MONITORING, EVALUATION AND LEARNING (MEL) PLAN for AICCRA Zambia

Keagan Kakwasha | Netsayi N. Mudege | Megi Cullhaj | Schutz Tonja | Victor Siamudaala

October 2021

CGIAR | AICCRA
Accelerating the Impact of CGIAR Climate Research for Africa

Acknowledgements

We acknowledge the funding from the International Development Association (IDA) of the World Bank to the Accelerating Impact of CGIAR Climate Research for Africa (AICCRA) project.

Table of Contents

Purpose of the project MEL Plan

This Monitoring and Evaluation and Learning (MEL) Plan for the AICCRA project is a management tool that will help the project track and assess progress and achievements and make adjustments if necessary to ensure that the project can achieve its objectives intended results. The purpose of this MEL plan is:

- To explain how the project will be monitored to determine whether the intended results are being achieved.
- To define the project data sources that will be used to verify the results achieved.
- To establish a process to alert implementers and stakeholders of any problems in project implementation and provide the basis for making any needed adjustments.
- To describe information products such as reports and other written documentation that the project will produce and disseminate to its stakeholders, internal and external audiences.

Background of the AICCRA Project

Southern Africa is a climate hotspot. Erratic rainfall, rising temperatures, and recurring droughts and floods impact water, agriculture and energy businesses, undermining farmers' livelihoods and threatening existing crop and livestock systems. The COVID-19 pandemic has placed further stress on food and water security in the region, with both crises affecting workforces, transportation systems, and supply chains from field to fork. As the region and Zambia gears up for economic recovery post-Covid, AICCRA's will strengthen climate resilience, putting food systems on a low emissions development pathway. The AICCRA project assumes that improved water resource management is key to a zero-carbon future.

AICCRA Zambia aims to improve water security in the drylands of Southern Africa through access to knowledge, technologies, and decision-making tools, to strengthen climate resilience in Zambia's agriculture and food systems in the face of a hotter and drier climate. AICCRA will work with Zambian partners by scaling actionable CIS and CSA technologies (solar irrigation, drought-tolerant seed varieties, integrated aquaculture/agriculture practices, integrated crop/livestock practices) to achieve water and food security and build resilience. The project will also strengthen local capacity by

1. Training intermediaries to communicate climate services
2. Implement a local internship program, prviding incubator/accelerator grants for SMEs/entrepreneurs
3. assessing challenges in the enabling environment for startups.
4. Inform policy (in the drought declaration process)

5. Enhance investment plans by identifying suitable financing mechanisms, using fiscal tools to de-risk private sector investments in food value chains.

Objective of the project

The Project Development Objective is to strengthen the capacity of targeted CCAFS (CGIAR Research Program on Climate Change, Agriculture and Food Security) partners and stakeholders and to enhance access to climate information services and validated climate-smart agriculture technologies in Zambia.

Specific objectives

i. Knowledge generation and sharing for effective services
ii. Partnerships for delivery
iii. Supporting the uptake of climate-smart agriculture (CSA) innovations

Project Implementation partners

The partners implementing this project will be as follows:

International Water Management Institute (IWMI). IWMI will be responsible for the overall project management activities in Zambia, and it will also lead the implementation of the Climate-Smart Agriculture (CSA) bundle 1 – ***Sustainable Financing for Off-Grid Solar Irrigation***. CSA bundle 1 aims to address physical and economic water scarcity by providing off-grid solar pumps to smallholder farmers in key-value chains and supporting adaption through sustainable finance solutions (see Figure 1). AICCRA will roll out an accelerated grant mechanism targeting small and medium enterprises (SMEs) in various agriculture value chains to support the uptake of CSA technologies among farmer beneficiaries. See Annex 1 for more information on the deliverables (also check MARLO, see here).

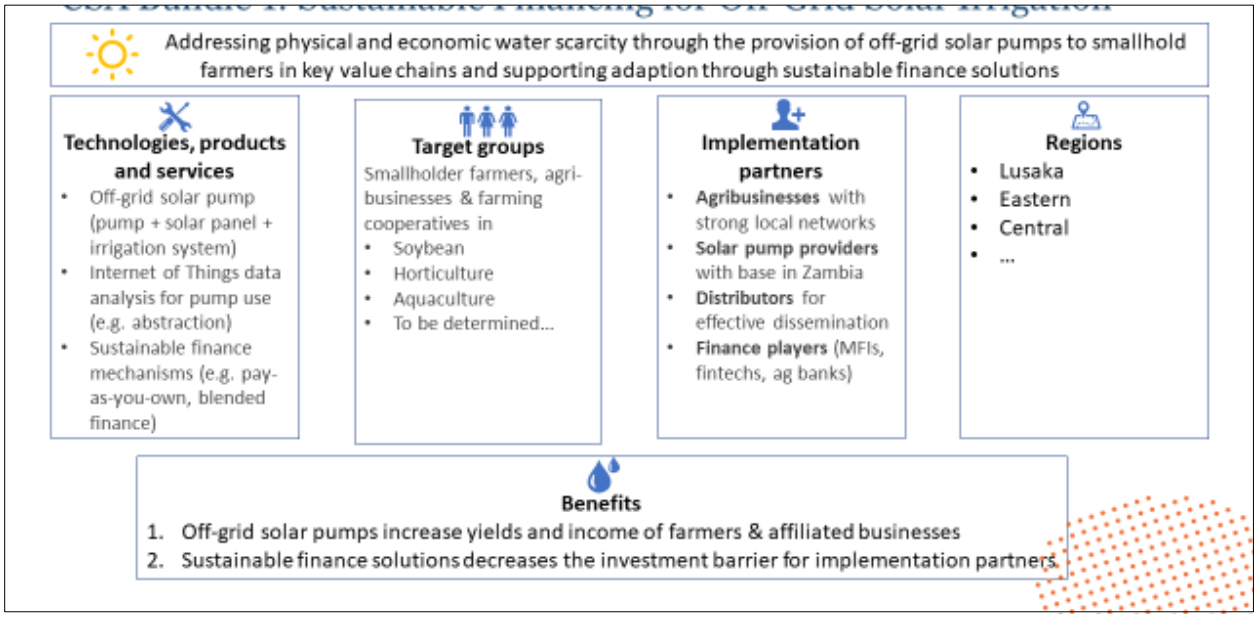

Figure 1: CSA bundle 1 – Sustainable Financing for Off-Grid Solar Irrigation.

2. WorldFish. WorldFish will lead CSA bundle 2 –Integrated Aquaculture Agriculture Systems (Figure 2). It will also host the monitoring and evaluation unit of the project. Annex 1 deliverables expected from WorldFish.

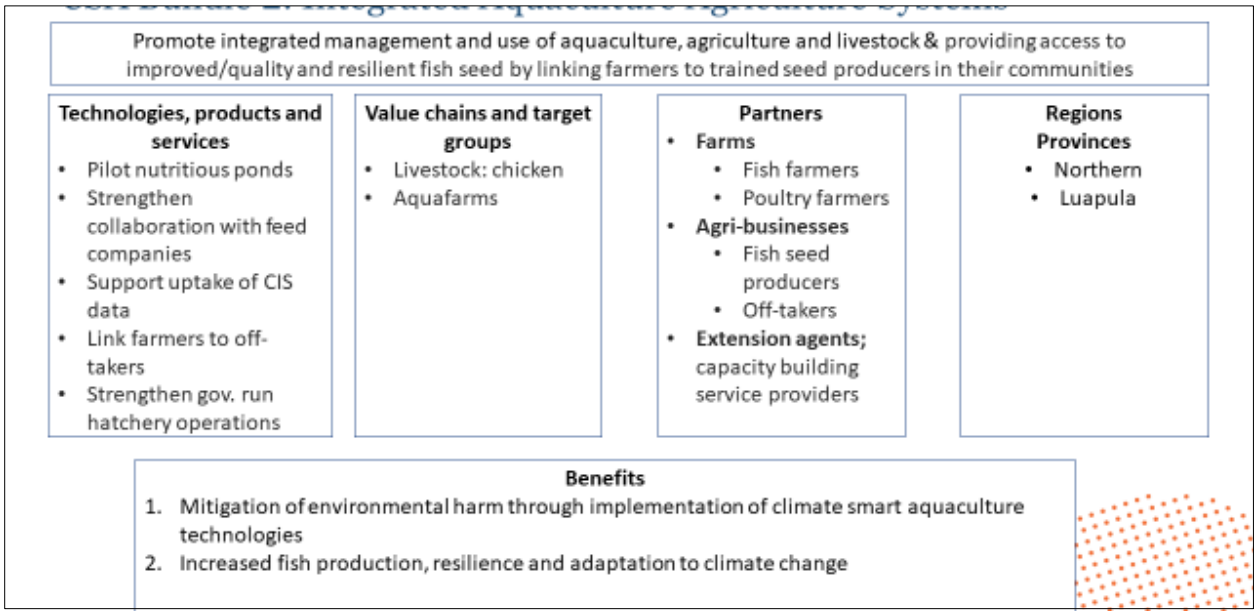

Figure 2: CSA bundle 2 –Integrated Aquaculture Agriculture Systems

3. International Institute of Tropical Agriculture (IITA). IITA will be responsible for the implementation of CSA bundle 3. –Addressing drought through climate-smart seed varieties (Figure 3).

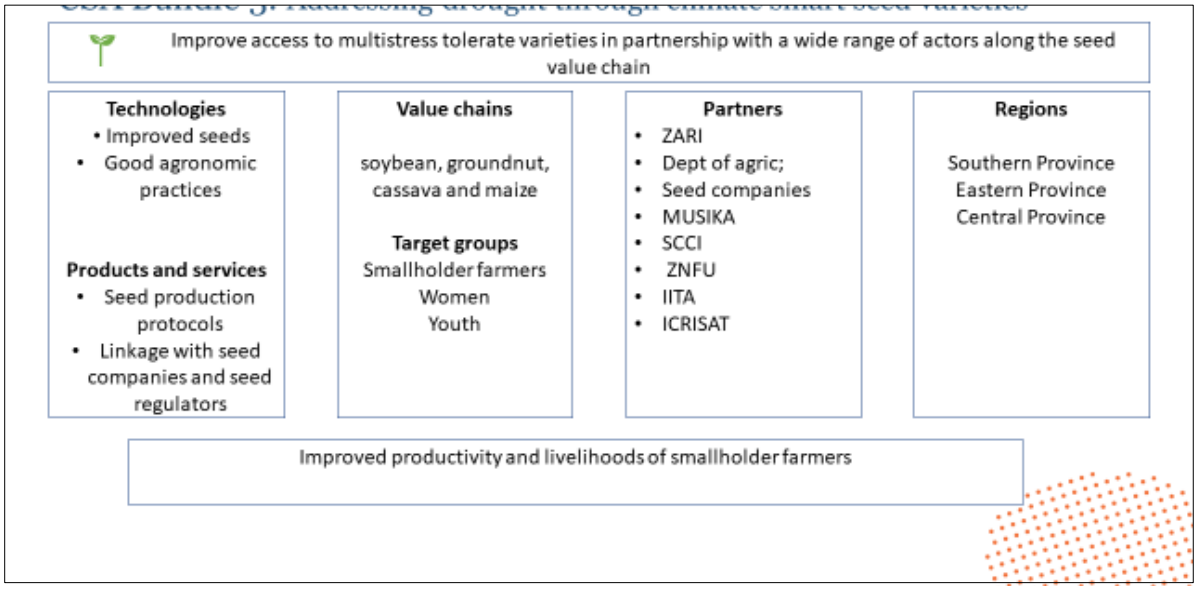

Figure 3: CSA Bundle 3 –Addressing drought through climate-smart seed varieties

4. International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). Ag data hub development; Automated messaging system development;

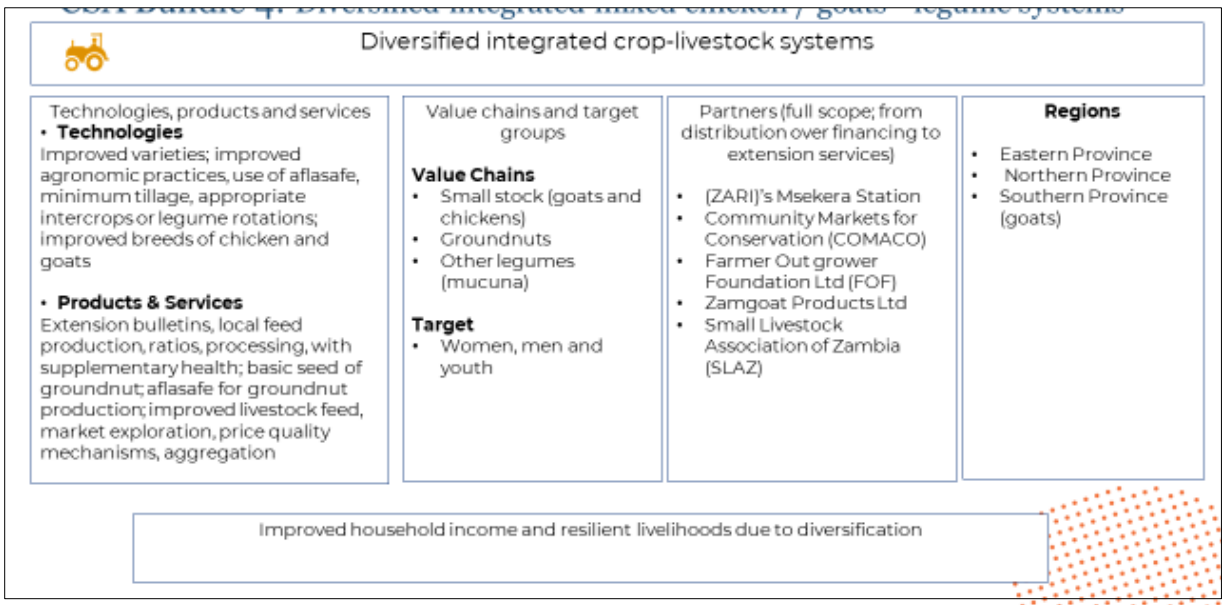

Figure 4: CSA bundle 4 –integrated crop/livestock practices

The AICCRA project MEL team organogram

The project MEL tam comprises the cluster leader from IWMI who is responsible for the overall implementation of the project. The project will have an MEL specialist hosted by WorldFish, and he/she will be responsible for the design and operationalization of the project monitoring and evaluation and learning plan. The M&E Specialist will be reporting to the WorldFish Senior Scientst and MEL Manager Malaysia, and he/she will work closely with the AICCRA Cluster and the CSA bundle leads as well as the CCAFS MEL Specialist (see Figure 5).

At field level, the MEL Specialist will also be required to work with M&E Officers/field coordinators from the AICCRA Zambia partners.

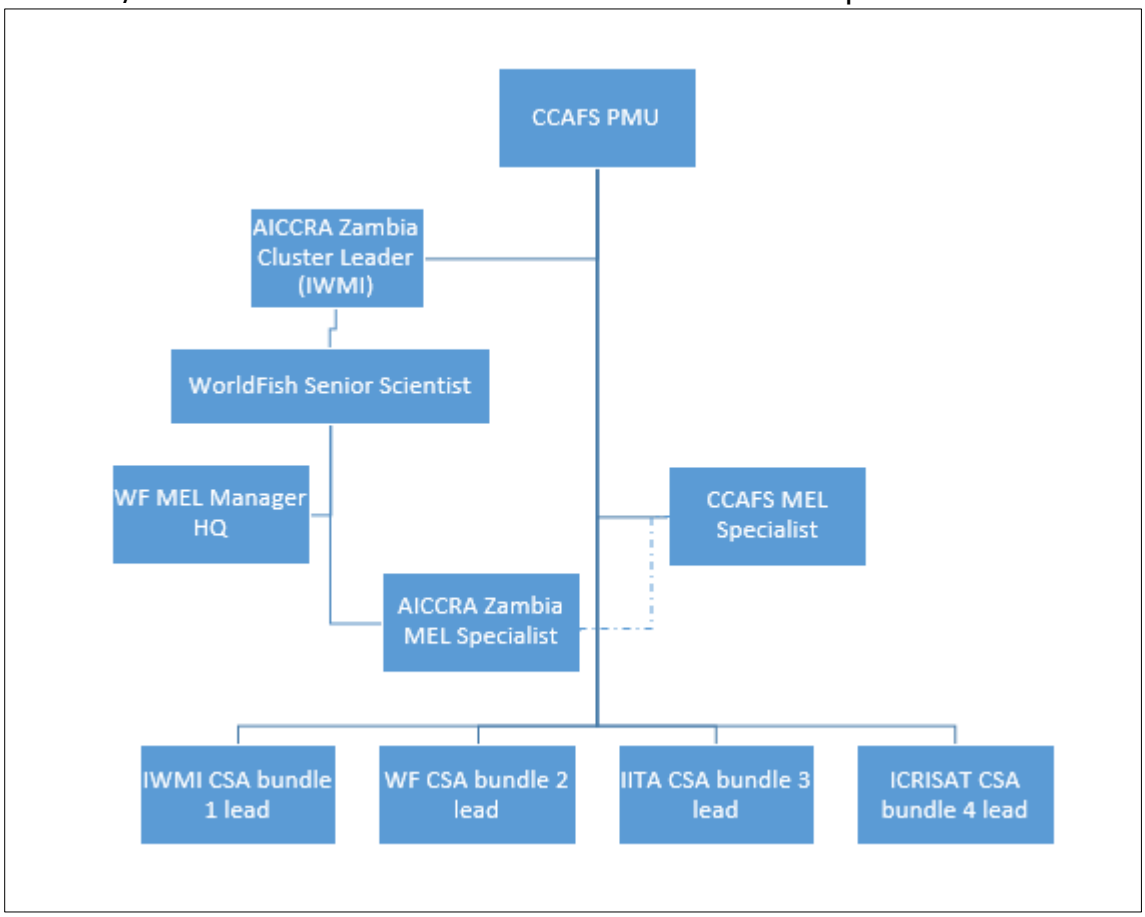

Figure 5: AICCRA MEL team organogram

AICCRA Project Data Flow

The AICCRA project data flow will comprise four categorical stages and these are (1) data collection; (2) data storage; (3) data analysis; and (4) reporting and dissermation (see figure 6). The MEL Specialist will work with CSA bundle leads and the Cluster Leader to ensure that information products (datasets, pictures, reports etc.) are documented and uploaded in MARLO –a permanent data storage that allows planning and internal and external reporting. Reports from the CSA bundle leads will have to be approved by the Cluster Leader prior to uploading them in MARLO. The MEL Specialist will complete a meta data form for each information product to be uploaded in MEL. Th project management unit together with CCAFS MEL Specialist will be responsible for approving reports for external sharing in MALRO. Approved reports will be shared using a handle/link from MARLO.

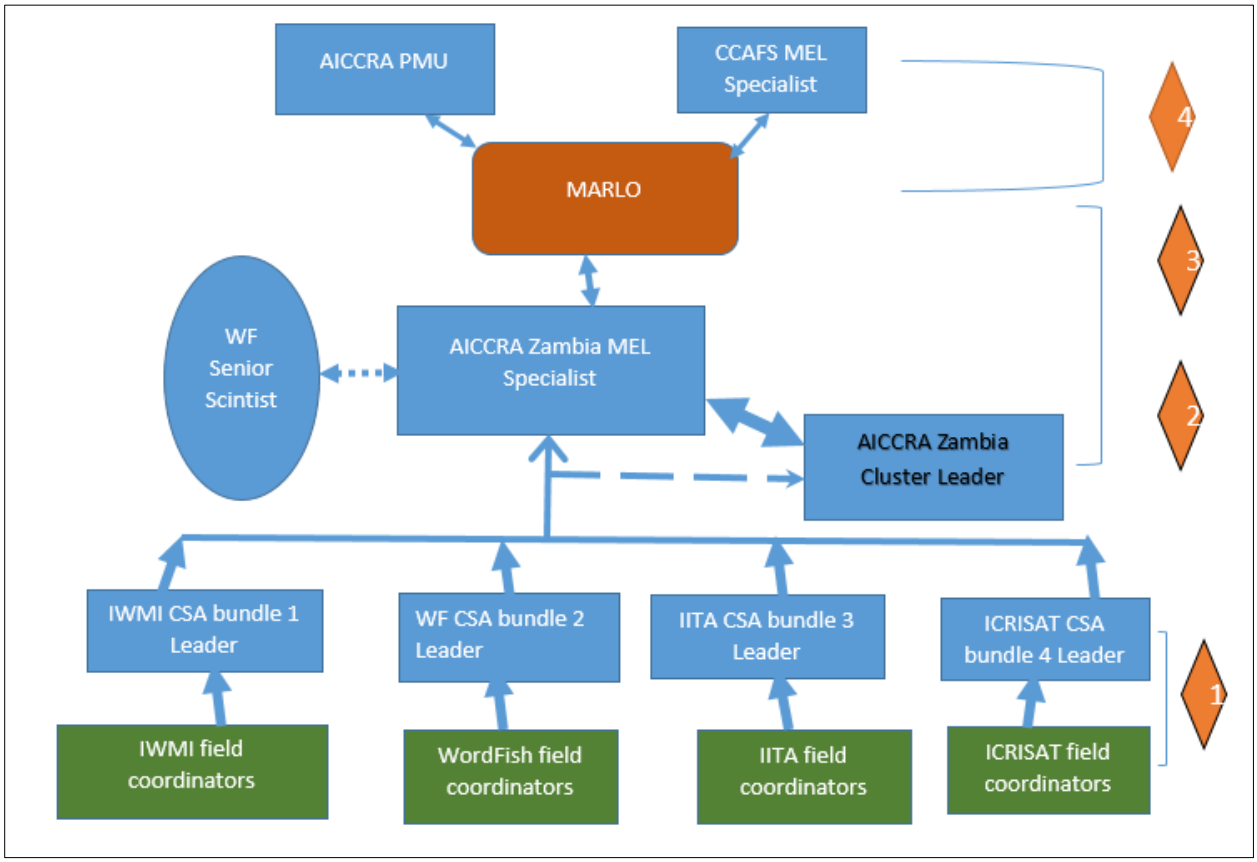

Figure 6: AICCRA project data flow chart

Key Performance Indicators

This section describes the quantitative and qualitative variables that will be used to measure project achievements and help assess the project performance over time. The key performance indicators (KPIs) have been identified at different levels of the results chain, and these are (i) impact indicators, (ii) outcome indicators, (iii) output indicators, and (iv) input indicators.

Impact indicators

The indicators measuring the impact of the AICCRA project will be in three categories that make up a climate-smart agriculture innovation, and these are (i) productivity, (ii) adaptation and, (iii) mitigation. The impact indicators will measure the long-term cumulative effects of the project's and other actors efforts over time. AICCRA Zambia will use the impact indicators to determine the contribution made towards enhanced AICCRA in Zambia.

- Percent reduction in the production system's exposure to climate risks.
- Prevalence of farmers disaggregated by sex and age using agriculture practices that reduce Greenhouse Gas emissions
- Percent of production systems. This will be measured in two ways –and these are (i) farmers' yield disaggregated by sex and age; and (ii) income generated from the sale of farm yield disaggregated by sex and age.

Outcome indicators

Outcome indicators will measure immediate results of using AICCRA project outputs such as a change in the number of farmers using CSA innovations and CIS advisory tools, knowledge and behaviour of farmers with regards CSA practices, skills for reducing/adapting to climate risk, access to CIS, policies and environmental conditions. Outcome results are incremental and cumulative and are not dramatic –it happens over time hence will only be measured periodically. The following are the main outcomes indicators that will measure achievements against project objectives:

- Percentage change in CSA knowledge and CIS advisory tools among farmer-beneficiaries disaggregated by sex and age.
- Number of value chain actors adopting CSA practices disaggregated by sex and age.

Output indicators

Output indicators are direct products (goods and services) that the AICCRA project will deliver due to carrying out its activities and may also be used to account for the resource expenditure. The project will have a lot of outputs (see Annex 1), and they are mainly three categories, and these are:

- CIS and CSA Knowledge generated
- Partnerships developed with NARs, universities, farmers etc. This may include the signing of MOUs, creation of multistakeholder platforms.
- Farmers supported the uptake of CSA innovations.

Theory of Change and Impact Pathway

The Southern Africa is a climate change hotspot. Erratic rainfall, rising temperatures, and recurring droughts and floods impact water sucurity and threatens the existing crop and livestock systems and ultimately undermines farmers' livelihoods. The COVID-19 pandemic has placed further stress on food and water security in the region. It is from this background that the AICCRA project seeks to strengthen the capacity of public and private institutions in the country to enhance access to climate information services and validate and use climate-smart agriculture technologies in Zambia. Figur 8 presents a theory of change and impact pathways for delivering the project objective.

The project will develop climate smart advisory tools; develop gender and social inclusive multistakehoder partnerships to enhance the delivery of climate information services and climate smart agriculture technologies in order to strengthen resilience, adaptation and mitigation to climate shocks in Zambia's drylands. The availability and accessiblity of CIS and CSA technologies will lead to incleased use and adoption of CIS/CSA practices among agribusinesses and farmers. Achieving these results is dependant on the assumption that the SMEs and farmers have much interest and desire to use CIS advisory tools to address problems affecting their agriculture food systems.

Furthermore, the project will build the capacity of public institutions particularly the Zambia Meteological Department (ZMD), agriculbusiness (SMEs) to deliver CIS advisory tools and CSA technologies to farmers in Zambia's climate change hotspots. ZMD staff will be trained on various climate smart related tools, including installation of tools, updating climate data libraries as a way of building their capacity to deliver and enhance uptake of CIS and CSA technologies. The small and medium enterprises (SMEs) will also be provided capacity through the incubator/accellerator grant and CIS/CSA trainings. In the long run, CIS/CSA practices in Zambia's drylands will improve the water security in the agriculture and food systems. This based on the assumption that multistakeholder patnerships, CIS and CSA practices in hotter and drier areas lead to resilience, adaptation and mitigation to climate shocks.

Theory of chang and impact pathway

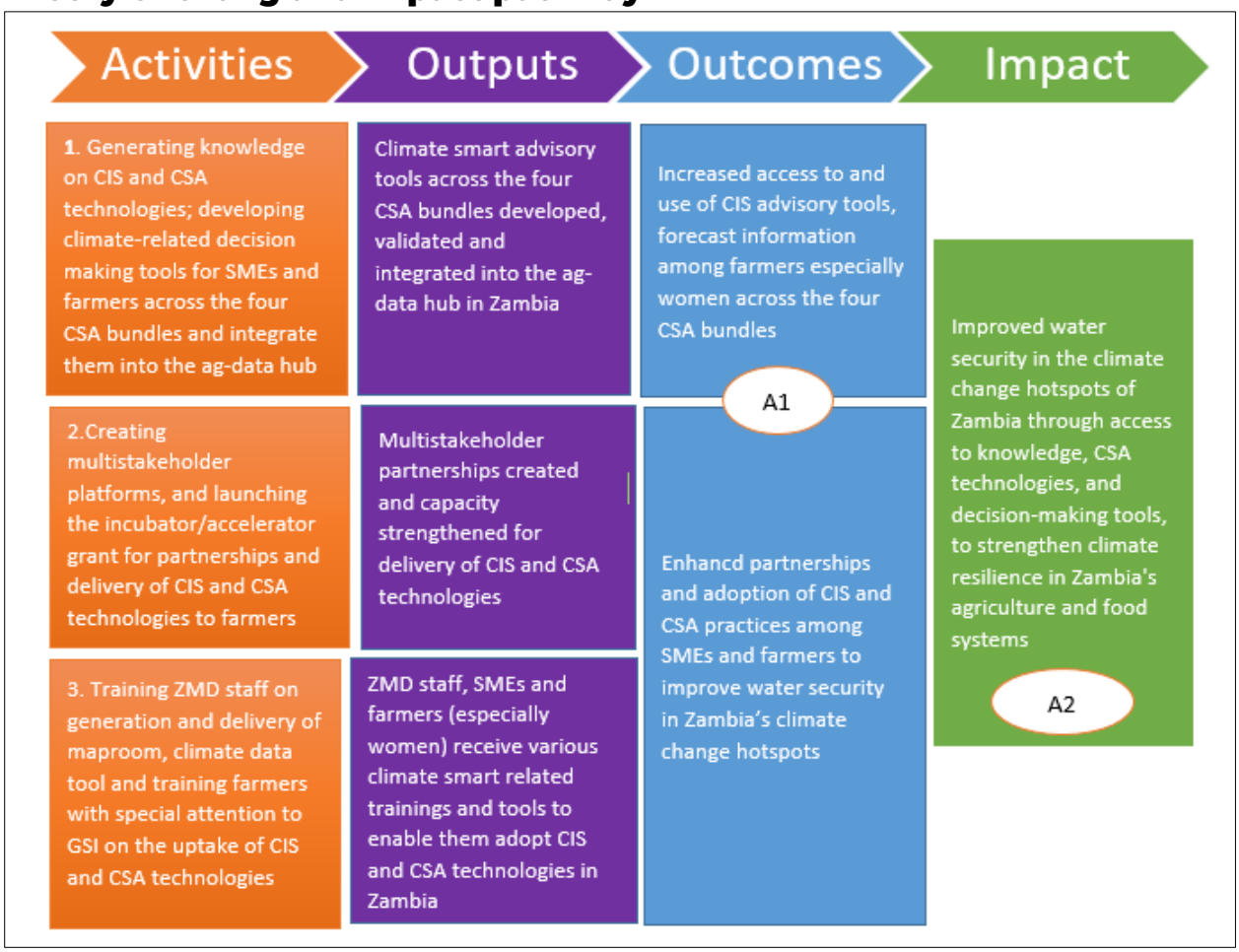

Figure 8: AICCRA Theory of Change and Impact Pathways *('A' denotes assumption)*

Assumption 1: SMs and farmers have interest and desire to use CIS advisory tools and CSA technologies developed by CCAFS partners and stakeholders

Assumption 2: CIS and CSA practices lead to increased resilience, adaptation and mitigation to climate shocks and improved water security
***the theory of change will be updated during the multistakeholder platforms with CCAFS partners and project CSA bundle leads.

AICCRA project Results Framework

The project is geared towards a Results Framework with indicators and targets we do invest in M&E also for its Learning and for our partner, stakeholder and project team's collective decision-making and joint adaptive management.

		2021		2022		
	Unit of measures	**Likely targets to be achieved in 2021**	**Reached to date (Sep 2021)**	**Targets proposed for 2022**	**Cumulative APWB targets for 2022**	**Cumulative PAD Targets 2022**
PDO 1	Stakeholders	3	0	27	30	30
PDO 2	Beneficiaries	0	0	640,000	640,000	750,000
PDO 3	Extra countries	1	1	2	3	3
IPI 1.1	Products	14	14	36	50	45
IPI 1.2	Papers	2	0	15	17	16
IPI 1.3	**Satisfaction w. Products**	**To be assessed by questionnaire**				
IPI 2.1	Platforms	1	1	3	4	4
IPI 2.2	Partnerships	12	4	12	24	18
IPI 2.3	Capacity building persons	300	0	1850	2150	2000
IPI 2.4	**Partner satisfaction/efficiency**	**To be assessed by questionnaire**				
IPI 3.1	Products made accessible	2	1	10	12	9
IPI 3.2		2	1	16	18	18
IPI 3.3	**Use/ adaption of products**	**To be assessed by questionnaire**				
IPI 3.4		2	2	8	10	10
IPI 3.5		3	2	10	13	8

Tracking Project Performance

The AICCRA project performance tracking will comprise (1) routine monitoring of project inputs and outputs; and (2) periodic evaluations for progress towards delivering outcomes and impacts. This section explains how the two approaches will be carried including the frequency of tracking the progress made. Planning and reporting for monitoring and evaluation will be done in MARLO.

Routine monitoring

The AICCRA M&E Specialist will do routine monitoring. He/she will systematically collect data on specified output indicators to track and measure progress concerning AICCRA implementation plan and the results framework. Data collection will be done on a weekly and monthly basis, as outlined in Table 1. Routine monitoring of results will provide the project management and the main stakeholders (IWMI, IITA, ICRISAT, WorldFish and others) the extent of progress made towards achieving project objectives. The M&E Specialist will also work with the project finance team to inform management on the progress made in the use of funds allocated for project activities. The M&E Specialized will convene individual project meetings with CSA bundle leads for routine monitoring meetings at least once a month. Monitoring reports will be presented in monthly/quarterly project meetings with participants representation from each CSA bundle.

Table 1: Indicators for routine monitoring

Output	Indicator	Description	Frequency	Data source
Result Area 1. Knowledge Generation and Sharing				
1.1 Climate-relevant knowledge products, decision-making tools and advisory services created	Number of climate-relevant knowledge products, decision-making tools and advisory services created.	These are climate change early warning advisory tools for various agriculture value chain actors. The tools should be accessible to farmers.	Monthly	• CSA bundle leads • Project meetings
1.2 CIS advisory tools from various value chains integrated into ag-data hub using iSAT and DEA data cubes	Number of CIS advisory tools developed and integrated on ag-data hub	This is a package of CIS advisory tools integrated in one platform	Monthly	• Cluster leader • CSA bundle leads • Project meetings
1.3 Baseline assessment report for the impact of CIS and CSA in Zambia	Baseline assessment report for the impact of CIS and CSA in Zambia developed and disseminated	This is a report describing the status of CIS, farmers' knowledge on climate change as well as baseline values for project indicators	Once off in year 1 of the project	• Farmers in project sites • KII from ZMD • Private sector actors
1.4 AICCRA-funded peer-reviewed research papers written and made available in open access	Number of AICCRA peer-reviewed research papers written	These are various research papers led by and/or co-authored by AICCRA project team members	• Monthly • Quarterly	• CSA bundle leads

1.5 multistakeholder dialogue report on the improvement of dissemination, timing and accessibility of CIS	Number of multistakeholder dialogue conducted on the improvement of dissemination, timing and accessibility of CIS	These are multistakeholder workshops, webinars aimed at disseminating CSA/CIS technologies	Weekly	• CSA bundle leads
1.6 High-resolution sub-seasonal rainfall forecast generated	Number of sub-seasonal rainfall forecasts generated	These are weather forecast reports either at national, provincial and district levels developed and shared with farmers	• Weekly • Monthly	• ZMD weather forecast reports • CSA bundle leads
1.7 Climate and food security bulletin and guide in risk management strategies developed and made available in open access	Number of climate and food security bulletin and guide in risk management strategies developed and made available in open access		• Weekly • Monthly • Quarterly	• CSA bundle leads • ZMD • Ministry of agriculture
Result Area 2: Partnership delivery				
2.1 Multiple platforms framework for integration of tools for ag-data hub created	Number of platforms framework for integration of tools for ag-data hub created	This is an innovation platform comprising scientists working to integrate climate change early warning advisory tools.		• Cluster leader • AICCRA monthly meetings
2.2 Private sector/SMEs from various value chains selected and awarded the AICCRA Incubator/accelerator grant	Number of private sector companies/SMEs awarded the AICCRA CIS/CSA Accelerator grant disaggregated by sex.	Activities will involve the development of the incubator-accelerator-grant-concept note, call for proposals, selection and awarding of grants to successful applicants. Successful applicants and AICCRA will sign letters of agreement describing the roles of the successful enterprises.	• Weekly • Monthly	• Cluster leader • CSA bundle leads • Successful enterprises • Monitoring data will also be collected from SMEs and their respective farmers to understand their progress in implementing the grant.
2.3 Latest version of IRI's Climate Data Tool (CDT) installed at ZMD	Latest version of IRI's Climate Data Tool (CDT) installed at ZMD		• Weekly • Monthly	• ZMD • Cluster leader

2.5 Data library at ZMD installed and updated	Data library at ZMD installed and updated		• Weekly • Monthly	• ZMD • Cluster leader
2.6 NexGen System installed and updated at ZMD	NexGen System installed and updated at ZMD		• Weekly • Monthly	• ZMD • Cluster leader
2.7 Training materials for the NextGen System for sub-seasonal rainfall forecast developed	Number of materials for the NextGen System for sub-seasonal rainfall forecast developed		• Weekly • Monthly	• ZMD • Cluster leader
2.8 Concept note for the establishment of CoP/MSD for CIS delivery and CSA scaling in Zambia developed	Concept note for the establishment of CoP/MSD for CIS delivery and CSA scaling in Zambia developed and shared in open access.		• Weekly • Monthly	• Cluster leader • AICCRA monthly meetings
2.9 Internship/learning program concept note developed	Internship/learning program concept note developed.		• Weekly • Monthly	• Cluster leader • AICCRA monthly meetings
2.10 National drought risk strategy strengthened at the district level	Number of districts strategically strengthened on drought management		• Weekly • Monthly	• Cluster leader • ZMD • MoA
Result Area 3 outputs: Strengthening uptake of CSA innovations				
3.1 ZDM staff trained on generation and delivery of maproom	Number of ZMD staff trained on generation and delivery of map room (disaggregated by sex)		• Cluster leader • ZMD	• Cluster leader • ZMD
3.2 ZMD staff trained on the latest version of IRI's Climate Data Tool (CDT)	Number of ZMD staff trained on the latest version of IRI's Climate Data Tool (disaggregated by sex)		• Weekly • Monthly	• Cluster leader • ZMD
3.3 Farmers (disaggregated by sex and age) from various value chains trained on the uptake of CIS/CSA innovations	Number of farmers (disaggregated by sex) from various value chains trained on the uptake of CIS/CSA innovations	Farmers training reports need to indicate the date, duration, venue, topics covered, participants list by sex and age, and any other relevant information	• Weekly • Monthly	• Cluster leader • CSA bundle leads
3.4 CSA women and youth entrepreneurship webinar series conducted	Number of CSA women and youth entrepreneurship webinar series conducted		• Weekly • Monthly	• Cluster leader • CSA bundle leads

3.5 Incubator/accelerator grant and internship program multimedia campaigns	Number of incubator/accelerator grant and internship program multimedia campaigns		• Weekly • Monthly	• Cluster leader • CSA bundle leads

Periodic Evaluation

The project will conduct (i) baseline evaluation, (ii) mid-term evaluation, and (iii) end-term evaluation. Indicators, description, frequency and data sources for period evaluation are shown in Table 2, and Table 3 shows the key evaluation questions.

i. **Baseline evaluation**. IITA will carry out the baseline survey in year 1 of the project to understand the impact of CIS and CSA in Zambia.

ii. **Mid-term evaluation**. External consultants will conduct the midterm evaluation. It will be done in July 2022, subject to confirmation by the cluster leader and the donor. The midterm evaluation aims to obtain midterm values on the progress made towards achieving the goal and objectives. The M&E Specialist, together with the cluster and CSA leads will develop the terms of reference for conducting the midterm evaluation.

iii. **End-term evaluation**. External evaluation experts will do the end-term evaluation, and it will be conducted at the end of the project in 2023/24.

Tale 2: Period evaluation indicators and data sources

Results	Indicator	Description	Frequency	Data source
Impacts: improve water security in the climate change hotspots of Zambia through access to knowledge, technologies, and decision-making tools, to strengthen climate resilience in Zambia's agriculture and food systems in the face of a hotter and drier climate	Percentage reduction in the production system's exposure to climate risks	Production system's capacity or ability to continue production even when the climatic conditions are not favourable, e.g., farmers being able to produce even when there is drought or extreme change in temperature.	• At baseline • End term/impact evaluations	Farmers in project sites
	Prevalence of farmers using agriculture practices that reduce Greenhouse Gas emissions	These are agricultural innovations or practices that reduce Greenhouse Gas emissions	• At baseline • End term/impact evaluations	Farmers in project sites
	Yield of production system for farmers disaggregated by sex and age	This is the yield of the production system for the target value chains, e.g. aquaculture; Income	• At baseline	Farmers in project sites

		generated from the production system	• End term/impact evaluations	
Outcomes 1: Increased access to and use of climate-relevant knowledge, technologies, and decision-making tools among farmers (disaggregated by sex)	Percentage change in CSA knowledge among farmers disaggregated by sex and age	Farmers that are aware and knowledgeable of the climate-smart advisory tools and CIS available in their communities.	• Baseline • Midterm evaluation • Enter evaluation	Farmers in project sites
Outcome 2: Enhanced adoption of CSA practices and use of CIS among farmers disaggregated by sex	Number of value chain actors who have adopted CSA practices (disaggregated by sex and age)	The farmers that are able to use the innovations/technologies that have been made available to them.	• Baseline • Midterm evaluation • Enter evaluation	Farmers in project sites

Table 3: Key Evaluation Questions

Evaluation dimension	Midterm and end-term evaluation Questions
Relevance **Were the project objectives appropriate to address the problems identified?**	a. To what extent were the AICCRA project objectives relevant to the needs of intended beneficiaries (men, women, youth, SMEs, ZMD staff)?. Were the project objectives relevant to farmers located in Zambia's climate change hotspots?
Coherence	a. *To what extent were the project activities and outputs consistent with the project objectives?*
Effectiveness **How well did the project outputs contribute to the achievement of the project objective?**	a. To what extent did the project succeed in developing CSA advisory services, developing partnerships, and building the capacity of farmers to uptake CSA innovations? b. Were the project outputs delivered as planned? c. Did the project outputs help achieve the intended outcomes? d. Were the results delivered in the best way to maximize impact? e. How did the project interventions across the CSA bundles strengthen the participation of women and youths in CSA practices? f. To what extent did the training of ZMD staff, incubator accelerator grant mechanisms, etc., change farmers' behaviour towards uptaking CSA innovations and use of CIS? g. To what extent has the project contributed to an increase in linkages and multi-partnerships between and among farmers

	and private sector service providers, NARs, universities, CGIAR centres etc.?
Efficiency **How well inputs have been used in activities and converted into outputs.**	a. Were the resources used in the best possible way? Why or why not? b. What could have been done differently to improve implementation and maximize impact at an acceptable and sustainable cost? c. Did the project apply any time or cost-saving mechanisms to achieve results within the approved timeframe and budget? d. Did the project face any obstacles (financial, administrative, managerial) and to what extent has this affected its efficiency? e. Did the project apply any time or cost-saving mechanisms to achieve results within the approved timeframe and budget? f. What are the lessons for efficient project implementation?
Impact	a. To what extent did the adoption of CSA innovations and use of CIS in Zambia's climate change hotspots contribute to (i) improved the productiin systems, (ii) reduce the production systems' exposure to climate risks; and (iii) increase the prevalence of farmers (**especially women and youth**)practice technologies that reduce emission GhG?
Sustainability **The likelihood that benefits produced by the project continue to flow after external funding has ended.**	a. Are there any social, environmental, economic or political factors that influence positively or negatively the sustenance of project results and impacts? b. Is there sufficient government, private sector investment/commitment to continue with service provisioning and linkages with farmers and entrepreneurs c. Has the project catalyzed institutional change (among private sector and government officials) and behaviour change among farmers creating new opportunities in the sector d. What are the positive consequences of the project on men and women's participation in the sector? e. What are the negative consequences of the project on men and women's participation in the sector?

Data collection methods for periodic evaluations

Quantitative and qualitative methods of data collection will be adopted during the evaluation assessments of the project. For quantitative methods, a questionnaire will be the primary tool for data collection, and it will be installed on a mobile phone using either Open Data Kit (ODK) and or KoBoToolbox. Key Informant Interviews (KII) and Focus Group Discussions (FGDs) will be used to collect qualitative data.

Data analysis and results presentation

Quantitative data for evaluation assessments will be analyzed in STATA. Content analysis will be used to analyze qualitative data.

M&E for Learning under the AICCRA project

The project staff will play a critical role in identifying lessons learnt, and the AICCRA project M&E Specialist will document these. The learning for the project will take place through reflection upon (i) operational experiences, (ii) results from routine monitoring, and (iii) results from periodic evaluations, taking full consideration of the project goal. The lessons learnt will be used during project management discussions and will also inform the design of future related projects.

Project Reporting

Internal reporting mechanisms

The M&E Specialist will hold monthly meetings with the CSA bundle leads and the cluster leader to discuss progress made regarding the implementation of project activities against the project work plan. Furthermore, the project will hold meetings with implementing partners monthly to discuss the progress made on implementing the project. Partners will also be required to submit technical reports quarterly and annually to the cluster leader with M&E Specialist in copy. The M&E Specialist will be responsible for uploading approved project deliverables and updating performance indicators in MARLO.

Donor Reporting

The project management unit (PMU) will do donor reporting, and the Zambia cluster will be represented by the cluster leader –Dr. Inga Jacobs-Mata. Thus the Zambia Cluster will ensure timely reporting into MARLO to enable the PMU to report to the donor.

Annex 1: Project deliverables and partners responsible

2021 Deliverables

ID	Deliverable	Responsibility	Co-responsibility
D24637	Training ZMD staff on generation and delivery of maproom	CCAFS FP4 Columbia (Alison Rose, Tufa Dinku)	
D24649	Training of ZMD staff on the latest version of IRI's Climate Data Tool (CDT)	CCAFS FP4 Columbia (Tufa Dinku)	IWMI

D24650	Multiple platform integration framework for integration of tools for the integrated ag data hub	IWMI	ICRISAT
D24652	Review of existing platforms, gaps and challenges in CIS delivery in Zambia	IWMI	IITA
D24659	Online system development/integration for accelerator grant and internship call, application and review process	IWMI	Each of the 4 CSA bundle leads to develop a Request for Applications for their bundle and share this with IWMI)
D24660	AICCRA monitoring and evaluation plan	WorldFish	
D24460	Develop flood and drought monitoring indicators	IWMI	
D24441	Baseline assessment of the impact of CIS/CSA in Zambia	IITA	WordFsh IWMI ICRISAT ZMD
D24484	Installation of the latest version of IRI's Climate Data Tool (CDT) at ZMD	CCAFS FP4 Columbia (Tufa Dinku)	IWMI
D24488	Updated installation of IRI Data Library at ZMD	CCAFS FP4 Columbia (Tufa Dinku)	IWMI ICRISAT
D24491	Updated installation of the NexGen System	CCAFS FP4 Columbia (Tufa Dinku)	IWMI ICRISAT
D24495	Integration of virtual platform to showcase latest developments of tools/services in AICCRA Zambia	IWMI	ICRISAT
D24499	Concept note for the establishment of CoP/MSD for CIS delivery and CoP/MSD for CSA scaling in Zambia	IWMI	IITA WorldFish ICRISAT ZMD

D24505	Internship/learning program concept note	IWMI	
D24506	Incubator/Accelerator grant mechanism concept note	IWMI	IITA WorldFish ICRISAT
D24518	Paper on the participatory selection of key-value chains through stakeholder engagement of best-bet CSA options for smallholder farmers in the agro-ecological zones of Zambia	IWMI	IITA WorldFish

2022 Deliverables

ID	Deliverable	Responsibility	Co-responsibility
D24638	Addition of climate variables to ZMD's gridded climate datasets		
D24641	Climate information products developed in consultation with users and AICCRA partners		
D24645	Training materials on the NextGen System for sub-seasonal rainfall forecast		
D24158	Integrated ag-data hub in Zambia using iSAT and DEA data cube developed.		
D24453	Assessment and inventory of existing and required climate services delivery models		
D24464	Summary Report of testing of 3 communication channels and roll-out of CIS to smallholders		
D24477	Multistakeholder dialogue report on the improvement of dissemination, timing and accessibility of CIS		
D24508	Incubator/accelerator grant and internship program multimedia campaigns		

D24514	CSA women and youth entrepreneurship webinar series		
D24523	Business cases and finance modalities to enhance inclusive access to CSA solutions		
D24530	Risk and return profiles of various CSA technology packages		
D24533	Policy paper on systemic changes in the enabling environment to accelerate adoption and scaling of CSA technologies		
D24536	Evaluation of potential for nature-based solutions 9NBS) and CSA within CSAIP (Discussion paper/white paper/working paper)		

2023 Deliverables

ID	Deliverable	Responsibility	Co-responsibility
D24575	Identification of suitable financing mechanisms to de-risk private sector investments in food value chains		
D24642	Training material on climate basics and the use of the ENACTS maprooms		
D24644	Generation of high-resolution sub-seasonal rainfall forecast		

D24658	Climate and food security bulletin and guide in risk management strategies		
D24454	Contribution to CSA national strategy documents, implementation framework		
D24474	4 Integrated, economically viable CSA technology packages co-designed, piloted and up-scaled for high potential areas		
D24500	Assessment of CoP/MSD impact		
D24503	Multistakeholder dialogue report on scaling CSA and climate services/data/innovations		
D24504	1 catalogue of climate services training materials, co-developed and updated with users.		
D24511	Lessons learnt report: Incubator/accelerator grant mechanism and internship program.		
D24513	Implementation of CSA technology packages in key value chains communications campaign		
D24521	Paper on climate-smartness of innovative CSA options with low/medium adoption potential to accelerate scaling		
D24535	Strengthening of national drought risk strategy (and develop district-level drought		

	contingency plan to mitigate drought