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Ecosystem stewardship to balance sustainability and growth in Tanzania

SUSTAIN Eco Annual Report 2024

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This document was made possible through support provided by the Swedish International Development Cooperation Agency (Sida).

Published by: IUCN, Gland, Switzerland

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Citation: IUCN (2025) SUSTAIN Ecosystem stewardship to balance sustainability and growth in Tanzania: 2024 Annual Report. IUCN, Gland, Switzerland.

Editors: Ala al Dwairi, Maria Ana Borges

Cover photo: © SUSTAIN, Tete landscape

Layout by: Imre Sebestyén, jr. / Unit Graphics

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SUSTAIN Eco Annual Report 2024

May 2025

About the SUSTAIN Eco Partnership

SUSTAIN Eco is being implemented by a consortium of partners involving IUCN, the International Union for Conservation of Nature, African Wildlife Foundation (AWF), and the Netherlands Development Organisation (SNV). IUCN serves as consortium lead, implementing and executing project management tasks but also providing strategic guidance and technical assistance to the partners across both Kilombero and Sumbawanga landscapes. IUCN's expertise in ILM approaches and environmental sustainability adds value to the implementation process. AWF is active in the Kilombero landscape, focusing on integrating conservation enterprise solutions and enhancing community livelihood through sustainable Natural Resources Management (NRM). SNV is active in the Sumbawanga landscape, leveraging its longstanding presence to foster inclusive growth through sustainable agricultural practices and renewable energy solutions. Together, these organisations deliver the SUSTAIN Eco programme, aiming to ensure ecosystem stewardship and sustainable growth in the agricultural sector in Tanzania through collaborative and strategic landscape-level interventions.

IUCN is a membership Union composed of both government and civil society organisations. It harnesses the experience, resources and reach of its more than 1,400 Member organisations and the input of more than 17,000 experts. IUCN is the global authority on the status of the natural world and the measures needed to safeguard it. In Tanzania, IUCN brings over 20 years' experience, focusing on conservation, forest restoration, natural resource governance, and sustainable agriculture. Our work has been instrumental in integrating environmental and social sustainability into local policies, particularly through engagement with SAGCOT. IUCN's ability to convene diverse stakeholders and provide scientific insights and conservation tools makes IUCN a key player in landscape-level interventions.

AWF has been a pivotal conservation leader in Africa for over 60 years, emphasising practical solutions to natural resource management challenges. In Tanzania, AWF's presence since its inception in 1961 has focused on land management, poverty alleviation, and sustainable resource use. Their work in the Kilombero landscape involves implementing integrated landscape management programmes that promote conservation enterprises, enhancing both natural resource protection and community engagement.

SNV has operated in Tanzania for 50 years, aiming to achieve inclusive growth and sustainable development. Their approach in the Sumbawanga landscape combines local impact solutions with a focus on agriculture, energy, and climate resilience. SNV's established relationships with local and national authorities, as well as with private sector actors, enable them to deliver sustainable solutions across various sectors, enhancing local communities' livelihoods and environmental stewardship.

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Abbreviations

AMCOS	Agricultural Marketing Cooperative Society
AWF	African Wildlife Foundation
BMU	Beach Management Unit
BRiTEN	Building Rural Incomes Through Entrepreneurship
CBO	Community-Based Organisation
CBFM	Community-Based Forest Management
CBFMPs	Community-Based Forest Management Plans
CCRO	Certificate of Customary Right of Occupancy
CEOrt	CEO Roundtable of Tanzania
CSA	Climate-Smart Agriculture
DANIDA	Danish International Development Agency
FFS	Farmer Field School
FM	Forest Manager
FSA	Farm Sustainability Assessment
GCF	Green Climate Fund
IGG	Inclusive Green Growth
IKLMSP	Integrated Kilombero Landscape Multi-Stakeholder Partnership
ILM	Integrated Landscape Management
ILUMA WMA	ILUMA Wildlife Management Area
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resource Management
JNRMPs	Joint Natural Resource Management Plans
KSC	Kilombero Sugar Company
KNCC	Kilombero Network of Conservation Champions
KOCD	Kilombero Organization for Community Development
LGA	Local Government Authority
LHMI	Land Health Monitoring Index
LRBWB	Lake Rukwa Basin Water Board
MEL	Monitoring, Evaluation and Learning
MOA	Ministry of Agriculture
MSP	Multi-Stakeholder Partnership
MUST	Mbeya University of Science and Technology
MVIWATA	National Network of Farmers' Groups in Tanzania
NDC	Nationally Determined Contribution

NFC	New Forests Company
NMB	National Microfinance Bank of Tanzania
NbS	Nature-based Solutions
NORAD	Norwegian Agency for Development Cooperation
NRM	Natural Resource Management
NRMC	Natural Resource Management Committee
PES	Payment for Ecosystem Services
PO-RALG	President's Office - Regional Administration and Local Government
RA	Reforest Africa
RANGO	Rukwa Association of Non-Governmental Organizations
RBWB	Rufiji Basin Water Board
RREMP	Rukwa Region Environmental Master Plan
SAGCOT	Southern Agriculture Growth Corridor of Tanzania
SAT	Sustainable Agriculture Tanzania (field-training NGO)
SNV	Netherlands Development Organisation
SUSTAIN-Africa	Sustainability and Inclusion Strategy for Growth Corridors in Africa
SUSTAIN Eco	SUSTAIN Ecosystem stewardship to balance sustainability and growth in Tanzania
SUSTAIN Pro	SUSTAIN Productive Landscapes for Inclusive Growth in Tanzania and Mozambique
TANAPA	Tanzania National Parks
TANESCO	The Tanzania Electric Supply Company Limited
TAWA	Tanzania Wildlife Authority
TAWIRI	Tanzania Wildlife Research Institute
TARI	Tanzania Agricultural Research Institute
TFS	Tanzania Forest Services Agency
TIRDO	Tanzania Industrial Research and Development Organisation
VGS	Village Game Scouts
VLUM	Village Land Use Management
VLUP	Village Land Use Plan
VNRCs	Village Natural Resources Committees
VPO	Vice President's Office
WMA	Wildlife Management Area
WUA	Water Users Association
WWF	World Wide Fund for Nature



© Ala Al Dwairi, Waterfall, Kalambo, Sumbawanga landscape

About SUSTAIN Eco

sustain
Sustainability and Inclusion Strategy for Growth Corridors in Africa

SUSTAIN-Africa was an IUCN-led initiative implemented from 2014 to 2020 in SAGCOT and the Zambezi Valley in Mozambique. Conceived as a multi-year initiative, SUSTAIN-Africa focused on catalysing climate-resilient development that balances economic growth with ecosystem stewardship and social prosperity. The first phase established a solid foundation of partnerships among businesses, government agencies, local communities, farmer groups, and others in the landscape to deliver on this vision. Building on these networks and the achievements of the initial phase, IUCN initiated a second phase of SUSTAIN-Africa through two complementary programmes: SUSTAIN Eco and SUSTAIN Pro—both underpinned by equity and inclusion and both striving to accelerate a shift from business-as-usual to development paradigms that build resilience in economies, people, and nature. While SUSTAIN Eco emphasises the need to protect and restore ecosystems to secure the services needed for sustainable livelihoods, including agricultural production, SUSTAIN Pro focuses on making agriculture more sustainable.

sustain/eco

SUSTAIN Eco aims to enable healthy ecosystems and prosperous communities in Tanzania by improving governance and rights, strengthening sustainable management practices and catalysing investment in the protection and restoration of biodiversity and ecosystems. The programme has been designed as a 10-year initiative with an operational plan from 2022 to 2026. The delivery strategy encompasses: (i) strengthening coordination amongst governance structures for sustainable and inclusive management of natural resources; (ii) integrating landscape management to improve ecosystem health and generating inclusive business and livelihood opportunities and (iii) investing in the protection and restoration of ecosystems and their services to strengthen climate resilience for people and ecosystems. The programme is being implemented in two landscapes in Tanzania, Sumbawanga and Kilombero. Sumbawanga landscape covers Tanganyika District, Mpimbwe District, Sumbawanga District, Nkasi District, Mpanda district, and Kilombero landscape covers Kilosa District, Mlimba district, Ifakara and part of Kilolo district.

sustain/pro

SUSTAIN Pro a sister programme to SUSTAIN Eco, aims to support sustainable food systems and healthy productive landscapes in Mozambique and Tanzania. The programme has been designed as a 10-year initiative with an operational plan for the first four years from 2022 to 2025. The delivery strategy encompasses: (i) upscaling solutions for sustainable agricultural production; (ii) restoring land health through multi-stakeholder partnerships, and (iii) investing in sustainable and inclusive value chains to drive systemic change. The programme will be implemented in SAGCOT and the Beira Agricultural Growth Corridor in Mozambique.

Together, SUSTAIN Eco and Pro form the continuation of SUSTAIN-Africa, building on its successes and learning from the challenges that were encountered during the first five years of the programme. The geographical footprint and partnerships established in the first phase of SUSTAIN make up the lion's share of interventions in these two complementary programmes, ensuring continuity and aiming at long-term sustainability.



© SUSTAIN, farmer in a maize field, Sumbawanga landscape, Tanzania

Executive Summary

SUSTAIN Eco continued to scale ecosystem stewardship in Tanzania throughout 2024, deepening landscape-level engagement in Kilombero and Sumbawanga while aligning local action with national policy and investment priorities. By focusing on integrated landscape management, climate-smart agricultural (CSA) practices, and nature-based solutions (NbS), the programme supported over 4,700 community members, reinforced multi-stakeholder partnerships (MSPs), and catalysed investments in sustainable agriculture and restoration.

Under **Outcome 1**, the programme strengthened governance structures across both landscapes. In Sumbawanga, 18 of 20 villages integrated Natural Resource Management (NRM) into their governance frameworks, with 17 inclusive committees actively engaged in environmental law enforcement and community sensitisation. Issuance of 301 Certificates of Customary Rights of Occupancy (CCROs)—including to 134 women and 59 joint households—marked a major step forward in securing land tenure. In Kilombero, cross-district collaboration through the Integrated Kilombero Landscape Multi-Stakeholder Partnership (IKLMSP) and the Kilombero Network of Conservation Champions (KNCC) supported participatory planning and community-led conservation. National influence grew, with SUSTAIN Eco's multi-stakeholder partnership models now informing similar projects in Zanzibar.

For **Outcome 2**, integrated landscape management and climate-smart agriculture advanced across both landscapes. In Kilombero, over 2,400 farmers were supported through 45 trained extension officers, with 188 hectares under crop rotation and 38 hectares under demonstration plots. Agrochemical waste management scaled up through 17 collection centres and outreach to over 500 cane farmers. Sumbawanga focused on combining conservation with income generation: 49 Farmer Field School plots engaged 445 farmers, and 30,000 seedlings were planted through 15 nurseries and agroforestry demo sites. Restoration of riparian zones and watershed management were implemented alongside community training on environmental laws and village by-laws.

Under **Outcome 3**, ecosystem restoration and sustainable financing took centre stage. In Kilombero, over 300,000 seedlings were distributed and 20 km of riverbanks restored. Terracing and agroforestry supported erosion control and agroecological transitions, while cocoa-based value chains expanded, reaching nearly 6,000 farmers and attracting significant market interest. The validated NbS Strategy and Payment for Ecosystem Services (PES) model in Vidunda laid a strategic foundation for incentive-based conservation. In Sumbawanga, restoration of Lake Kwela and pilot agroforestry efforts, including beekeeping, highlighted the power of nature-based, community-led action. Data collection and land health monitoring were expanded across both landscapes, supporting national systems through the Land Health Monitoring Index (LHMI).

Throughout 2024, SUSTAIN Eco emerged as a connector—linking grassroots action with science, policy, and finance. Collaborations with SUSTAIN Pro and national stakeholders have set the stage for scaling success. As the programme enters the final 18 months of the current phase, efforts will focus on capturing and communicating results, validating business cases, and operationalising sustainable financing pathways to ensure long-term impact.

Lessons learned in 2024

Lesson 1. Early support for Multi-Stakeholder Partnerships (MSPs) drives Integrated Landscape Management (ILM) implementation: MSPs in Kilombero and Sumbawanga proved vital for inclusive governance, leading to outcomes like the Kilombero NbS Strategy and the Lake Kwela restoration initiative. For long-term sustainability, MSPs must now be formalised within district structures and strengthened as vehicles for policy influence.

Lesson 2. Securing land tenure supports gender equality and farmer's autonomy: Successes such as the issuance of 301 CCROs in Sumbawanga and engagement through locally-based institutions with experience and expertise on land tenure security highlight that combining technical support with cultural literacy and legal awareness is essential to shifting land ownership norms and securing rights, especially for women.



Lesson 3. Building adaptive water governance is essential to manage climate and drought risks: Erratic rainfall and drought affected agriculture and restoration timelines, underscoring the need for adaptive water management. Community-led tools like TARISSfupi and MiniSASS were effective in building local capacity, but national integration of these systems is key for long-term resilience.



Lesson 4. Restoration success hinges on multi-Level buy-in: Community engagement drove restoration success in areas like Lake Kwela, but sustaining impact will require alignment with district and national plans, formal documentation, and budget integration. Cross-sector collaboration remains crucial for maintaining ecological gains.

Lesson 5. Demonstration fields accelerate adoption of sustainable agricultural practices: In Kilombero, 63 % of the 1,472 farmers trained since 2023 are already practicing agroforestry—proof that early training, strong demo plots and follow-up drive uptake. Replicating this formula will be key to scaling adoption across the landscapes.

Lesson 6. Diversified value chains are key to access markets and finance solutions: While value chains such as cocoa, honey, and rice offer promise, market access and finance remain bottlenecks. Business case development and linkages to buyers and financiers are critical next steps for converting conservation-linked livelihoods into resilient enterprises.

Lesson 7. Capacity building requires repetition and local anchoring: One-off training is insufficient. Sustained mentoring, trust-building, and handover strategies are essential. Local institutions must be supported to lead, while self-assessment tools and consistent coaching can embed change.

Lesson 8. Integrating programmes and sharpening knowledge-management & communication are key for long-term impact: SUSTAIN Eco has produced valuable knowledge products—from the Kilombero NbS Strategy to farmer radio episodes—but internal learning systems remain ad hoc. Better integration of MEL, documentation, and cross-landscape exchange will amplify impact and support replication.

2024 Progress Highlights

SUSTAIN Eco: Scaling inclusive ecosystem stewardship in Tanzania

(1) Strengthening local governance and landscape resilience in Sumbawanga

In 2024, SUSTAIN Eco advanced its work in Sumbawanga by strengthening the foundations for inclusive and sustainable natural resource governance. The programme supported 18 out of 20 target villages to integrate natural resource management (NRM) into their governance structures, ensuring that local priorities align with both district-level mandates and national conservation goals. This integration not only improved coordination but also helped reduce conflicts over land and water use, particularly at the village and ward levels.

Inclusivity remained a key driver of the programme's approach: in 17 of the 20 Natural Resource Management Committees (NRMCs), women, youth, and representatives of vulnerable groups were actively engaged in programme activities. Striving for more diverse composition has led to enhanced legitimacy and responsiveness of these governance bodies, in turn strengthening bylaw enforcement and stepping up reporting to village authorities.

To build the capacity of these committees and their communities, the programme delivered a wide range of training sessions. Topics included agroforestry, beekeeping, climate-smart agriculture, and water governance, reaching over 2,200 community members. In parallel, vertical and horizontal dialogues at village, ward, and district levels created partnerships for knowledge exchange and strengthened inter-village collaboration. These dialogues also enhanced integration from local to district levels, improving coherence and coordination in the governance of natural resources.



> "Bringing communities, government, and conservation partners together has changed how we manage natural resources in Rukwa and Katavi. By linking livelihoods with conservation, we're ensuring that people don't just protect their environment, but they benefit from it, creating lasting impact for both nature and communities." – *Richard Bruno, Sumbwanga landscape manager, SNV*

On the ground, efforts to scale conservation and restoration actions gained momentum. With support from Water User Associations (WUAs) and the Lake Rukwa Basin Water Board, sub-catchment management plans were developed for the Msaginya and Mpanda rivers. Community-led actions included the installation of 450 beacons to demarcate protected areas, safeguarding over 440 hectares from encroachment, while an

additional 300 beacons were procured to expand this protection. Water quality monitoring was enhanced through the deployment of turbidity devices and locally adapted tools like TARISSfupi (MiniSASS), supporting more data-driven water governance.

The promotion of sustainable agriculture also progressed with 15 nurseries and demo farms producing 30,000 seedlings over 90 hectares, and 49 Farmer Field School (FFS) demonstration plots engaging 445 farmers in climate-smart agriculture (CSA) such as using drought-resistant crops, conservation tillage and soil fertility management. Special attention was given to empowering women during the agroforestry training by including crops such as vegetables and beans.

The outcome: 16% of the 588 trained farmers in agroforestry (234 women, 354 men) have successfully adopted and are implementing agroforestry production systems in their farms.

The issuance of 301 Certificates of Customary Rights of Occupancy (CCROs) in Kachele and Kafukoka villages helped secure land tenure for women and youth, reinforcing equitable access to land as a pillar of climate resilience.

Sumbawanga in numbers

Land placed under sustainable management through CBNRM initiatives	**24,521 ha**
Villages with integrated NRM	**18**
CCROs issued	**301 (130W, 94M, 59 Joint, 14 Institution)**
Community members trained on biodiversity protection, ecosystem restoration, water governance, and CSA	**2,286 (886W, 1,400M)**
Vertical and horizontal dialogues conducted to improve multi-level coordination	**8 dialogues (141W, 206M)**
Demarcated areas for protection	**440 ha using 450 beacons**
Nurseries and demonstration farms established	**15 sites, 30,000 seedlings covering 90 ha**
FFS demo plots on CSA established	**49 plots engaging 445 farmers (175W, 270M)**
NRM Partnerships strengthened	**2**

Sumbawanga Landscape Summary

The Sumbawanga landscape, spanning the area between Lakes Rukwa and Tanganyika, is a biodiverse region with an important network of protected areas and wildlife corridors. Its ecological integrity supports the livelihoods of local communities through agriculture, fishing, and tourism. Despite its low population density, recent infrastructure improvements have increased access, leading to pressures on natural resources and potential conflicts over land use. Ongoing initiatives aim to enhance natural resource management and promote systemic change trajectories as well as building trust and understanding among natural resource users and the public sector responsible for resource management (e.g., deliver scalable impacts on social inclusion and green investment in various value chains, including rice, maize, sunflower, and other commodities) in Rukwa and Katavi regions.





© SUSTAIN, fisherman in Lake Kwela, Sumbawanga landscape



> "In Katavi, we're empowering local institutions and communities to conserve natural resources, improve water management, and build sustainable livelihoods. This balance between conservation and economic growth is key to ensuring long-term benefits for both people and nature." *- Josephine Rupia, Katavi Regional Wildlife Officer.*

(2) Community-led conservation and climate resilience in Kilombero

In 2024, SUSTAIN Eco remained focused on integrated conservation, community engagement, and sustainable development. A central achievement was the finalisation and validation of the Kilombero Integrated NbS Strategy, developed through a multi-stakeholder and cross-sectoral process involving 40 participants across agriculture, forestry, water, livestock, and conservation sectors. The strategy now serves as a shared roadmap for guiding investment, conservation, and development efforts across the landscape.

At the same time, inclusive governance was strengthened across Kilosa, Kilombero, and Ulanga districts: 99 stakeholders - including government officials, were trained on governance, natural resource management, conflict resolution, and advocacy. These trainings not only improved inter-district collaboration and budget coordination but also clarified responsibilities at the village and ward levels. As part of SUSTAIN Eco's drive to elevate local leadership, the Kilombero Network of Conservation Champions (KNCC) was formalised in 2024 as a 40-member dialogue forum with its own action plan and a steering committee drawn from the regional secretariat, parastatals, LGAs, CSOs, private sector and CBOs; members have already been trained in integrated resource governance and resource-mobilisation skills. Four KNCC CBOs then won competitive seed grants of USD 9,000 each (USD 36,000 total) for roll-out in early 2025: Association Mazingira will guide cocoa farmers in climate-smart production, KOCD will restore the Ikwambi River, Mazingira ni Uhai Foundation will expand community beekeeping in Vidunda, and ILUMA WMA will promote eco-tourism and awareness through its "Itunze ILUMA Ikutunze" charity marathon.

Sustainable water management remained a priority, with continued support to the Vidunda Water User Association (WUA), which was formally registered and received training in conservation law enforcement. Three other WUAs were strengthened and jointly conducted 60 patrol days along the Mngeta, Ruipa, and Vidunda sub-catchments to protect river buffer zones. Dialogue sessions on Integrated Water Resources Management (IWRM) also engaged 194 participants (63 Women, 131 Men) to identify local challenges and shape collective water governance solutions.



> "Sustainable agroforestry is about securing livelihoods and restoring the ecosystem services we depend on. In Vidunda, grafted avocados and other agroforestry practices are designed to increase household incomes and build climate resilience."– *Clarence Msafiri, Kilombero Landscape Manager, AWF*

In support of sustainable agriculture, the programme enhanced extension services delivered to 2,444 farmers (880 Women, 1,564 Men) through 45 field extension officers. Interventions included crop rotation on 188 hectares, 38 demonstration plots for climate-smart agriculture, and targeted soil and water conservation practices. A major push on agrochemical waste management

saw the construction of 17 collection centres, paired with training for 526 cane farmers (169 Women, 357 Men) to promote proper disposal and reduce environmental risks. Initial steps were taken to engage agrochemical companies and local stakeholders in building a recycling value chain, with active discussions underway to formalise partnerships for plastic collection and reuse.

The conservation and restoration agenda also advanced. A total of 304,948 tree and crop seedlings were distributed, including cocoa and avocado. Restoration activities covered 20 km of river stretches, and communities were supported to graft 19,200 avocado seedlings as part of sustainable livelihood strategies. The cocoa research site at TARI Ifakara continued to serve as a hub for farmer engagement and innovation, facilitating knowledge exchange between 32 cocoa farmers and providing training on organic production techniques.

Village governance structures were also strengthened. A total of 212 village leaders and 48 field-level officers (91 Women, 169 Men)—across ILUMA WMA and adjacent communities—received training on leadership, finance, governance, and conflict resolution. Notably, several CBO and WUA members who participated in these trainings later stood for local elections, with two being elected as village chairpersons, reflecting a growing integration of conservation leadership within formal governance.

Kilombero in numbers

Landscape NbS Strategy developed	**1**
Village leaders and officers trained on NRM	**260 (91W, 169M)**
Tree and crop seedlings distributed (incl. avocado, cocoa)	**304,948**
River stretches restored	**20 km**
Hectares under crop rotation	**188 ha**
Demonstration plots for CSA and soil/ water conservation	**38 ha**
Cocoa farmers linked to TARI	**32 (9W, 23M)**
Agrochemical waste collection centres constructed and trained farmers	**17** **526 (169W, 357M)**
Strengthened WUAs and environmental law enforcement training	**3 WUAs strengthened;** **88 trained (23W, 65M)**
Community-based organisations awarded grants	**4 (USD 36,000 total)**

Kilombero Landscape Summary

The Kilombero Valley, enclosed by major conservation areas including the Selous Game Reserve and Udzungwa Mountains, is a fertile region known for its agricultural productivity and biodiversity. The landscape supports a range of ecosystems and wildlife, including a significant portion of the world's Puku antelope population. The Kilombero Valley Floodplain is one of the largest wetlands in Africa and a designated Ramsar Site due to its importance as a freshwater ecosystem. However, Kilombero faces challenges from agricultural expansion and land use changes, leading to habitat degradation and water management issues. Efforts are underway to implement climate-smart agricultural practices (mainly in the Morogoro Region, encompassing the district of Kilosa, the District Council of Mlimba, and Ifakara Town Council), and improve governance and resource management to enhance local and downstream ecosystem health.





© SUSTAIN, Tete landscape

(3) Bridging landscapes and scaling impact

Throughout 2024, SUSTAIN Eco extended its role as a connector—linking action at landscape level to policy dialogues and national priorities. The programme supported the establishment and strengthening of Multi-Stakeholder Partnerships (MSPs) in both Kilombero and Sumbawanga, revitalising coordination among local governments, natural resource users, and conservation authorities. These partnerships serve as anchors for inclusive dialogue and are now actively shaping shared responses to land degradation, biodiversity loss, and climate pressures across the programme landscapes.

In Sumbawanga, a landscape-level MSP was formally established following a workshop in early 2024, bringing together a wide spectrum of stakeholders including district councils, water user associations, civil society, and protected area authorities. The partnership not only provided space to align on natural resource governance challenges but also selected an interim committee—comprising 16 members (37.5% women)—tasked with steering coordination and collaboration moving forward.



> "Multi-Stakeholder Partnerships are not just coordination spaces—they are incubators for locally-led solutions. By anchoring Nature-based Solutions within these partnerships, we ensure restoration efforts are inclusive, grounded in community needs, and aligned with national goals." – *Ala Al Dwairi, Natural Infrastructure Officer, IUCN*

In Kilombero, efforts focused on strengthening the pre-existing Integrated Kilombero Landscape Multi-Stakeholder Partnership (IKLMSP) established during SUSTAIN-Africa phase 1, which was reinvigorated through joint facilitation with partners. A major outcome of this renewed engagement was the establishment of the Kilombero Network of Conservation Champions—a collective of community-based actors committed to deploying Nature-based Solutions (NbS) such as agroforestry, riverbank restoration, and community-led conservation agriculture.

Collaboration with SUSTAIN Pro

To build on this momentum and underpin restoration efforts with science-based tools, a baseline assessment of land health indicators was conducted across Kilombero as a joint deliverable with SUSTAIN Pro. This informed the development of the SUSTAIN-Africa Land Health Monitoring Index (LHMI)—built around 19 indicators spanning soil, water, and resilience. Piloted in both Ihemi and Kilombero landscapes, the LHMI attracted strong interest from government stakeholders and culminated in the signing of a National Soil Health Compact by over 60 representatives from public institutions, civil society, and the private sector. The tool is now being rolled out in Sumbawanga, where it will guide landscape-level planning and support integration of land health data into national monitoring and enforcement systems.

Alongside this work, efforts continued to scale nature-based solutions across programme landscapes. A standout collaboration emerged with Kilombero Sugar Company (KSC) and Newcastle University, where two one-hectare experimental riparian plots were established to test natural regeneration versus targeted planting of native species. These

plots aim to balance ecological restoration with sugarcane productivity and will inform a forthcoming technical guideline on riverine restoration best practices to guide implementation across the Southern Agricultural Growth Corridor of Tanzania (SAGCOT).

In parallel, SUSTAIN Eco completed a joint assessment that mapped blended finance, PES and carbon credit pathways for climate smart agriculture and NbS in Kilombero and Sumbawanga. The work produced a pipeline of investable business cases—covering both staple (rice, maize) and emerging (agroforestry, honey) value chains—which will be validated with financiers and rolled into grant and derisking schemes during 2025.

Collaboration with SUSTAIN Pro

Looking ahead, SUSTAIN Eco is also helping to align conservation with climate finance. In collaboration with the CEO Roundtable of Tanzania and SUSTAIN Pro, SUSTAIN Eco contributed to the design of the Green Finance Campaign—an initiative that will officially launch in 2025. The campaign aims to engage private sector actors in Tanzania's low-carbon transition through a suite of practical Green Finance guides, investor outreach, and business model support. These tools are expected to help unlock sustainable financing for climate-smart agriculture, nature-based solutions, and integrated landscape management—ensuring that ecosystem and community resilience can be scaled well beyond the life of the programme.


© IUCN, Magoe National Park

Setting the scene: Progress in year 1 (2023)

Before diving into the achievements of 2024, this section summarises the progress made during the first year of SUSTAIN Eco implementation. The first year was pivotal in establishing a strong foundation for the programme's long-term success. Beginning with the Inception Phase (January–July 2023) and progressing into the commencement of activity implementation (August–December 2023), efforts focused on establishing the programme's operational framework, advancing multi-stakeholder engagement, and initiating field-level interventions across the Kilombero and Sumbawanga landscapes.



© SUSTAIN, lead farmer during a meeting

Inception phase

The inception phase focused on mobilising landscape and corridor stakeholders, finalising operational plans, establishing programme governance, and developing the Monitoring, Evaluation, and Learning (MEL) plan. This period also emphasised building capacity on environmental and social management safeguards among partners. Two major events — the inception workshop and project launch in Mbeya — engaged national and regional stakeholders, generating momentum and aligning programme priorities. At the landscape level, technical inception meetings were held in Sumbawanga and Kilombero to map key actors, generate project awareness, and secure political and institutional buy-in. During this phase, the selection of landscapes was completed, confirming the focus on the Kilombero and Sumbawanga clusters within SAGCOT. These landscapes are critical zones for balancing development needs with biodiversity conservation, particularly in the face of climate change and land use pressures. For more details, see the inception phase report and refer to Table 1 in that report for the final list of selected wards.

Implementation phase

Building on the momentum of the inception phase, SUSTAIN Eco transitioned to implementation during the second half of 2023, with activities anchored in ecosystem restoration, sustainable land management, and community empowerment.

In **Sumbawanga**, the programme expanded its knowledge base through baseline surveys and spring assessments, enriching hydrology, biodiversity, and land use data. These insights shaped the development of annual work plans for three sub-catchments — Katuma, Msaginya, and Mpanda — and informed

prioritisation efforts. Key on-the-ground achievements included the establishment of 12 Village Natural Resource Committees (VNRCs) across 20 villages, the training of 203 committee and village leaders on environmental bylaws and natural resource management, and the revitalisation and re-registration of the Msaginya Water User Association (WUA) after six years of inactivity. These milestones reinforced local ownership over natural resources and strengthened governance mechanisms in the Lake Rukwa basin.

In **Kilombero**, SUSTAIN Eco focused on securing land for sustainable management through the development of three new Village Land Use Plans (VLUPs), covering a total of 19,831 hectares. Sustainable water governance was promoted through the establishment of a WUA in the Vidunda sub-catchment, connecting 15 villages across four wards. Conservation and ecological resilience were further strengthened through the establishment of 31 native species nurseries supporting natural and agroforestry restoration. In parallel, SUSTAIN Eco supported agricultural sustainability by partnering with the Tanzania Agricultural Research Institute (TARI) to establish a cocoa research farm, connecting over 200 cocoa farmers to improved practices and technologies.

Throughout 2023, the programme maintained strategic engagement with key partners and institutions, including Local Government Authorities, the Ministry of Agriculture, the Ministry of Water, SAGCOT, and the CEO Roundtable of Tanzania (CEOrt). A strong focus was placed on promoting Nature-based Solutions (NbS), with awareness sessions already rolled out in Sumbawanga to introduce stakeholders to NbS principles and catalyse initial ideas for local initiatives.

As SUSTAIN Eco moved to its second year, the strong foundation established in 2023 provided the programme with the necessary momentum to scale up restoration efforts, build inclusive value chains, and embed integrated landscape management principles across the Kilombero and Sumbawanga landscapes. For more details, see the 2023 SUSTAIN Eco Annual Report.



© SUSTAIN, fruit in Tete landscape



© SUSTAIN, Lake Kwela, Sumbawanga landscape

Progress against outcomes and outputs

Outcome 1 – Coordination strengthened amongst governance structures for sustainable and inclusive management of natural resources

Outcome 1 summary: This outcome focuses on strengthening the integration between governance structures and institutions responsible for natural resource planning and management. It also continues to engage with local governance processes, such as WUAs and VLUCs. By delivering this outcome, SUSTAIN Eco will invest in MSPs to facilitate dialogue and collaboration among different stakeholders and across sectors. One key goal of Outcome 1 is to strengthen the connection between dialogue and action, ensuring that discussions lead to concrete steps and solutions. Moreover, the goal is to create partnerships that are inclusive, ensuring that all relevant parties have a voice in decision-making processes. To ensure the sustainability of actions taken, Outcome 1 emphasises ongoing engagement with and influence over relevant governance structures at different levels to embed learning and sustainable practices into these institutions and networks for long-term change.

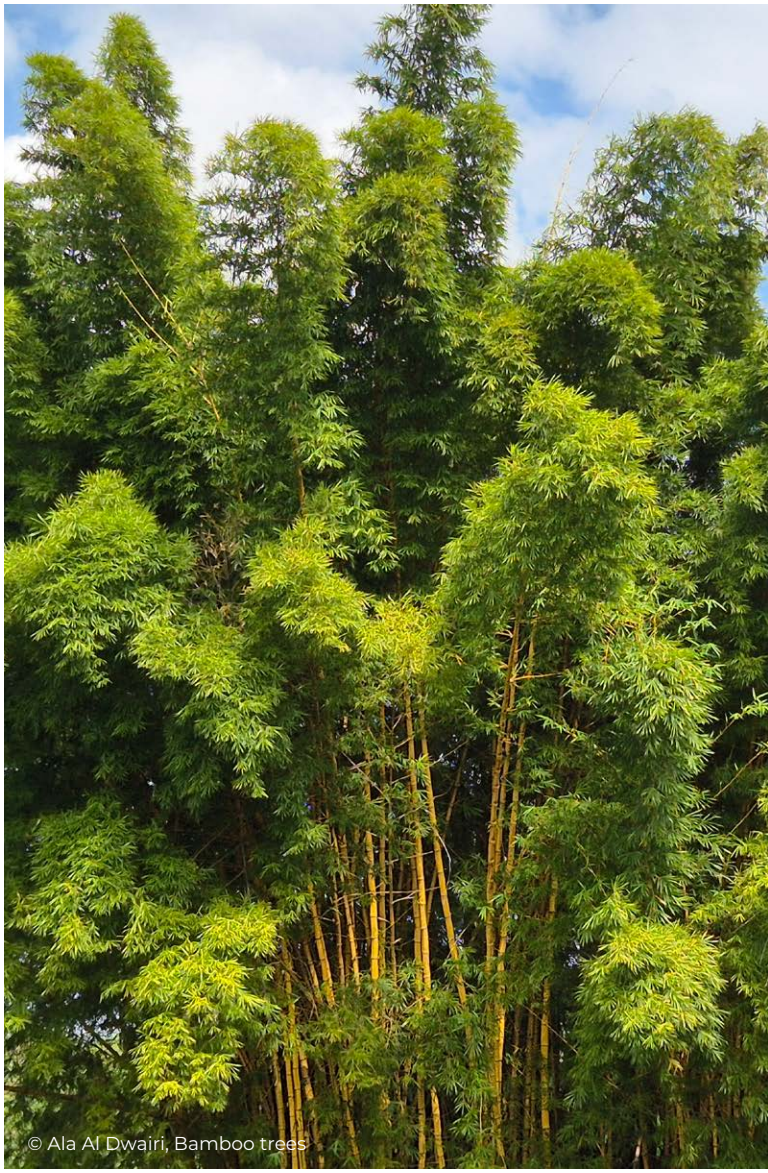
Output		Summary Deliverables
1.1	Integration fostered between local governance structures for natural resources (water, land, forests)	• 18 out of 20 villages in Sumbawanga successfully implemented integrated NRM aligned with local and district governance priorities. • Six JNRMPs and CBFMPs were developed and operationalised, alongside the establishment of a Beach Management Unit (BMU) at Lake Kwela. • The IKLMSP established during SUSTAIN-Africa phase 1, was reinvigorated through joint facilitation with partners to align local conservation efforts with national policies.
1.2	Equitable and balanced participation and leadership by women and men in public and private natural resource governing bodies	• In Sumbawanga, a total of 132 champions, including women, men, youth, and vulnerable groups (82 women, 50 men), were trained in NRM, leadership, and advocacy, empowering them to take up decision-making roles within WUAs, VNRCs, and other governance structures. • 301 CCROs were issued to 94 men, 134 women, 59 joint man-woman ownerships, and 14 institutions, addressing historical land tenure inequalities and promoting equitable land ownership, particularly for women and marginalised groups. • In Kilombero, capacity-building sessions on gender and youth inclusion were delivered to 158 stakeholders (109 men, 49 women), focusing on enhancing the roles of youth, women, and marginalised groups in decision-making processes related to land, water, and business management.

1.3	Coordination across multiple levels of governance ensures coherent natural resource planning and management as well as equitable sharing of benefits	• In Sumbawanga, SUSTAIN Eco supported the development of the Rukwa Region Environmental Master Plan (RREMP), aligning local efforts with national goals for land restoration, sustainable land, forest, and water management. • 16 MiniSASS tools were procured to be distributed to WUAs, schools, and LRBWB. This initiative empowers communities to participate in water quality assessments, helping to monitor and protect vital water resources in the region. • The Kilombero Network of Conservation Champions (KNCC) was established, with 44 participants.

In Sumbawanga landscape, the programme has made progress in integrating natural resource governance into both local and district-level frameworks through targeted interventions and capacity-building efforts. A key achievement is the integration of natural resource management (NRM) approaches within 18 out of 20 village governance structures (e.g., VLUPs and NRMCs), facilitating better coordination between local institutions and district authorities and ensuring that conservation and sustainable resource use are embedded within local development plans (e.g., JNRMPs, CBFMPs and BMU).

Central to this work is the empowerment of local communities, particularly women, youth, and vulnerable groups, enabling them to take active roles in decision-making processes. Through rolling out inclusive participation processes, SUSTAIN Eco has enhanced community ownership of governance structures. This is reflected in the fact that 17 out of 20 Natural Resource Management Committees (NRMCs) now include diverse representation, with women, youth, and vulnerable groups assuming leadership positions. These committees have been further strengthened through capacity-building initiatives, allowing them to effectively enforce NRM regulations, improve transparency, and make resource management decisions that are both inclusive and impactful.

Additionally, SUSTAIN Eco has operationalised several governance frameworks, including Joint Natural Resource Management Plans (JNRMPs) and Community-Based Forest Management Plans (CBFMPs), ensuring that community priorities are aligned with national conservation policies. The establishment of a Beach Management Unit (BMU) at Lake Kwela represents a critical step towards fostering sustainable fisheries management. The programme has also contributed to advancing the implementation of the Rukwa Region Environmental Master Plan (RREMP), which serves as a blueprint for environmental restoration, ensuring that local efforts contribute to national land restoration goals *(see **Box 1** for more details)*.



© Ala Al Dwairi, Bamboo trees

Box 1: Collaborative efforts to address water stress and empower communities in the Lake Rukwa Basin

Water stress remains a critical challenge in the Lake Rukwa Basin, where increasing demand for irrigation, inefficient water use practices, and weak enforcement of water regulations have intensified pressure on already fragile ecosystems. Seasonal shortages are exacerbated by unregulated abstractions and land use practices near riparian zones, threatening the long-term sustainability of the basin's water resources and the resilience of communities who depend on them. In response, SUSTAIN Eco, in collaboration with the Lake Rukwa Basin Water Board (LRBWB), has begun to address these water management challenges and build sustainable solutions for local communities and stakeholders.

One of the key interventions was the development of Sub-Catchment Management Plans (SCMPs) for the Msaginya and Mpanda rivers. These plans, developed in partnership with LRBWB and Mbeya University of Science and Technology (MUST) and based on scientific data and stakeholder input, ensure that local interventions align with the national objectives outlined in the Integrated Water Resources Management and Development Plan (IWRMDP) 2015-2035.

The SCMPs highlight the importance of improving institutional capacity, conducting water availability assessments, and implementing sustainable resource management practices. By integrating hydrological, meteorological, and socio-economic factors, the plans provide tailored solutions to the water challenges faced by these communities. They aim to improve water allocation and efficiency by 25%, restore 60% of degraded areas by 2035, and reduce river pollution by 40%. Key strategies introduced through the SCMPs include promoting regulated water abstraction, encouraging efficient irrigation practices, and formalising water use rights through Water User Associations (WUAs). These measures not only aim to protect the integrity of water sources but also empower local communities to take ownership of their water resources.

In addition to the SCMPs, SUSTAIN Eco has provided turbidity monitoring devices to LRBWB and WUAs in the Msaginya, Mpanda, and Katuma catchments. The procurement of 16 sets of MiniSASS (TARISSfupi) citizen science tools marks a significant milestone in strengthening local capacity for water quality monitoring. These tools, distributed to WUAs, primary schools, and LRBWB, allow communities, students, and local institutions to actively engage in water quality assessments. By integrating citizen science into local schools, this initiative nurtures a new generation of environmental stewards who are equipped to monitor and protect their vital water sources.



WUA members taking water sample from a river in the Sumbawanga landscape



VNRC & VLUM members participating in awareness creations session on integrated NRM, Sumbawanga landscape

Furthermore, SUSTAIN Eco has empowered 132 champions (82 women and 50 men) in the Sumbawanga landscape to advocate for inclusive NRM, with a particular focus on land tenure. The initiative has issued 301 Certificates of Customary Rights of Occupancy (CCROs) to men and women, promoting equitable land ownership and fostering greater community engagement in land management practices *(see **Box 2** for more details)*.

Box 2: Promoting land tenure security and empowering communities through CCROs

SUSTAIN Eco's work on land tenure in Sumbawanga has been pivotal in addressing historical land ownership inequalities. Through the issuance of 301 Certificates of Customary Rights of Occupancy (CCROs), the project has provided legal recognition of land rights to 94 men, 134 women, and 59 joint man-woman ownerships, ensuring equitable land ownership and enabling access to formal land management tools.

This initiative is particularly significant for women and vulnerable groups, who have historically been excluded from land ownership due to cultural norms and legal barriers. Through targeted awareness-raising efforts and capacity-building sessions, SUSTAIN Eco has encouraged women to claim their land rights, empowering them to become active participants in land governance.

Challenges remain in securing land rights for women, particularly in regions where traditional norms have long excluded them from land ownership. Despite these challenges, the success of the CCRO programme has been transformative, shifting perceptions of land ownership and encouraging a more inclusive and sustainable approach to resource management.



© SUSTAIN, farmer with her newly issued CCRO, Sumbawanga landscape, Tanzania

Watch: SUSTAIN Eco - Land tenure security for women and youth in Kalambo district.

> *"Through these dialogues, we have gained a better understanding of how to manage our natural resources responsibly. Working together with neighbouring villages has not only strengthened our governance structures but also empowered us to make informed decisions that benefit both our environment and our communities." - Hassan Ahmed, a VNRC member from Kafukoka Village, Sumbawanga landscape.*

In addition, SUSTAIN Eco has catalysed cross-sector collaboration and community empowerment through a series of structured dialogue sessions and landscape exchange workshops. These engagements, which involved 347 participants across both horizontal (63 women, 96 men) and vertical (78 women, 110 men) dialogues, created space for local communities, Village Natural Resource Committees (VNRCs), and Local Government Authorities (LGAs) to reflect on shared challenges, exchange best practices, and co-develop strategies for effective ecosystem restoration.

Complementing these community-level exchanges, multi-stakeholder dialogues at the regional level have further strengthened institutional engagement. Sixty stakeholders (24 women, 36 men) from government bodies, NGOs, CBOs, the private sector, and community organisations participated in discussions structured around the IUCN's Natural Resource Governance Framework (see **Figure 1**). These principles guided the establishment of Multi-Stakeholder Partnerships (MSPs) for natural resource management, and a task force of 16 members was formed to oversee the implementation of priority actions under each pillar. These MSPs provide a critical mechanism for aligning efforts across levels of governance, promoting transparency, and ensuring that decision-making processes remain inclusive, evidence-based, and responsive to the evolving needs of communities and ecosystems.



Figure 1: Ten pillars of IUCN's Natural Resource Governance Framework.

In Kilombero landscape, SUSTAIN Eco made progress in strengthening coordination and capacity across governance structures for sustainable and inclusive management of natural resources. A key focus in 2024 was reinforcing existing platforms and partnerships while building the leadership capacity of institutions and individuals at all levels. Through a collaborative training programme with the College of African Wildlife Management–Mweka, the National Land Use Planning Commission, and the Ministry of Natural Resources and Tourism, a total of 66 local stakeholders (48 men, 18 women) were trained on natural resource management systems and collaborative techniques for ecological connectivity and decision-making. These efforts helped improve cooperation among local authorities, water and forestry agencies, conservation institutions, and Wildlife Management Areas (WMAs) across Kilosa, Kilombero, and Ulanga districts.

To promote inclusive dialogue and joint planning, SUSTAIN Eco partners reinvigorated the Integrated Kilombero Landscape Multi-Stakeholder Partnership (IKLMSP) - which was established during the first phase of SUSTAIN-Africa. The 2024 dialogue brought together 58 participants (48 men, 10 women) from diverse institutions and resulted in a joint vision for the Kilombero landscape and a set of priority actions to improve land use planning, water governance, and law enforcement.

Spotlight: Kilombero partnership inspires replication in Zanzibar

The experience of the Integrated Kilombero Landscape Multi-Stakeholder Partnership (IKLMSP) has led to the launch of a similar partnership in Zanzibar. As reported by *Zanzibar Leo*, the Ministry of Agriculture, Irrigation, Natural Resources and Livestock of Zanzibar, in collaboration with SAGCOT and Kilombero District Council, officially launched a multi-stakeholder partnership in North Unguja to support sustainable conservation and land management under the Global Environment Facility (GEF)-funded FOLUR project.

During the launch, SAGCOT representatives noted that Zanzibar had *"invited their counterparts from the Kilombero Multi-Stakeholder partnership"* to share their experience. Since 2017, the Kilombero MSP has facilitated coordination among public institutions, private sector actors, and civil society—promoting integrated landscape management, restoring degraded ecosystems, and delivering long-term benefits to people and nature.

Maua Mzimba, Permanent Secretary for Rural Development and Urban Services, highlighted the Kilombero MSP's key success in *"integrating natural resources into broader efforts aimed at creating healthy landscapes that deliver long-term ecosystem services."* he also credited the partnership with improving coordination across sectors and avoiding duplication of efforts.

This learning exchange and replication reinforces the role of SUSTAIN Eco in generating scalable models of landscape governance and influencing national policy through practical, field-based experience.



© SUSTAIN, farmers walking next to a rice paddy, Kilombero landscape

In parallel, a new Kilombero Network of Conservation Champions (KNCC) was established, engaging 44 participants and bringing together 40 institutions from across the landscape. The network serves as an engine for local innovation and knowledge exchange. Four member CBOs were competitively selected to receive seed grants totalling USD 36,000 to implement community-based initiatives focusing on ecotourism, agroecology, river restoration, and sustainable livelihoods *(see **Box 7** for more details)*.

> "What inspired me to become a leader was the goal to conserve and protect water sources. One achievement has been raising awareness in the community—many now understand the importance of not washing clothes or bathing directly in water sources." - *Yohana Kibasa, a young member of the Vidunda WUA*

SUSTAIN Eco also contributed to enhancing inclusive participation in natural resource governance through targeted efforts to empower women, youth, and elderly leaders.

Gender and youth capacity building was carried out across the landscape engaging 158 individuals from WUAs, VNRCs, and village leaders. This has led to improved representation of marginalised groups in decision-making roles, with new voices driving conservation priorities in areas such as water source protection and community sensitisation.

Efforts also continued to strengthen institutional capacity and multi-level coordination. Thirty-three officials (22 men, 11 women) from Kilombero and Kilosa districts were trained in lobbying, planning, and advocacy for natural resource management, supporting better budget allocation and coordination between district councils, parastatal agencies, and local actors. Informed by structured dialogues, landscape-level priorities are now being linked to national commitments under frameworks such as the Bonn Challenge, the AFR100 initiative, and the Kunming-Montreal Global Biodiversity Framework.

SUSTAIN Eco's facilitation of multi-stakeholder dialogues in Kilombero not only supports local coordination but also ensures that grassroots initiatives contribute to national and global environmental agendas.

This includes contributing to Tanzania's commitment to restore 5.2 million hectares of degraded land by 2030 under the Bonn Challenge and AFR100 initiative, advancing progress under Target 3 of the Kunming-Montreal Global Biodiversity Framework (to conserve 30% of land and sea by 2030), and supporting climate resilience and land degradation targets under the country's Nationally Determined Contributions (NDCs). By embedding landscape voices in policy processes, SUSTAIN Eco is helping ensure that conservation is not only locally grounded but nationally supported.

> "At the beginning, I had doubts, but I learned that true commitment means pushing past hesitation. People now listen and engage with conservation messages—it motivates me to keep going despite challenges." - Leonad Skolastika, an elder woman elected to a leadership role.



© SUSTAIN, awareness raising session on CCROs, Sumbawanga landscape

Outcome 2 – Integrated landscape management improves ecosystem health and generates inclusive business and livelihood opportunities, especially for women, youth, and vulnerable groups

Outcome 2 summary: This outcome focuses on contributing to a long-term transition towards a climate-resilient economy by altering behaviours within the landscapes where the SUSTAIN initiative operates and amongst key stakeholders who have the power to influence land and water management decisions. The key objective is to enhance the capacity of these stakeholders by improving their knowledge, practices, and access to technologies, thereby promoting sustainable land, water, and business management practices. The adoption of Integrated Landscape Management (ILM) approaches and the deployment of Nature-based Solutions (NbS) are central elements of SUSTAIN's vision, engaging both the Pro and Eco programmes to achieve scale and impact.

Output		Summary Deliverables
2.1	Implementation, enforcement and compliance with land use, biodiversity and environmental-related laws and regulations	• In Sumbawanga, 372 local leaders (142 women, 230 men) across 18 villages were trained in environmental laws and village by-laws, strengthening enforcement structures that now oversee nearly 25,000 ha of forest and 400 ha of riparian zones. • In Kilombero, the registration of Vidunda WUA and revitalisation of Ruipa WUA enabled better enforcement of water and land use regulations, with 60 patrols conducted and buffer zones protected from settlement, pollution, and extraction.
2.2	Capacity and awareness of farmers and rural communities, especially women and youth, strengthened for sustainable land, water and business management	• In Sumbawanga, 49 demonstration plots were established through Farmer Field Schools, reaching 445 farmers (38% women), and promoting climate-smart agriculture with crops like maize, beans, and vegetables. Despite gender disparities, the FFS approach attracted more women through targeted vegetable farming. • In Kilombero, 45 extension officers were trained, providing services to 2,444 farmers (880 women) on sustainable farming practices; 38 hectares of demo plots and 188 hectares of rotated fields are actively used to disseminate sustainable land and water management practices. • 24 expert-led radio episodes were aired across 43 stations, reaching over 354,000 listeners across 12 districts to raise awareness on sustainable land and water management.
2.3	Environmental and social management standards and practices adopted by businesses and their associations	• In Sumbawanga, SNV supported the implementation of CSA practices by establishing 15 community nurseries and demonstration farms, producing 30,000 seedlings to rehabilitate 90 hectares, while training 210 farmers in agroforestry techniques that support both conservation and income generation. • In Kilombero, 17 agrochemical waste collection centres ("vizimba") were constructed; 526 cooperative members (169 women, 357 men) were trained on waste management, leading to improved disposal practices and reduced ecosystem and health risks. • Working with Kilombero Sugar Company and SAGCOT, SUSTAIN Eco supported the rollout of the Farm Sustainability Assessment (FSA), training 2,695 cane farmers (45% women) on inclusive business models, environmental stewardship, and health and safety standards.

In Sumbawanga landscape, the SUSTAIN Eco project has enhanced integrated landscape management by combining environmental governance with livelihood support, particularly for women, youth, and vulnerable groups. Through extensive land demarcation efforts, 450 beacons were installed to mark riparian zones and village forest boundaries, helping to secure 440 hectares of land against encroachment and ensuring the conservation of critical areas like the Katuma, Mpanda, and Msaginya rivers. These actions were supported by the procurement of an additional 300 beacons targeting priority zones, such as Kapondwe River and 2,240 hectares of village forests.

To institutionalise local conservation, the programme trained 372 community members and leaders (142 women, 230 men), including Village Natural Resources Committees (VNRCs), Village Land Use Management Committees (VLUMs), and local authorities, across 18 villages. These trained groups now oversee close to 25,000 hectares of forest and over 400 hectares of riparian areas. Parallel capacity-building efforts reached 80 Water User Association (WUA) members (25 women, 55 men), enabling more inclusive and effective enforcement of water laws in the catchments.

When it comes to incentivising sustainable production, SUSTAIN Eco scaled up its support for climate-smart agriculture. The establishment of 49 demonstration plots engaged 445 farmers—38% of them women—in sustainable cultivation practices for maize, paddy, sunflower, beans, cassava, and vegetables. These plots not only promoted food security and soil conservation but also encouraged income generation through crop diversification. SUSTAIN Eco also supported 15 nurseries and 15 agroforestry demonstration farms producing 30,000 seedlings in 2024. These community-led nurseries have helped restore 90 hectares of land, benefitting 210 farmers—many of them women—with long-term returns through fruit, fuelwood, and timber production (see **Box 3** for more details).

Through these interventions, communities in Sumbawanga are increasingly integrating conservation into daily practice, gaining both environmental resilience and improved livelihoods. From legal awareness and law enforcement to agroforestry and inclusive farmer training, the programme has helped strengthen grassroots governance and sustainable economic models that align with district and national development goals.



© SUSTAIN, farmer in Sumbawanga landscape

Box 3: Seeds of Change: Community-led agroforestry for ecosystem restoration and livelihoods

In 2024, SUSTAIN Eco catalysed a community-driven agroforestry initiative across 15 villages in the Sumbawanga landscape, merging environmental restoration with inclusive economic growth. The initiative supported the establishment of 15 community nurseries and 15 demonstration farms aimed at promoting sustainable land management practices.

These nurseries, set up in September 2024, produced approximately 30,000 seedlings with a 75% survival rate—enough to restore 90 hectares of degraded land. A diverse mix of tree species was cultivated, including timber, fuelwood, fruit trees, nitrogen-fixing species, and varieties suitable for silvo-pastoral systems. This diversity not only enhances biodiversity and soil fertility but also equips farmers with resources for long-term income generation.

The initiative directly benefitted 210 farmers in its first year, with a strong emphasis on women's participation. Women, often engaged in small-scale farming, have embraced the opportunity to grow fruit trees, boosting food security and creating new income streams. Some have reported using the earnings to expand farms or invest in tools and improved seed varieties.

Beyond the environmental and economic gains, these nurseries have instilled a sense of ownership and stewardship within communities. By embedding agroforestry practices into local development plans and farmer field schools, the initiative is paving the way for long-term climate resilience and sustainable agriculture. As the trees grow, so too does the collective capacity of these communities to shape a greener, more prosperous future.



© IUCN, Maria Ana Borges, crop

In Kilombero landscape, SUSTAIN Eco has enhanced integrated landscape management by reinforcing environmental governance and advancing inclusive, climate-resilient livelihoods. The registration of the Vidunda Water User Association (WUA), along with the strengthening of Ruipa and Mngeta WUAs has significantly strengthened catchment-level water management. These WUAs now play a central role in conserving and managing water resources on behalf of the Rufiji Basin Water Board (RBWB), overseeing community engagement, regulation enforcement, and environmental restoration across three sub-catchments. Their capacity to implement by-laws has been strengthened by seed funding and technical support, enabling them to conduct regular patrols, engage in riparian reforestation, and integrate village leadership structures such as VNRCs and VLUMs into coordinated natural resource governance frameworks.

At the community level, farmer field schools and demonstration plots have expanded across the Vidunda sub-catchment, promoting Climate-Smart Agriculture (CSA), agroforestry, terracing, and erosion control on over 188 hectares. These interventions, supported by 45 trained extension officers, have increased agricultural productivity, improved soil stability, and enhanced water retention, directly benefiting 2,444 farmers (880 women, 1,564 men). Further public engagement through 24 radio episodes has raised awareness among over 350,000 rural listeners, reinforcing ecosystem stewardship and sustainable land and water use practices.

To safeguard ecosystem and human health, the programme supported the construction of 17 agrochemical waste collection centres (vizimba) and trained over 500 sugarcane farmers on responsible pesticide disposal. Building on this, Kilombero Sugar Company (KSCL) is integrating the Kizimba model into its Farm Sustainability Assessment (FSA) framework to scale sustainable production and environmental protection across its outgrower network. In tandem, IUCN's collaboration with KSCL and Newcastle University is advancing riverine restoration efforts for the Mkula, Msolwa, and Ruhembe Rivers, combining natural regeneration and targeted reforestation to enhance ecosystem services vital to agriculture, biodiversity, and the integrity of the Udzungwa–Magombera corridor *(see **Box 4** for more details)*.

Meanwhile, 212 village leaders and newly elected VNRC members were trained in natural resource governance and conflict resolution. Their enhanced capacity strengthened collaboration with ILUMA Wildlife Management Area (WMA) and increased leadership roles in village governance, where former WUA and CBO members are now leading village councils.



© Ala Al Dwairi, farm in Tanzania

Box 4: Riverine restoration through science and partnership

In the heart of Kilombero Valley, a unique collaboration between IUCN, Kilombero Sugar Company (KSC), and Newcastle University has been improving landscape connectivity and freshwater ecosystem health. At the centre of this initiative is Sheena Davis, a PhD researcher whose work is bringing fresh scientific insight into the restoration of riparian habitats on sugarcane plantations. Her research, supported by the SUSTAIN initiative, focuses on how degraded riverine ecosystems can be revitalised to restore biodiversity, safeguard ecosystem services, and strengthen climate resilience—all while supporting agricultural productivity.

From September to December 2024, Sheena led extensive fieldwork along five major rivers in the landscape—Ruhembe, Msolwa, Sanje, Ikela, and the Great Ruaha. Her team surveyed 30 river sites and adjacent land use areas, assessing vegetation structure, bird diversity, water quality, and microclimate variation. A particular emphasis was placed on understanding the role of riparian buffers in agricultural zones, not only for their ecological value but also their potential to provide pest control, flood mitigation, and soil stability. Working closely with IUCN and KSC, she also explored how restoration strategies could align with sugarcane production goals and benefit surrounding communities.

Beyond science, Sheena's experience in the field revealed the nuanced barriers and opportunities that shape restoration in real-world landscapes. Logistical hurdles like poor road access and limited resources were navigated with flexibility and innovation. More significantly, her conversations with smallholder farmers and local stakeholders uncovered a critical gap in ownership and understanding of restoration responsibilities. While farmers recognised the impacts of erosion and water degradation, many did not see the riparian zones as their responsibility to protect.

> Sheena's recommendation: *co-develop practical restoration protocols that empower farmers through training, involvement, and shared accountability.*



Sheena Davis, Newcastle PhD researcher, Kilombero landscape

Box 4 cont'd

As part of the collaboration, Newcastle University and IUCN are testing experimental restoration plots on KSC land, trialling natural regeneration and selected native tree species for their ecological and agricultural co-benefits. These efforts aim to restore riparian function along key rivers—Ruhembe, Msolwa, and Mkula—helping to protect water flows for sugarcane irrigation, buffer ecosystems in the Udzungwa–Magombera corridor, and reduce sedimentation into the broader catchment. The work directly supports Tanzania's FLR commitments and offers a replicable model for private-sector engagement in ecosystem stewardship.

Through this partnership, science is not only informing restoration—it is reshaping how it is done: inclusive of local perspectives, grounded in evidence, and aligned with both conservation and development goals.

As Sheena reflects: *"In landscapes like Kilombero, where biodiversity and agriculture are so closely intertwined, restoring riparian habitats is a chance to improve both environmental health and human well-being. But it has to be built together—on data, dialogue, and trust."*



© IUCN, Tete Landscape

Outcome 3 – Investment in the protection and restoration of ecosystems and their services strengthens climate resilience for people and ecosystems

Outcome 3 summary: This outcome focuses on the shift from traditional development approaches to climate-resilient ones by emphasising greener and more inclusive investments. The programme aims to strengthen the connection between biodiversity data, nature-based solutions (NbS), and decision-making processes. Its goal is to make a compelling case for investing in ecosystems and attract innovative financing to support their protection and restoration.

Output		Summary Deliverables
3.1	Improved biodiversity data drives decisions for conservation management and contributes to ecosystem connectivity	• In Sumbawanga, 90 WUA members were trained in river health assessments using citizen science tools (TARISSfupi and MiniSASS) across the Katuma, Mpanda, and Msaginya sub-catchments. • Fire hotspot mapping was initiated in Katavi National Park and Lwafi Game Reserve to inform the revision of fire management strategies in collaboration with TANAPA. • In Kilombero, sub-catchment WUAs in Vidunda, Mngeta, and Ruipa integrated Key Biodiversity Areas (KBAs) into their action plans, responding to environmental challenges with backing from local governments. • The Land Health Monitoring Index (LHMI) was piloted and validated in Kilombero, linking local land restoration actions to national and global environmental commitments.
3.2	Nature-based solutions (including restoration) deployed to enhance ecosystem functioning and climate-resilient livelihoods	• In Sumbawanga, restoration work in Lake Kwela began, combining afforestation, beacons installation, cattle troughs, and erosion control to safeguard water security and ecosystem resilience benefiting over 24,000 people across seven villages. • Across both landscapes, a total of 60,000 water-friendly trees were planted in Sumbawanga and over 304,000 cocoa, avocado, and native tree seedlings were distributed in Kilombero, supporting agroforestry, soil health, and forest connectivity over 40.5 ha of degraded land. • Community-based Forest management was enhanced through beekeeping (101 farmers, 100 hives) and agroforestry training (588 farmers in Sumbawanga; 75 trained nursery managers in Kilombero), diversifying rural livelihoods and reinforcing conservation outcomes. • An Integrated Nature-based Solutions Strategy for the Kilombero landscape was developed, validated and is now being used by local CBOs, farmers, and government stakeholders to guide restoration and conservation efforts.

3.3	Innovative financing streams available for conservation and restoration of ecosystems and their services	• A Payment for Ecosystem Services (PES) business model was tested and validated for the Vidunda sub-catchment, confirming feasibility and proposing in-kind incentive schemes. • Village-level COCOBA initiatives have been mapped and supported in Sumbawanga and Kilombero, with targeted training and grant preparation underway to strengthen women-led conservation enterprises. • Four CBOs were competitively selected to receive seed grants totalling USD 36,000 to implement community-based initiatives focusing on ecotourism, agroecology, river restoration, and sustainable livelihoods in Kilombero landscape. • A cross-landscape assessment was conducted to explore innovative financing streams for Climate-Smart Agriculture (CSA) and Nature-based Solutions (NbS), focusing on both staple and emerging value chains to guide future investment mobilisation.

In Sumbawanga landscape, progress was made in restoring freshwater systems, protecting forest and riparian zones, and linking conservation to alternative livelihoods. SUSTAIN Eco has worked to embed restoration and water governance into community structures, supporting Village Natural Resources Committees (VNRCs), Water User Associations (WUAs), and smallholder farmers across multiple districts.

A key milestone has been the restoration of Lake Kwela, a critical freshwater resource in the Katuma catchment. Once threatened by sedimentation, runoff, and livestock encroachment, the lake is now protected through buffer zone demarcation with 450 beacons, afforestation of over 60,000 trees, and coordinated management by strengthened village-level institutions. The initiative has not only improved water quality for more than 24,000 people but also inspired national recognition, prompting a visit from the Environment Division of the Vice President's Office. This restoration model is already informing replication efforts across the Lake Rukwa Basin *(see **Box 5** for more details).*

To reinforce climate-resilient agriculture and biodiversity, SUSTAIN Eco trained 588 farmers (40% women and youth) in agroforestry across 19 villages. Adoption rates are steadily increasing, with over 90 farmers integrating trees into their farming systems. Complementary livelihoods like beekeeping were introduced across key forest sites under Community-Based Forest Management (CBFM), reaching 101 farmers and contributing to both forest protection and household income.

In collaboration with Katavi National Park (KANAPA) and Lwafi Game Reserve, SUSTAIN Eco supported the validation of fire hotspots and fire-sensitive habitats across Sumbawanga's protected areas. These efforts contribute to the revision of the Fire Management Strategy for both reserves, aimed at improving habitat conservation, reducing carbon emissions from bushfires, and ensuring long-term resilience of forest and savanna ecosystems. The updated strategy, developed through joint mapping and technical consultations, will guide future fire monitoring and community engagement in fire prevention.

Efforts to institutionalise sustainable water governance were equally prominent. Through participatory river health monitoring using TARISSfupi and MiniSASS, 90 WUA members gained biomonitoring skills, enabling rapid response to water quality threats. Besides training, SUSTAIN Eco supported WUAs through the provision of technical equipment, enabling them to conduct regular patrols and improve law enforcement across the Katuma, Mpanda, and Msaginya rivers. A comprehensive water user database was also developed for the Mpanda WUA and Lake Rukwa Basin Water Board to enhance equitable water allocation and long-term planning *(see **Box 6** for more details).*

Box 5: Reviving Lake Kwela – A community-led model for integrated ecosystem restoration

Once a vital source of clean water and livelihood support for over 24,000 people, Lake Kwela faced growing ecological pressure from sedimentation, agricultural encroachment, and unrestricted livestock access. In response, SUSTAIN Eco launched a restoration initiative, positioning Lake Kwela as an example of nature-based solutions at scale.

In collaboration with the Lake Rukwa Basin Water Board (LRBWB), Rural Water Supply and Sanitation Agency (RUWASA), and Tanzania Forest Services (TFS), a multi-pronged strategy was implemented. This included planting over 60,000 trees—20,000 of which were donated by TFS—along with the installation of 450 beacons to demarcate and protect lake buffer zones. These actions were paired with the development of alternative cattle watering points to reduce direct contamination and ecosystem degradation.

Central to the success was community engagement: Village Natural Resources Committees (VNRCs) were strengthened and involved at every stage, from afforestation to water quality monitoring. Species planted—such as Rauvolfia caffra (Quinine Tree), Syzygium cumini (Java Plum), and Cedrela odorata (Spanish Cedar)—were selected for their environmental, medicinal, and agroforestry benefits.

The initiative's impact has gone beyond ecological gains. Lake Kwela now serves as a springboard for alternative livelihoods like beekeeping and community forestry, reinforcing the link between conservation and income generation. Its success has garnered national recognition, with a mission from the Vice President's Office Environment Division, positioning the model for potential policy integration and replication across similar lake systems in Tanzania.

Key Results:

- 24,000+ people benefit from improved water quality and availability.
- 60,000 trees planted in lake buffer zones for soil stabilisation and runoff reduction.
- 450 beacons installed to protect 440.3 hectares of riparian and catchment land.
- Local communities actively engaged in lake governance and restoration.
- National validation by the Vice President's Office Environment Division.

Watch:
SUSTAIN Eco: Lake Kwela restoration.
SUSTAIN Eco: Land tenure security for women and youth in Kalambo district.



© SUSTAIN, Lake Kwela, Sumbawanga landscape

In the Nsaginya River catchment, SUSTAIN Eco collaborated with the Lake Rukwa Basin Office, TAFORI, and Tanzania Forest Services (TFS) to plan the mechanical removal of Lantana camara—a fast-spreading invasive shrub threatening riverbank integrity and native biodiversity. Although permissions were still pending by the end of 2024, the initiative is designed to align with Tanzania's national invasive species strategy and engage local communities in long-term habitat restoration efforts.

Finally, by supporting women-led conservation agriculture through WAWAWE AMCOS, SUSTAIN Eco is furthering inclusive climate adaptation. Targeted training in nursery management and avocado farming, coupled with material support, will unlock new economic opportunities for 150 women. These intersecting interventions illustrate an integrated landscape management approach—linking restoration, governance, livelihoods, and gender equity to deliver lasting environmental and social impact.



© SUSTAIN, farmers near lake Kwela, Sumbawanga landscape

Box 6: Strengthening the foundations for data-driven water governance

Across the Sumbawanga landscape, SUSTAIN Eco has prioritised data as a cornerstone for adaptive, inclusive, and resilient water resource governance. Through strategic partnerships and community-led initiatives, the project has made substantial progress in closing long-standing data gaps while reinforcing institutional and grassroots capacity for evidence-based decision-making.

A flagship achievement has been the establishment of a structured Water Users Database by the Lake Rukwa Basin Water Board (LRBWB), supported by SUSTAIN Eco. Using mobile tools such as Kobo Toolbox, LRBWB captured vital information on user type, location, water source, usage purpose, permit status, and pollution compliance. This digital platform—now managed by the government—improves transparency and enables equitable water allocation, fee collection, and compliance monitoring. It also serves as a foundational reference for planning at the sub-catchment and basin levels.

In parallel, the project has empowered Water User Associations (WUAs) through hands-on training and equipment provision, enabling them to generate critical local data. Community members now use TARISSfupi (MiniSASS), a low-cost citizen science tool that evaluates river health by analysing macroinvertebrate populations. These assessments offer early warnings of water degradation and empower WUAs to identify and respond to pollution sources.

However, challenges remain: MiniSASS data is often stored manually and lacks a centralized repository, hindering its integration into formal monitoring systems. In response, SUSTAIN Eco is promoting standardised collection protocols and exploring open-source GIS platforms and cloud-based apps to facilitate real-time data sharing across stakeholders.

These efforts are designed to feed into the Land Health Monitoring Index (LHMI)—a broader SUSTAIN Pro initiative aimed at tracking land health across site, landscape, and national levels. By strengthening the quantity and quality of freshwater data, including river health, pollution status, and restoration outcomes, the project is enriching the LHMI water indicators. This integrated approach not only informs restoration priorities but also anchors community action within national environmental commitments.



© SUSTAIN, information session with farmers near lake Kwela, Sumbawanga landscape

In Kilombero landscape, efforts to invest in ecosystem protection and restoration have yielded tangible progress in both environmental health and community resilience. Building on strong foundations in participatory governance, SUSTAIN Eco has worked closely with Village Game Scouts, Water User Associations (WUAs), farmers, and cooperatives to expand the reach and impact of nature-based solutions, enhance biodiversity monitoring, and promote sustainable livelihoods.

The capacitation of Village Game Scouts (VGS) through CyberTracker training has significantly improved biodiversity surveillance in the ILUMA Wildlife Management Area (WMA). In the last quarter of 2024, patrols supported by this training led to a marked decrease in illegal activities including deforestation, charcoal burning, and cattle incursions. The data generated from these patrols has improved ecological understanding and enabled more targeted enforcement, contributing to both conservation effectiveness and accountability.

In parallel, strengthened WUAs in Vidunda, Mngeta, and Ruipa sub-catchments are now at the forefront of freshwater biodiversity and river health monitoring. Integrating biomonitoring data into catchment planning has enabled these associations to identify and act upon environmental threats—such as illegal fishing practices that had degraded bioindicator species in Mchombe River. Restorative actions taken by the WUAs, in collaboration with communities and government, have successfully brought such river segments back to a healthy status.

These community-led systems now prioritise Key Biodiversity Areas (KBAs) in their action plans, contributing to a growing culture of local stewardship in integrated water resources management. Notably, active and passive restoration measures have already led to the rehabilitation of 20 km of river stretches in Mngeta, Ruipa, and Vidunda sub-catchments, with an additional 13 km patrolled to identify priority conservation actions. These efforts, supported by structured IWRM dialogues and joint inspections with RUWASA and TANESCO, have resulted in a 30% reduction in harmful anthropogenic activities—including illegal car washing, grazing, and waste dumping—along critical riverine zones.

At the heart of Kilombero's landscape restoration efforts lies a Nature-based Solutions (NbS) Strategy—developed and endorsed by over 40 stakeholders—that is now guiding interventions across agriculture, forestry, conservation, and economic development. The strategy has provided a cohesive framework for community-based organisations (CBOs), government partners, and private actors to align on restoration priorities and track progress. Efforts to operationalise the Land Health Monitoring Index (LHMI) are complementing this by providing a data-driven basis for tracking changes in soil health, species habitat, and connectivity across the landscape (see **Box 8**).

Restoration efforts have been reinforced through the distribution of over 300,000 cocoa, avocado, and native tree seedlings to farmers, schools, and local institutions. These agroforestry initiatives are linking ecological recovery with improved livelihoods. In Vidunda and Mngeta, over 40 hectares of degraded farmland have been brought under cocoa-based agroforestry systems that support biodiversity corridors while raising household incomes. Terrace farming techniques—promoted to combat erosion on sloped terrain—are being implemented alongside cocoa and spice farming in the Vidunda sub-catchment, demonstrating an effective integration of climate-smart agriculture (CSA) and NbS approaches (see **Box 9**).

Box 7: Kilombero Champions Network: Mobilising local innovation for conservation

Launched in 2024, the Kilombero Network of Conservation Champions (KNCC) is an ambitious platform that unites 40 local institutions committed to restoring the Kilombero landscape and driving nature-positive, community-led change. With the support of SUSTAIN Eco, the network formalised its structure through the adoption of a Terms of Reference (ToR) and the election of a steering committee comprising representatives from local government, civil society, and community-based organisations.

As a next step, KNCC members were trained in integrated natural resource governance and resource mobilisation strategies. These trainings equipped members with the tools to design and implement scalable conservation initiatives while engaging local communities in stewardship and sustainability. The KNCC has also developed an Action Plan, detailing the network's strategic priorities and operational pathways. Discussions on financial sustainability are already underway, with proposals for revenue-generating activities aligned with the network's environmental mandate to ensure long-term resilience beyond initial seed funding.

As part of its inaugural activities, KNCC launched a competitive grant call that attracted eight innovative proposals from across the Kilombero landscape. Of these, four proposals were awarded USD 9,000 each, selected for their potential to deliver high-impact, community-driven conservation outcomes. The four selected projects are:

- **Association Mazingira** – Promoting sustainable cocoa farming practices in Mlimba District to enhance productivity while protecting forest ecosystems.
- **Kilombero Organization for Community Development (KOCD)** – Restoring the Ikwambi River, a key water source for wildlife and human use, through reforestation and stakeholder engagement.
- **Mazingira ni Uhai Foundation** – Expanding community livelihoods in Vidunda through sustainable beekeeping while supporting biodiversity conservation.
- **ILUMA WMA** – Raising conservation awareness and supporting ecotourism through its "Itunze ILUMA Ikutunze, Tangaza Utalii" campaign, emphasising sustainable resource use.

Beyond implementation, these projects serve as learning models, providing practical demonstrations of nature-based solutions (NbS) and inclusive governance. KNCC members have also initiated local stakeholder meetings to present their projects, gather feedback, and ensure alignment with broader landscape goals. As the KNCC grows, it is positioning itself as an MSP for advocacy, lesson sharing, and innovation—offering a powerful example of how coordinated grassroots action can drive long-term ecosystem restoration and sustainable development.



© IUCN Tanzania, Rice farmer, Kilombero landscape

Box 8: Kilombero's integrated NbS strategy: a collective framework for climate resilience

The Kilombero landscape now benefits from an Integrated Nature-based Solutions (NbS) Strategy, co-developed through a participatory process engaging over 40 stakeholders including local government authorities, conservation organisations, research institutes, and community-based groups. The strategy provides a unifying framework to promote, adopt, mainstream, and monitor NbS interventions across conservation, agriculture, forestry, water, and economic development sectors.

Key interventions identified include reforestation of degraded areas, sustainable agroforestry and horticulture, riverbank restoration, and conservation agriculture. Capacity building is at the heart of the strategy, with targeted training on soil health testing, seedling production, carbon credit readiness, and integrated water resource management (IWRM) being rolled out for WUAs, Village Natural Resource Committees (VNRCs), and farmer groups. Strategic partnerships with institutions such as TFS, TARI, and SAGCOT are also being leveraged to improve technical support and scale impact. The NbS Strategy is now actively informing the design of community projects and local plans, including the Greater Udzungwa-Kilombero Restoration Strategy and WUA catchment action plans.

Its institutional uptake is advancing CBOs who are using it to frame their proposals, while government partners are integrating its principles into land use planning and conservation business models. Through this model, SUSTAIN Eco is catalysing a shared vision of ecological resilience and sustainable livelihoods, setting a precedent for other landscapes in Tanzania.



© SUSTAIN, farmers in Vidunda catchment using a terracing technique for planting

Efforts to mobilise sustainable finance through Payment for Ecosystem Services (PES) are also advancing. A feasibility assessment for a PES scheme in Vidunda confirmed its viability and outlined a model centred on in-kind payments and capacity-building incentives. The model proposes engaging upstream farmers as service providers and downstream actors—including TANESCO, RUWASA, RBWB, and private sector partners—as beneficiaries. If adopted, the PES model could further incentivise conservation actions while supporting water quality and quantity outcomes.

Through the Kilombero Network of Conservation Champions (KNCC) and its mandate to promote entrepreneurship among local organisation, four member CBOs were competitively selected to receive seed grants totalling USD 36,000 to implement community-based initiatives focusing on ecotourism, agroecology, river restoration, and sustainable livelihoods *(see **Box 7** for more details).*

Spotlight: Kilombero's cocoa sector growth

Nowhere is the impact of these agroforestry initiatives more visible than in the transformation of Kilombero's cocoa sector. Through AWF's continued support—including training, fermentation boxes, solar dryers, and improved market linkages—farmer incomes have seen substantial growth. The number of farmers engaged in cocoa production rose from 4,710 in 2023 to 5,968 in 2024, with yields increasing to over 1,000 metric tons (from 852 metric tons in 2023).

An auction held in June 2024 by MOCO AMCOS saw 43.7 metric tons of cocoa beans sold at TZS 25,720 (USD 10.28) per kilogram, highlighting the sector's market potential. Some farmers reported earnings exceeding TZS 30 million. Producer groups like Miti Maisha are scaling up seedling production and entrepreneurship, while new AMCOS (Igima and Mngeta) are emerging as aggregation centres to improve market access. The establishment of infrastructure such as cocoa solar dryers and nurseries, along with strategic partnerships with entities like Kokoa Kamili and Compassionate Carbon, are ensuring sustainability across the value chain.

Lastly, the review of the ILUMA WMA Conservation Business Plan has laid the groundwork for more strategic partnerships and benefit-sharing arrangements. With updated business manuals and engagement protocols in place, the WMA is better positioned to attract ecotourism investment while ensuring that surrounding communities share in the economic returns of conservation. Together, these initiatives are enhancing ecosystem connectivity, promoting sustainable land and water management, and building long-term resilience for both people and nature in the Kilombero landscape.

In 2024, SUSTAIN Eco in collaboration with SUSTAIN Pro conducted a cross-landscape assessment to identify innovative financing streams for Climate-Smart Agriculture (CSA) and Nature-based Solutions (NbS), aligned with similar efforts under SUSTAIN Pro. The assessment focused on both staple and emerging value chains in Tanzania's Kilombero and Sumbawanga landscapes, aiming to move from conceptual discussions to concrete, investable opportunities capable of attracting public and private finance while delivering ecological and socio-economic returns. Drawing from participatory fieldwork and value chain viability analyses, the assessment examined financing mechanisms such as blended finance, Payment for Ecosystem Services (PES), and carbon credits. The result is a portfolio of business cases in preparation—some near investment-ready, others requiring further refinement. These cases outline how SUSTAIN and its partners can target interventions for impact and scale, while also identifying promising but longer-term value chains that merit sustained support. In 2025, this work will enter a new phase: finalised business cases will be validated and used to guide investor engagement, inform grant schemes, and support the development of de-risking strategies for those opportunities that require additional work to become viable (see **Table 1** for more details).

Box 9: Reclaiming slopes: terrace farming as a nature-based solution

In the steep terrain of Vidunda sub-catchment, SUSTAIN Eco has scaled up terracing as a combined Climate-Smart Agriculture (CSA) and Nature-based Solution (NbS) to combat soil erosion, improve farm productivity, and build long-term resilience. A total of 38 hectares of demonstration plots were established across the villages of Vidunda, Udung'hu, and Chonwe, showcasing the effectiveness of contour terraces for managing water runoff, retaining topsoil, and reducing siltation of downstream water bodies.

The terraces are paired with agroforestry systems—including cocoa, avocado, and native trees—creating microclimates that boost biodiversity, enhance soil health, and increase water retention. In high-risk erosion zones such as springheads, slopes, and riverbanks, farmers also adopted Vetiver grass farming to reinforce soil stability and minimise sediment loads into rivers. These integrated practices are now being embraced by public institutions, groups, and individual farmers, with 188 hectares under crop rotation and conservation techniques.

Beyond agricultural productivity, this approach directly benefits the Rufiji and Lake Rukwa basins by improving river flow regulation and water quality, supporting hydropower and domestic water supply. It also contributes to the Land Health Monitoring Index (LHMI) by providing data on land cover improvements, soil health, and sustainable land-use transitions. The terrace farming initiative illustrates how nature-based techniques can deliver multi-functional gains—economic, ecological, and social—in one of Tanzania's most vital watersheds.



© SUSTAIN, local government officer engaged with the farmers around land tenure in Sumbawanga landscape

Table 1: Catalysing investment in resilient and inclusive value chains in Tanzania landscapes

Tanzania: Kilombero & Sumbawanga					
Crop	**Why it matters**	**Key vulnerabilities**	**Business case (2024-25)**	**Investment opportunities for SUSTAIN & partners**	**Expected impact (beyond 2025)**
Value chains opportunities					
Rice	• Staple food and cash crop, critical to poverty reduction; • 90% sold raw resulting in little value added; • Rice straw seen as waste.	• Low yields from flood irrigation & input costs; • Straw burning emissions & health risks; • Currently no market for residues.	• Combined System of Rice Intensification (SRI) with other CSA practices increases yields and cuts on water use; • Straw-to-briquette turns waste into clean bio-coal, generates new income & avoids open burning.	• Train 300 farmers in SRI / CSA on 5 demo plots; • Pilot one 5 t/day straw-briquette unit, aggregating feedstock via farmer groups. • Broker financing with NMB & pre-purchase MoU with local fuel distributors; • Partner with TIRDO & Mazingira for tech and outreach.	• Higher yields & water efficiency; rice-straw diverted from burning; new briquette income stream for farmer groups; carbon-emission reduction and circular-economy model ready for scale-up *(targets to be finalised in the full business case).*
Maize	• Staple crop representing over 30% of national food production and 75% of cereal consumption; • Critical for food security and livelihoods in Sumbawanga and other Southern Highlands; • Current value chain weak due to limited processing, poor infrastructure, and low farmer bargaining power.	• Fragmented value chain and poor farmer–processor linkages; • High transport and energy costs due to lack of local processing; • Post-harvest losses and missed value-addition opportunities.	• Deploy cooperative maize milling ventures with off-grid-compatible machinery; • Pilot processing hubs in Mpui, Laela, Ikonzi, Kalambazite, and Kaengesa to reduce costs and add value; • Link cooperatives to financing and buyers (e.g. WFP, Landoni, Msama Food) and promote sale of flour and maize bran.	• Engage AMCOS and savings Co-ops for joint venture models; • Link to training from RUDI, BRiTEN and Farm Radio International; • Integrate CSA methods (e.g. Push–Pull, technique) for sustainability.	• Higher annual farmer revenue from flour and maize bran sales; Energy and transport cost savings; Strengthened farmer bargaining power; lower carbon emissions; reduced waste, and improved food system resilience *(targets to be finalised in the full business case).*

Emerging value chain:					
Agroforestry	• Avocado, cashew & cocoa trees diversify income and provide shade for food crops; • Terracing, hedgerows and mixed cropping curb erosion, enhance soil moisture and cut forest encroachment.	• High up-front cost and 3 to 4 year waits to first harvest; • Limited know-how in nursery management, terrace layout and tree–crop spacing.	• Pilot of contour-terrace agroforestry strips on slopes, enhancing yields for farmers; • Solar-pump micro-irrigation secures dry-season seedling growth; • Trees lock carbon with a future route to verified credits once biomass matures.	• Train 200 farmers in four villages on seedling production, terrace building and intercropping; • Establish 2 community nurseries and link COCOBA savings groups to seed/ irrigation micro-loans; • Draft benefit-sharing & carbon-readiness plan with village forest committees to position for scale finance.	• A drop in soil-erosion runoff; Increased water retention on pilot plots; New fruit/ nut revenue stream from year 4; Reduced charcoal reliance & forest clearing; Proven template ready to extend across 2 000 ha as additional funding becomes available. • *(targets to be finalised in the full business case).*
Beekeeping	• Tanzania is Africa's second-largest honey producer, with strong export and domestic market potential; • Forest-based beekeeping enhances biodiversity and provides livelihood opportunities; • Beekeeping supports NbS through pollination and reduced pressure on natural ecosystems.	• 99% of beekeepers in Sumbawanga use traditional hives, resulting in low yields and poor quality; • Lack of access to equipment, capital, markets, and technical know-how; • Limited integration with cooperatives and certification schemes.	• Promote modern beekeeping across 15 groups in 6 wards and 4 park-adjacent areas; • Introduce improved hives and strengthen cooperatives for aggregation, training, and certification; • Develop a local market partnership with Katavi National Park to sell honey and diversify products (e.g. beeswax).	• Provide 750 improved hives and necessary tools to 294 beekeepers; • Train groups in hive management, beeswax processing, and cooperative marketing; • Facilitate honey certification, aggregation, and buyer contracts; • Promote native flowering tree planting to support bee health and ecosystem restoration.	• Increased household income from honey and beeswax; reduced • deforestation and charcoal dependence; improved pollination and crop yields; strengthened cooperatives ready to scale operations. *(targets to be finalised in the full business case).*

Looking ahead, SUSTAIN Eco is contributing to a shared initiative under SUSTAIN Pro to advance sustainable financing in Tanzania. In collaboration with the CEO Roundtable of Tanzania (CEOrt), preparations are underway for the launch of a year-long Green Finance Campaign in early 2025. The campaign aims to familiarise Tanzanian businesses with green finance principles, demonstrating their alignment with sustainability goals and the potential for climate-smart investment. As the programme enters its final year, this initiative will help bridge private sector engagement with inclusive, nature-based investment opportunities developed under SUSTAIN, anchoring climate resilience and low-carbon practices within national business strategies.


© SUSTAIN Beekeeper

Gender and Youth Action

SUSTAIN Eco has prioritised gender equality and youth empowerment since its inception, building on a comprehensive gender and youth assessment finalised in 2023. This assessment, grounded in stakeholder consultation and literature review, laid bare gender disparities and structural inequalities in natural resource governance and agricultural productivity. In response, a dedicated gender and youth action plan was adopted to guide the implementation of inclusive programming across all project landscapes. More information can be found in the 2023 SUSTAIN Eco annual report.

In Sumbawanga landscape, the programme faced persistent cultural barriers limiting women's access to land and participation in training events. In response, SNV promoted co-ownership of land through advocacy in locally-based institutions and public forums, leading to increased uptake of Certificates of Customary Right of Occupancy (CCROs) by women. Farmer Field School (FFS) design was also adapted to prioritise crops typically grown by women—such as beans, sunflower, and horticulture—resulting in improved gender responsiveness in agricultural trainings. Across technical capacity-building activities, additional efforts were made to schedule sessions at times and locations accessible to women, though challenges remain around land ownership requirements. Notably, land tenure awareness campaigns adopted a multi-pronged approach, combining legal, cultural, and economic arguments to inspire both women and men to seek secure and inclusive land rights *(see **Box 2** for more details)*.

In Kilombero landscape, AWF's rights-based approach sought to embed gender equity into conservation and economic decision-making from the outset. Although women's participation in community meetings and project activities has increased, systemic barriers—such as male-dominated land tenure systems and local governance structures—continue to restrict broader inclusion. Several workshops and trainings saw women's participation averaging between 21–35%, with higher rates achieved when efforts were made to weigh the proportion of women invited or motivate women leaders directly. Nonetheless, low interest among women in areas like sugarcane farming and village patrol duties highlights the need for continued adaptation of engagement methods, especially when land ownership criteria create entry barriers. Future strategies will need to combine targeted outreach with greater institutional awareness to create pathways for female leadership and participation.

At programme level, IUCN worked to ensure that gender and youth inclusion was integrated across all activities in both Kilombero and Sumbawanga. For instance, in the initial mapping and sensitisation of COCOBA groups in Sumbawanga, strict eligibility criteria were applied to ensure women's inclusion, with groups disqualified if they lacked female representation. Across project implementation, IUCN promoted equitable participation through consistent partner engagement and training design. While overall progress was rated as medium in terms of gender-responsiveness, lessons from 2024 have reinforced the importance of intentional, tailored strategies that go beyond numeric targets and address structural constraints to participation.

Looking ahead, SUSTAIN Eco will continue strengthening inclusive approaches across its portfolio. A dedicated capacity-building training on gender and youth empowerment is scheduled for May 2025 to further embed these principles into project delivery and institutional culture.

Lessons Learned

Early support for Multi-Stakeholder Partnerships (MSPs) drives Integrated Landscape Management (ILM) implementation: In both Kilombero and Sumbawanga, MSPs played a critical role in enabling dialogue, coordination, and learning among diverse actors. In Kilombero, this culminated in the co-development of the landscape's first Nature-based Solutions (NbS) strategy—an important step toward integrated planning. While this illustrates growing ownership at the landscape level, further institutionalisation is needed to embed MSPs within district structures and ensure continuity beyond project cycles. Strengthening MSP governance, clarifying roles, and enhancing their policy interface remains a priority for advancing Integrated Landscape Management (ILM).

Securing land tenure supports gender equality and farmer's autonomy: Significant progress was made in promoting gender-sensitive interventions, particularly in Sumbawanga where advocacy through locally-based institutions with experience and expertise on land tenure security helped normalise co-ownership of land and spurred a rise in women's interest in horticulture. Awareness-raising around inheritance risks and access to finance further bolstered support for land registration. However, deeply ingrained gender norms still restrict women's influence in decision-making spaces, and in some cases, lack of documentation (e.g., ID cards) remains a barrier to securing land rights. These lessons reinforce the importance of coupling technical support with cultural literacy, inclusive messaging, and legal awareness.

Building adaptive water governance is essential to manage climate and drought risks: Across both landscapes, erratic rainfall and prolonged dry spells disrupted agricultural calendars and impacted restoration activities. This underscored the vulnerability of existing systems and the need for stronger climate risk integration in programme design. Water-related Nature-based Solutions—such as spring restoration, riverine buffer protection, and catchment-level planning—are increasingly relevant but require more robust monitoring and governance mechanisms. The experience also highlighted the importance of accurate and timely water-related data for decision-making at community and district levels.

Restoration success hinges on multi-Level buy-in: Landscape restoration efforts—such as those around Lake Kwela in Sumbawanga—were successful due to strong community involvement and support from village-level committees. However, their long-term viability depends on buy-in from district and national authorities. Ensuring that restoration efforts are documented, aligned with local development plans, and embedded within broader policy frameworks will be essential for scaling impact and sustaining results.

Demonstration fields accelerate adoption of sustainable agricultural practices: Early results from Kilombero are promising, of the 1,472 farmers trained in agroforestry since 2023, 931 (≈ 63 %) have already integrated the practice on their farms. These figures highlight the value of starting training early, anchoring it in well-run demonstration plots, and reinforcing it through refresher sessions and peer-to-peer learning. Looking ahead, farmer-led trials, continuous coaching, and community-based extension services will be essential to turn initial interest into widespread, lasting adoption.

Diversified value chains are key to access markets and finance solutions: Cocoa, agroforestry products, and beekeeping are increasingly seen by communities as viable conservation-linked income streams. For example, the sharp rise in cocoa prices in Kilombero led to growing interest in cultivation. However, farmers still face barriers in accessing finance, quality inputs, and consistent market links. There is a need to align community capacity-building with downstream value chain development, and to mobilise investment through tailored financing models that can bridge the gap between producers and off-takers.

Capacity building requires repetition and local anchoring: As observed during field missions and MEL supervision visits, one-off training does not guarantee sustained behaviour change or institutional performance. Real progress depends on trust-building, mentoring, and context-specific reinforcement. Capacity-building efforts should be complemented by self-assessment tools, gradual handover of responsibility to local institutions, and consistent coaching from programme teams and district officials.

Integrating programmes and sharpening knowledge-management & communication is key for long-term impact: While coordination between SUSTAIN Eco and Pro has improved, further alignment is needed to ensure synergies are captured and lessons are shared systematically. Knowledge products, from the Kilombero NbS Strategy to assessment reports and radio campaigns, are helping to raise visibility but internal learning mechanisms need to be more deliberate. There is also room to improve documentation of what works, particularly in relation to landscape-level governance, behaviour change, and effective partnerships. Communications should aim not only to inform but also to influence decision-makers and strengthen partner cohesion.

The next year will focus on consolidating these lessons, refining monitoring systems, and enhancing cross-landscape learning, ensuring that SUSTAIN Eco meets its strategic objectives for inclusive, climate-resilient, and ecosystem-based landscape management.



© Clarence Msafiri, planted seedlings at a terraced slope in Vidunda, Kilombero landscape

Looking ahead to 2025

As SUSTAIN Eco enters the final 18 months of implementation of the current phase, 2025 will be a critical period for consolidating results, deepening impact, and securing the programme's legacy across Tanzania's Kilombero and Sumbawanga landscapes. Building on the progress and lessons of 2024, the focus will shift to strategic integration, institutional embedding, and scalable investment.

Under **Outcome 1**, efforts will centre on strengthening multi-level governance structures to ensure inclusive and accountable natural resource management. IUCN, AWF, and SNV will continue supporting Water User Associations (WUAs), Village Natural Resource Committees (VNRCs), and district platforms through targeted training on participatory enforcement, financial oversight, and integrated planning. Special attention will be given to formalising Multi-Stakeholder Partnerships (MSPs) into permanent structures and aligning them with district and national development frameworks. Gender and youth inclusion will remain a priority, with tailored workshops and a capacity-building initiative in May 2025. SNV's introduction of citizen science tools for water quality and illegal abstraction monitoring will strengthen local enforcement, while IUCN will advance a policy influencing strategy to elevate lessons to national fora.

For **Outcome 2**, the programme will scale up proven CSA and NbS interventions, focusing on restoring riparian zones, enhancing agroforestry systems, and reducing pressure on ecologically sensitive areas. SNV will promote sustainable grazing and complete climate adaptation mapping to guide future restoration planning. AWF will develop and implement a comprehensive management plan for the Vidunda sub-catchment, while also expanding safe agrochemical waste management practices and Farmer Field Schools. IUCN will support cross-village monitoring missions and work with cooperatives and businesses to promote sustainable practices using the Inclusive Green Growth (IGG) toolkit. Across both landscapes, new demonstration plots and local action plans will serve as vehicles to institutionalise land restoration while improving livelihoods – especially for women, youth, and vulnerable groups.

Under **Outcome 3**, SUSTAIN Eco will operationalise sustainable financing models for ecosystem protection and restoration. IUCN will finalise the Kilombero Nature-based Solutions (NbS) Strategy and scale it as a planning tool, while continuing riparian and invasive species restoration. COCOBA groups will receive targeted support, alongside exploration of carbon markets and PES schemes. AWF will advance PES design and integrate conservation enterprises within agroforestry systems. SNV will reinforce beekeeping and riverbank restoration initiatives while piloting channel rehabilitation with green-grey infrastructure. These efforts will be complemented by continued investor engagement and business case validation, linking to the broader CEOrt-led Green Finance Campaign.

Cross-Cutting: Knowledge, MEL and Communications

The Water and Wetlands Team will be leading the rollout of peer-reviewed and grey publications, campaign materials, and a suite of videos and infographics highlighting project stories and evidence. A media campaign will

run to elevate the visibility of SUSTAIN and create a lasting digital footprint. MEL efforts will focus on data capture, reflection, and communication of results through Power BI dashboards, stories of change, outcome harvesting, and the broader application of the Land Health Monitoring Index (LHMI). Preparations for the management response for the SUSTAIN Eco MTR will begin in early 2025 to assess programme impact and formulate lessons for future scaling. In 2025, we will also prioritise engagements with key partners including SAGCOT, CEOrt, KSC, and national policy actors, ensuring ownership and uptake of tools, models, and frameworks piloted under SUSTAIN Eco.



© SUSTAIN, school children in Vidunda learn about restoration, Kilombero landscape

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