

Cluster Description

Cluster Title: Zambia: Activities led by International Water Management Institute (IWMI)

Activities: WorldFish

Start Date: 2021-01-01.

End Date: 2023-12-31.

Reporting period: 1st January 2023 to 31st December 2023

Project Component

- PDO: Project Development Objective Indicators
- KS: 1. Knowledge Generation and Sharing
- PD: 2. Strengthening Partnerships for Delivery of Climate-Smart Innovations in Agriculture
- CSA: 3. Validating Climate-Smart Agriculture Innovations through Piloting

Executive Summary

Contribution to Monitoring, Evaluation, and Learning (MEL)

The AICCRA Zambia achievements have been reported in MARLO with WorldFish's support (see Annex 1 2023 AICCRA Annual report). Hosting the project M&E staff, WorldFish compiled project deliverables from AICCRA Zambia partners and ensured their timely upload on CG Space, followed by comprehensive reporting in MARLO.

WorldFish led various MEL functions, supporting the IWMI cluster leader in planning and reporting in MARLO. This collaborative approach enhances the accuracy and efficiency of monitoring and reporting processes within the AICCRA Zambia cluster. The table below highlights the key contribution of WorldFish to the cluster, and these form part of the annual report submitted in MARLO.

Contribution to Climate Smart Agriculture (CSA) technologies

WorldFish strengthened the capabilities of six Small and Medium Enterprises (SMEs) contributing to AICCRA Zambia CSA Bundle 2 on Integrated Aquaculture Agriculture System (IAAS). These SMEs include EUNIMOS Investment Ltd, HopeWays Enterprises, Kasakalabwe Multipurpose Cooperative Society, ADSEK Enterprises Ltd, Triple Blessings Center, and Kasama Arts Theatre. WorldFish hosted several workshops, including the following <https://hdl.handle.net/10568/127029> and <https://cgspace.cgiar.org/handle/10568/127028> to train SMEs and an end-of-project

workshop to harvest lessons learned from implementing the project to inform future scaling-up activities. For detailed insights into the lessons learnt workshop, please refer to the report available at D24500: AICCRA CSA-Bundle Two Lesson Learned Workshop Report (<https://hdl.handle.net/10568/130782>).

To ensure that SMEs could increasingly access and effectively utilize climate-smart aquaculture technologies, WorldFish also developed and disseminated a Climate-Smart Aquaculture (CSA) training manual (refer to D25299: <https://hdl.handle.net/10568/131305>) available in English and Bemba; a local language commonly used in Northern and Luapula provinces. WF translated the manuals to ensure their accessibility and useability by women and others with low levels of formal education but who can read the local language. Using different methods, such as local cultural dramas, radios, demonstration ponds, and cascading training to farmers, the SMEs reached 45,154 (36% women) beneficiaries with increased access to CIS and CSA technologies (<https://hdl.handle.net/10568/130745>). Self-reported estimates from a few selected farmers who have adopted climate-smart aquaculture innovation packages show that production has improved by 71% from 240kgs per 400m² sized fishpond in 2021 to 840kgs in 2023.

Climate Information Services (CIS)

WorldFish designed a tilapia decision support tool (D25102: <https://hdl.handle.net/10568/1>). The DS tool/matrix/system was developed based on an analysis of existing knowledge of the temperature thresholds for tilapia and the potential effects of temperature on other water quality variables. Once hosted in iSAT, the decision support tool will serve as a temperature-based early warning alert system for fish farmers in Zambia. It shows under which conditions air temperature may create a normal, high risk or emergency scenario and the monitoring and management mitigations recommended under each scenario. WorldFish is collaborating with the University of Stellenbosch to write a paper titled "Climate Information Systems (CIS) for Aquaculture: Development of a Temperature-Based Early Warning Alert System for Fish Farmers in Zambia." The paper, yet to be finalized, was presented at the World Aquaculture Society Conference 2023 in Zambia (see D24453: <https://hdl.handle.net/10568/137805>).

Gender Equality and Social Inclusion.

WorldFish contributed to strengthening capacity on gender and climate change by working with students from the Geneva Institute to conduct a study to assess Gender Norms and Climate-Smart information in Northern Zambia (<https://hdl.handle.net/10568/131319>). The insights garnered from this study played a crucial role in identifying various communication channels and refining the timing of information dissemination to ensure the inclusion of women as key beneficiaries.

The WF team also trained SMEs on gender and inclusion and how to collect sex-disaggregated data (see training reports <https://hdl.handle.net/10568/127028> and <https://hdl.handle.net/20.500.12348/5596>).

WF also translated the Climate-Smart Agriculture (CSA) training manual into Bemba, a local language, utilized radios, and employed social-cultural innovations to effectively disseminate Climate Information Services and Climate Smart Aquaculture technologies to ensure that vulnerable community members, especially women, are reached by CIS information and knowledge.

WorldFish Contributions to the cluster by deliverables

ID	Deliverable title	Status	Dissemination Handle
D25299	Climate Smart Aquaculture for Smallholder Fish Farmers: Integrated Fish and Small Livestock Farming	Complete	https://hdl.handle.net/10568/131305
D25102	Tilapia Decision Support Tool	Complete	https://hdl.handle.net/10568/137809
D24453	Climate Information Systems (CIS) for Aquaculture: Development of a Temperature-Based Early Warning Alert System for Fish Farmers in Zambia	Complete	https://hdl.handle.net/10568/137805
D24500	AICCRA CSA- Bundle two Lesson Learned Workshop Report	Complete	https://hdl.handle.net/10568/138895
D24533	AICCRA Country Scaling Vision: Zambia	Complete	https://hdl.handle.net/10568/130306
	Gender Norms and Climate-smart	Complete	https://hdl.handle.net/10568/131319



	Information in Northern Zambia		
D24575	AICCRA I2G Open Innovation Challenge - Internship and Grant Opportunity: Post Sprint and Ideation Lab Report	Complete	https://hdl.handle.net/10568/137644
D24521	Internship Tracer Survey Report Internship Innovation Grant (I2G)	Complete	https://hdl.handle.net/10568/137646
D24454	Stakeholder Engagement Report: The Development of a National Framework for Weather, Water and Climate Services for Zambia (NFWCS-ZM)	Complete	https://hdl.handle.net/10568/137749
D24474	Integrated, economically viable CSA technology packages co-designed, piloted and up-scaled for high potential areas reaching out to at least 50,000 farmers	Complete	https://hdl.handle.net/10568/130745
D24511	Lessons learned report: Incubator/accelerated or grant mechanism and internship program	Complete	https://hdl.handle.net/10568/130782
	AICCRA Zambia – Affordability study with farmers using	Complete	https://hdl.handle.net/10568/138867



	the CSA/CIS innovations report		
	AICCRA Zambia Additional Finance Stakeholder Consultation Report	Complete	https://hdl.handle.net/10568/134457
	Scaling Bundled Agro-Climate Advisory Services for Integrated Aquaculture-Agriculture Systems in Zambia	Complete	https://hdl.handle.net/10568/127152
	AICCRA Zambia Beneficiary Report: increasing smallholder farmers' access to enhanced climate information services and/or validate climate-smart agriculture	Complete	https://hdl.handle.net/10568/127066
	CSA-CIS MSD workshop report focusing on aquaculture	Complete	https://hdl.handle.net/10568/127029
	Impact of CSA technology packages on smallholder farmers under the accelerator program in Zambia	Complete	https://hdl.handle.net/10568/130745
	Value chain engagement for sustainable and inclusive scaling of climate-smart agriculture and climate information	Complete	https://hdl.handle.net/10568/137810



	services: Cases from Zambia		
	Framework for incorporating Gender Equality and Social Inclusion (GESI) elements in Climate Information Services (CIS)	Complete	https://hdl.handle.net/10568/125617
	Gender Smart Agriculture for Equality and Empowerment	Complete	https://hdl.handle.net/10568/137401

Acknowledgement

The Accelerating Impact of CGIAR Climate Research for Africa (AICCRA) project is supported by a grant from the International Development Association (IDA) of the World Bank. IDA helps the world's poorest countries by providing grants and low to zero-interest loans for projects and programs that boost economic growth, reduce poverty, and improve poor people's lives. IDA is one of the largest sources of assistance for the world's 76 poorest countries, 39 of which are in Africa. Annual IDA commitments have averaged about \$21 billion over circa 2017-2020, with approximately 61 percent going to Africa.