

Ukama Ustawi (U2)

Water Secure and Climate Resilient Agricultural Livelihoods in East and Southern Africa

Initiative Lead and Co-Lead	Primary CGIAR Action Area	Estimated 2022 - 2024 Budget
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Challenge

East and Southern Africa (ESA) is a climate hotspot, with over US\$ 45 billion in agricultural production at risk from higher temperatures, shorter growing seasons, worse droughts and floods (<https://bit.ly/3dZJ711>). These risks cascade, increasing disease and pest outbreaks, affecting post-harvest storage and transport, jeopardizing businesses and supply chains, and undermining livelihoods. Maize is particularly vulnerable: 15% climate-related declines in yield (without adaptation), cropland suitability (<https://bit.ly/3dZJ711>) and degrading environmental services and health (low soil fertility, water quality and availability) (<https://bit.ly/3taJWxP>). Maize production covers over 75% of the cropping area (<https://bit.ly/2RxqMEt>) in many places, increasing the vulnerability of large, growing and often malnourished populations (largely women and youth), since maize provides most of their calories and income (<https://bit.ly/3taT6KJ>). Diversification and de-risking of maize-mixed systems is vital. Farmers and market systems in these areas face key challenges limiting food/water security and climate resilience, including: access to inputs, advisories, capacity, finance; youth unemployment and interest in agriculture, social inequality hindering equitable growth; tensions over owning or using scarce resources; increased environmental migration; human-wildlife conflict; and challenges to collaborative governance. Integrated farm and natural resource management, building climate resilience and producing nutritious foods are imperative to achieving the SDGs, UNFCCC and other commitments. Solutions exist; the challenge is deploying and rapidly scaling these actions in a coordinated and inclusive way to ensure lasting food/water security and climate resilience, while overcoming systemic barriers, empowering youth and women through innovative partnership models and fostering entrepreneurship and financial access, and strengthening underpinning governance mechanisms: the rationale for Ukama Ustawi.

Objective

Ukama Ustawi (U2) will identify, leverage and accelerate policies, practices, technologies and services for climate-smart innovations to diversify and de-risk agriculture in maize-mixed areas of ESA at multiple scales through science-based innovation, capacity strengthening, policy support, and collaborative governance. U2 builds off the Two Degree Initiative-Southern African Challenge (<https://bit.ly/32dLkUs>) success, where we partnered with 300 diverse stakeholders to co-create a research for development agenda for water-secure, climate-resilient, low-emission, inclusive livelihoods and landscapes. This needs tailoring to region and country contexts by scaling out (greater numbers), scaling up (institutionalizing) and scaling deep (embedding). Five nested work packages promote fit-for-use innovation bundles, capacity, collaborative governance, multi-stakeholder partnerships, and communications to achieve food/water security, climate resilience, and environmental, social and governance (ESG) impacts in targeted ESA countries, benefitting 1 million people, through three objectives:

1. Diversify and de-risk maize-mixed systems, focusing on farms, markets and consumer behavior, and improving water/land management, soil health, nutrition, resilience to climate shocks, pest and disease outbreaks. A regional hub supports scaling strategies and implementation plans (<https://bit.ly/3e1pUiU>; <https://bit.ly/3acwrpY> by integrating, adapting, and scaling technologies, practices, agro-advisory services, communications, and financial products;
2. Unlocking private sector investment, promoting empowerment of women and youth in value chains, through capacity strengthening (incubators, accelerators, internships), spurring start-up/SME growth, jobs, inclusive finance and social equity; developing investment roadmaps;
3. Ensuring landscape-scale environmental health, sustainable water/land management, policy implementation and governance promoting water security and other ecosystem service and human movement flows as adaptation strategies; renewable energy technologies; and greenhouse-gas emissions (GHG) reductions.

U2 will collaborate closely with thematic initiatives that will undertake work in this region, bringing their advances into the innovation bundles and leveraging partnerships for impact in ESA. As per the first round of submissions made, the following initiatives are noted.

Several global initiatives with an expressed focus on ESA:

ST: NEXUS Gains: Realizing Multiple Benefits Across Water-Energy-Food-Environment System; ClimBeR: Building Systemic Resilience against Climate Variability and Extremes; SHiFT: Sustainable Healthy Diets through Food Systems Transformation; Enabling gender and social equality through resilient and inclusive agri-food systems; Harnessing Digital Technologies for Timely Decision-Making across Food, Land, and Water Systems

RAFS: Sustainable Intensification of Mixed Farming Systems; ASPIRE - building systemic resilience to climate variability and extremes through AgroSilvoPastoral Investments and Restoration; Resilient Cities through Sustainable Urban and Peri-urban Agrifood Systems; Climate Smart Solutions for Livestock Agri-food Systems (Policy and Practice); Protecting human health through a One Health approach; Implementing Nature-Positive Solutions to enhance system productivity and resilience, safeguard the environment, and promote inclusive growth

In addition, the following global initiatives will make direct contributions to U2's workpackages as follows:

WP 1: Diversify and sustainably intensify: SeEdQUAL delivering genetic gains in farmers' fields; Accelerated Breeding: Meeting Farmers' Needs with Nutritious, Climate-Resilient Crops; Sustainable Intensification of Mixed Farming Systems; SHiFT: Sustainable Healthy Diets through Food Systems Transformation; Implementing Nature-Positive Solutions to enhance system productivity and resilience, safeguard the environment, and promote inclusive growth; Transformational agroecology across food, land and water systems

WP 2: De-risk: ClimBeR: Building Systemic Resilience against Climate Variability and Extremes

WP 3: Empower and engage women and youth: Enabling gender and social equality through resilient and inclusive agri-food systems

WP 4: Incubate and accelerate: Resilient Cities through Sustainable Urban and Peri-urban Agrifood Systems; Rethinking Food Markets and Value Chains for Inclusion and Sustainability

WP 5: Restore and conserve water, land and biodiversity health across landscapes: National Policies and Strategies for Food, Land and Water Systems Transformation; NEXUS Gains: Realizing Multiple Benefits Across Water-Energy-Food-Environment System; Transforming food systems from greenhouse gas sources to sinks (S2S)

Theory of Change

Ukama Ustawi (U2) supports water security and climate-resilient agricultural livelihoods in East and Southern Africa (ESA), helping millions of vulnerable smallholders transition maize-mixed systems to more intensified, diversified and de-risked systems, fostering enterprise development, unlocking private investment, especially for socio-economically disadvantaged women and youth, and ensuring landscape-scale environmental health. U2 will do this by applying science-based innovation, capacity strengthening, policy support and communication. An innovation scaling hub for ESA will research adaptive scaling in the region, producing fit-for-purpose innovation-bundle delivery models implemented with partners. Digital platforms embedded with partners (NARS, private sector, etc.) will develop agro-advisory applications de-risking agriculture. These hubs and platforms feed into private-sector engaged multi-stakeholder dialogue spaces fostering a pipeline of SMEs strengthened through incubation and acceleration, linked to inclusive finance spurring sustainable growth. Empowering vulnerable groups (women, youth, migrants) is integrated through capacity strengthening activities, e.g., change agent identification, internships/mentorships, networks/cooperatives. Enabled by integrated water/land/energy management, collaborative governance and multi-stakeholder shared visions, targets and plans for food/water security, will spillover to regional trade and human movement patterns. U2's theory of change is based on the assumption that transformative change emerges from the relationships among/between actors and not the actions of any single actor; through a set of well-functioning hubs, platforms and partnership-based networks, which will be aligned with large development initiatives such as the OneCGIAR global initiatives, and private investments reaching farmers at scale. By 2024, we envisage more informed policies across six countries, 250,000 farmers (90,000 women) having more diversified and resilient production, 750,000 receiving climate information services, and 250 SMEs incubated/accelerated.



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Highlights

- DIVERSIFY, INTENSIFY AND DE-RISK maize-mixed systems, supporting climate-smart, nutrient-dense crop and livestock production/market systems; sustainable and integrated management practices, digital agriculture, extension services, and technologies improving climate resilience, productivity, food/water security, soil health and nutrition. Regional scaling hub supporting innovation-bundle delivery models that are equitable, locally-appropriate co-designed with partners.
- EMPOWER AND ENGAGE women and youth, prioritizing those socio-economically disadvantaged groups, through innovative partnerships, leveraging networks and cooperatives to remove systemic barriers; build-out digital ventures catalyzing equalizing opportunities; use multi-partner platforms/dialogues to unlock inclusive finance, increase market linkages, create enabling policy environments; generate opportunities through internships/mentorships/change agent identification, promoting equitable and accessible business environments.
- INCUBATE AND ACCELERATE start-ups and small and medium enterprises (SMEs) to de-risk agriculture, water, and climate investments via innovation hubs providing research-informed technical assistance, SME pipeline and job growth, sustainable finance mechanisms, and supporting regional trade. Focus on youth, women, input delivery (seeds, machinery, irrigation), value addition, digital entrepreneurship.
- RESTORE AND CONSERVE water, land and biodiversity to support foundational ecosystem services by improving management practices, capacity strengthening, collaborative governance and a shared, inclusive, transboundary and multi-stakeholder vision, targets and plans for building water, food and climate security and resilience, and honoring national commitments to SDGs, CBD-Kunming, UNFCCC.
- INTEGRATE AND EMBED OneCGIAR (locally, nationally, regionally) through innovative business and legal models, capitalizing on demand-driven opportunities by embedding research and partner innovations into public, private and civil society sector activities; championing and spotlighting impactful research outcomes, actions, and partnerships; and supporting political transformations driving transformative change.

Work Packages

Scope of Work		3-year Outcomes
Diversify and intensify maize-mixed systems	Diversify and sustainably intensify maize-mixed systems by rapidly scaling innovation bundles through the scaling hub, promoting climate-adapted legumes, fruits & vegetables, roots & tubers (e.g. cassava), agroforestry, fisheries, livestock, and other staples (rice, sorghum, millet, teff) from farm-to-market-to-consumer. Improve inputs, delivery systems and management practices (irrigation, mechanization, minimum till) that enhance climate-smartness, productivity, nutrition, incomes, and gender equity, through research such as multi-sc..	By 2024, 200,000 farmers/value chain actors/consumers have begun to transition from maize-mixed systems to more diversified, integrated and resilient climate-smart farming systems, on a path towards resilience, soil fertility, sustainable land and water management practices, ultimately resulting in higher productivity, profitability, and nutrition. Regional scaling hub catalyzes this transformation by leveraging partnerships and providing fit-for-purpose innovation-bundle delivery models.
De-risk farm and market systems	De-risking market systems by enhancing access to and use of de-risking technologies, digital agro-advisory and climate services, and decision-support tools for early warning, action and preparedness through open access platforms and applications. Co-designed with farmers, SMEs, governments and investors, focusing on targeted communication activities, multi-media dissemination, and data sharing.	By 2024, 1,000,000 farmers and other next users of climate information have improved access to climate information, digital agriculture and agro-advisory services to enhance early warning for early action and preparedness, and improved climate resilience; communication strategies broadly developed for digital agriculture and financial services availability.
Empower and engage women and youth	Empower and engage women and youth across work packages by strengthening capacity (financial literacy; targeted agricultural extension, internships/mentorships, digital innovations for youth); identifying financial support to compete on and off-farm (credit; revolving funds); targeting incentives for on-farm innovations (closing gender yield-gaps; preferential-procurement mechanisms for women-owned enterprises).	By 2024, clear targets identified across work packages reaching 60,000 women (30% of total farmers/next users); of which 600 women and youth (100 per country) are identified as change agents for building capacity, financial support; and targeting incentives; 30% of new jobs created are for women and 40% for youth.
Incubate and accelerate start-ups and SMEs	Incubate and accelerate start-ups and SMEs through entrepreneurship innovation hubs, building a pipeline of investable SMEs contributing to ESG targets; using multi-partner platforms and multi-stakeholder dialogue spaces that strengthen the enabling environment; linking SMEs to a sustainable finance facility; scaling environmentally-sustainable, socially-equitable and responsible financial (e.g. micro-lending and insurance) products.	By 2024, at least 250 SMEs (30% run by women and 40% by youth) have been incubated or accelerated and are in process or have received financing for a total of at least US\$5 million of new finance, that has been unlocked and invested (through debt, equity or grants).
Restore and conserve water, land and biodiversity health across landscapes	Restore and conserve water, land and biodiversity health across landscapes, strengthening local, national and regional enabling environments; creating coherent policies, regulations, investments (e.g. Payment-for-Ecosystem-Services (PES), exclosures) and institutional coordination; data sharing across sectors/countries; inclusive, multi-stakeholder visions and integrated ecosystem management; renewable energy use, emissions reduction and nature-based solutions.	By 2024, 60 partnerships activated, 6 strategies/policies supported, and US\$300 million of investments informed, enabling collaborative governance of multifunctional landscapes supporting regional and national commitments for biodiversity, climate, SDGs, as articulated through shared national monitoring and reporting processes.

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Impact Area Contributions

Nutrition, health & food security	Millions more people have access to more nutritious food, with greater food security, and improved health. Smallholder farmers, especially women, in ESA have moved beyond maize-mixed systems to maize-mixed/diversified systems, and biofortified crops, consuming more diverse foods, diversifying food sold in market systems, and (re)using safer water for safe food.
Poverty reduction, livelihoods & jobs	Improved on-farm productivity enhances incomes and livelihoods; more diversified production creates new off-farm opportunities in value chains and facilitates intra/inter regional trade; start-ups and SMEs support new jobs, increasing livelihood options and reducing poverty, especially in vulnerable populations of women and youth.
Gender equality, youth & social inclusion	Women and youth are more empowered, have ownership security and greater employment opportunities after investments, capacity and support are targeted and expanded to them; greater social inclusion and equality result from lifting structural/productivity barriers.
Climate adaptation & greenhouse gas reduction	Overall, improved resilience to climate and shocks, and adaptation across food, land and water systems are supported for millions of small-scale producers and vulnerable groups (women, youth, migrants) on cropland spanning 12 countries and supporting improved soil health, while improving resilience in agro-food value chains and supporting renewable energy use.
Environmental health & biodiversity	Environmental health, including water and land management, is restored and managed to support ecosystem services, ensuring lasting benefits across broad landscapes and people. Collaborative management planning and integrated policy implementation at landscape scales, with an on-going community of practice on water/food/climate security, and climate resilience in the region.

Impact on SDGs



Regions

East and Southern Africa (ESA)

Countries





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Innovations

Regional scaling hub, advancing diversified/de-risked climate-smart technologies and practices; inclusion; capacity strengthening; and policy implementation that will enhance adaptive scaling capacity in the ESA region on the science of scaling out (more people or areas); scaling up, (policies and institutions); and scaling deep (behavioral change).
Climate information and agro-advisory services linked to local technical advisory committees ( <a href="https://bit.ly/3g7nJNh">https://bit.ly/3g7nJNh</a> ), regional platforms, ( <a href="https://bit.ly/3mNURes">https://bit.ly/3mNURes</a> ), and digital delivery channels ( <a href="https://bit.ly/2PQhYJv">https://bit.ly/2PQhYJv</a> ), with parallel actions tailoring and targeting these strategies to women and youth, in ways that support de-risking agricultural production, value chain activities, and SMEs.
Agribusiness start-up incubators and accelerators providing business support and technical assistance to nascent, but highly innovative and impactful, agriSMEs, linking them to investors and sustainable finance sources (e.g. impact investors and sustainability funds), supporting their growth, and benefitting farmers, youth, and supply chains, while creating/expanding SMEs and jobs.
Climate-smart financial products for smallholder farmers (e.g. Village Savings and Loan Associations and/or self-managed women's groups) build financial literacy while providing members with secure financial mechanisms for savings, accessing loans, and obtaining emergency/weather/climate-risk based insurance, thereby enabling investments in farm diversification, climate-resilient agriculture, and local value-chains.
Regional/national/local policy monitoring with partners: a) on international and regional agreements; of policy results frameworks and ESG impact reporting; and b) Policy implementation through on-the-ground actions and incentives (e.g. exclosures, managed aquifer recharge (MAR), PES) for restoring and protecting natural resources.

Key Partners

Demand	Government	RECS and regional organizations: SADC/EAC/IGAD; Community Market For Conservation (COMACO); COMESA; River Basin Organiziations (RBOs); Transfrontier Conservation Areas (TFCA); national ministries of Agriculture, Environment, Climate, Water, Trade, Enterprise Development, Rural Development (Zambia/Kenya/Eswatini/Zimbabwe/Tanzania/Malawi)
	National NGO	Farmers, farmer unions, cooperatives especially for women and youth, NGOs, civil society
	Other Public Sector	Meteorological Departments/Agencies and National Disaster Management Centres e.g. NDMC Eswatini
	Private Sector	Finance institutions (MFIs, commercial banks e.g. ABSA, asset managers)
	Private Sector in Aid Recipient Country	Start-ups, SMEs, Business in the Food System
Innovation	Academic, Training and Research	International research (World Vegetable Center, CABI) and regional research centers, NARS in focus countries, national universities and research funding agencies (WRC) and centers (CST)
	Other Public Sector	Networks: CCARDESA/ASARECA; RUFORUM; Waternet; FANRPAN, GRP, GWP, Youth networks, women networks, Digital SME hubs eg Nourishing Africa
	Private Sector	Fund/Asset managers, impact investors
		Seed companies, machinery manufacturers and importers
	Public Private Partnership	Knowledge and Innovation Hubs and Initiatives: Digital SME hubs eg Nourishing Africa, Lusaka Hub, WE4F, ILSSI, GIZ Scaling Task Force, USAID-Resilient Waters Program
Scaling	Multilateral	RECS and regional organizations: SADC/EAC/IGAD; Community Market For Conservation (COMACO); COMESA; River Basin Organiziations (RBOs); Transfrontier Conservation Areas (TFCA)
	National NGO	NGO/NGO networks: Total LandCare, Solidaridad, WorldVision, Water for People, Catholic Relief Services, SNV, Aquaculture Zimbabwe; Community Development Trust Zimbabwe, CARE, AWARD
	Private Sector	Mobile companies, telecommunications, media
	Private Sector in Aid Recipient Country	SMEs and SME networks (Vitalite, GoodNatureAgro, VIA, FuturePump, Africa Agribusiness Academy)
	Public Private Partnership	Innovation hubs/labs: Digital SME hubs eg Nourishing Africa, Lusaka Hub, WE4F, ILSSI, GIZ Green Innovation Centre Zambia, NatuRES partnerships, African Fertilizer and Agribusiness Partnership (AFAP), SWPN

