

AU-AIP AFRICA WATER INVESTMENT SUMMIT 2025

13 - 15 August 2025
Cape Town, South Africa



AU AIP WATER INVESTMENT SUMMIT: PROJECT SHOWCASE

PROGRAMME/ PROJECT OVERVIEW	
Project name	Empowering Women-Led Drone Enterprises for Water-Efficient Agriculture and Livelihood Diversification in Zimbabwe.
Location (Country, Region, Coordinates)	Zimbabwe – Prioritizing drought-affected regions: Masvingo, Midlands, and Matabeleland South Provinces.
Involved countries	Zimbabwe. Mozambique
Sub-Sector	Water-Smart Agriculture, Climate-Resilient Livelihoods, Drone-Based Irrigation and Fertilization, Technology-Enabled Women's Economic Empowerment.
Project description (Goals and expected outcomes)	<p>To increase climate resilience and rural income diversification in Zimbabwe's drought-prone regions by enabling women-led technological enterprises using drones for water-efficient agricultural support services.</p> <p>Output 1: Establishment of women-led drone service enterprises delivering precision irrigation, fertilization, crop monitoring and security services.</p> <p>Output 2: Increased water productivity and agricultural yields through drone-enabled precision agriculture among smallholder farmers.</p> <p>Output 3: Strengthened local institutional capacity to integrate AI and technological solutions in water resource management.</p> <p>Output 4: Gender-equitable economic empowerment through alternative income streams linked to agricultural technology services.</p> <p>Output 5: Strengthened climate resilience of rural communities through diversified livelihoods and improved agricultural productivity.</p>
Technological details/ innovation	<p>Drone technology for aerial crop monitoring, precision watering, and fertilizer application. Drones equipped with multispectral, hyperspectral or high-resolution RGB cameras and sensors will provide:</p> <ol style="list-style-type: none"> 1. Aerial crop monitoring: Regular monitoring of crop health, growth, and development, enabling early detection of issues such as pests, diseases, and nutrient deficiencies. 2. Precision watering: Drones will be equipped with thermal imaging capabilities to detect soil moisture levels, enabling precise irrigation scheduling and reducing water waste. 3. Precision fertilizer application: Drones will be equipped with precision sprayers, enabling targeted application of fertilizers and pesticides, reducing waste and environmental impact. <ul style="list-style-type: none"> • Drone technology for surveillance, monitoring, and security operations: <ol style="list-style-type: none"> 1. Aerial surveillance: Utilize drones equipped with high-resolution cameras to provide aerial surveillance services for agricultural clients, monitoring crops, and detecting potential security threats. 2. Crop protection: Drone-based protection services, monitoring and responding to potential threats such as trespassing, theft, or vandalism. 3. Perimeter security: Drone-based perimeter security services, monitoring farm perimeters, detecting and responding to potential security breaches. 4. Asset protection: Drone-based asset protection services, monitoring and securing agricultural assets, such as equipment, livestock, and crops. 5. Risk assessment: aerial risk assessment services, identifying potential security vulnerabilities and provide recommendations for mitigation. • AI-enabled analytics for optimal irrigation schedules and fertilizer usage. <ol style="list-style-type: none"> 1. Advanced algorithms will analyze data collected by drones, providing insights on optimal irrigation schedules, fertilizer application, and crop management. • Development of local capacity in drone operation, repair, and AI systems prioritizing women and youth. • Water efficiency monitoring and decision-support systems for smallholder farmers. <p>1. Decision-support systems will be developed to enable smallholder farmers to make informed decisions on water usage and crop management.</p>
Governance improvements / innovation	<p>Establishment of women-led cooperatives managing drone service enterprises.</p> <p>Training local authorities and farmer groups on integrating drone services in local agricultural extension programmes.</p> <p>Creation of regulatory guidance in partnership with Zimbabwe Civil Aviation Authority (ZCAA) and Ministry of Environment.</p> <p>Community engagement through participatory planning and capacity-building for technology adoption.</p>
IMPLEMENTATION & KEY PLAYERS	
Lead institution	Government of Zimbabwe – Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD)
Implementing agent(s)	Girls in Tech Zimbabwe (GITZ)/Women in Technology Zimbabwe (WiTZ) Network, UNCCD – GRDSA, Local agricultural cooperatives.
Sponsors / Investors / Contractors / Advisors	<p>Sponsors: MLAFWRD, Ministry of Women's Affairs, Community, Small and Medium Enterprises Development.</p> <p>Investors: Green Climate Fund (targeted grant funding of \$28 million), local banks and microfinance institutions for co-financing.</p> <p>Advisors: Zimbabwe Civil Aviation Authority (ZCAA), FAO Zimbabwe, UN Women Zimbabwe, SheFlies – Drone Community for young minds, APSAN-Vale (transboundary learnings), LIMCOM, GLTFCA</p>
PROJECT TIMELINE & DEVELOPMENT STAGE	
Year of prep, est start & end	Preparation: 2026; Feasibility and Proposal Development: 2026–2027; Implementation: 2028–2032 (5 yrs)
Current development stage	Concept Note – Under Development
PROJECT RATIONALE & STRATEGIC IMPORTANCE	
Alignment with national/regional plans, SDGs, Agenda 2063	<ul style="list-style-type: none"> • Zimbabwe National Development Strategy 1 (2021–2025) • Zimbabwe's NDC (2021) and Climate Policy • Zimbabwe Smart Agriculture Blueprint • Zimbabwe Water Policy

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	<ul style="list-style-type: none"> • SDGs: 1, 5, 6, 8, 9, 13 SADC: various alignments including WEF Nexus
Contribution to NDC's and alignment with NAPs / Adaptation & Mitigation	<ul style="list-style-type: none"> • Directly contributes to water efficiency targets in Zimbabwe's NDC. • Supports the Smart Agriculture Strategy through precision agriculture technology. • Enhances adaptation capacity by reducing vulnerability to drought through alternative livelihoods.
Paradigm shift potential (scalability, replicability, policy or behaviour change)	<ul style="list-style-type: none"> • High scalability across Southern Africa, commencing with transboundary learning between Mozambique and Zimbabwe. • Creates replicable models for gender-focused drone enterprises in agriculture. • Encourages national policy shifts towards integrating emerging technology in agriculture and water management. • Enhancing ZCAA policies and approaches to adapt regulations and rules associated with airspace, to practical agricultural application in Zimbabwe (a "first" since there are currently no applicable regulations to provide guidance in the country)
FINANCIAL & INVESTMENT DETAILS	
Total project cost, currency	\$40 million USD (GCF request: \$28 million; Co-financing: \$12 million)
Funding already raised (amount & sources)	Co-financing expected from Government of Zimbabwe, local financial institutions, and development partners (to be confirmed).
Proposed revenue model	Public-private partnership frameworks for service provision; Microfinance-backed leasing models for drones and drone training to women-led cooperatives. Drone service fees paid by farmers or agricultural cooperatives;
Financial metrics available? Y/N, date	N: To be developed in full proposal phase.
Economic performance (Benefit-Cost Ratio) Y/N, date	Y: Planned, Q2 2026. Initial estimates suggest positive net benefits from increased productivity and water savings.
INVESTMENT ASK & WAY FORWARD	
Remaining investment required: component & type	\$28 million Grant (GCF)
Opportunity for bundling with other projects (Y/N, date)	Y: Potential bundling with Zimbabwe Water Sector Investment Programme and SADC Water-Energy-Food Nexus Initiatives.
Next steps	<ul style="list-style-type: none"> • Secure endorsement from NDA Zimbabwe. • Finalize detailed feasibility studies and financial structuring. • Develop full proposal and engage GCF and co-financiers.
TARGET GROUPS & SOCIAL IMPACT	
Direct beneficiary population per project component	180,000 people (focus on women and youth in Masvingo, Midlands, Matabeleland South) 65% women participation target in drone enterprise training and ownership. Details e.g. income status, gender etc. to be confirmed during feasibility study.
Social & gender impact assessment (Y/N, date)	Y: To be conducted as part of full proposal development, GEDSI strategy included.
Job creation estimate / local economic benefit assessment (Y/N, date)	Y: Planned. Estimated 1,500 direct jobs (drone pilots, technicians, cooperative managers), and indirect benefit to 10,000+ smallholder farmers.
SUSTAINABILITY & ENVIRONMENTAL ANALYSIS	
Environmental compliance & climate assessment (Y/N, date)	Y: Environmental and Social Management Framework (ESMF) to be developed; ESS risk category B (medium risk): Q1 2026.
Environmental impact assessment (Y/N, date)	Y: Planned – From infrared image recording to expand to aerial fertilizer/pesticide/natural product distribution regulation, wildlife impact, and local airspace rules and regulations development/guidance: Q2 2026.
ESG performance (Y/N, date)	Y: Planned. Emphasis on inclusive governance and environmental protection: Q2 2026
Safeguards & community engagement (Y/N, date)	Y: Inclusive stakeholder consultations already initiated; Grievance redress mechanism planned: Q2 2026
RISK MANAGEMENT	
Main risks & mitigation measures (Political, Legal, etc)	<p>Market acceptance risk: Community sensitization and extension services integrated.</p> <p>Regulatory risk: Partnership with ZCAA for drone licensing and airspace management frameworks.</p> <p>Institutional capacity: Investment in long-term training and capacity-building hubs for women and youth.</p> <p>Financial: Establish phased investment and microfinance structures to reduce up-front capital risk.</p>
Constraints or bottlenecks to finance	<p>Securing concessional co-financing beyond GCF grant.</p> <p>Market structuring for drone services in rural areas.</p>
CONTACT INFORMATION AND CONSENT	
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