk Market Inefficiencies, Informational Inefficiencies. Source: Market inefficiencies and the adoption of agricultural technologies in developing countries. Agricultural Technology Adoption Initiative. Prepared by B. Kelsey Jack. May 2013. Available at: http://www.atai-research.org/sites/default/files/ATAI%20white%20paper%2020130629.pdf
[49] http://www.ruralfinance.org/fileadmin/templates/rflc/documents/1241106625426_Finance_in_Value_Chain_Analysis.pdf

- Adequate financing options and capacity building in financial literacy, business management skills, food marketing, or marketing linkages facilitation are needed to improve nutrition through the agriculture sector.[50]
- Some financial services that have been implemented for nutrition sensitive agriculture include: asset-backed financing, crop risk insurance, microcredit for nutrition-sensitive agriculture, remittances matching programs for agricultural development, value chain financing and in-kind revolving funds or inventory credit.[51]

4.4Recommendation 4: Strengthen Focus on Gender Equity and the Involvement of Women in Project Activities

More Gender Integration: There was also acknowledgement by donors that there is more need to address gender issues and the involvement of women in project activities in particular. As mentioned above, stronger emphasis on gender has been noticed during CultiAF II compared to CultiAF I. Activities and outputs were evidenced and the Pro-WEAI data has been noted as an important step in ensuring monitoring is gender sensitive. However, more in-depth, strategic gender-oriented planning needs to take place to ensure transformative, intermediate outcome-level results are achieved.

- Gender equality and women's empowerment are crosscutting factors in the linkage between agriculture and nutrition and ALL agricultural interventions should mainstream gender equality and women's empowerment.[52] [53]
- Targeting women and addressing gender equity issues contributes to women's empowerment by increasing women's access to – and control over – income, and enhances their role in decision-making related to household expenditures, in communities and society as a whole.[54]
- Women can be empowered through targeted agricultural interventions, especially ones that focus on 'women's crops' including small-scale horticulture.[55] [56]
- Evidence demonstrates that agricultural interventions associated with improvements in household dietary intake and nutritional status had one of two key characteristics: either women

[50] SOTA recommendations
[51] FANTA, SCN
[52] Can Interventions to Promote Animal Production Ameliorate Undernutrition? American Society for Nutrition. The Journal for Nutriton. Leroy and Frongillo. 2007. Available at: http://jn.nutrition.org/content/137/10/2311.abstract
[53] The Importance of Gender in Linking Agriculture to Sustained Nutritional Outcomes Agriculture and Nutrition Global Learning and Evidence Exchange (AgN-GLEE) Bangkok, Thailand. Hazel Malapit and Shakuntala Haraksingh Thilsted. March 20 , 2013.
[54] The Micronutrient Impact of Multisectoral Programs Focusing on Nutrition: Examples from Conditional Cash Transfer, Microcredit with Education, and Agricultural Programs. Jef L Leroy, Marie Ruel, Ellen Verhofstadt, Deanna Olney., International Food Policy Research Institute (IFPRI).2008. Available at: http://micronutrientforum.org/innocenti/Leroy-et-al-MNF-Indirect-Selected-Review_FINAL.PDF
[55] Improving Nutrition Through Multisectoral Approaches Agriculture and Rural Development. International Bank for Reconstruction and Development/ International Development Association or The World Bank. January 2013. Accessed at: http://search.yahoo.com/r/_ylt=A0oG7lZL2ndRfTcAettXNyoA;_ylu=X3oDMTE1OWVyNmoyBHNlYwNzcgRwb3MDMwRjb2xvA2FjMgR2dGlkA01TWTAwNV8xMTk-/SIG=14q1pi4i9/EXP=1366837963/**http%3a//www.securenutritionplatform.org/Documents/Improving%2520Nutrition%2520through%2520Multisectoral%2520Approaches_full%2520doc.pdf
[56] GAIN IDS Discussion Paper: Nutritious Agriculture by Design: A Tool for Program Planning. Spencer Henson, John Humphrey, Bonnie McClafferty. April 2013. Accessed at: http://www.ids.ac.uk/files/dmfile/GAIN-IDSDiscussionPaper.pdf

played a critical role in the intervention or the interventions included a nutrition education and behavior change component.[57]

- Greater control by women at all stages of the agriculture nutrition pathway will reflect their preferences and priorities more, and potentially lead to their greater control of income to improve household food security and nutrition outcomes.[58] [59]
- **Gender-Sensitive M&E:** Disaggregate all indicators by *Sex and Age Disaggregated Data (SADD)* where relevant
- Gender issues should be addressed in the required Interim Technical reports reporting, with appropriate gender indicators promoted and measured and indicator data disaggregated by sex and, when appropriate, age.
- Resources:
  - Increase Women's Access to Quality Agricultural Inputs
  - Increase Women's Access to Financial Services
- Income:
  - Increase Women's Income and Intra-household Decision-Making Power and Control over Income
- Time:
  - Address Women's Time Constraints/ and time allocation

[57] Can Interventions to Promote Animal Production Ameliorate Undernutrition? American Society for Nutrition. The Journal for Nutriton. Leroy and Frongillo. 2007. Available at: http://jn.nutrition.org/content/137/10/2311.abstract
[58] From Nutrition Plus to Nutrition Driven: How to Realize The Elusive Potential of Agriculture For Nutrition? International Food Policy Research Institute IP.Nevin Scrimshaw International Nutrition Foundation. Lawrence Haddad. April 2013. Available at: http://www.ingentaconnect.com/content/nsinf/fnb/2013/00000034/00000001/art00005
[59] From Agriculture to Nutrition: Pathways, Synergies and Outcomes. The International Bank for Reconstruction and Development / The World Bank. Agriculture And Rural Development Department. 2007. Available at: http://siteresources.worldbank.org/INTARD/825826-1111134598204/21608903/January2008Final.pdf

5 ANNEXES

5.1 Annex 1: Summary of CultiAF-funded Projects

No.	Short Title	Country (s)	CultiAF Research Themes [60]	CAD $	Start Date	End Date
1	**Malawi Fisheries:** Strategies for Scaling Improved Fish Processing Technologies	Malawi	▪ Agribusiness+ ▪ Reducing Post-Harvest Losses ++	CA$ 682,425	October 2018 (Renewed)	March 31, 2021
2	**Fruit Flies Mango** (Alien Invasive Fruit Flies in Southern Africa: Implementation of a Sustainable Integrated Pest Management (IPM) Program to Combat their Menaces)	Zambia, Malawi, Zimbabwe, Mozambique	▪ Reducing Post-Harvest Losses ++	CA$ 2,803,300	April 2019 (New)	Scheduled to close September 2022
3	**INSFEED2** (Insect Feed for Poultry, Fish and Pig Production in Sub-Saharan Africa-Phase 2)	Kenya Uganda	▪ Agribusiness++ ▪ Nutrition+ (livestock)	CA$ 1,495,900	October 2018 (Renewed))	September 2021[61]
4	**Irrigation project in Mozambique**	Mozambique	▪ Resilience to Climate Change++ ▪ Agribusiness +	CA$ 1,797,800	April 2019 (New)	Scheduled to close September 2022
5	**Nutrifish** (Harnessing Dietary Nutrients of Under-utilized Fish and Fish Processing By-Products to Reduce Micronutrient Deficiencies Among Vulnerable Groups in Uganda)	Uganda	▪ Agribusiness+ ▪ Nutrition++ ▪ Reducing Post-Harvest Losses ++	CA$ 2,660,500	April 2019 new)	Scheduled to close September 2022
6	**Picture-based Crop Insurance** (Improving Agricultural Productivity and Resilience with Satellite and Cellphone Imagery to Scale)	Kenya	▪ Resilience to Climate Change++	CA$ 1,695,600	April 2019 (New)	Scheduled to close September 2022
7	**Pre-cooked Beans** (Scale-Up Supply and Utilization of Precooked Beans for Food and Nutrition Security)	Uganda, Kenya	▪ Agribusiness+ ▪ Nutrition++	CA$ 750,000	December 2018 (Renewed)	March 31, 2021
8	**Sorghum** (Climate-Smart Interventions for Smallholder Farmers in Ethiopia)	Ethiopia	▪ Agribusiness+ ▪ Reducing Post-Harvest Losses + ▪ Resilience to Climate Change++	CA$ 2,786,700	April 2019 (New)	Scheduled to close September 2022
9	**Youth Agripreneurs** (Effectiveness of the Metro Agri-Food Living Lab for Gender Inclusive Youth Entrepreneurship Development in Kenya)	Kenya	▪ Agribusiness++	CA$ 741,000	October 2018 (Renewed)	March 31, 2021

++ denotes that theme is overarching focus
+ denotes that project has an objective related to the theme

[60] The program focuses on four key thematic areas: 1. Improved productivity and incomes for farmers and communities and decreased post-harvest losses; 2. Improved gender equity; 3. Nutrition and Human Health; 4. Climate change and sustainable water management.
[61] INSFEED II, was granted a six-month no-cost extension and will end in September 2022.

5.2 Annex 2: Evaluation Work Plan

Table 8: Evaluation Work Plan Timeline

Week of the Tasks	June	July	Au	Sept 13	Sept 20	Sept 27	Oct 4	Oct 11	Oct 18	Oct 25	Nov 1	Nov 8	Nov 15	Nov 22	Nov 29	Dec 06	Dec 13	Dec 20	Dec 27	Jan 3	Jan 10	Jan 17	Jan 24	Jan 31	Feb 7	Feb 14	Feb 21	Feb 28
Inception Phase																												
Inception meeting																												
Preliminary interviews																												
Preliminary literature review																												
Draft inception report (D1)																												
Final inception report (D2)																												
Data Collection and Analysis																												
In-depth literature review																												
Key Informants Interviews																												
Focus Group discussions																												
Online Survey																												
Analysis																												
Reporting																												
Draft evaluation report (D3)																												
IDRC – ACIAR Comments																												
Final evaluation report (D4)																												

5.3 Annex 3: Logical Framework

Logical Framework Model

CultiAF-2's logical framework model is presented in its Performance, Monitoring and Evaluation Strategy.[62] It is articulated around the main goal to **increase gender equitable and sustainable food, income and nutrition security for small holder farmers in Eastern and Southern Africa** and three intermediate outcomes: 1) Increased Knowledge & Resources, 2) Increased Crop, Livestock, Fisheries and Water Use and 3) Gender-Responsive, Environmentally Sustainable & Climate Resilient Public Policies. It also has intermediate outcomes, immediate outcomes, outputs and related activities that ultimately contribute to achieving the high-level goal (ultimate outcome).

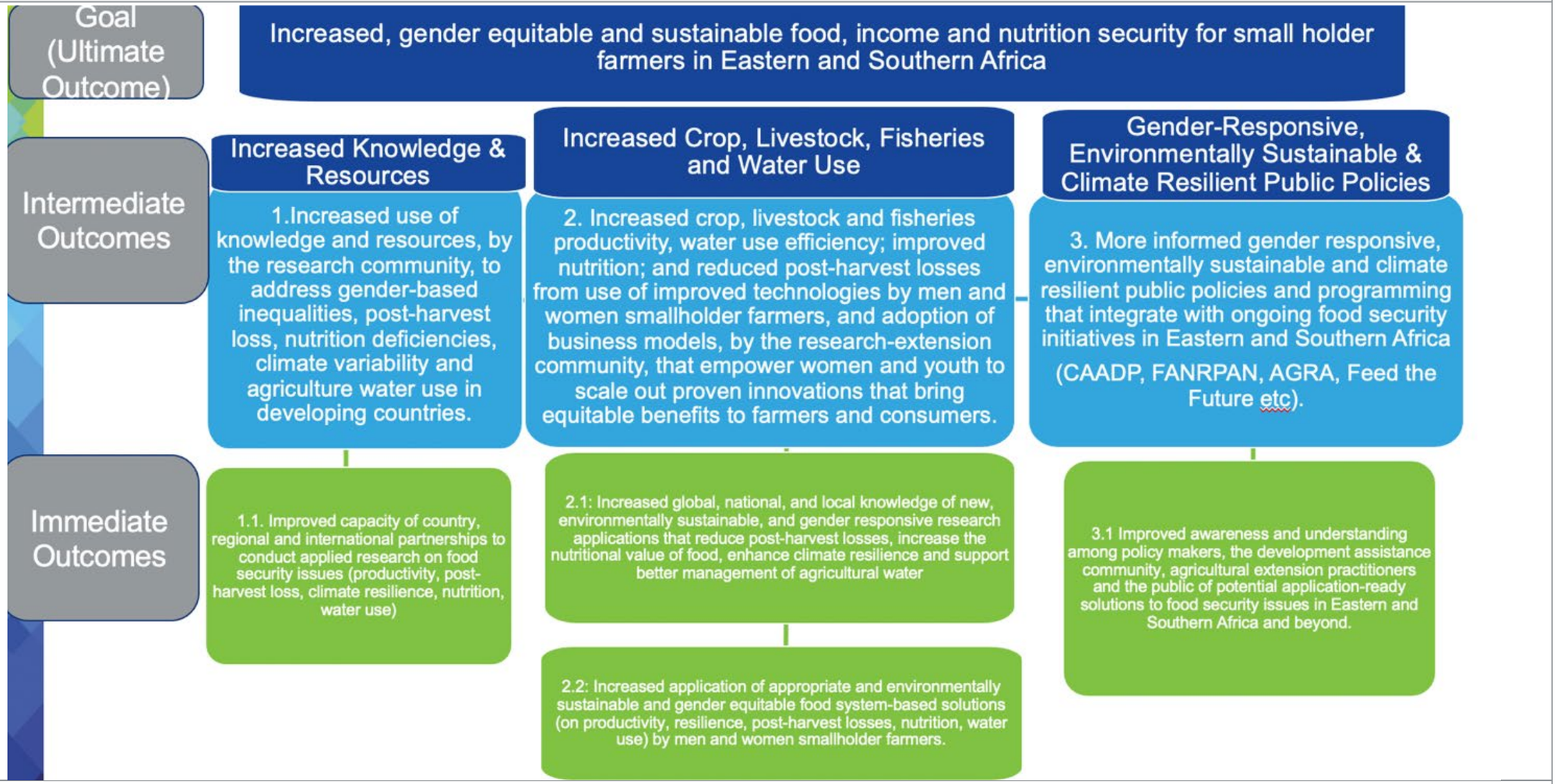
Intermediate outcomes are fed by immediate outcomes, connected with outputs and corresponding activities. Overall, the model is based on the following implementing components which shows the horizontal logic at the output level:

1. Establishment of research partnerships at country regional and international levels;
2. Scientific research, discovery and development, including the testing of solutions and applications in IDRC fields of interest;
3. Extension, adoption, and knowledge sharing, in particular the extending use and scale-up of discoveries, as well as the building of local knowledge (beneficiaries) as a direct results of research activities; adapt food security solutions to local conditions, make research discoveries and application publicly available; to the delivery and application of knowledge in policy and program development to gain scale and contribute to putting food security at the center of the policy agenda.

From the output level, CultiAF-2 moves to the higher-level results presented in Figure 2 below.

[62] "CULTIVATE AFRICA'S FUTURE FUND PHASE II (CULTIAF-2): PERFORMANCE, MONITORING AND EVALUATION STRATEGY." Canada's International Development Research Centre (IDRC) and Australian Centre for International Agriculture Research (ACIAR), June 2019.

Figure 9: CultiAF II Logical Framework Model



Source: Adapted from "CULTIVATE AFRICA'S FUTURE FUND PHASE II (CULTIAF-2): PERFORMANCE, MONITORING AND EVALUATION STRATEGY." Canada's International Development Research Centre (IDRC) and Australian Centre for International Agriculture Research (ACIAR), June 2019.

Performance Measurement Framework (PMF)

CultiAF-2's PMF is the main tool used by IDRC and ACIAR to collect and track data/results on the program's overall progress towards indicator associated targets. Each intermediate outcome is supported by immediate outcomes and corresponding indicators, with their baselines and subsequent targets. These indicators also specify the data collection methods used to gather the information and the frequency and responsibility of collection.
The PMF, based on the logical framework model, contains four levels:

1. **One Goal: Ultimate Outcomes** (long-term): Increased, gender equitable and sustainable food, income and nutrition security for small holder farmers in Eastern and Southern Africa
2. **Three Intermediate Outcomes** (medium-term) with nine-related indicators that are to be informed first mid-way into the project and which related to the uptake and acceptance of research results and applications in the development and broader research communities.
3. **Four Immediate Outcomes** *(short-term) with* twelve relevant indicators generated directly from individual project and project monitoring reports to gauge the short-term success of CultiAF. Individual projects' monitoring data are collected through IDRC digital monitoring system *Trackify* and compiled at the aggregate level by IDRC.
4. **Ten Outputs** with 25 relevant output indicators, also informed by individual projects.

The full PMF is presented in Annex 5 of the present IR. The effectiveness of CultiAF-2 will be assessed using the data available for the PMF's indicators.

5.4 Annex 4: Research Evaluation Questions and Evaluation Matrix

Table 9: Research Evaluation Questions

No.	Criteria & Research Evaluation Questions
1. Relevance: How relevant is CultiAF programming with the mandates of its funders (International Development Research Centre (IDRC) and Australian Centre for International Agricultural Research (ACIAR)? How relevant is CultiAF programming in terms of food & nutrition security priorities in the Eastern and Southern Africa countries that the program targets?	
1.1	How does CultiAF align with priority areas of both ACIAR and IDRC, including priority geographic regions (i.e., ESA), and to the Government of Canada and Australian government official [overseas] development assistance (ODA) priorities?
1.2	To what extent do the program and projects respond to the urgent food and nutrition security needs for ESA?
1.3	What are examples of potential high impact solutions for food and nutrition security as a result of CultiAF-funded projects?
2. Effectiveness: How effectively are the CultiAF program and the projects it supports addressing food and nutrition security priorities to reach expected outcomes?	
2.1	How is the research funded under CultiAF showing potential for increasing productivity, reducing food loss, improving nutrition, optimizing use of water for agriculture, and building climate resilience in the geographic areas covered by the program?"
2.2	How are the funded research projects increasing uptake of practices in line with key research theme practices? Among small farmers in the geographic areas covered by CultiAF?
2.3	What CultiAF-funded projects show the potential for large-scale impacts on food security, in terms of magnitude, equity and variety of impacts?
2.4	To what extent have CultiAF-developed results and solutions been actively promoted within the East and Southern Africa region, informed policies in these countries and informed the IDRC and ACIAR programming priorities?
2.5	How and how effectively have the knowledge, tools, and technical approaches developed through CultiAF been scaled-up and made available to smallholder farmers and relevant actors in developing countries?
2.6	Is the targeted research innovative and contributing to new evidence for agriculture productivity and food and nutrition security interventions?
3. Environmental Risks: What consideration has been given to the potential environmental impacts, both positive and negative, of the projects supported through CultiAF?	
4. Gender: How effectively has the funded research recognized and addressed gender issues	
4.1	To what extent did the use of the Pro-WEAI (Women's Empowerment in Agriculture Index) tool lead to women empowerment outcomes?

Table 9: Research Evaluation Questions

No.	Criteria & Research Evaluation Questions
	5. Economic Impact: What have been the potential positive or negative economic impacts[63] of the CultiAF innovations? Can they be quantified? **6. Efficiency:** How efficient and appropriate has the CultiAF-2 program model—including the governance, management, planning and implementation – been in supporting CultiAF objectives?
6.1	How effective and efficient has communication and coordination between ACIAR and IDRC and with project implementers (Fund recipients) been?
6.2	To what extent have governance mechanisms and standard operating procedures been properly established and are they operating effectively?
6.3	Have the annual workplans and the overall CultiAF implementation plan been properly developed, and have the workplans been implemented/achieved in a timely fashion?
6.5	What lessons can be borrowed from the CultiAF program to inform IDRC and ACIAR on building and maintaining funding partnerships?
6.6	What is the perception of the end beneficiaries (particularly women smallholder farmers) about the benefits of the new nutrition-sensitive and climate-resilient practices and technologies available to them through these projects?
6.7	Are the research coordination and research management adequate and of high quality?
	7. Economy (financial management): How effectively is the institutional/ reputational risk of fund recipients being managed? To what extent were research partner activities funded equitably and finances managed in a coordinated way among partners? **8. Strategic Recommendations:** How can CultiAF improve its overall performance for the remaining implementation time of the program? What are the most important program adjustments that can be made to improve future implementation?

Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
1. Relevance			

[63] Economic impacts are measured through impact evaluation methodologies. The present evaluation does not apply an impact evaluation methodology and focuses on many other aspects of the program and its projects, such as relevance, effectiveness, efficiency and many others.

	Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
1.	How relevant is CultiAF programming with the mandates of its funders (**International Development Research Centre (IDRC)** and **Australian Centre for International Agricultural Research (ACIAR)?** How relevant is CultiAF programming in terms of food & nutrition security priorities in the Eastern and Southern Africa countries that the program targets?			
1.1	How does CultiAF align with **priority areas of both ACIAR and IDRC, and to the** Government of Canada and Australian government official [overseas] development assistance (ODA) priorities?	- Level of alignment between the overall objective and budget allocations across IDRC and ACIAR's portfolio -Correlation between the program objectives and Government of Canada and Australian government official [overseas] development assistance (ODA) priorities	IDRC KII	
1.2	To what extent do the program and projects respond to the urgent food and nutrition	-Alignment of program and individual projects' objective and content with targeted countries' policies, and priorities in terms of food & nutrition security priorities and changing needs - Examples of conflicting needs and priorities - Proof of participatory approach to designing CultiAF	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs Relevant food & nutrition security strategic targeted countries' national documents	Thematic analysis of qualitative and quantitative data using pre-determined and emerging sub themes and categories;

	Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
	security needs for ESA?		All CultiAF-2 research related documentation CultiAF Strategic and Programmatic Documents Specific project documents Project Reports Technical Documents Meeting Notes and presentations Online Survey FGD with research users/beneficiaries	
1.3	What are examples of **potential high impact solutions for food and nutrition security** as a result of CultiAF-funded projects?	- Standalone question - Assessment and analysis of impacts, also in terms of equity; - Example of negative impacts and mitigation measures; List, aggregation and analysis of examples.	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs All CultiAF-2 research related documentation CultiAF Strategic and Programmatic Documents Specific project documents Project Reports Technical Documents Meeting Notes and presentations Online Survey	Thematic analysis of qualitative and quantitative data using pre-determined and emerging sub themes and categories;
2. Effectiveness				
2	How **effectively** are the CultiAF program and the projects it supports **addressing food and nutrition security priorities** to reach expected outcomes?			
2.1	Have funded projects **adequately covered**	- Alignment between CultiAF-2 project portfolio and program's objectives and range of	IDRC KII ACIAR KII	Thematic analysis of qualitative and quantitative data using

	Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
	the range of research themes within the areas targeted by CultiAF (e.g., increasing productivity and incomes, managing post-harvest loss, nutrition, climate resilience, and agricultural water use)?	research themes within the areas targeted by CultiAF	Country researchers KIIs Country researchers FGDs All CultiAF-2 research related documentation CultiAF Strategic and Programmatic Documents Specific project documents Project Reports Technical Documents Meeting Notes and presentations	pre-determined and emerging sub themes and categories; triangulate from qualitative and quantitative sources
2.2	How are the funded research projects increasing uptake of practices in line with key research theme practices? among small farmers in the geographic areas covered by CultiAF?	- % of planned outputs achieved - Evidence of contribution towards the three intermediate outcome - Observed changes in how small farmers are working - Congruence between these changes and the key research theme in the country Limitations/constraints of CultiAF-2 approach for the achievement of results - Examples of unexpected positive and/or negative results generated by the project - Stakeholder perspective and beneficiary level of satisfaction (Extent of which stakeholders think that the development intervention achieves the expected outcomes) -	IDRC KII ACIAR KII Country researchers KIIs Country researchers, end-beneficiaries FGDs All CultiAF-2 research related documentation CultiAF Strategic and Programmatic Documents Specific project documents Project Reports Technical Documents Meeting Notes and presentations FGD with research users Online survey	Thematic analysis of qualitative and quantitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative and quantitative sources
2.3	What CultiAF-funded innovations have the **potential for large-scale impacts on food security**?	- Standalone question. - Portfolio analysis linked to other effectiveness and impact related questions in the matrix to generate list of projects with most potential - Opinions of all involved stakeholders regarding positive and negative, short-term and long-term impact, with a particular enfaiss on the impact on gender equity	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs Relevant targeted countries' national food security policies All CultiAF-2 research related documentation	Thematic analysis of qualitative and quantitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative and quantitative sources

	Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
			CultiAF Strategic and Programmatic Documents Specific project documents Project Reports Technical Documents Meeting Notes and presentations Online Survey	
2.4	To what extent have **CultiAF-funded project evidence-based results and solution**s been actively **scaled-up and further promoted** within the East and Southern Africa region, as well as informed policies in these countries? and informed the IDRC and ACIAR programming priorities? (Including policy makers and the development assistance community)	- Evidence of follow-up research activities within the targeted countries linked to the CultiAF-funded project evidence-based results and solutions during and after the projects - Number of research publications the targeted countries linked to the CultiAF-funded project evidence-based results and solutions during and after the projects - Opinion of involved researchers	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs Relevant policies All CultiAF-2 research related documentation CultiAF Strategic and Programmatic Documents Specific project documents Project Reports Technical Documents Meeting Notes and presentations	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative and quantitative sources
2.5	How and how effectively have the **knowledge, tools, and technical approaches** developed through CultiAF been **scaled-up** and made available to **smallholder farmers** and relevant	- Adequacy of CultiAF-2 and portfolio projects' communication and dissemination tools with each type of smallholder farmers and relevant actors in developing countries - Quality knowledge, tools, and technical approaches - Perception of relevant smallholder farmers and relevant actors in targeted countries	IDRC KII ACIAR KII Country researchers KIIs Country researchers, Research beneficiaries FGDs All CultiAF-2 research related documentation CultiAF Strategic and Programmatic Documents Specific project documents Project Reports	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative and quantitative sources

	Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
	actors in developing countries?		Technical Documents Meeting Notes and presentations Online Survey	
2.6	Is the **targeted research innovative** and **contributing to new evidence** for agriculture productivity and food and nutrition security interventions?	- Data from logical framework and project reports related to agriculture increased productivity, food and nutrition security due to new evidence produced by project's research; policies influenced by evidence produced during research projects; - Perceptions and levels of satisfaction of all researchers regarding the new evidence produced, innovativeness; -	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs Specific project documents, Project Reports, Technical Documents, CultiAF Strategic and Programmatic Documents	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative and quantitative sources
3. Environmental Risks				
3.	What consideration has been given to the potential **environmental impacts,** both positive and negative, of the projects supported through CultiAF?	- Evidence that CultiAF-2 supported projects integrate environmental considerations (avoiding negative impacts of project activities and promoting positive results for the environment within the projects' design and activities - Examples of environmental results within the projects - Number of application-ready environmentally sustainable practices, technologies, and methodologies for improved food security based on field research developed - Opinion of relevant stakeholders	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs CultiAF-2 environmental guidelines Online survey	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative and quantitative sources
4. Gender				
4.	How effectively has the funded research recognized and	- All indicators of the log frame/M&E system that have a gender component; - Example of projects that have work particularly to address gender issues	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from

	Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
	addressed **gender issues**?	- Main achievement regarding fender equality;	Gender Focal Points KIIs CultiAF Strategic and Programmatic Documents Specific project documents Project Reports Technical Documents Meeting Notes and presentations)	qualitative and quantitative sources
4.1	To what extent did the use of the **Pro-WEAI (Women's Empowerment in Agriculture Index)** tool lead to women empowerment outcomes?	- Number of projects using the Pro-WEAI tool or its prototype to track gender outcomes. - Coherence betweenPro-WEAI tool and other gender-related results assessed above. -Opinion, perception and level of satisfaction of Pro-WEAI users	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs Pro-WEAI related documentation (to be provided) Online Survey	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative and quantitative sources
5. Economic Impact				
5.	What have been the potential **positive or negative economic impacts** of the CultiAF innovations? Can they be quantified?	- Data from logical framework and project report such as: increased production and productivity; change in income, efficiency, reduction of post-harvest losses, etc; - Opinions of stakeholders regarding the economic impact and its quantification; - Perception of research users regarding the economic impact of CultiAF innovations;	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs CultiAF Strategic and Programmatic Documents Specific project documents Project Reports Technical Documents Beneficiaries KII	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative sources.
6. Efficiency				
6.	How effective and efficient has communication and			

	Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
	coordination between ACIAR and IDRC and with project implementers (Fund recipients) been?			
6.1	How effective and efficient has **communication and coordination** between ACIAR and IDRC and with project implementers (Fund recipients) been?	- Evidence of internal quality systems (communications, MEL, processes, finance, tools, and other key mechanisms, etc.) - Indicators of the logical framework related to partnerships, internal communication, knowledge sharing, participation; - Existence and use of communication plans and strategies - Perception regarding the effectiveness and efficiency of communication and coordination between CultiAF and the implementers;	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs CultiAF Strategic and Programmatic Documents Specific project documents Project Reports CultiAF-2 Communication strategy Online Survey	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories.
6.2	To what extent have **governance mechanisms and standard operating procedures** been properly established and are they operating effectively?	- Perception regarding the existence and usefulness of standards opeating governance, guidelines and programming-oriented communication products produced and disseminated - Level of satisfaction regarding program delivery functions (governance)	IDRC KII ACIAR KII Country researchers KIIs Program's staff Country researchers FGDs CultiAF Strategic and Programmatic Documents SOPs	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories.

	Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
6.3	Has the **annual workplans** and the overall CultiAF **implementation plan** been properly developed, timely, and have the workplans been implemented/achieved?	- Evidence annual workplans and implementation plans have been developed in a participatory manner - Ratio of activities planned vs conducted - Level of satisfaction of all respondents concerning the design's participatory process and timeliness of the program and projects' implementation and activities. Actions taken to mitigate time constraints	IDRC KII ACIAR KII Country researchers KIIs Country researchers, end-beneficiaries FGDs Specific project documents Project Reports	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories.
6.4	What **lessons can be borrowed from the CultiAF program** to inform IDRC and ACIAR on building and maintaining funding partnerships?	- Standalone question - Opinion of all research related respondents on lessons	IDRC KII ACIAR KII CultiAF Strategic and Programmatic Documents Specific project documents Project Reports	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative and quantitative sources
6.5	What is the perception of the end beneficiaries (particularly women and youth smallholder farmers) about the benefits of the new nutrition-sensitive and climate-resilient practices and technologies available to them through these projects?	- Perception standalone question	FGD with end-beneficiaries	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative and quantitative sources
6.7	Are the **research coordination and research management**	- Data from logical framework and project reports regarding partnership formed around research projects;	IDRC KII ACIAR KII Country researchers KIIs Country researchers FGDs	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from

	Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
	adequate and of **high quality**?	- Perception of researchers and other partners regarding the quality of the coordination; - Proportion of partners expressing a high level of satisfaction and usefulness in their partnership to implement and disseminate research results by the end of their project. - -	Online Survey	qualitative and quantitative sources
7. Economy (financial management)				
7.	How effectively is the institutional/ reputational risk of fund recipients being managed? To what extent were research partner activities funded equitably and finances managed in a coordinated way among partners?	- % of total and project level budgets spent - Evidence risk assessments/ due diligence processes were conducted Proportion of partners expressing a high level of satisfaction and usefulness in their partnership to implement and disseminate research results by the end of their project. - Quality of financial management institutional set-up	IDRC KII ACIAR KII Country Program Managers KII Risk management plan, due diligence (to be provided) Progress reports Program and project levels financial documentation (some to be provided)	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from qualitative sources.
8. Strategic Recommendations				
8.	How can CultiAF **improve its overall performance** for the remaining	Standalone questions (evaluation's overall recommendations)	All respondents through KIIs and FGDs All relevant documentation (Specific project documents, Project	Thematic analysis of qualitative data using pre-determined and emerging sub themes and categories; triangulate from

Questions and Sub-Questions	Indicators	Data Collection Methods and Respondents	Data Analysis Method
implementation time of the program? What are the most important program adjustments that can be made to improve future implementation?		Reports, CultiAF Strategic and Programmatic Documents)	qualitative and quantitative sources.

5.5 Annex 5: Reconstructed Theory of Change (TOC)

The (re)construction of the program's Theory of Change (TOC) helps the evaluation team (ET) identify and assess the extent to which conditions conducive to the changes sought by CultiAF II in partner countries are fostered by the program and its individual research projects. It also provides a framework to do a comparative analysis of the different country projects. There is no Theory of Change (TOC) available for the overview of the research program implementation but based on both the targeted research questions and the CultiAF-II Performance, Monitoring and Evaluation Strategy[64] (see 2.2.1 above and Annex 5 below) and the understanding gained during interactions with stakeholders and through a review of literature, the ET proposes the following TOC. This will be reviewed considering findings from the evaluation and revised consultatively with all stakeholders to propose a revised version of the TOC in the final evaluation report, for consideration by program management.

A starting point that guided the drafting of this TOC was the key evaluation questions and the "Consolidated Framework for Implementation Research".[65] This model presents the main conceptual framework for the implementation of research and provides a menu of factors that have been associated with effective implementation. It reflects the state-of-the-science at the time of its development in 2009; including constructs from, for example, Everett Rogers' Diffusion of Innovations Theory[66]. As per the Logical framework model, the overall CultiAF-2 progress and results will be measured as a function of its overall impact—to increased food, income and nutrition security for smallholder farmers in Eastern and Southern Africa (that is gender-equitable and sustainable) and the corresponding intermediate results/outcomes including:

- **1. Increased use of knowledge and resources**, by the research community, to address gender-based inequalities, post-harvest loss, nutrition deficiencies, climate variability and agriculture water use.
- **2. Increased crop, livestock and fisheries productivity, water use efficiency; improved nutrition; and reduced post-harvest losses**
- **3. More gender responsive, environmentally sustainable and climate resilient-informed public policies and programming**

In addition to the main intermediate results/outcomes, the TOC will ensure to focus on the cross-cutting thematic areas of the CultiAF research themes: 1) agribusiness/ agricultural water use; 2) increased agricultural production and incomes; 3) nutrition; 4) management of post-harvest losses and 5) climate change resilience. Cross-cutting research theme issues are gender equality and equity and environmental. Therefore, the main purpose of CultiAF-2 is to conduct/implement research, test it through the piloting of solutions/innovations, and share results with a variety of stakeholders, with the expected indirect impact that the wider adoption of those solutions through subsequent research implementation and policy uptake will contribute to the overall impact as well as the main goals of the CultiAF global program to:

- To inform country policies and programming priorities
- To build & maintain funding relationships
- To influence large-scale impacts on research theme areas
- To improve overall CultiAF program performance.

In order to achieve the impact, intermediate outcomes (results) and the main goals of the CultiAF global program, an enabling environment at both the global level with the key donors (IDRC and ACIAR) through research selection, budget, technical support, and monitoring and evaluation is necessary, In addition, the enabling environment at the country level is also important including with the -implementing consortia partners including Universities and Research Centers; the Partners from civil Society (NGO, private sector, academia) and Governments as well as the direct beneficiaries—the Individuals (smallholder farmers, women, relevant actors), households and communities. Figure 3 outlines the proposed provisional TOC conceptual framework. The TOC presented below is based on the information collected from projects and program's documents, the program's logic model, its PMF, monitoring strategy as well as overall risks and assumptions made by the ET based on initial meetings and document review. The causal pathway of this TOC implies that implementation research components such as the CultiAF-2 program model have clearly defined the research questions with potential users, a network of researchers and key research users, clear governance, standard operational procedures (SOPs), management, planning and implementation, identification of thematic areas of research and the identification of innovation/high impact solutions results

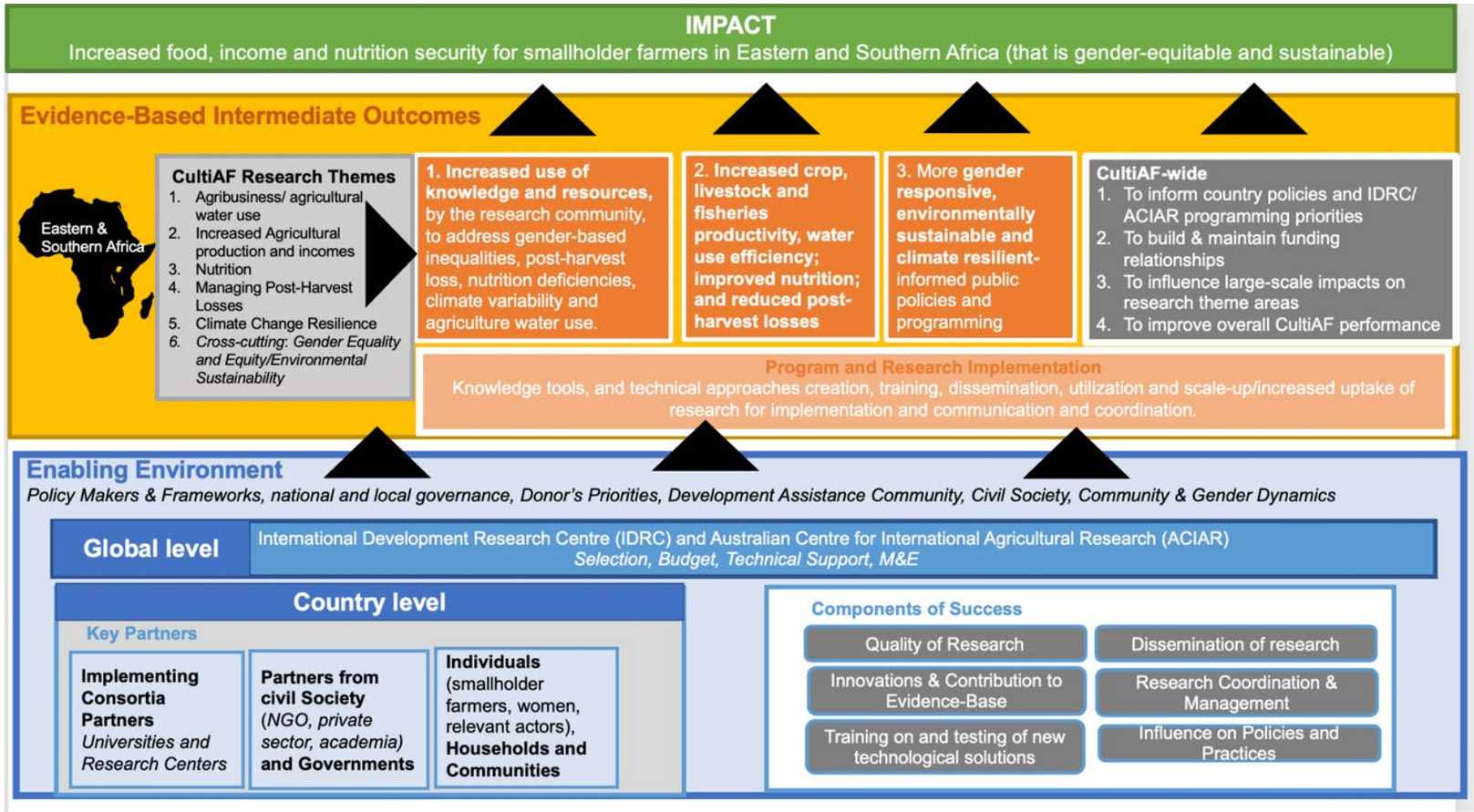
[64] "Cultivate Africa's Future Fund Phase II (CultiAF-2): Performance, Monitoring and Evaluation Strategy." Canada's International Development Research Centre (IDRC) and Australian Centre for International Agriculture Research (ACIAR), June 2019.
[65] "The Consolidated Framework for Implementation Research – Technical Assistance for Users of the CFIR Framework." Accessed July 27, 2021. https://cfirguide.org/.
[66] MOSELEY, STEPHEN F. "Everett Rogers' Diffusion of Innovations Theory: Its Utility and Value in Public Health." Journal of Health Communication 9, no. sup1 (January 1, 2004): 149–51. https://doi.org/10.1080/10810730490271601.

The assumptions which this TOC rests on, which will be assessed as part of the evaluation, are:

- **Research and Program Quality:**
  - The research is of quality and is well disseminated among key stakeholders.
  - The quality of the research and its identification and implementation process lead to an increase in the uptake of research use and dissemination.
- **Efficient Coordination, Management and Governance:** Strong research coordination and management will result in widely disseminated research and contributions to the evidence base.
- **Contribution to the Evidence-Base:**
  - An increase in innovations and contributions to the evidence base will improve CultiAF research thematic areas of implementation and program quality.

A strengthened evidence-base and the quality of research in the thematic areas will result in stronger influence on country and regional programming and policies.

Figure 10: Draft CultiAF-II Theory of Change



5.6 Annex 6: List of Key Informant Interview Participants

Table 10: List of Key Informant Individuals Interviewed

Organization	Stakeholder Name	Position	Gender	Country of Durty
IDRC	De Plaen Renaud	Senior Program Specialist Former Program Leader	M	Canada
IDRC	Lubega Ampaire Edidah	Senior Program Specialist Former Program Manager - CultiAF	F	Kenya
IDRC	Rurii Mercy	Programme Officer Program Manager	F	Kenya
IDRC	Waiyaki Janet	Program Management Officer - Support	F	Kenya
IDRC	Wesley Annie	Senior Program Specialist - Nutrition Responsible Officer project #109041 Nutrifish. Program specialist	F	Canada
IDRC	Gagnon Sandra	Senior Program Officer Responsible Officer project #109040 Fruit Flies IPM	F	Canada
IDRC	Hayle Price-Kelly	IDRC Evaluation rep	F	
ACIAR	Okello Anna	CultiAF program Management	F	
ACIAR	Biddle Julianne	Multilateral engagement	F	
ACIAR	Andrew Campbell	ACIAR CEO for high level governance issues	M	
ACIAR	Ndungu Leah	Partnerships with African countries	F	
ACIAR	Osanor Kennedy	Partnerships with African countries	M	

ACIAR	Cape Patrick/ Emmie Wachira	Outreach and Communications	M	
IDRC	Charron Dominique	Vice-President, Program and Partnership GC co-chair	M	Canada
IDRC	Toure Kathryn	Director, Regional Office for Sub-Saharan Africa GC Member	F	Kenya
IDRC	Alba Corral Santiago	Director, Climate-Resilient Food Systems GC Member	M	Canada

Ethiopia Sorghum.

Last Name	**First Name**	**Type of Stakeholder**	**Organization**	**Function**
Minday	**Taye**	**Project Leader**	**Ethiopian Institute of Agricultural Research (EIAR)**	**Project iniator and manage the overall project activties**
Sime	Mekonnen	Coordinator	EIAR	Coordinate the project team mebers and undertake socio economic research activties
Borrell	Andrew	Third-party organization	University of Queensland	Coordinator of the project from the Australian Side
Mace	Emma	Third-party organization	University of Queensland	Project team meber
Jordan	David	Third-party organization	University of Queensland	Project team meber
Abere	Eyeberu	Representatives of other project	Amhara Regional Agricultural	Coordinate the project in the region

		implementing institutions	Research Institution (ARARI)	
Alemu	Abrha	Representatives of other project implementing institutions	Amhara Regional Agricultural Research Institution (ARARI)	Coordinate agronomic research
Tadesse	Fekadu	Representatives of other project implementing institutions	Oromia Regional Agricultural Research Institution (ORARI)	Coordinate agronomic research
Abebe	Eyasu	Representatives of other project implementing institutions	Tigray Regional Agricultural Research Institution (ARARI)	Coordinate the project in the region
Woldegerima		Representatives of other project implementing institutions	Tigray Regional Agricultural Research Institution (ARARI)	Coordinate agronomic research
Bogale	Meron		NARO	Assistance for TE phenotyping EIAR Undertake TE phenotyping Ethiopia

Uganda, Nutrifish

Last Name	**First Name**	**Type of Stakeholder**	**Organization**	**Function**
Efitre	Jackson	Project Leader (Principal Investigator)	Makerere University	Senior Lecturer
Nkalubo	Winnie	Principal Investigator	National Fisheries Resources Research Institute/NARO	Director

Nsega	Monic	Project Administrator	National Agricultural Research Organization (NARO)	Project Administration
Nsibirano	Ruth	**Gender Specialist**	Makerere University	Senior Lecturer
Galiwango	Samuel	Directorate of Coordination , Monitoring and Evaluation,	Office of the Prime Minister (OPM)	Senior Ecomonist
Ikwaput-Nyeko	Joyce	Ministry of Agriculture, Animal Indusrty and Fisheries	Directorate of Fisheries Resources	Acting Director
Bakunda	Aventino	Fisheries Manager	Directorate of Fisheries Resources	Policy and Management
Yawe	John	National Agricultural Research Laboratories/Organization	Agricultural Engineering & Appropriate Technology Research Institute	Research Oficcer
Akello	Polly	Buliisa District	Wanseko landing site	Fisheries officer
Kayiira	John Cosmas	Masaka District	Lambu landing site	Fisheries officer
Oloya	Michael	Pakwach District (DFO)	Pakwach local government	District Fisheries Office
Otunga	Anthony	DFO	Amolatar DLG	Fisheries Management
Katiti	Ovia		Uganda Fish Processors and Exporters Association (UFPEA)	Chief Executive Officer
Kobusingye	Lovin		Uganda National Women Fish Organization (UNFWO)	Chairperson
Neville	Keith		Arrow Aquaculture Africa (AAA)	Director
6 processors and fishers		FGDs		

Kenya, Malawi, Mozambique, Zambia, Zimbabwe: Fruit Flies

Last Name	First Name	Type of Stakeholder	Organization	Function
Mohamed	Samira	Project leader	International Centre of Insect Physiology and Ecology	Principal investigator and coordinator
Ndlela	Shepard	Key researchers (international)	International Centre of Insect Physiology and Ecology	Project manager
Kidoido	Michael	Key researchers (international)	International Centre of Insect Physiology and Ecology	Monitoring , Evaluation and learning specilaist
Makumbe	Louisa	Key researchers (in-country)	Plant Quarantine Services Institute	in-country cordinator
Nthenga	Isaiah	Key researchers (international/in-country)	Zambia Agricultural Research Institute	in-country cordinator
Kachigamba	Donald	Key researchers (international/in-country)	Department of Agricultural Research Services (DARS)	in-country cordinator
Bota	Luis	Project's staff_technical support	Ministry of Agriculture and Rural Development	project technical assistant
Kirscht	Holger	Gender Specialist	International Centre of Insect Physiology and Ecology	Gender Specialist
Lucio Pedro	Almeida	Community leader Manica		Growers Mobilization
	Chiputu	Chiputu Village Head		Community mobilization and encouragement
	Nyalubwe	Nyalubwe Village Head		Community mobilization and encouragement
Mbuzi	Zelipa	National Authorities' representatives	Department of Agriculture	Agriculture Assistant
Lungu	Rosemary	Community Leaders		Growers Mobilization
Dube	Margaret	Technical Staff	Department of Agricultural Extension	District Agricultural Extension Officer

Kenya, Rwanda, Uganda, Pre-cooked beans.

Last Name	First Name	Type of Stakeholder	Organization	Function

Karanja	David	Project Leader	Kenya Agricultural & Livestock Research Organization (KALRO)	National Coordinator Grain Legume
Ugen	Micha el	Project Leader (Key Researcher)	National Agricultural Research Organization (NARO)	Director
Ouma	Joab	Private Sector's representatives (Processor)	Lasting solution	CEO (Lasting Solution)
Nanyonj o	Grace	Key researchers (international/in-country)	National Agricultural Research Organization (NARO)	Gender
Mugagg a	Joseph Isaac	Key researchers (international/in-country)	National Agricultural Research Organization (NARO)	Gender/ Seed systems
Fungo	Robert		CIAT	Nutritionist

Kenya, Youth Agripreneurs

Last Name	**First Name**	**Key researchers (international/in-country)**	**Organization**	**Function**
Wambala ba	Franci s	Principle Investigator	United States International University - Africa	Development Economics
Njuguna	Amos	Financing Model Development and Funder Recruitment Coordinator	United States International University - Africa	Finance and Project Management
Asena	Salom e	Project Manager and Logistics	United States International University - Africa	Project Management in Natural Sciences
Ogada	James	Monitoring, Evalulation and Experimental Research	Monitoring, Evalulation and Experimental Research	Behavioral Research Design
Bett	Eric	Member of County Assembly	County of Kericho	Member of County Assembly
Veyrl	Adell		Signifide Group International	External Gender Consultant
7 youth FGD				

Malawi, Malawi Fisheries

Last Name	**First Name**	**Type of Stakeholder**	**Organization**	**Function**
Chiwaula	Levison	Project Leader	University of Malawi	Associate Professor of Economics

Ngochera	Maxon	Key Researchers (in-country)	Fisheries Research Unit	Officer In Charge
Simbeye	Jupiter	Key Researcher (in-country)	University of Malawi	Lecturer
Banda	James	Key Researcher (in-country)	Fisheries Research Unit	Research Officer
Masangano	Joshua	Banker	FDH	Account manager
Namkwenya	Bonface	Third-party organization	WorldFish Center	Research Analyst
Zaipa	Lazarous	Project's staff (incl. technical support)	University of Malawi	Assistant Finance Officer

5.7 Annex 7: Evaluator Profiles

Alexandre Daoust

Alexandre Daoust (Bachelor of Arts, Economics and Politics; Master of Arts, International Economic Development) has more than 10 years of evaluation experience as a consultant at Baastel. He is a certified specialist with the Canadian Society for Evaluation in Evaluation and Results-Based Management. His main areas of expertise are socio-economic development and the sustainable economy of agriculture (climate change resilient) as well as the promotion of different value chains. He also works on mandates related to food security, child protection and education. His specific skills are related to the participatory evaluation of projects, programmes and institutions; development of monitoring/assessment systems, as well as strategic planning.

An overview of Mr. Daoust's recent mandates demonstrates his unique capabilities in managing complex and multidimensional program and project evaluations. The organizations and institutions with which he has recently collaborated include: Global Affairs Canada, FAO, WFP, UNDP, UNCTAD, the International Trade Centre, the European Commission, Oxfam-Québec, the IDB and the US Department of State. He holds a secret Canadian reliability rating and basic and advanced UN security certificates.

Ms. Noreen Mucha, M.P.A. has over 18 years of experience working in international development, primarily focusing in the public health sector but also within the agriculture and education sectors. Her experience includes working with multiple donors, United Nations, host country governments, international non-governmental organizations, think-tanks, U.S. military, research institutions and universities. Technical areas of expertise include: nutrition (both specific and sensitive) to reduce stunting and acute malnutrition, infectious disease including HIV and AIDS, malaria and Tuberculosis as well as orphans and vulnerable children programming. Noreen is currently on a team as qualitative researcher for the UNICEF/Cambodia country-led process evaluation of the cash transfer programme for pregnant women and children. In 2017-18, Noreen was the Team Leader for nutrition for the design of the baseline household survey and impact evaluation for Laos' USAID-funded integrated nutrition and WASH stunting reduction program "NURTURE". In addition to designing the population-based survey she also led the training of trainers for 70 enumerators to conduct the household survey in the Southern provinces of Laos including measurement of Women's-Minimum Dietary Diversity (W-MDD), children's minimum acceptable diet (MAD) the core IYCF and Joint Monitoring Program WASH indicators. Noreen has participated as Nutrition lead expert in a number of USDA nutrition school feeding evaluations including for USDA baseline evaluation for McGovern-Dole International Food for Education and Child Nutrition for Cameroon (2017), midterm evaluation (2021), USDA baseline evaluation for Food for Education (FFE) II for Benin (2018) and Senegal USDA midterm evaluation (2017). In 2016, Noreen was the Team Leader for a qualitative and quantitative feasibility study in Cambodia which involved focus group discussions with sub-national local government authorities (Communes) and women of reproductive age with children under 5 from poor families in Stung Treng and Ratanakiri provinces. In 2015, Noreen was on a team to review all of Irish Aid's health grantees in multiple countries (with site visits to Zimbabwe, Kenya and Uganda) for their Irish Aid Program Fund Evaluation 2012-2015. In 2015, Noreen was the Nutrition Team leader for the first U.S. Feed the Future USAID-funded nutrition-sensitive agriculture project entitled 'Malawi Integrating Nutrition into Value Chain (INVC)' and led the survey design, focus group discussions with women of reproductive age beneficiaries and all work in country. In 2015, Noreen evaluated Heifer International's country programs for nutrition globally and included site visits to: Bangladesh, Rwanda and Zambia. In 2011, Noreen provided technical assistance to the U.S. Embassy in Ethiopia to evaluate the USAID office management, operations and staffing that resulted in changes to operations and staffing.

Noreen Mucha

5.8 Annex 8: Data Collection Instruments

Evaluation of the Culti AF II Program, by Baastel	
Interview notes by:	---
Organization interviewed:	---
Name and function:	---
Location:	---
Date:	

Introduction:

- The purpose of this evaluation is to assess the performance of the **Cultivate Africa's Future Fund Phase II**, co-funded by IDRC and ACIAR but managed by IDRC on a day-to-day basis. .
- The purpose of the evaluation is to assess the relevance, coherence, effectiveness, efficiency, economic impact, gender equality and women empowerment, and the environmental sustainability of the programme, in order to build a body of knowledge which will permit to explore and evaluate its achievements. The evaluation should lead to relevant and useful recommendations for all stakeholders involved. The main users of this evaluation will be IDRC and ACIAR managers, implementing partners and key stakeholders at program and project levels.
- The focus of the evaluation will be to assess: (i) progress made toward the achievement of CultiAF expected outcomes and areas for improvement in the remaining time, and (ii) lessons learned that could inform future programming.
- My name is … and I am part of a team of the Canadian company Baastel, in charge of conducting the evaluation of the programme on behalf of IDRC. I do not represent the management of IDRC. Rather, the team was hired as an independent evaluator to carry out the evaluation in a transparent and independent manner.
- You have participated in the project's activities, such as: (MENTION IN WHICH ACTIVITIES THE RESPONDENT HAS PARTICIPATED/ WORKED). This is why we are taking the time to talk today: the discussion gives you the opportunity to provide feedback on your involvement in the project.
- Our interview will last approximately 60 minutes. The information you provide will be used solely for assessment purposes and will be handled taking into account principles of confidentiality. Please rest assured that the report will not attribute any names to individual statements or findings.

- Before we continue, do you have any questions? Let's begin by establishing the context of your participation in the project.

	Global Program level		Country/project level			
Evaluation questions **Respondent**	**IDRC staff/ Program managers**	**ACIAR Staff**	**Implementing partners' staff (other than researchers, e.g. CEO or Director)**	**Researchers and third patty organizations**	**Gender Focal Points**	**Governments' representatives**
Background of interviewee						
Could you please briefly describe your area of work and your relationship to the CultiAF II programme?	x	x	x	x	x	x
What was the nature of your involvement with CultiAF II programme? How long for? What was the nature of your interactions with the programme? How frequent were your interactions (or were they ongoing)?	x	x	x	x	x	X
1. Relevance						
How does CultiAF align with priority areas of both ACIAR and IDRC, and to the Government of Canada and Australian government official [overseas] development assistance (ODA) priorities?	X	X				
What urgent food and nutrition security needs	X	X	X			X

	Global Program level		Country/project level			
Evaluation questions Respondent	IDRC staff/ Program managers	ACIAR Staff	Implementing partners' staff (other than researchers, e.g. CEO or Director)	Researchers and third patty organizations	Gender Focal Points	Governments' representatives
for Eastern and Southern Africa are addressed by the program?						
What are examples of potential high impact solutions for food and nutrition security as a result of CultiAF-funded projects?	X	X	x	X	x	x
2. Effectiveness						
How adequately in your view have CultiAF funded projects covered the range of research themes within the areas targeted (e.g., increasing productivity and incomes, managing post-harvest loss, nutrition, climate resilience, and agricultural water use)?	X	*X*		X		
Have the funded research projects increased uptake of key research theme practices (mention themes here)? Among small farmers in the geographic areas covered by CultiAF? If so, how?	X	X		X		X

	Global Program level		Country/project level			
Evaluation questions **Respondent**	**IDRC staff/ Program managers**	**ACIAR Staff**	**Implementing partners' staff (other than researchers, e.g. CEO or Director)**	**Researchers and third patty organizations**	**Gender Focal Points**	**Governments' representatives**
Are there CultiAF-funded projects that have the potential for large-scale impacts on food security?	X			X		
To what extent have CultiAF-funded project evidence-based results and solutions been actively scaled-up and/ or further promoted within the East and Southern Africa region, as well as informed policies in these countries? and informed the IDRC and ACIAR programming priorities? (including policy makers and the development assistance community)	*X*	X		x		X
3. Environmental risks						
Can you explain if and how consideration has been given to the potential environmental impacts, both positive and negative, of the projects supported through CultiAF?	X		X	x		
4. Gender						

	Global Program level		Country/project level			
Evaluation questions **Respondent**	**IDRC staff/ Program managers**	**ACIAR Staff**	**Implementing partners' staff (other than researchers, e.g. CEO or Director)**	**Researchers and third patty organizations**	**Gender Focal Points**	**Governments' representatives**
How effectively has the funded research recognized and addressed gender issues? Please explain	X		X	X	x	
To what extent did the use of the Pro-WEAI (Women's Empowerment in Agriculture Index) tool lead to women empowerment outcomes? How did it support you in pursuit of women empowerment outcomes? Has and to what extent have such outcomes achieved? Please explain	*X*			*X*	*x*	
5. Economic Impact						
What have been the potential positive or negative economic impacts (differentiated impacts between men and women) of the CultiAF innovations? Can they be quantified?	*X*	*X*	X	X		X
6. Efficiency						
How effective and efficient has communication and coordination between	X		X			

	Global Program level		Country/project level			
Evaluation questions Respondent	IDRC staff/ Program managers	ACIAR Staff	Implementing partners' staff (other than researchers, e.g. CEO or Director)	Researchers and third patty organizations	Gender Focal Points	Governments' representatives
ACIAR and IDRC and with project implementers (Fund recipients) been? Please describe						
To what extent have governance mechanisms and standard operating procedures been properly established for the program and are they operating effectively?	X		X			
Have the annual workplans and the overall CultiAF implementation plan been properly developed, and have the workplans been implemented/achieved in a timely fashion?	X		X			
What lessons can be borrowed from the CultiAF program to inform IDRC and ACIAR on building and maintaining funding partnerships?	X	X	X	x		
What is the perception of the end beneficiaries			X		X	X

	Global Program level		Country/project level			
Evaluation questions Respondent	IDRC staff/ Program managers	ACIAR Staff	Implementing partners' staff (other than researchers, e.g. CEO or Director)	Researchers and third patty organizations	Gender Focal Points	Governments' representatives
(particularly women smallholder farmers and youth) about the benefits of the new nutrition-sensitive and climate-resilient practices and technologies available to them through these projects?						
7. Economy						
How effectively has the institutional risk of fund recipients been managed?	X	X	X			
To what extent were research partner activities funded equitably and finances managed in a coordinated way among partners?	X	X	X			
8. Research and Program Quality						
In what way, if any, is the targeted research innovative and contributing to new evidence for agriculture productivity and food and nutrition security interventions?	*X*			X		

	Global Program level		Country/project level			
Evaluation questions **Respondent**	**IDRC staff/ Program managers**	**ACIAR Staff**	**Implementing partners' staff (other than researchers, e.g. CEO or Director)**	**Researchers and third patty organizations**	**Gender Focal Points**	**Governments' representatives**
How adequate and of which quality is the research coordination and research management for the program? Please explain	*X*	*x*		X		
What are both the strengths or challenges from existing work under CultiAF that can be used to influence future programming for the remainder of the program?	*X*		X	X		
9. Strategic Recommendations						
How can CultiAF improve its overall performance for the remaining implementation time of the program?	X	X	x	x		
What are the most important program/project adjustments that can be made to improve future implementation?	X	X	X	X	X	X

5.9 Annex 9: Lessons Learned from CultiAF Phase 1

Lessons Learned from the CultiAF Phase I

Phase I of CultiAF-1 was a CAD $15 million-competitive grant facility created in 2013 by IDRC and ACIAR to increase high-quality scientific research with a focus on the adoption of existing and new research results to tackle persistent problems in food insecurity in East and Southern Africa (ESA).

The grant funded **five large, applied agriculture and nutrition research consortia** in Kenya, Malawi, Uganda, Zambia and Zimbabwe, each involving a mix of public and private partnerships (PPP), and **three cross-cutting projects** on youth and use of information, communication technologies (ICTs) for information dissemination and scaling up. The research themes of the programs were 1) reducing post-harvest losses, 2) agribusiness, 3) resilience to climate change and 4) nutrition-sensitive agriculture.

Findings of the CultiAF I Evaluation[67] highlighted the following:

- There were multi-faceted efforts made to communicate research progress to a variety of stakeholders, especially in targeted countries;
- The emphasis was placed on **capacity development of research teams and partners** in effective research management practices, with researchers noting that productivity and research quality improved as a result.
- Specific results were achieved in addressing **gender equality and youth**, particularly through two projects in entrepreneurship.[68]
- There were **strong performance and financial monitoring processes**;
- **Short Timeframe for Implementation:** The 30 months or less timeframe for the implementation of the projects was considered short due to time requirements to undertake and scale-up agricultural research;
- **IDRC and ACIAR's had comparative advantages together to oversee projects:** for instance, IDRC has a longstanding experience in Africa, with competitive calls for proposals and with research capacity building while ACIAR has extensive technical expertise that complement each other.
- **Lack of Integration into ACIAR's Processes:** Finally, the evaluation found that CultiAF was not adequately integrated into ACIAR's internal processes resulting in low visibility of the Fund across the organization.

Recommendations from the evaluation for the design and implementation of the CultiAF II can be summarized as follows:

- **Comparative Advantages**: Map out IDRC and ACIAR's respective comparative advantages and explore how these could best benefit the CultiAF partnership and other potential collaboration;
- **Increase Project Implementation Cycle:** Increase the length of the project implementation cycle, in line with the type of research projects implemented by CultiAF,

[67] Universalia, 2016. Evaluation of the Cultivate Africa's Future Fund (CultiAF). 106 pages.

68 The two projects were: *Expanding business opportunities for youth in agri-food systems in Southern Africa* and *Expanding business opportunities for youth in agri-food systems in Kenya*.

which requires time to undertake research and consolidate, publish and disseminate results;

- **Revise Logic Model and Performance Measurement Framework:** Revise the logic model and accompanying PMF to ensure that indicators are better aligned with the time frame and scale of the Fund and that they capture any agreed priorities, such as generational equality and environmental sustainability;
- **Capacity Development of Research Teams**: Maintain the emphasis on capacity development of research teams, and potentially explore cost-effective ways to also provide institutional capacity development support to the lead organizations.

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11 Annex 11: Terms of Reference

REQUEST FOR PROPOSAL ("RFP")

RFP #:	**RFP Title:**
21220001	**Mid-term Evaluation, Cultivate Africa's Future Fund Phase II**
Issue Date:	**Close Date & Time:**
Wednesday, April 28, 2021	Wednesday, May 19, 2021 at 1:00 p.m. Eastern Daylight Time
RFP Authority Division:	**Originating Division:**
Procurement Services *Name*: Lindsay Empey *Title*: Procurement Officer *Email:* lempey@idrc.ca **Street address:** 150 Kent Street, Constitution Square, Tower III, Ottawa, Ontario, K1P 0B2, Canada **Mailing address**: PO Box 8500, Ottawa, Ontario, K1G 3H9, Canada	-Programs

Table of Contents

SECTION 1 – INTRODUCTION

The purpose of this section is to provide general information about the International Development Research Centre ("IDRC" or "Centre") and this RFP.

1.1 IDRC OVERVIEW

IDRC was established by an act of Canada's parliament in 1970 with a mandate "to initiate, encourage, support, and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical, and other knowledge to the economic and social advancement of those regions." A **Canadian Crown corporation**, IDRC supports leading thinkers who advance knowledge and solve practical development problems. IDRC provide the resources, advice, and training they need to implement and share their solutions with those who need them most. In short, IDRC increases opportunities — and makes a real difference in people's lives. Working with development partners, IDRC multiplies the impact of investment and brings innovations to more people in more countries around the world. IDRC offers fellowships and awards to nurture a new generation of development leaders. IDRC employs about **375** people at the **head office** located in Ottawa, Canada and in **five (5) regional offices** located in New Delhi-India, Montevideo-Uruguay, Amman-Jordan, Nairobi-Kenya, and Dakar-Senegal. IDRC is governed by a board of up to 14 governors, whose chairperson reports to Parliament through the Minister of International Development. For more details visit: www.idrc.ca

1.2 PURPOSE OF THIS RFP

IDRC requests proposals to conduct a mid-term evaluation of Cultivate Africa's Future Fund Phase 11 program where requirements are described in section **2**, the Statement of Work ("Services").

1.3 DOCUMENTS FOR THIS RFP

The documents listed below form part of and are incorporated into this RFP:

- This RFP document
- Annex **A** – Resulting Contract Terms and Conditions
- Annex **B** – Mandatory Requirements Checklist
- Annex **C** – Rated Requirements Checklist

1.4 TARGET DATES FOR THIS RFP

The following schedule summarizes significant target events for the RFP process. The dates may be changed by IDRC at its sole discretion and shall not become conditions of any Contract which may be entered into by IDRC and the selected Proponent.

Event	Date
RFP issue date	See page 1
Deadline for Enquiries	See section 5.1
RFP close date	See page 1
Commencement of Services	May 2021

SECTION 2 – STATEMENT OF WORK

This section is intended to provide Proponents with the information necessary to develop a competitive proposal. The Statement of Work ("SOW") is a complete description of the tasks to be done, results to be achieved, and/or the goods to be supplied.

2.1 BACKROUND

The CultiAF Performance Monitoring Framework (PMF) stipulates that a mid-term external evaluation should be conducted after three years into the implementation of the program. CultiAF phase II started officially on June 23, 2017 with the signing of the partnership agreement but implementation of roll-over projects started in October 2018 while the call for the new projects was launched in January 2018 and project implementation started in April 2019. The evaluation has been scheduled to start in May 2021, three and a half years after the launch of the call for the new projects.

The external evaluation will draw on monitoring information collected through Trackify, the IDRC digital monitoring system. Additionally, data is incrementally documented on achievement of key milestones, outputs, and outcomes on a regular basis through monitoring visits (pre-Covid-19), monthly virtual monitoring meetings (during the Covid-19 pandemic), six-month updates and 12-month interim technical reports for each project. More information is available in the call documents, the PMF, Governance Committee and Scientific Advisory Committee documents, Research in Action articles, stories from the field, and annual reports to ACIAR. The evaluation team is expected to review and use this existing information as well as collect complementary primary data.

The focus of the evaluation will be to assess: (i) progress made toward the achievement of CultiAF expected outcomes and areas for improvement in the remaining time, and (ii) lessons learned that could inform the design of a future phase or initiative.

The objectives of CultiAF II are as follows:

1. Increase food and nutrition security in Eastern and Southern Africa by funding applied research to develop sustainable, climate resilient, and gender responsive innovations for smallholder farmers.
2. Develop and implement business models that empower women and youth to scale out innovations that bring equitable benefits to smallholder farmers and consumers.
3. Use research results to inform food security, nutrition, climate change and water policies and programs.

2.2 DESCRIPTION AND SCOPE OF WORK

2.2.1 Objectives of the Evaluation

i. Assess the relevance and performance (effectiveness, efficiency, value for money) of the program.

ii. Assess the scientific merit and achievements, specific outputs and outcomes, and the differences each project has made or is well-positioned to make at the scientific and community levels in partner countries.

iii. Provide strategic recommendations to guide program implementation during the remaining period, and that inform the design of a future phase or a new partnership initiative under the umbrella of the current ACIAR-IDRC partnership.

2.2.2 Use of Evaluation Results

The evaluation will provide guidance to CultiAF's Governance Committee to determine the program's success and inform future food security programming, including a potential third phase of CultiAF or another follow up initiative that could be developed under the current ACIAR/IDRC partnership.

IDRC and ACIAR management and program staff will use findings of the evaluation to inform implementation during the remaining period of the program and to communicate results to various stakeholders. The results of the evaluation will be public and will be shared with other donors, international and developing country stakeholders working on agriculture and food security issues.

2.2.3 Evaluation Questions

The following outlines the key evaluation questions that the evaluation will address, which are based on key areas of inquiry defined in the PMF. Suggested sub-questions are also included in bullet form—evaluators will be responsible for refining these with feedback from IDRC during the evaluation inception phase.

Relevance: How relevant is CultiAF programming in light of the mandates of its funders and to Food Security priorities in the Eastern and Southern Africa regions that the program targets?

- How is CultiAF aligning with priority areas of both ACIAR and IDRC, and to the Government of Canada and Australian government ODA priorities?
- To what extent are the research topics covered by CultiAF consistent with the overall poverty reduction strategies and/or policies?
- To what extent have research projects adequately covered a range of priority geographic areas/regions for both ACIAR and IDRC (i.e., Eastern and Southern Africa)?
- What urgent Food Security concerns for Eastern and Southern Africa are addressed by the program?
- What potential high impact solutions are emerging because of CultiAF?

Effectiveness: How effectively are the CultiAF program and the projects it supports addressing Food Security priorities, and positioning their work for expected outcomes?

- Have projects adequately covered a range of issues/themes within the areas targeted by CultiAF (i.e., increasing productivity and incomes, managing post-harvest loss, nutrition, climate resilience, and agricultural water use)?
- How is the application of research funded under CultiAF showing potential for increasing productivity, reducing food loss, improving nutrition, optimizing use of water for agriculture, and building climate resilience in the geographic areas covered by the program?
- How is the application of research showing potential for uptake among small farmers in the geographic areas covered by CultiAF?
- What signals exist that applications developed by CultiAF could produce large-scale impacts on food security?
- To what extent have CultiAF-developed results and solutions been actively promoted within the East and Southern Africa region, informed policies in these countries and informed the IDRC and ACIAR programming priorities?
- How has CultiAF improved awareness of potential application-ready solutions for food security in developing countries among policy makers and the development assistance community?
- How and how effectively have the knowledge, tools, and applications developed through CultiAF been adapted and made available to smallholder farmers and relevant actors in developing countries?

Environmental risks: What consideration has been given to the potential environmental impacts, both positive and negative, of the applications developed through CultiAF?

Gender: How effectively has the research recognized and addressed gender issues?

- To what extent did the use of the Pro-WEAI tool lead to women empowerment outcomes?

Economic impact: What have been the positive or negative economic impacts of the CultiAF innovations? Can they be quantified?

Efficiency: How efficient and appropriate has the program model—including governance, project set-up, planning and implementation - been in supporting CultiAF objectives?

- How effective and efficient has communication and coordination between ACIAR and IDRC and with project proponents (Fund recipients) been?
- How well coordinated is the approach taken by the program?
- To what extent have the mechanisms of governance been properly established and are they performing effectively?
- How well have annual workplans and the overall CultiAF implementation plan been developed, timelines set, and have they been achieved?
- How effectively have funded partnerships been able to integrate various relevant thematic and expertise from the natural and social sciences within research projects?
- What lessons can be borrowed from CultiAF, an externally funded program, to inform IDRC and ACIAR on building and maintaining funding partnerships?
- What is the perception of end user (particularly women smallholders) of the utility of the new practices and technologies available to them?

Economy: How effectively is the institutional risk of fund recipients being managed? To what extent were research partner activities funded equitably and finances managed in a coordinated way among partners?

Research and program quality: Considering the methodology and early research outputs of projects under way, what is the quality of the research at this stage? Consider using RQ+ or a sub-set of its quality dimensions that are most relevant for CultiAF.

- What is the quality of the research?
- Is the research innovative and contributing new evidence on agriculture and food security?
- Are the mechanisms for research coordination and research quality management adequate?
- What quality dimensions demonstrate strengths or issues to address in the remainder of the program?

Strategic recommendations: How can CultiAF improve its performance in the remaining program time? What are the most important adjustments the program could make as it continues implementation?

2.2.4 Proposed Timeline

Date	Activity
October 2020	Updated timeline showing mid-term review presented to GC

February - March	Develop evaluation plan and TOR in consultation with ACIAR
April	Announcement of the RFP for the evaluation (closed call, as agreed by ACIAR and IDRC) and
May	Contract the consulting firm and start evaluation
June	Host an inception phase at which an inception report and methodology, including an evaluation design matrix will be presented, discussed, and approved
August	Presentation/discussion of initial findings to IDRC/ACIAR
September	Prepare and submission of final report
October	Review and acceptance of evaluation report by IDRC & ACIAR, preparation of official response from both institutions
November	Official submission of evaluation report to GC for review and approval (October/November depending on when GC is sitting)
December onwards	Sharing evaluation results with stakeholders, including national governments and beneficiaries. Integration of findings into Canadian, Australian, and global public engagement/outreach messaging

2.2.5 Project Budget

Proposed budget is expected to fall under CAD 100,000 including fees, expenses and taxes.

2.3 IDRC RESPONSIBILITES, SUPPORT, AND REPRESENTATIVES

IDRC will identify a **Project Authority** to whom the successful Proponent will report during the period of a resulting Contract. The Project Authority will be responsible for coordinating the overall delivery of service, providing as required direction and guidance to the Proponent, monitoring Proponent performance and accepting and approving Proponent deliverables on behalf of IDRC.

IDRC will identify a **Contracting Authority**, who will oversee a resulting Contract throughout its lifecycle, in conjunction with the Project Authority and the Proponent, create amendments for any changes to a resulting Contract, and answer questions on terms and conditions.

2.4 LOCATION OF WORK AND TRAVEL

Due to the type of Services required, the successful Proponent will be able to work from its own location. IDRC will not provide onsite facilities for the Proponent, other than providing facilities for on-site meetings if required.

Travel not expected to be required by the Proponent.

2.5 PERIOD OF A RESULTING CONTRACT

A resulting Contract is expected to commence on May 2021 and conclude by December 2021.

SECTION 3 – PROPOSAL EVALUATION

This section describes the process that IDRC will use to evaluate Proposals and select a Lead Proponent.

3.1 EVALUATION COMMUNICATION

During Proposal evaluations, IDRC reserves the right to contact or meet with any individual Proponent in order to obtain clarification of its submission or to gain insight into the quality and scope of relevant services. A Proponent will not be allowed to add, change, or delete any information during the process. IDRC is in no way obligated to meet with any or all Proponents for this purpose.

3.2 EVALUATION METHODOLOGY

IDRC will use the following methodology to evaluate Proposals:

3.2.1 Step 1 - Mandatory Requirements

Each Proposal will be examined to determine compliance (pass or fail) with all IDRC's **Mandatory Requirements** as set out in **Annex B**. Non-compliant Proposals will receive no further consideration.

Summary Table:

RFP Section	Mandatory Requirements	Pass or Fail
Annex B	Mandatory Requirements in response to the Statement of Work	

3.2.2 Step 2 - Rated Requirements

Compliant Proposals will be evaluated and attributed points according to the degree to which they meet or exceed IDRC's **Rated Requirements** as set out in **Annex C.**

Summary Table:

RFP Section	Rated Requirements	Weighting % A	*Points 0-10 B	Score A x B
Annex C	Resources section	25		
"	Methodology section	70		
	Total %	**95**		

***Points Table:**

Points	Points Description
0	Barely addresses any of the stated requirements and completely lacking in critical areas
3	Adequately meets most of the stated requirements. May be lacking in some areas which are not critical
5	Meets most stated requirements
7	Meets all stated requirements
8	Meets all stated requirements and may exceed some
10	Exceeds the stated requirements in superlative and beneficial ways

3.2.3 Step 3 –Interviews

Proponents may be asked to attend an interview to provide additional information prior to the final selection. IDRC reserves the right to supply more information to those Proponents.

3.2.4 Step 4 - Financials

The Proponents' Financial Proposals will be scored. The Proponent submitting the lowest price will receive the maximum 10 points on the standard evaluation scale of 0-10. All other Proponents will receive a prorated score out of 10 based on the relative proportion of their price to the lowest price submitted.

RFP Section	Rated Requirements	Weighting A	Points 0-10 B	Score A x B
4.6	Total pricing, exclusive of taxes	5		
	Total %	5		

3.2.5. Step 4 - Final Score

Scores for the shortlisted Proponents' proposals will be calculated, and IDRC may select the Lead Proposal achieving the highest total points ("Lead Proponent"), subject to IDRC's reserved rights.

3.3 PROPONENT FINANCIAL CAPACITY

IDRC reserves the right to conduct an assessment of the **Lead Proponent's** financial capacity. IDRC may request that the Lead Proponent provide proof of financial stability via bank references, financial statements, or other similar evidence. This is a pass/fail test. Pass means that Contract discussions begin. Fail means that the Lead Proponent may not enter into Contract discussions and is disqualified from further consideration. The Lead Proponent must provide this information upon 72 hours of IDRC's request; failure to comply may result in disqualification.

Note: In the case of a joint venture or consortium, each and all members of the joint venture or consortium must provide the information required for their legal form.

3.4 PROPONENT SELECTION

As noted in section **5.8**, acceptance of a proposal does not oblige IDRC to incorporate any or all of the accepted proposal into a contractual agreement, but rather demonstrates a willingness on the part of IDRC to enter into negotiations for the purpose of arriving at a satisfactory contractual arrangement with one or more parties.

Without changing the intent of this RFP or the Lead Proponent's proposal, IDRC will enter into discussions with the Lead Proponent for the purpose of finalizing the Contract.

In the event no satisfactory Contract can be negotiated between the Lead Proponent and IDRC, IDRC may terminate negotiations. In such event, if IDRC feels that the Proponent with the second highest score may meet the requirements, IDRC will continue the process with the secondary Proponent, and so on.

Announcement of the successful Proponent will be made to all Proponents following the signing of a Contract no later than 72 days following the award of a Contract. Upon request from an unsuccessful Proponent, IDRC will provide the reasons why that particular proposal was not selected.

SECTION 4 – PROPOSAL FORMAT

Proposal responses should be organized and submitted in accordance with the instructions in this section.

4.1 GENERAL

Proposals should be in 8 1/2" x 11" (letter) format, with each page numbered. Elaborate or unnecessary voluminous proposals are not desired. The font used should be easy to read and generally be no smaller than 11 points (smaller font can be used for short footnotes).

4.2 OFFICIAL LANGUAGES

Proposals may be submitted in English or French.

4.3 ORGANIZATION OF RESPONSES

Responses should be organized as follows, where the sections that follow provide more details:

see RFP Section for full details	File	Contents
4.4	**1.0**	Cover Letter
4.5, Annex B, Annex C	**2.0**	Mandatory Requirements Checklist and Rated Requirements Checklist
4.6	**3.0**	Technical Proposal
4.7	**4.0**	Financial Proposal
5.9, Annex A	**5.0**	Objections with reasons regarding the proposed contract terms and conditions included in this RFP

4.4 COVER LETTER

The Proponent should provide *as a separate file.*

A one (1) page covering letter on the Proponent's letterhead should be submitted and should include the following:

- **a.** A reference to the RFP number and RFP title.
- **b.** The **primary contact person** with respect to this RFP: the individual's name, address, phone number and email address.
- **c.** A statement confirming the **validity** of the proposal (refer to section **5.4**).
- **d.** A statement confirming the Proponent does not have a **conflict of interest** with this RFP, real or perceived (refer to section **5.7**).
- **e.** The letter **signed** by person(s) duly authorized to sign on behalf of the Proponent and bind the Proponent to statements made in response to the RFP.

4.5 MANDATORY AND RATED REQUIREMENTS CHECKLIST

The Proponent should provide *as a separate file.*

The Proponent **should** create and include a Checklist, using the following format*****, of all **Mandatory Requirements** and all **Rated Requirements** listed in **Annex B** and in **Annex C**, that Indicates where in the Proponent's Proposal the response to each requirement can be found:

***Hint:** copy the tables in **Annex B** and **C**

4.6 TECHNICAL PROPOSAL

The Proponent should provide *as a separate file.*

4.6.1 Table of Contents

The Proponent should include a table of contents that contains page numbers for easy reference by the evaluation committee.

4.6.2 Response to the Statement of Work

The Proponent **must** provide detailed information relative to:

a. Each requirement listed in the Statement of Work in **Annex A**;

b. Each **Mandatory Requirement** in **Annex A**; and

c. Each **Rated Requirement** in **Annex A**.

The Proponent must clearly outline the work that the Proponent proposes to undertake for the provision of these Services to IDRC.

4.7 FINANCIAL PROPOSAL

The Proponent should provide a *as a separate file.*

4.7.1 Financial Requirements

The Proponent **must** provide pricing for all of its proposed Services.

Financial Requirements
a. The Proponent is to state the assumptions underlying its financial proposal.
b. All prices are to be quoted in Canadian dollars (CAD) and be exclusive of the Goods and services Tax (GST) or Harmonized Sales Tax (HST). The GST or HST, whichever is applicable, shall be extra to the prices quoted by the Proponent and will be paid by IDRC. If the Proponent will not be charging IDRC taxes, an explanation should be provided. See the **Notes** below for more details on taxes.
c. All prices must include a detailed breakdown following the response to section **2** (Statement of Work). Prices shall include all components normally included in providing the proposed services such as professional. e.g. All prices must include a detailed breakdown and include at a minimum the following: i. all inclusive daily rate applicable to proposed personnel who will do the work; ii. estimated total number of billable days to do the work; iii. estimated number of days to be spent in at IDRC's Ottawa office, if applicable.
d. The Proponent shall propose an invoicing schedule if other than providing one (1) invoice upon completion of all Services. *Important Note:* IDRC's payment terms are NET 30 and IDRC will make no advance on fees.
e. Proponents who must travel to Ottawa for onsite work must indicate if there will be fees chargeable to IDRC. Although it is anticipated that travel requirements will be minimal, if required, all travel costs will be in line with IDRC's Travel Policy guidelines.

4.7.2 Mathematical Errors

If there are errors in the mathematical extension of unit price items, the unit prices prevail, and the unit price extension is adjusted accordingly.

If there are errors in the addition of lump sum prices or unit price extensions, the total is corrected, and the correct amount reflected in the total price.

Any Proponent affected by mathematical errors shall be notified by IDRC and be given the corrected prices.

SECTION 5 – CONDITIONS

The purpose of this section is to inform the Proponent about IDRC's procedures and rules pertaining to the RFP process.

5.1 ENQUIRIES

All matters pertaining to this RFP are to be referred exclusively to the RFP Authority named on page 1.

No verbal enquiries or verbal requests for clarifications will be accepted.

Proponents should, as much as feasible, aggregate enquiries and requests for clarifications and shall submit them **in writing via email** to the **RFP Authority** by Wednesday, May 5, 2021, at 11:00 a.m. EDT in order to receive a response prior to the close date. When submitting, Proponents *email subject line* should cite **"RFP # 21220001- Mid-term Evaluation, Cultivate Africa's Future Fund Phase II**".

The RFP Authority will provide simultaneously to all Proponents, all answers to significant enquiries received without revealing the sources of the enquiries.

In the event that it becomes necessary to revise any part of the RFP as a result of any enquiry or for any other reason, **an Amendment** to this RFP will be provided **by email** to each Proponent to whom IDRC has issued this RFP.

5.2 SUBMISSION DEADLINE

IDRC will only accept proposals up the close date and time indicated on page 1.

Important note: Late proposals will not be accepted. No adjustments to proposals will be considered after the close date and time.

5.3 PROPOSAL SUBMISSION INSTRUCTIONS

Proposals should be submitted in accordance with the instructions in this section.

5.3.1 Method of Sending

The preferred method of proposal submission is electronic, via **email**, in **Microsoft Word** or in **PDF** format to the RFP Authority named on page 1. Proponents *email subject line* should cite **"RFP# 21220001- Mid-term Evaluation, Cultivate Africa's Future Fund Phase II**" when submitting via email.

Important Note: Email messages with large attachments can be slowed down in servers between the Proponent's email and the RFP Authority's email inbox. It is the Proponent's responsibility to ensure that large emails are sent sufficiently in advance to be at IDRC by the close date and time. Proponents should use electronic receipt confirmation and or contact the RFP Authority to confirm receipt.

Important Note: The maximum size of an email that IDRC can receive is 10MB. If necessary, Proponents can send multiple emails.

5.3.2 Number of Files

The Proponent's electronic submission should consist of **five (5) files** (i.e. 5 separate documents) as noted in section **4.3**.

5.3.3 Changes to Submission

Changes to the submitted proposal can be made, if required, provided they are received as an Addendum (or an Amendment) to, or clarification of, previously submitted proposal, or as a complete new proposal to cancel and supersede the earlier proposal. The addendum, clarification, or new proposal should be submitted as per the delivery instructions outlined above, be clearly marked **"REVISION",** and **must be received no later than the submission deadline.** In addition, the revised proposal should include a description of the degree to which the contents are in substitution for the earlier proposal.

5.3.4 Multiple Proposals

IDRC will accept only one (1) proposal per Proponent.

5.4 VALIDITY OF PROPOSAL

Proposals must remain open for acceptance for **ninety (90) days** after the close date.

5.5 PROPONENTS COSTS

All costs and expenses incurred by a Proponent in any way related to the Proponent's response to the RFP, including but not limited to any clarifications, interviews, presentations, subsequent proposals, review, selection or delays related thereto or occurring during the RFP process, are the sole responsibility of the Proponent and will not be chargeable in any way to IDRC.

5.6 GOVERNING LAWS

This RFP is issued pursuant to the laws of the province of Ontario and the laws of Canada.

5.7 CONFLICT OF INTEREST

In submitting a Proposal, the Proponent must avoid any real, apparent or potential conflict of interest and will declare to IDRC any such conflict of interest.

In the event that any real, apparent, or potential conflict of interest cannot be resolved to the satisfaction of IDRC, IDRC will have the right to immediately reject the Proponent from consideration and, if applicable, terminate any Contract entered into pursuant to this RFP.

5.8 RIGHTS OF IDRC

IDRC does not bind itself to accept any proposal submitted in response to this RFP, and may proceed as it, in its sole discretion, determines following receipt of proposals. IDRC reserves the right to accept any proposal(s) in whole or in part, or to discuss with any Proponents, different or additional terms to those envisioned in this RFP or in such a Proponent's proposal.

After selection of preferred proposal(s), if any, IDRC has the right to negotiate with the preferred Proponent(s) and, as a part of that process, to negotiate changes, amendments or modifications to the proposal(s) at the exclusion of other Proponents.

Without limiting the foregoing, IDRC reserves the right to:

a. seek clarification or verify any or all information provided by the Proponent with respect to this RFP, including, if applicable to this RFP, contacting the named reference contacts;

b. modify, amend or revise any provision of the RFP or issue any addenda at any time; any modifications, amendment, revision or addendum will, however, be issued in writing and provided to all Proponents;
c. reject or accept any or all proposals, in whole or in part, without prior negotiation;
d. reject any proposal based on real or potential conflict of interest;
e. if only one proposal is received, elect to accept or reject it;
f. in its sole discretion, cancel the RFP process at any time, without award, noting that the lowest or any proposal will not necessarily be accepted;
g. negotiate resulting Contract terms and conditions;
h. cancel and/or re-issue the RFP at any time, without any liability whatsoever to any Proponent;
i. award all or any part of the work to one or more Proponents based on quality, services, and price and any other selection criteria indicated herein; and
j. retain all proposals submitted in response to this RFP.

5.9 PROPOSED CONTRACT

Annex A has been provided as part of the RFP documents so that Proponents may review and become familiar with certain specific conditions that are expected to be adhered to in connection with the provision of Services. While some of the language may be negotiated between IDRC and the successful Proponent, IDRC's flexibility to amend its standard terms and conditions may be limited.

Important note: The Proponent should outline any objections with reasons to any terms and conditions contained in this RFP and include them in its proposal (reference section **4.3**). Failure to identify objections at the proposal stage may preclude Proponents from raising these objections in the course of any future negotiations.

ANNEX A – Proposed Contract

Below is the proposed sample Contract and Terms and Conditions (reference section **5.9**).

Specific Terms and Conditions of the Contract

CONTRACT NO. _____

This Contract is between_____("**Consultant**") and Canada's **International Development Research Centre**, 150 Kent Street, PO Box 8500, Ottawa, ON, K1G 3H9 ("**IDRC**" or "the **Centre**").

The parties agree as follows:

1. TERMS OF REFERENCE AND SCHEDULE

1.1 Summary

_____
_____

1.2 Scope

_____
_____

1.3 Schedule

_____
_____

1.4 Contract Resources

The following individuals are the main contacts for this Contract:

1.4.1 IDRC will be represented by:

_____
_____

1.4.2 The **Consultant** will be represented by:

_____
_____

It is understood that the Consultant will assign performance of all work under this Contract to_____. Written authorization from IDRC's **Project Authority** must be obtained in advance for any substitution of personnel. The Consultant must ensure that its employees, subcontractors and assignees alike are subject to the terms and conditions of this Contract, which shall take precedence over any other terms and conditions that may exist between the Consultant and those persons.

1.5 Service Location

_____
_____

1.6 Service Engagement Process

_____
_____

1.7 Change Management

Any changes to the Services will require written agreement from both parties. IDRC's **Contracting Authority** may issue Amendments to the Standing Offer to reflect such changes.

2. FEES

In consideration of these Services, IDRC will pay the Consultant_____.

3. TRAVEL AND TRAVEL EXPENSES

_____
_____

4. INVOICES

4.1 Invoice Schedule

The Consultant shall invoice IDRC according to the following schedule:

_____
_____

4.2 Invoice Submission Instructions

Invoices and any required backup documentation must be sent electronically to:
invoices-factures@idrc.ca

Invoices must be set out as follows:

- IDRC's **Contract number**
- Invoice number
- Invoice Date
- Fees - detailed description, daily rate and number of days or unit rate and number of units or fixed price
- Travel expenses, if applicable – detailed description, quantity, and price (and include any required back up documents with invoice)
- Taxes - Canadian GST (Goods and Services Tax) or HST (Harmonized Sales Tax), as applicable; Consultants not registered for Canadian GST purposes must itemize the taxes they paid and are charging back to IDRC
- Canadian GST/HST registration number, if applicable
- Currency

5. PAYMENTS

5.1 Payment Inquiries

Payment inquiries should be sent electronically to:
ap-cc@idrc.ca

5.2 Payment Method

All payments related to this Contract will be made based on information provided by the Consultant in the **Supplier, Tax and Bank Information form**, which will form part of the Contract and should be supplied from time to time to IDRC for updates to the information.

5.3 Advance Payments

IDRC will make no advance on fees and travel expenses.

5.4 Conditions Precedent for Payment

The following sets out the conditions precedent that the Consultant must comply with to ensure payment for Services and Deliverables pursuant to this Contract:

a) Completion and delivery of the information requested in the **Supplier, Tax and Bank Information form**.
b) Satisfactory performance of Services and satisfactory completion of Deliverables.
c) Proper completion of invoice(s) as set out in the **Invoice section** above.

IDRC will issue payment of fees, and travel expenses if applicable, according to IDRC's standard payment period of **thirty (30) calendar days**. The **payment period is measured** from the date IDRC receives the duly completed Supplier, Tax and Bank Information form, or the date IDRC receives an acceptable invoice, or the date the Services and Deliverables are performed and delivered in acceptable condition as required in the Contract, whichever is latest. If the content of the invoice or the requisite form is incomplete, if the Services have not been performed in accordance with this Contract, or the Deliverables are not accepted by IDRC, the Consultant will be notified, and the payment period will be deferred until all deficiencies have been rectified to IDRC's satisfaction.

IDRC will reimburse the Consultant for applicable commodity taxes, net of input tax credits that have claimed directly from Canada Revenue Agency or the Consultant's country commodity tax offices.

IDRC will not pay more than one (1) day of fees per 24-hour period. IDRC will not pay any fee nor any travel expenses incurred after the Termination Date of the Contract.

Following the Termination Date, and payment of the final invoices, all taxes due and owing in relation to the provision of Services pursuant to this Contract are deemed to have been paid by IDRC. The Consultant will be liable for any tax claims, debts, actions or demands in relation to the Services provided pursuant to this Contract (hereinafter referred to as "Tax Claims") and the Consultant shall indemnify and hold IDRC harmless against said Tax Claims.

6. SPECIAL CONTRACT CONDITIONS

_____
_____

7. CONTRACT DOCUMENTS

The Specific Terms and Conditions of the Contract, Attachment **A**- General Terms and Conditions of the Contract, Attachment **B**-_____, and Attachment **C**-_____constitute the entire Contract between the parties.

The Contract documents are complementary and what is called for in any one shall be binding as if called for by all. The Contract documents shall be interpreted as a whole and the intent of the whole rather than the interpretation of any particular part shall govern. In the event of a conflict between them, the Contract documents shall have precedence among themselves in the order as listed above.

8. CONTRACT ACCEPTANCE AND SIGNATURES

By signing this Contract, each party accepts the contents of the Contract.

This Contract will become effective when all the parties have signed it. The date this Contract is signed by the last party to sign (as indicated by the date associated with the party's signature) will be deemed the date of this Contract.

CONSULTANT	**IDRC**
*By:*_____	*By:* _____
Signed	Signed
_____	_____
Printed Name	Printed Name
_____	_____
Title	Title
_____	_____
Date	Date

Attach:
- Attachment **A** – General Terms and Conditions of the Contract
- Attachment **B** – _____

ATTACHMENT A - General Terms and Conditions of the Contract

A1. DEFINITIONS

For the purposes of this Contract:

"Commencement Date" shall mean the date on which the Services are to commence.

"Confidential Information" shall mean any and all technical and non-technical information including patent, copyright, trade secret, and proprietary information, techniques, sketches, drawings, models, inventions, know-how, processes, apparatus, equipment, algorithms, software programs, software source documents, source codes, and formulae related to the current, future, and proposed products and services of IDRC, and includes, without limitation, IDRC's information concerning research, experimental work, development, design details and specifications, engineering, financial information, procurement requirements, purchasing, manufacturing, and marketing plans and information.

"Consultant" shall mean either the individual, institution, corporation or partnership retained pursuant to this Contract, and its employees, directors, officers, partners, subcontractors and agents, as applicable, and any other representative for whom the Consultant is responsible at law.

"Contract" shall mean the **Specific Terms and Conditions of the Contract**, including any and all **attachments** incorporated therein by reference. In the event of a conflict between the Specific Terms and Conditions versus the attachments, the Specific Terms and Conditions shall prevail.

"Day" means seven and a half hours (7.5) hours, unless otherwise specified in the Contract, and exclusive of meal breaks, with no provision for annual leave, statutory holidays and sick leave.

"Deliverables" means the items to be written, developed or prepared by the Consultant pursuant to this Contract, including, without limitation, all works of authorship, reports, recordings, information, documents, materials, or software, whether in hard copy or electronic form.

"Derivatives" shall mean: 1. any translation, abridgement, revision, or other form in which an existing work may be recast, transformed, or adapted; 2. for patentable or patented material, any improvement thereon; and, 3. for material which is protected by trade secret, any new material derived from such existing trade secret material, including new material which may be protected by copyright, patent, and/or trade secret.

"*IDRC*" or "*the Centre*" means the International Development Research Centre.

"Services" mean the services to be provided by the Consultant in accordance with the Contract, including the Deliverables as set out in the Contract.

"Termination Date" shall mean the earlier of (a) the date on which all Services and Deliverables have been performed and delivered; (b) the end date as specified in the Contract; and (c) the date on which the Contract terminates by operation of the Termination provisions contained in this Contract.

A2. TIME OF ESSENCE

Time shall be of the essence of every provision of this Contract.

A3. ENTIRE AGREEMENT

This Contract supersedes all previous Contracts and correspondence, oral or written, between IDRC and the Consultant, pertaining to the subject matter of this Contract, and represents the whole and entire understanding between the parties. No modification, variation or amendment of it shall be binding upon the parties unless it is in writing and signed by both parties.

A4. NON-EXCLUSIVITY

This Contract shall not grant the Consultant exclusivity of supply. IDRC may perform services or develop items similar or identical to the Services or Deliverables, or obtain them from any third party.

A5. WARRANTY

The Consultant covenants that it will provide its Services pursuant to this Contract in a diligent and workmanlike manner, with regard to the best interests of IDRC, and warrants that its personnel possess the skill and experience necessary to the satisfactory performance of the Services.

A6. TAXES

IDRC is subject to applicable commodity and other tax legislation and regulations in Canada and is generally not exempt from paying HST/GST on goods and services it procures, unless otherwise specified in the Contract. Additionally, IDRC is subject to applicable tax legislation and regulations in force in the countries where its regional offices are located.

IDRC will **withhold** and remit to the Canada Revenue Agency (CRA), **15% of fees and non-exempt travel expenses of non-Canadian resident** Consultants performing work in Canada unless the Consultant provides to IDRC a Contract- specific waiver from the CRA. Such funds can be reclaimed by the Consultant from the CRA or from their own governments, as the case may be. Non-Canadian resident Consultants that are travelling to Canada to perform work can contact the CRA to obtain additional information about the current regulations and waivers. The main CRA website can be found at http://www.cra-arc.gc.ca.

A7. INVOICES

Invoice requirements are noted in the **Invoices section** of the **Specific Terms and Conditions of the Contract.**

A8. PAYMENTS

Conditions precedent for payment are noted in the **Payments section** of the **Specific Terms and Conditions of the Contract.**

A9. TERMINATION

Termination for Cause: In addition to or in lieu of any other remedies that IDRC has in law or in equity, IDRC may terminate this Contract immediately without notice in the event:

a) The Consultant breaches any material term of this Contract, and fails to remedy such breach within thirty (30) calendar days of receiving notice to do so by IDRC.
b) IDRC, in its sole discretion, determines that the Consultant made a misrepresentation during the process of selection.
c) The Consultant:
   i. ceases to carry on business,
   ii. commits an act of bankruptcy within the meaning of the Bankruptcy and Insolvency Act (*Bankruptcy and Insolvency Act, R.S., 1985, c. B-3)* or is deemed insolvent within the meaning of the Winding-up and Restructuring Act (*Winding-up and Restructuring Act, R.S., 1985, c. W-11*) or makes an assignment, against whom a receiving order has been made under the applicable bankruptcy legislation or in respect of whom a receiver, monitor, receiver-manager or the like is appointed, or
   iii. becomes insolvent or makes an application to a court for relief under the Companies' Creditors Arrangement Act, the Bankruptcy and Insolvency Act or the Winding Up and Restructuring Act (*Companies' Creditors Arrangement Act, R.S., c. C-25*) or comparable local legislation.

Termination without Cause: IDRC may at any time by notice in writing suspend the work of the Consultant or any part thereof. This Contract may be terminated in its entirety or in part by IDRC upon written notice. On such termination or suspension, the Consultant shall have no claim for damages, compensation, or loss of profit against IDRC except

payment for Services performed and Deliverables submitted up to the date of notice of such suspension or termination, or completed thereafter in accordance with the notice.

A10. INSURANCE

The Consultant is responsible for taking out at its own expense any insurance deemed necessary while executing this Contract.

If the Consultant will be working on-site at IDRC, the Consultant shall maintain during the term of this Contract, Commercial General Liability insurance in the amount of not less than CAD 5,000,000.00 inclusive per occurrence, with IDRC named as "additional insured", unless otherwise specified in the Contract.

Upon the request of IDRC, the Consultant shall provide the **insurer's certificate**.

A11. USE OF IDRC PROPERTY

Access to Information Systems and Electronic Communication Networks: During the course of this Contract, the Consultant may be provided with access to IDRC information systems and electronic communication networks. The Consultant, on behalf of its/his/her employees, subcontractors and representatives, agrees to abide by IDRC policies concerning use of such information systems and networks. IDRC will provide the Consultant with any such policies upon commencement of Services pursuant to this Contract, or as such policies are put into effect, and the Consultant will make such policies known to its personnel, and will take such steps as are necessary to ensure compliance with such policies.

Access to IDRC Premises: The parties agree that reasonable access to IDRC's premises by Consultant's authorized personnel and which is necessary for the performance of the Services hereunder, in accordance with the terms of this Contract, shall be permitted during normal business hours of IDRC. The Consultant agrees to observe all IDRC security requirements and measures in effect at IDRC's premises to which access is granted by this Contract.

A12. SUB-CONTRACTORS, SUCCESSORS AND ASSIGNEES

The Consultant is prohibited from entering into any sub-contract, designating any successor or assigning any rights under this Contract without the express written consent of IDRC.

A13. RELATIONSHIP WITH IDRC

Nothing in this Contract shall be deemed in any way or for any purpose to constitute the parties hereto partners in the conduct of any business or otherwise. The Consultant shall have no authority to assume or create any obligation whatsoever, expressed or implied, in the name of IDRC, or to bind IDRC in any manner whatsoever.

The Consultant acknowledges and agrees that, in carrying out this Contract, the Consultant is acting as an independent contractor and not as an employee of IDRC. The Consultant shall be responsible for all matters related to it or its employees including but not limited to deducting or remitting income tax, Canada Pension Plan contributions, Employer Insurance contributions or any other similar deductions required to be made by law for employees. The Consultant agrees to indemnify IDRC in respect of any such remittances which may be subsequently required by the relevant authorities, together with any related interest or penalties which IDRC may be required to pay.

A14. CONFIDENTIALITY OF INFORMATION

Non-Disclosure and Non-Use of Confidential Information: The Consultant agrees that it will not, without authority, make use of, disseminate or in any way disclose any Confidential Information to any person, firm or business.

The Consultant shall take all reasonable precautions at all times (and in any event, efforts that are no less than those used to protect its own confidential information) to protect Confidential Information from disclosure, unauthorized use, dissemination or publication, except as expressly authorized by this Contract.

The Consultant agrees that it, he, or she shall disclose Confidential Information only to those of its, his, or her employees or subcontractors who need to know such information and certifies that such employees or subcontractors have previously agreed, either as a condition to employment or service or in order to obtain the Confidential Information, to be bound by terms and conditions substantially similar to those of this Contract.

The Consultant will immediately give notice to IDRC of any unauthorized use or disclosure of the Confidential Information. The Consultant agrees to indemnify IDRC for all damages, costs, claims, actions and expenses (including court costs and reasonable legal fees) incurred by IDRC as a result of the Consultant's failure to comply with its obligations under this section. The Consultant further agrees to defend and participate in the defence of any claim or suit alleging that IDRC has a liability with regard to any unauthorized disclosure, provision or making available of any Confidential Information the Consultant may have acquired from a third party.

Exclusions from Nondisclosure and Non-use Obligations: The Consultant's obligations under the preceding subsection with respect to any portion of the Confidential Information shall terminate when the Consultant can document that:

a) it was in the public domain at or subsequent to the time it was communicated to the Consultant by IDRC through no fault of the Consultant;
b) it was rightfully in the Consultant's possession free of any obligation of confidence at or subsequent to the time it was communicated to Consultant by IDRC; or
c) it was developed by the Consultant, its employees or agents independently of and without reference to any information communicated to the Consultant by IDRC.

A disclosure of Confidential Information (1) in response to a valid order by a court or other governmental body, (2) otherwise required by law, or (3) necessary to establish the rights of either party under this Contract, shall not be considered to be a breach of this Contract or a waiver of confidentiality for other purposes; provided, however, that the Consultant shall provide prompt written notice thereof to enable IDRC to seek a protective order or otherwise prevent such disclosure.

Ownership of Confidential Information and Other Materials: All Confidential Information and any Derivatives thereof, whether created by IDRC or the Consultant, remain the property of IDRC and no license or other rights to Confidential Information is granted or hereby implied.

The Consultant shall, on request, promptly return to IDRC all of its proprietary materials together with any copies thereof.

This section shall survive the termination of this Contract.

A15. ASSIGNMENT OF COPYRIGHT AND WAIVER OF MORAL RIGHTS

In consideration of the fees paid, the Consultant, its employees, subcontractors, successors and assignees expressly agree to assign to IDRC any copyright arising from the Deliverables. The Consultant hereby agrees to waive in favour of

IDRC any moral rights in the Deliverables. The Consultant shall secure any additional waivers of moral rights in the works in favour of IDRC, from personnel and subcontractors, as appropriate.

Furthermore, the Consultant may not use, reproduce or otherwise disseminate or authorize others to use, reproduce or disseminate such Deliverables without the prior written consent of IDRC.

A16. PATENT, TRADE MARK, TRADE SECRET AND COPYRIGHT INFRINGEMENT

The Consultant covenants that no Services or Deliverables to be provided to IDRC under this Contract will infringe upon or violate the rights of any third parties, including such parties' intellectual property rights. Without limiting the generality of the foregoing, the Consultant represents and warrants that no Services or Deliverables provided pursuant to this Contract will infringe any existing patent, trade mark, trade secret or copyright registered or recognized in Canada or elsewhere, with respect to or in connection with the intended use of the Services or Deliverables by IDRC.

The Consultant agrees to indemnify and hold IDRC harmless from and against any and all damages, costs, and expenses (including court costs and reasonable legal fees) incurred by IDRC as a result of the infringement or alleged infringement of any third party intellectual property rights, and further agrees to defend and participate in the defence of any claim or suit alleging that IDRC has a liability in this regard.

This section will survive termination of the Contract.

A17. CONFLICT OF INTEREST

The Consultant must avoid participating in activities or being in situations that place it, him, or her, in a real, potential or apparent conflict of interest that has the potential of influencing the Services and Deliverables being contemplated by this Contract.

The Consultant must not accept, directly or indirectly, for themselves or on behalf of any person or organization with whom they are in a close social, family or economic relationship, any gift, hospitality, or other benefit from any person, group, or organization having dealings with IDRC where such gift, hospitality, or other benefit could reasonably foreseeably influence the Consultant in the exercise of its, his or her official duties and responsibilities pursuant to this Contract.

A18. COMPLIANCE WITH LAWS

In performing services under this Contract, the Consultant shall be responsible for complying with all legislation of the country (countries) in which it, he, or she must work (including but not limited to laws pertaining to immigration, taxation, customs, employment and foreign exchange control).

It is the individual's responsibility to comply with the travel visa regulations of any country visited or in transit.

The overhead (included in fees) and allowances paid under this Contract include provision for complying with national legislation of the countries the Consultant may visit (including Canada). IDRC will not entertain any claim for work visas, work permits, etc., or any other costs relating to compliance with the national legislation of any country in the world.

A19. GOVERNING LAW

This Contract shall be governed and construed in accordance with the laws of the Province of Ontario, Canada. Where a dispute cannot be resolved by mutual agreement, the parties agree that any legal action or claim must be brought

before the courts of the Province of Ontario, Canada, which will have exclusive jurisdiction over all such actions and claims.

A20. SEVERABILITY

The provisions of this Contract are severable, and the invalidity or ineffectiveness of any part shall not affect or impair the validity and effectiveness of remaining parts or provisions of this Contract.

A21. WAIVER

Failure by a party to enforce any right or to exercise any election provided for in this Contract shall not be considered a waiver of such right or election. The exercise of any right or election of this Contract shall not preclude or prejudice a party from exercising that or any other right or election in future.

A22. FORCE MAJEURE

Neither party shall be in default by reason of its delay or failure to perform its obligations by reason of strikes, lockout or other labour disputes (whether or not involving the party's employees), floods, riots, fires, acts of war or terrorism, explosions, travel advisories or any other cause beyond the party's reasonable control. Each party will use its best efforts to anticipate such delays and failures, and to devise means to eliminate or minimize them.

A23. NOTICES

Any notices, requests, or demands or other communication relating to this Contract shall be in writing and may be given by: 1. hand delivery, 2. commercial courier, 3. facsimile, 4. registered mail, postage prepaid, or, 5. electronic mail.

Any notice so sent shall be deemed received as follows: 1. if hand delivered, on delivery, 2. if by commercial courier, on delivery, 3. if by registered mail, three (3) business days after so mailing, or, 4. if by facsimile or electronic e-mail, on the date sent. The initial address and facsimile number for notice are set out in this Contract and may be changed by notice hereunder.

A24. REVIEW AND AUDIT

The Consultant agrees, if IDRC so requests at any time up to two (2) years following the Termination Date to:

a) submit a complete financial accounting of expenses, supported by original (or certified copies of) invoices, timesheets or other documents verifying the transactions (excluding any receipts which have been submitted at the time of invoicing as deemed necessary according to the terms of the Contract);
b) give officers or representatives of IDRC reasonable access to all financial records relating to the Services and Deliverables to permit IDRC to audit the use of its funds. This shall include books of account, banking records and, in the case of individuals, credit card statements.

This section will survive termination of the Contract.

A25. LANGUAGE

The parties have requested that this Contract and all notices or other communications relating thereto be drawn up in English. Les parties ont exigé que ce contrat ainsi que tous les avis et toutes autres communications qui lui sont relatifs soient rédigés en Anglais.

ANNEX B – Mandatory Requirements Checklist

INSTRUCTIONS:

As stated in **Section 3.2.1 Mandatory Requirements**, to qualify as an eligible Proponent, you must meet all the following requirements.

PART 1: *General* Mandatory Requirements of this RFP

These general Mandatory Requirements will be confirmed by IDRC:

#	Mandatory Requirements
Mi.	Met submission close date and time
Mii.	Included all required files

PART 2: *Statement of Work* Mandatory Requirements

As stated in in **Section 4.6 Response to the Statement of Work,** the Proponent **must provide detailed information relative to each mandatory requirement**. Indicate in the table, where in the Proponent's Proposal the response to the mandatory requirement can be found:

Example:

This is only to provide an example on how to complete the table and provide the response.

#	Mandatory Requirements	Compliant (yes or no)	Response
	RESOURCES		
M1.	10 Years of Service.	yes	See page 3, heading "xxxxx", paragraph 3 and 4.

Mandatory Requirements in Response to the Statement of Work:

#	Mandatory Requirements	Compliant (yes or no)	Response
	RESOURCES		
M1.	**All Proposed Resources - *Outline*** The Proponent shall outline *all proposed resources* to be used in completing the project and include: **a.** their roles, structure and reporting relationships **b.** name, title, telephone #, email address, location (city and province only*)		

M2.	**Conflict of Interest** The Proponent shall include as part of its Cover letter, a statement that the proponent does not have any real or perceived conflict of interest. Criteria for excluding certain individuals/organizations from undertaking the evaluation based on conflict of interest could include: • having been involved in the design, implementation or oversight of the activities; • having received grant funding from IDRC in the recent past • having a stake in what the evaluation uncovers.		
M3.	**All Proposed Resources - *Bio*** The Proponent shall include an up-to-date bio of *each proposed resource.*		
M4.	**Resources Experience – *References*** The Proponent's response should demonstrate the quality and level of expertise of its proposed team by providing the following: **a.** two (2) client references for whom **similar services** have been done **within the past two (2) years** from the RFP closing date. This shall include: company name, client contact name, contact title, contact telephone number, email address, services period, and brief description of services provided.		

ANNEX C – Rated Requirements Checklist

INSTRUCTIONS:

As stated in **Section 3.2.2 Rated Requirements**, the following requirements will be evaluated according to the degree to which they meet or exceed IDRC's requirements.

As stated in **Section 4.6 Response to the Statement of Work**, the Proponent **must provide detailed information relative to each Rated Requirement.** Indicate in the table, where in the Proponent's Proposal the response to the Rated Requirement can be found:

Example:

#	Rated Requirements	Response
	RESOURCES	
R1.	Demonstrate the qualifications of the Lead Resource.	See page 18, Annex B, section 1.1

RATED REQUIREMENTS:

Rated Requirements in Response to the Statement of Work:

#	Rated Requirements	Weight	Response
	RESOURCES	**25**	
R1.	**Company – Demonstrate Similar Services** The Proponent's response should demonstrate the quality, timeliness and level of expertise of its proposed team by providing a brief description of three (3) relevant assignment for which **similar services** have been done. This shall include: company name, client contact name, contact title, contact telephone number, email address, services period, and brief description of services provided.	**5**	
R2.	**All Proposed Resources Experience – *Demonstrate Experience*** The Proponent's response should demonstrate the quality and level of expertise of its proposed team by providing the following: **a.** a one to maximum two-page up-to-date bio of each proposed resource that includes relevant work experience, education, and all relative professional designations and certifications. **b.** description of the roles and level of effort of each team member	5	
R3.	**Lead Resource – *References*** The Proponent's response should demonstrate the quality and level of expertise of its Lead resource, by providing the following: **a.** two (2) client references for whom **similar searches** have been done **within the past two (2) years** from this RFP's closing date. This shall include: company name, client contact name, contact title, contact telephone number, email address, search period, and services provided.	5	
R4.	**Proposed Evaluation Team** should be composed of members who between them have the following skills Experience and competencies: • Experience in the design and conduct of program-level evaluation of multi-partner initiatives, from a food systems perspective.	10	

	• Experience in evaluating the results of research for development projects and multi-organizational programs (the innovation derived from research, communication and dissemination of research results, capacity building, knowledge translation, and policy influence). • Knowledge and experience in agriculture and food security issues in low and middle income countries, preferably in the Eastern and Southern Africa region. • Knowledge and experience in integrating equity, gender, inclusion and environmental dimensions in agriculture, nutrition and food security research and formative program evaluations particularly as related to applied food security research. • Ability and experience in working with multi-organizational initiatives (both donors and implementers).		
	METHODOLOGY	**70**	
R5.	**Understanding of IDRC, ACIAR and SOW** The Proponent should demonstrate that it has a **complete understanding** of: **a.** IDRC, ACIAR and CultiAF; and **b.** the objectives and requirements in the Statement of Work	5	
R6.	**Approach** The Proponent should describe its approach to go about conducting the Evaluation as per the requirements detailed in the Statement of Work and include a draft project schedule detailing milestone. <u>Including:</u> • Achievements of the evaluation objectives • A roles and responsibilities chart including time commitments of each team member • Ethical standards and guidelines • Workplan and expected deliverables • A detailed timeline tied to the expected deliverables	55	
R7.	Project Risk Management Plan - Describe any contingencies that may hinder the progress or outcome of the project and suggest how you would mitigate them.	10	

5.12 Annex 12: Detailed Methodology

Evaluation Purpose & Objectives

CultiAF II commissioned this external evaluation during its third year of implementation to fulfill accountability requirements and to inform an understanding of results and implementation of the program. As the CultiAF II program reached its third year and a half of implementation, the program was required to undergo an external evaluation This process external evaluation was conducted as a result to fulfil this mandatory requirement and its purpose is to identify achievements, performance issues, and constraints related to activity implementation and effectiveness. The main users of this report are CultiAF program staff and IDRC and ACIAR as funders.

The evaluation team (ET) sought to assess the extent to which CultiAF II has contributed to outcomes and longer-term results. The evaluation assessed progress based on cumulative outcome-level data (goal and first-level objectives and indicators) reported by CultiAF II and triangulation of qualitative data. The focus of the evaluation had two objectives:

- **Objective 1: To Assess Progress/Results Against Planned Outcome Targets:** To assess advancement made toward the achievement of CultiAF II program objectives, expected intermediate results and immediate outcomes to highlight areas of both success and potential improvement for the remaining implementation period;
- **Objective 2: Inform Future Programming:** To formulate lessons learned and recommendations that could inform future programming to CultiAF's Governance Committee (GC) which is responsible to give the program its strategic orientations

The key findings and results from the evaluation helped identify a set of actionable recommendations to better coordinate future activities to achieve CultiAF II's (and potentially future program phases) goals and objectives. The main users of the evaluation findings and recommendations will be CultiAF II staff and the program's funders, ACIAR and IDRC. This is not an impact evaluation and hence no counterfactuals were used.

Evaluation Methodology & Approach

Evaluation Criteria & Research Questions The evaluation aligned with the *Development Assistance Committee of the Organization for Economic Co-operation and Development- Development Assistance Committee (OECD-DAC) Quality Standards for Development Evaluation* (2010)[69] and the IDRC evaluation approach where applicable.[70] The methodological approach was transparent, impartial, inclusive, gender-sensitive, participatory, and utilization-focused. It drew upon mixed methods to gather credible information from a variety of sources. The evaluation design was built around the principles of utility, credibility, independence, impartiality, ethics, transparency, human rights as well as gender equality, and professionalism.

The proposed evaluation questions (EQs) (Table 1) were aligned with the OECD/DAC evaluation criteria.[71] There are nine areas of inquiry linked to the associated evaluation questions (the full list of questions and sub-questions can be found in Annex 1.)

[69] Organisation for Economic Co-operation and Development. "Quality Standards for Development Evaluation." Paris: OECD Publishing, 2010. https://www.oecd.org/development/evaluation/qualitystandards.pdf.
[70] "Evaluation at IDRC." International Development Research Centre (IDRC), January 2017. https://www.idrc.ca/sites/default/files/sp/Documents%20EN/evaluation-at-idrc.pdf.
[71] "Evaluation Criteria - OECD." Accessed April 26, 2021. https://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm.

Table 11: Research Evaluation Questions

Criteria	Research Evaluation Questions
1. Relevance	How relevant is CultiAF programming with the mandates of its funders (International Development Research Centre (IDRC) and Australian Centre for International Agricultural Research (ACIAR)? How relevant is CultiAF programming in terms of food & nutrition security priorities in the Eastern and Southern Africa countries that the program targets?
2. Effectiveness	How effectively are the CultiAF program and the projects it supports addressing food and nutrition security priorities to reach expected outcomes?
3.Environmental Risks	What consideration has been given to the potential environmental impacts, both positive and negative, of the projects supported through CultiAF?
4. Gender	How effectively has the funded research recognized and addressed gender issues
5. Economic Impact	What have been the potential positive or negative economic impacts[72] of the CultiAF innovations? Can they be quantified?
6. Efficiency	How efficient and appropriate has the CultiAF-2 program model—including the governance, management, planning and implementation - been in supporting CultiAF objectives?
7. Economy (financial management)	How effectively is the institutional/ reputational risk of fund recipients being managed? To what extent were research partner activities funded equitably and finances managed in a coordinated way among partners?
8. Research and Program Quality	Considering the projects methods and early research outputs, what is the general assessment of the quality of the research supported through CultiAF at this stage (in terms of overall integrity and legitimacy, importance and positioning for use?
8. Strategic Recommendations	How can CultiAF improve its overall performance for the remaining implementation time of the program? What are the most important program adjustments that can be made to improve future implementation?

The ET used these EQs to analyze the different CultiAF II funded projects in terms of the program relevance and performance. The team's approach and methodology provided a thorough assessment of the CultiAF II project interventions, by presenting useful and linked findings, conclusions, lessons learned and key recommendations for future programming.

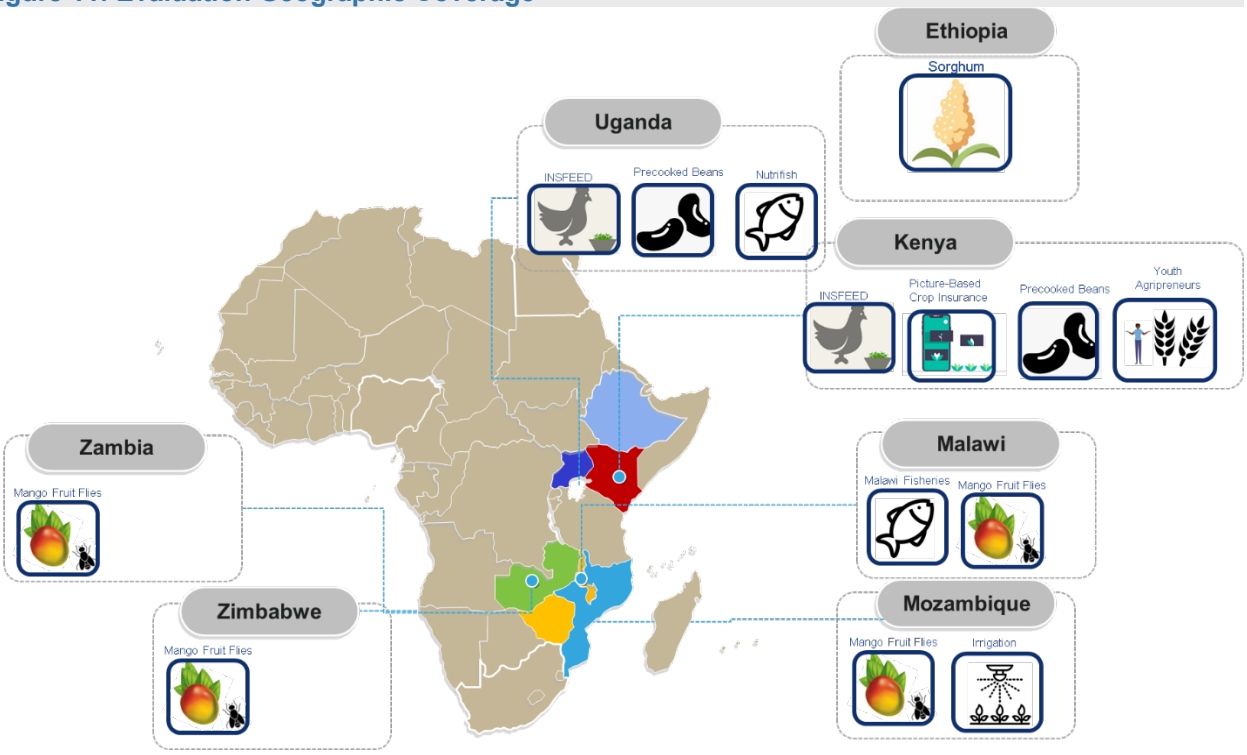
[72] Economic impacts are measured through impact evaluation methodologies. The present evaluation does not apply an impact evaluation methodology and focuses on many other aspects of the program and its projects, such as relevance, effectiveness, efficiency and many others.

This evaluation of CultiAF II has a special emphasis on the focus countries (Ethiopia, Kenya, Malawi, Mozambique, Uganda, Zambia, and Zimbabwe), where the project activities have been operating intensively. The range of projects to be evaluated included those initiatives or interventions for which results are monitored and stored into the 'Trackify'— the IDRC digital monitoring system, based in Excel.

The ET used the Theory of Change (TOC) it constructed during the inception phase of the evaluation, presented in Annex 5 and in the inception report, as an addition to the evaluation matrix (EM) framework—which included the questions, sub-questions, indicators, data collection methods and respondents as well as the data analysis methods, (Annex 4) that allowed for a balanced assessment of both the program and project level results. Although the main focus was at the program initiative level, a lot of the data collected came from the individual projects.

The analysis of the key EQs, along with the use of the EM as a guiding tool to conduct the key informant interviews (KIIs) and focus group discussions (FGDs) allowed for a detailed triangulated approach to evaluate CultiAF II and the progress that has been achieved to date. This included examining the partnership arrangements between IDRC and ACIAR, as well as between these IDRC/ACIAR and the consortium that implementing the projects in the targeted countries.

Figure 11: Evaluation Geographic Coverage



Source: Authors of this report, 2021.

Evaluation Phases The ET used a mix-method approach to generate several lines of evidence that incorporated and reflected various factual data and stakeholder perspectives as the foundation for **rigorous triangulation**. The EM functions as the main analytical framework for how each EQ and sub-questions were addressed. The matrix maps the EQs against data collection and analysis methods, indicators and lines of inquiry, data collection tools and sources of information. This matrix guided the analysis and helped with triangulation and the identification of evidence gaps which ensured that the evaluation design was robust, credible, and transparent. This evaluation had three main phases: inception, data collection and analysis and the final reporting phase (Figure 3).

Figure 12. Phases of the Evaluation

Source: Authors of this report, 2021.

Overall, the team used the following steps and activities to carry out this evaluation.

- Phase 1: Inception

During the inception phase, the ET worked with IDRC and ACIAR to refine the EQs, finalizing the EM, making sure that the optimal method of gathering data and evidence would be conducted during the evaluative process, and that all objectives and EQs could be answered at the final report stage. The ET used the EQs outlined in the TORs as a starting point to finalize the

evaluation matrix and develop a theory of change to help analyze for the evaluation. The EQs were used as a framework to further identify key sub-questions, indicators, relevant data and information sources and also finalize the data collection methods. The EM included reference to OECD's evaluation principles; key questions, sub-questions; performance indicators; proposed data sources; data collection, methods & tools and the methods for data analysis.

Preliminary Literature Review. A preliminary desk/literature review was conducted including reviewing existing CultiAF II monitoring data and materials, program/project technical reports, the CultiAF performance measurement framework (PMF) (Annex 3), Global Canada and Scientific Advisory Committee (SAC) documents, *Research in Action* articles, stories from the fields, annual reports to ACIAR as well as external relevant documents.

Inception Report (IR): The inception meeting and preliminary literature review led to the provision of information for the development and refinement of the IR that was presented to the relevant evaluation coordinators from IDRC and ACIAR to discuss details and needed adjustments.

- Phase 2: Data Collection and Analysis

This evaluation used both qualitative data from key informant interviews (KIIs) and qualitative and quantitative data from the program's performance measurement framework (PMF), reports, database monitoring system 'Trackify' and other program documents (see Annex 10 bibliography). The following is a description of the lines of evidence that were used for data collection by the Baastel team.

An In-depth Literature Review was conducted. The ET reviewed the relevant program, monitoring and evaluation (M&E) documents (Annex 10) and research support projects literature provided by IDRC during the inception phase as well as found online. The documents were reviewed, assessed and data extracted based on the evaluation criteria and systematically classified within a data collection matrix.

Key Informants Interviews (KII): Starting with key informants from IDRC and ACIAR, the ET used a semi-structured approach tailored to different categories of stakeholders, based on interview protocol designed during the inception phase (Annex 8). Semi-structured interview formats allowed the team to ask a variety of stakeholders the same questions in order to facilitate triangulation but also explore other topics that arise in the interview process or that are specific to a given interviewee. Interviews were conducted virtually in English. The ET conducted a total of 25 KIIs (grouped and individual interviews).

Focus Group discussions (FGD): Four FGDs were organized with several stakeholder groups, in the sampled countries, including with beneficiaries from the communities. Due to COVID-19 related travel restrictions, FGDs were conducted online via WhatsApp/Zoom to encourage maximum participation by all.

Table 12: Data Collection Methods by Type of Respondents

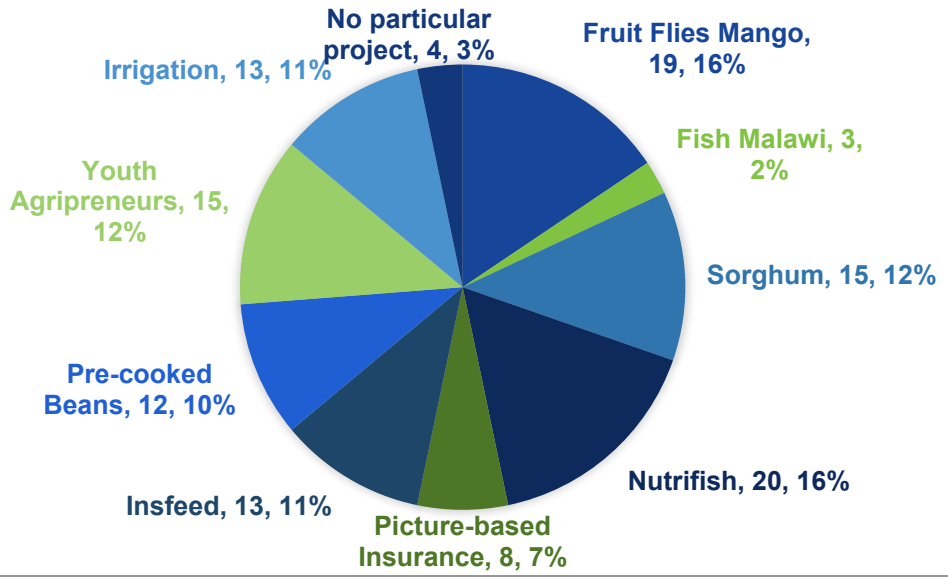
Level of Informant	Respondents
Program (Global) Level *Key informant Interviews*	▪ Donor representatives (IDRC/ACIAR) ▪ Program managers/CultiAF ▪ Governance Committee Members

Table 12: Data Collection Methods by Type of Respondents

Level of Informant	Respondents
Project (Country) Level *Key informant interviews as well as* *Online survey* *Focus Group Discussions in a sample of countries*	▪ Key researchers (international/in-country) ▪ Project's staff (incl. technical support) ▪ Gender Specialists
In-country stakeholders *Key informant interviews as well as* *Online survey (when email address is available)* *Focus Group Discussions in a sample of countries*	▪ National Authorities' representatives ▪ Private Sector's representatives ▪ Direct beneficiaries (research users, smallholder farmers) ▪ Community Leaders

Online survey: The online surveys helped gather participants' opinions on a series of subjects directly linked to evaluation questions. A total of 122 stakeholders responded to the survey between October 10th-31st (out of 285 people who had initially received the link). Among them, 100 (82 percent) have completed the survey fully, meaning that 22 did not answer all the questions. Still, their answers have been considered for this analysis, as long as they had completed at least a third of the survey.

Figure 13: Number of Respondents by Project (Total: 122)



Source: IDRC Culti-AF Evaluation online survey, 2021.

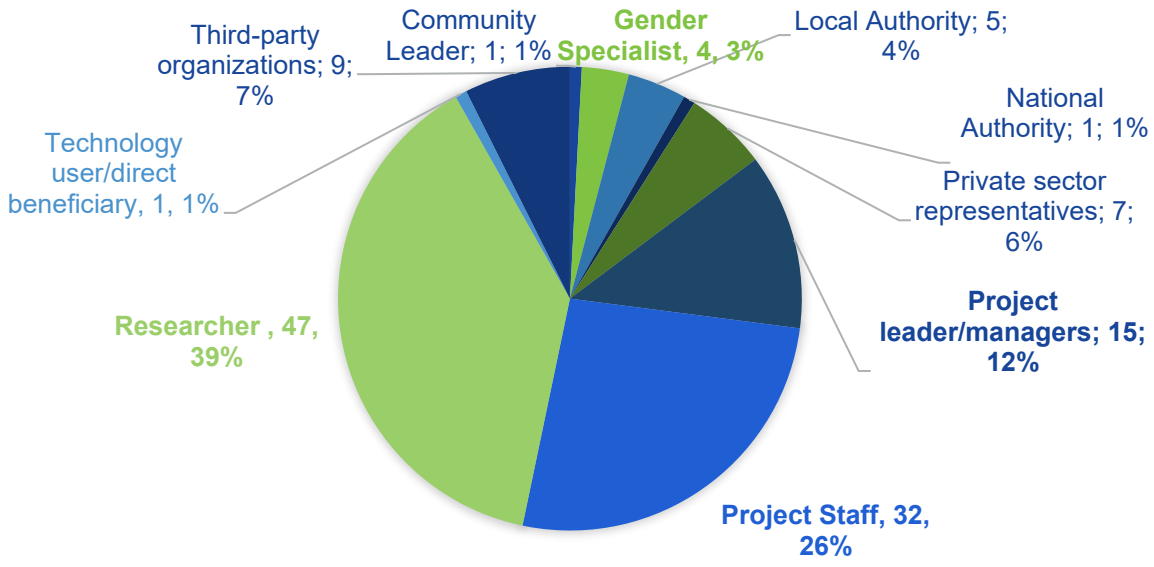
The 122 respondents were selected and mostly evenly distributed across the nine projects in which they have been involved (Figure 4). The only exception was the 'Business Models for Scaling Improved Fish Processing Technologies' (Malawi Fisheries73) who was only represented by four respondents. Furthermore, the most represented projects were Nutrifish (20 respondents), followed by Mango Fruit Flies (18) and Youth Agripreneurs (15). Four respondents declared that they were not attached to any project in particular.

[73] In the rest of the text, the following shortcuts will be used when calling the projects : Climate-smart Interventions for Smallholder Farmers in Ethiopia

In terms of country of duty (Figure 5), 40 percent of the respondents were based in Kenya, which is not surprising since four out of the nine projects were based there, either exclusively or through a transnational project. In the case of Uganda, there were 23 respondents, which hosts 3 different projects, followed by Mozambique (17) and Ethiopia (16). In the latter case, although only one project (*Climate-smart Interventions for Smallholder Farmers in Ethiopia*) is implemented there, 15 people answered the survey.

When asked about their role in the project, the largest number of respondents (47) answered that they were directly related to the research, representing 38 percent of the total population of respondents. They were followed by projects staff (36), among which four of whom were gender specialists, and project managers (15). In addition, there were (9) representatives of third-party organizations, (7) of the private sector and (5) of local authorities who were also relatively well represented, in contrast with technology users/direct beneficiaries[74], community leaders and national authorities, with only one respondent each. The lower response rate from the latter partners was expected because of their lack of access to internet to respond to the survey. The ET conducted the remote KIIs and FGDs to compensate this situation.

Figure 14: Number of Respondents by Role in the Project (Total: 122)



Source: IDRC Culti-AF Evaluation online survey, 2021.
The first figure is the number of peoples, the second the percentage of people related to the total number.
In bold, groups that are part of the projects' teams)

- Phase 3: Reporting Phase

The evaluation team presented preliminary findings to IDRC and ACIAR, followed by the submission of a draft report. The present final report incorporates comments from IDRC and ACIAR.

Limitations: The ET identified limitations to the evaluation process that it mitigated to the extent possible in the context of remote data collection with partners lacking good access to internet.

- The remote data collection process was a challenge because of internet connectivity issues and because of the geographical dispersion of the respondents within and across countries

[74] The 'technology users' terminology was used to include all the final beneficiaries of the projects' innovations, such as the smallholder farmers or the fisherpersons.

and projects. This was particularly true regarding FGDs with end users, who were not always able to connect on time, or to travel to a single place to work with a single connection. In most cases, the discussions were fluid, despite these limitations. Nonetheless, it is clear that the face-to-face, in-country data collection processes would have had a strong added-value for the evaluation.

- In addition, due to the impossibility to travel to projects' countries to conduct fieldwork, it took more time than usual to coordinate meetings, KIIs, and FGDs, despite the very appreciated effort from the projects' staff to call all the stakeholders individually on time;
- Another limitation was the absence of field visits which prevented the team of evaluators from directly observing some of the innovations, which could have been useful to better understand the technology behind, for instance in the case of the sun dryers or kiln;
- Finally, time differences have been a minor issue to coordinate meetings with IDRC and ACIAR, with participants based in very different time zones, stretching from Canada, to Kenya, to Australia. But the goodwill of participants made it possible to organize some general meetings. Generally speaking, Covid-19 affected the ET's full ability to collect data in the same manner as it would have in normal circumstances. All needed efforts were made to ensure the evaluation would be useful for its intended users and the support received from the field was aligned with this objective as well.

Sampling Strategy

To ensure the evaluation had a balanced approach to assessing both program and project level achievements, a sampling strategy was developed.

At project-level, a tiered sampling approach was applied to the population of the nine projects to ensure that the evaluation could, with robust confidence, assess the CultiAF Program using data from the targeted countries, while ensuring a representative coverage of the major characteristics of the portfolio of projects. This approach matches specific analytical processes to sampled sub-populations of projects (Table 4).

Table 13: Sampling Approach at Project Level Across Countries

TIERS	SAMPLED PROJECTS	ANALYTICAL PROCESSES INVOLVED
Tier 1 In-Depth Project Analysis	2	▪ Projects Results Assessments: focused on all evaluation criteria and answering all questions detailed in the evaluation matrix ▪ The assessment was informed by a variety of data collection methods: document review, KII (grouped KIIs will increase the number of stakeholders consulted), FGD and Online survey. ▪ FGDs were held with farmers (one per country) and researchers (through a multi-project, multi-country FGD).
Tier 2 Project Results Assessments	4	▪ Project Results Assessment: focused on all evaluation criteria and answering all questions detailed in the evaluation matrix ▪ The analysis relied on document review, KIIs (grouped KIIs will increase the number of stakeholders consulted), FGD with researchers (through a multi-project, multi country FGD) and the online-survey.
Tier 3 On-line Survey	9 (all projects)	▪ The assessment was informed by a document review and through the online survey that will be administered to different categories of stakeholders, covering relevant evaluation criteria and evaluation questions

Source: Baastel Evaluation Team, 2021.

Using the data from Table 1 the ET summarized the characteristics of the CultiAF II project portfolio. The characteristics are based on the country or countries in which the projects are

implemented, their budgets, the research themes, their timeline and whether they are new projects or renewed from CultiAF I.

Using these same characteristics, the sample below was generated to represent, as best possible, the project portfolio for tier 1 and 2 (tier three project stakeholders will be reached through the online survey).

Table 14: CultiAF-II Portfolio Projects and Sample Criteria and Methods

		Criteria for Selection				Evaluation Methods				
Project Name	Country (s)	New or Renewed Project	Criteria: Budget Level (More than or less than 1.5 million)	Criteria: Stakeholders Available	Thematic Areas	Evaluation Matrix Questions Analysis	# KII (grouped)	FDG- (Small holder farmers – Each FGD will be with beneficiaries from one country only)	FGD- (Researchers – Each FGD will be multi-project, multi country)	Online Survey
Tier 1 Projects										
Nutrifish	Uganda	New	Bigger budget	Good list of stakeholders	Increasing agricultural productivity and incomes, Post-Harvest and CC	Yes	4	FGD A	FGD C	Yes
Youth Agripreneurs	Kenya	Renewed	Smaller budget	Good list of stakeholders	Increasing agricultural productivity and incomes	Yes	4	FGD B	FGD C	Yes
Tier 2 Projects										
Fruit flies Mango	Zambia, Malawi, Zimbabwe, Mozambique	New	Bigger budget	Good list of stakeholders	Post-harvest	Yes	3		FGD D	Yes
Sorghum	Ethiopia	New	Bigger budget	Good list of stakeholders	Increasing agricultural productivity and incomes, Post-Harvest and CC	Yes	3		FGD D	Yes
Fish Malawi	Malawi	Renewed	Smaller budget	List of Only researchers	Increasing agricultural productivity and incomes and Post-Harvest	Yes	3		FGD D	Yes
Pre-cooked Beans	Uganda, Kenya	Renewed	Smaller budget	Mainly list of researchers	Increasing agricultural productivity and incomes, Nutrition	Yes	3		FGD C	Yes
Tier 3 Projects										

Table 14: CultiAF-II Portfolio Projects and Sample Criteria and Methods

		Criteria for Selection				Evaluation Methods				
Project Name	Country (s)	New or Renewed Project	Criteria: Budget Level (More than or less than 1.5 million)	Criteria: Stakeholders Available	Thematic Areas	Evaluation Matrix Questions Analysis	# KII (grouped)	FDG- (Small holder farmers – Each FGD will be with beneficiaries from one country only)	FGD- (Researchers – Each FGD will be multi-project, multi country)	Online Survey
Insfeed 2	Kenya, Uganda	Renewed	Average budget (for Phase II)	Reduced list of stakeholders (17 persons)	Increasing agricultural productivity and incomes, Nutrition	Yes	0			Yes
Picture-based Crop Insurance	Kenya	New	Average budget	Good list of stakeholders	Resilience, Climate Change	Yes	0			Yes
Irrigation	Mozambique	New	Average budget	Good list of stakeholders	Resilience to Climate, Change Increasing agricultural productivity and incomes	Yes	0			
Total							**20**	**2**	**2**	**6**

Baastel

30 Years Promoting Sustainable Development

North American Office

Le Groupe-conseil Baastel ltée
92, rue Montcalm
Gatineau (Québec)
Canada, J8X2L7

P: +1 819 595 1421
F: +1 819 595 8586

European Office

Le Groupe-conseil Baastel srl
Boulevard Adolphe Max 55
B-1000 Brussels
Belgium

P: +32 (0)2 893 0032
F: +32 (0)2 503 3183

Representation France
Olivier Beucher & Gaetan Quesne
T: +33 7 82 92 44 98
E: olivier.beucher@baastel.com
gaetan.quesne@baastel.com

Representation Jamaica
Curline Beckford
P: +1 876 298 6545
E: curline.beckford@baastel.com