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Water and Soil Accelerator Inception Report

Sustainable soil and water management from farm to landscape in Malawi and Zambia

Mahlatse Nkosi, André van Rooyen, Thato Mabele, Evans Chinembiri, Inga Jacobs-Mata, Greenwell Matchaya, Ojongetakah Enokenwa Baa, Tinashe Lindel Dirwai, Winnie Kasoma-Pele, Everisto Mapedza, Mirriam Makungwe, Karen Nortje, Munyaradzi Mutenje, Henry Roman

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Authors

Mahlatse Nkosi, Research Officer – Inclusive Agricultural Finance, International Water Management Institute (IWMI), Pretoria, South Africa

André van Rooyen, Advisor, IWMI, Pretoria, South Africa

Thato Mabele, Research Consultant, IWMI, Pretoria, South Africa

Evans Chinembiri, Senior Project Manager – Agribusiness Acceleration and Scaling, IWMI, Lusaka, Zambia

Inga Jacobs-Mata, Strategic Program Director – Water, Growth and Inclusion, IWMI, Nairobi, Kenya

Greenwell Matchaya, Deputy Country Representative and Senior Researcher in Economics, IWMI, Pretoria, South Africa

Ojongetakah Enokenwa Baa, Researcher – Gender, Social Inclusion and Youth, IWMI, Pretoria, South Africa

Tinashe Lindel Dirwai, Senior Regional Researcher – Agricultural Water Management, IWMI, Harare, Zimbabwe

Winnie Kasoma-Pele, Research Associate, IWMI, Lusaka, Zambia

Everisto Mapedza, Senior Researcher – Social and Institutional Scientist, IWMI, Pretoria, South Africa

Mirriam Makungwe, Postdoctoral Fellow – Scaling Climate-smart Agriculture and Climate Information Services, IWMI, Lusaka, Zambia

Karen Nortje, Research Group Leader – Gender Equality and Social Inclusion, IWMI, Pretoria, South Africa

Munyaradzi Mutenje, Researcher – Scaling Water Solutions, IWMI, Lusaka, Zambia

Henry Roman, Country Representative and Southern Africa Regional Representative, IWMI, Pretoria, South Africa

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Cover photo

Water and Soil Accelerator consortia partners and CG Scientists at the Water and Soil Accelerator Inception Meeting in Lilongwe, Malawi. Photo Credit: Cr8tivease Multimedia

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ACRONYMS & ABBREVIATIONS

Acronym	Definition
ABC	Alliance for Bioversity and International Center for Tropical Agriculture
AID-I	Accelerated Innovation Delivery Initiative
AUC	African Union Commission
CARD	Centre for Agricultural Research and Development
CA	Conservation Agriculture
CCARDESA	Centre for Coordination of Agricultural Research and Development in Southern Africa
CFU	Conservation Farming Unit
CIAT	International Center for Tropical Agriculture
CIMMYT	International Maize and Wheat Improvement Center
CBNRM	Community-Based Natural Resource Management
CRS	Catholic Relief Services
CSA	Climate-Smart Agriculture
FARA	Forum for Agricultural Research in Africa
FLC	Forest Landscape Committee
FOF	Farmer Outgrower Foundation
FtF	Feed the Future
GALS	Gender Action Learning System
GAPS	Gender Action Plans
GESI	Gender Equality and Social Inclusion
GIS	Geographic Information System
Kvuno	Youth-led MELIA implementation partner
MELIA	Monitoring, Evaluation, Learning and Impact Assessment
MoAIWD	Ministry of Agriculture, Irrigation and Water Development (Malawi)
MoFEPD	Ministry of Finance and Economic Planning and Development (Malawi)
MwAPATA	Malawi Agricultural Policy Advancement and Transformation Agenda
NGO	Non-Governmental Organization
ODK	Open Data Kit
OAF	One Acre Fund
PCU	Program Coordination Unit
PMEL	Planning, Monitoring, Evaluation and Learning
PSC	Project Steering Committee
RFMS	Results and Field Monitoring System
SADC	Southern African Development Community
SADD	Sex, Age and Disability Disaggregated
S4I	Scaling for Impact
SMEs	Small and Medium Enterprises
TDCs	Title Deed Certificates
TLC	Total Land Care
ToC	Theory of Change
USG	United States Government
VNRMC	Village Natural Resource Management Committee
WEAI	Women's Empowerment in Agriculture Index
WASA	Water and Soil Accelerator
ZoI	Zones of Influence

Photo credit: Christian Thierfelder, International Maize and Wheat Improvement Center (CIMMYT)

Summary

The Water and Soil Accelerator (WASA) is a three-year, rapid-response initiative (2024-2027) led by the International Water Management Institute (**IWMI**) and funded by the US Government (USG), co-designed to scale evidence-based water and soil management interventions across rainfed agri-food systems in **Malawi and Zambia**.

Operating within the former Feed the Future (FtF) Zones of Influence (ZoI), WASA addresses the critical vulnerability of rural communities, where 85–90% of the population depends on **rainfed agriculture** that is increasingly threatened by erratic rainfall, prolonged droughts and degraded soils. Rather than piloting new technologies, the project focuses on rapidly scaling proven interventions, including climate-smart conservation agriculture, watershed management, nature-based solutions and community-based natural resource governance, to make a lasting impact from **farm to landscape level**.

The overarching goal is to catalyze the widespread adoption of these sustainable practices, aimed at improving agricultural productivity, strengthening local capacities and institutions, and expanding equitable access to resources and knowledge for smallholder farmers, particularly women. The vision is to connect at least **one million farmers** and value chain actors to innovative tools and information needed to enhance water retention, soil regeneration and landscape management across **one million hectares** of land.

The Theory of Change (ToC) integrates watershed management and farm management as primary drivers of change, supported by **capacity building** and **inclusive participation**. The project targets two primary outcomes: 1) improved watershed management through sustainable water resource management practices that extend beyond individual farms, and 2) improved farm management, where smallholder farmers adopt climate-smart agricultural practices and utilize improved technologies. The ultimate impact is increased climate-resilient agricultural productivity in targeted areas, defined by higher and more stable crop yields and farm incomes despite climate stresses.

The project uses an innovative **consortia-based delivery model**, tapping into existing networks and partnerships to ensure demand-driven, locally relevant implementation. This approach highlights **co-design** processes that integrate scaling into local delivery systems, relying on established trust and community relationships to promote the adoption and adaptation of sustainable practices. The five competitively selected consortia, each comprising diverse and complementary technical and delivery partners, are strategically aligned to identified geographies and thematic areas:

- **Catholic Relief Services (CRS)-led partnership:** Operating in Malawi, it focuses on landscape planning and committee engagement; coordinating integrated water management and soil conservation activities; expanding demonstration farms and rainwater systems; promoting agroforestry and intercropping; creating peer learning groups and farmer learning centers; and strengthening market access and partnerships. Partners include Illovo Sugar Malawi, MwAPATA Institute and Churches Action in Relief and Development.

- **Conservation Farming Unit (CFU)-led partnership:** Operating in Zambia, it focuses on testing and scaling water and soil management technologies, including agroforestry systems, and integrating drought-tolerant seeds with conservation agriculture practices; providing hands-on training on sustainable farming techniques and promoting gender and youth empowerment; gathering of evidence to influence policy; mechanization; and inclusive insurance. Partners include Viamo, AgriPredict and Contractsure Services Limited.

- **Total Land Care (TLC)-led partnership:** Operating in both Malawi and Zambia, it focuses on steering sustainable water and soil management practices, crop diversification and intensification, and local seed collection; farmer trainings, intervention bundling and localized delivery; community governance; and inclusive integration. Partners include African Fertilizer and Agribusiness Partnership, Farmers' Outgrower Foundation, PELUM Malawi and Mediae.

- **Solidaridad-led partnership:** Operating in Zambia, it focuses on regenerative and rotational grazing agriculture training; demonstration site with a mini water reservoir; inclusive seed loan facility; farmer training on waste aggregation for quality organic fertilizer production; provision of early warning systems and extension services; establishment and strengthening of Community-based Natural Resource Management (CBNRM) Committees; and data gathering using transformative methods. Partners include Kvuno, Greencare Eco Solutions, AgriPredict and Mediae.

- **One Acre Fund (OAF)-led partnership:** Operating in Zambia, it focuses on enrolling farmers for agroforestry-carbon packages (350+ trees/ household); establishing decentralized tree nurseries; distributing tree seedlings to farmers; providing quality inputs: fertilizer, seeds, soil amendments and training; providing crop insurance to mitigate weather risks; delivering technical support on agroforestry, green manure and cover crops, and composting (Trainer of Trainers); training field teams and demo ambassadors on composting; exhibiting agroforestry and composting at agricultural shows; conducting joint soil/ water training and field days with private sector; developing seasonal and long-term climate/crop advisories; and producing TV and radio content on climate-smart agriculture and carbon financing. Partners include Golden Valley Agricultural Research Trust (GART), Green Cycle Ltd, Mediae and PASAP.

IWMI together with two other CGIAR centers, the International Maize and Wheat Improvement Center (CIMMYT) and Alliance Bioversity and CIAT (ABC), provide strategic and technical support to all delivery partners, helping to catalyze impact at scale. The **Project Steering Committee (PSC)** includes representatives from IWMI, CIMMYT, ABC and nominated consortia leads, while implementation is overseen by a **Program Coordination Unit (PCU)** based at IWMI, with technical leadership distributed across thematic workstream leads and country coordinators in Malawi and Zambia to ensure alignment with national priorities.

The **eight thematic areas** that structure WASA's interventions are: sustainable water management, green infrastructure deployment, modified farming and crop systems, capacity development, collective action and natural resource management, climate information services, an enabling environment with proper financing,

and gender equality and social inclusion (GESI). These themes serve as interconnected parts of a holistic systems approach rather than separate pillars.

WASA is being implemented in **three phases** aligned with cropping calendars: Phase 1 (Mobilization and Deployment, months 1–6), Phase 2 (Scaling and Adaptation, months 7–24 and Phase 3 (Embedding and Sustainability, months 18–36). This structured approach ensures systematic progress from initial partner mobilization and baseline establishment through full-scale implementation to final institutional handover and community ownership protocols. The final phase, in line with the exit strategy, recognises that government and strategic partner integration is vital for WASA's interventions to have **lasting impact** beyond the project's completion. Financial sustainability is secured through market-driven approaches, linking smallholder producers to inclusive value chains and supporting youth- and women-led enterprises through an embedded business accelerator to be launched in 2026.

The robust Monitoring, Evaluation, Learning and Impact Assessment (MELIA) framework supports real-time feedback loops for **adaptive management**, enabling adjustments to strategy, implementation and partnerships based on evidence and field insights. Quarterly consortium reflections, cross-consortium learning exchanges and participatory evaluation mechanisms ensure continuous refinement of delivery strategies. Risk indicators are included in the MELIA framework for early detection and rapid response, but a broader, stand-alone risk management framework has also been developed. This proactive approach, outlining the likelihood and impact of risks, along with mitigation strategies, assumptions and responsible entities, strengthens resilience during WASA's implementation and beyond.

Finally, WASA will quantify its impact using a multi-model framework to compare a baseline scenario with an intervention scenario, providing evidence-based data on how farm-level practices and watershed management influence hydrology, soil health and agricultural productivity. By enhancing understanding and demonstrating the effectiveness of WASA's interventions, this impact modeling will support the scaling of sustainable practices across Malawi and Zambia, well into the future.

The Water and Soil Accelerator (WASA) Inception Report outlines the strategic foundation, design rationale and implementation framework for a rapid-response initiative aimed at scaling proven soil and water management practices in rainfed agricultural systems across Malawi and Zambia. The report responds to increasing climate vulnerability, land degradation and declining productivity affecting rural livelihoods, recognizing that most smallholder farmers depend on rainfed agriculture and are thus exposed to erratic rainfall and environmental stress. Rather than piloting new technologies, the initiative focuses on accelerating the adoption of validated climate-smart interventions through consortia-based delivery, systems-level coordination and inclusive stakeholder engagement.

Structurally, the report progresses from contextual background and project overview to co-design processes, theory of change and results framework, followed by geographic targeting, inclusion strategies, monitoring and evaluation approaches, risk management and impact modeling. Together, these sections provide a roadmap for translating scientific knowledge into scalable, landscape-level resilience outcomes aimed at sustainable agricultural transformation.

Photo credit: Christian Thierfelder, CIMMYT

1. Introduction

In Malawi and Zambia, rural communities remain overwhelmingly dependent on rainfed agriculture, with approximately 85–90% of the rural population relying on it for their livelihood[1,2]. This dependency exposes communities, especially those most marginalized, to heightened vulnerability in the face of climate variability and extreme weather events. Increasingly erratic rainfall, shifting seasonal patterns and the rising frequency of droughts have severely disrupted agricultural productivity, food security and rural incomes. Compounding these climate pressures are widespread deficiencies in water and soil management, with poor land use practices contributing to soil erosion, reduced soil moisture retention, land degradation and declining yields, particularly in water-scarce areas.

Strengthening Rainfed Agriculture for Climate Resilience

Increasing the land under irrigation is a sound medium- to long-term option, but it is expensive and takes time; therefore, investments in strengthening rainfed agriculture remain a feasible immediate strategy. Conservation agriculture and rainwater harvesting technologies, such as soil ripping and tied ridges, can improve water infiltration and increase crop yields by lowering water loss through evaporation and runoff (Figure 1). In so doing, these technologies not only enable climate-resilient cropping, but also promote long-term soil health, increase water productivity and reduce runoff-associated erosion[3,4].

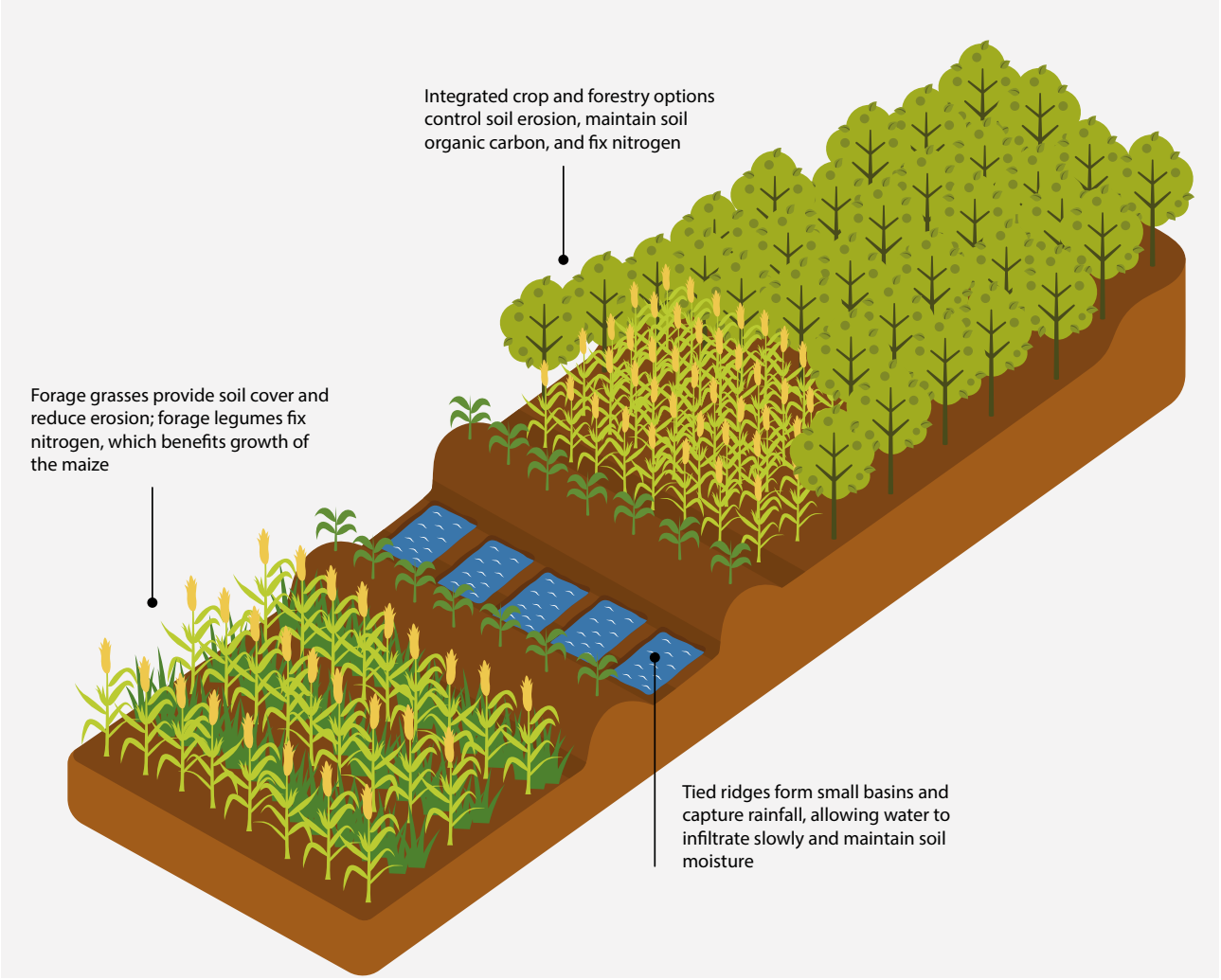

Figure 1: Scaling validated soil and water management practices from plot to landscape.
Source: Adapted from Kizito et al. 20223.

For sloping and erosion-prone landscapes, strategic water flow management is critical in preventing soil erosion and crops being washed away, which may cause severe downstream impacts. Integrating agroecological practices, such as perennial vegetation, agroforestry and green infrastructure, has additional benefits in stabilizing hydrological cycles, sequestering carbon, protecting biodiversity and diversifying crops, in turn improving farmers' income sources[5]. When combined with climate-resilient crop varieties, targeted crop diversification and access to climate information services, these practices offer pathways to agricultural systems that are climate-adaptive, water-efficient, profitable and sustainable. Financial linkages and climate information services further expand access to innovation, enhancing resilience and inclusive growth.

Given that projections indicate potential yield reductions of 15–50% due to variability in rainfall patterns[6,7], recent work by IWMI and partners to identify and evaluate suitable interventions that build local and regional resilience is both relevant and timely.

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Building on Previous and Existing Programs

The current project builds on previous and ongoing initiatives in Zambia and Malawi, particularly in areas where the U.S. Government (USG) targeted prior and ongoing investments within the Zambezi catchment in Zambia and Malawi, and specifically within the former Feed the Future (FtF) Zones of Influence (ZoI). The lead partners were all involved in evaluating and rolling out interventions in these areas, directly or indirectly funded by the USG or other donors. Apart from building on the foundations laid by the FtF investments, the following completed and ongoing work provides a solid basis on which to expand the project's reach and impact.

Ukama Ustawi, a regional integrated initiative led by IWMI from 2022 to 2024, sought to transform agricultural resilience across 12 East and Southern African countries by diversifying maize-based farming systems. True to its name – "Ukama" (Shona for partnerships) and "Ustawi" (Swahili for prosperity) – the initiative advanced agricultural transformation through collaborative partnerships and a shared goal. By 2024 it had reached over 164,000 farmers with climate-smart agriculture (CSA) practices and had extended digital agro-advisory and financial services to millions more, including 2.4 million farmers engaged through the *Munda Makeover* TV show[8]. By advocating for the use of digital innovations, providing science-based technical assistance to agribusinesses, and strengthening the enabling environment, USD 14 million in blended finance was catalyzed to support agribusinesses' scaling ambitions. Policy engagement in Ethiopia, Madagascar, Tanzania and Zambia further influenced national strategies, unlocking USD 734 million in investment and underscoring the power of coordinated advocacy. Furthermore, Ukama Ustawi placed inclusivity at the center of its engagements. Through the Gender Equality and Social Inclusion (GESI) strategy and toolkit, together with utilization of gender transformative methods such as GenderUp and the Gender Action Learning System (GALS), the program promoted an all-of-society approach that specifically supported women and youth involved in agriculture in transitioning to sustainable, intensified and diversified agri-food systems.

Accelerated Innovation Delivery Initiative (AID-I), a rapid response program funded by the USG as part of the FtF initiative, was designed to address the agricultural impacts of high fuel and fertilizer prices, which had been exacerbated by the Ukraine conflict. Operating as a two-year intervention across Malawi, Tanzania and Zambia, AID-I provided targeted assistance to three million smallholder farmers through four core areas: improving soil health and fertilizer management, strengthening local seed systems, connecting farmers to financial services, and delivering enhanced extension and advisory services. The initiative established agile and networked rural innovation hubs that facilitated technology adaptation and sustainable value chain development, while fostering diversification through climate-smart agronomic practices for cereals, legumes, vegetables and feed crops. Integrating both CGIAR and non-CGIAR innovation partners to support last-mile delivery, it included specialized components such as the livestock-focused AIDI-L project, launched in May 2024, which aims to reach 400,000 households through poultry vaccination campaigns and market linkages.

Southern Africa Fertilizer and Soil Health Coordination Hub, funded by the World Bank, implements the Africa Fertilizer and Soil Health Action Plan within the African Union Commission (AUC) and Forum for Agricultural Research in Africa (FARA) mandates. The hub is jointly coordinated by 14 donors through African institutions, led by the Southern African Development Community (SADC) and the Centre for Coordination of Agricultural Research and Development in Southern Africa (CCARDESA) Regional Communities, to link national soil management plans with regional donor and soil management programs. The main emphasis is on the coordination of field and landscape soil management practices, including biophysical, policy, market and capacity building aspects. The hub aims to combat soil degradation, optimize fertilizer use and promote sustainable farming practices to rebuild the region's agricultural foundations and achieve food security by 2030[9].

CGIAR Science Programs and Accelerators, particularly the Sustainable Farming (SFP), Multifunctional Landscapes (MFL), and Scaling for Impact (S4I) programs, provide critical foundational research that directly complements the current project's focus on enhancing the efficiencies of water and soil health through integrated farm-to-landscape interventions. Furthermore, S4I represents a transformative framework designed to bridge the gap between research innovations and real-world

implementation at scale. As the first CGIAR program fully dedicated to scaling land, food and water systems innovations, it turns research into measurable impact through transdisciplinary science, strategic partnerships and evidence-based scaling pathways. The main program targets, as depicted in Figure 2, are to reach 62 million beneficiaries, apply biodiversity-friendly and/or climate-smart innovations to more than 10 million hectares of land, create or improve 250,000 jobs, provide 480,000 people – half of them women – with access to healthier diets, and mobilize USD 5 billion in development partner investments to amplify scaling and system-wide impact by 2030[10]. S4I's emphasis on bundling technologies with services, finance and support systems, combined with its focus on building enabling environments through policy, regulation and market access improvements, provide essential infrastructure for sustainable adoption of the current project's interventions.

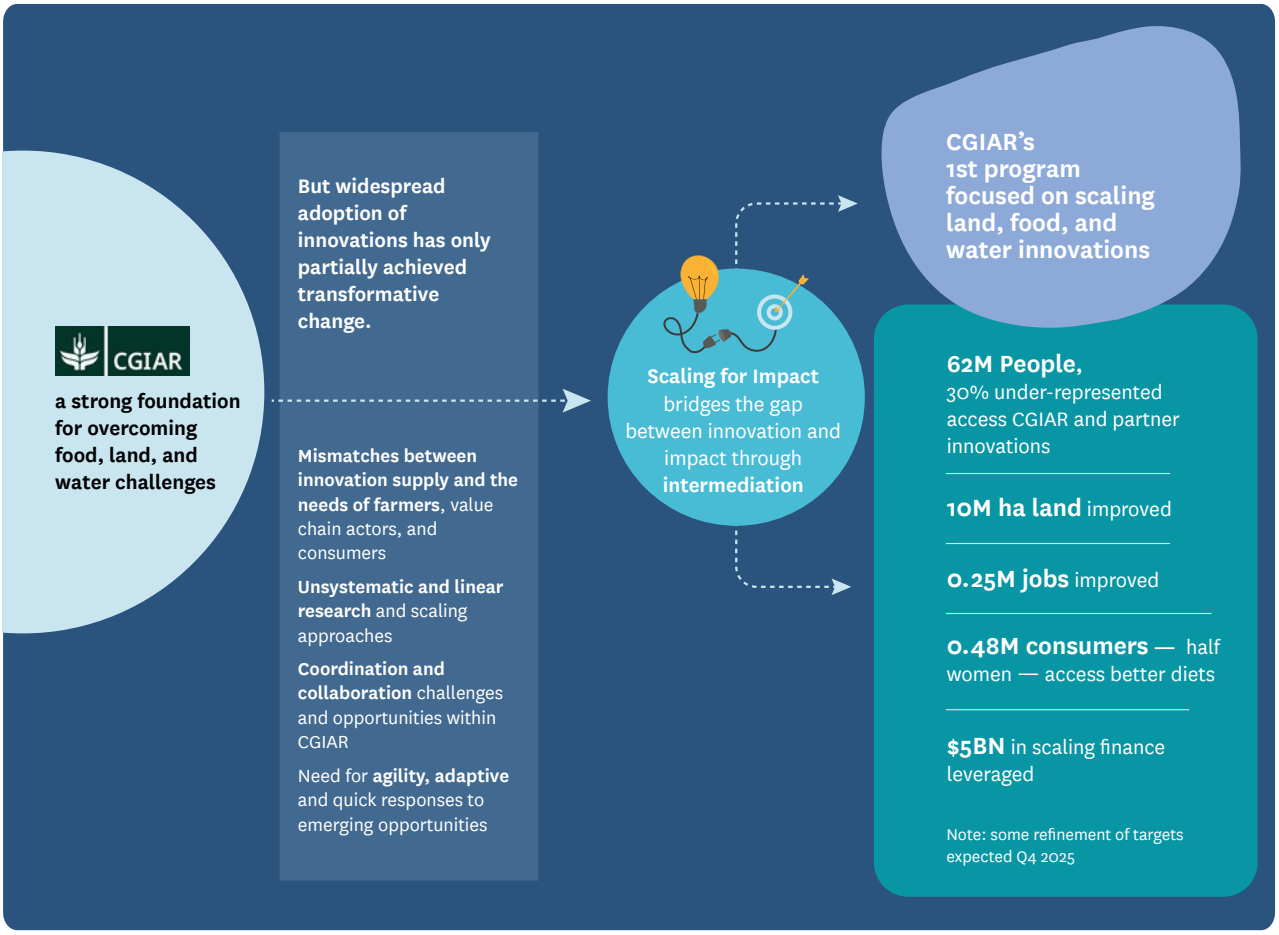


Figure 2: Scaling for Impact (S4I) program targets (2025–2030).
Source: CGIAR 2024[10].

2. Project Overview

The **Water and Soil Accelerator (WASA)** is a cooperative initiative led by IWMI and sponsored by the USG from 2024 to 2027. Anchored in the former Feed the Future (FtF) Zones of Influence (ZoI) in Malawi and Zambia, it is designed as a rapid-response, three-year project aimed at scaling evidence-based interventions that enhance water and soil management in rainfed agricultural systems. The overarching goal is to catalyze the widespread adoption of proven sustainable practices from farm to landscape level to improve agricultural productivity, strengthen local capacities and institutions, and expand equitable access to resources and knowledge for smallholder farmers, particularly women, in resource-constrained settings. Through collaborative scaling efforts, WASA contributes to the USG's Global Food Security Strategy (GFSS) and Global Water Strategy (GWS), while responding to the urgent climate and systemic challenges affecting food, water, energy and agricultural systems.

Accelerating Adoption of Scalable Interventions

Operating over two to three consecutive growing seasons, WASA will connect at least one million farmers and value chain actors to innovative tools and the information they need to improve water retention, soil regeneration and landscape management. Resources will not be used to pilot new technologies or conduct extensive basic research, but to accelerate the integration and delivery of validated interventions.

By leveraging existing networks and partner presence on the ground, the initiative will enhance uptake of improved methods, strategies and innovations in climate-smart practices and green infrastructure deployment, while creating a conducive enabling environment for impact at scale. Capacity building and community-based natural resource governance will ensure long-term sustainability.

Climate-smart agronomy and land use: as improved crop selection, cover cropping, and enhanced soil health to promote infiltration and reduce erosion.

Deployment of green infrastructure: such as the use of vegetative buffers and water harvesting structures, to stabilize hydrological flows.

Capacity building: through the provision of tailored technical assistance on water, soil and land management practices.

Community–based natural resource governance: by strengthening local institutions and farmer cooperatives to manage land, water, and vegetation sustainably.

Consortia-based Delivery

WASA's implementation is driven by five competitively selected consortia, each comprising diverse technical and delivery partners, and strategically aligned to the project's target geographies and thematic areas. This consortia-based model is designed to harness the comparative strengths of institutions with demonstrated experience in sustainable agriculture, water and soil management, systems innovation and community-based service delivery.

Each consortium will deploy activity packages that are tailored to the strategic priorities of the project (Annex 1) while also being demand-driven, ensuring relevance to the local context and existing initiatives. Last-mile delivery partners will play a critical role in engaging smallholder farmers, rural communities and other key stakeholders to ensure inclusive participation.

Project Management

As the lead implementing partner in the consortia-based model, IWMI oversees the overall project delivery and serves as the Program Coordination Unit (PCU). The core PCU team is based in Pretoria and Lusaka and includes key organizational units such as Communications, Human Resources and Administration, Finance, and Monitoring and Evaluation. The management team is supported by IWMI's Director for Water, Growth and Inclusion as Project Lead and Project Coordinator. Working closely with the Lusaka-based Program Manager and technical leads, the Director assists with aligning resource allocation and intervention timelines to ensure effective delivery of program objectives. Additional support is provided by IWMI's headquarters in Sri Lanka and the Southern Africa team in South Africa, Zambia and Zimbabwe, focusing on partner contracting, financial oversight and stakeholder coordination. These functions are facilitated through bi-monthly coordination calls, task tracking tools, monthly performance reviews, and one-on-one check-ins. Management meetings also serve as a platform to exchange lessons learned and best practices from other relevant IWMI projects aligned with WASA's objectives.

Photo credit: Christian Thierfelder, CIMMYT

A tiered management approach ensures both strategic and on-the-ground agility, as presented in Figure 3. The Project Steering Committee (PSC), comprised of representatives from IWMI, the International Maize and Wheat Improvement Center (CIMMYT), the Alliance Bioversity and CIAT (ABC) and nominated consortia leads, will provide strategic direction, high-level decision making and resource alignment through quarterly reviews.

Technical leadership will be distributed across thematic workstream leads, with each thematic area assigned to a designated lead partner tasked with development and implementation of activities, tracking progress and reporting. At the country level, country coordinators in Malawi and Zambia ensure alignment with national priorities, facilitate government engagement and oversee implementing partners.

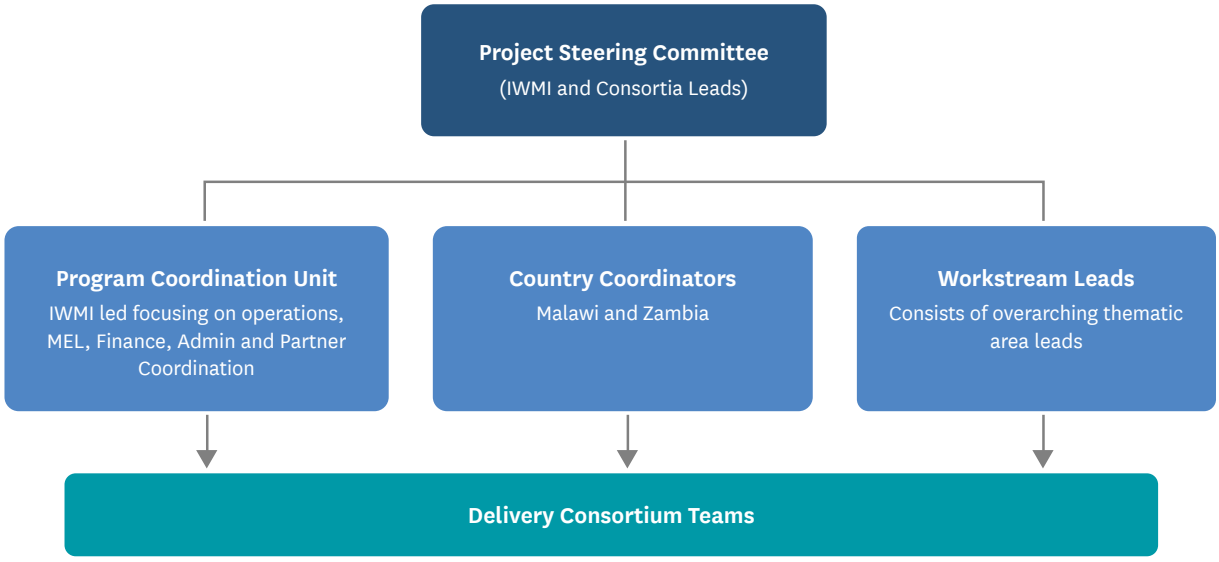


Figure 3: Project management organogram.
Source: Authors' creation.

Implementation Phasing and Workplan

WASA will be implemented in three phases, which are aligned with the agricultural calendar and structured to deliver impact within two to three planting seasons. The implementation phasing and workplan overview shown in Table 1 is supported by a key milestone tracker for the duration of the project, available as Annex 2. Implementation phasing with milestones from partner workplans is available in Annex 3.

Table 1: Implementation phasing and workplan overview.

Phase	Timeframe	Key Activities	Lead Entities
Phase 1 **Mobilization and Deployment**	Oct 2024 – Sept 2025	→ Consortia contract finalization and onboarding. → Partner mobilization. → Granular district identification. → Validation of activities. → Bundled activity design. → Baseline MELIA design and implementation. → Reporting.	PSC, PCU, Country Coordinators and Thematic Leads
Phase 2 **Scaling and Adaptation**	Oct 2025 – Jul 2026	→ Full scale implementation across target districts. → Continuous monitoring. → Feedback-based refinement of activities. → Policy engagement. → Reporting.	Delivery Consortia Teams, MELIA Lead and Thematic Leads
Phase 3 **Embedding and Sustainability**	Aug 2026 – Sept 2027	→ Institutionalization and implementation of sustainability plan. → Documentation of scaling modalities. → Final impact assessment based on Endline MELIA design. → Policy uptake and/or advocacy. → Reporting.	All

Source: Author's creation

3. Inception and Co-Design

From the outset, WASA's conceptual framework was built on the core principles of co-design, localized delivery and systemic impact, based on the recognition that they enable a demand-driven, inclusive approach to scaling solutions, as depicted in Figure 4. By pooling specialized expertise, engaging diverse stakeholders and sharing risks, solutions that are more innovative, scalable and sustainable can be identified. This collaborative approach not only strengthens local ownership and trust but also enhances resource efficiency and policy influence, ensuring that interventions deliver greater impact and remain resilient in the face of uncertainty. The benefits and potential impact of adopting co-design and local partnership delivery are further explored in Annex 4.

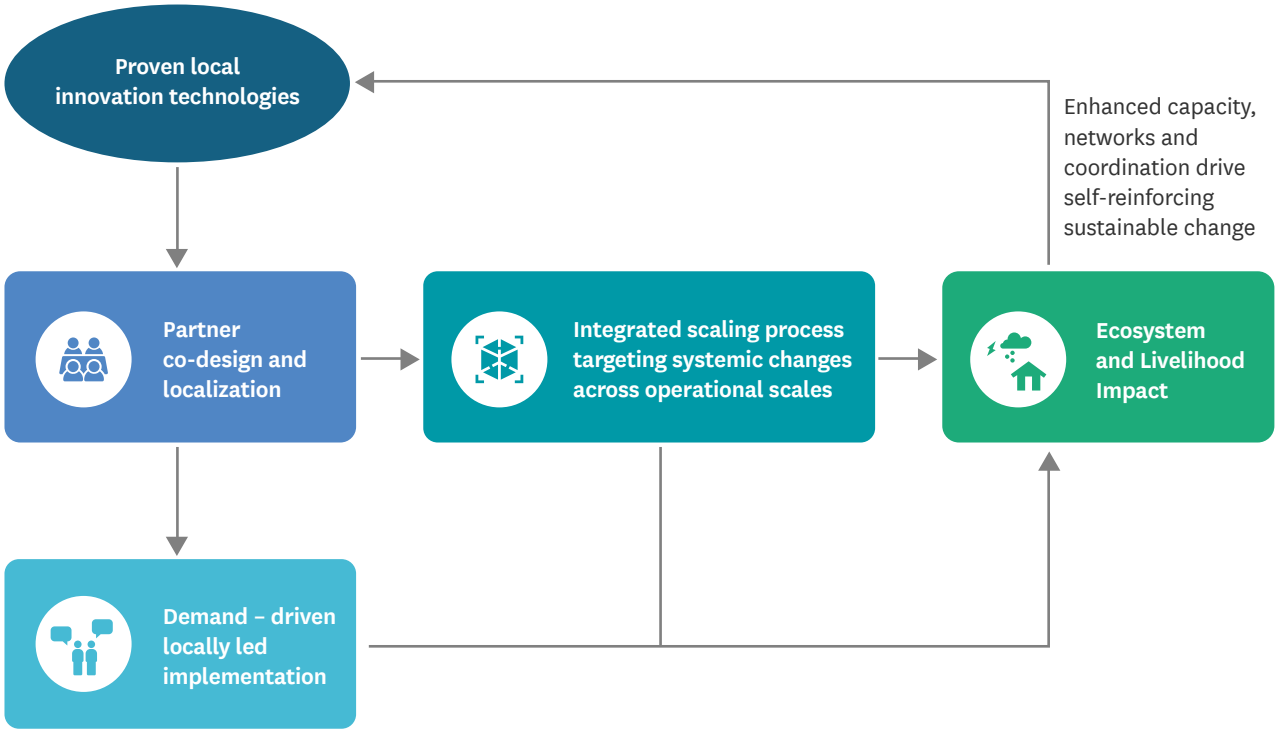


Figure 4: Conceptual framework for scaling water and soil interventions through localized, demand-driven systems.
wSource: Authors' creation.

Engagements

As part of a co-design process in developing the project, IWMI held a series of preparatory meetings and consultations with national government agencies, technical experts, private sector actors and development partners representing 51 different organizations. The engagements aimed to assess stakeholder demand, gather lessons on barriers to scaling, align expectations and develop a shared understanding of sustainable water and land management priorities in the rainfed agricultural systems of Malawi and Zambia. Key engagement milestones were:

- **Technical and Delivery Partner meetings (26 September 2024)** – to align feasibility and delivery strategies.
- **Strategic Partner meetings (1 October 2024)** – with government and regional actors for system-wide alignment.
- **Pre-workshop and site visit (6–7 October 2024)** – pre-planning session with the USG and CGIAR centers to align workshop goals and logistics, followed by field visits to Conservation Farming Unit (CFU) sites in Shibuyunji and Situmbeo (near Lusaka) to observe practical water and soil management solutions.
- **Malawi and Zambia sessions** – to contextualize national priorities.

Insights gathered through these engagements and an expanded registration survey contributed to the multi-stakeholder WASA Co-creation Workshop held in Lusaka, Zambia, on 8–9 October 2024 (see Annex 5 and Annex 6). This workshop aimed to achieve collective agreement on:

1. Target geographies for intervention,
2. Key local and technical partners and their roles,
3. High potential (best-bet) interventions in water, soil and climate information services, and
4. A draft program of work for future implementation.

The workshop and preparatory engagements highlighted erratic rainfall, degraded soils, inadequate infrastructure, limited access to finance, and a fragmented communication ecosystem as critical challenges that needed to be addressed. The Central and Southern regions

Photo credit: Cr8tivease Multimedia

of Malawi and the Eastern, Southern and Central provinces of Zambia were identified as the target geographies.

This intensive co-design process culminated in a **Call for Proposals**, through which the project's multi-partner consortia were selected. The consortia, under the guidance of their lead organizations, operate as locally anchored delivery networks.

Partner Selection

The partner selection process aimed to ensure that partnerships were aligned with WASA's overall objectives to strengthen sustainable soil and water management in rainfed agricultural systems. Three contracting mechanisms were co-designed to support delivery:

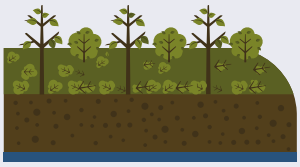
1. **Quick Wins** – Short-term, rapid-impact interventions to demonstrate immediate results during the first agricultural season.
2. **Integrated Partnerships** – Longer-term, multi-partner consortia to deliver scalable, demand-driven solutions across soil and water management.
3. **Agribusiness Acceleration Grants** – Targeted support to enhance market-led approaches and private sector engagement in the geographic and thematic focus areas.

While the Integrated Partnerships were selected through the Call for Proposals, the Quick Wins had to be repurposed due to project delays and have now been combined with the Agribusiness Acceleration Grants. These will be launched in 2026 after market/finance gaps have been identified within the partnerships and their geographic areas. The selection process for Integrated Partnerships involved concept note submissions, interviews and full proposal evaluations, with applications submitted through a recognized regional platform to ensure transparency and efficiency. Applicants were encouraged to form consortia that integrated at least three thematic focus areas and demonstrated market-led approaches that avoided distortions. A strong response of nearly 30 applications was received, with the majority from Zambia.

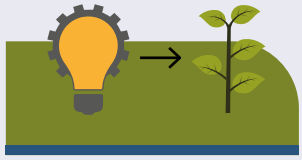
Thematic Focus Areas

Sustainable Water Management: Efficient and equitable water use and management from farm to landscape level.

Green Infrastructure: Nature-based solutions to enhance storage and infiltration, manage water flow, reduce erosion and improve ecosystem health, including the potential for mechanization to support green infrastructure.



Enhancing Agronomy, Crop Type and Coverage: Methods and approaches to improve crop management by incorporating climate-resilient crops and agricultural approaches that enhance soil health and water retention, infiltration or storage alongside productivity gains.



Capacity Building and Technical Support: Innovative capacity strengthening, dissemination, knowledge sharing and extension mechanisms for farmers, public and private sector partners in water, soil and land management practices.

Collective Action on Natural Resource Management: Strengthening land, vegetation, and soil and water management through local institutions, private sector and cooperatives.

Climate Information Services and Risk Management: Providing farmers with access to climate information and early warning systems, as well as enhancing the access to and availability of mitigating choices in production to ensure early action to climate warnings.

Enabling Environment, Financing, Investment and Stewardship: Supporting agricultural water stewardship and inclusive innovative financing mechanisms, including climate finance and microfinance, de-risking mechanisms, carbon credits` etc.

Gender Equality and Social Inclusion (GESI) and Land Tenure and Rights: Ensuring equitable resource access, promoting gender equality and social inclusion, and securing customary or formal land tenure. This cross-cutting theme is integrated into all activities, ensuring that there are no unintended negative impacts on gender, inclusion and land tenure security for marginalized groups.

A review committee was established, comprising experts in water management, sustainable agriculture and development programming. Lead partners were evaluated against clear requirements, including:

- Relevant technical expertise and operational capacity.
- Legal eligibility to operate in the target geographies.
- Commitment to gender equality and social inclusion.
- Demonstrated ability to leverage resources and align with other initiatives.
- Strong theory of change for measurable improvements in agricultural productivity, water use efficiency and soil health.

Following rigorous review, five high-scoring consortia were selected for funding. These proposals reflected innovative approaches to soil and water management, strong collaboration strategies and significant potential for long-term impact. The emphasis on gender, social inclusion and locally led delivery will ensure that interventions remain equitable and relevant to the needs of vulnerable farming communities.

Partner Inception

Following the partner selection process, the consortia partnership inception meeting, held in Lilongwe, Malawi, on 23–24 June 2025, served as a forum for updating delivery expectations and translating project objectives into actionable strategies. Partners collaborated to review assumptions, reduce duplication and co-develop a coherent, scalable model of engagement, recognizing that fragmented, siloed efforts cannot achieve systemic change.

Training, capacity building and incentives were identified as central to driving meaningful impact. Partners emphasized that training must be an ongoing, adaptive process supporting farmers, extension workers and institutions to not only learn but apply and own new knowledge. Community-based methods such as lead farmer models and peer exchanges were highlighted for their role in ensuring accountability and validation. To address inconsistent extension advice to farmers across partners, a participatory extension framework incorporating farmer ID-linked dashboards and other tools was recommended to harmonize messaging and track progress. Context-sensitive incentives, ranging from input kits to community grants and market linkages, were considered vital to encourage behavior change and reduce risks for early adopters.

The meeting provided a valuable opportunity to revisit and refine the Theory of Change (ToC), emphasizing its function as a dynamic systems map rather than a linear plan. By exploring nested ToCs across soil, water, markets and climate services, partners ensured alignment with a shared vision while recognizing the need to discontinue activities not supporting intended outcomes.

Overall, the co-design process and partner inception phase played a crucial role in strengthening trust and cooperation among partners, both within and between consortia, as well as between consortia and IWMI.

Photo credit: Cr8tivease Multimedia

4. Theory of Change

In common with many parts of the developing world, the target areas in Malawi and Zambia face the interconnected challenges of poverty, inequality, weak institutional frameworks and climate variability, all contributing to landscape degradation, low agricultural productivity, reduced resilience, and socio-economic decline.

The Theory of Change (ToC) envisions increasing climate resilience and agricultural productivity by scaling proven interventions and strategies to improve watershed management and farm-level practices. In essence, enhancing water and soil management from farm to landscape level produces a virtuous cycle: healthier ecosystems that support robust agriculture, which improves food security and household resilience. Strengthening local capacities and local governance will ensure long-term sustainability and reduce the necessity of continuous external support.

Three core assumptions underpin this cause-and-effect pathway: farmers must recognize the value of new practices and technologies, supported by training, demonstrations and access to inputs; strong local institutions and capacities are essential to sustain improvements beyond the project's lifecycle; inclusive approaches must ensure equitable access for women, youth and vulnerable groups to enhance uptake and avoid unintended negative impacts. If these conditions are met, the ToC expects a clear pathway from interventions to impact. Farmers and communities will be empowered to manage water and soil resources in the face of climate change, resulting in increased agricultural productivity that is resilient to weather shocks. This, in turn, contributes to higher-level goals of improved food security and reduced poverty and malnutrition, in line with national and global objectives.

The ToC is represented in Figure 5. It identifies five areas of work – Co-design, Improved Watershed Management, Improved Farm Management, Enabling Environment and Inclusion, and Monitoring, Evaluation and Learning (MEL) – to address challenges and to respond to the research questions. A summary of the impact pathway for each, from high-level outputs to intermediate outcomes, to project outcomes and eventually to impacts, is provided below.

- **Co-design:** The project united partner consortia to collaboratively develop the project and support networks of partners implementing coordinated and integrated strategies across sites and countries. These social innovations result in stronger networks, while knowledge sharing fosters integration, synergies, shared goals and potential for impact. Five efficient consortia have integrated work plans that implement work in target areas across two countries, utilizing a standardized set of indicators for MEL plans. Ultimately, partner organizations within and across consortia function in tighter networks, with greater cooperation and synergies beyond the life of the project.

- **Improved Watershed Management:** Strengthen watershed governance systems to design and implement sustainable strategies that enhance landscape resilience and buffer farmers against environmental stressors. This will be achieved through training and institutional support to improve governance; building community capacity for water management; developing watershed management and land restoration plans; and investing in green infrastructure and water systems. Watershed management institutions will be fortified to improve catchment management and maintain restored lands, enabling sustainable, inclusive watershed management through participatory governance systems and institutions. The result will be resilient landscapes that deliver significant ecological goods and services while shielding communities from environmental shocks.

- **Improved Farm Management:** Support smallholder farmers in transitioning into climate-smart agricultural producers by disseminating technologies, building capacity and facilitating the development of an enabling environment, resulting in resilient production systems. Farmer training, demonstration plots and improved agricultural inputs and technologies will strengthen farmers' knowledge and skills in land and crop management. By planting diversified, drought-resistant crop varieties and improving soil health and water-holding capacity, farmers will experience consistently higher yields and extended growing seasons.

- **Enabling Environment and Inclusion:** Strengthen institutions, promote efficient governance and involve women, youth and marginalized groups in all activities. This inclusive capacity building will ensure that institutions can maintain knowledge systems, that access to resources is fair, and that local governance and planning for resource management is grounded in well-designed GESI strategies. Participation of women, youth and marginalized groups in at least 40% of all activities will lead to improved skills and leadership, enabling full representation in local community organizations and active roles in decision making and planning. Both farmers and governance systems will recognize the importance of linking ecosystem functioning from farm to landscape level.

- **Monitoring, Evaluation and Learning:** Establish effective strategies and learning to ensure early corrective action through strategic data collection and performance tracking, and quality assurance. With a functional monitoring system in place, progress from the baseline situation will be clear and measurable, and firm evidence for adaptive management will be available so that timely adjustments can be made to correct course and exploit opportunities. By the end of the project, all stakeholders and participants will have gained significant adaptive management skills and understand the value of integrated soil and water management across scales.

Impact: Increased climate-resilient agricultural productivity in targeted areas of Zambia and Malawi.

The cross-scale implementation of this integrated strategy to improve soil and water management practices within an enabling environment will impact at least one million hectares of resilient landscapes supporting one million climate-smart small-scale farmers in Malawi and Zambia. Their high-yielding and diversified cropping systems will allow these farmers to be food and nutritionally secure and lay the foundation for further autonomous scaling through social learning, inclusion, strong institutions and functional governance systems from farm to landscape. The deep learning resulting from the co-design process, the integration of five consortia, and a multi-dimensional approach will promote significant local skills development for the further scaling of WASA's interventions without further direct funding.

WASA's key research and development questions are:

- What strategies can we use to scale solutions for food, land and water systems?
- How can co-designing scaling strategies help facilitate broad adoption and impact?
- What actions can create enabling environments for scaling while minimizing negative consequences?
- How can an enabling environment support increased adoption and sustained impact?

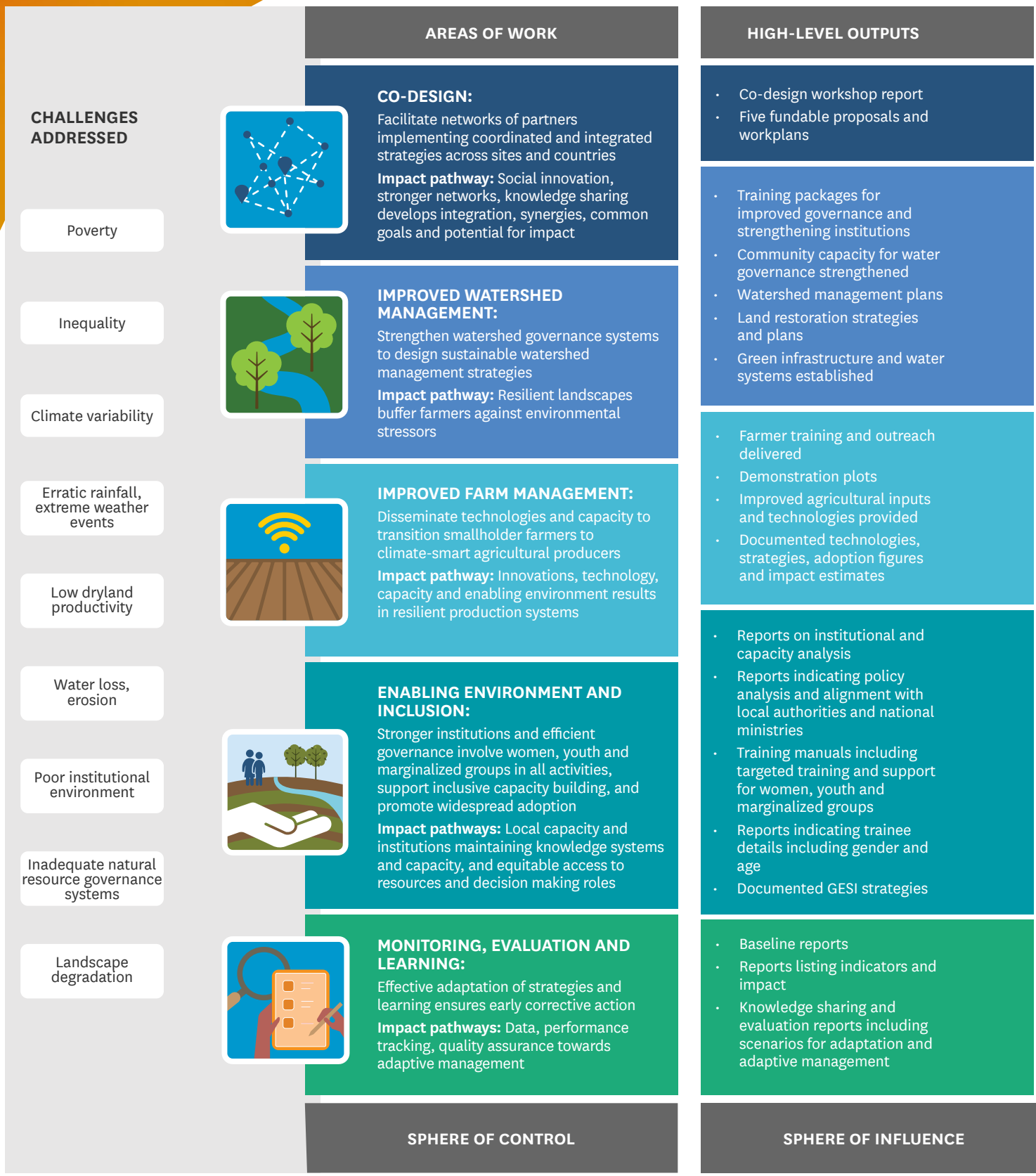


Figure 5: Theory of Change illustrating the challenges, areas of work, high-level outputs, outcomes and possible impacts the project aims to achieve.

Source: Authors' creation.

INTERMEDIATE OUTCOMES

- Five efficient consortia with integrated work plans implementing work in target areas in two countries
- Partners use a common set of indicators to implement MEL plans

- Watershed management Institutions strengthened to improve catchment management
- Strategies to maintain restored land

- Improved farmer knowledge and skills in soil health, in-field water management and erosion control
- Farmers using practices that enhance soil organic matter, reduce erosion and improve water-holding capacity
- Improved crop yields through better soil health, water efficiency and erosion control
- Diversified production systems

- Strengthened local governance and planning for resource management
- Inclusive participation of women, youth and marginalized groups in at least 40% of all activities
- Enhanced skills and leadership of youth and

- Functional monitoring system in place
- Progress from the baseline situation is clear and measurable
- Firm evidence for adaptive management in place, timely adjustments can be made to correct course and to exploit opportunities

PROJECT OUTCOMES

- Partner organizations within and across consortia function in tighter networks with greater cooperation and synergies beyond this

- Watersheds in the target areas in the two countries are managed sustainably by inclusive governance systems and institutions
- Watersheds are resilient, ecologically sound, producing significant ecological goods and services while buffering communities from

- Knowledgeable farmers employ improved land and crop management strategies
- Farmers have diversified crops, use drought-resistant varieties, and because of improved soil health and water-holding capacity, experience consistently higher yields and longer

- Women and youth are represented in local community-based organizations and play a significant role in decision making and planning
- Governance systems as well as farmers are tuned to the importance of linking ecosystem functioning at scale, from field to landscape level

- All project stakeholders and participants have gained significant adaptive management skills and understand the value of MEL

PROJECT IMPACTS

1M Ha

One million hectares of climate-resilient landscapes supporting one million climate-smart small-scale farmers in Malawi and Zambia

1M

High-yielding and diversified cropping systems support one million farmers to be food and nutritionally secure

1M

The enabling environment developed by the project ensures autonomous scaling through social learning, inclusion, strong institutions and functional governance systems

Deep learning emanating from the co-design process, the integration of five consortia and multi-dimensional approach allow for **scaling of the accelerator modalities**

Nutrition, Health and Food Security

Poverty Reduction, Livelihoods and Jobs

Gender Equality, Youth and Social Inclusion

Climate Adaptation and Mitigation

Environmental Health and Biodiversity

SPHERE OF INTEREST

CONTRIBUTIONS TO IMPACT

5. Nested Results Framework

Of the five areas of work identified in the Theory of Change, the results framework focuses on selected outcomes and outputs for Improved Watershed Management and Improved Farm Management as the primary drivers of change, supported by the cross-cutting outcome Enabling Environment and Inclusion. Co-design, combined with a strong MEL plan, provides for corrective action and adaptive management.

Outcome 1: Improved Watershed Management

Communities adopt sustainable water resource management practices beyond individual farms. This includes restoring and conserving catchment areas, constructing or rehabilitating small-scale water infrastructure (such as check dams, rainwater harvesting systems and irrigation schemes), and implementing nature-based solutions to reduce runoff and erosion. As a result, water availability and ecosystem health are enhanced at the landscape level, providing more reliable soil moisture and water supply for crops. Success is measured by indicators such as the area of land under improved natural resource management and the number of people benefiting from improved water resource management measures. These outcomes create the environmental foundation for resilient agriculture.

Output 1.1: Green Infrastructure and Water Systems Established

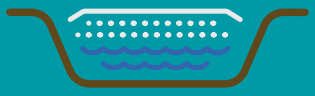
The project facilitates on-the-ground investments in rainwater harvesting structures, rehabilitated wetlands, flood control measures and community water storage. Increased rainwater infiltration and storage is an immediate output. Outputs are counted in terms of physical infrastructure completed and operational (e.g., number of water storage facilities built) and hectares of catchment area treated or reforested to improve hydrology. Finance mobilized for water management (including public, private, and community contributions) is tracked to ensure sustainability. For example, the indicator for water-sector investments (e.g., 'finance mobilized for water') captures resources committed to these infrastructure outputs.

Output 1.2: Community Capacity for Water Governance Strengthened

The project trains local water user associations and committees in participatory watershed planning and resource governance. Communities receive tools and climate information to plan for droughts and floods. The number of people trained in water management and climate adaptation (a custom output indicator, often aligning with EG.11 series for climate adaptation training) is recorded. Strengthened local institutions ensure that the watershed interventions are maintained and that water is allocated fairly, securing the outcome of improved watershed management over the long term.

Outcome 1 :
Improved Watershed Management

Restoring catchment areas

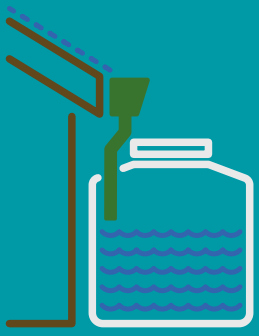


Constructing check dams

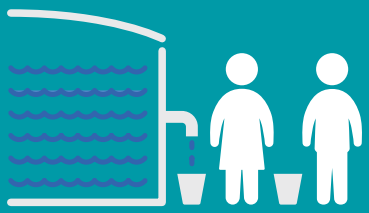
Solutions to reduce runoff and erosion.

Output 1.1 : Green Infrastructure and Water Systems Established

Investments :

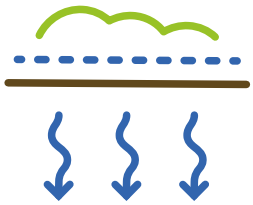


Rainwater harvesting structures



Community water storage

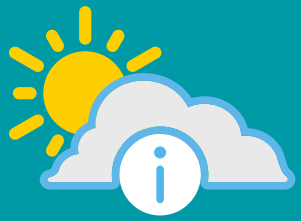
Output :



Increased rainwater infiltration

Output 1.2 : Community Capacity for Water Governance Strengthened

Watershed planning



Climate information to plan for droughts and floods

Outcome 2: Improved Farm Management

Smallholder farmers adopt climate-smart agricultural practices and improved technologies on their fields, leading to better soil health, crop productivity and resilience at the farm level. This outcome encompasses a range of on-farm improvements: conservation agriculture techniques (minimal tillage, mulching), diversified cropping (intercropping, crop rotation with drought-tolerant varieties), efficient use of inputs (fertilizers, soil amendments), and other sustainable practices that boost yields while protecting the land. As a result, farms experience higher yields and reduced yield variability, even under erratic rainfall, and production of nutrient-rich crops increases. Progress toward this outcome is primarily measured by farmer behavior change and land management indicators, such as the number of farmers applying improved practices and hectares under improved management. These indicators reflect technology uptake – a critical step in the results chain. The more farmers apply the promoted techniques (e.g., drought-tolerant seed, soil conservation measures), the greater the cumulative impact on agricultural productivity and climate resilience across the community.

Output 2.1: Farmer Training and Outreach Delivered

To drive adoption, the project provides extensive training, demonstrations and advisory services on climate-smart farming. Thousands of farmers participate in workshops, field days and 'lead farmer' demonstration plots to learn new techniques. The indicator 'EG.3.2: Number of individuals participating in USG food security programs' captures the scale of outreach, reflecting how many farmers, diversity of farmers, and community members have engaged in training or other capacity-building activities. The project also disseminates practical information via radio, SMS and other media, measured by the number of contacts receiving agricultural advisory messages (a custom indicator). By equipping farmers with knowledge and tools, this output lays the groundwork for widespread practice change on farms.

Output 2.2: Improved Agricultural Inputs and Technologies Provided

The project works with partners to introduce and distribute improved inputs – such as drought-tolerant or high-yield crop varieties, quality seeds, fertilizer and farming equipment – and to demonstrate innovative technologies like soil moisture conservation methods. A custom indicator (CUST-1) tracks the number of climate-resilient crop varieties promoted through the project, indicating the extent to which farmers have new options better suited to a changing climate. Additionally, any leverage of private sector participation (for example, agro-dealers supplying inputs or mechanization services) is recorded via indicators such as the value of private sector investment leveraged for food security (EG.3.1-15). These outputs ensure farmers not only learn about improvements but also have the means to implement them in their fields. When combined with the knowledge from Output 2.1, the availability of inputs and technology accelerates adoption of best practices.

> "The project provides extensive training, demonstrations and advisory services on climate-smart farming.

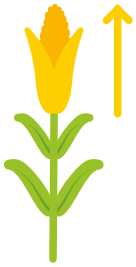
Outcome 2 :
Improved Farm Management

Adoption :

Mulching

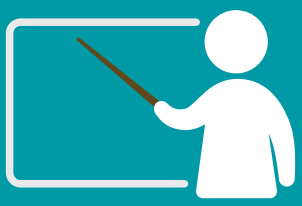
Intercropping

Result :



Higher yields

Output 2.1 : Farmer Training and Outreach Delivered



Extensive training

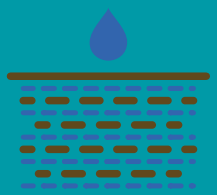
Farmer workshops

Information via SMS

Output 2.2 : Improved Agricultural Inputs and Technologies Provided

quality seeds

fertilizer



soil moisture conservation

Cross-Cutting Outcome: Enhanced Enabling Environment and Inclusion

While the project's primary interventions focus on watershed and farm-level improvements, this cross-cutting outcome ensures that the broader policy, institutional and social environment actively supports and sustains those gains. It emphasizes working with local authorities and national ministries to align policies (e.g., land use planning, agricultural extension services) and strengthen institutions so that climate-resilient agriculture can flourish.

A central feature is advancing gender equality and youth inclusion. The framework commits to:

- Ensuring women farmers, young people and other vulnerable groups have equitable access to project resources (inputs, training and financial services).
- Creating meaningful decision-making roles for women and youth in local planning and farmer organizations.
- Addressing systemic barriers such as lack of credit, insecure land rights or limited access to extension services that disproportionately affect women and young farmers.

The benefits are twofold: women and youth directly gain opportunities to enhance their productivity, income and resilience, while their leadership strengthens community-wide adoption of climate-smart practices. Milestones can include integration of inclusive project approaches into district development plans, adoption of supportive policies (e.g., climate-informed agricultural advisories tailored to women and youth), or reforms in extension systems that expand women's and youth's participation. Progress on inclusion will be tracked not only by disaggregating key indicators by gender and age (e.g., percentage of women and young farmers adopting new practices), but also through dedicated measures of women's empowerment and youth engagement. By building an enabling environment where women and youth are recognized as central actors rather than peripheral beneficiaries, this cross-cutting outcome reinforces Outcomes 1 and 2, accelerates scaling and ensures that project impacts endure well beyond the immediate target areas.

Each component of this nested results framework is linked and provides the necessary feedback mechanisms to ensure self-sustained change and improvement. The outputs (infrastructure built, people trained, inputs provided) lead to behavioral and environmental outcomes (adoption of practices, better soil water and nutrient management), which in turn realize the higher-level impact (resilient productivity gains and food security improvements). This logical structure facilitates both implementation planning and performance monitoring, ensuring that day-to-day project activities remain aligned with the pathway to the desired impact. It also provides transparency for stakeholders, mapping how the initiative's efforts translate into tangible benefits for farming communities and contribute to long-term development goals in Zambia and Malawi.

Cross-Cutting Outcome :
Enhanced Enabling Environment and Inclusion

Equitable access to project resources

Creating decision-making roles for women and youth

Addressing systemic barriers such as lack of credit

6. Geographic Focus

WASA will be implemented in five provinces: Central and Southern regions in Malawi, and Eastern, Central and Southern provinces in Zambia.

Regional Context and Agricultural Challenges

Central Region – Malawi

The Central Region of Malawi spans approximately 35,592 km² and is centered around Lilongwe, the country's political and economic capital. The region has a population of approximately 7.5 million people. About 1.3 million (17%) are urban residents, with the remaining 6.2 million (83%) living in rural areas. The Central Region Plateau has an elevation of 760–1,370 m. Annual rainfall averages 920 mm, with local variation influenced by altitude, proximity to Lake Malawi and other factors.

Most farming is rainfed, with only a small portion relying on irrigation. The rainfall pattern, combined with well-drained plateau soils, makes the region highly suitable for farming. Agriculture is the main economic activity, with maize as the dominant staple crop, occupying the largest cultivated area[11]. Other key crops include tobacco (for export), groundnuts, cotton, rice, potatoes and tropical fruits. Smallholder farmers also raise livestock such as cattle, goats and poultry. Despite its agricultural potential, the region faces significant challenges, including land degradation and soil erosion caused by deforestation and poor land management, high poverty levels among rural households, shifting and unpredictable rainfall due to climate variability, limited irrigation infrastructure, and pressure on natural resources[12]. These issues threaten long-term productivity and food security, requiring coordinated efforts in soil conservation, reforestation, climate adaptation and improved farming practices.

Southern Region – Malawi

The Southern Region of Malawi covers approximately 31,753 km² and includes Blantyre, the country's main economic capital and commercial hub. The region, which borders Mozambique and Lake Malawi, is the most densely populated in Malawi, with about 7.75 million people according to the 2018 census. The official 2023 projection estimated the population at more than 8.7 million people, of which only 1.15 million were living in urban centers such as Blantyre and Zomba.

Geographically, the Southern Region features diverse agroecological zones, including the fertile Shire Highlands, the productive Shire Valley, Lake Chilwa plain and highland plateaus around Zomba and Mulanje[12]. Rainfall is generally higher in the highlands and lower in the valley, supporting intensive agriculture and commercial cropping. Some 80% of Malawi's land needs restoration, with about 40% classified as degradation hotspots, most notably in the Shire River Basin, where soil erosion and sediment buildup are disrupting irrigation canals, fisheries, reservoirs, floodplain wetlands and hydropower systems[12]. The main agricultural products include maize (the staple crop), rice, beans, cassava, sweet potatoes, cotton, groundnuts, sugarcane and tea, with significant livestock rearing of cattle and goats in some districts.

Eastern Province – Zambia

The Eastern Province of Zambia, covering about 51,476 km² and with a population of approximately 2.4 million people, relies heavily on smallholder agriculture, with farmers cultivating staple and cash crops such as maize, groundnuts, sorghum, tobacco, sunflower, soybeans, rice and horticultural produce[13]. Despite receiving 800–1,000 mm of rainfall annually under ideal conditions, the province faces increasing climate variability, including delayed rainfall, dry spells and emerging pests, which threaten crop yields and food security.

To address these challenges, initiatives like the Zambia Integrated Forest Landscape Project and the Eastern Province Jurisdictional Sustainable Landscape Program[14] have promoted climate-smart agriculture (CSA) practices such as agroforestry, conservation tillage and crop residue retention across multiple districts, reaching tens of thousands of farmers. While these efforts have raised awareness and improved resilience, adoption remains uneven due to high upfront costs of CSA technologies, limited access to financial and technical resources, inadequate extension services, low literacy levels, lack of gender and social inclusion, and insufficient refresher training. These barriers continue to hinder the scaling of CSA and the transformation of rainfed agri-food systems in the region.

Central Province – Zambia

Central Province is a key agricultural region in Zambia, characterized by fertile soils and moderate climatic conditions, including an average temperature of 24.1°C and annual rainfall of up to 1,000 mm[15]. According to the 2011–2020 Zambia Statistics Agency (ZamStats) national statistics, Central Province contributes 21% of Zambia's total agricultural output and 18% of national maize production, making it one of the most productive regions in the country[15]. Despite its strengths, rainfed maize production in Central Province faces significant challenges. Most smallholder farmers rely on seasonal rainfall between November and March, making them highly vulnerable to climate variability and prolonged dry spells. The 2023–2024 cropping season was marked by severe drought. Under these conditions manure had limited benefits due to its slow nutrient release.

Scaling up productivity is constrained by several barriers, such as limited access to formal land titles, the high costs of land tenure conversion, and bureaucratic hurdles that prevent many farmers from securing collateral for loans. A 2024 study on land tenure and maize production efficiency in the province found that only 8.3% of 435 households surveyed held formal Title Deed Certificates[15].

The findings highlighted how tenure security influences farmers' willingness and ability to invest in productivity-enhancing practices, since customary land tenure systems, though widely practiced, are not recognized by financial institutions. Other factors such as long travel distances to fields, as well as the age and education levels of household heads, also contribute to technical inefficiency by limiting labor availability and diverting household priorities away from farming.

Southern Province – Zambia

In southern Zambia, maize is the dominant crop, complemented by leguminous crops that help diversify the farming system[16]. Despite ongoing efforts to improve agricultural resilience, rainfed agricultural systems continue to face serious challenges. The province has been severely affected by climate variability, particularly through prolonged droughts, extreme temperatures and irregular rainfall associated with El Niño. During the 2023–2024 season, rainfall was less than a third of the annual average, with dry spells lasting over 30 days, resulting in widespread crop failures, especially in maize. Erratic weather patterns disrupt cropping cycles and reduce yields, while water scarcity limits irrigation and contributes to declining soil quality[16]. Land degradation, poor soil fertility and inadequate infrastructure further constrain productivity, deepening food insecurity and malnutrition[17].

Economic barriers in the province, such as high input costs, limited access to credit and weak market connections, make it difficult for farmers to adopt climate-resilient practices. At the same time, low awareness of climate-smart technologies and limited digital access slow the uptake of innovations. Institutional challenges in the form of fragmented governance, insufficient extension services and weak policy enforcement undermine the effectiveness of adaptation strategies within the province. Social and cultural factors, particularly gender inequality and resistance to new technologies, also limit access to resources and slow the adoption of improved practices.

Focal Areas of the Consortia

The five consortia focus their work within the geographical areas where the technologies were first deployed and validated (see Figure 6). From here, the impact will be scaled out to reach one million farmers across one million hectares.

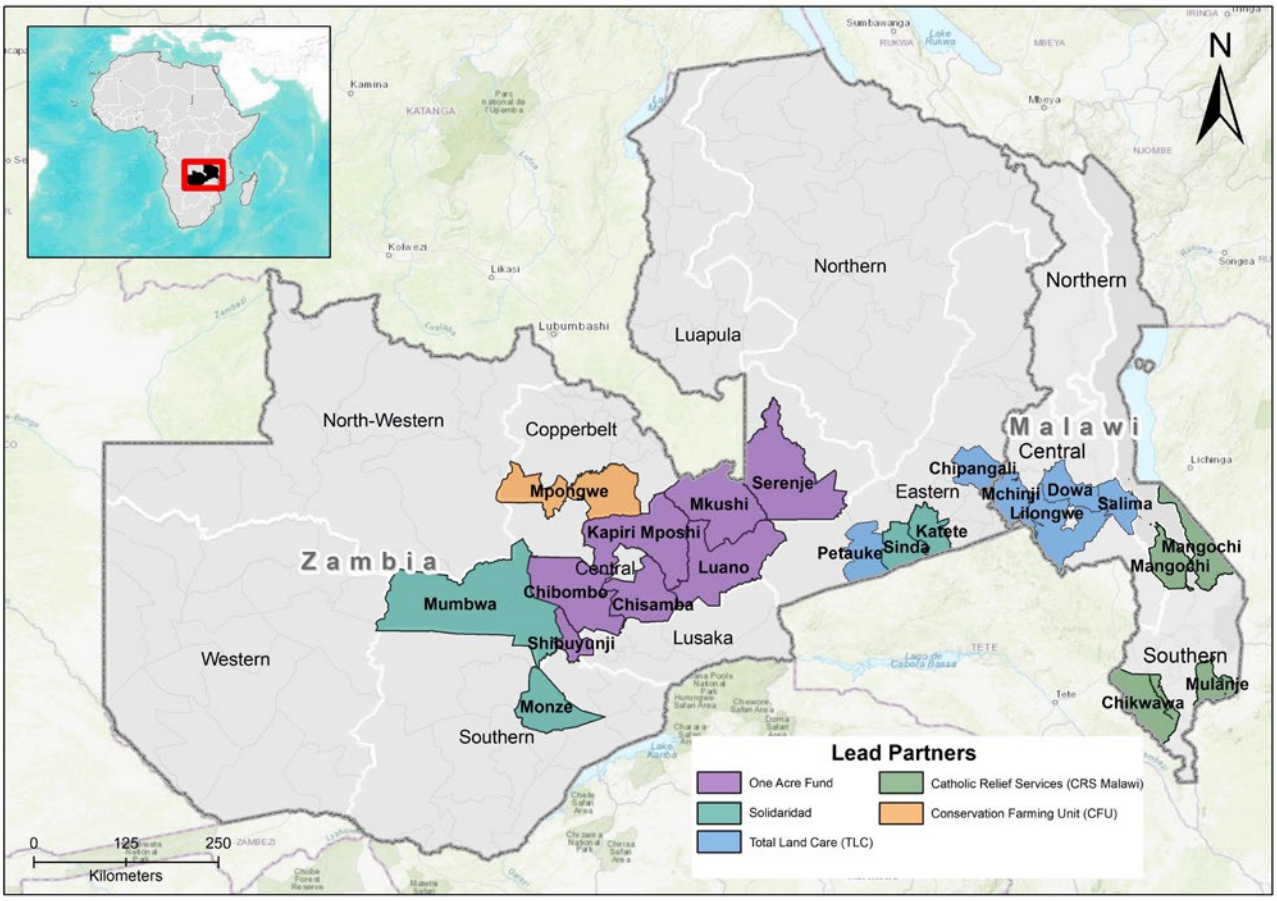


Figure 6: Consortia geographical mapping.
Source: Authors' creation.

The consortia and their focal areas, as detailed in Table 2 and Annex 1, are:

- **Catholic Relief Services (CRS)-led partnership:** Operating in Malawi, it focuses on landscape planning and committee engagement; coordinating integrated water management and soil conservation activities; expanding demonstration farms and rainwater systems; promoting agroforestry and intercropping; creating peer learning groups and farmer learning centers; and strengthening market access and partnerships. Partners include Illovo Sugar Malawi, MwAPATA Institute and Churches Action in Relief and Development.
- **Conservation Farming Unit (CFU)-led partnership:** Operating in Zambia, it focuses on testing and scaling water and soil management technologies, including agroforestry systems, and integrating drought-tolerant seeds with conservation agriculture practices; providing hands-on training on sustainable farming techniques and promoting gender and youth empowerment; gathering of evidence to influence policy; mechanization; and inclusive insurance. Partners include Viamo, AgriPredict and Contractsure Services Limited.
- **Total Land Care (TLC)-led partnership:** Operating in both Malawi and Zambia, it focuses on steering

sustainable water and soil management practices, crop diversification and intensification, and local seed collection; farmer trainings, intervention bundling and localized delivery; community governance; and inclusive integration. Partners include African Fertilizer and Agribusiness Partnership, Farmers' Outgrower Foundation, PELUM Malawi and Mediae.

- **Solidaridad-led partnership:** Operating in Zambia, it focuses on regenerative and rotational grazing agriculture training; demonstration site with a mini water reservoir; inclusive seed loan facility; farmer training on waste aggregation for quality organic fertilizer production; provision of early warning systems and extension services; establishment and strengthening of Community-based Natural Resource Management (CBNRM) Committees; and data gathering using transformative methods. Partners include Kvuno, Greencare Eco Solutions, AgriPredict and Mediae.

- **One Acre Fund (OAF)-led partnership:** Operating in Zambia, it focuses on enrolling farmers for agroforestry-carbon packages (350+ trees/ household); establishing decentralized tree nurseries; distributing tree seedlings to farmers; providing quality inputs: fertilizer, seeds, soil amendments and training; providing crop insurance to mitigate weather risks; delivering technical support on agroforestry, green manure and cover crops, and composting (Trainer of Trainers); training field teams and demo ambassadors on composting; exhibiting agroforestry and composting at agricultural shows; conducting joint soil/water training and field days with private sector; developing seasonal and long-term climate/ crop advisories; and producing TV and radio content on climate-smart agriculture and carbon financing. Partners include Golden Valley Agricultural Research Trust (GART), Green Cycle Ltd, Mediae and PASAP.

Given that more than one consortium is active in some areas, coordination of activities will be necessary. While there is no overlap between the two consortia active in Malawi, since TLC operates in the central region and CRS in the southern region, TLC also has activities in the Eastern Province of Zambia, with limited overlap with Solidaridad's work in Sinda. Three consortia are working in the various districts of the Central Province of Zambia, with both CFU and OAF being active in Chibombo, Kapiri and Shibuyunji, and also needing to generate synergies with Solidaridad in Mumbwa. CFU is the only consortium working in one district of the Southern and Eastern Provinces of Zambia, so will have to work effectively to ensure significant impacts in these districts.

Table 2: Consortia partners, geographical focus areas and core contributions to WASA.

Lead Partner	Country of Operation	Primary Focus	Sub Partners and Technical Partner
Catholic Relief Services (CRS Malawi)	**Malawi:** Chikwawa, Mulanje & Mangochi	Landscape planning and committee engagement; Coordinating IWM and soil conservation activities; Expanding demo farms and rainwater systems; Promoting agroforestry and intercropping; Creating peer learning groups and farmer learning centers; Strengthening market access and partnerships	Illovo Sugar (Malawi) plc; MwAPATA Institute; Churches Action in Relief and Development (CARD), International Water Management Institute (IWMI)
Conservation Farming Unit (CFU)	**Zambia:** Chibombo, Ngabwe, Kapiri, Mumbwa, Shibuyunji, Mukushi, Mpongwe, and Monze	Testing and scaling water and soil management technologies, including agroforestry systems, and integrating drought-tolerant seeds with conservation agriculture practices. Capacity Building & Inclusive Practice Promotion: Providing hands-on training on sustainable farming techniques and promoting gender and youth empowerment; gathering of evidence to influence policy; mechanization; inclusive insurance	International Maize and Wheat Improvement Center (CIMMYT); IWMI; Viamo; AgriPredict; Contractsure Services Limited

Lead Partner	Country of Operation	Primary Focus	Sub Partners and Technical Partner
Solidaridad	**Zambia:** Mumbwa, Katete, Monze, Sinda	Regenerative and rotational grazing agriculture training; demonstration site with a mini water reservoir; inclusive seed loan facility; farmer training on waste aggregation for quality organic fertilizer production; provision of early warning systems and extension services; establishment and strengthening of Community-based Natural Resource Management (CBNRM) Committees; Data gathering using transformative methods (e.g., WEAI, GALS, dialogues)	IWMI; Kvuno; Greencare Eco Solutions; AgriPredict; ABC; Mediae
Total Land Care (TLC)	**Zambia:** Petauke, Sinda, Chipangali, Katete, Kasenengwa **Malawi:** Lilongwe, Mchinji, Salima, Dowa	Sustainable water and soil management practices, crop diversification and intensification, and local seed collection; Farmer trainings, intervention bundling and localized delivery, community governance, GESI integration	African Fertilizer and Agribusiness Partnership; Farmers' Outgrower Foundation; PELUM Malawi; IWMI; CIMMYT; Mediae
One Acre Fund	**Zambia:** Chibombo, Chisamba, Kapiri Mposhi, Luano, Mkushi, Mumbwa, Serenje, Shibuyunji, Mpongwe	Enrolling farmers for agroforestry-carbon packages (350+ trees/household); establishing decentralized tree nurseries; Distributing tree seedlings to farmers; Providing quality inputs: fertilizer, seeds, soil amendments, and training; Providing crop insurance to mitigate weather risks; Delivering technical support on agroforestry, GMCCs, composting (Trainer of Trainers); Training field teams and demo ambassadors on composting; Exhibiting agroforestry and composting at agricultural shows; Establishing joint demo plots with extension partners; Conducting joint soil/water training and field days with private sector; Developing seasonal and long-term climate/crop advisories; Training 112 Field Leads and conducting follow-ups; Producing TV and radio content on climate-smart agriculture and carbon financing	ABC; Golden Valley Agricultural Research Trust (GART); Green Cycle Ltd; Mediae; PASAP

Source: Author's creation

7. Social and Economic Inclusion

WASA has adopted a holistic and integrated approach to social and economic inclusion, recognizing that equitable access to resources, knowledge and decision making is essential for sustainable impact in rainfed agricultural systems.

Its commitment to gender equality and social inclusion (GESI) means that GESI principles are treated as integral pillars of design, implementation, monitoring and scaling, rather than as separate add-ons. This ensures that women, youth and marginalized communities are not only beneficiaries of innovation but also active decision-makers, entrepreneurs and leaders in shaping solutions.

The project tackles systemic inequities that limit inclusive participation in agri-food systems. This entails strengthening land tenure and resource security, expanding access to tailored financial services and credit products for women- and youth-led enterprises, and dismantling barriers to adoption, such as restrictive social norms, labor constraints and limited access to extension services.

Diagnostic tools will be applied to identify barriers and opportunities for different social groups, while approaches such as the Gender Action Learning System (GALS) will be used to build household- and community-level agency, negotiation skills and collective action. At the institutional level, inclusive enabling environments will be fostered by engaging local authorities, financial institutions, private sector actors and civil society to reduce risks of exclusion or unintended harm.

Scalability will be achieved by embedding inclusivity in pathways that prioritize value chains with high potential for women and youth participation, strengthen SMEs as inclusive market actors, align policy to institutionalize responsive approaches, and leverage digital ecosystems to expand access to climate and agronomic information, as depicted in Figure 7. Built-in safeguards will ensure that scaling processes avoid reinforcing inequalities or environmental degradation.

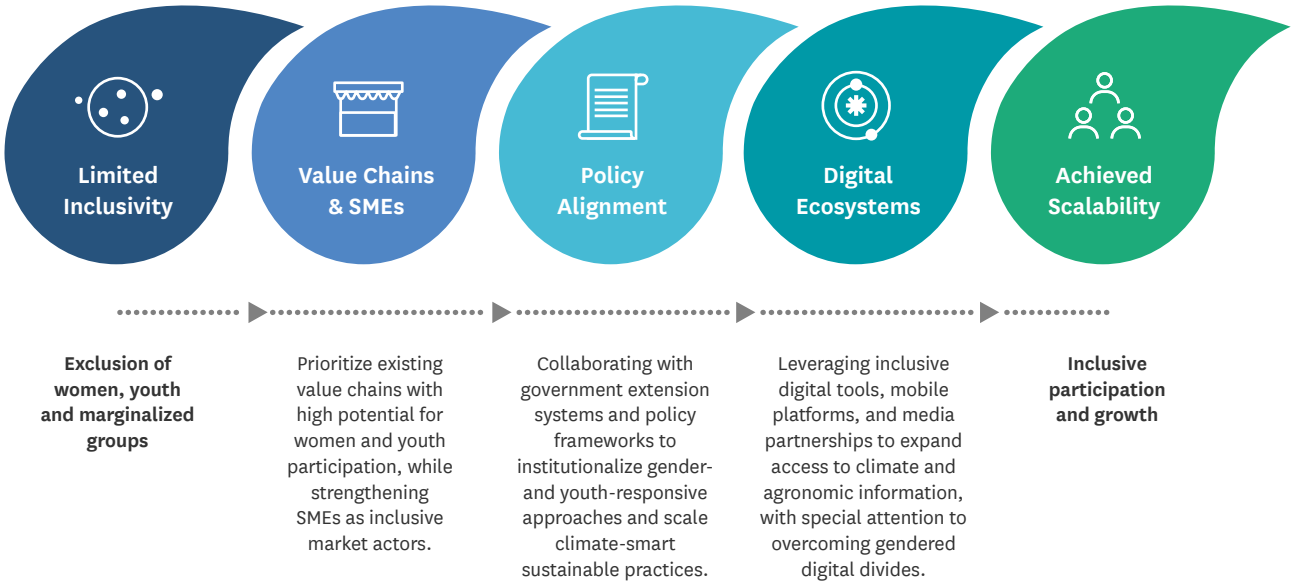


Figure 7: Embedding inclusivity for scalability.
Source: Authors' creation

Photo credit: Christian Thierfelder, CIMMYT

> The project tackles systemic inequities that limit inclusive participation in agri-food systems

These strategic intentions are already being translated into practice through a range of activities led by WASA's Lead Partners. For example:

- **Strengthening land tenure and resource security:** TLC supports community awareness with 100 local governance structures in Zambia and Malawi, specifically targeting women excluded from land and resource rights; likewise, OAF is engaging with chiefs and local leadership to promote secure land tenure and boost women's participation in farming.
- **Expanding inclusive financial and enterprise opportunities:** CRS is working to expand market opportunities for 120,000 households engaged in the cultivation of legumes, while Solidaridad will engage women and young people as sales agents for organic fertilizer.
- **Dismantling structural barriers to adoption:** TLC is rolling out GALS training for 20 field staff and 30,000 farmers to promote inclusive adoption of mechanization and conservation agriculture.
- **Leveraging digital tools and media for inclusion**: CFU integrated the AgriPredict tool into the AWARE platform, while Solidaridad and OAF partnered on the *Munda Makeover* TV show.
- **Institutionalizing inclusive governance and policy frameworks:** Solidaridad is co-developing community bylaws and charters for natural resource management committees, embedding women's and youth voices in decision making.

These interventions illustrate how WASA's partners are laying the groundwork for transformative change in rural farming systems, where GESI integration is central to climate resilience, equitable livelihoods and sustainable resource management.

8. Strategic Communications and Knowledge Management

In line with the co-design process, a communications strategy will be developed to support knowledge sharing and learning among consortia to boost efficiency and impact. Lessons learned will be shared across partner regions to enhance learning and scaling from farmers and local governance systems to high-level government decision-makers.

To support informed decision making, all consortia will work with meteorological departments to develop seasonal and long-term climate forecasts and agro-advisory message services for dissemination through extension agents and mass media platforms, such as television, community radio stations and other digital forms, including SMS and mobile apps.

The consortia lead partners are already engaged in a range of activities that strengthen communication, knowledge sharing and policy engagement. For example:

- **Expanding farmer access to information and dialogue:** CRS launched a digital subscription service sharing farmer success stories locally and nationally, complemented by live radio dialogues connecting farmers with subject matter specialists.
- **Strengthening climate information services and risk management:** CFU is integrating the AgriPredict tool into the AWARE platform, training consortium staff, and sharing real-time climate data and early warnings with farmers.
- **Promoting knowledge sharing and evidence-based policy:** CFU is organizing workshops, field tours and stakeholder events, while analyzing data from mega demonstrations to generate actionable insights.
- **Building capacity for digital extension and tailored advisory services:** Solidaridad and OAF partnered on the *Munda Makeover* TV show, reaching 150,000 farmers with regenerative agriculture knowledge and linking them to digital advisory platforms; OAF is training 112 field leads to deliver e-extension messages and structured feedback systems, with advisory content on climate-smart agriculture and carbon financing in multiple local languages.
- **Advancing advocacy and inclusive governance:** OAF is engaging chiefs, local leaders and the National Assembly to promote secure land tenure, climate-smart agriculture and carbon financing within national policy frameworks; TLC is convening SHARE fairs to connect private sector actors and initiatives, while producing gender-sensitive communication materials on land governance frameworks.

Together, these efforts demonstrate how WASA partners are building the foundations of an inclusive knowledge ecosystem – one that equips farmers with timely information, amplifies local voices and informs policy shifts toward climate-resilient, equitable farming systems.

9. Sustainability and Exit Strategy

WASA's sustainability and exit strategy is built around four interconnected pillars: institutional embedding, financial viability, knowledge transfer and community ownership. Together, these ensure that the practices implemented are durable, locally led and scalable beyond the project's timeframe.

Institutional Embedding and System Integration

WASA will embed its interventions within national and subnational systems, strengthening existing institutional structures through formal partnerships with government agencies, extension networks and district authorities. This ensures that technical innovations are fully aligned with national resilience priorities and integrated into ongoing public programs in Malawi and Zambia. Such integration is essential for sustainable impact beyond the project's completion, ensuring that interventions do not remain isolated, external initiatives. For example, by linking project activities with the World Bank-funded Zambia Water Investment Programme (ZIP) 2022–2030, the Sustainable Intensification of Smallholder Farming Systems in Zambia (SIFAZ) project, and the Malawi Watershed Services Improvement Project (MWASIP), synergies can be exploited to increase impact on the ground and support from high-level decision-makers.

Furthermore, technical guidelines and monitoring tools developed by the project will be institutionalized within national research institutes and training curricula, enabling long-term technical support. Partner networks will be strengthened and their capacity to cooperate increased, which will enhance efficiency and ensure that future development efforts can function without reliance on foreign donors. At grassroots level, community-based natural resource management (CBNRM) groups and farmer cooperatives will be trained and supported to take ownership of landscape restoration and resource governance. By the end of the project, it is expected that CBNRM strategies will be implemented by local organizations in partnership with local authorities and adhered to by resource users. Measurable improvements in landscapes, reflected in increased ecological goods and services, will demonstrate the effectiveness of this approach.

Financial Sustainability and Market-driven Adoption

To secure financial sustainability, WASA leverages market-driven approaches that link smallholder producers to inclusive value chains and foster youth- and women-led enterprises. A dedicated business accelerator, embedded as a last-mile delivery mechanism, will provide science-based technical assistance, performance-based grants, blended finance pathways and business remodeling. These measures will de-risk SMEs and encourage reinvestment.

Engagement with private sector actors will strengthen value propositions and create reliable off-take opportunities for sustainably produced crops. By project end, SMEs should be positioned to supply economically viable smallholder farmers with affordable, high-quality inputs. Improved water management practices, healthier soils and climate-smart crop varieties will translate into higher yields and profits, with farmers selling into functional local value chains. Independent private sector data, such as increased sales of drought-tolerant, high-quality inputs and consistent growth in market offtakes, will provide evidence of sustainability.

Photo credit: Christian Thierfelder, CIMMYT

Capacity and Knowledge Transfer

Knowledge transfer and capacity development at all levels is prioritized by training local facilitators and extension service agents using train-the-trainer models, toolkits and technical guides, ensuring that both technical expertise and institutional memory remain with local actors beyond project closure.

Community ownership

Community ownership plays a pivotal role, and will be reinforced through participatory planning, citizen science and the co-creation of local governance systems that guide resource use. This empowers farmers and communities to define, innovate and enforce sustainable practices based on local priorities and context. By the end of the project, local actors should have the capacity to disseminate technical knowledge effectively within a strong network of natural resource users, private sector players and decision-makers. Knowledge will be accessible through multiple channels, such as extension services, digital platforms, television and community radio.

The sustainability and exit strategy ensures that WASA delivers lasting impact by working collaboratively with local institutions and communities to co-design viable pathways for the long-term transformation of rainfed agricultural landscapes in Malawi and Zambia. Developed for communities, by communities, these pathways will enable autonomous scaling through social learning, knowledge sharing and innovation.

10. Monitoring, Evaluation, Learning and Impact Assessment (MELIA)

The MELIA framework uses a set of harmonized, consortium-specific and USG-aligned indicators to assess project performance across various domains, including productivity, resilience, inclusion, soil and water health, and digital access. These metrics are both quantitative (e.g., % yield increase, hectares restored, tree survival rate) and qualitative (e.g., community satisfaction, behavior change). They enable the project to measure progress toward intended outcomes and impacts while ensuring comparability across geographies and consortia.

Purpose of the MEL plan

To guide the systematic tracking, assessment and adaptive learning from project interventions across five consortia implementing water and soil improvement technologies. The plan aims to:

- Monitor progress against targets.
- Assess the effectiveness, efficiency, sustainability and scalability of interventions.
- Promote continuous learning and adaptive management.

Objectives of MEL

- Track adoption and performance of soil and water innovations.
- Generate evidence on cost-effectiveness and co-benefits (e.g., yield, resilience, carbon sequestration).
- Document farmer/community feedback and learning loops.
- Strengthen partners' capacity for evidence-based decision making.

Table 3 highlights the key areas of impact and the supporting indicators that will be used in the MELIA plan to monitor progress and impact measurement within the consortia partners.

Table 3: Consortia Results Framework

Level	Result/Objective	Key Indicators	Means of Verification	Contributing Consortia	Assumptions
Impact	One million hectares of climate-resilient landscapes supporting one million smallholder farmers in Zambia and Malawi · Highly productive and diversified cropping systems enable one million farmers to achieve improved food and nutrition security	% increase in yields; % increase in household income; % improvement in resilience index; % improvement in food security	Endline surveys; RFMS dashboard; Looker; ODK	All (Catholic Relief Services, Conservation Farming Unit, One Acre Fund, Total Land Care, Solidaridad)	No major shocks disrupt implementation
Outcome 1	Improved watershed and landscape-level water and soil management resulting in resilient ecosystems that provide ecological goods and services while buffering communities from environmental shocks	Number of hectares under improved management; hectares under improved land and crop management strategies; %/number of farmers reporting improved yields from improved water and soil management	GIS-linked ODK; geo-tagged reports; remote sensing; photo logs	Catholic Relief Services, Conservation Farming Unit, Total LandCare	Communities maintain infrastructure
Outcome 2	Farmers adopt diversified crops, drought-resistant varieties, digital climate advisories, and improved soil and water management practices that increase productivity	% farmers applying practices; % adoption of improved packages; % using advisories; % accessing inputs; yields; % CA/intercropping	Farmer surveys; ODK; GeoFarmer; digital logs	All consortia	Farmers continue applying practices
Outcome 3	Women, youth and marginalized groups are represented in local institutions and actively participate in decision-making and planning processes	%/number of women and youth participating in household/community decision-making related to farm management, assets, and income use	CBNRM records; GALS logs; training reports; partner technical reports	Catholic Relief Services, Conservation Farming Unit, Total Land Care, Solidaridad	Governance bodies remain active
Output 1.1	Green infrastructure and water systems installed	Number of structures installed; % functional	Geo-tagged reports; photo logs; partner reports	Catholic Relief Services, Conservation Farming Unit, Total Land Care	Infrastructure remains functional
Output 1.2	Community capacity for water governance strengthened	Number of community water governance structures strengthened	MEL reports; partner progress reports	Catholic Relief Services, Conservation Farming Unit, Total LandCare	Communities remain engaged

Level	Result/Objective	Key Indicators	Means of Verification	Contributing Consortia	Assumptions
Output 1.3	Development of watershed management plans supported for implementation	Number of watershed planning processes supported	Consortia reports; discussions with project leads	Catholic Relief Services, Conservation Farming Unit, Total LandCare	Stakeholders participate
Output 1.4	Land restoration planning and implementation supported	Number of land restoration plans/ interventions supported	Consortia reports; discussions with project leads	Catholic Relief Services, Conservation Farming Unit, Total LandCare	Communities participate
Output 1.5	Local institutions strengthened for water and natural resource governance	Number of local institutions trained	MEL reports; partner progress reports	International Water Management Institute, Catholic Relief Services, Conservation Farming Unit, Total LandCare	Institutions remain functional
Output 2.1	Farmer training and outreach on sustainable practices delivered	Number of farmers trained (disaggregated by gender, age, country)	Training logs; ODK event register	All partners	Farmers participate
Output 2.2	Demonstration plots established	Number of demonstration plots established (disaggregated by country)	Partner progress reports	One Acre Fund, Total LandCare, Conservation Farming Unit	Demonstration sites remain active
Output 3.1	Institutional capacity of women, youth and marginalized groups strengthened	Number of women, youth and marginalized groups supported	MEL reports; partner progress reports	Solidaridad, International Water Management Institute	Continued participation
Output 3.2	Policy alignment and coordination supported between local authorities and national ministries	Number of policy alignment and coordination engagements supported	MEL reports; partner progress reports	International Water Management Institute, Solidaridad	Government remains engaged

Source: Authors' creation

Data Collection Methods and Reporting Frequency

Quantitative data collection involves using standardized tools across partners, with digital data capture (e.g., ODK, GeoFarmer, AgriPredict) and manual tools for qualitative data (e.g., farmer diaries, field observation logs) across baseline, midline and endline intervals. Intervention areas are mapped using GIS software. IWMI leads the development of quarterly partner data reporting templates and a secure cloud-based database for uploading data, reports and other essential information, such as event registers that must be uploaded within three days of the event. Gender-, age- and disability-disaggregated data (SADD) are prioritized to enhance equity tracking.

Table 4 shows the minimum contributions each partner must make by June 2027 to reach the project's vision of one million smallholder farmers adopting improved soil and water management across one million hectares of land. Each partner's MEL team is responsible for ensuring progressive achievement of these targets, with at least 40% attained by August 2026 and the remaining 60% by June 2027. Progress against these milestones will be systematically monitored and verified through the established data quality assurance procedures, ensuring accuracy, consistency, and accountability in reporting.

Table 4: Key Results Areas (KRAs) and consortia indicators.

KRA	Indicator	Method	Frequency	Responsible	Targets by Partner	Cumulative Target
1. **Landscape & Watershed Management Outcomes**	EG.3.2-25 – Hectares under improved management	ODK records, GPS mapping, remote sensing	Quarterly	IWMI + Partners	All partners	1,000,000 hectares
	HL.8.5-2 – People benefiting from water management	Geo-tagging	Quarterly	IWMI + Partners	All partners	300
	CUST-2: People benefiting from improved soil/ land management practices	Household surveys, quarterly remote sensing	Quarterly & Annually	IWMI + Partners	All partners	300
	Soil improvements (soil organic matter, infiltration)	Soil sampling	Annual	CRS, CFU, TLC	Partner-specific	≥10–15%
	Water retention improvement	Moisture probes	Seasonal	M&E Teams	CRS, CFU	≥15%
	Infrastructure functionality	Field reports	Annual	CRS, CFU, TLC	All partners	≥80% functionality rate
2. **Farm-level Adoption & Productivity Outcomes**	EG.3.2-24 – Applying practices	Household surveys	Quarterly	MEL Teams	All partners	700
	EG.3.2 – Participants in USG food security programmes	ODK records, household surveys, quarterly remote sensing	Quarterly & Annually	MEL Teams	All partners	1,000,000
	EG.3.10–12 – Targeted commodity yield	Household surveys, protocols	Quarterly	IWMI + Partners	All partners	Maize >2t; Legumes >500kg; Other crops >1t
	CUST-1: Climate-resilient varieties promoted	Household surveys, protocols	Quarterly	IWMI + Partners	All partners	12 varieties promoted

KRA	Indicator	Method	Frequency	Responsible	Targets by Partner	Cumulative Target
	CUST-4: Gender-smart, inclusive water-soil technologies	Household surveys	Bi-annual	MEL Teams	All partners	300
3. **Livelihoods & Resilience Outcomes**	EG.11-5 – Climate adaptation support	ODK records; quarterly reports; household surveys	Quarterly & Annually	MEL Teams	All partners	700
	EG.3.1-15 – Private sector investment leveraged	Quarterly reports	Quarterly & Annually	MEL	All partners	≥ USD 2.5 million
4. **Systems, Inclusion & Capacity Strengthening**	EG.3.2 – Participants in USG food security programmes	ODK records, household surveys, quarterly remote sensing	Quarterly & Annually	MEL Teams	All partners	1,000,000
5. **Learning & Adaptive Management**	Lessons documented	Reflection sessions	Bi-annual	IWMI	All partners	≥20/year
	Adjustments made	Committee records	Annual	Steering Committee	All partners	≥10/year

Source: Authors' creation

Continuous Learning

The MELIA framework embeds adaptive learning through quarterly consortium reflections, red-flag dashboards and cross-consortium learning exchanges. Real-time feedback loops allow for adjustments in strategy, implementation and partnerships based on evidence and field insights. Gender and youth-responsive learning mechanisms (e.g., GALS, WEAI) are integrated to drive inclusive adaptation and course correction.

While WASA aims to maximize its impact, there are also important lessons to learn from the implementation process, the structure and operation of the consortia, and the level of engagement from partners and stakeholders. Questions that WASA explores include:

- Which combination of interventions results in the most sustainable soil and water outcomes?
- What are the social and economic factors that enable or hinder scaling of these innovations?
- How does weather index insurance influence risk-taking behavior and technology adoption?
- What institutional arrangements best support ongoing community-level implementation?

These questions will help develop an evidence-based understanding of how to adapt and design scaling strategies in the future. To address them, WASA facilitates and participates in a variety of learning activities, including case study analysis, partner reflection sessions, inclusive participatory evaluation workshops, and field learning exchanges among partners, geographies and disciplines.

Schedule of MELIA Plan

Table 5 provides a breakdown of roles and responsibilities of the project team and partners within their respective roles, while Table 6 outlines the expected reporting outputs from the consortia, and the way in which these will be used for MELIA. To support these activities, approximately 10–20% of the consortia budget is allocated to MELIA, enabling both baseline and endline surveys to be conducted. Furthermore, learning events such as the yearly pause and reflection are used as a cost-efficient alternative to a midline assessment to assist in evaluating progress, deliverables and any envisaged delays, supporting a robust and adaptive MELIA approach.

Table 5: MELIA roles and responsibilities.

Entity / Partner	MELIA Role / Responsibility	Contributing Consortia	Assumptions
MELIA Lead (Consortia level)	Oversight, standardization, quality assurance, reporting	All Consortia	Consortium-level coordination is resourced and active
Partner MEL Officers	Data collection, cleaning, reporting	All Consortia	MELIA officers are retained and trained
Field Teams	Direct data collection, farmer engagement	All Consortia	Field teams remain engaged and mobile
Technical Advisors	Ensure rigor in biophysical assessments	All Consortia	Expertise is available for assessments
Steering Committee	Oversight of learning and adaptation decisions	All Consortia	Committee is functional and meets regularly
IWMI	MELIA coordination; GESI & water metrics; results synthesis	All consortia	IWMI remains engaged and resourced for MELIA oversight
CIAT	Climate adaptation and GESI evaluations; advisory metrics	CRS, TLC, Solidaridad	Climate and gender specialists available for periodic assessments
CRS	MELIA lead; oversight, reporting, digital integration	CRS	Field teams consistently collect and report data
CFU	MELIA implementation in Central Zambia; ODK, AgriPredict, feedback loops	CFU	Community structures support learning processes
One Acre Fund (OAF)	Farmer adoption tracking; input provision metrics; ODK rollout support	OAF	Enumerators are available; digital tools function reliably
TLC	Consortium MELIA; water use and resilience indicators	TLC	Partners align MELIA tasks with implementation plans
Solidaridad	Consortium MELIA lead; Looker dashboard; gender-responsive MELIA system	Solidaridad	Gender & M&E teams retained and engaged
AgriPredict	SMS-based advisory tracking; platform usage analytics	OAF, CFU, Solidaridad, TLC	Farmers have mobile access and use digital platforms
Kvuno	Youth-led training tracker; MELIA facilitation & data entry	Solidaridad	Youth field agents remain supported and active
CARD	Field data collection; CBNRM/ FLC feedback integration	CRS	Local facilitators retained and motivated

Entity / Partner	MELIA Role / Responsibility	Contributing Consortia	Assumptions
MwAPATA Institute	Policy feedback; soil & water indicator alignment with national systems	CRS	National engagement continues; ministries adopt learnings
CBNRM / FLCs / Committees	Local-level governance monitoring and validation	CRS, CFU, Solidaridad, TLC	Committees remain functional and meet regularly

Source: Authors' creation

Table 6: Expected reporting outputs.

Report	Frequency	Primary Audience	Purpose / Use
Partner Technical & Financial Reports	Quarterly	Consortium Management, IWMI PCU	Track implementation, financial performance, and troubleshoot delivery bottlenecks
Consortium MELIA Summary Reports	Bi-annual	USG, National Stakeholders	Consolidate progress, flag risks, and highlight early outcomes and lessons
End-of-Season Field Briefs	Seasonal	Partners, Field Teams	Inform immediate adaptations in practice and activity planning
Policy Briefs	Annual	Policymakers, Ministries (MoAIWD, MoFEPD)	Translate results into actionable policy insights
Learning Notes & Case Studies	Quarterly / As needed	All Consortia, Steering Committee	Document emerging innovations, successes, or challenges for peer learning
Dashboards & Data Visualizations	Real-time	MELIA Officers, Program Managers	Enable evidence-based management using digital tools (ODK, etc)
Endline & Midline Evaluation Reports	Q4 2026 & Q2 2027	Donors, Academia, Stakeholders	Assess final project impact, including resilience, equity, and behavior change

Source: Authors' creation

Exit Strategy for Participants and Follow-up Support

The project embeds sustainability mechanisms such as the strengthening of local institutions (e.g., CBNRM, FLCs), farmer-led advisory platforms, and digital extension services to ensure continuity after project exit. Graduation models and peer-led learning networks are leveraged to support ongoing practice adoption. Final learning briefs and transition support plans are being co-developed with communities and local government for long-term resilience.

The overall MELIA framework is structured in alignment with project milestones, timelines for evaluations, assessments and learning events. Annex 7 presents an overview of the expected deliverables, while Annex 8 provides a supporting Gantt chart that outlines both expected deliverables and their respective timelines. These annexes ensure that MELIA processes are not only rigorous and participatory but are also aligned with dynamics in implementation and adaptive to evolving risks.

11. Risk Management

Effective risk management is key to WASA's ability to achieve its vision of one million farmers adopting sustainable soil and water management practices across one million hectares of land. Operating in environments where uncertainty is the norm, WASA must anticipate potential threats that could disrupt delivery, and take proactive measures to mitigate them. A risk management framework has therefore been developed, as shown in Annex 9. It outlines the likelihood and impact of various risks, as well as their respective mitigation strategies, underlying assumptions and the responsible entities for risk management.

Unpacking the risk landscape

At the core of WASA's risk management is the recognition that credible evidence and adaptive learning depend on robust data systems. Risks such as enumerator turnover, delays in baseline surveys, and digital tool failures can undermine data quality and comparability, threatening the integrity of MELIA outputs. To safeguard against these, WASA invests in standardized tools, refresher trainings, lean mobile-enabled baselines, and offline data capture modes. These measures ensure that evidence remains reliable and timely.

Climate and environmental risks are among the most significant, with droughts, floods and erratic rainfall posing high-likelihood, high-impact threats to agricultural productivity and field operations. WASA integrates climate-smart planning into all interventions, allocates contingency funds, and leverages early warning systems to adjust schedules and protect investments.

Political and security risks, including election-related instability or policy shifts, are managed through early engagement with authorities, transparent communication, and reliance on local partners to lead fieldwork. Financial risks, such as disbursement delays or exchange rate fluctuations, are mitigated through quarterly cashflow forecasts, harmonized reporting and proactive donor communication.

Partnership and governance risks reflect the complexity of a multi-consortia model. WASA addresses these through joint governance structures, regular coordination meetings, and clear scopes of work. Private sector engagement risks are mitigated by aligning interventions with market incentives, engaging agribusinesses early, and deploying blended finance tools to de-risk investment. Community and social inclusion risks, particularly around gender equality and tenure, are managed by embedding GESI safeguards, promoting inclusive participation, and applying gender-transformative approaches such as GALS. Lastly, operational and logistical risks, including procurement challenges and cross-country delays, are addressed through advance planning, local sourcing and supplier databases.

Importantly, risk management is embedded within MELIA to enable early detection and effective response throughout the duration of project implementation. By fostering continuous learning and adaptation, this approach strengthens resilience over time.

> **"Operating in environments where uncertainty is the norm, WASA must anticipate potential threats that could disrupt delivery, and take proactive measures to mitigate them.**

12. Impact Modeling

WASA uses an integrated modeling approach to quantify the impact of its interventions at the watershed level. This provides a comprehensive understanding of how farm-level practices and broader watershed management influence hydrology, soil health and agricultural productivity. The modeling uses a multi-model framework to capture the complexity of the landscape. It includes:

- **Soil and Water Assessment Tool (SWAT):** Simulating the impacts of land management practices on water, sediment and agricultural and water yields in complex watersheds. SWAT can model various interventions, including changes in land use, terracing and conservation farming. It is used to quantify changes in runoff and groundwater recharge.
- **Runoff and Groundwater Recharge:** Simulating how water retention practices affect water flow and the replenishment of aquifers.
- **Erosion and Sediment Yield:** Measuring the reduction in soil loss due to conservation agriculture and other soil management interventions.
- **Nutrient and Water Balance:** Assessing the efficiency of water use and nutrient cycling at the watershed scale.
- **River Analysis System (HEC-RAS) model:** Evaluating the effectiveness of nature-based solutions such as ponds and constructed wetlands for flood attenuation and water storage.

The impact modeling compares a baseline scenario with an intervention scenario to quantify the effects of WASA's activities.

Baseline Scenario: Simulates the watershed's conditions from 2010 to 2024 without the project's interventions. This will reflect the current state of soil degradation, flood risk and low agricultural productivity.

Intervention Scenario: Simulates post-interventions, with the progressive adoption of interventions by consortia partners. It includes increased areas under conservation agriculture, the implementation of nature-based solutions, and improved water management practices.

The outputs from this detailed impact modeling are used for:

- **Impact Maps:** Visualizing the positive changes in flood risk, soil moisture and agricultural productivity.
- **Quantitative Metrics:** Providing clear data on the benefits, such as a percentage reduction in flood peaks or an increase in yields.
- **Adaptive Management:** Using the models to test different strategies and optimize WASA's implementation throughout the project period and beyond.

These applications serve not only as technical tools but also as powerful resources for stakeholder engagement and capacity building. The impact maps, in particular, offer a compelling visual narrative of change, making complex data more accessible to a wide range of audiences. By enhancing understanding and providing evidence-based data demonstrating the effectiveness of WASA's interventions, the impact modeling will support the scaling of sustainable practices across Malawi and Zambia.

Integrated Modeling Tool

Soil and Water Assessment Tool (SWAT)

River Analysis System

Erosion and Sediment Yield

Nutrient and water Balance

Runoff and Groundwater Recharge

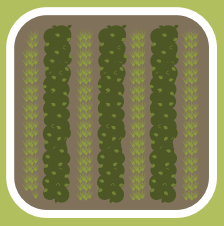
Captures the complexity of the landscape

Measuring Change: Baseline Vs. Intervention

Baseline Scenario

Simulates the watershed's conditions from 2010 to 2024 without the project's interventions

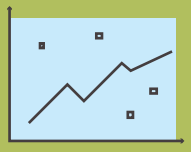
Intervention Scenario



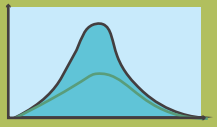
Simulates post-interventions, with the progressive adoption of interventions by consortia partners

Outputs

The outputs are used for:



Impact Maps



Quantitative Metrics

Adaptive Management

13. Conclusion

This Inception Report describes the design and initial implementation strategy of the Water and Soil Accelerator. It emphasizes the importance and benefits of the co-design process that involved all consortium lead organizations and their partners in shaping the project. This step is vital because it builds trust, strengthens networks and encourages knowledge sharing and learning, which not only improve the prospects of successfully scaling water and soil technologies, but also help maintain efforts and impact after the project's conclusion. Five consortia, along with their partners, will implement proven technologies in Malawi and Zambia, with varying degrees of geographical overlap. Areas for potential collaboration, integration and future synergies have been identified, and project management will oversee and facilitate necessary cooperation. IWMI will also ensure that linkages and integration with earlier, related and ongoing CGIAR initiatives are maintained, and lessons are shared through a range of communication channels. Knowledge sharing and lessons learned will be supported by a comprehensive MELIA plan that will track progress toward the vision of reaching one million farmers across one million hectares.

Endnotes

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ANNEXES

Annex 1: Consortia Partner Factsheets

Lead Partner	Conservation Farming Unit (CFU)	
Other Partners	1. International Maize and Wheat Improvement Center (CIMMYT) 2. IWMI 3. Viamo 4. AgriPredict 5. Contractsure Services Limited	
Country	Zambia	
Provinces Covered	Chibombo, Ngabwe, Kapiri, Mumbwa, Shibuyunji, Mukushi, Mpongwe, Masaiti, and Monze	
Key Activities	1. **Development & Validation of Sustainable Farming Innovations:** → Designing and implementing demonstration protocols to test and scale water and soil management technologies, including agroforestry systems adapted to local conditions. → Sourcing drought-tolerant maize and legume seeds and integrating them with Conservation Agriculture (CA) practices to improve cropping systems and promote long-term sustainability. 2. **Capacity Building & Inclusive Practice Promotion:** → Providing hands-on training to farmers and stakeholders on sustainable farming techniques, with a focus on CA, residue management and crop diversification. → Promoting inclusive participation by supporting gender and youth empowerment through tailored training and participatory approaches that ensure equity across all project activities. 3. **Collaboration & Knowledge Exchange Facilitation:** → Engaging with climate and weather experts to optimize cropping systems using climate data and forecast. → Organizing workshops, field tours and stakeholder events to promote knowledge sharing and build a strong network of committed actors. 4. **Evidence Generation & Policy-Oriented Dissemination:** → Collecting and analyzing data from mega demonstration plots and scale trials to produce actionable insight. → Documenting and sharing findings with stakeholders to inform policy decisions and promote sustainable landscape and water management practices.	
Key Target (per indicator)	**Indicator**	**Key Target**
	EG.3.2-24	→ Designs of mega demos and scaling plots developed and shared → 480 Leader farmers and 30 partners staff trained → Cleaned and validated datasets from mega demos and scaling plots → Detailed micro watershed maps and profile
	EG.3.2-25	→ 90,000 farmers adopt CA practices (e.g., minimum tillage, mulching) → 20+ micro watershed management plans (30% managed by women, youth or under-represented individuals)

	CUST-1	→ 1 mega demo trial design protocol → Innovation bundles combining seed, mechanization and CA practices → 12 drought-tolerant maize and legume varieties promoted → Technical briefs or knowledge products with recommendations → 12 DTS varieties promoted (with area under DTS & demos)
	EG.3-10,11,12	→ Yield monitoring under CA and DTS adoption
	HL.8.5-2	→ Field tour reports (8 tours, 1 workshop) → 90,000 benefit from CA-based systems → Trained management committees & bylaws developed → 20+ water and land management structures installed (40% women, youth, under-represented individuals)
	CUST-2	→ 50+ extension personnel trained → 20 community-based institutions functional and actively managing resources
	CUST-3	→ 156,000 farmers use seasonal weather forecasts in cropping decisions → 57,600 farmers/year availed with weather information → USSD / mass media platforms → AgriPredict access via AWARE platform → 85,333 farmers access e-messages/mass media/year → 6,000 farmers trained (advisory-linked trainings)
	CUST-4	→ 8 contingency plans developed → 8 stations installed (functional) → 18,700 farmers access insurance per year (crop insurance services, insured area reported)
	EG 11-5	→ 1 survey and participatory assessment → 1 baseline and inclusion assessment report → 150,000 supported to adapt (40% women, 40% youth) → Decision-support tools (advisories, dashboards, mobile alerts) → Digital map of water resources → Conservation and water use plans developed → Agroforestry & erosion control (trees planted, grassed waterways, mechanization) → 57,600 farmers/year trained in CA practices → Reduced erosion & improved infiltration
	EG.3.1-15	→ Policy briefs or evidence summaries based on field findings → US$ 4 million private sector investment in climate-smart agriculture → 2 stakeholder organizations align on sustainable practice
	EG.3.2:	→ 57,600 farmers trained per year (in CA and related practices)
Budget	**USD 900,000**	

Lead Partner	**Total Land Care (TLC)**
Other Partners	1. African Fertilizer and Agribusiness Partnership (AFAP) 2. Farmer Outgrower Foundation (FOF) 3. PELUM Malawi 4. Munda Makeover 5. IWMI 6. CIMMYT 7. ABC
Countries	Zambia and Malawi

Districts and Provinces Covered	**Malawi:** Lilongwe, Mchinji, Salima, Dowa **Zambia:** Petauke, Sinda, and Chipangali
Key Activities	1. Reviewing and validating extension training materials on sustainable water and soil management practices, crop diversification and intensification, and local seed collection 2. Training field staff and farmers on sustainable water and soil management practices, sustainable intensification, crop diversification, and local seed collection 3. Establishing demonstrations on water and soil management, sustainable intensification, and crop diversification. 4. Facilitating field days on water and soil management practices and sustainable intensification and crop diversification. 5. Facilitating linkages between farmers, input and equipment suppliers (for water and soil management technologies and small-scale mechanization), and output markets.
Key Target (per indicator)	**Indicator** — **Key Targets**
	EG.3.2 → 3 training materials validated → 7 megademo protocols and 7 scaling plot protocols developed → 20 field staff and 30,000 farmers trained on mechanization → 20 field staff and 30,000 farmers trained on mechanization and CA practices → 20 field staff and 250,000 farmers trained
	HL.8.5-2 → 500 demonstrations established
	EG.3.2-24 → 50 field days conducted → 1 annual scientific report → 2 peer-reviewed publications → 100 community awareness meetings conducted
	EG.3.1-15 → participation in 1 national event per year → 150,000 farmers linked to input and output markets → 40 community structures and 10 private sector partners identified and mapped → 40 community structures and 10 private sector partners identified and trained as GALS Champions influencing policy change → 10 private sector partners and 40 community structures linked → GESI Toolkit → 21 agripreneurs supported to design Gender Action Plans (GAP)
	CUST-2 → 40 community governance structures linked
	CUST-3 → 40 IEC materials developed and distributed → 10 media stakeholders trained → 250,000 farmers reached
Budgets	**USD 900,000**

Lead Partner	**Solidaridad**
Other Partners	1. Kvuno 2. Greencare Eco Solutions 3. AgriPredict 4. ABC 5. IWMI
Country of Operation	Zambia
Provinces Covered	Mumbwa, Katete, Sinda, Monze

Key Activities	1. Training of farmers on regenerative and rotational grazing agriculture 2. Establishment and monitoring of a demonstration site with a mini water reservoir 3. Training of extension officers on regenerative agriculture and participatory climate-informed decision-making 4. Establishment of an inclusive seed loan facility 5. Farmer training on waste aggregation for quality organic fertilizer production 6. Provision of early warning systems and extension services 7. Dissemination of regenerative agriculture knowledge 8. Provision of advisory services to farmers 9. Establishment and strengthening of Community-based Natural Resource Management (CBNRM) Committees 10. Data gathering using transformative methods (e.g., WEAI, GALS, dialogues)	
Key Target (per indicator)	**Indicator**	**Key Targets**
	EG.3.2	→ 40,000 farmers trained (incl. 16,000 women & youth) → 40 government extension officers trained → 4 gender and social inclusion workshops conducted → 150,000 farmers reached via *Munda Makeover* TV Show
	EG.3.2-24	→ 40,000 farmers trained (soil & water management focus) → 30,000 farmers receiving advisory services (e.g., planting dates) → 30,000 farmers receiving early warning systems & extension services (SMS/app)
	EG.3-10, 11, 12	→ Improved maize/soy yields expected through training, access to climate-resilient seed, and adoption of regenerative practices
	EG.3.1-15	→ 30,000 farmers receiving climate advisory & early warning services → 300 farmers with access to climate-resilient soy seed varieties
	HL.8.4-1	→ 1 mini-water reservoir constructed
	HL.8.5-2	→ 1 mini-water reservoir constructed → 1 functional CBNRM Committee
	CUST-1	→ 300 farmers with access to climate-resilient soy seed varieties
	CUST-2	→ 300 farmers trained on waste aggregation for organic fertilizer → 40,000 farmers trained in regenerative agriculture (soil & water focus)
	CUST-3	→ 150,000 farmers reached via *Munda Makeover* TV Show → 30,000 farmers receiving SMS/app-based advisory service
Budgets	**USD 750,000**	

Lead Partner	**Catholic Relief Services (CRS)**
Other Partners	1. MwAPATA 2. CARD
Country	Malawi
Districts Covered	Chikwawa, Mulanje and Mangochi

Key Activities	1. Conducting village meetings and mapping impact areas 2. Organizing learning visits and trainings 3. Procuring seedlings, tools and materials 4. Developing grant criteria and messaging 5. Facilitating landscape planning and committee engagement 6. Coordinating IWM and soil conservation activities 7. Expanding demo farms and rainwater systems 8. Promoting agroforestry and intercropping 9. Creating peer learning groups and farmer field schools 10. Strengthening market access and partnerships 11. Broadcasting success stories and sharing guidelines 12. Supporting VNRMC planning, monitoring and resource mobilization 13. Training water committees and aligning with local government	
Key Target (per indicator)	**Indicator**	**Key Targets**
	EG.3.2	→ Number of participants attending 3 meetings (60 participants total) → Number of learning visits conducted – 3 visits (95 participants)
	EG.3.2-24	→ Number of sites mapped – 60 across 3 districts → Training sessions held: 3 sessions (150 farmers) → Successful demonstration sites identified: 150
	EG.3.2-25	→ Area restored and protected: 45 sites
	EG.3-10, 11, 12	→ Successful demonstration sites identified: 150
	EG.11-5	→ Number of learning visits conducted – 3 visits (95 participants) → Adapted messages developed: 108 → Training sessions held: 3 sessions (150 farmers)
	G.3.1-15	→ Polythene tubes procured: 1,200,000 (tree species raised)
	HL.8.4-1	→ Rainwater harvesting structures maintained
	HL.8.5-2	→ Number of sites mapped – 60 across 3 districts → Landscape restoration plans developed: 105 → Rainwater harvesting structures maintained
	CUST-1	→ SOGs developed: 36
	CUST-2	→ Training sessions held: 3 sessions (150 farmers) → Area restored and protected: 45 sites
	CUST-3	→ Adapted messages developed: 108 → Policy briefs produced: 1
Budgets	**USD 900,000**	

Lead Partner	**One Acre Fund**
Other Partners	1. PASAP 2. GART 3. ABC 4. Munda Makeover
Country	Zambia
Provinces Covered	Central Province

Key Activities	1. Developing partnership agreements with key stakeholders 2. Co-creating a unified service framework for farmer support 3. Coordinating joint planning, delivery, and learning 4. Enrolling farmers for agroforestry-carbon packages (350+ trees/household) 5. Establishing decentralized tree nurseries 6. Distributing tree seedlings to farmers 7. Providing quality inputs: fertilizer, seeds, soil amendments and training 8. Providing crop insurance to mitigate weather risks 9. Delivering technical support on agroforestry, GMCCs, composting (Trainer of Trainers) 10. Training field teams and demo ambassadors on composting 11. Exhibiting agroforestry and composting at agricultural shows 12. Establishing joint demo plots with extension partners 13. Conducting joint soil/water training and field days with private sector 14. Developing seasonal and long-term climate/crop advisories 15. Training 112 Field Leads and conducting follow-ups 16. Producing TV and radio content on climate-smart agriculture (CSA) and carbon financing 17. Advocating for land tenure with Chiefs and local leaders 18. Facilitating transfer of customary land titles 19. Collaborating with Parliament to raise awareness on CSA and carbon financing 20. Hosting climate financing policy discussions 21. Organizing National Assembly workshops	
Key Target (per indicator)	**Indicator**	**Key Targets**
	EG.3.2	→ 24,000 farmers reached
	EG.3.2-24, CUST-2, and EG 11-5	→ 26,000 cumulative hectares improved
	EG.3.2-25	→ 270,000 farmers reached via TV and Radio by 2027
	CUST-3	→ 54,000 farmers aware and taking action (covering 54,000 ha) → 12 TV slots (5 min each) over 2 cropping seasons → 2 Radio slots (5min each) over 2 cropping seasons
Budgets	**USD 750,000**	

Source: Authors' creation.

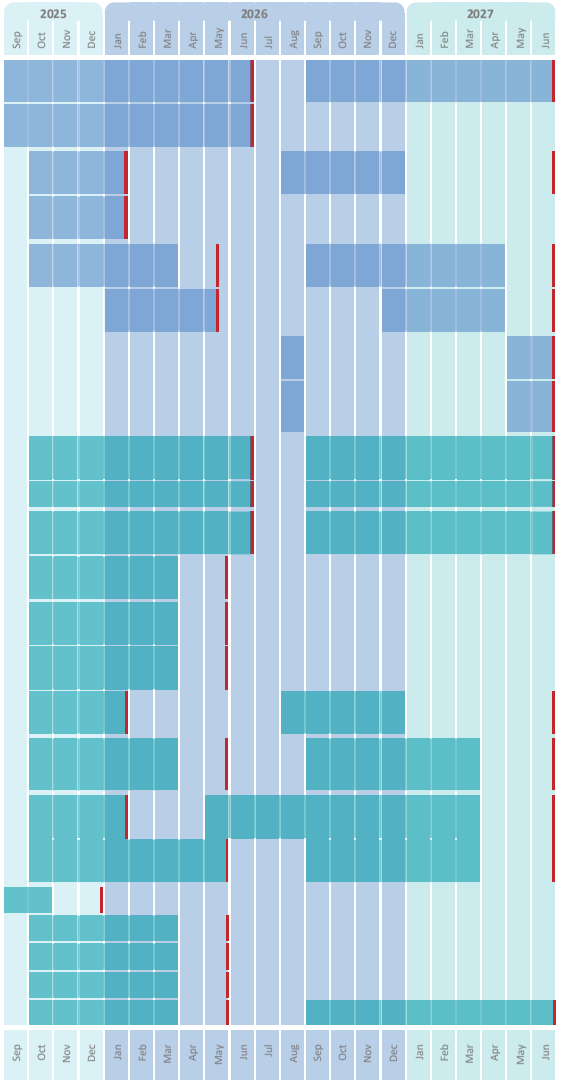
Annex 2: Key Milestone Tracker (Sept 2025 - Sept 2027)

Quarter	Milestone	Deliverables
Q3 – Q4: 2025	Programme Launch and Kick-off Intervention districts finalized Baseline MELIA Assessment VFT	Partnership contracts signed and inception workshops completed. Geotargeted workplans, baselines, targeting tools operational. Identifying scaling pathways and their respective targets for data collection.
Q1: 2026	Commencement of training and bundled interventions US Stakeholder Mission	First field demonstrations and farmer engagement sessions launched.
Q2 : 2026	First Harvest Lesson Exchange	Rapid appraisal of bundled interventions and proposed adjustment based on field results.
Q3: 2026	Pause and Reflect	Mid-term reflection, adaptive learning and identification of scaling pathways.
Q4: 2026	Initiating Policy Dialogues and Advocacy	GESI strategy reflections, land tenure mapping and stakeholder briefings.
Q1: 2027	Sustainability Planning	Institutional handover roadmaps and documentation developed, and community ownership protocols designed with training provided.
Q2: 2027	Endline MELIA Assessment	Impact metrics reported and synthesis report on project learnings.
Q3: 2027	Close-out and Reflections	Consortia reflections and exit.

Source: Authors' creation.

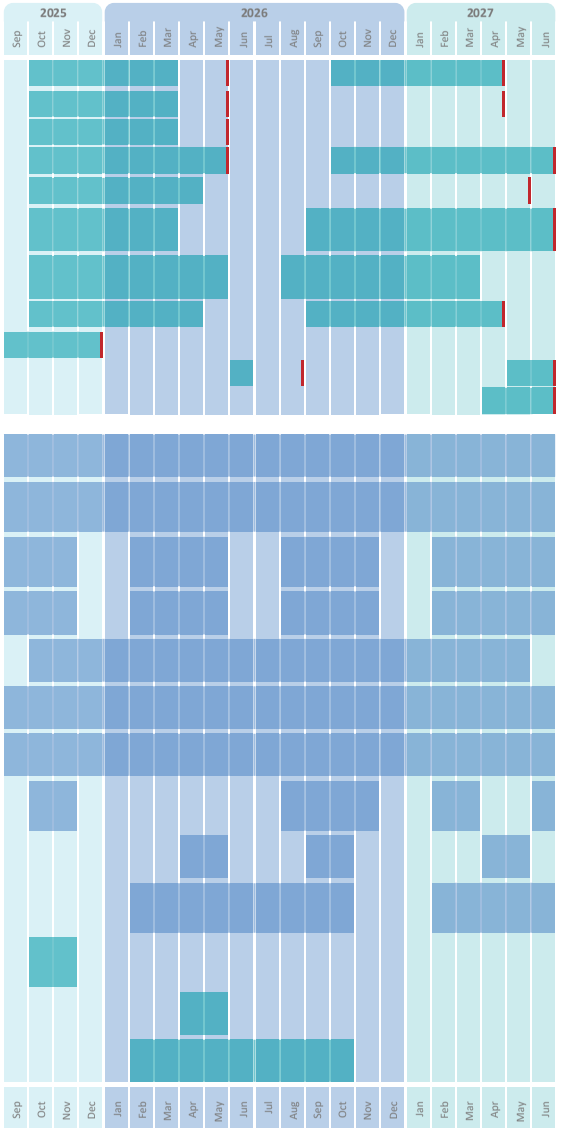
Annex 3: Implementation Phasing with Milestones from Partner Workplans

	PARTNERS	ACTIVITIES		BUDGET	DELIVERABLE & OUTPUT
CFU	CIMMYT	1. Develop and Validate Sustainable Farming Innovations	Design protocols for mega demonstrations and on-farm scaling plots to validate water and soil management technologies, including agroforestry systems tailored to local conditions. This is followed by setting up the demos and scaling plots	20,000	► Designs of mega demos and scaling plots developed and shared
			Source drought-tolerant maize and legume seeds and bundle innovations such as Conservation Agriculture practices to optimize cropping systems and enhance sustainability		► Planting of drought-tolerant maize and legume seeds in mega demos and scaling plots
		2. Build Capacity and Promote Inclusive Practices	Provide hands-on training to partners and farmers on sustainable farming techniques, focusing on Conservation Agriculture, mechanization, residue management, and crop diversification	200,000	► 480 Lead farmers and 30 partners staff trained. ► 90,000 farmers adopt Conservation Agriculture practices (e.g., minimum tillage, mulching) ► 1 training report ► 1 training manual
			Support gender and youth inclusion through tailored training and participatory approaches to ensure equity and empowerment in all project activities		► 1 survey and participatory assessment. ► 1 baseline and inclusion assessment report. ► 150,000 supported to adapt to the effects of climate change, of which 40% are women and 40% are youth
		3. Facilitate Collaboration and Knowledge Sharing	Engage with weather experts, stakeholders, and partners to optimize cropping systems based on climate data and anticipated weather conditions	200,000	► 4 Decision-support tools (e.g., advisories, dashboards, mobile alerts) ► 156,000 farmers use seasonal weather forecasts in cropping decisions
			Organize workshops, field/study tours, and events to foster knowledge exchange and build a robust network of committed stakeholders		► Field tour report ► Workshop reports (attendance lists, discussion summaries) ► 8 field tours ► 1 workshop ► 90,000 benefit from the adoption and implementation of CA-based systems
		4. Generate and Disseminate Evidence for Policy and Practice	Collect and analyze data from mega demos and scaling plots to generate actionable insights	80,000	► Cleaned and validated datasets from mega demos and scaling plots ► Technical briefs or knowledge products with recommendations ► 1 analytical report ► 1 technical brief ► 3 scientific papers
			Document findings and share them with partners to inform policy decisions, supporting sustainable landscape and water management practices		► Policy briefs or evidence summaries based on field findings ► Technical reports and documentation of practices and results ► Case studies highlighting successes, lessons, and recommendations ► 1 technical report ► 2 stakeholder organizations align activities on sustainable practices ► US$ 4 mil private sector investment in climate-smart agriculture
	CFU	1. Sustainable water management (SWM)	Identifying and mapping of water resources,	175,500	► (a) Digital Map of water resources (b) Conservation and water use plans developed ► (a) Improved knowledge and skills (b) Increased adoption of sustainable water management
			Establishing Governance systems for Micro watershed management		► (a) Trained Management committees (b) By-laws developed
	IWMI		To delineate and prioritize microwatersheds based on hydrological, environmental, and socio-economic vulnerability criteria	200,000	► Detailed microwatershed maps and profiles for pilot districts ► List of prioritized microwatersheds for intervention ► 1 training manual developed
			To co-design inclusive, context-specific microwatershed development plans through participatory approaches		► 20+ microwatershed management plans ► Community-approved action plans and investment roadmaps
			To install structural and nature-based solutions that enhance water security, soil health, and ecosystem resilience		► Minimum 20 water and land management structures installed ► Over 100,000 farmers adopting CSA and water-smart technologies* *Supported through CFU and other limited partners within the established microwatershed plans and interventions
			To enhance the technical and institutional capacity of local actors for long-term sustainability and scaling		► 50+ extension personnel trained ► 20 community-based institutions functional and actively managing resources
			To track progress, assess outcomes, and adapt interventions based on evidence and community feedback		► Regular progress reports and impact evaluations ► Final project report with recommendations for scaling
	CFU	2. Green Infrastructure	Increasing support for Green Infrastructure and uptake of nature based solutions for soil and water management	146,500	► (a) Number of agroforestry trees planted (b) Area under Agroforestry (c) Area under erosion control measures (d) Number of grassed waterways (e) Number of farmers adopting mechanisation ► (a) Reduced erosion (b) Improved infiltration
		3. Enhanced Agronomy, Crop Type and Coverage	Group farmer training in Conservation Agriculture	207,800	► 57,600 farmers trained /year ► (a) CA Training materials developed (b) Farmers trained in CA (c) Hectarage under CA (d) CA demonstration plots (e) CA field days and Promotions
			Promotion of drought tolerant seed (DTS) varieties		► 12 DTS varieties promoted ► (a) Number of DTS varieties b) Area under DTS c) DTS Demonstrations
		4. Enhanced Capacity Building and Technical Support	Training needs assessment	169,600	► 1 survey ► Training needs assessment reports
			Formation of Community management committees		► 8 committees ► Meeting reports and minutes
			Sensitization of Traditional leaders and Local authorities		► 8 districts sensitised ► Meeting reports and minutes
			Facilitation and development micro watershed by-laws		► 4 meetings ► Copies of by-Laws
			Farmer and management committee training		► 6,000 farmers trained ► Improved skills and knowledge

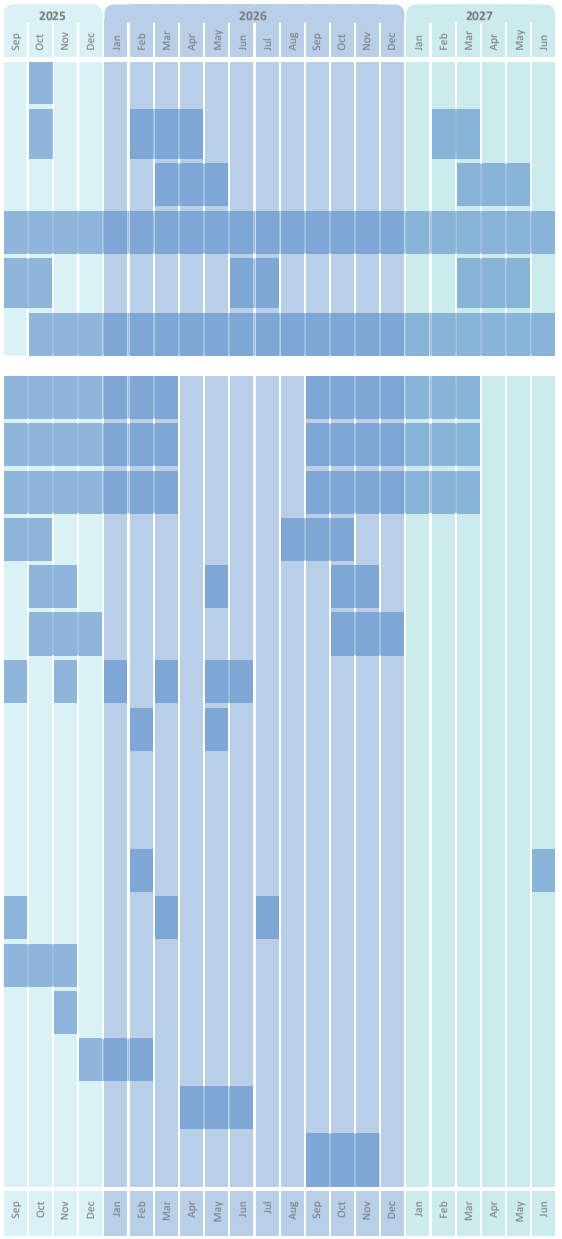


Source: Authors' creation.

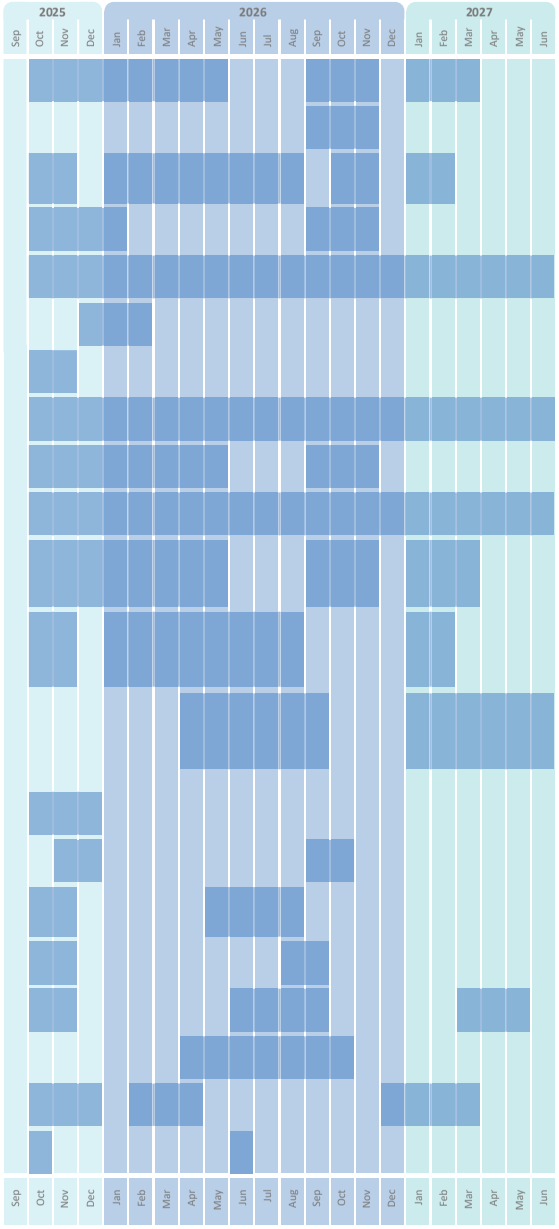
	PARTNERS	ACTIVITIES		BUDGET	DELIVERABLE & OUTPUT
CFU	Agripredict	5. Climate Information Services and Risk Management	Sharing of climate information and early warning systems	200,600	► 57,600 farmers /year availed with weather information ► USSD/media platform
	IWMI		Training Consortium staff on AWARE platform for operationalisation		► 20 consortium staff ► training report/attendance register
			Integration of the Agripredict tool on AWARE platform		► Agripredict access via AWARE Platform
			Development of district drought contigency plan		► 8 contigency plans developed ► contigency plans
	CFU		Installation of weather stations and soil moisture meters		► 8 stations installed ► Functional stations
	Contractsure		Farmer training and Facilitation of Farmer access to weather index insurance		► Insurance packages availed, Number of farmers insured b) Area under insurance ► 18,700 access insurance/year
	Viamo		Development of e-extension messages		► (a) USSD system (b) Mass media system ► 85,333 farmers access e-messages/mass media/year
			Farmer Consent, registration and message dissemination		► (85,333 farmers access e-messages/mass media/year ► Quarterly reports
	CFU/ IWMI/ CIMMYT	6. Monitoring Evaluation and Learning	Baseline study	50,600 (CFU budget contribution)	► 1 Baseline survey ► Baseline report
			Adoption and outcome studies		► 1 Adoption and 1 Outcome survey/year ► Adoption and Outcome study reports
			Endline survey		► 1 Endline survey ► Endline survey report
TLC	TLC, AFAP, FOF, PELUM Malawi, Munda MO	1.1.1 Review and validate extension training materials on sustainable water and soil water management practices, crop diversification and intensification and local seed collection		20,000	► Manuals, reports ► 3 training materials validated
	CIMMYT	Develop and Validate Innovation Bundles: Design protocols for mega demonstration and scaling plots, bundling water and soil management technologies with mechanization, such as basin diggers, to validate and optimize innovative solutions		100,000	► Implementation protocols, scientific datasets, peer-reviewed publications ► 7 Megademo protocols; 7 scaling plot protocols developed
		Capacity Building and Training: Train partners and farmers on Conservation Agriculture practices, mechanization use, and maintenance while incorporating gender training to promote inclusivity and enhance sustainable adoption of technologies		250,000	► Training report ► 20 field staff, and 30,000 farmers trained on mechanization and CA practices and gender inclusion
	IWMI	Using capacity building training, the GALS 2.0 approach would be implemented with partners and farmers on the inclusive adoption of CA practices, and mechanization use		38,500	► Training report ► 20 field staff, and 30,000 farmers trained on mechanization and CA practices using inclusive approaches
	TLC, AFAP, FOF, PELUM Malawi	1.1.2 Train field staff and farmers on sustainable water and soil management practices, sustainable intensification and crop diversification, local seed collection		250,000	► Training report ► 20 field staff and 250,000 farmers trained
	TLC, AFAP	1.1.3 Establish demonstrations on water and soil management and sustainable intensification and crop diversification		250,000	► Activity report ► 500 demonstrations established
	TLC, AFAP, FOF, PELUM Malawi, Munda MO	1.1.4 Facilitate field days on water and soil management practices and sustainable intensification and crop diversification		40,000	► Activity report
	CIMMYT	Engage and Collaborate with Stakeholders: Actively collaborate with public and private partners to provide access to drought-tolerant seeds, organize workshops, and represent the project at events, fostering a strong network for sustainable water and soil management		150,000	► Workshop report, presentations given at national for a ► 1 annual review and planning meeting ► Participation in 1 national events per year
	AFAP, FOF	1.1.5 Facilitate linkages between farmers, input and equipment suppliers for water and soil management technologies and small-scale mechanisation equipment and output markets		50,000	► Activity reports, contracts ► 150,000 farmers linked to input and output markets
	CIMMYT	Generate and Share Evidence: Collect and analyze data from mega demonstrations and scaling plots, organize field activities, and facilitate knowledge exchange through study tours, planning meetings, and thorough documentation to inform policies and promote scalability		100,000	► scientific reports, blogs , peer-reviewed publications ► 1 annual scientific report ► 2 peer-reviewed publications
	CIMMYT	2.1.1 Community awareness of local governance structures (CMCs, VNRMCS, CMFGs) on land regulations (registration, land tenure act (The Land (Amendment) Act of 2022), land restoration, governance and GESI		40,000	► Activity report ► 100 community awareness meetings conducted
	AFAP, FOF	2.1.2 Link local governance structures to Ministry of Land to facilitate registration of customary land estates and land tenure		30,000	► Activity report ► 40 Community Governance structures linked
	CIMMYT	2.1.3 Produce and disseminate gender sensitive IEC materials on land governance frameworks		40,000	► Activity report, IEC materials ► 40 IEC materials developed and distributed



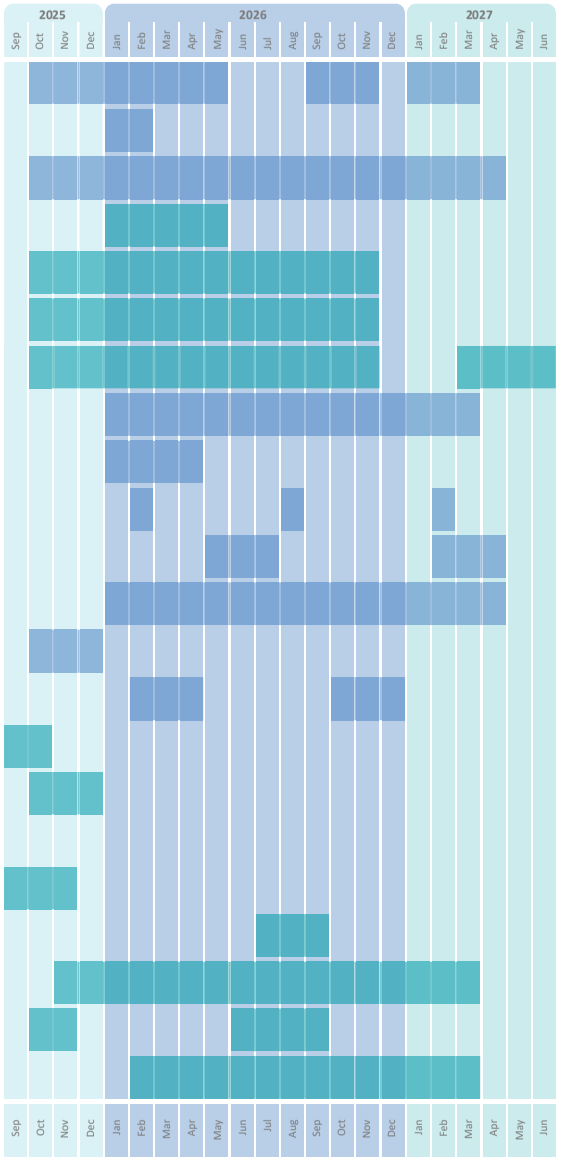
	PARTNERS	ACTIVITIES	BUDGET	DELIVERABLE & OUTPUT
TLC	TLC, AFAP	3.1.1 Conduct a mapping and identification of existing community governance structures, Private Sector partners in water, soil and land management	20,000	► Activity report, SH database ► 40 Community Structures and 10 Private Sector partners identified and mapped
TLC	IWMI	3.1.2 Capacity building and policy support through GALS as an inclusive lens for decision support by local institutional structures for the adoption of conservation agriculture & agroforestry practices to mitigate climate impact	26,000	► Activity report, blog SH database ► 40 Community Structures and 10 Private Sector partners identified and trained to become GALS Champions influencing policy change
TLC	TLC, AFAP	3.1.2 Link private sector to existing water, soil and land management initiatives through SHARE fairs	30,000	► Activity report, SH report ► 10 private sector partners and 40 community structures linked
TLC	CIAT, Munda MO	3.1.3 Train stakeholders (Community Radios, Media houses, Met Depts) in development of climate forecast and agroadvisory segments)	50,000	► Training report ► 10 media stakeholders trained
TLC	IWMI	3.1.3 Provide TA support / intervention to farmers on Gender Action Plans and gender lens investment using the 2X Criteria. Generate evidence of investment opportunities targeting women and youth in the value chain	14,300	► Activity report; GESI Toolkit ► 21 farmers (targeting agripreneurs) are supported on how to design Gender Action Plans (GAP) for accelerating inclusive business growth
TLC	Munda MO	3.1.4 Conduct community information dissemination campaigns on climate focused and advisory services including TV and Radio	80,000	► Activity report, programs ► 250,000 farmers reached
CIAT	ZMD, 1AF, Solidaridad, AgriPredict, Mediae, Community radio, local NGOs, GART, MoA	1.1 Co-develop seasonal climate advisories	180,000	► 6 seasonal advisory packs co-developed and validated with stakeholders
CIAT		1.2 Translate advisories into local languages and adapt to farmer-friendly formats (graphics, voice, radio scripts)		► Advisories translated into local languages and adapted into SMS, voice, radio/TV formats
CIAT		1.3 Disseminate advisories via digital platforms and synchronize with Munda Makeover TV/radio campaigns		► Advisories disseminated: 30,000 farmers via SMS/app; ≥ 150,000 via Munda Makeover TV/radio
CIAT		1.3 Onboard farmers onto digital advisory platforms		► Database of 30,000 farmers registered and actively receiving digital advisories, with usage analytics reports
CIAT		1.4 Train 70+ extension officers (ToTs) on CSA and climate advisories, and integrate advisories into farmer trainings and demo days		► 70 extension officers trained via ToTs Training manuals updated with climate advisories
CIAT	GART, 1AF, Solidaridad, IWMI, MoA	2.1 Develop CSA curricula & soil management modules	150,000	► Harmonized CSA knowledge package (manuals + advisory modules)
CIAT		2.2 Deliver 7 farmer training cohorts on CSA practices (≥40% women/youth)		► Cohort training reports with disaggregated participant lists ► 40,000 farmers trained in regenerative practices ► Training tracker, pre/post-tests, adoption surveys
CIAT		2.3 Support establishment of demo plots showcasing CSA practices (soil fertility, water harvesting, cover crops)		► Demo plots established and managed for two cropping seasons, with photo documentation and adoption tracking reports ► 1M ha under improved practices; increased yields ► Demo plot reports, soil data, photos
CIAT		2.4 Provide technical backstopping for training cohorts (review curricula, join trainings, ensure CSA quality)		► Quarterly technical support reports ► Improved training quality & CSA adoption ► Training session evaluations
CIAT		2.5 Organize joint farmer field days at demo plots to showcase regenerative practices		► Field day reports, photo documentation ► 10,000 farmers exposed to CSA ► Attendance lists, farmer feedback
CIAT		2.6 Mobilize farmers for adoption of improved soil practices		► Farmer adoption reports ► 60% of farmers adopt CSA practices ► Farmer survey data
CIAT		2.7 Monitor soil productivity & yields at demo sites		► Soil and yield monitoring reports ► Yield gains and improved soil fertility ► Soil test results, yield surveys
CIAT	Solidaridad, MoA, Chiefs, local councils, local livestock officers, farmer associations	3.1 Conduct GIS mapping of grazing areas	180,000	► GIS maps for targeted grazing area(s)
CIAT		3.2 Facilitate inclusive community consultations (with women/youth)		► Consultation records (attendance, disaggregated by gender/age) ► Inclusive participation of livestock farmers, women, and youth in designing grazing governance ► Attendance registers disaggregated by sex/age - Consultation minutes - Feedback form
CIAT		3.3 Co-develop a Rotational Grazing Plan		► 1 validated rotational grazing plan (supporting Solidaridad/IWMI) ► Community-endorsed grazing system reduces overgrazing, improves productivity ► Endorsed grazing plan document - Area (ha) covered by plan - Community validation meeting minutes
CIAT		3.4 Support adoption of community grazing bylaws		► 1 set of grazing bylaws adopted (Monze) ► Grazing bylaws institutionalize sustainable practices and accountability mechanisms ► Signed bylaw document
CIAT		3.5 Establish inclusive grazing committees with women/youth representation		► 1 functional NRM Committee established/strengthened with Solidaridad (≥ 40% women/youth reps ► Strengthened inclusive governance body ensures enforcement and monitoring of grazing plan ► Committee membership list (disaggregated by sex/age) - Committee meeting minutes (≥ 6 sets) - Reports on compliance and monitoring



	PARTNERS	ACTIVITIES	BUDGET	DELIVERABLE & OUTPUT
SOLIDARIDAD	Solidaridad	Activity 1.1: Train farmers on regenerative and rotational grazing agriculture through workshops and demonstration plots	504,976	► Quarterly reports ► Description and evidence of farmers trained on regenerative agriculture practices and rotational practices
		Activity 2.1: Establish an inclusive seed loan facility for improved access to affordable climate-resilient soy seeds		► Quarterly reports ► Detailed description and evidence of the seed loan facility
		Activity 3.1: Establish/strengthen Natural Resource Management (NRM) Committees to develop a rotational grazing plan and community bylaws to help enforce sustainable land use planning and governance		► Natural Resources Management Committee Charter ► Rotational Grazing Plan ► Community bylaws
	Kvuno	Activity 2.1: Establish an inclusive seed loan facility for improved access to affordable climate-resilient soy seeds	85,675	► Quarterly reports ► Description and evidence of access to seed on credit scheme
		Activity 2.5: Provide farmers with advisory services including planting dates		► Quarterly reports ► Description and evidence of farmers accessing information such as planting dates information
	Greencare Eco Solutions	Activity 1.2: Establish and monitor a demonstration site with a mini water reservoir	107,716	► Quarterly reports ► Description and evidence of the mini water reservoir established
		Activity 2.2: Train farmers through workshops on waste aggregation to ensure quality organic fertilizer production		► Training manuals ► Modules for farmers on waste aggregation to ensure quality organic fertilizer production
	AgriPredict	Activity 2.3: Provide farmers with access to early warning systems and extension services via SMS/app	51,633	► Quarterly reports ► Description and evidence of farmers with access to early warning systems and extension services via SMS/app
	CIAT	Activity 1.3: Train extension officers from the Ministry of Agriculture on regenerative agriculture and participatory climate information based decision making through workshops	200,000 + 100,000 in-kind support	► Quarterly reports ► Detailed description and evidence of government extension officers trained on regenerative agriculture and participatory climate information based decision making
		Activity 2.4: Provide farmers with knowledge on regenerative agricultural practices through the Munda Makeover TV Show		► Media report ► Munda Makeover show viewers
	IWMI	Activity 1.1: Train farmers on regenerative and rotational grazing agriculture through workshops and demonstration plots IWMI's role: Support the implementation of training; Leverage these training events for GESI specific training/interventions	150,000	► Training report ► Detailing how women and youths have benefited from the training on regenerative agriculture (due 30 November 2025)
		Activity 3.1: Establish/strengthen Natural Resource Management (NRM) Committees to develop a rotational grazing plan and community bylaws to help enforce sustainable land use planning and governance IWMI's role: Support coordination of meetings; Leverage these meetings events for GESI training/interventions		► Inclusive Collective Action entry and scaling Pathways for Soil and Water governance (due 30 April 2026) ► Blog on collective action (due 30 September 2026)
		Conduct data gathering workshops to use aspects from GESI transformative methods (WEAI, GALS, and dialogues), understanding what is required for empowerment, and feeding this information into training sessions IWMI: lead implementer		► Report on Women Empowerment for scaling through a GALS approach for soil and water transformation (30 March 2027) ► Video of GESI scaling opportunities (30 May 2027) ► Blog on inclusive scaling for soil and water interventions (30 May 2027)
CRS	Palladium/ ReSAF/ CARD	1.1.1. Promote adoption of pigeon peas, velvet beans/mucuna pruriens, cow peas, common beans, and soy bean (Palladium/ReSAF/CARD)	14,782	► households growing either pigeon peas, velvet beans, cowpeas, common beans and soy beans - 80% of the total target Hectarage under cover crop
	CARD	1.1.2. On-farm demonstrations showcasing intercropping (e.g., maize/pigeon pea, doubled-up legumes) with successful farmers from previous projects as champions	2,214	► On Farm demonstration showcased ► farmers attending the demonstrations
		1.1.3. Work with seed distributors/local seed banks to ensure the availability of cover crops (e.g., Gliricidia) and green manure seeds at village-level kiosks, providing group purchase options to reduce costs (CARD)	2,282	► Seed distributors/ local seedbanks identified and working with Farmers accessing the seed
		1.1.4. Training for lead farmers on intercropping and agroforestry (CARD)	3,273	► Training sessions conducted ► Trained lead farmers ► Trained fellower farmers
		1.1.5. Community workdays for mulching and manure spreading (CARD)	1,579	► Hectarage collectively mulched and manure spreading
	CARD/ Illovo/ Palladium	1.1.6. Establish and expand live fences using native species around irrigation plots	3,215	► Area covered by live fences
	CIAT/CRS/ Palladium/CARD	1.1.7. Develop/Consolidate/Distribute illustrated guidelines on crop residue management (CIAT/CRS/Palladium/CARD)	4,803	► Guidelines on managing crops residues distributed
	Illovo/ CARD/CRS	1.1.8. Training of extension workers on soil improvement technologies including biochar technologies (Illovo/CARD/CRS)	3,683	► Sessions conducted ► Trained Extension workers



	PARTNERS	ACTIVITIES	BUDGET	DELIVERABLE & OUTPUT
CRS	CRS/Palladium/ CARD/Illovo	1.1.9. Develop performance-based grant criteria for soil health and productivity (CRS/Palladium/CARD/Illovo)	18,385	▶ Grant criteria developed ▶ Performance grants awarded
	IWMI	1.1.10. Set up a tracking system for improved practices at farm and landscape levels (IWMI)	-	▶ Tracking system developed
	CRS/CARD/ MwAPATA	1.1.11. Support linkages with research stations on improved crop varieties (CRS/CARD/MwAPATA)	-	▶ Linkages supported (Chitedze, Makoka, Bvumbe)
	CARD/CRS	1.2.1: Map and reconnect with marketing agents and off-takers (CARD/CRS)	2,188	▶ Market linkaged mapped
	CARD/CRS	1.2.2. Establish contract templates for farmers, marketing agents and off-takers (CARD/CRS)	2,000	▶ Contracts Established
	CARD/CRS/ Palladium/Illovo	1.2.3. Identifying off-taker linkages for soil-health-promoting crops. (CARD/CRS/Palladium/Illovo)	11,523	▶ linkages established
	CARD/ Palladium/CRS	1.2.4 Facilitate the selling of produce by farmers to the off-takers (CARD/Palladium/CRS)	3,108	▶ farmer groups selling to off-takers
	CARD/CIAT	1.3.1. Partner with community radio stations for climate-smart messages. (CARD/CIAT)	2,522	▶ partnerships signed ▶ slots aired on the community radios
	CIAT	1.3.2. Create a digital subscription service for advisory messages (CIAT)	-	▶ Digital subscription created
	CARD/CIAT	1.3.3. Record and broadcast success stories from farmers (CARD/CIAT)	1,628	▶ Success stories recorded and broadcasted
	MwAPATA	1.3.4. National level documentation and dissemination of success stories (MwAPATA)	9,282	▶ National workshops
	CARD	1.3.5. Conduct live radio dialogue sessions with farmer and subject matter specialists on climate smart and crop diversification. (CARD)	4,330	▶ Live Dialogue session conducted
	CIAT/CRS/ MwAPATA	1.3.6. Joint development of soil & water management messaging (CIAT/CRS/MwAPATA)	9,861	▶ Soil and water management messaging developed
	MwAPATA	1.3.7. Generate and disseminate lessons on water and soil management (MwAPATA)	12,180	▶ National workshops ▶ Policy brief developed
	CARD	2.1.1. Conduct village meetings to confirm impact sites (CARD)	2,788	▶ Sites confirmed
	CARD/CRS	2.1.2. Support communities to develop/actualize landscape plans (CARD/CRS)	10,242	▶ landscape plans developed and implemented
	CARD/ Palladium/CRS	2.1.3. Support identification of sites for tree planting and water harvesting (CARD/Palladium/CRS)	58,714	▶ sites identified ▶ water harvesting structures constructed ▶ tree seedlings planted
	CARD/IWMI/ CRS	2.1.4. Facilitate area mapping to delineate impact areas (CARD/IWMI/CRS)	2,365	▶ areas delineated
	CRS/CARD/ MwAPATA	2.1.5. Organize learning visits to successful IWM sites (CRS/CARD/MwAPATA)	4,977	▶ learning visits conducted
	Palladium/ CARD	2.1.6. Gully reclamation and support livelihood opportunities through banana cultivation (Palladium/CARD)	6,960	▶ Gullies restored and planted with banana suckers
	CARD/ Palladium/CRS	2.1.7. Mapping of available resources e.g., nurseries (CARD/Palladium/CRS)	4,864	▶ Tree nurseries with tree seedlings
	CRS/Palladium/CA RD	2.1.8. Develop & award through performance-based grants for landscape-level soil and water conservation (CRS/Palladium/CARD)	-	▶ Performance based grant criteria developed ▶ Number of grants awarded



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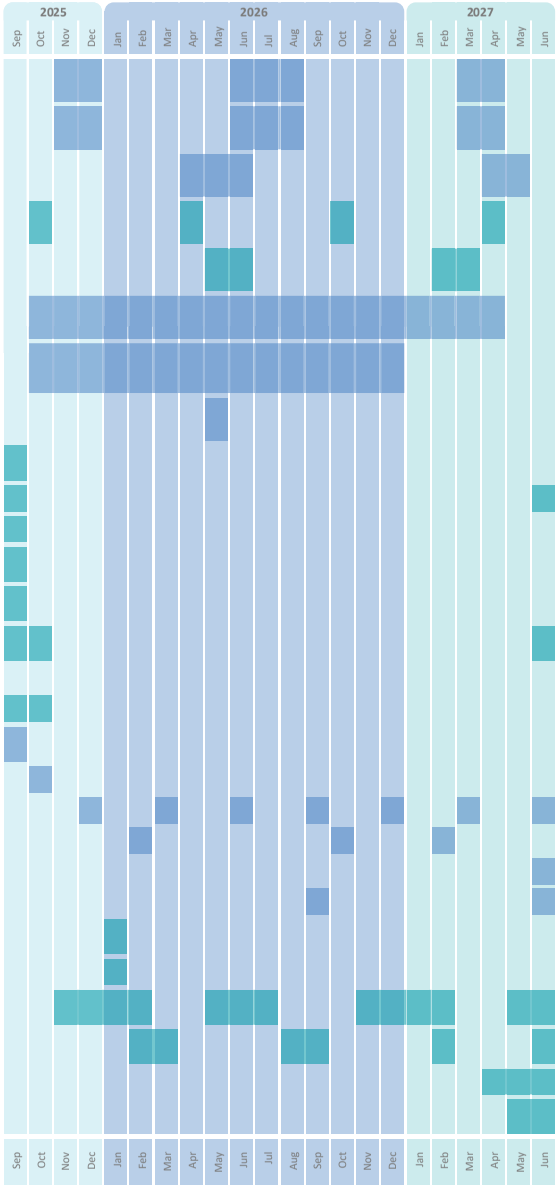
PARTNERS	ACTIVITIES		BUDGET	DELIVERABLE & OUTPUT
CARD	A.2.2.1. Provide community water user committees with training in water conservation (CARD)		9,650	► Sessiosn conducted ► Water committee members trained
CARD	A.2.2.2. Provide refresher training on water governance and monitoring (CARD)		9,650	► Sessiosn conducted ► Water committee members trained
Illovo/CARD	A.2.2.3. Organize training sessions on water-efficient practices (Illovo/CARD)		9,650	► Sessiosn conducted ► Water committee members trained
CARD	A.2.3.1. Joint review of VNRMCs plans to identify opportunities and gaps (CARD)		9,570	► Review meetings conducted ► VNRMCs plans reviewed
CARD	A.2.3.2. Mapping of available resources for scaling PBG design and application (CARD)		2,689	► meetings condcuted with stakeholders
CRS/CARD	A.2.4.1. Set up FLCs in accessible hubs (CRS/CARD)		5,455	► FLCs established
CRS/CARD	A.2.4.2. Organize regular training sessions at FLCs on topics like improved cropping, pest management, and soil health, allowing farmers to identify and address productivity challenges firsthand. (CRS/CARD)		7,381	► Training sessions conducted ► Lead farmers trained
CRS/CARD	A.2.4.3. Facilitate exchange visits between FLCs allowing farmers to share successes and leamings, boosting the adoption of best practices across communities. (CRS/CARD)		2,926	► FLC exchange visits conducted
All	Cross cutting activities	Organize a kickoff workshop to align all partners on objectives, timelines, and key milestones (reporting protocal, roles and responsibility matrix, project management unit (CRS)	497	► Kickoff workshop conducted
All		Conduct technical working group meetings at district level to solicit inputs and buy in (CARD)	6,860	► TWG conducted
All		Engaging with partners/PSE to agree on specific activities and design arrangements (CARD)	2,507	► Engagement meetings conducted
All		Create a detailed work plan with specific timelines, deliverables, and "quick win" activities to build early momentum. (CRS)	3,459	► Work plan develpoed
All		Identify potential risks upfront and establish a risk monitoring and response plan for immediate intervention. (CRS)	-	► Risk monitoring and response plan developed
All		Conduct and hold an entry meetings with DEC and community based structures in the 3 districts for the 3 districts (CRS)	1,958	► Entry meetings conducted with DEC and community structures
All		Decision-making mentorship using SMART Couple (CRS)	4,493	► Sessions conducted
All		Conduct community sensitisation meetings (CARD)	3,641	► Sensitisation meetings conducted (9 in Mulanje and 5 in Chikwawa and 12 in Mangochi)
CRS	MEAL Section	Conduct a 5MILER workshop - develop a MELIA framework to track key indicators aligned with project outcomes, and operationalize it. (CRS)	4,276	► MELIA operating manual
IWMI		Conduct internal baseline assessment including site mapping and georeferencing (IWMI)	5,429	► Baseline report
CRS		Conduct quarterly review meetings (CRS)	17,362	► Quarterly Report
CARD		Conduct joint stakeholder monitoring visits (CARD)	13,350	► Monitoring Report
CRS		Conduct external endline project evaluation (CRS)	6,917	► Endline Report
CRS		Conduct annual reflection/learning summits (CRS)	14,410	► Learning briefs
CRS	Communication activities	Launch press release and informations campaign on digital platform and mass media on key project information (CRS)	6,429	► Press release and multimedia content for enhanced visibility
CARD		Organize local launch events and produce brand marking tools	5,233	► Strategic marketing and communications support for stakeholder engagement
CIAT/ CARD/ CRS		Conduct multi-channel awareness participative campaigns on agricultural techniques and rainwater and soil management during key seasonal and agricultural periods.	3,275	► Communication materials and visual assets for awareness
MwaPata/ CRS		Produce capitalization and learning multi-format promotional products based on success stories and testimonials collected, and activity reports, every semi-annual.	4,931	► Success stories in multiple formats (written, visual, digital) ► Learning summaries in various formats for knowledge sharing and replication
CIAT/ CARD/ CRS		Conduct a multi-platform dissemination on the policies developed during the project.	6,161	► Policy materials in diverse formats supporting evidence-based advocacy
		Conduct an information campaign on digital platform and mass media on the main results of the project, its impacts, and the behavioral changes observed at the community level.	2,856	► Multimedia information products in multiple formats for broad audience reach



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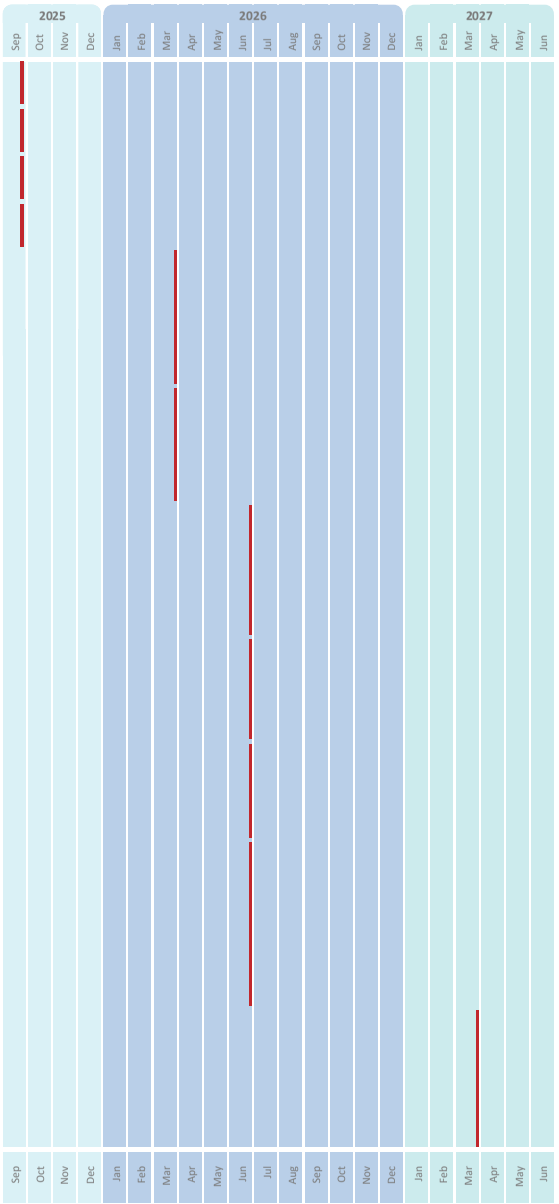
PARTNERS	ACTIVITIES	BUDGET	DELIVERABLE & OUTPUT
MMO	???	21,300	Deliverable 0 : Partnership Agreements ► Multilateral Partnership Agreement outlining the roles and responsibilities, and allocated budget for each consortium partner. ► Signed Contract with IMWI
GART	???	14,850	
Green Cycle	???	6,600	
1AF	???	182,400	
1AF	???	92,333	Deliverable 1/ 2026: Farmer enrolment, distribution, training and plot verification report ► Cumulative 16,500 smallholder farmers provided with an agroforestry package of 350+ mixed use trees per household, including tree crops, annual crops, and extension services with a focus on soil and water. ► 11,550 farmers access weather-index insurance ► 1.5 million seedlings planted by end of 2026 ► Responsibility: One Acre Fund
CIAT	???	0	Deliverable 2/ 2026: Content for the climate and crop advisories, seasonal, and long term, for dissemination through Extension agents and Media (TV and Radio) and report on field team, feedback and follow ups ► Content developed in collaboration with the Zambia Meteorological Department ► and 70 extension agents trained ► Responsibility: CIAT
MMO	???	24,850	Deliverable 3/ 2026: Content development of climate and crop advisory services and dissemination through TV and Radio, viewership report, KAP surveys (baseline + endline) ► 6 TV slots of 5 min each (new content) for each cropping season aired in November ► 6 Radio slots of ~5 min each (new content) aired in November ► Audience measurement and KAP (knowledge, attitude, practice) analysis after each season ► Responsible Partner: Munda Make Over
GART	???	11,550	Deliverable 4/ 2026: Demonstration Plots' establishment and joint soil water field officer and extension farmer training report ► 30 demo plots established with Green Cycle and extension partners (including Bayer, Atlas Organic, and others that may join during implementation) ► 55 extension agents and field staff (1AF, Private Sector) trained on smallholder appropriate soil health and water focused interventions (i.e. planting compliance, spacing, fertiliser dosing, crop selection, crop rotation, residue management, benefits of organic fertilizer, composting, GMCCs). ► 5,000 farmers reached by joint extension farmer training and field days with private sector partners. ► 3,000 on-farm touch points with farmers through One Acre Fund field staff to provide post training assessment and feedback. ► Responsibility: PASAP Consortium
Green Cycle	???	5,775	
1AF	???	10,370	Deliverable 5/ 2026: Report on policy enabling environment activities: 1) Advocacy for land tenure with Chiefs and Local Leadership to boost women participation and security for increased farming investments. 2) Transfer of customary land titles. 3) Collaboration with the National Assembly (Parliament) to increase awareness on climate smart agriculture and carbon financing. 4) Climate financing policy discussions with government, private sector and local communities. ► 1 Chiefdom MoU signed ► 500 female farmers secure customary land title through our intervention ► 1 meeting (government, private sector and chiefdoms) ► Responsibility: One Acre Fund
1AF	???	311,147	Deliverable 1/ 2027: Farmer enrolment, distribution, training and plot verification report ► Cumulative 24,167 smallholder farmers provided with an agroforestry package of 350+ mixed use trees per household, including tree crops, annual crops, and extension services with a focus on soil and water. ► 16,196 farmers (cumulative) access weather-index insurance ► 3 million seedlings planted cumulatively ► Responsibility: One Acre Fund



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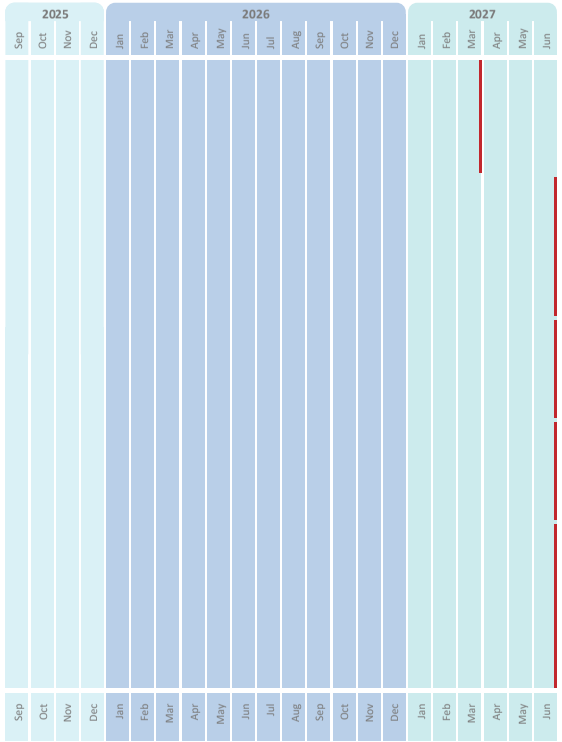
PARTNERS	ACTIVITIES	BUDGET	DELIVERABLE & OUTPUT
CIAT	???	0	Deliverable 2/ 2027: Content for the climate and crop advisories, seasonal, and long term, for dissemination through Extension agents and Media (TV and Radio) and report on field team, feedback and follow ups ► Content developed in collaboration with the Zambia Meteorological Department ► and 140 extension agents trained ► Responsibility: CIAT
MMO	???	24,850	Deliverable 3/ 2027: Content development of climate and crop advisory services and dissemination through TV and Radio, viewership report, KAP surveys (baseline + endline) ► 6 TV slots of 5 min each (new content) for each cropping season aired in November ► 6 Radio slots of ~5 min each (new content) aired in November ► Audience measurement and KAP (knowledge, attitude, practice) analysis after each season ► Responsible Partner: Munda Make Over
GART	???	23,100	Deliverable 4/ 2026: Demonstration Plots' establishment and joint soil water field officer and extension farmer training report ► Cumulative 80 demonstration plots established with Green Cycle and extension partners (including Bayer, Atlas Organic, and others that may join during implementation) ► 140 extension agents and field staff (1AF, Private Sector) trained on smallholder appropriate soil health and water focused interventions (i.e. planting compliance, spacing, fertiliser dosing, crop selection, crop rotation, residue management, benefits of organic fertilizer, composting, GMCCs). ► 10,000 farmers (cumulative) reached by joint extension farmer training and field days with private sector partners ► 3,000 on-farm touch points with farmers through One Acre Fund field staff to provide post training assessment and feedback. ► Responsibility: PASAP Consortium
Green Cycle	???	9,625	
1AF	???	11,250	Deliverable 5/ 2027: Report on policy enabling environment activities: 1) Advocacy for land tenure with Chiefs and Local Leadership to boost women participation and security for increased farming investments. 2) Transfer of customary land titles. 3) Collaboration with the National Assembly (Parliament) to increase awareness on climate smart agriculture and carbon financing.4) Climate financing policy discussions with government, private sector and local communities. ► 2 Chiefdom MoU signed ► 1,000 female farmers secure customary land title through our intervention ► 3 meetings (government, private sector and chiefdoms) ► Responsibility: One Acre Fund



Annex 4: Strategic Rationale and Impact Pathways of Co-design and Partnerships

Reasons for Adopting Co-design and Partnerships	Potential Impact of Co-design and Partnerships
Increasing Specialization: As knowledge and technology have advanced, organizations have developed deep but narrow expertise in specific fields. No single organization now possesses all the capabilities or resources needed to address multifaceted development challenges comprehensively. By engaging in co-design, organizations pool their specialized expertise, resulting in more effective and innovative solutions.	**Greater and More Sustainable Impact:** Projects designed and executed by diverse constellations of specialists are more likely to create durable, scalable change. Cross-sector partnerships address a wider range of needs and are better positioned to respond to unanticipated challenges.
Complexity of Modern Challenges: Contemporary development issues, such as climate change, public health crises or large-scale poverty alleviation, are complex and interconnected. Solving these 'wicked' problems often requires interdisciplinary approaches. Co- design brings together diverse stakeholders, including government agencies, NGOs, businesses and affected communities, who each contribute unique perspectives and knowledge.	**Improved Stakeholder Buy-In and Trust:** Engaging stakeholders, especially community members, throughout the process increases legitimacy and support. Local buy-in boosts effectiveness, fosters trust and empowers communities to sustain initiatives after external organizations exit.
Scaling Impact: Isolated interventions often have limited reach. Partnerships and co-design enable projects to scale efficiently by leveraging each organization's networks, infrastructure, and influence. Strong alliances multiply resources, increase legitimacy with funders and communities, and provide greater leverage for policy change or market influence.	**Increased Innovation:** The cross-pollination of ideas from partner organizations sparks creative solutions that none could have developed alone. This leads to novel approaches, more adaptable methodologies, and products or services that are robust against real-world complexity.
User-Centered Innovation: Co-design processes inherently involve end-users or beneficiaries in the design and evaluation of interventions. This participatory approach ensures that solutions are relevant, culturally appropriate and responsive to real needs, reducing the risk of misaligned or technological 'solutionism'.	**Resource Efficiency:** Shared knowledge, infrastructure and funding decrease duplication of effort and cut costs. Efficient division of labor ensures that organizations focus on what they do best, maximizing the collective utility of resources.
Risk Sharing and Sustainability: Joint ventures and partnerships spread financial, operational and reputational risks among several organizations. This not only makes ambitious projects more viable but also supports their long-term sustainability, as each partner has a stake in the project's success.	**Policy Influence and Advocacy:** Constellations of organizations can exert stronger influence on policymakers, funders and public opinion than single actors. Unified voices amplify messages and can accelerate systemic change in ways that are out of reach for individual organizations.
Adaptability and Learning: Collaborative approaches foster more agile adaptation. Multiple organizations can simultaneously pilot, share feedback and iterate on solutions. This speeds up the innovation cycle and helps ensure projects remain relevant despite changing circumstances.	

Source: Authors' creation.

Annex 5: Inception Meeting Programme

Day 1 – Monday, 23 June 2025: Pre-Meeting & Registration

Time	Session Title	Description	POC
08:30 – 09:00	Registration & Welcome Coffee	Participants sign in, receive meeting materials, and enjoy refreshments.	Valencia
09:00 – 09:15	Opening Remarks	Welcome address and overview of meeting objectives, emphasizing the need to re-strategize post-USAID funding.	Evans
09:15 – 09:45	Program Introduction: Water and Soil Accelerator	Presentation on the accelerator's vision, mission, key deliverables.	Evans
09:45 – 10:30	Results Framework	Theory of change, nested Theory of change and results framework.	Andre
10:30 – 10:45	Coffee Break	Short break.	
10:45 – 12:15	Project Structure and Workstreams	Overview of project components and workstreams – Presentations from each partner giving details on what they can achieve, followed by Q&A.	Mahlatse Collins Annie Sekayi Evelyn Richard Zwide Nonsikelelo
12:15 – 13:15	Lunch	Lunch break.	
13:15 – 14:45	Stakeholder Mapping & Roles Workshop	Breakout Session: Identify Key Stakeholders and Define Roles for New Partnerships Across Consortia.	Consortia
14:45 – 15:00	Break	Short break	
15:00 – 16:30	Short-Term Priorities	Group exercise to set short-term targets aligned with the revised strategy.	
16:30 – 17:00	Wrap-Up & Q&A	Summary of Day 1 learnings and action items for the upcoming sessions.	

Day 2 – Tuesday, 24 June 2025: Core Inception Meeting

Time	Session Title	Description
08:30 – 09:00	Welcome & Recap of Day 1	Summary of Day 1 outputs and briefing on Day 2 objectives.
09:00 – 10:30	Detailed Workstream Breakout Sessions	Group discussions on workstreams (research, technical integration, partnership development).
10:30 – 10:45	Coffee Break	Short break.
10:45 – 12:15	Funding, Partnerships & Sustainability	Discussion on alternative funding sources, strategic partnerships, and long-term sustainability.
12:15 – 13:15	Lunch	Lunch break.
13:15 – 14:45	Monitoring, Evaluation, and Learning	Finalizing the Project targets, identifying performance indicators and feedback loops.
14:45 – 15:00	Break	Short break.

15:00 – 16:00	Finalizing the Roadmap & Action Plan	Consolidation of group outputs, drafting a revised roadmap, and defining next steps.
16:00 – 16:30	Closing Session	Final remarks and overview of post-meeting follow-up actions.
17:30 – 18:30	Group Dinner	

Day 3 - Wednesday, 25 June 2025: Core Inception Meeting

Time	Session Title	Description
08:00 – 12:00	Optional Follow-Up & Consultative Meetings	Reserved for one-on-one consultations, follow-up meetings, or site visits (as needed).

Source: Authors' creation.

Annex 6: Participants List

Name and Surname	Organization	Role	Gender
Collins Nkatiko	CFU	Consortia Partner	♂
Machini Chikwekwe	TLC	Consortia Partner	♂
Stanley Silwimba	CFU	Consortia Partner	♂
Lameck Nkhoma	CARD	Consortia Partner	♂
Baxton Chirombo	CRS	Consortia Partner	♂
Molly Kumwenda	CRS	Consortia Partner	♀
Whytson Sakala	FOF	Consortia Partner	♂
Danny Kabwe	FOF	Consortia Partner	♂
Thato Mabele	IWMI	Research Consultant	♀
Sekai Mudonhi	CRS	Consortia Partner	♀
Elizabeth Venable	Growth Poles	Consortia Partner	♀
Blessing Mhlanga	CIMMYT	Scientist	♂
Christian Thierfielder	CIMMYT	Scientist	♂
Chileya Kasuba	Mediae	Consortia Partner	♀
Munyaradzi Mutenje	IWMI	Scientist	♀
Jephthah Maliro	TLC	Consortia Partner	♂
Christone Nyondo	MwAPATA Institute	Consortia Partner	♂
Mahlatse Nkosi	IWMI	Scientist	♀
Mazvita Chiduwa	CIMMYT	Scientist	♀
David Slane	ABC	Scientist	♂
Zwide Jere	TLC	Consortia Partner	♂
Valencia Mbatha	IWMI	Project Coordinator	♀
Humphrey Nxumalo	Solidaridad	Consortia Partner	♂
Sylvester Tsatonombwe	Ministry of Agriculture (Malawi)	Government Representative	♂
Annie Wakanyi	OAF	Consortia Partner	♀
Mphatso Chongo	AFAP	Consortia Partner	♂
Nonsikelelo Nkomo	Solidaridad	Consortia Partner	♀
Henry Roman	IWMI	Scientist	♂
Margaret Sadrake	AFAP	Consortia Partner	♀
Geoffrey Ziba	Ministry of Agriculture (Malawi)	Government Representative	♂
Kgothatso Mophosho	IWMI	Communications	♂
Greenwell Matchaya	IWMI	Scientist	♂
André van Rooyen	IWMI	Scientist	♂
Inga Jacobs-Mata	IWMI	Project Lead	♀
Winnie Kasoma-Pele	IWMI	Scientist	♀

Name and Surname	Organization	Role	Gender
Mirriam Makungwe	IWMI	Scientist	♀
Blessings Mwale	TLC	Consortia Partner	♂
Tinashe Lindel Dirwai	IWMI	Scientist	♂
John Omondi	IITA	Scientist	♂
Chifundo Khokwa	SCOPE/Pellum	Consortia Partner	♀
Wendy Bilima	Pellum Malawi	Consortia Partner	♀
Kumbukani Munthali	AFAP	Consortia Partner	♂
Luke Viljoen	OAF	Consortia Partner	♂

Annex 7: Timeline for MELIA Deliverables

Month	Activity	Deliverables
1–2	Finalize MEL framework and train partners	D1 – Socially inclusive MELIA framework, training report
2–3	Baseline data collection	D2 - Baseline report, quarterly technical and financial reports
4–6	Monitoring and learning event	D3 - Learning event report, MELIA report
7–9	Soil testing, training assessments	D4 – Seasonal innovation performance and planning report
10–12	Review progress, adapt interventions, publish learning note	D5 - Annual technical and financial progress report

Source: Authors' creation.

Annex 8: Schedule of MELIA Deliverables

Deliverables	Year 1						Year 2						Year 3		
	M2	M4	M6	M8	M10	M12	M2	M4	M6	M8	M10	M12	M2	M4	M6
D1 - Socially inclusive MELIA framework, training report															
D2 - Baseline report, quarterly technical and financial reports															
D3 - Learning event report, MELIA report															
D4 - Seasonal innovation performance and planning report															
D5 - Annual technical and financial progress report															

Source: Authors' creation.

Annex 9: Risk Management

Risk Category	Specific Risk	Likelihood	Impact	Mitigation Strategy	Assumptions	Responsible Entity
Data Collection	Enumerator turnover and inconsistent data quality	Medium	High	Refresher trainings, standardized ODK forms, spot checks	Sufficient budget and time for training	Consortium MELIA Teams, IWMI
Baseline Delays	Delayed surveys compromise endline comparability	High	High	Prioritize rapid, lean baselines with mobile tools	Project starts only after baseline	IWMI, ABC, MELIA Coordinators
Digital Tool Failure	Device or connectivity disruptions affect data entry or dashboards	Medium	Medium	Offline data entry modes, weekly data syncing, device provision	Enumerators have access to functional tools	ABC, Solidaridad, AgriPredict
Climate & Environmental	Extreme weather events, droughts and floods disrupt agricultural seasons, damage infrastructure and hinder field operation	High	High	Incorporating climate-smart planning, allocating contingency funds and promoting adaptive scheduling and early warning mechanism	Timely weather/ climate data available; partners adopt adaptive planning	IWMI, ABC, Solidaridad, AgriPredict
Political & Security Context	Election-related instability or policy shifts disrupt field operations or delay approvals	Medium	High	Engaging local authorities early and ensuring local implementation partners lead the field work	The political environment remains stable and conducive	IWMI, consortium members
Funding & Financial Management	Delays in disbursements, exchange rate fluctuations affect project implementation	Medium	High	Developing quarterly cashflow forecasts, utilizing harmonized financial reporting and regular donor communication	Donor reporting timelines remain consistent	IWMI finance, consortium finance leads
Partnership & Governance	Weak coordination, overlapping roles, and staff turnover delays project implementation	Medium	High	Establishment of joint government structure, regular consortium coordination meetings and clear scopes of work	Partners uphold their commitments to the collaboration framework	IWMI, consortium members
Private Sector Engagement	Low private sector engagement or limited co-investment undermines the long-term sustainability of interventions	Medium	Medium	Early engagement of agribusinesses, alignment with market incentives, leveraging de-risking and blended finance tools	The private sector identifies clear benefits for engagement	IWMI, consortium members
Community & Social Inclusion	GESI issues along with limited community ownership, hinder the uptake of interventions	High	High	Integrating GESI and tenure safeguards, promoting inclusive participation, and applying GALS methods	Local structures support inclusive participation	Consortium members, TLC, Solidaridad and IMWI

Risk Category	Specific Risk	Likelihood	Impact	Mitigation Strategy	Assumptions	Responsible Entity
Operational & Logistical	Procurement challenges or cross-country logistical delays hinder the timely implementation of activities	Medium	Medium	Planning procurement in advance, prioritizing local sourcing, and keeping an updated supplier database	Transport and import systems remain functional	IWMI procurement, consortium partners

Source: Authors' creation.

International Water Management Institute

CGIAR RESEARCH CENTER

The International Water Management Institute (IWMI) is an international, research-for-development organization that works with governments, civil society and the private sector to solve water problems in developing countries and scale up solutions. Through partnership, IWMI combines research on the sustainable use of water and land resources, knowledge services and products with capacity strengthening, dialogue and policy analysis to support implementation of water management solutions for agriculture, ecosystems, climate change and inclusive economic growth. Headquartered in Colombo, Sri Lanka, IWMI is a CGIAR Research Center with offices in 17 countries and a global network of scientists operating in more than 55 countries.

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Headquarters
127 Sunil Mawatha, Pelawatte
Battaramulla, Sri Lanka

Mailing address
P. O. Box 2075
Colombo, Sri Lanka

Telephone
+94 112880000,

Fax
+94 112784080

Website
iwmi@cgiar.org