

Lessons Learned from the Resilient Food Systems Programme



Acknowledgements

Resilient Food Systems

Lessons Learned from the Resilient Food Systems Programme
2023

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Learn more about the Workshop on the [RFS website](#).

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Contents

Acronyms & Abbreviations	1
Foreword	2
Executive Summary	4
Anatomy of the GEF Programming on Fostering Resilience and Sustainability for Food Security	6
ENGAGE	
Chapter 1 Bridging Science and Policy to Enhance Resilience and Food Security	12
Lessons learned from the RFS “Engage” workstream to advance the integrated approach	21
ACT	
Chapter 2 Catalysing green value chain development	22
Chapter 3 Best practices in social engineering for land restoration	29
Lessons learned from the RFS “Act” workstream to advance the integrated approach	37
TRACK	
Chapter 4 Innovation in ecosystem services assessment	39
Chapter 5 Measuring resilience in a multi-country programme	46
Lessons learned from the RFS “Track” workstream to advance the integrated approach	56
PROGRAMMATIC STRUCTURE	
Chapter 6 Programmatic value addition, additionality and achievements	58
Lessons learned from the programmatic structure to advance the integrated approach	66
Conclusions	70
References	73

Acronyms & Abbreviations

AGRA	Alliance for a Green Revolution in Africa	LDSF	Land Degradation Surveillance Framework
APFS	Agro-Pastoral Field School	M&E	Monitoring and Evaluation
CDP	Chiefdom Development Plan	MSP	Multi-stakeholder platform
CI	Conservation International	NDC	Nationally-Determined Contributions
CIAT	The International Centre for Tropical Agriculture	Neer-Tamba	Participatory Natural Resource Management and Rural Development Project
CIFOR-ICRAF	Center for International Forestry Research and World Agroforestry	NGO	Non-governmental organisation
COP	Conference of the Parties	PAR	Platform for Agrobiodiversity Research
COVID-19	Coronavirus 2019	PARFA	Agricultural Value Chains Resilience Support Project
CSA	Climate-Smart Agriculture	PCU	Programme Coordination Unit
CSARL	Climate-Smart Agriculture for Climate-Resilient Livelihoods	PRIDE	Programme for Rural Irrigation Development and Empowerment
ERASP	Enhancing the Resilience of Agro-ecological Systems Project	ProDAF	Family Farming Development Programme
ESWADE	Eswatini Water and Agricultural Development Enterprise	RFS	Resilient Food Systems
EX-ACT	EX-Ante Carbon-balance Tool	RMF	Results Monitoring Framework
FAO	Food and Agriculture Organization of the United Nations	SHARED	Stakeholder Approach to Risk Informed and Evidence Based Decision Making
FFS	Farmer Field School	SLM	Sustainable Land Management
GEB	Global Environmental Benefit	SMLP	Smallholder Market-Led Project
GEF	Global Environment Facility	TAG	Technical Advisory Group
GHG	Greenhouse gases	UNCCD	United Nations Convention to Combat Desertification
IAP	Integrated Approach Pilot	UNDP	United Nations Development Programme
ICRAF	World Agroforestry	UNEP	United Nations Environment Programme
IFAD	International Fund for Agricultural Development	UNFCCC	United Nations Framework Convention on Climate Change
INERA	Institute of the Environment and Agricultural Research	UTNWF	Upper Tana-Nairobi Water Fund
LDN	Land Degradation Neutrality		
LDFS	Reversing Land Degradation trends and increasing Food Security in degraded ecosystems of semi-arid areas of central Tanzania		

Foreword



Jean-Marc Sinnassamy

*Senior Environmental Specialist
Program Manager at the GEF Secretariat*

The Resilient Food Systems Programme has been one of the three pilot programs of the sixth replenishment cycle of the Global Environment Facility (GEF6) to test integration modalities. It aimed to promote sustainability and resilience among smallholder farmers through the sustainable management of natural resources – land, water, soils, and genetic resources – that are crucial for food security.

I have been very pleased to be involved since the first steps of its design at the beginning of GEF6 until now. The Resilient Food Systems Programme represents an operational example of how the global environmental agenda and local concerns of smallholder farmers are connected. Additionally, it shows how smallholder farmers and their organizations can contribute both to the generation of global environment benefits, resilience, and food security together.

The partnership between the GEF and IFAD worked well: IFAD was able to demonstrate its comparative advantage on this innovative subject; the resources from the GEF for the global environment matched very well those from IFAD for smallholder

agriculture and adaptation; IFAD was able to develop multiple partnerships with CIFOR-ICRAF and others; the seven projects developed by IFAD (alone or in association with other GEF agencies) served to create a momentum for the entire Resilient Food Systems Programme.

The Regional Coordination Project or regional hub has fulfilled its functions to provide Knowledge and Management Services. I will have personally taken several lessons from the work on gender equity and from the annual workshops and field visits that provided incredible moments of sharing. This publication will give you a good hint of what is available: more than 230 knowledge products are now referenced on the website.

Finally, this programme's success is due in no small part to the humans involved. I would like to thank all those who made the extra-effort to make integration a reality in the landscapes, the institutions, and the way of working. A special thanks to Jonky Tenou, Task Manager at IFAD and Rodrigo Ciannella, Coordinator at CIFOR-ICRAF. I would also like to pay tribute to Dr. Gustavo Fonseca (1956-2022), GEF's Global Program Unit Director, who pioneered the notion of integration at the GEF.



Jonky Yawo Tenou

Task Manager of the Resilience Food Systems Programme at IFAD

This publication is the result of over six years of hard work dedicated to implementing the Resilient Food System Program (RFS).

The RFS program is a flagship initiative that integrates various approaches. It is the product of a collaboration between the GEF and the International Fund for Agricultural Development (IFAD), along with other GEF Implementing agencies and executing partners at country and regional levels. These partners brought together their comparative advantages, expertise, and resources and worked closely to achieve the exciting results presented in this publication.

As the Task Manager of RFS at IFAD, I am proud to have been part

of this adventure. The program induced transformations in twelve participating countries, at different levels of intervention. It also significantly strengthened frameworks for policy dialogue and decision-making through consistent support from our regional partners. Our partnership with regional platforms, including the African Union Commission, resulted in promoting the integrated approach and bridging science to policy.

Despite the inherent challenges and complexities of the RFS design and implementation, we have gained a lot of lessons through a range of practices, innovative approaches, and tools developed, promoted, and documented. Vibrant communities of practice, knowledge platforms, and learning mechanisms were created to ensure that these lessons will continue to guide our current and future operations.

The present publication on the selected themes retraces the transformations that happened on the ground under RFS and some lessons learned from our collective efforts to strengthen rural communities' resilience. It also shows the programmatic value-addition of the RFS and how it was harnessed through case studies drawn from the experience of the country projects across the RFS critical components.

I would like to express my gratitude to our regional partners, country project teams, and consultative committee members for their engagement and support over the six years of implementation of RFS. I want to extend a special thanks to Mr. Rodrigo Ciannella, the PCU Coordinator at ICRAF, for his critical role in delivering the program and to Mr. Jean-Marc Sinnassamy, the GEF focal point of RFS, for his leadership and flexibility.

I am sincerely thankful to my IFAD colleagues, especially those at in the Environment, Climate, Gender and Social Inclusion division (ECS), the East and Southern Africa division (ESA) and the West and Central Africa division (WCA), with whom I have worked closely. Their support, advice, and positive energy have helped me grow professionally. It was a pleasure to work with them, learn from them, and, most importantly, deliver on IFAD's commitment to the RFS.

Lastly, I would like to pay tribute to those who greatly contributed at the start of this journey, Mr. Gustavo Fonseca, Director of Programs at the GEF Secretariat and Ms. Evelyn Ndenga, the former RFS coordinator at Conservation International.

Executive Summary

Integrated Approach Pilot (IAP) programmes were conceived as part of the Global Environment Facility (GEF) 2020 Strategy to test the delivery of integrated approaches that address discrete, timebound, complex, global environmental challenges. In its Sixth Replenishment Cycle (GEF-6), three IAPs were funded: Sustainable Cities, Taking Deforestation out of Commodity Supply Chains, and Fostering Sustainability and Resilience for Food Security in Sub-Saharan Africa, also known as the Resilient Food Systems (RFS) programme.

The RFS programme serves as an outstanding example of different partners and countries with distinct mandates joining forces to pursue a shared objective, leveraging their respective strengths to transform food systems in Africa. It highlights the significance of clearly articulating the programme's vision, establishing a well-defined division of labour, and delineating roles and responsibilities from the outset, forming the foundation for an accountability framework. Moreover, the RFS underscores the importance of adopting a nexus approach that integrates food security, agriculture, environment, socio-economic, and climate considerations.

This holistic approach recognizes the interconnectedness of these sectors and the need for holistic solutions. The RFS's systems-based approach brings together multiple partners at different levels and fosters information flows in

both directions, supporting collaboration and knowledge sharing.

This publication presents some of the main lessons learned from the RFS programme, which lasted for six years between 2017 and 2023. It provides a reflection on the implementation, lessons learned, and observations around the key components of the RFS. The programmatic value-add of the RFS and the manner with which it was harnessed during implementation is conveyed through case studies drawn from the experience of the country projects across these components.

Successfully **Engaging** for ecological restoration and resilient food systems across multiple scales

The integrated approach was successful in establishing inclusive and collaborative spaces within country projects, as testified by the multiple occasions through which stakeholders including governments, producers, and the private sector could work together to advance policy for food security and harness best practices in land restoration. Across the 12 RFS countries, a total of 11 multi-stakeholder platforms were established at the national level, 88 at the district/landscape level and 1,177 at the local level. The policy engagement activities have resulted in a total of 14 Natural Resource Management policy instruments and

regulatory frameworks having been reviewed and harmonised. A total of 33 intra-country learning exchanges were organised over the five-year duration of the programme. Collaborative spaces were also fostered between countries, with a total of 9 South-South exchanges taking place between different RFS country projects, which led to the uptake of innovative practices.

Acting towards global environment benefits

The RFS programme has resulted in sizeable global environmental benefits, having reached by June 2023¹ a total of:

- 56,707 ha of terrestrial protected areas (Core indicator 1.2)
- 338,079 of land restored (Core indicator 3)
- 1,204,994 ha of landscapes under improved practices (core indicator 4) including:
 - 736,611 ha of landscapes under improved management to benefit biodiversity (Core indicator 4.1)
 - 468,383 ha of landscapes under sustainable management in production systems (Core indicator 4.3)

¹ At the time of publishing this report, some of the RFS country projects were still finalising their activities and/or completing reports, so the results presented in this paper are expected to have been exceeded by the end of 2023.

- 21,668,519 metric tonnes of CO₂ equivalent of GHG mitigated (Core indicator 6)²
- 4,326,808 individual beneficiaries (Core indicator 11) were reached by project activities, of which 45% were women.

In addition, a dedicated work stream focused on value chain development has resulted in 22 sustainable value chains either emerging or already financially benefiting farmers. **Close to 70,000 farmers across the 12 countries reported an increase in yields or animal production equal or above 10% as a result of green value chain development.** Important lessons were learned in terms of optimising approaches to greening value chains, such as ensuring the readiness of all actors across the value chain when issuing catalytic grants and ensuring these are well connected to country project activities.

Tracking the resilience of food systems

The IAP did not aim to track the resilience of food systems across 12 countries in a uniform manner, given the highly heterogeneous set of preferences and approaches adopted by governments and other partners. Instead, it designed and advocated for the adoption of a common resilience monitoring and assessment framework. In recognition of the different local contexts and national prerogatives when it comes to conducting project activities,

the IAP was similarly not prescriptive in terms of the monitoring tools to be used by projects. Countries gained from their exposure to a highly-diverse number of tools and many adopted new ones which are now commonly used by government entities. At the time of compiling this report, a total of 41 agencies at the national and sub-national level were making use of tools recommended by Regional Hub partners to monitor and assess resilience. Despite the success of a few tools, such as the EX-Ante Carbon-balance Tool (EX-ACT), which was adopted by 11 country projects to measure GHG mitigation, overall the diversity in the uptake of tools did not allow for a comparable measurement of real-world resilience across all countries. The programme's additionality was constrained by this inability to systematically capture emergent and systemic change and this publication is rich in lessons learned on how to improve the tracking of resilience in future integrated approaches.

Although the “Engage, Act, Track” approach, which describes the programmatic Theory of Change, was consistently adopted across all projects to cement the integrated approach, the RFS suffered throughout its lifespan from the disconnect between the regional component and the country projects, which were designed asynchronously. While the relevance and effectiveness of the programme are clearly demonstrated through multiple examples across this publication, the RFS highlights

the criticality of establishing robust linkages between individual country-level projects and the service offerings of a central mechanism like the Regional Hub project. Proactive engagement in demand creation emerges as a key learning outcome, ensuring that the specific services provided by the Regional Hub to beneficiary countries align with their needs.

Although the high number of agencies involved in the implementation of the RFS has been decried as a drawback in the RFS design as it complexified delivery, these agencies have through the RFS secured legacy beyond the GEF portfolio. For instance, a total of 2,211 Farmer Field and Agro-Pastoral Field Schools (FFS/ APFS) established under RFS are now added to the Global Farmer Field Schools Platform which gathers a thriving network of FFS across 136 countries. The FAO's work has resulted in Governance of Tenure being systematically integrated within UNCCD (**technical guide**) and follow-up GEF programmes.

And finally, within each agency and country project team, the skills of community champions and facilitators to bring integrated approaches from paper to reality have been honed and will add value to future integrated approaches.

² At the time of writing this publication, work was underway by the FAO EX-ACT team to cross check the GHG values shared by countries in order to assess their robustness. Findings will be shared through IFAD and GEF.



QUICK LINKS

ENGAGE

Page 12

Lessons learned from the RFS “Engage” workstream to advance the integrated approach

Page 21

ACT

Page 22

Lessons learned from the RFS “Act” workstream to advance the integrated approach

Page 37

TRACK

Page 39

Lessons learned from the RFS “Track” workstream to advance the integrated approach

Page 56

PROGRAMMATIC STRUCTURE

Page 58

Lessons learned from the RFS programmatic structure to advance the integrated approach

Page 66

Anatomy of the GEF Programming on Fostering Resilience and Sustainability for Food Security

Jean-Marc Sinnassamy, Mohamed Bakarr & Peter Umunay (GEF)

INTRODUCTION

Agriculture and food systems are essential for the health, food security and nutrition, and economic well-being of humanity on the planet. There is evidence that the **challenge of food security in Africa** will intensify in the coming decades and climate change will likely exacerbate the risk facing agriculture systems in Africa. Demand for food in the African continent will increase sharply with the increase in population, a chronic food deficit, the lowest crop yields in the world, and poor soil quality. Tackling food security challenges in isolation will not deliver the desired shift toward sustainability and resilience for the African continent and the planet. Such a shift calls for collective engagement by diverse actors involved in food production and value chains.

As African countries increasingly embrace intensification and modernisation of agriculture, it is important to draw lessons from the Asian Green Revolution with respect to environmental consequences – both good and bad. Yet there are no comparative efforts to integrate environmental priorities, including the growing risks associated with climate change, which will undermine the continent’s fragile ecologies with consequences for the long-term sustainability of food security investments; these actions will have major long-term implications

for livelihoods of the continent’s poor and vulnerable, especially women.

Intensification through high-yielding varieties, chemical fertilisers, and extensive irrigation can result in considerable increases in yields, but in many cases the environmental costs may overwhelm the benefits. In Africa, water scarcity and soil erosion will be exacerbated by climate change. Sustainable intensification in Africa therefore demands innovations to keep the water flowing and the soil healthy, and to maintain indigenous and adaptive crop varieties and livestock breeds on which millions of smallholder farmers depend for their survival. These priorities are also essential for ensuring the resilience – ability of a system to maintain objectives or functions in the face of stressors and shocks – of smallholder agriculture for food security. These can only be achieved if countries have supportive policies and institutional frameworks to facilitate scaling up, and access to knowledge and tools for safeguarding ecosystem services.

Against this backdrop of challenges and opportunities, the Global Environment Facility (GEF) in its Sixth Replenishment Cycle (GEF-6), launched an Integrated Approach Pilot (IAP) programme on fostering sustainability and resilience for food security in Africa.

Building on two-decade experience of investing in food and agriculture projects, the IAP programme was intended to introduce **integration** as a new way of investing in global environmental benefits that addresses multiple dimensions of the agriculture and food system.

The programme, since rebranded as Resilient Food Systems programme (RFS), was specifically designed and conceptualised to tackle drivers of environmental degradation in smallholder agriculture and food systems in the dryland regions of sub-Saharan Africa where the impacts of such degradation are further exacerbated by climate change. The focus was on supporting countries in the region to promote holistic approaches to management of the natural capital (land, water, soils, trees and genetic resources) that underpin food security. Through the approach, the GEF was seeking to establish the management of natural capital as a priority in ongoing and planned efforts to transform smallholder agriculture and ensure sustainable food production in sub-Saharan Africa.

BOX 1. RFS INSTITUTIONAL FRAMEWORK

The Food Security IAP was designed to include a dual institutional framework to support regional coordination as well as individual country-level coordination for the purpose of integrating natural capital management and ecosystems services to foster resilient agricultural production. The programme was steered by the Regional Hub project (the “Hub”), through the establishment of the Project Coordinating Unit (PCU) - hosted at ICRAF and supervised by IFAD - and a Consultative Committee.

Twelve countries were selected upon a competitive process to develop country projects for improving smallholder farming and food security: Senegal, Burkina Faso, Niger, Nigeria, Ghana, Ethiopia, Kenya, Uganda, Burundi, Tanzania, Malawi, and Eswatini. IFAD was the lead GEF Agency for the whole IAP and worked closely with CIFOR-ICRAF, UNEP, FAO, UNDP (and AGRA), Conservation International, the Alliance of Bioversity International and CIAT, UNIDO and the World Bank in implementing the cross-country components of the programme. Agencies were in charge of overseeing project implementation within given country projects as well as their specific components.

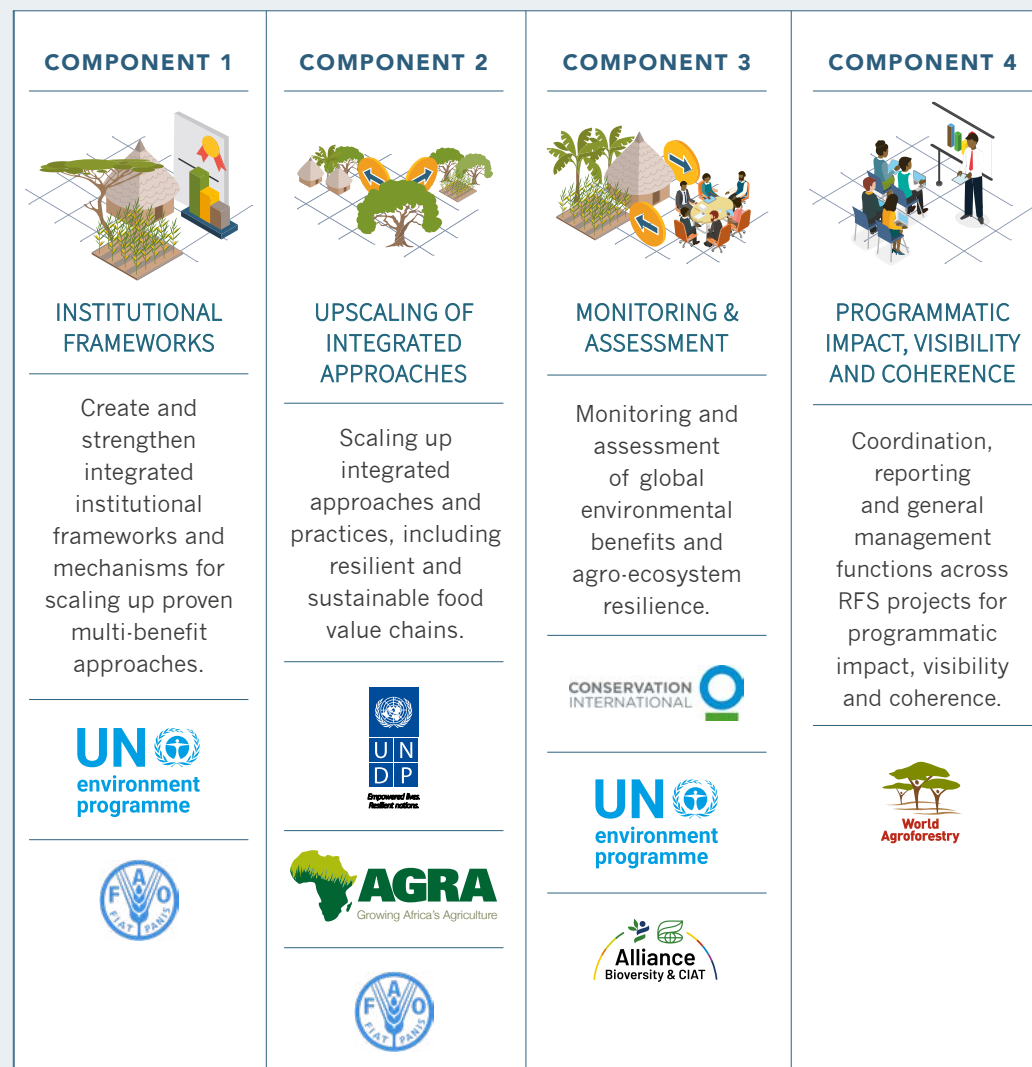


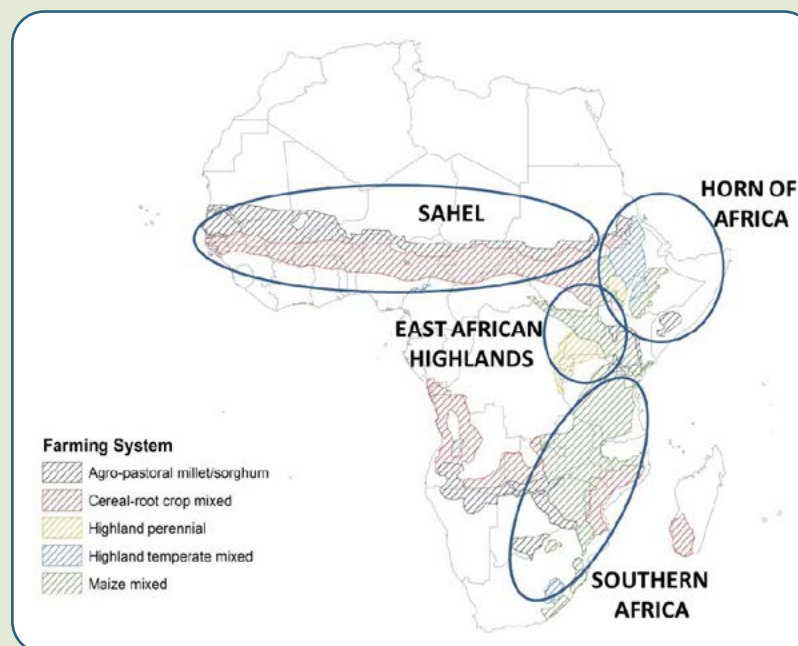
Figure 1. RFS Regional Hub components

PROGRAMME DESIGN PRINCIPLES AND THEORY OF CHANGE

The integrated approach to fostering sustainability and resilience considered production and post-production, and markets for smallholder farmers, who account for more than 70% of agricultural production in the region. The programme targeted specific geographies with areas prone to environmental crisis leading to food insecurity; that have potential for leveraging significant investments; that are ripe for scaling-up based on evidence and with some success to build on; and with evidence of public sector engagement demonstrating ownership and sustainability.

Based on these criteria, the following geographies were prioritised:

- **Sahel** – Focus on the Guinea-Savanna dominated by maize-mixed and agro-pastoral systems
- **Eastern Africa Highlands and Horn of Africa** – Mainly areas dominated by mixed and perennial farming systems, with high population densities, with an estimated 70 million people, including pastoralists living in areas prone to extreme food shortages
- **Southern Africa** – Focusing on the crop-livestock systems in the sub-humid zone, with maize as the dominant food crop



Agroecological context	RFS countries
Sahel	Burkina Faso, Senegal, Ghana, Niger, Nigeria
Eastern and Horn of Africa	Burundi, Ethiopia, Kenya, Uganda
Southern Africa	Malawi, Eswatini, Tanzania

Figure 2. The agroecological contexts of RFS country projects.

These geographies are also areas where options and approaches with smallholder farmers were possible for improvement and scaling up: soil health and water conservation, diversification of production systems, integrated natural resource management in agropastoral systems, increasing resilience and stability.

To advance the integration agenda, the GEF proposed four key design principles for the programme, which included:

1. demonstrating the value-add of the GEF,
2. creating institutional frameworks for stakeholder engagement,
3. dealing with complexity, and
4. promoting systemic shifts.

In addition, the design prioritized cross-cutting issues to amplify the impacts – gender mainstreaming, resilience, stakeholder engagement, leveraging the private sector, and knowledge management and learning.

The Theory of Change of the RFS programme was anchored on three main components as pathways for advancing sustainability and resilience:

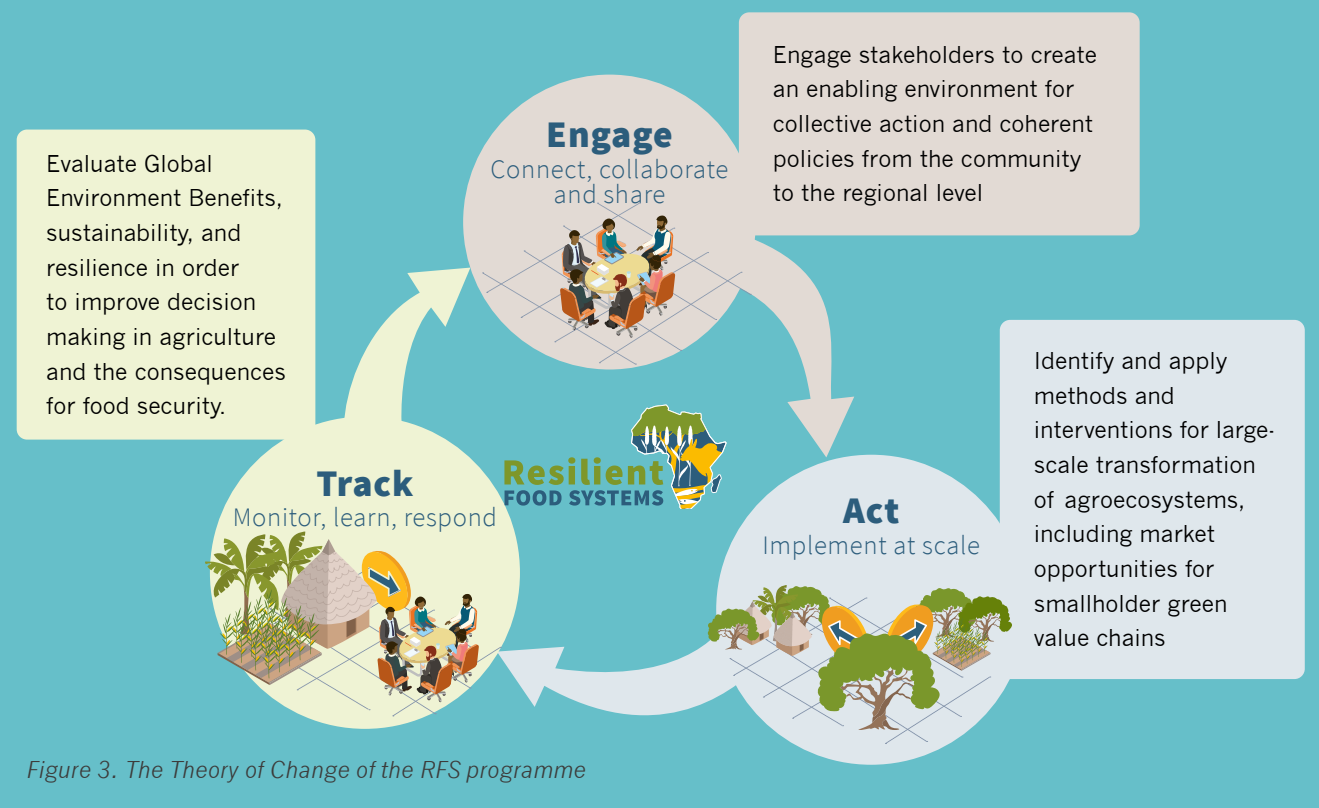


Figure 3. The Theory of Change of the RFS programme

PROGRAMME DESIGN FRAMEWORK

To maximise potential for delivering programme outcomes and impacts in holistic and coherent manner, the programme operated at two levels:

Country level – Across the target geographies, twelve countries were selected through a competitive process to design country projects under the

programme. Each of the countries also targeted specific landscapes where practices will be promoted for long-term sustainability and resilience of food production, and contribute to reducing land degradation and biodiversity loss, recovering natural vegetation, and increasing soil

carbon. The programme Theory of Change and framework was applied in every country project to ensure coherence and consistency in the delivery.

Regional level – A dedicated regional project was designed to provide overall coordination and specific activities for delivery at regional and country levels, including south-south exchanges, collective action, and dissemination of scientific knowledge and best practices to inform policy dialogue.

INSTITUTIONAL FRAMEWORK FOR PROGRAMME DELIVERY

IFAD was selected to serve as Lead GEF agency to the programme, which included oversight of a Programme Coordinating Unit (PCU) established through the regional project. At country level, IFAD served as agency for seven country projects either alone (Burkina Faso, Kenya, Malawi, Niger, Eswatini, Tanzania), or in association with UNIDO (Senegal). Other GEF agencies selected by countries included FAO (Burundi), UNDP (Ethiopia, Nigeria), FAO-UNDP (Uganda) and World Bank (Ghana).

At the regional level, IFAD engaged CIFOR-ICRAF as technical partner and host of the Regional Hub for knowledge and learning, UNEP, CI, UNDP, FAO, AGRA, and Bioversity International, who all collectively worked to deliver components of the regional project, while providing support to country teams.

COUNTRY PROJECTS

Our twelve country projects are located in the dryland regions of sub-Saharan Africa. This area is extremely vulnerable to environmental degradation and climate change. In line with the broad approaches of the RFS programme, each country project invests in safeguarding the environment, advancing food security and improving the livelihoods of the people affected by their activities.

SENEGAL

Agricultural Value Chains Resilience Support Project

GEF financing (million \$)
7.219

Co-financing (million \$)
28.54

GHANA

Sustainable Land and Water Management Project

GEF financing (million \$)
12.768

Co-financing (million \$)
22.0

NIGERIA

Integrated Landscape Management to Enhance Food Security and Ecosystem Resilience in Nigeria

GEF financing (million \$)
7.139

Co-financing (million \$)
57.0

BURKINA FASO

Participatory Natural Resource Management and Rural Development Project

GEF financing (million \$)
7.923

Co-financing (million \$)
35.9

ETHIOPIA

Integrated Landscape Management to Enhance Food Security and Ecosystem Resilience

GEF financing (million \$)
10.239

Co-financing (million \$)
144.0

KENYA

Upper Tana-Nairobi Water Fund

GEF financing (million \$)
7.201

Co-financing (million \$)
61.05

UGANDA

Fostering Sustainability and Resilience for Food Security in Karamoja Sub-Region

GEF financing (million \$)
7.139

Co-financing (million \$)
52.9

BURUNDI

Support for Sustainable Food Production and Enhancement of Food Security and Climate Resilience in Burundi's Highlands

GEF financing (million \$)
8.062

Co-financing (million \$)
45.05

TANZANIA

Reversing Land Degradation trends and increasing Food Security in degraded ecosystems of semi-arid areas of central Tanzania

GEF financing (million \$)
7.155

Co-financing (million \$)
52.96

MALAWI

Enhancing the Resilience of Agroecological Systems

GEF financing (million \$)
7.155

Co-financing (million \$)
87.4

NIGER

Family Farming Development Programme

GEF financing (million \$)
7.636

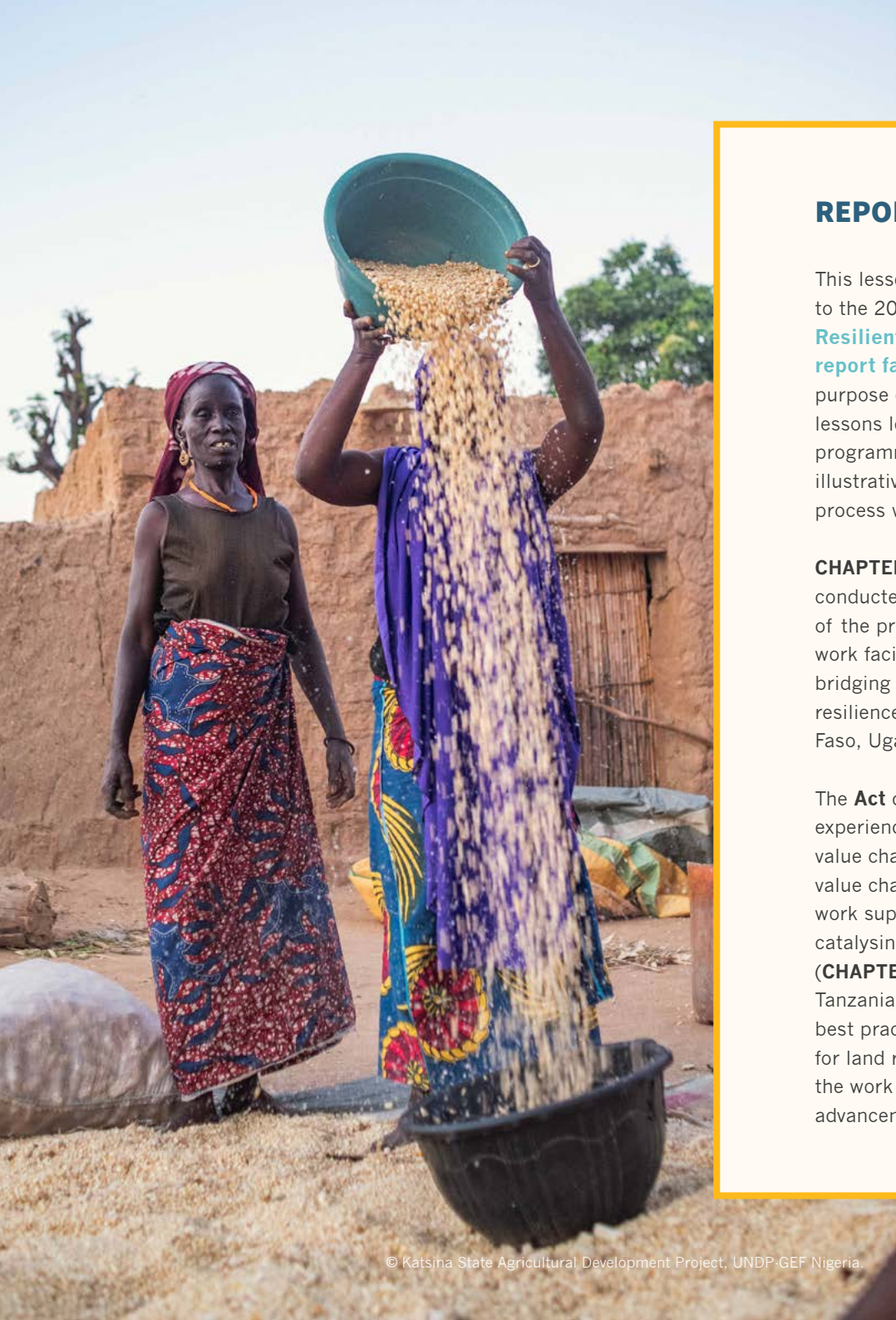
Co-financing (million \$)
60.32

ESWATINI

Climate-Smart Agriculture for Climate Resilient Livelihoods

GEF financing (million \$)
7.211

Co-financing (million \$)
48.0



© Katsina State Agricultural Development Project, UNDP-GEF Nigeria.

REPORT PURPOSE AND OUTLINE

This lessons learned report is a follow up to the 2021 [Emerging Lessons from the Resilient Food Systems Programme report facilitated by the GEF](#). The purpose of this report is to gather lessons learned from across the RFS pilot programme, and consolidate them through illustrative case studies in a co-creative process with RFS stakeholders.

CHAPTER 1 outlines the work conducted in the **Engage** component of the programme, with a focus on the work facilitated by the UNEP and FAO in bridging science and policy to enhance resilience and food security in Burkina Faso, Uganda and Nigeria.

The **Act** component brings forth experiences in developing sustainable value chains, starting with the honey value chain in Malawi and followed by the work supported by UNDP and AGRA in catalysing green value chain development (**CHAPTER 2**) in Burkina Faso and in Tanzania. This section also highlights best practices in social engineering for land restoration as exemplified by the work done by Niger in stopping the advancement of the desert and what

Tanzania has done through participatory land governance (**CHAPTER 3**).

Moving onto the **Track** component, the paper looks at the innovations pioneered in ecosystem services assessments as exemplified by the use of the Land degradation Surveillance Framework (LDSF) led by CIFOR-ICRAF in Eswatini, the development of an ecosystem services payment system, giving rise to the Upper Tana-Nairobi Water Fund (UTNWF) in Kenya, and the Platform for Agrobiodiversity Research (PAR) in partnership with the Alliance of Bioversity International & CIAT through the Diversity Assessment Tool for Agrobiodiversity and Resilience (DATAR) tool (**CHAPTERS 4**).

CHAPTER 5 presents the framework developed by Conservation International in measuring resilience (Senegal and Ethiopia case studies), with the value addition of the SHARP+ tool in measuring the resilience of agri-systems that was run in Burundi.

CHAPTER 6 expands on the programmatic value add and additionality of the programme, and brings forth best practices and lessons learned to convey the programmatic impact visibility of RFS.



ENGAGE

Chapter 1: Bridging Science and Policy to Enhance Resilience and Food Security

Co-written with Lilian Goredema (FAO) &
Grace Anyango Obuya (UNEP)



At the regional level, the Hub was tasked through its Component 1 to facilitate the Engage workstream of the programmatic Theory of Change. This means linking with policy and scientific platforms to support dialogue and advocacy for mainstreaming ecosystem services, climate resilience and gender-sensitive approaches to food security, and supporting policy and institutional innovations. Various interventions were undertaken at the regional and sub-regional scales as per this activity to influence decision-making, based on good practices. Therefore, the focus of this component is the facilitation of dialogue, models, policies and institutions, which bridge the agricultural and environmental agendas and constituencies, at various scales.

UNEP and FAO jointly implemented Component 1 by facilitating multi-stakeholder exchange mechanisms for the 12 RFS countries, providing guidance and tools on best practices for integration of science in policies and regulatory frameworks, and by providing technical support to RFS projects. With UNEP leading the science-policy interface and related interventions at the country level as requested by country projects, UNEP supported 8 countries through in-person capacity building. The missions yielded useful information identifying gaps on policy intervention on food security and integrated natural resource management. FAO also utilised networks and platforms that the organisation leads or is involved in, to provide venues for RFS countries to exchange knowledge, profile their policy and science best practices, as well as to provide input into regional and international policy processes. This includes the **Global Farmer Field School Platform** (see Box 2).

Additionally, case studies from RFS countries shared in this chapter demonstrate the linkages between regional and national processes that were supported within the RFS.

BOX 2. THE GLOBAL FARMER FIELD SCHOOL PLATFORM

Farmer Field School (FFS) is an approach based on people-centred learning. FFS first started in Asia in the late 1980s. Since then, FAO and other development organisations have been promoting FFS to address a broad range of problems and technical domains in over 90 countries. FFS improved the skills of over 20 million farmers, pastoralists and fisher folks in the world, evolving to address a range of topics from IPM to sustainable production systems, agro-pastoralism, value chains, nutrition and life skills. FFS activities are anchored in non-formal adult education approaches, enabling learning through direct experience, integrating scientific insights into local knowledge systems. The FFS approach enables people, household and community empowerment.

A total of 2,211 FFS and Agro-Pastoral Field Schools were set up over the duration of the programme, benefitting over 104,000 farmers. Through the RFS, FAO was also able to build a dynamic and perennial Global FFS Platform to facilitate further uptake and impacts of FFS programmes globally. Through a website, online discussion-group and key networks at global, regional, and institutional levels, the Global FFS

Platform enabled thousands to learn and understand why and how FFS can contribute to SDGs and smallholders' empowerment. In 2022, the Global FFS Platform produced 15 news products reflecting needs and priorities for enhancing smallholders' competences and collective action, including via stocktaking of how FFS can increase food systems sustainability via agroecology, forestry, value chain development and gender transformation. The cohesive structure and vast library of knowledge products from the Platform has seen it mainstreamed into the GEF portfolio, and it is being taken forward in multinational dialogue and in the GEF-8 toolbox.



TRACKING SDG IMPLEMENTATION

As a pilot during RFS implementation and as part of regional initiatives from the 2030 Agenda, UNEP capacitated National Environment Information Network (NEIN) focal points on the use of the National Environmental Summaries (NES) tool. The portal was developed as an interactive online tool for all actors in the national environmental situation analysis to participate in production of Common Country Assessments (CCAs), NES, and State of Environment and Outlook reports, as well as other integrated/thematic assessments. The initiative seeks to ensure consistency and focus for the different national teams inputs into the process. It will also boost the Sustainable Development Goals (SDG) reporting methodologies in Africa while increasing the uptake of science for transformative action on the triple planetary crises – climate change, biodiversity and nature loss, and pollution and waste. The overall UNEP initiative targets at least 19 African countries in the current phase, while subsequent phases will aim to include all countries in the region. RFS countries who have successfully harnessed this approach include [Kenya](#) and [Tanzania](#), who are joined by their peers in [South Sudan](#), [Eritrea](#), [Benin](#), [Botswana](#), [Egypt](#) and [Zambia](#), among others.

Policymakers can use the science-based standards produced by these data in order to guide environmental interventions for development efforts to be sustainable and bend the curve of environmental degradation - see the above mentioned country reports for details. The portal streamlines the presentation of data gathered, analysed, and interpreted at the sectoral level, and

its integration at the national level. The statistical approach employs simple correlation analyses related to the state of the environment and drivers of change, and the state of the environment and the state of society, to improve the understanding of the interlinkages between SDG indicators. It also emphasises the importance of data disaggregation and fully populated SDGs to understand environmental and socio-economic interactions, and opportunities using innovative data techniques to close data gaps.

RESPONSIBLE GOVERNANCE OF TENURE FOR LAND DEGRADATION NEUTRALITY

The FAO supported the UNCCD Secretariat to produce a [technical guide](#) on integrating Voluntary Guidelines on Responsible Governance of Tenure on Land, Fisheries and Forest in the context of National Food Security (VGGT) into the implementation of the Convention in order to achieve the target of Land Degradation Neutrality (LDN). FAO in collaboration with UNCCD organised a series of inclusive multi-stakeholder e-consultations for preparation of the guide. Land degradation neutrality and responsible land governance are pillars for the integrated implementation of the 2030 Agenda. Implementing the VGGT principles in policy and practice and implementing LDN projects and programmes are both inherently complex and challenging.

Governance of Tenure offers a foundation for managing natural resource use sustainably in a way that supports long-term conservation outcomes,

while simultaneously promoting local resilience and sustainable livelihoods. Supporting rural communities to secure and scale up land rights can reduce the risk of land grabs and develop new opportunities for conservation.

The FAO also collaborated with the UNCCD Secretariat and the FAO Land and Water Division to create a platform for sub-Saharan African experiences and learning from the RFS and the EU Land Governance Programme in Africa to inform and refine the draft technical guide and its nine pathways. Through RFS, the FAO Land and Water Division and the UNCCD conducted an [awareness and capacity building webinar series in 2021](#), which facilitated learning and experience sharing among 17 sub-Saharan African countries. The African Union's Land Policy Centre contributed to the conceptualization of the webinar series. The [UNCCD COP15 Advance Copy](#) under the section on Policy Frameworks and Thematic Issues (p.8) acknowledged the input into the technical guide through the webinar series. Outcomes and messages from the process were incorporated into the [technical guide which was published in 2022](#).

AT COUNTRY LEVEL

The subsequent case studies of Uganda, Burkina Faso and Nigeria bring forth the importance of co-designing evidence-based policy intervention, identifying strategic entry points in conceiving policy support measures and leveraging multi-stakeholder platforms to mobilise action.

1.1 Case Study

Feeding the Future of Sustainable Land Management for Food Security Through Effective Stakeholder Engagement, Access to Finance and Technology Services

Co-written with Paul Emuria (FAO, RFS Uganda) & Sarah Mujabi (UNDP, RFS Uganda)



UGANDA



Duration:

February 2018 -
February 2024

Cost:

7,139,450
GEF Grant,
2,334,881
Disbursement
(USD)

Number of Beneficiaries:

18,888

BACKGROUND

The RFS Uganda project **Fostering Sustainability and Resilience for Food Security in Karamoja sub-region (F-SURE)** seeks to respond to chronic food insecurity in the Karamoja region, which is a result of combined pressures including environmental degradation, climate change, and a heavy reliance on natural resources for agriculture, energy and income.

The vast majority of people in Karamoja are facing food shortages, either year-long or seasonally, and the region has been subject to increasingly frequent and severe climate-related events such as prolonged droughts and flash floods. The **Uganda National Household Survey Report** (UNHS 2019-2020) from the Uganda National Bureau of Statistics (UBOS) indicates that the Karamoja sub-region has the highest percentage of the country's people living below the poverty line (70%), female-headed households (65%), of households without savings (54%),

people with no formal schooling (66%), and households that rely on firewood from the bush/forest (95%). Karamoja sub-region also has a high potential for forest restoration opportunities yet only 1% of households use plantations or woodlots as their primary source of their firewood.

The F-SURE project is addressing some of the environmental, socio-economic, and institutional barriers to increased food security and sustainable natural resources management by building technical capacity on CSA, SLM at local government and community levels, establishment of MSPs to strengthen enabling policy and institutional frameworks by promoting a shift towards more integrated, collaborative, multi-sectoral approaches that bring together government line ministries, NGOs, farmer institutions (APFS, watershed associations, etc.) to help enhance coordination and bridge the science-policy interface to increase uptake of INRM, CSA and SLM for food and income security.

PROJECT APPROACHES & RESULTS

A total of 35 parish-level land use plans to guide restoration activities have been developed and implemented by 252 APFS group action plans. To implement these plans, the capacity of at least 100 government technical staff and 10,002 community members, including from 7,277 farming households (F=4,549; M=2,728), was built on CSA/INRM practices using APFS and watershed management approaches. The participants, who represented the APFSs as well as 2,725 non-FFS members, were capacitated in partnership with NGOs, government research institutions and stakeholders from UNDP supported small-grant schemes.

About 94% out of 2,258 farmers interviewed in Moroto and Kotido district applied one or more SLM/CSA practices (e.g., grass strips/bands, mulching, retention ditches, row cropping, terracing, trash lines) in the 2022 crop production season. The majority (87%) applied one practice while about 13% applied more

than one practice mainly on maize crops. About 61% of those who applied SLM/CSA practices were females.

F-SURE promoted e-extension services by recruiting three groups of **young private entrepreneurs who were trained by AccessAgriculture** and equipped with solar powered smart projectors to provide e-extension services by showing videos translated into local languages.

At least 2,533.46 ha out of the target 4,920 ha of degraded croplands, forest areas and rangelands have been restored through assisted natural regeneration, removal of unpalatable pasture species, enrichment planting and promotion of soils and water conservation measures. The labour-intensive nature of SLM uptake means the project will promote sustainable mechanisation (e.g., rippers, mould board plough, water tank, trailer, irrigation pump) to scale uptake of SLM practices and livelihood diversification through value addition, transportation, irrigation and fodder conservation among others. Efforts will also be made to promote the use of improved silos and drying technologies to **reduce post-harvest losses**.

A business model based on the provision of tractor hire services by trained youth and women's groups, plus capacity building of service providers for repair services, and training of operators for the various machinery and equipment for SLM and value addition, will be conducted in partnership with farmer institutions and the local governments.

To improve access to financial services, at least 6,385 (M=2,082, F=4,303) farming households from 229 APFS are engaged in group savings and loan schemes. As of 31 December 2022, over UGX 421,376,870 (USD 114,349) was saved in 12 to 18 months out of which at least UGX 208,843,150 (USD 56,674) were loaned out to 2,397

members. A number of success stories demonstrate uptake of good practices and technologies such as use of **fuel-efficient cookstoves**, **backyard gardening**, rainwater harvesting, rangeland restoration, **post-harvest processing**, storage, value addition and more. The FFS and APFS approaches have fostered **farmer-farmer knowledge exchange** and **inter-community cooperation**, and channelled resources for micro-enterprises. Through **VSL schemes implemented as part of the APFS framework**, the project has increased access to flexible rural finance to catalyse investment into diversified alternative livelihoods, with a focus on women and youth, as they rely heavily on natural resources.

To help bridge the science-policy interface for INRM, CSA and SLM uptake in Uganda, the F-SURE project facilitated an MSP where successful practices applied through the FFS and APFS activities generate results that inform policy design and, in turn, result in an increasingly enabling environment for scaling their adoption. In response to a request from the F-SURE project, **FAO and ICRAF hosted a training of trainers (ToT) in Uganda** to capacitate district-level leaders in the Karamoja region on MSP operationalisation as it pertains to food value chains. The training was implemented by the **SHARED Decision Hub** (ICRAF) and participants will employ the MSP process toward strengthening institutional frameworks and developing relationships between stakeholders in the Nakapiripirit, Nabilatuk, Moroto, Kotido, Kaabong and Karenga districts of Karamoja region. In addition, UNDP and AGRA hosted a Training of Trainers in Uganda to build the capacity of selected players in the food value chains, on **Greening the value chains**.

F-SURE also participated in the Making Every Voice Count for Adaptive Management (MEV-CAM) initiative from FAO, producing **knowledge materials on best practices for SLM**, contributing to the **MEV-CAM Knowledge Bank**.



Capitalising on the Ugandan experience with multi-stakeholder engagement

The Ugandan experience revealed how women in the RFS Uganda project sites were **disproportionately less able to participate in SLM activities** because of unequal decision-making dynamics and gender norms. Farmer organisations that foster farmer-farmer learning, like FFS and APFS, enhance their inclusion and increase the uptake of desired practices.

The project intervention also highlighted the importance of orienting multi-stakeholder engagement towards fostering environmental sustainability. At each stage of the value chain are environmental issues that should be addressed to foster the sustainability of the entire value chain. For example, at the production level, climate-smart practices coupled with the use of drought-tolerant or early-maturing varieties of sorghum will lead to increased production without over-extracting soil nutrients. At the processing level, the choice of technology for adding value will become more sustainable when solar-powered equipment is used compared with fossil fuels.

1.2 Case Study

Strengthening Land Tenure Security for Greater Food Systems Resilience in Burkina Faso

Co-written with Koudrègma Zongo (RFS Burkina Faso)



BURKINA FASO



Duration:

April 2017 -
December 2022

Cost:

7,269,448
GEF Grant,
6,931,008
Disbursement
(USD)

Number of Beneficiaries:

293,270

BACKGROUND

The **Participatory Natural Resource Management and Rural Development Project (Neer-Tamba Project)** was one of several projects initiated by the Government of Burkina Faso toward restoring 5 million hectares of severely degraded land and reaching their voluntary targets to achieve LDN by 2030. The project was implemented in collaboration with IFAD in the North, North Central and Eastern regions of the country, targeting rural households experiencing poverty and food insecurity.

Land security has been identified as a major obstacle to the establishment and maintenance of the productive assets planned under the project, despite the presence of policies like the 2007 National Policy to Secure Land Tenure in Rural Areas (PNSFM). Conflicts over land use from subsistence agriculture, pastoralism, conservation, mining and housing challenge land security and the capacity for smallholder farmers to confidently take up SLM activities.

Based on this observation, the Neer-Tamba project, in collaboration with the National Land Observatory (ONF), has initiated the development of strategies to mitigate the impacts of land conflicts on productive assets. These included awareness raising on land policies, targeted land tenure studies, and expanded implementation of the 2009 Rural Land Tenure Law by building upon the Millennium Challenge Account Rural Land Governance Project (implemented 2009-2014).

PROJECT APPROACH

The Neer-Tamba project also facilitated a multi-stakeholder approach to improving awareness of land tenure processes and regulations, engaging actors at all levels. Socio-land consensus was established before the start of development work and the Project developed a land agreement negotiation guide and tools for its operationalization. The various stakeholders in the development process have been trained to use

the guide and its tools. In order to guarantee the sustainability of its investments, the Project has formalised land deeds on all its sites.

Local land use charters

The 2009 Rural Land Law recognizes customary land rights and provides legal mechanisms for their formalisation, enabling communities to draft local land charters that are contextually relevant. The local charters contain rules and regulations relating to loan processes, dispute resolution, conservation, shared natural resources, and more. In line with this, the Neer-Tamba project adopted a participatory approach to supporting local charter development. One facet of this involved engaging women and men in discussions on the gender dimensions of land ownership and access. The results of these and other social intersections concerning people of varying age, migrant, income and ability status were integrated into the design of the charter.



Capitalising on Burkina Faso's work on strengthening land tenure

A key takeaway from the Neer-Tamba experience is that customary land tenure systems in Burkina Faso are an important cultural element and are supported by political frameworks. It is therefore imperative that projects engage far more with local authorities who are also important sources of knowledge about their communities and contexts.

Furthermore, actors familiar with community contexts, such as NGOs and farmers' organisations, are generally the most familiar with project environments and best positioned to implement interventions. In the case of Burkina Faso, security concerns have made these actors essential to working on the ground and maintaining momentum toward project goals.

“

THE ACTIVE AND CONCERTED PARTICIPATION OF ADMINISTRATIVE AUTHORITIES, CUSTOMARY AUTHORITIES AND BENEFICIARIES IS IMPERATIVE FOR THE SUCCESS OF ANY SOCIO-LAND TENURE PROCESS FOR THE SUSTAINABLE SECURING OF PRODUCTIVE ASSETS REALIZED IN THE FRAMEWORK OF A DEVELOPMENT PROJECT.”

M. Zongo Koudrègma, Coordinator, Neer-Tamba Project

Community uptake of SLM

The Neer-Tamba project partnered with local NGOs and farmer organisations like the National Federation of Naam Groups (FNGN) to mobilise local populations and build capacity among farmers to adopt soil and water conservation techniques, assisted natural regeneration of forests, and sustainable farming methods. The FNGN formed 'communities of practice' and trained farmers as technical experts to scale the endogenous practices they learned amongst their communities. Project beneficiaries were also trained in assessing their carbon footprints.

PROJECT RESULTS

The Neer-Tamba project has contributed 11% of Burkina Faso's Nationally Determined Contributions (NDCs)

© Benue State Agricultural Development Project, UNDP-GEF Nigeria.

1.3 Case Study

Influencing the greater inclusion of Agriculture, Forestry and Other Land Use (AFOLU) in Nigeria's National Environment Policy

Co-written with Rhoda Dia (RFS Nigeria) & Daniel Aleriwon (Federal Ministry of Environment, Nigeria)



NIGERIA



Duration:

December 2017 -
December 2022

Cost: 7,139,450
GEF Grant,
7,139,450 Project's
Disbursements
(USD)

**Number of
Beneficiaries:**
92,897

BACKGROUND

The Agriculture, Forestry and Other Land Use (AFOLU) is a term used in the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines describing the anthropogenic GreenHouse Gas (GHG) emissions from two distinct sectors: Agriculture; and Land Use, Land Use Change and Forestry (LULUCF), which were previously treated separately. The AFOLU sector is the largest contributor of GHG emissions globally, producing about one-fourth of global GHG emissions.

Developing countries are commonly referenced for the majority of GHG emissions, with increasing emissions mainly due to deforestation and agriculture. The contribution of developing countries in AFOLU-related emissions is expected to increase significantly in future due to projected increase in food production and land conversions.

Nigeria is not exempt from these projections and GHG emissions, putting the contributions of AFOLU on the forefront of targets for the **Integrated Landscape Management to Enhance Food Security and Ecosystem Resilience in Nigeria** project, or RFS Nigeria. The project addressed the need to mainstream AFOLU into the National Policy on Environment as it cuts across all major sectors of the environment.

The narrow space/content of AFOLU in the National Policy on Environment limits its potential to shape the government's efforts towards an effective framework to address the multifaceted concerns in the sector that cuts across all major sectors of the environment. There is a need for a revision in order to capture emerging environmental issues and concerns. Thus, the need to define a new holistic framework to guide the management of environment and natural resources

of the country. This will provide sectoral and cross-sectoral strategic policy statements and actions for the management of the country's environment for sustainable development.

PROJECT APPROACH

The RFS Nigeria policy influence began in April 2022 with a 2-days stakeholder workshop to deliberate on a comprehensive framework for intervening on the National Policy on Environment. Two seasoned consultants/experts were also engaged by the RFS Nigeria Project to provide technical support to the process.

Key stakeholders in attendance were policy formulators and analysts, officers of the Policy Department of the Federal Ministry of Environment,

Agriculture & Forestry, and target audiences such as the Permanent Secretary of the Minister and Federal Executive Council.

Helpful policy elements to this process were the federal government's commitment to net zero emission and LDN by 2030, and the presidential pronouncement for planting 100 million trees by 2030.

PROJECT RESULTS

- The National Policy on Environment is currently under review for mainstreaming and capturing AFOLU which will attract proper budgetary allocation from the Government
- A comprehensive strategic framework for implementation of environmental policy with comprehensive component for AFOLU has been formulated
- The key actors and stakeholders within the environmental sector have been identified for synergies and resource mobilisation to achieve better and greater impact
- The Policy Department is finalising work on the policy document for submission and approval by the Federal Executive Council



Group work by stakeholders. (Credit: UNDP Nigeria)



Capitalising on Nigeria's experience with stakeholder engagement

The project facilitated stakeholders engagement as its contribution to policy process that will further build more resilience for the small holder farmers in Nigeria, and suggest that projects should avoid rigidity in engaging supporting initiatives as they can add value to the overall results and impacts even if not part of the original project design.



Lessons learned from the RFS “Engage” workstream to advance the integrated approach

Co-design policy interventions

- Any policy intervention should be evidence-based, demand driven and be the product of a co-designed process involving all tiers of government from the national to the sub-national to the community level right from the start.
- Frequent and consistent engagement with all relevant stakeholders is key to maintaining momentum for policy change.
- Adopt a clear roadmap with a refined strategy and objectives.
- Providing case studies of pilots within their constituencies increases support and buy in from policy makers at national, regional and continental level.
- Engaging local government representatives in planning and monitoring SLM activities helps catalyse engagement from the public sector and mainstream information from the ground into decision-making. This can also help align project interventions with government objectives and vice-versa.

Be strategic in identifying policy support for impact

- Projects can be designed to provide good practices (including piloting innovative approaches) that influence policy shifts towards sustainability at national and global levels.
- Aim for the low hanging fruit first: often a Bill or regulation has been in the making for a while and just requires a final push.
- As much as supporting policy making is important, projects' efforts should also focus on supporting executive level activities as much as legislative.

Leverage multi-stakeholder platforms to mobilise action

- Multi-stakeholder platforms need to be established to mobilise partners at all levels, create linkages, and facilitate relationships across sectors and scales.

- Utilising existing platforms and networks, including those at international level, creates leverage for engaging at high-level platforms.
- Policy integration through use of different platforms and tools involving actors across different levels requires significant coordination intensively over a time period for impact.
- Marrying the objectives of multiple scales and sectors also helps to achieve objectives and ensures sustainability through mutually-beneficial activities.



QUICK LINKS

ACT

Page 22

Lessons learned from the RFS “Act” workstream to advance the integrated approach

Page 37



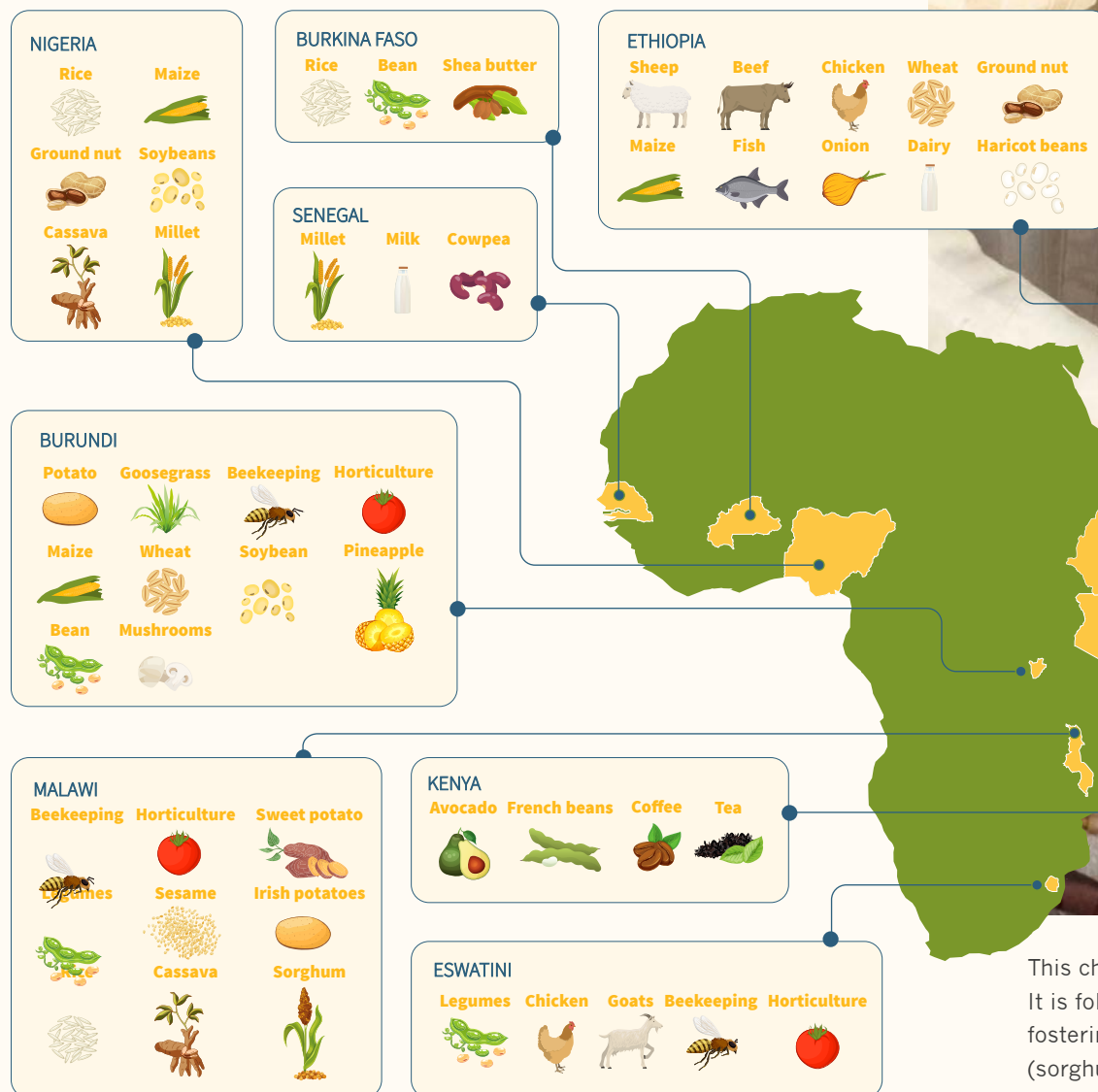
ACT

Chapter 2: Catalysing green value chain development

The 12 country projects of the RFS programme have catalysed 22 sustainable value chains since their inception. This Chapter provides a case study of value chain greening in Malawi, and an overview of the UNDP/AGRA catalytic grants and contributions for greening value chains as Hub partners. These standout cases exemplify the RFS work to

connect smallholder farmers with value chains to take up sustainable production practices, but they do not stand alone in the integrated programme. Further examples of value chain development, like the **legume**, **honey**, or **indigenous chicken** value chains in Eswatini, can be found on the **RFS Knowledge Centre**.

RFS has 22 sustainable value chains in development



This chapter presents the experience of Malawi with developing a honey value chain. It is followed by two case studies focusing on the work done by UNDP and AGRA in fostering sustainable value chains through the awarding of catalytic grants in Tanzania (sorghum value chain) and in Burkina Faso (maize value chain).

2.1 Case Study

Beekeeping in Malawi

Co-written with Munday Makoko (RFS Malawi)



MALAWI



Duration:

April 2018 -
December 2023

Cost:

7,155,963
GEF Grant,
4,008,703 Project's
Disbursements
(USD)

Number of Beneficiaries:

27,306

BACKGROUND

Deforestation is a widespread issue in Malawi, often driven by the extraction of wood products for charcoal production by some of the country's poorest rural people. These are the same people who are most affected by land degradation and decreasing agricultural productivity, leaving them increasingly vulnerable to climate shocks.

In the Karonga, Machinga and Phalombe districts, charcoal was previously the main income-generating activity for local communities, so the RFS Malawi project, **Enhancing Resilience of Agroecological Systems Project (ERASP)**, facilitated a **honey value chain** to fill the income gap switching from charcoal would leave farmers in. In turn, the presence of bees is expected to contribute to forest conservation.

ERASP is implemented by the Government of Malawi and IFAD. The project was designed to complement the Programme for Rural Irrigation

Development (PRIDE) by promoting SLM practices in the upper catchments of PRIDE irrigation schemes. Alongside other income-generating activities like a **goat and chicken pass-on programme** or promoting **Chitetezo cookstoves**, beekeeping was introduced to incentivise farmers to adopt SLM activities and reverse the trend of land degradation in the project sub-catchments. A total of 646 households benefited from training in beekeeping and honey production and were supported with inputs to actively contribute to the honey value chain. The beneficiaries were trained in effective production group dynamics and business linkages.

Connecting farmers with markets

Farmers have been linked to markets mainly through participation in business-to-business workshops and have sold honey to bakeries and honey processors facilitated by the project and through their own initiative.

PROJECT RESULTS

As a result of smallholder farmers participating in forest conservation through beekeeping, the ERASP project reported a reduction in land degradation in the target sub-catchments across the life of the project. Communities are also enthusiastically upscaling the activities with funds generated from the sale of honey, and in response to the changes they are observing in their landscapes like improved soil fertility, decreased gully, and improved household nutrition through the production of honey and other activities promoted by the project like the livestock pass-on programme and backyard gardening. This approach has been adopted in other PRIDE projects and has garnered attention from other projects across Malawi and informed the production of **knowledge products through FAO** for scaling in other contexts.



Farmers working with Wowo Irrigation Scheme, Phalombe District, with honey processing equipment provided by PRIDE and ERASP. (Credit: PRIDE/ERASP)



Honey harvesting in Phalombe District. (Credit: PRIDE/ERASP)



Capitalizing on the honey value chain development project in Malawi

The Malawian experience in developing the honey value chain showed the benefits of integrating beekeeping constitutes an incentive for communities to become involved in the restoration of forest landscapes, as they realise the benefits of producing and selling honey. The project team also learned that strong training and capacity building on beekeeping tools and processes were essential to ensure communities continue beekeeping in the long-term and in turn teach other communities, and that sourcing equipment and undertaking capacity building required adequate financial resources. Finally, beekeeping is a tool for economically empowering women as experience has shown that they can as much as men be involved in beekeeping.



2.2 Case Study

The UNDP/AGRA Catalytic Grants

Co-written with Assan Ngombe (AGRA) & Mupangi Sithole (UNDP)

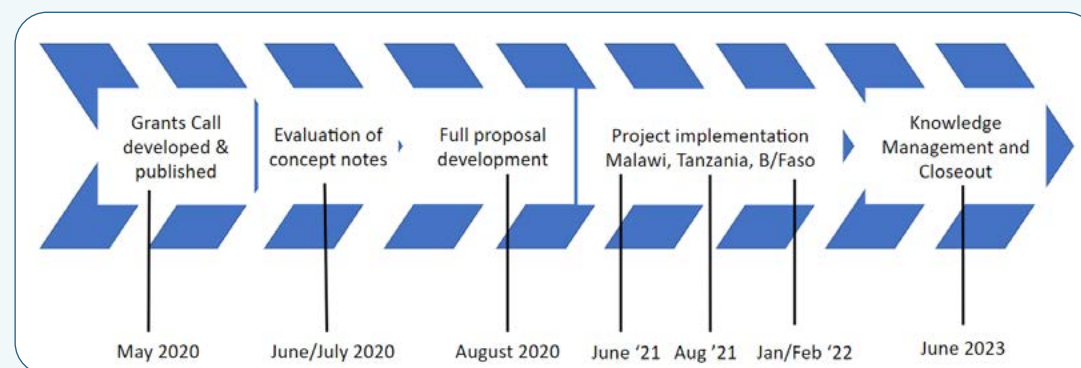


Under component 2 of the Regional Hub project, Upscaling of Integrated Approaches, AGRA and UNDP partnered to scale the green value chain approach among RFS country projects. In September 2019, AGRA and UNDP hosted a **regional training workshop on greening agricultural food value chains** for RFS country project teams in Nairobi, Kenya, to practise value chain mapping and brainstorm interventions and stakeholder engagement for resilient value chains. They also produced a **training manual for food value chain development in Africa** to support projects in taking the approach forward.

The following year, AGRA and UNDP launched a call for applications for sub-regional catalytic grants for projects working to strengthen agri-food value chains and integrate natural resource management into food systems in RFS project countries. Specifically, the grants sought to demonstrate how agricultural value chains for regional staple crops can integrate both business sustainability and environmental resilience in food systems.

Of the 63 concept notes received, **three grant winners were selected**:

- Institute of the Environment and Agricultural Research (Burkina Faso) - USD \$177,975
- Kilimo Trust and Musoma Foods (Tanzania and Uganda) - USD \$200,000
- African Fertilizer and Agribusiness Partnerships (Malawi and neighbouring countries) - USD \$200,000



Catalytic grant timeline

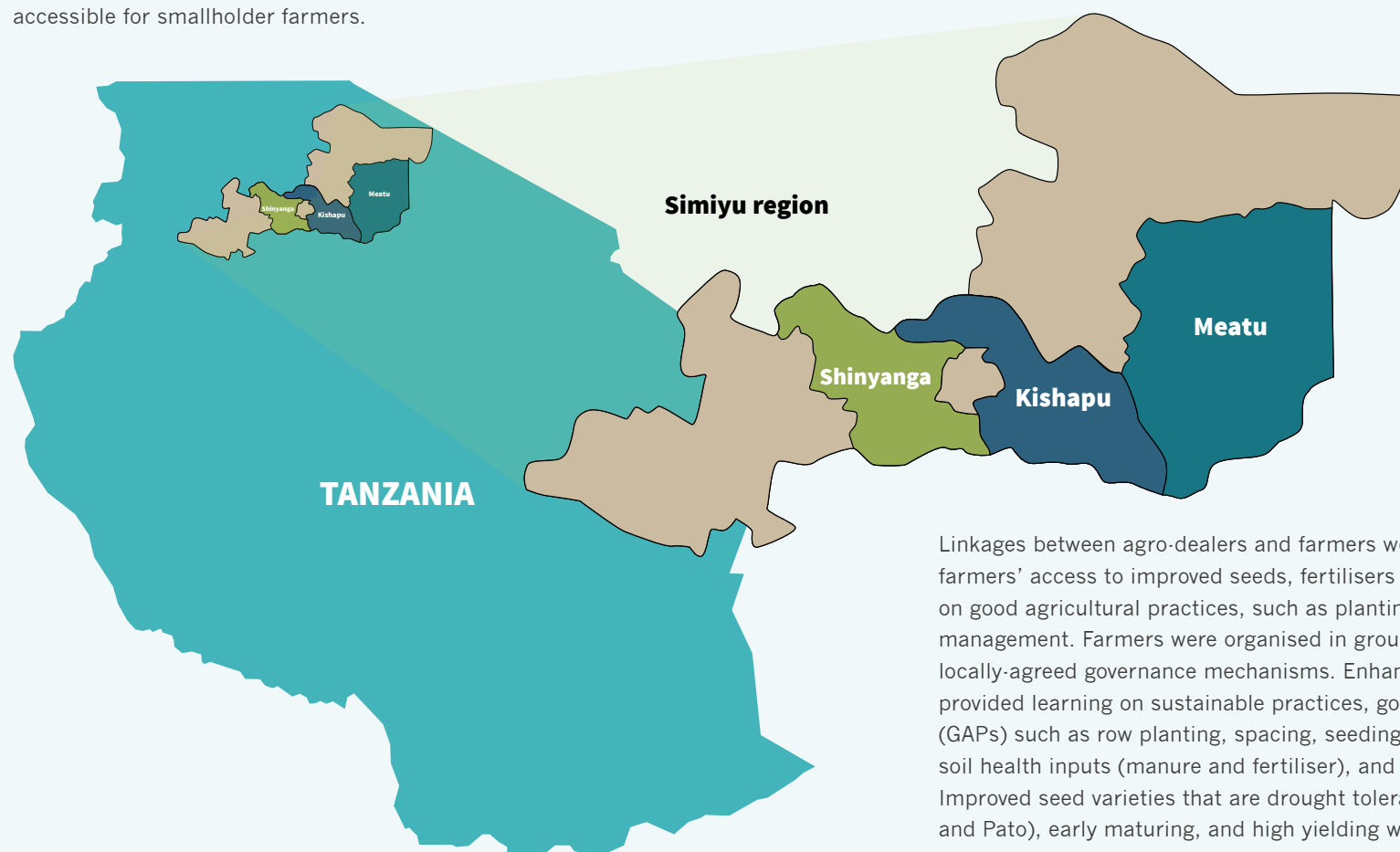
Grant recipients documented key lessons learned and successes to inform future actions by policy and decision-makers, project developers, funding agencies and the private sector. The results and lessons learned from these grants are exemplified in the following example from Tanzania.

UNDP/AGRA CATALYTIC GRANT: BUILDING THE SORGHUM VALUE CHAIN IN THE LAKE ZONE REGION OF TANZANIA

BACKGROUND

Sorghum is a crop that can thrive in areas that are highly susceptible to the effects of climate change, categorising it as a climate-smart crop. The catalytic grant **Building the Sorghum Value Chain in the Lake Zone region of Tanzania**, was awarded to Kilimo Trust and Musoma Foods, and was designed to address bottlenecks and gaps in the sorghum value chain and make the value chain more green, sustainable, and accessible for smallholder farmers.

The project utilised an enhanced value chain approach to identify all key actors in the sorghum value chain including input suppliers, smallholder farmers, farmer groups, aggregators, local cereal grain retail and wholesale traders, off-takers, processors, extension service providers, agricultural officers, NGOs, financial institutions, and machine/thresher fabricators.



The project was implemented in three districts - Shinyanga and Kishapu in the Shinyanga region, and Meatu in the Simiyu region - within the Lake Zone of Tanzania.

Linkages between agro-dealers and farmers were facilitated to improve farmers' access to improved seeds, fertilisers and advisory services on good agricultural practices, such as planting methods and pest management. Farmers were organised in groups that were formed with locally-agreed governance mechanisms. Enhanced advisory services provided learning on sustainable practices, good agricultural practices (GAPs) such as row planting, spacing, seeding rate, application of various soil health inputs (manure and fertiliser), and climate-smart technologies. Improved seed varieties that are drought tolerant (Macia, Tegemeo, Wahi, and Pato), early maturing, and high yielding were promoted in demo plots, on communal and farmer fields.

PROJECT RESULTS

More than 12,000 farmers were trained on GAPs, climate-smart technologies, and postharvest management practices. These efforts showed enhanced productivity in the value chain. For example, through practices such as recycling sorghum and rice crop waste being used as a soil health treatment to mitigate the shortage of inorganic fertilisers, farmers increased their crop yield from 650 kg/ha to 1,050 kg/ha in one season.



Capitalising on the sorghum value chain pilot project in Tanzania

Consider the adverse effects of project activities on women and girls

Bird infestation in sorghum fields is a real challenge, necessitating that farmers physically sit for long hours in fields to scare birds away. In the project areas it was found that women and girls are often charged with the responsibility of guarding sorghum fields from birds. This practice can disadvantage girls as it may keep them away from school or other responsibilities. To address this, the project promoted the use of kites to scare birds away. The project also suggested increasing the number of sorghum fields in the area to distribute bird infestations as a way to mitigate loss.

Proper post-harvest management is essential and must be part of the project design

Farmers are challenged by aflatoxin contamination in sorghum post-harvest management. Kilimo Trust has trained them on proper harvesting and storage, capacitating them on using threshing machines and improved storage bags such as agroZ bags. Storage facilities should be implemented when scaling the approach.

Shelling remains a challenge for the farmers. The project facilitated linkages between fabricators of shelling machines and farmer groups to extend the reach of sheller service to more farmers in the sorghum value chain.

Promote farmer aggregation into groups

Organising producers into groups ensures that they are able to generate high levels of efficiency in value chains to meet the standards and requirements of markets. Aggregation centres provide more efficient market access for buyers of the commodity to engage farmers.

Ensure a regional market to address food security and prevent the miscarriage of production

The main market for the sorghum value chain was food processors such as Musoma Foods Company Ltd. The quality and quantity of the output was originally below expectation in part because there was little awareness of the new market for sorghum, and breweries were one of the few markets farmers were aware of. The project quickly redirected farmers to new market linkages to address food insecurity.



QUICK LINKS

TRACK

Page 39

Lessons learned from the RFS “Track” workstream to advance the integrated approach

Page 56



Chapter 3: Best practices in social engineering for land restoration

337,314 hectares of previously degraded land restored (79% of the programme target)

(GEF 7 core indicator 3)

The RFS programme targeted major drivers of environmental degradation within the landscapes of the 12 country projects, suited to their unique contexts. By advocating for and scaling **SLM, integrated water resource management, and agroforestry and reforestation practices**, RFS has seen significant achievements in land restoration across the life of the programme.

This Chapter focuses on best practices in social engineering for land restoration with detailed examples from Niger and Tanzania, and common themes from across the integrated approach.

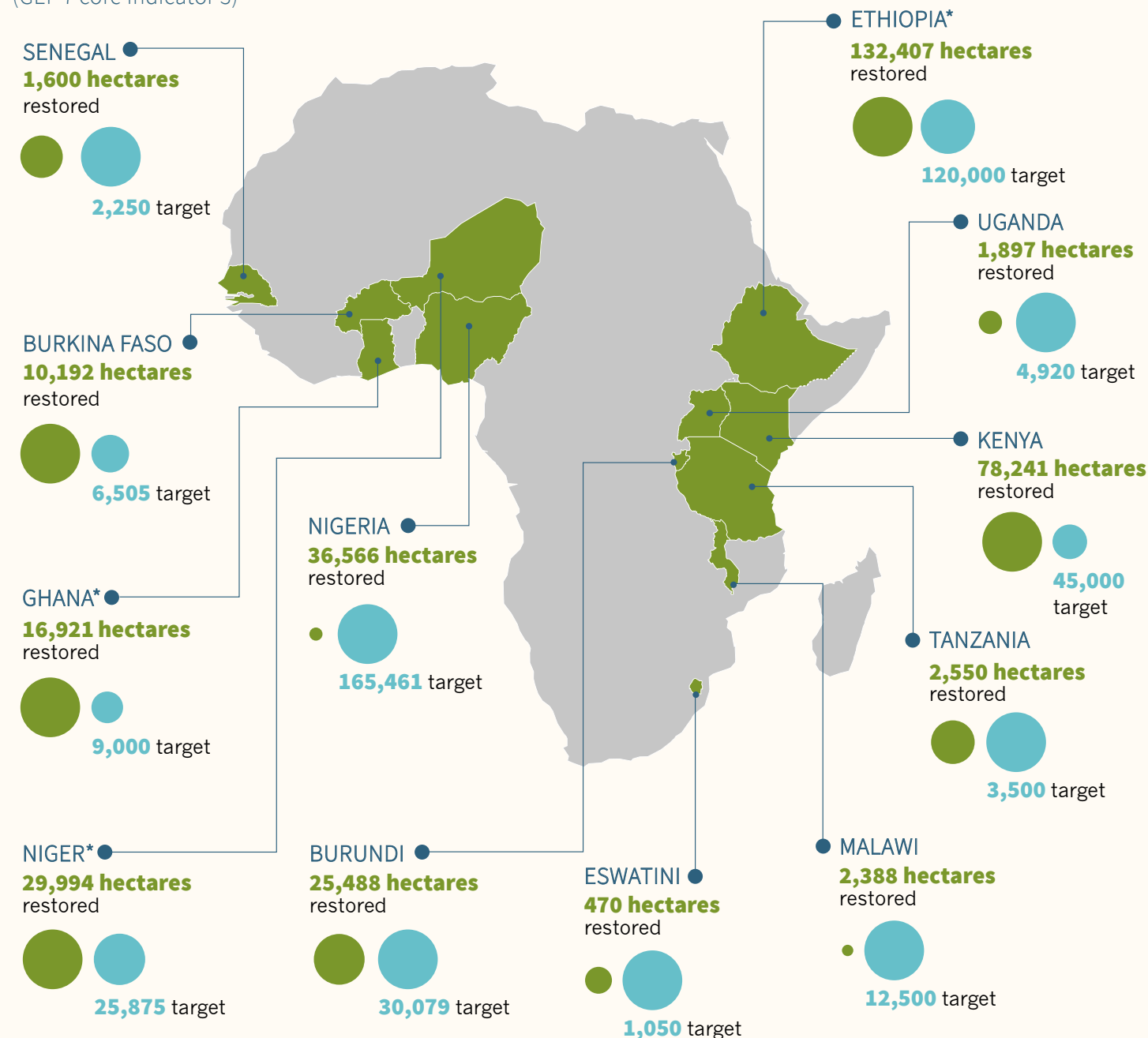


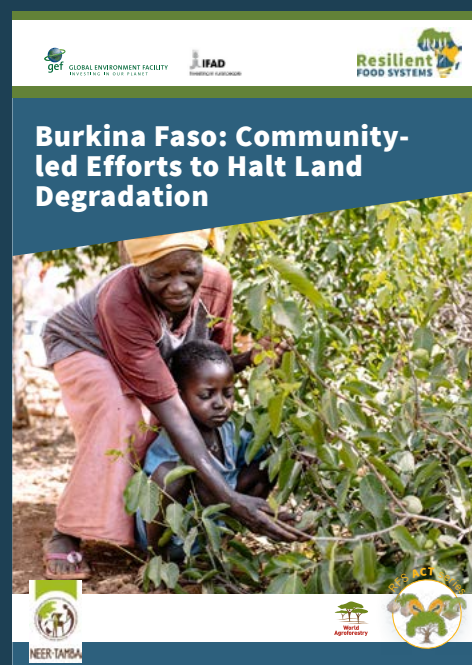
Figure 4. Land restoration targets and achievements of the 12 RFS country projects, from the 2022 Programme Highlights report.

COMMUNITY PARTICIPATION

As the primary users of rural land, and the most vulnerable to the effects of its degradation, rural communities are the most important stakeholders in RFS project sites, and their active inclusion, motivation and empowerment are key to successful restoration. This approach encourages communities to take active ownership of the project interventions, ensuring their sustainability.

In Eswatini, **lead farmers** are scaling conservation agriculture to their peers, and **communities themselves** are implementing erosion control measures. The PARFA project engaged Mangrove User Associations and other community-based organisations to target 800 ha of mangroves for restoration in Saloum Delta, Senegal. In Burundi, communities have taken ownership of **bamboo planting** taught to them through FAO FFSs, bringing stability to riverbeds and extra income to households. The RFS Burundi project is also engaging communities to participate in **soil and water conservation** at the watershed level.

Knowledge products produced through the Regional Hub capture some of the lessons learned from community-driven restoration efforts in **Ethiopia** and **Burkina Faso**.



INTEGRATED APPROACH WITH WHOLE CATCHMENTS

The RFS Kenya and Malawi country projects operate with the knowledge that catchments are integrated systems, and that actions involving farming communities in the upper catchments have an effect on water infrastructure downriver.

The UTNWF has worked with several rural stakeholders to scale SLM in the upper Tana River catchment with incentives like market linkages. **An example of this** is in supporting more than 8,500 coffee growers to obtain Rainforest Alliance Certification for their coffee, reaching new markets and increasing their income, all while helping to restore the upper catchment. Similarly, the ERASP project has incentivised smallholder farmers living up-catchment from PRIDE irrigation schemes to **reverse land and soil degradation** through income-generating activities like **livestock pass-on programmes**, **Chitetezo cookstoves**, beekeeping and **farm-residue manure**.

THE ROLE OF LAND TENURE IN RESTORATION

Land governance is a **major factor** in SLM implementation, and in 2012, the Committee on World Food Security officially recognized tenure's role in achieving the SDGs by endorsing the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT).

Then, at the UNCCD COP14, UNCCD adopted a note titled '**New and emerging issues: land tenure**,' which FAO then collaborated on to develop a technical guide for integrating VGGT into LDN policies and activities at the country level. FAO hosted four **training webinars** through **RFS** to raise awareness on the importance of land tenure in addressing land degradation, **support the development of the guide**, and elicit feedback on the draft technical guide.

The final report, **Technical Guide on the Integration of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security into the Implementation of the United Nations Convention to Combat Desertification and Land Degradation Neutrality**, was launched in 2022.

3.1 Case Study

Stopping desert advancement through sustainable family farming in Niger

Co-written with Altiné Boubacar, Soumaila Abdoulaye and Saley Sadiko (RFS Niger)



NIGER



Duration:

February 2017 -
June 2022

Cost:

7,636,422
GEF Grant,
7,129,130 Project's
Disbursements
(USD)

Number of Beneficiaries:

2,161,439

BACKGROUND

The **Family Farming Development Programme (ProDAF)** was implemented by the Nigerien Ministry of Agriculture and is linked with the priority development strategies of the Government of Niger through its long-standing **Nigeriens Feed Nigeriens (3N)** initiative and the **Economic and Social Development Plan (PDES)**.

ProDAF promoted sustainable family farming with an emphasis on women and young people and improved market access, and it achieved these objectives by targeting environmental degradation factors and addressing the food and nutritional needs of communities. To this end, farmers were trained on land rehabilitation techniques like dune stabilisation and assisted natural regeneration, taking into account land tenure issues. Increasing farmer incomes from land rehabilitation takes time, so the project employed local workers for dune stabilisation and tree planting, achieving the co-benefit of

communities adopting a sense of ownership over the interventions and incentive to sustain them.

The programme has implemented activities aimed solely at women, including a goat pass-on programme, learning and nutritional rehabilitation homes with training for Maman Lumière (women trained in health and nutrition for scaling in communities), and the **Women's Welding Granary**, or **Greniers Féminins de Soudure (GFS)**, approach developed by the Projet d'Appui à la Sécurité Alimentaire et au Développement dans la Région de Maradi (PASADEM).

“

The Family Farming Development Programme (ProDAF) is considered to be one of the most relevant tools for implementing the Government of Niger's priority development policies and strategies, in particular the 3N Initiative and the Economic and Social Development Plan (PDES) in rural areas. The ProDAF has adopted a holistic approach enabling action to be undertaken both upstream and downstream of catchment areas, by targeting and addressing the factors and effects of degradation of agro-silvo-pastoral ecosystems, in order to improve productivity and meet the food and nutritional needs of communities and livestock.”

Boubacar Altiné, Senior National Technical Assistant for Political Dialogue, Family Farming Development Programme (ProDAF)

PROJECT RESULTS

- 349 literacy centres benefitting 8,685 learners (53% women, 51% youth) out of a target of 352
- 611,729 temporary jobs created;
- 23,500 hectares of degraded land treated for restoration
- 5,910,122 seedlings planted
- 2.2 billion FCFA (about USD 3.6 million) distributed to vulnerable households
- 188,234 ha under Naturally Assisted Regeneration (96% of target)
- 27,063 ha restored (120% of target)
- 5,928 ha of watersheds treated against erosion
- 2,263 ha of dunes fixed with ponds and basins
- 3,837 corridors and silvopastoral areas developed
- 80% of funds distributed to beneficiaries were used for household food expenses
- Agricultural yields ranged from 112 kg/ha to 886 kg/ha at the Dan Gueza site, and in the Mainari site, yields of herbaceous biomass range from 50 kg/ha to 2140 kg/ha of dry matter. These are significant increases in crop yield.
- A 75% increase in biomass was recorded, compared with the baseline measurement from 2017, in the Maradi region
- 80% of funds distributed to beneficiaries were used for household food expenses



Capitalising on the Niger land rehabilitation project

The work accomplished by the RFS project team in tandem with other projects to reach economies of scale in south east Niger has brought to light the importance of knowledge sharing and exchange on sustainable land management practices to scale interventions in other regions. Importantly, any intervention was preceded by community engagement to iron out land tenure issues and key stakeholders were involved in each phase of the project lifecycle. In this respect, engaging public sector actors at the beginning of the project and integrating project processes and objectives within existing policy frameworks proved crucial. Without the enthusiastic participation of producers, improved land management practices would be short lived, so incentivising producers to participate and making them the agents of change is key. By the same token, supporting agricultural activities whilst rehabilitation activities are underway can decrease the vulnerability of households while they implement sustainable land and water management interventions. Finally, this experience showed that coordinated action from a wide array of stakeholders produces effective land and water management and contributes to the sustainability of project outcomes.



3.2 Case Study

Participatory land use planning in Tanzania

Co-written with Joseph Kihaule (RFS Tanzania)



TANZANIA



Duration:

March 2018 -
March 2024

Cost:

7,339,449
GEF Grant,
4,097,044 Project's
Disbursements
(USD)

Number of Beneficiaries:

9,043

BACKGROUND

The Government of the United Republic of Tanzania established the National Land Use Planning Commission (NLUPC) to ensure the sustainable use of natural resources, conservation of ecosystems, equal access to land-based resources, enhanced land tenure security, and mitigated land-related disputes, as described in the National Land Use Planning Act No. 6 of 2007. The NLUPC addresses gaps in the policy, legal and institutional framework that coordinates land use activities and works alongside multiple stakeholders and partners to develop participatory and inclusive land use plans.

The NLUPC works in partnership with the Environment Division of the Vice President's Office which coordinates the RFS Tanzania project **Reversing Land Degradation trends and increasing Food Security in degraded ecosystems of semi-arid areas of central Tanzania (LDFS)**. The project supports food security and fosters smallholder farmers' and pastoralists'

resilience to climate and other shocks through participatory approaches. Through implementing **participatory village land-use plans**, the project's targets included transforming 9,000 hectares of land under conservation, climate-smart farming and sustainable management, and reforesting 500 hectares of degraded land.

The LDFS project targets geographic areas with high levels of poverty, food insecurity, child malnutrition, land degradation, low average annual rainfall, and areas where there are resource conflicts among communities. The project area covers 22 villages in semi-arid areas in Kondoa, Nzega, Mkalama, Magu and Chemba districts.

PROJECT APPROACH

Institutional mandates

The LDFS project strengthened actors' capacity to perform development planning and implementation. They did this in line with institutionally mandated stakeholder teams including:

- **The Participatory Land Use Management (PLUM) team** who initiates and guides the process of participatory planning at the district level, coordinates the involvement of technical staff from different sectors, works with extension staff, and facilitates support for the PLUM process from other district-level actors. The major role of the PLUM team is introducing, guiding and facilitating interest in participatory land-use planning and resource management rather than making the plans themselves at the village level.
- **The Village Assembly** is the main decision-making and approval institution at the village level and identifies, through participatory ways, issues and problems which are of priority for communities.
- **The Village Council** has executive powers and responsibilities for land-use planning and may delegate some of its tasks concerning land matters to the Village Land Use Management (VLUM) committee.

- **The VLUM** committee works together with the PLUM team and receives on-the-job training to carry out the required tasks during and after the presence of the PLUM team members in the village. The VLUM committee can also be assigned to become the Village Adjudication Committee (Section 53, Village Land Act).

Village-level Planning

The participatory village land-use management approach in Tanzania is guided by requirements that must be met through community engagement:

- The needs of land users are identified by the land users themselves and met in land-use planning and management
- Villagers participate fully in agenda setting, action planning, resource allocation and controlling the planning process
- Villager decision-making capacity is built through the mobilisation of local institutions, training and knowledge dissemination

- The processes of gathering and analysing information, priority setting and formulating village land-use plans are centred on local people
- Plans and processes are oriented to local conditions to promote civic engagement and dialogue
- The process considers stakeholder differentiation and is gender-sensitive and based on cultural context

The LDFS project engaged communities on the ground through engagement activities, village meetings and gatherings, and robust consultations to meet and exceed these requirements.

PROJECT RESULTS

Through the preparation of village land-use plans, the RFS Tanzania project achieved the following outputs:

- 5 District Participatory Land Use Management teams
- 35 District Participatory Land Use Management team members trained in facilitating village land use planning and supporting bylaws

- 23 Village/shehia Land Use Planning Committees and five Joint Land Use Planning Committees in all project villages
- 23 Village/Shehia Natural Resources Management Committees and a total of 3,870 hectares of forest restored
- 8 Inter-village Village Natural Resources Management Committees
- A total of 23 villages/shehias Land Use Plans and bylaws prepared
- A total of 2,653 Certificate of Customary Right of Occupancy issued.



Village assembly meetings to deliberate on decisions.



Local communities doing resource mapping on the ground and through satellite images.



Local community members negotiate village boundaries and resource mapping.



Community members formulate action plans.



Capitalising on the Tanzanian's participatory land use planning approach

The Tanzanian experience highlights how, as village land-use plans are designed by local communities, they reflect their needs and are better adapted to local conditions, ensuring that communities will support their implementation. This work focused on participatory land use planning has demonstrated that the process minimizes land disputes and fosters sustainability since the plans are created through dialogue.



Lessons learned from the RFS “Act” workstream to advance the integrated approach

Greening value chains to leverage private sector engagement

The work conducted in greening value chains across RFS countries is still at a pilot stage and will require a second phase to see the consolidation of the value chains initiated. Some recommendations to pursue such work are as follows:

- Ensuring a sound understanding of the concept of green food value chain development across all programme actors is key to streamline activities toward a clear and common goal and to mobilise interest from potential grant applicants.
- Multi-stakeholder platforms are an effective entry point for the private sector to participate in building sustainability in agri-food value chains.
- In some communities, the need to market crops came as an afterthought when they already had crops stocked in their granaries. Most of the commodities sold by the smallholder farmers have potential to be locally value added (or semi-processed) prior to selling.

- Building consistency and scale through an enabling environment with policy and institutional support is a critical element for scaling value chains.
- While new or stronger market linkages were developed during the programme, significant gaps and opportunities remain to connect with broader financial services to promote green food value chains.
- Farmer groups should strive to build relations with one main buyer and alternative buyers. As shown during the COVID 19 pandemic, relying on a single produce market erodes negotiating power and chance of landing competitive prices for produce.
- Niche markets that prefer green / Good-Agricultural-Practice or organically produced crops must be explored further.

The catalytic grant spearheaded by AGRA showed that:

- With relatively small amounts, fairly substantial value chains can be initiated in a given community.

- The process of allocating grants was not connected to the RFS country project areas and stakeholders. Linkages with the value chains being developed by country projects and their beneficiary farmers should constitute a requirement for awarding future catalytic grants.
- These catalytic grants should be leveraged to attract more funding from the private sector/banking institutions.

Optimize social engineering to ensure sustainability of land restoration efforts

The land restoration work carried out in Niger and in Tanzania (and also all other RFS countries engaged in restoring degraded land) has shown how ensuring strong social engineering with all stakeholders is critical to lay lasting foundations of civil engineering/land restoration interventions. Other take away lessons include:

- Participatory approaches are essential for ownership, knowledge dissemination and sustainability.
 - In particular, participatory land use planning can increase land productivity and its benefits for the various stakeholders since the plans reflect the stakeholder's interests and are thus more actively implemented.
- Any land use and land rehabilitation intervention should adopt a gender-sensitive participatory approach that takes into account social intersections and customary systems. Vulnerable people should be provided with resources, including financial means, to help them participate in project activities and build their capacity.
- Socio-land consensus is a prerequisite for sustainable development. As also illustrated in case study 1.2 from Burkina Faso, civil security and land security are interconnected. Land tenure security is a critical and indispensable element in any development project dealing with adaptation to climate change and building people's resilience.
- Land and water rehabilitation measures should be integrated in tandem to ensure a more holistic approach with broader outcomes.



QUICK LINKS

TRACK

Lessons learned from the RFS “Track” workstream to advance the integrated approach

Page 39

Page 56





TRACK

Chapter 4: Innovation in ecosystem services assessment

Ecosystem services refer to the recognition of the diverse values that ecosystems provide to humanity. Innovative approaches to assessing ecosystem services and assigning their value have been piloted and amplified through the RFS Programme, embedding natural capital within productive and sustainable agricultural systems. These approaches, aimed at preserving and restoring environmental resources, concern the four types of ecosystem services defined in the **Millennium Ecosystem Assessment**: provisioning, regulating, and supporting.

The Diversity Assessment Tool for Agrobiodiversity and Resilience (DATAR) was applied in Malawi, Ethiopia, Tanzania, Uganda and Burundi to assess agro-biodiversity, which offers benefits to people (**provisioning** services). In Kenya, the value of water (the water cycle as a **supporting** service) and water purification (a **regulating** service, i.e., benefits provided by ecosystem processes that moderate natural phenomena) have formed the basis of an ecosystem services payment system, giving rise to the Upper Tana-Nairobi Water Fund. The Land Degradation Surveillance Framework (LDSF), developed by CIFOR-ICRAF, monitors ecosystem and soil health (a **supporting** service) in RFS Eswatini, Malawi and Kenya.



4.1 Case Study

The Diversity Assessment Tool for Agrobiodiversity and Resilience to increase biodiversity in farming systems for enhanced resilience against shocks

Co-written with Devra Jarvis (PAR)



BACKGROUND

The **Diversity Assessment Tool for Agrobiodiversity and Resilience** (DATAR) was developed by the Platform for Agrobiodiversity Research (PAR) in partnership with the Alliance of Bioversity International & CIAT. DATAR complements existing tools, such as the **Resilience Adaptation Feasibility Tool** (RAFT), the **Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists** (SHARP), or the Indicator of Resilience in **Socio-Ecological Production Landscapes and Seascapes** (SEPLS) tool, which concentrate on the species and landscape levels without provision for intra-specific crop level (in the form of crop varietal diversity) and livestock (in the form of livestock breed diversity). One purpose underlying the use of DATAR is to link on-the-ground assessment of agricultural biodiversity to actions that enhance resilience against environmental and social-economic shocks. This agrobiodiversity in the form of diverse sets of crop varieties and livestock

breeds is assessed together with information on the institutional, market and policy environment, and used to reduce risk exacerbated by climate and accompanying social and economic changes.

PROJECT APPROACH

Participatory development of a powerful online tool to measure intra-specific diversity



Through the lifespan of RFS, the interactive development of DATAR with participating national partners has enabled the tool to grow from a paper-based process to a user-friendly online tool available for mainstreaming through new projects. This has the potential to orientate the actions of communities on the ground to preserve and

enhance their agro-biodiversity. Five national RFS partners and other on-going projects in sub-Saharan Africa, South America and in Asia were an integral part of developing the online applications (web portal and tablet application). RFS national partners contributed crop varietal and animal breed descriptors and portfolios of development interventions that use agrobiodiversity at the community level, linking them with development actions and policy recommendations. They also provided significant inputs in the development of the Free, Prior and Informed Consent (FPIC) forms for national researchers to use with farmer and herder communities when using DATAR for data assessment and analysis.

DATAR training was run for the Burundi, Uganda, Tanzania, Malawi and Ethiopia country teams, with FAO supporting DATAR training in Burundi and Uganda through separate FAO-GEF projects. The five RFS countries undertook a baseline assessment of their agro-biodiversity. Uganda partners used DATAR to complete livestock and crop surveys with over 500 households through a complementary project funded by FAO-GEF, and Tanzania's DATAR project was handed over to IUCN who will be funding data collection and implementation. Up-scaling of the DATAR tool also occurred in Morocco through a DARWIN funded project in the High Atlas Mountains, and in Jordan and Nepal through the IFAD-funded Evolutionary Breeding programme.

PROJECT RESULTS

As of July 2023, DATAR, which is aligned to GEF tracking tools for Biodiversity, is now available globally, for free for all countries at regional and global levels in English, French, Spanish, Russian and Chinese. DATAR indicators were developed to be exactly aligned with GEF tracking tools for biodiversity. Users can synthesise information by crop species or livestock breeds or by multiple crop species and livestock breeds and can also access information on local suppliers and market linkages, and actions and interventions that are gender and age sensitive. The success of the [DATAR Web Portal](#) and [DATAR app](#) resulted in the investment of the Raffaella Foundation (a non-profit 501 3c charity) to commit to the continued support and hosting of the PAR DATAR web and app system after the end of the grant.



Capitalising on the development and use of the DATAR tool

DATAR complements traditional tools focused on agricultural diversity by helping national partners understand why intra-specific diversity (in the form of local crop varieties and livestock breeds) is an integral part of sustainable livelihoods for farmers and herders and pro-poor development actions.

Experience using the tool has shown how instrumental it proves in helping decision-makers integrate crop varieties, livestock breeds, and aquatic farmed-types into agricultural plans as critical elements to build the resilience of food systems (evolution/adaptation, ecosystem services, substitute for input, risk management, food sovereignty). The tool has also proven to be instrumental in propelling women into decision making roles.

Furthermore, the participatory research approach underpinning data collection with the DATAR tool and the fact that the process naturally calls for engaging with the target communities to determine what course of intervention should be taken in the light of agrobiodiversity collected, has proved critical in making development practitioners and government officials aware that systematic interaction with farmers is crucial to ensure the relevance and impact of agricultural interventions.

4.2 Case Study

Making a business case for land and water conservation in Kenya

Co-written with Anthony Kariuki & John Gatagu (RFS Kenya)



KENYA



Duration:

January 2017 -
August 2021

Cost:

7,201,835
GEF Grant 7,123
031 Project's
Disbursements
(USD)

Number of Beneficiaries:

51,682

BACKGROUND

The first of its kind in Africa, the **Upper Tana-Nairobi Water Fund** (UTNWF) coordinates the financing and implementation of the RFS integrated approach to support farmers in the Upper Tana watershed to adopt CSA and SLM practices. The UTNWF has leveraged a total of USD 7,339,450 in GEF funding alongside USD 21,405,675 in co-financing obtained from a network of public and private sector partners to invest in the rehabilitation of the headwaters of the Tana River, which supplies water to over 9 million people and provides half of Kenya's hydropower output.

To garner support for the water fund, UTNWF have built a strong **business case** for investing in land and water restoration. The assessment of the economic viability of the water fund was commissioned by a public-private steering committee that evaluated the impact of conservation interventions to reduce suspended sediments in rivers and increase dry season

flows. Private sector investors, like the Coca-Cola Foundation, who draw water from downstream points along the river are receiving a return on their donations and investments through reduced water treatment costs. Since supporting farmers to adopt SLM practices upstream in the Tana River, water quality monitoring stations at Ng'ethu and Sasumua have recorded reduced sedimentation and improved quality and quantity of the river water.

PROJECT APPROACH

Facilitating MSPs has been a critical component of the UTNWF process with the objective of bringing farmers into dialogue surrounding the implementation of SLM processes. The project's unique Public-Private-Producer Partnership (4P) approach invites smallholder farmers in as key private sector investors and partners rather than simply project beneficiaries, building on the traditional PPP approach. Farmers have participated in MSPs alongside stakeholders from the

Kenyan Ministry of Environment and Natural Resources, Water Resources Authority, Kenya Forest Services, Kenya Wildlife Services, The Nature Conservancy, the Nairobi City Water and Sewerage Company, county governments of Nyandarua, Laikipia, Murang'a and Nyeri, and research institutions, including Jomo Kenyatta University of Agriculture and Technology and National Museums of Kenya.

Engagement of local stakeholders in MSPs has led to four priority county-level policies and regulations being developed to address wetland and riparian areas, invasive and alien species, mining and quarries management, and rural roads and stormwater management. Further, extension services through the RFS project have been especially effective in supporting rural farmers in their transition to CSA and SLM practices because of the involvement of farmers in identifying and planning the activities that are most transformative in their contexts.

PROJECT RESULTS

The UTNWF has been involved in several knowledge and learning exchanges with the intention of scaling the Water Fund approach across Africa. At the national level, the Eldoret-Iten Water Fund Steering Committee was hosted for a 4-days learning tour in April 2022 in preparation for their launch under the GEF-7 financing cycle. At the regional level, the **Blantyre-Mulanji Water Fund** hosted UTNWF for a South-South exchange visit in Malawi in September 2022, building on the 2022 RFS Knowledge Exchange and Learning Workshop. The Water fund also hosted Lesotho ROLL (Regeneration Of Landscapes and Livelihoods) for a project learning visit in March 2023. The team of 10 toured the upper-

Tana watershed to learn about the implementation model of the water fund, governance structure, financing, sustainability model, monitoring, and evaluation of activities.

As of September 2021, the UTNWF is an independent trust that is managed by local leaders with the support of donors from the private and public sectors. All donations are reinvested into the catchment to reduce erosion and improve water quality in the Tana River for all its users.

Project Milestones



2013

Steering Committee
Established



2015

Water Fund Receives
Charter Registration



2016

Water Fund is Adopted
into GEF-6 Funding Cycle



1 September 2021

The Upper Tana-Nairobi Water Fund
Transitioned to an Independent Trust



Capitalising on the Upper Tana-Nairobi Water Fund project

Kenya's experience in building a business case for investing in water catchment areas has brought forth the importance of fostering strong partnerships at multiple scales to encourage ownership and sustainability past the life of the project. The project was conducted in very close

proximity with the government and it also made sure to engage farmers prior to implementation to streamline their needs, barriers and objectives into project plans.

4.3 Case Study

Sustaining a land restoration monitoring framework - the experience of Eswatini

Co-written with Bhekisisa Mkhonta (RFS Eswatini) & Dr Leigh Ann Winowiecki (CIFOR-ICRAF)



ESWATINI



Duration:

December 2016 -
September 2022

Cost:

7,200,000
GEF Grant,
3,699,515
Project's
Disbursements
(USD)

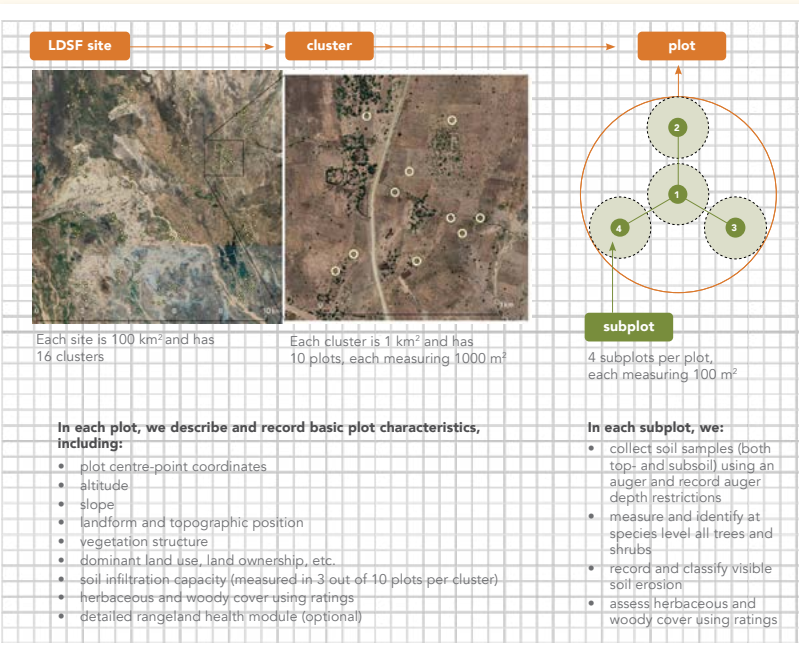
Number of Beneficiaries:

12,383

BACKGROUND

The Land Degradation Surveillance Framework

(LDSF) was developed by ICRAF and is a hierarchical, systematic sampling method that takes into account various indicators of soil land health including land use, topography, land cover, vegetation biodiversity and soil health. Soil samples are systematically analysed in the CIFOR-ICRAF soil spectroscopy lab in Nairobi, Kenya. The LDSF provides a holistic assessment of ecosystem health at landscape level that offers a biophysical baseline and a monitoring and evaluation framework for tracking the processes of land degradation and land restoration efforts over time.



PROJECT APPROACH & RESULTS

The RFS Eswatini project (CSARL) has employed the LDSF to identify target areas for intervention to reverse land degradation that are location and context-specific. As of January 2022, field surveys had been conducted in 11 sites across Eswatini, representing a total of 1,467 LDSF plots in a bid to represent topographic and ecological variation across the country's four regions. The data informed the development of Chiefdom Development Plans in all chiefdoms across the country using land use maps as a guide.

Though the RFS project is complete, CSARL is closely linked with IFAD's Smallholder Market-led Project (SMLP) project which is implemented within the Eswatini Water and Agricultural Development Enterprise (ESWADE), a governmental initiative. The national partnerships formed throughout the duration of CSARL have embedded sustainability in the LDSF's application.

The Eswatini Ministry of Agriculture and Ministry of Information, Communications and Technology have been engaged to host and run the LDSF facility with staff from different departments under their own ministry, as well as those from the Ministry of Tourism and Environmental Affairs.

Governmental staff have been trained on the implementation of the methodology and on the open-source software it operates under. These national actors will take the LDSF forward to track indicators of land and soil health to understand drivers of degradation and soil health and inform future interventions.

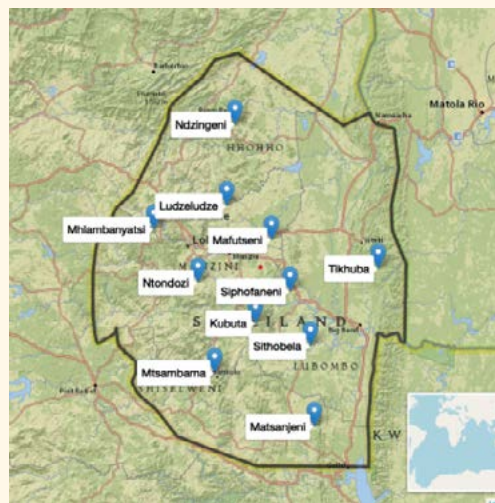
WHAT'S NEXT?

The Eswatini Land Health Dashboard is an upcoming web application being co-developed with ESWADE with funding provided by IFAD to provide open-source access to data collected under the Eswatini Land Health project, building on national LDSF data. It is being designed for use by a wide range of stakeholders, including policy-makers and development projects, to make informed decisions on land restoration.

Additional training is underway to support the transition of the Eswatini LDSF facility to the Government of Eswatini so that they will operate it independently. Workshops will also be convened to capacitate stakeholders in the use of the Eswatini Land Health Dashboard.

LDSF SITES IN ESWATINI

- Ntandozi
- Kubuta
- Mafutseni
- Siphofaneni
- Sithobela
- Matsanjeni
- Hosea
- Mtsambama
- Ludzeludze
- Tikhuba
- Ndzingeni



Field team photo- while conducting the LDSF together in eSwatini in 2018



Capitalising on the LDSF in Eswatini

The Eswade project has learned through running the LDSF on the RFS project sites that land restoration takes time, which calls for a sustainability strategy that includes continuous budgeting. The need for strong political involvement and will to support a soil monitoring project cannot be overemphasised. In this respect, building capacity among stakeholders on robust, non-biased monitoring techniques is critical, as is building capacity for country-based government soil laboratories in analysing soil data. Going forward, supporting the transition of the platform to the new hosts will be essential.



Chapter 5: Measuring resilience in a multi-country programme

Co-written with Tom Kiptenai Kemboi, Monica Noon
(Conservation International) & Sirine Johnston (FAO)

From the start, the RFS programme decided against a one size fits all model to measuring resilience. To ensure a country-led approach, implementing agencies and governments were encouraged to apply a broad resilience lens to their specific circumstance and to measure resilience through composite indicators. The heterogeneity of approaches in measuring resilience was captured in the RFS report **Monitoring the resilience of people's food security** which provides an overview of approaches taken by the 12 RFS country projects.

All 12 RFS country projects selected indicators capturing the absorptive, adaptive and transformative capacities³ of the project activities, and adopted a wide range of approaches, tools and frameworks for monitoring resilience introduced to them by the Regional Hub. Many of these tools required building capacity, which was supported by Hub partners, and ensuring that infrastructure, training, and support systems were in place (see Figure 5).

	Burkina Faso	Burundi	Eswatini	Ethiopia	Ghana	Kenya	Malawi	Niger	Nigeria	Senegal	Tanzania	Uganda
Diversity Assessment Tool for Agrobiodiversity and Resilience (DATAR)												
Earth Observation for Sustainable Development (EO4SD)												
Collect Earth (Ndv)												
Trends Earth												
EX-Ante Carbon Balance Tool (EX-ACT)												
Integrated Food Security Phase Classification (IPC)												
Land Degradation Assessment in Drylands Mapping Tool (WOCAT-LADA)												
Land Degradation Surveillance Framework (LDSF)												
Management Effectiveness Tool (METT)												
Multidimensional Poverty Assessment Tool (MPAT)												
Resilience, Adaptation Pathways and Transformation Assessment (RAPTA)												
RESILIENCE ATLAS												
Resilience Index Measurement and Analysis (RIMA) model												
Results and Management Impact System (RIMS)												
Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP); HH-BAT												
Food Insecurity Experience Scale (FIES)												
Household Dietary Score (HDDS)												
Vital Signs monitoring framework												
Women's Empowerment in Agriculture Index (WEAI)												
Outcome Mapping (OM)												

Figure 5. Tools recommended by the programme and used by countries.

A FRAMEWORK FOR MONITORING ECOSYSTEMS SERVICES, SOCIOECONOMIC BENEFIT AND RESILIENCE OF FOOD SECURITY

Working under the scope of the programme's Technical Advisory Group (TAG) on Monitoring and Assessment, the Regional Hub project prepared through the technical expertise of Conservation International a report on **Guidance for monitoring ecosystems services, socioeconomic benefit and resilience of food security**.⁴ This framework proposed an approach for measuring the resilience of food security on the ground, underlining the importance of tracking key indicators over time and across different contexts. For this purpose, the framework developed by CI focused on two sets of indicators to be tracked at the programme level: Global environmental benefits (GEBs) and Socio-economic benefits (SEBs).

During implementation, the RFS programme was requested to transition from key indicators for GEBs (originally approved during the GEF-6 period) to GEF-7 core indicators and sub-indicators.⁵

³ See Béné et al. 2012 and Douxchamps et al. 2017

⁴ Some countries reported assessments of resilience selected from one of the following alternative frameworks: Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP) (on which training was offered by the FAO in 2021); Resilience Index Measurement and Analysis (RIMA) and RIMA-II (FAO 2016), or Community-based Resilience Analysis (CoBRA).

⁵ For a detailed description of the shift from GEBs to core indicators, refer to pp 11-12 of the RFS Monitoring and Evaluation Plan.

Throughout the RFS, data on these indicators were collected and reported through different platforms, such as Resilience Atlas (see Box 3) and the SmartM&E platform, which was designed to host the programme-level monitoring and evaluation, and is accessible via an online platform that

provides up-to-date M&E information from country projects and the Hub project, with a focus on the programme's contributions to global environment benefits. See chapter 6.2 for a description of the M&E work undertaken for the programme.

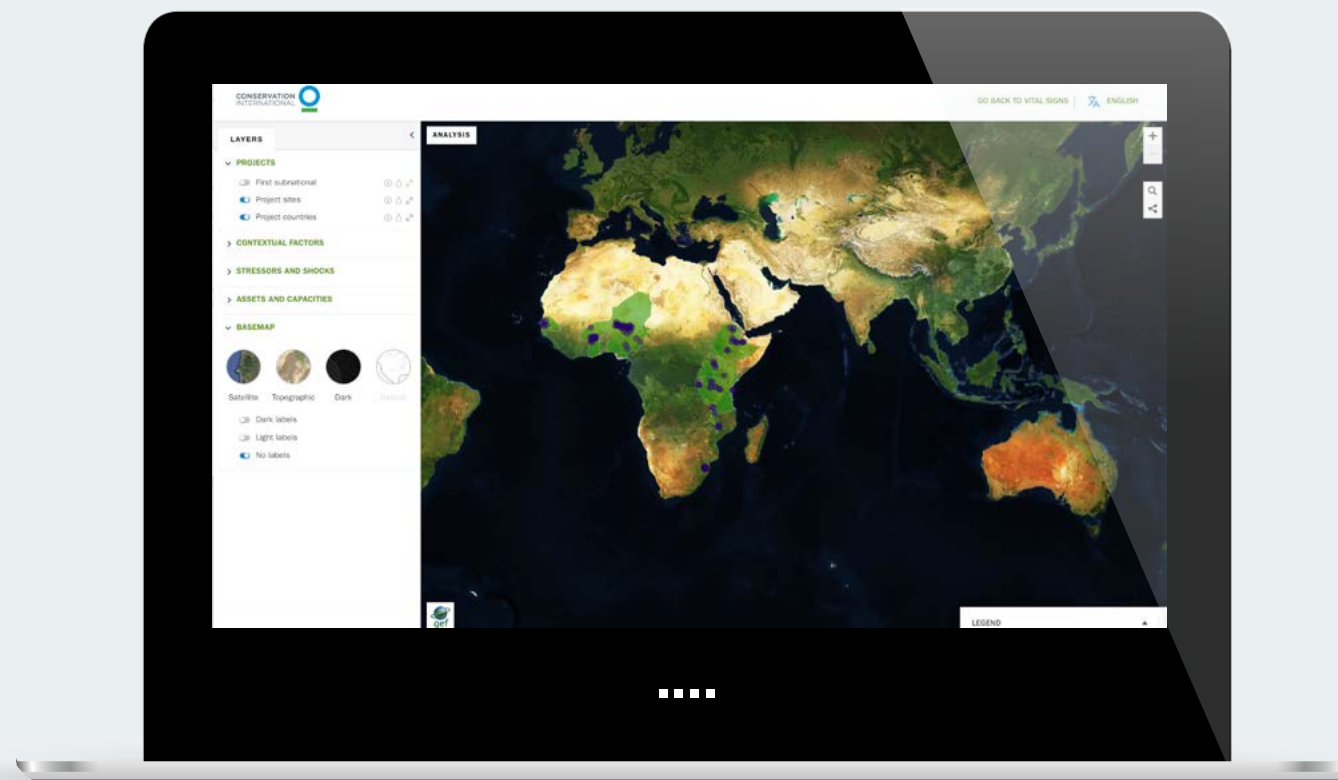
BOX 3. THE RESILIENCE ATLAS



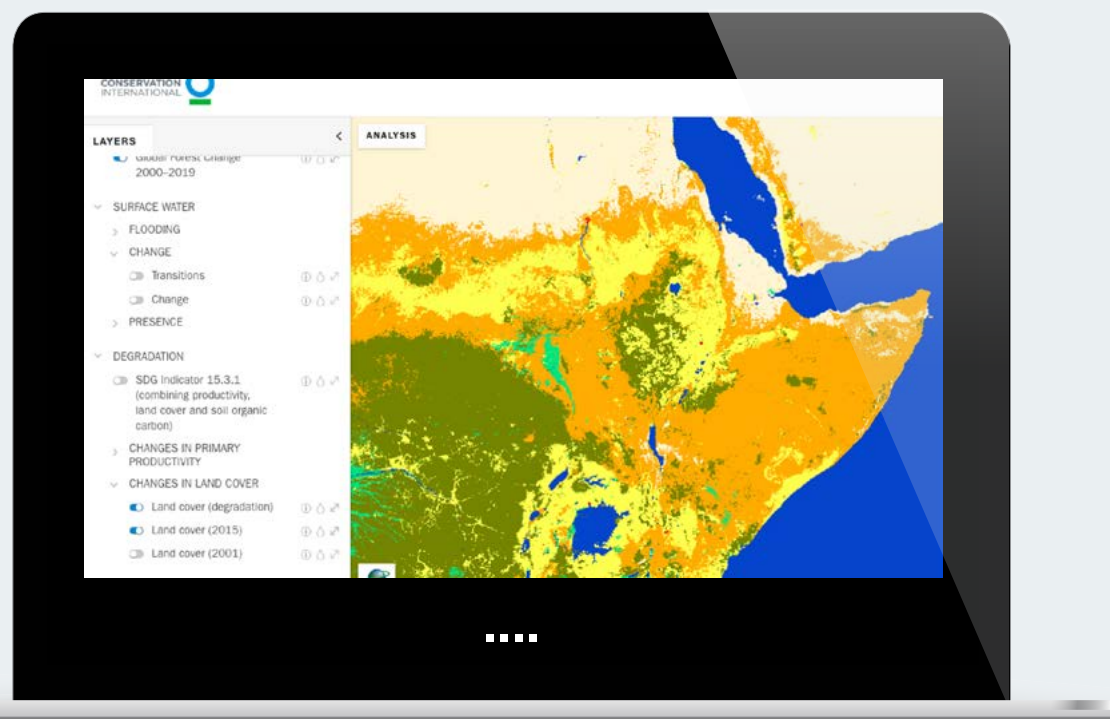
The Resilience Atlas was developed by CI as an interactive analytical tool for building:

1. an understanding of the extent and severity of some of the key stressors and shocks that are affecting rural livelihoods, production systems, and ecosystems in the Sahel, Horn of Africa and South and Southeast Asia; and
2. insights into the ways that different types of wealth and assets (i.e., natural capital, human capital, social capital, financial capital and manufactured capital) – and combinations among these – impact resilience in particular contexts.

Projects' boundary files can be accessed from the [online platform](#).



Satellite map of RFS countries and project boundaries



Map showing the extent of land cover and land degradation in the Horn of Africa

The TAG recommended tracking three sets of finer-scale indicators in addition to the above GEBs and SEBs:

1. ecosystem services,
2. more detailed information on socioeconomic benefits, and
3. resilience of food security.

Global environmental benefits (GEBs):

- Land under integrated management
- GHG emissions avoided or reduced
- Conservation of genetic diversity on farm
- Number of sector policies and regulatory frameworks that integrate biodiversity considerations
- Land cover

Socio-economic benefits (SEBs):

- Direct beneficiaries (number, and disaggregated by gender)
- Food security index

CI's final programme report **Resilient Food Systems Report: Towards a harmonised indicator set and evaluation methodology** assessed the country projects' contributions to improving resilience of food security in their programme areas, and of the overall contributions of the RFS programme as a whole and unpacks lessons learned.

This chapter comprises three case studies showing how resilience was monitored, crossing both datasets stemming from the national projects and the remote sensing tools used by Conservation International (CI) (Ethiopia and Senegal). The third case study illustrates how the SHARP tool supported by the FAO is used in conjunction with CI's tools to monitor resilience. The chapter includes a wealth of lessons learned on how to improve the measuring of resilience in future integrated approaches.

5.1 Case Study

A comparative case study on the measurement of resilience in Ethiopia and in Senegal

Co-written with Tom Kiptenai Kemboi, Monica Noon (Conservation International), Birara Chekol (RFS Ethiopia) & Assane Gueye (RFS Senegal)



SENEGAL



Duration:

June 2017 -
June 2022

Cost:

7,219,450
GEF Grant,
5,971,218
Project's
Disbursements
(USD)

Number of Beneficiaries:

41,530

ETHIOPIA



Duration:

May 2017 -
April 2023

Cost:

10,239,450 GEF
Grant, 9,186,736
Project's
Disbursements
(USD)

Number of Beneficiaries:

1,473,516

BACKGROUND

This section analyses indicators related to GEBs, in particular climate change mitigation, agro-biodiversity and land degradation, but also water management and how these contribute to monitoring resilience in Ethiopia and in Senegal.

The RFS **Ethiopia** project sought to promote **diversified agricultural production** through practices like planting nutritional dense crop varieties and agroforestry, **improved livestock** and poultry production, **beekeeping**, inter cropping, alley cropping, off-farm activities, small scale irrigation and other water management. The project also facilitated 8 agricultural and husbandry value chains and mobilised financial resources for SLM while increasing the land under ILM. The project did not track composite indicators so overall resilience was assessed through:

- Changes in land productivity measured with the Normalised Difference Vegetation Index (NDVI): compared to baseline, the low productivity areas decreased from 78% to 67% and higher productivity areas increased from 22% to 33%.

- Reduction in food security risks for 238,074 households, who benefited from **gender-responsive** and age-sensitive food production practices and the agricultural value chains that were developed.

The socio-economic baseline survey (2020) conducted in **Senegal** underlined that loss of soil fertility was the main problem cited by the majority of households in the RFS project intervention zone. The project's interventions have included **rehabilitation of degraded land and mangroves**, providing technical support for value chains, **water resource management**, and facilitating biogas compost systems to support healthy soils and alleviate the pressure on biomass.

PROJECT APPROACH

The country projects self-reported their progress on targets, so CI used remote sensing to support validation of their indicators. CI used Trends. Earth to monitor the progress on the GHG emissions mitigated, changes in land productivity, and changes in land cover within the project areas. Due to a lack of spatial data collected for each intervention (e.g., farm fields), only broad conclusions are drawn in the regions where project activities took place.

Earth Observation through remote sensing is a powerful tool that has been applied in the programme for monitoring changes in land degradation, land productivity and land cover. In both Senegal and Ethiopia, interventions have translated into improvements in land cover.

In **Ethiopia**, over the 13 project sites monitored, an average of 30% change in land productivity was observed, with improvements going as high as 72% in Doba District. The most important change in land cover was in tree cover with an average increment of 28%. The highest tree cover increment was recorded in Angolelana Tera at 2,482 ha (75%). An average decrease of 3.6 ha in the agricultural land cover was recorded across project sites. In terms of grassland, there were mixed results where some Woredas had declining grassland cover while others recorded significant increases, such as Diguna Fango 1,824 ha (21.5%).

In **Senegal**, only Kaolack recorded a positive productivity of 0.8%.⁶ All the regions except Diourbel (-3.8% translating to tree loss of 168 ha) recorded positive tree cover increments of between 2.5% to 37.7%. Concerning grassland, all the regions except Kaffrine and Fatick, recorded declining grassland, Laouga showing the highest decline at 12.2% translating to 43,021ha. Land under agriculture in all the five project sites declined between 2018 and 2022 with Lounga showing the highest loss of 3.3% translating to 34,007 ha.

PROJECT RESULTS

The project final evaluation (2021) lists several benefits of the project: newly established dams resulted in shrub and tree vegetation slowly returning; land rehabilitation works have allowed communities to re-settle in once highly-degraded areas; re-colonisation of abandoned farmland due to erosion in gullies has reduced youth rural-urban migration; emerging rice production centres, particularly in Djilas and surrounding areas. The project has set up a system for monitoring and evaluation with support from the Ecological Monitoring Centre (Centre de Suivi Ecologique). The system showed that tracked indicators demonstrated success by delivering on the GEBs, strengthening institutions, improving livelihoods, and promoting gender equality.



Mangrove restoration works underway in Senegal.

⁶ Interpretation of results should include differences in climate change effects; in the case of Senegal, this trend can likely be attributed to a more pronounced drought year.

Country project	3 – Increase in area of land restored (ha)	6 – Increased greenhouse gas emissions (TCO ₂ eq) mitigated in the project area	4.1 – Area of landscapes under improved management
Ethiopia	132,407 (target: 132,407)	3,282,303/ target: 3,300,000	132,407/ target: 132,407
Senegal	1,600 (target: 2,550)	110,924/ target: 112,500	NA

Table 1: Ethiopia and Senegal's contributions to GEF core indicators.

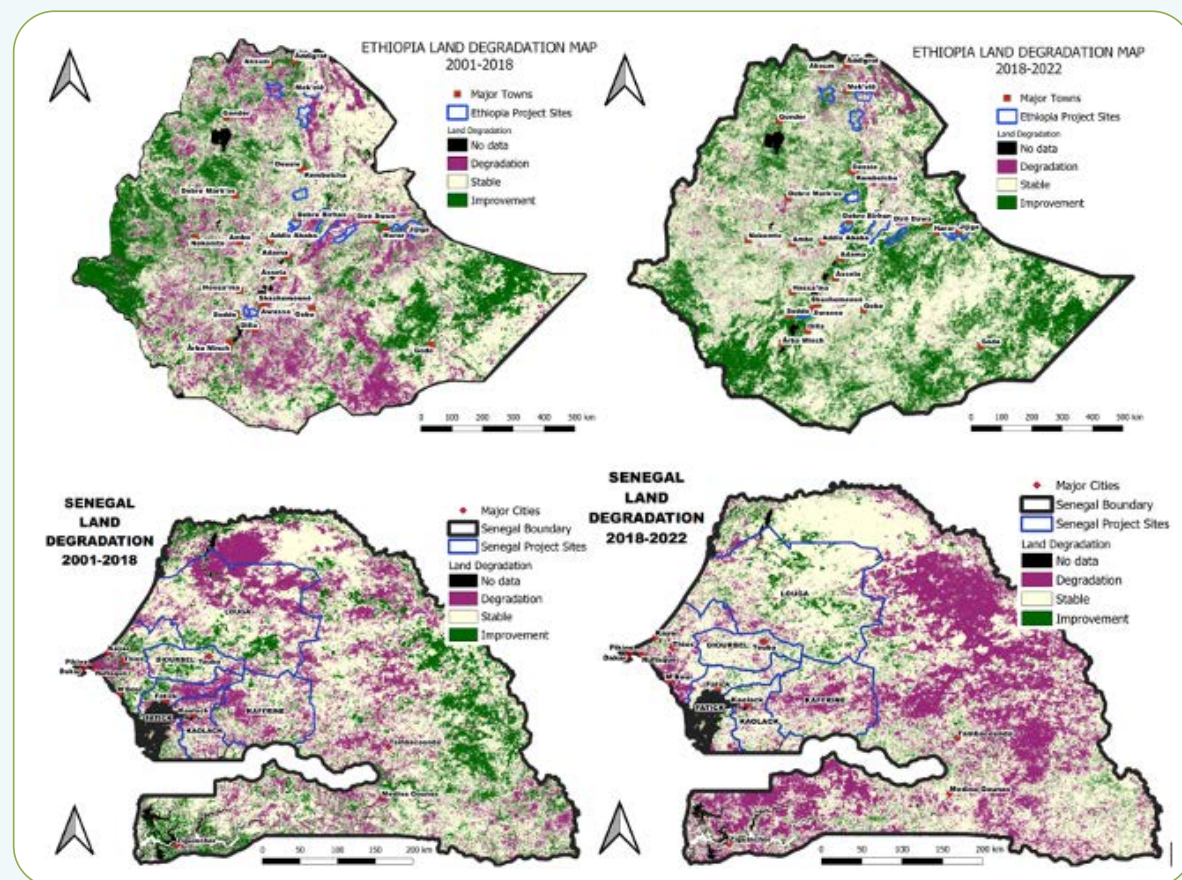


Figure 6: Ethiopia and Senegal land degradation map (Left: Baseline (20001-2018) Right: Project End (2018-2022)).



5.2 Case Study

Monitoring agroecosystem resilience in Burundi through the SHARP+ tool

Co-written with Tom Kiptenai Kemboi, Monica Noon (Conservation International), Sirine Johnston (FAO) & Oscar Niyonzima (RFS Burundi)



BURUNDI



Duration:

September 2017 -
September 2023

Cost:

7,396,330
GEF Grant, 5,015,000
Project's Disbursements
(USD)

Number of

Beneficiaries: 81,310

BACKGROUND

The Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP+)

tool, developed by FAO in 2014, aims at assessing rural households' resilience to climate change by collecting qualitative and quantitative information from smallholders across the entire farm system. The assessment methodology combines participatory self-assessment with quantitative assessment of resilience based on agro-ecosystem resilience indicators.⁷ The tool also collects the necessary data to measure the **Household Dietary Diversity Score**. The qualitative and quantitative data are transformed by the SHARP+ tool into numerical scores reflecting the resilience of rural-based households as well as the priority areas considered by farmers.

PROJECT APPROACH & RESULTS

Two surveys were conducted in RFS Burundi, one in 2016 to support the design of the project, consider potential project modifications and establish a baseline assessment, and an end-line study in 2023. The survey was conducted in the provinces of Muramvya, Mwaro and Gitega, where 402 households were surveyed in 2016 and 341 in 2023.

Farmer Field Schools have a high impact on smallholders' resilience

The baseline assessment highlighted the main resilience-limiting aspects of the farm households studied. The areas with low resilience scores were associated with low household incomes, an underdeveloped livestock sector, lacking appropriate management practices and breeding techniques, and low tree diversity and density on farmland combined with poor access to surrounding forests

and growing populations. Participation in a group or association was low, despite more than half of respondents claiming to be part of one, as there was little, if any, exchange of information on farming practices and traditional knowledge.

To address gaps identified by SHARP+, 134 FFS were established, engaging more than 3800 farmers. These FFS focused in particular on:

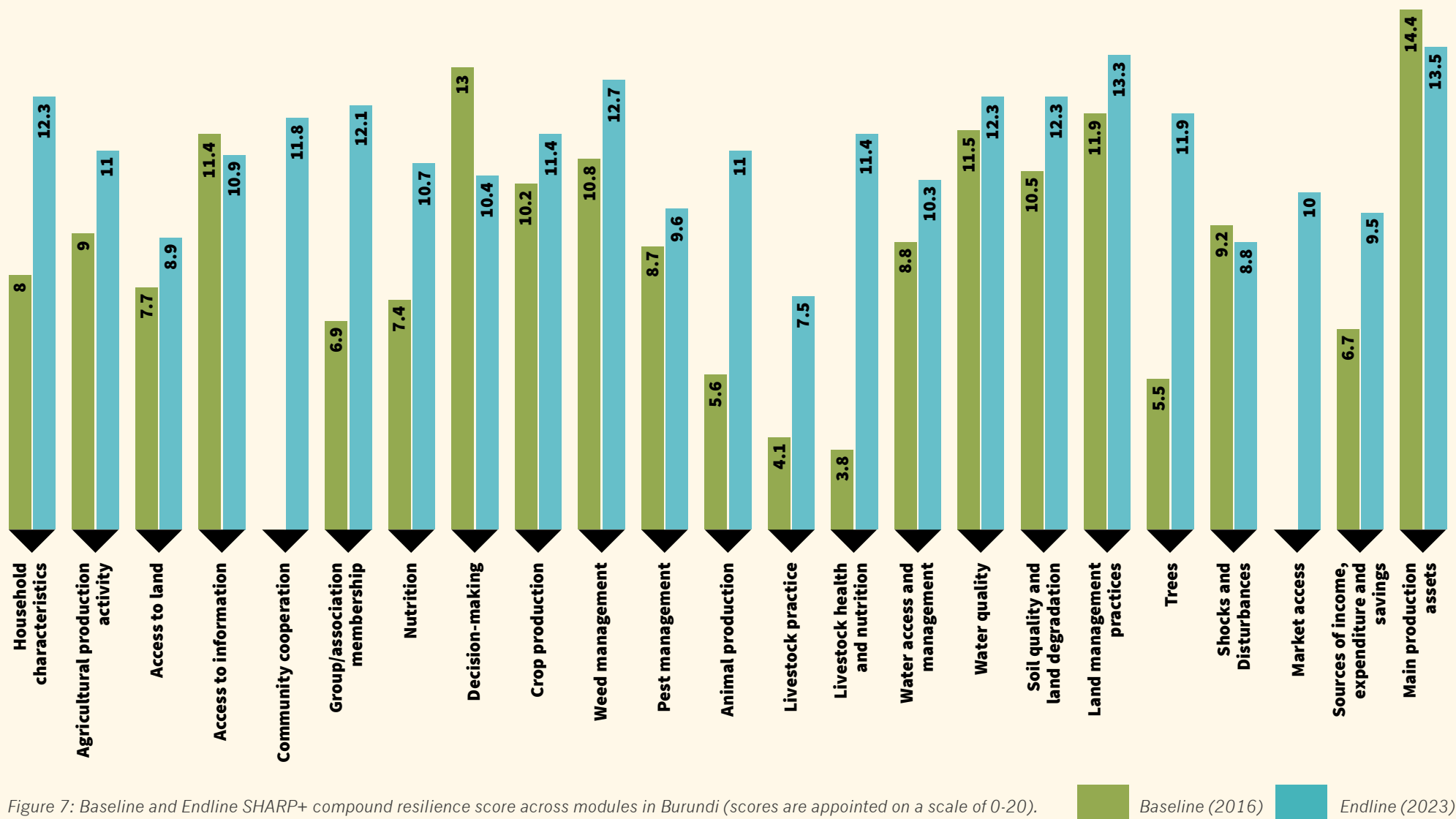
- a. agroforestry,
- b. alternative livelihood activities like mushroom cultivation and beekeeping,
- c. bamboo planting on river banks,
- d. the development of contour lines and anti-erosion devices on farms and in watersheds,
- e. improving production and nutrition through vegetable gardens, market gardening, improved and high-yielding food varieties, and animal husbandry,
- f. water management through hill irrigation,
- g. structuring the FFS into cooperatives, strengthening participation from women.

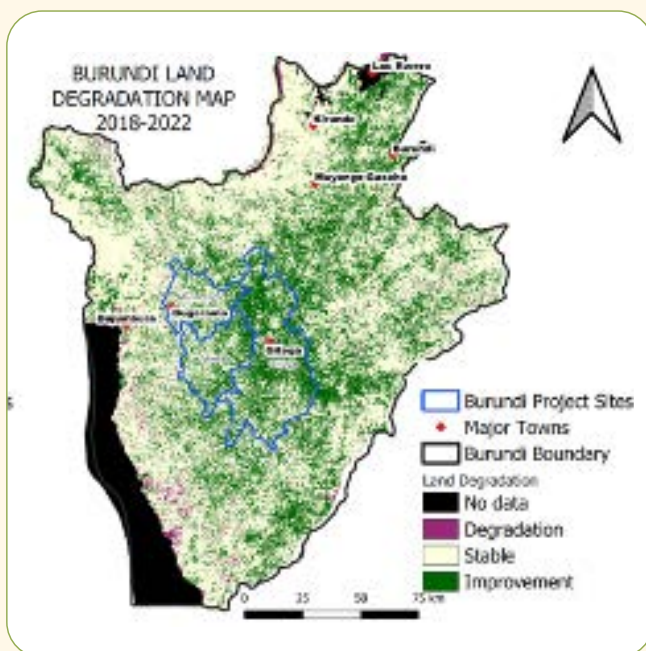
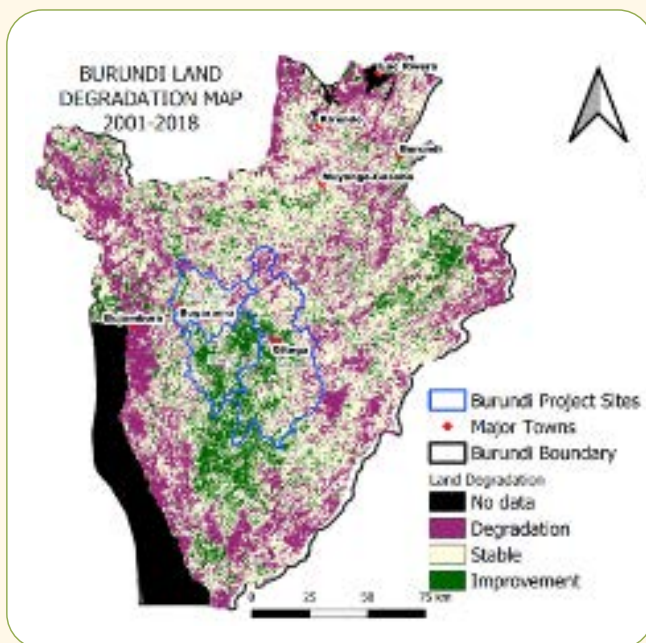
⁷ See Cabell & Oelofse, 2012

The SHARP+ results showed that the difference in resilience scores between male and female-headed households decreased from 6.2 in 2016 to 0.5 in 2023.

The endline and baseline comparison, illustrated in Figure 7, shows a significant increase in resilience. The activities carried out through the FFSs have resulted in increased group membership, fostered social cohesion and knowledge sharing,

strengthened women's participation in hill committee meetings, increased the number and diversity of livestock, and increased the availability of forest products through private and communal afforestation. Remote sensing imagery used by CI provides further evidence of enhanced resilience in the project sites by demonstrating improvements in land degradation in the country.





Conclusion and takeaways from using the SHARP tool in the context of the RFS

The SHARP+ tool was used successfully, primarily by drawing from an objective baseline of resilience from farmer feedback, and priority areas were addressed through FFSs. A follow up survey run in 2023 with the same SHARP+ tool has demonstrated a clear and significant improvement in resilience across most target areas. It was however challenging to attribute results to the project's interventions because data was collected only from project beneficiaries. Results were discussed with the project members in an attempt to make linkages. To remedy this, results could be discussed further with local stakeholders, in order to shed greater light on the causes of vulnerability and resilience. Finally, for a future study, a control population should be included in the sample and interviewed.

The 2023 study has also highlighted a decrease in the level of resilience for certain aspects studied, such as access to information on weather forecast and meteorological events, decision-making within the household and main production assets. These aspects have nevertheless achieved medium to high resilience levels and therefore

do not represent areas requiring urgent intervention. In order to understand the observed decline in scores, a second step would be to discuss it in a focus group, to better understand whether it is really a drop in resilience or a greater demand on the part of respondents with regard to the state of their resource or a service, due to increased awareness.

Remote sensing imagery used by CI further evidenced the enhanced resilience in the project sites through significant improvements on land degraded on most project sites.

In order to maximise the use of SHARP+ and be able to monitor the evolution of resilience, projects should plan at least a baseline and endline survey. As part of RFS, many countries requested to use this methodology but did not have the necessary time or resources to carry out an endline. A precise data collection plan would be beneficial to anticipate the various implementation phases required (including SHARP training, data collection, analysis and discussion of results with the parties concerned).

Figure 7: Burundi land degradation map (Left: Baseline (20001-2018) Right: Project End (2018-2022)).



Lessons learned from the RFS “Track” workstream to advance the integrated approach

The importance of monitoring the resilience of agro-ecosystems requires diverse and multi-scale tools

Monitoring and documenting the complex functions of an ecosystem in simple language is key to making a case for its restoration and garnering political support. Tools such as the DATAR, which monitors intra-species diversity, and the LDSF, which monitors soil land health, constitute adequate tools for monitoring the complex functions of agro-ecosystems.

Making a business case for restoring degraded ecosystems

Any intervention focused on restoring ecosystem functions should go hand in hand with building a strong **business case** for investing in the restoration efforts.

The business case goes hand in hand with the policymaking case

- Policy-specific activity planning should be included into the project work plan

- Use decision support tools and capacitate farmers, policy makers, regulators, implementing partners, and research institutions on their use

Strong focus on fostering human knowledge and linkages for buy-in and long-term sustainability

- Project activities can be scaled out through technology and partnerships including MSPs
- Because such processes are knowledge and technology intensive, stakeholders should be trained at all levels and stages; continuous engagement is important.
- Engaging with stakeholders to link efforts across sectors (climate change, agriculture, restoration, biodiversity) as well as embedding activities within government structures are key for sustainability

Identify common metrics to measure resilience from the onset

The RFS did not want to be prescriptive in the manner through which countries measured their

resilience, which in turn limited the programme's ability to demonstrate its value add. Although a strong M&A framework was developed by CI at the beginning of the programme under the auspices of the TAG, following through the implementation of this framework up to projects' end lines proved challenging. The approach lacked a way of packaging the monitoring of resilience throughout the diversity of proxy indicators used by countries, although there was recognition that resilience could be tracked through such composite indicators.

The IAP made provision to monitor simple food security indicators as proxies to measuring resilience, such as the Food Insecurity Experience Scale (FIES) and the Household Dietary Score (HDDS) but this was done after some projects had been running, which compromised baseline information, and in several countries, the lack of provision for an end line and measuring a control group meant that these indicators could not be adequately measured when the programme ended.

- Future integrated approaches should consider overcoming the complexity of measuring food systems resilience through a proxy such as a food security or food consumption indicator. These should include a baseline and endline but also a measure of community performance after a shock.

Streamline and optimise the use of tools to measure resilience

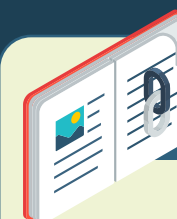
All the Hub Partners had different tools with different capabilities. Country Projects indicated that they were not sure of which tools to select and use and some tools were adopted well into the programme implementation with mitigated results.

It is therefore recommended that:

1. Available tools should be organised and presented to countries during the design phase, so that they can be supported in choosing the most appropriate tool from the start. This process should be well thought out so that countries can settle on relevant tools from the onset and avoid tools / **awareness-raising** overload. Although it may not be possible to prescribe any specific tool, some possible tool packages can be recommended to countries.
2. Technical focal points are assigned by country projects with the responsibility of managing the use of tools and knowledge updated within the country project, while liaising with Regional Hub partners as needed throughout the journey.

Other key elements of effective M&A include:

- **Data collection plan:** to ensure the necessary data is collected accurately and consistently, including after shocks, allowing project activities to be redirected according to the identified vulnerabilities where necessary and to ensure that datasets harvested from a specific tool can inform another tool.
- **Periodic reviews:** regular reviews of the project's values should be conducted to ensure that they are still relevant and accurate to cross-reference the data.
- **Context-specific assessments:** assessments should be tailored to the specific context in which the programme is being implemented.
- **Stakeholder engagement:** future programmes should engage stakeholders early on, including beneficiaries, government officials, and other relevant actors, to ensure that their perspectives are considered.
- **Use of technology:** the use of technology, such as mobile phones and GPS mapping, can help to improve monitoring and assessment in food security programmes, by reducing costs, increasing efficiency, and improving data quality. Future initiatives should ensure that technical staff are recruited to support the project.
- **Continuous learning:** It is essential to adopt a continuous learning approach, regularly reviewing monitoring and assessment systems to identify areas for improvement and make necessary adjustments.



QUICK LINKS

PROGRAMMATIC STRUCTURE

Page 58

Lessons learned from the RFS programmatic structure to advance the integrated approach

Page 66



Chapter 6: Programmatic value addition, additionality and achievements

Co-written with Rodrigo Ciannella (CIFOR-ICRAF) &
Jonky Tenou (IFAD)

6.1 Programmatic value addition

The RFS added value to GEF's traditional investments by connecting the environmental and food security agendas, as well as by contributing to the UN Rio Conventions.

CONSOLIDATING THE ENVIRONMENT AND FOOD SECURITY NEXUS

The IAP was conceived in response to the GEF's 2020 Vision that focuses on addressing drivers of environmental degradation and supporting broad partnerships to implement innovative programming (GEF, 2018). Through the RFS Programme, the GEF tackled major drivers of environmental degradation by advancing a holistic approach seeking to enhance agroecological approaches and agricultural productivity in smallholder systems. In particular, the programme played a pivotal role in ensuring that food security underpins the achievements of Global Environmental Benefits (GEBs) by working in concert with the African Union's Environment Action Plan (EAP) and the Comprehensive African Agricultural Development Programme (CAADP), contributing specifically to its pillars on:

1. extending the area under SLM and reliable water control systems;
2. improving rural infrastructure and trade-related capacities for market access;
3. increasing food supply, reducing hunger, and improving responses to the food emergency crises; and
4. improving agriculture research, technology dissemination, and adoption.

CONTRIBUTING TO THE RIO CONVENTIONS

The programme was aligned with regional and global priorities for integrating environmental sustainability with rural development. As the GEF is a financial mechanism for the three Rio Conventions, it provided a unique opportunity to ensure that the GEF funds were channelled in a manner that reinforced countries' commitments to implement the Conventions (Cf. [Emerging Lessons paper pp 15-16](#)). The participating countries' commitments to the conventions were thus reinforced and synergies across the conventions amplified, as illustrated in Figure 8. RFS experiences were shared during several high-level events, including the [UNFCCC COP27](#), [UNCCD COP14](#), and [UNCCD COP15](#).



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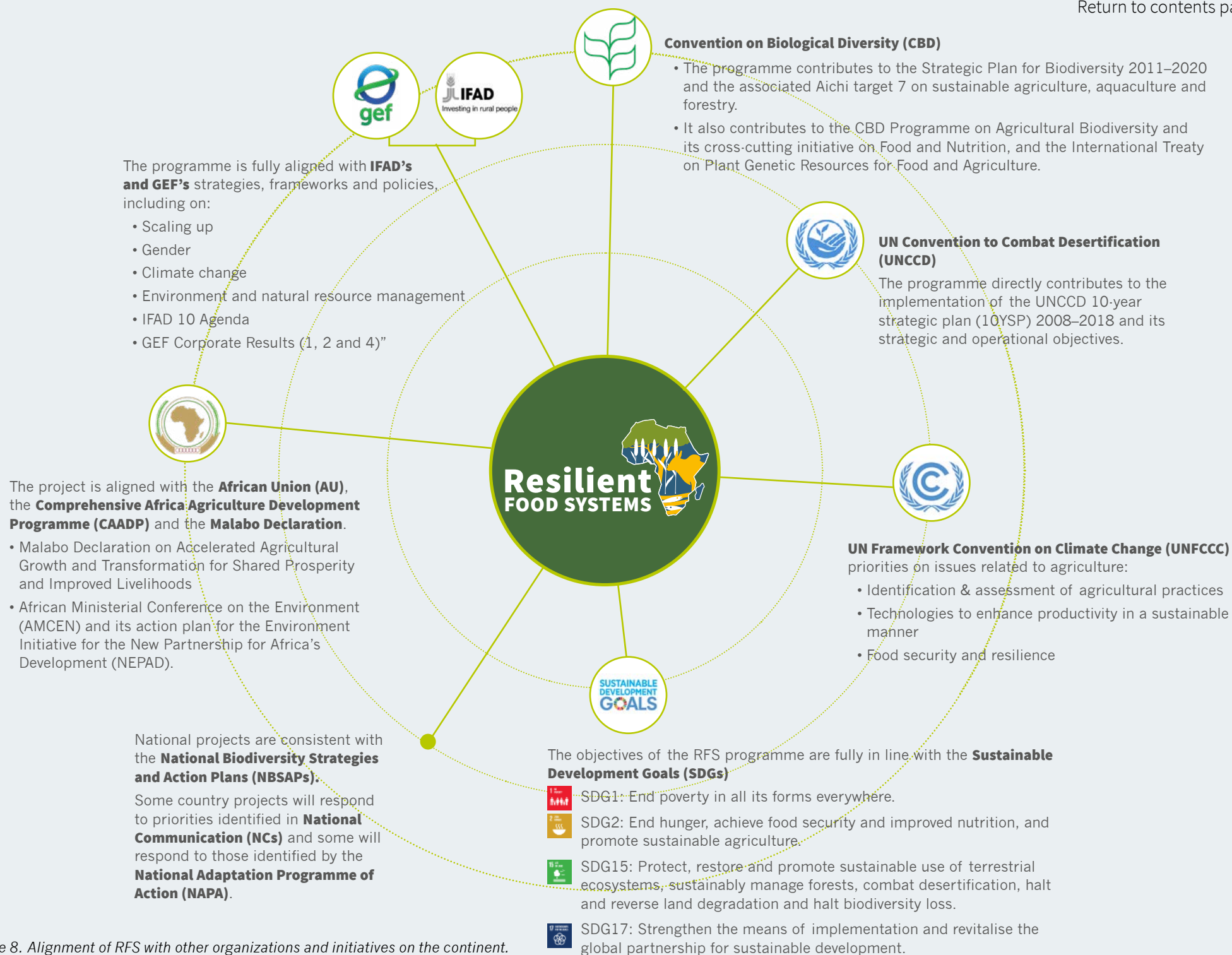


Figure 8. Alignment of RFS with other organizations and initiatives on the continent.

6.2 RFS programme additionality

In the RFS case, GEF's additionality - i.e., the additional benefits attributable to GEF investments⁸ - lie predominantly in the programmatic approach fostering coherence and consistency across 12 national projects, which was facilitated by the Regional Hub. This was achieved through co-financing, regional coordination, co-learning, and co-development, together with governments and other institutional partners. This additionality also emanated from the implementation modality of the programme, which sought to leverage existing initiatives.

CO-FINANCING

In addition to the core grant financing (\$116 million including the Agency Fee) invested by GEF in the IAP, the programme counted on significant co-financing pledged by technical agencies, governments, and other partners - an additional \$805 million were pledged during the preparation of the Program Framework Document back in 2015⁹.

In the case of four countries, the RFS project was closely connected with longer-term baseline projects and programmes, bringing in supplementary funding or co-finance. This was the case for three IFAD supervised projects (Burkina Faso, Niger, Senegal) and for a World Bank-supervised project (Ghana).

Because it is inherently about ensuring the alignment of activities undertaken by each country and the Hub on the ground, and contributing to regional agendas, national priorities, and strategies, other than ensuring that all programme stakeholders are heavily invested in the common goal pursued by the RFS programme, this co-financing is an essential contribution to fostering coherence and consistency within the initiative.

PROGRAMMATIC COORDINATION

The RFS programme drew on the **comparative advantages** of several GEF agencies and other executing partners. It brought together different stakeholders working in common landscapes (governments, private sector, communities, financiers/investors, etc.), to build coherence and momentum to changes at a system level—on policy, regulatory and practice matters—that can then lead to the required changes at local level. In partnership with a range of actors and via existing platforms in sub-Saharan Africa, the Regional Hub, through its Programme Coordination Unit, helped country projects address barriers to the inclusion of ecosystem services approaches into policies and investments for improved and sustainable smallholder agriculture and food value chains. The focus was on promoting dialogue, models, metrics, and practices that bridge the agricultural and environmental agendas at various scales (refer to Chapter 2 and 4 for value chain greening and measuring resilience, respectively).

PROMOTION OF CO-LEARNING

Formal and informal collaboration and co-learning have constituted a strong value add of the programme. Programmatic coherence and consistency, as well as the promotion of best practices were fostered through cross-country knowledge exchanges, which were facilitated by the Regional Hub. This happened on the occasion of the six annual meetings (2017, 2018, 2019, 2021, 2022 and 2023), a plethora of formal and informal interactions between Hub agencies and country

projects, webinars and exchanges of knowledge and experiences through the RFS knowledge platform. The **2022 programme gathering in Blantyre, Malawi**, for instance, included 6 jointly-designed Learning Labs exploring core RFS themes, an evidence and experience session highlighting RFS impact on the ground and field trips to visit the RFS Malawi irrigation schemes and catchment management projects hosted by the PRIDE-ERASP teams. In 2023, the **RFS Final Workshop** in Naivasha, Kenya, was combined with a Science-Policy Learning Day capitalising on RFS learnings for improved policy advocacy in Africa. During the programme close out workshop, countries presented the case studies captured in the present publication. Also, the South-South learning exchanges encouraged by the Hub have resulted in the uptake of new practices learned from other countries (refer to Chapter 6.4).

Co-learning was also fostered through Hub-supported activities which ensured the uptake of innovative farming practices and their wide dissemination, as exemplified by the Farmer Field School (FFS) established in Burundi, Ethiopia, Ghana, Kenya, Malawi, Niger, Tanzania and Uganda, which now form part of the Global FFS Platform (see Box 2).

PROMOTION OF CO-DEVELOPMENT THROUGH CAPACITY BUILDING

Several dedicated training sessions were organised and offered by the Regional Hub to country teams, contributing to provide on-

⁸ Programme additionality refers to the positive net effect of an intervention and this principle further implies that contributions from the GEF do not replace structural expenditure by participating countries.

⁹ Nonetheless, by the time all RFS projects had been fully-designed and initiated in 2018, the aggregated co-financing reported as “secured” by all partners had dropped to \$785 million. By June 2022, less than \$280 million had been reported as “spent” co-financing by the 13 RFS projects.

going cross-learning, technical backstopping to countries and to address challenges related to lack of uniformity in tools and frameworks adopted by different projects.

Within the lifespan of the programme, capacity development sessions were provided focusing on monitoring tools such as **Vital Signs**, **MPAT**, **Resilience Atlas**, **EX-ACT**, **DATAR**, **SHARP**, **LDSF**, **Decision Support**, **participatory video making**, and others, which led to a larger base of RFS projects adopting common tools, thus improving the programme's baseline data. In particular, all annual programme workshops (all of which were in person save for the 2021 workshop which was run virtually due to COVID-19 travel restrictions), as well as the M&E workshop held in 2019, included sessions dedicated to promote the uptake of initiatives offered (at cost) by the supporting agencies and to improve the capacity of country teams on monitoring tools. Separate training sessions were also provided to specific countries on demand.

CO-MONITORING AND EVALUATION

A significant achievement of the RFS was the consultative and detailed elaboration of a coherent programme-level **Monitoring and Evaluation Plan**, with a comprehensive RFS programme results framework that covers the indicators, targets and results validation for the RFS as a whole, including for the RFS Hub project and its components. The programme Results-based Monitoring Framework (RMF) is accessible via an online platform (**SmartME**) that provides up-to-date M&E information from country projects and the Hub project (see Figure 1). The assumption

at design was that the programme would have an impact larger than that of the aggregated values of the indicators for the country projects alone, due to the expectation that the technical assistance provided throughout the programme will have broad influence on food security policy and climate resilience in the region. Therefore, the twelve countries in the RFS included in their project documents targets towards some of the regional-level impacts to which they were expected to contribute.

The development of this plan entailed several country level engagements, followed by a **regional M&E workshop** organised by the PCU in November 2019 to present the emerging RMF and solicit input from countries and agencies to refine indicators and targets. This exercise resulted in commitments from nine countries to adopting new indicators and targets to improve the programme's overall tracking and reporting of impact at regional level. A consolidated GEF-6 RMF was presented to the RFS Technical Advisory Group (TAG) and approved, pending a transition to GEF-7. The transition to the GEF-7 results architecture entailed a subsequent significant rework of the RMF, as the PCU had to revert back to each country to assess how GEF-6 indicators should be carried over under GEF-7, as well as to cross-check assigned targets for core indicators for each country, and rework the framing of indicators for the regional matrix in consultation with Hub partners. As none of the country projects had planned a transition to GEF-7, this required that the PCU effectively undertook this transition on behalf of the country projects. It proved challenging to ensure the sound interpretation of what core indicators encapsulated versus the prior used GEBs by countries, but the transition at programme level was successfully carried out and is further proof of the value-add of the IAP.

GENDER MAINSTREAMING

The Regional Hub was instrumental in elevating gender equality as a critical determinant of resilience both at household and community levels. This transpired through the Monitoring and Assessment (M&A) framework developed to track resilience, in which gender is strongly embedded, the overall programme's RMF, which comprises a mini-dashboard with gender-related indicators, as well as through multiple knowledge resources, such as a practical **guidance note** that was disseminated and supported through **programme-wide training** and **best practices** knowledge consolidation. This, combined with bilateral engagements with countries, helped projects shift from a basic gender-balance approach to a model that emphasises women's empowerment.

See the **Guidance Note on Gender-Responsive Project Implementation** on the RFS Knowledge Library.



6.3 Leveraging other initiatives

LINKAGES WITH AFRICAN AND GLOBAL INITIATIVES

The RFS programme undertook to ensure that food security benefits underpin the achievements of GEBs by aligning efforts and contributing to major regional and global initiatives. Contributions between 2017 and 2020 are outlined pp 22-23 of the [Emerging Lessons paper](#).

Between 2020 and 2023, several additional linkages with relevant initiatives were made. At the regional level, this includes the African Union Commission, the Great Green wall initiative, and the [IAP on Commodities with UNDP](#). Additionally, learnings from the RFS fed into the design and implementation of the GEF-7 Impact Programmes on [Sustainable Forest Management Impact Programme: Dryland Sustainable Landscapes, Food Systems, Land Use and Restoration \(FOLUR\)](#), and the [Good Growth Partnership](#).

National linkages were facilitated through participation in or organisation of strategic events. Examples include:

- In collaboration with the Women Farmers Advancement Network (WOFAN), RFS Nigeria has advanced a multi-stakeholder platform to establish the Rice Council Bill and leverage off of existing momentum to re-frame the rice value chain
- The ProDAF project aligns with the objectives of the 3N Initiative (Nigeriens Nourish Nigeriens) and the sustainability of its interventions is embedded in this partnership

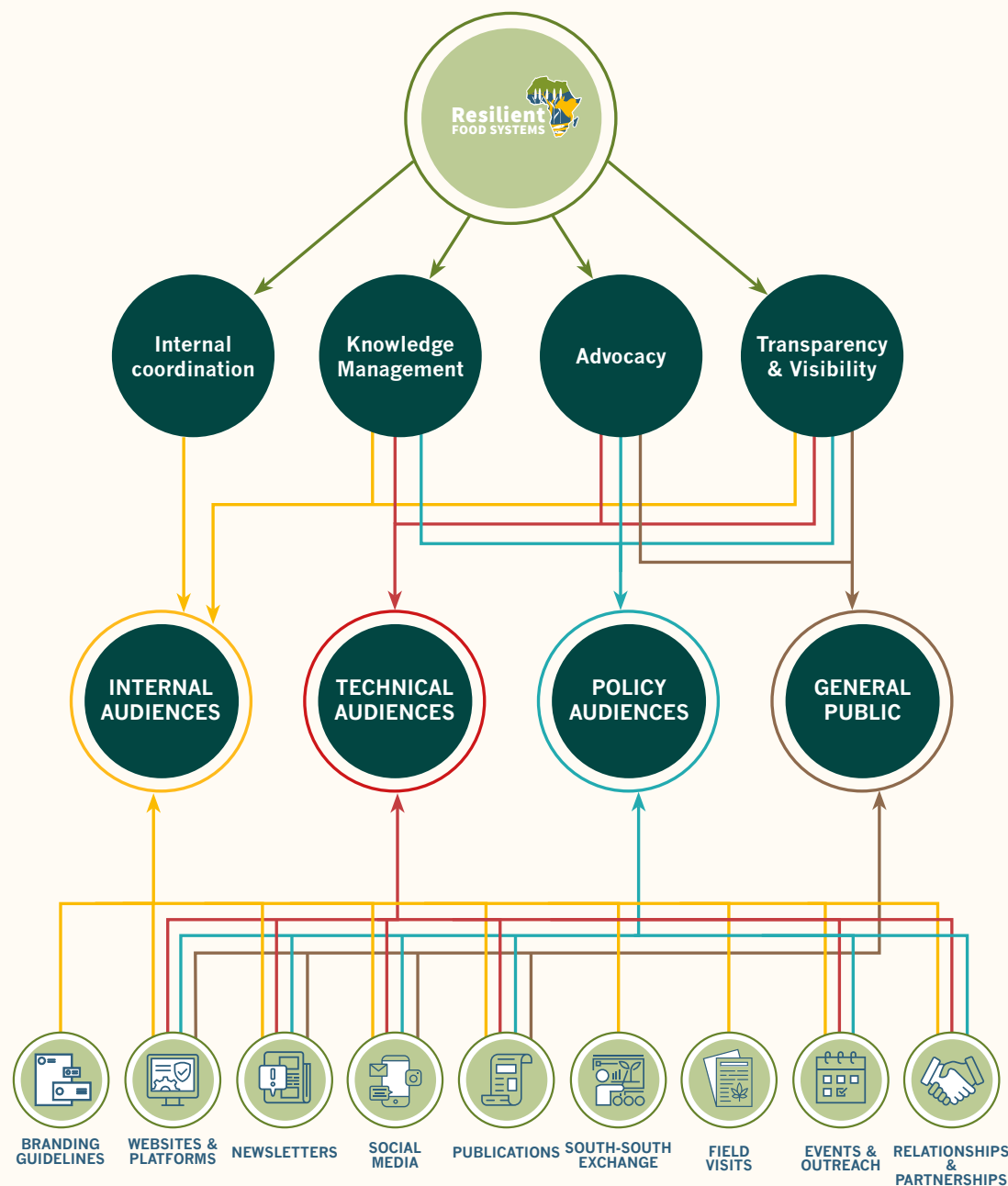


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6.4 Knowledge management and learning across RFS

The RFS Regional Hub was responsible for coordinating and implementing programme-wide knowledge management and communications. This was implemented by ICRAF under Component 4 of the Regional Hub project. The various communications channels implemented by the Regional Hub fostered inter-country exchanges and partnerships with stakeholders across sub-Saharan Africa to ensure that country projects did not work in isolation.

The [Communication and Knowledge Management Strategy](#) of the RFS programme sought to gather, analyse, present and translate information from the 12 country projects, which was disseminated through the RFS communications channels. These channels were designed to strategically connect with internal and external audiences.



Internal audiences

GEF Secretariat | GEF agencies and executing partners | Programme Coordination Unit | Consultative Committee | Technical Advisory Group(s) | country project teams.



Technical audiences

Smallholder farmers | Civil society organisations | Extension officers | Development partners | Research institutes



Policy audiences

National government | Regional and transboundary governing bodies | Development partners | Private sector foundations | Research bodies | Think tanks



General public

Media | SSA citizens | Philanthropic organisations | Development actors | Private sector businesses | Private sector foundations

KNOWLEDGE PRODUCTS

Learnings from across RFS have been consolidated into knowledge products and services by the Regional Hub, closely linking knowledge management with the [RFS M&E plan](#) and enabling adaptive management across the programme. For example, the 2020 guide [How to adapt to a rapidly changing work environment under COVID-19](#) was produced by the Regional Hub to help country teams adjust to remote work in response to the COVID-19 pandemic. The pandemic also necessitated adapting the [2021 Annual Workshop](#) into a virtual format to fulfill the South-South learning component of the programme.

RFS knowledge products also aimed to connect country projects with key tools to guide their implementation and draw connections between them. [The Knowledge Management Brief: Key themes and activities across the twelve RFS Country Projects](#) and [12 country Factsheets](#) generated in 2020 connected cross-cutting themes and objectives of country projects, while [Guidance Notes](#) and [Toolkits](#) provided strategic guidance to support country projects in their implementation.

Other products like [event briefs](#) and [annual reports](#) consolidated the lessons and experiences across the programme to communicate the programmatic learnings with RFS audiences.

The [RFS Knowledge Centre](#) houses close to 250 knowledge products.

DESIGNING A COORDINATED KNOWLEDGE PLATFORM

Knowledge products and M&E dashboards are linked through the RFS website and Knowledge Centre and disseminated through the RFS communications platforms such as social media accounts and news bulletins. The main objective of the Knowledge Centre is to provide a platform for collecting, analysing, and sharing information generated by the programme. During the design of the Knowledge Platform, ease of access and effective organisation were the main considerations, leading to the disaggregation of resources by several criteria including the relevant country project, project theme, and document type.

Key ingredients of an effective knowledge platform:

- Clear tags and categories that help users quickly find the materials they need
- Concentrated pages relating to major programmatic components
- A sustainability plan for the platform and its resources after the programme ends

FACILITATING SOUTH-SOUTH LEARNING

The RFS programme is innovative in its dedication to South-South learning by bringing together country projects from 12 sub-Saharan African countries with technical support provided by the Regional Hub project, in contrast with traditionally

standalone development projects. This approach has effectively fostered knowledge exchange over the duration of the programme through common knowledge management channels and joint learning events. The flagship of knowledge sharing for RFS has been the programme Workshops.

RFS Annual Workshops took place in [2017](#), [2018](#), [2019](#), [2021](#) and [2022](#) in Ethiopia, Kenya, Ghana, virtual format, and Malawi, respectively. The workshops were a space for taking stock of progress, discussing achievements, addressing programmatic challenges, and conducting field trips to engage in practical peer-peer learning.

Following the 2019 Workshop, the RFS Uganda team requested a follow-up visit with the RFS Kenya team to learn more about the SLM and CSA technologies and practices they presented during the Workshop. The Uganda team visited Kenya for 6 days and gained invaluable recommendations that they later applied to their own project. [Read the full visit report](#) on the RFS Knowledge Centre. The 2019 Workshop also led to the [RFS Nigeria team taking on the composting approach](#) presented by the Ghana country project. Following the 2022 Workshop in Malawi, the [UTNWF was invited for an extended visit hosted by the Blantyre-Mulanji Water Fund](#) to share knowledge and experiences on establishing a water fund.

The [Final Workshop & Science-Policy Learning Day](#) was held in June 2023 to close the programme and take stock of lessons learned, complementing the content and structure of this report.



Lessons learned from the programmatic structure to advance the integrated approach

Simplifying project design for future integrated approaches

At design, the rationale for involving multiple agencies in supporting the 12-country programme was to foster synergies between interventions and ensure complementarity in expertise. Through their involvement in the RFS, participating agencies have developed innovative platforms and products that will be used by other programmes and have also learned significantly from their involvement in the IAP. The institutional legacy of the IAP for these agencies is added value. However, the complexity inherent to having multiple agencies implementing the programme and the related sub-grant agreements (five primary grant agreements and two sub-agreements in the case of the Regional Hub project) led to high coordination and transaction costs, often causing delay in the provision of technical support to country teams.

- Despite the merits of having multiple agencies work in synergy, future integrated approaches should seek to involve fewer implementing agencies and consider whether sub-contracting arrangements will be feasible without leading to operational delays and additional costs.

Misconceptions at country level on how to benefit from the integrated approach

Country projects were allocated 90% of the overall programme budget, and they received their GEF allocations directly through their selected implementing agencies (IFAD, UNDP, UNIDO, FAO and/or the World Bank). As the regional approach was being piloted, the additional GEF funding given to countries to integrate them within a regional programme was often not adequately communicated to country teams at design. In consequence, their knowledge on the requirements and benefits they could reap from a more integrated approach, including connections to the other country projects and collaboration with the Regional Hub, have, depending on the agencies, been limited.

- The overall programme coherence, understanding and ownership of an integrated approach need to be well explained and embedded into all individual project documents at design.

Make provision for detailed country budget lines for regional activities and for regional activities in country

Despite several communications from the PCU explaining the programme's overall budget structure, and which services were offered by Hub partners (and at what cost), some country teams resisted throughout the programme the idea of co-paying for Hub services from their own project budgets, as they regarded these services as something that should be complementary and especially because the suggested support activities offered by Hub partners were shared after project design, making budget allocations to additional activities problematic.

- For countries to best capitalize on the GEF additionality and work in an integrated manner, having at design dedicated budget lines for regional-level activities, including specific provisions on how to co-invest with the Hub, could have been more efficient. Similarly, consideration could be given to allocate greater resources to the Regional Hub, and have some of these funds mapped at design to specific country contributions (in terms of technical support), in line with national / local priorities.



Programme co-design is the bedrock of the integrated approach

Whereas the core components of “Engage, Act and Track” were consistently adopted by all country projects and provided a strong common thread, effective programmatic integration elsewhere remained limited. The parallel design of the Regional Hub project and 12 country projects, as opposed to a co-design process at programme level followed by country level, limited the possibility of fostering synergies between interventions, sub-components and M&E approaches among RFS partners before they launched. As the workplans, budgets, and expected deliverables of Hub project components were structured in advance of consultations and alignment with country project workplans, several regional level activities to support countries could not be taken up by countries and conversely the regional component was not able to adequately respond to country needs. Whereas country projects’ interest in the RFS was sparked over time through a series of engagements, the Hub’s and agencies’ ability to tailor expertise to emerging needs remained limited.

- Future integrated initiatives should ensure that the regional supporting entity undertakes a process of joint design with country projects in order to ensure the relevance of regional-level interventions to support areas for which projects express deficiencies, to identify common management challenges and activities between projects, and to ensure a strong alignment between regional and country project cycles.

Focus on high-level indicators at programme level and the packaging of composite indicators to monitor resilience

Demonstrating programme additionality, especially through quantitative approaches and data, was partially constrained by the fact that not all indicators, metrics or monitoring tools were standardised across the RFS country projects. Juggling the recognition of project specificities and contexts, as well as different timelines between country projects and the Regional Hub, whilst determining comparable metrics, proved a challenging exercise.

Also, given the lack of composite indicators to monitor resilience (a core target of the programme) the RFS results framework ended up somewhat ambitious in seeking to track different types of resilience-related indicators that were common to a minimum number of countries. Although this granularity conveyed a rich picture of overall achievements, the possibility of aggregating results from countries and proving the impact of the programme on improved resilience at the regional level remained constrained by this heterogeneity. Future initiatives should ensure the adoption of common high-level indicators, metrics and monitoring tools by all country projects at design, and not seek to track too many indicators.

Further leveraging the private sector through investment plans

Most of the programme achievements related to engagement with the private sector took place at country project level, usually with local businesses and/or national companies. No contractual arrangements, for instance, were envisaged with multinational corporations or other key private stakeholders connecting them with the Regional Hub. Future integrated approaches should seek to harness the significant financial and technical contributions the private sector can offer.

- The case for building resilience should systematically be correlated to business cases in which private (and public) investors understand the merits of co-investing in the rehabilitation of ecosystems or sustainable agribusiness models, as exemplified by the case of the Upper Tana Water fund piloted through the RFS (see case study 4.2).
- Future initiatives could attempt to engage the private sector more closely at design by developing an investment package that identifies opportunities for companies and farmers to co-invest in project activities.

Go deeper into details of knowledge management in the programme design

The RFS Communication and Knowledge Management Strategy was finalised in 2020, three years after the official programme started in 2017 (some RFS projects and components were initiated later in 2018), so designing the strategy was reactive to initial programmatic learnings. While this was beneficial in terms of tailoring the strategy to what we knew would be useful, it led to backtracking and filling in gaps.

Designing a knowledge management strategy with clear indicators and targets before the implementation of the programme allows for streamlining the early learnings of a programme and feeds directly into communicating information to project at the early project stages which is a crucial time. However, being adaptive is still an asset; for example, the RFS strategy included an internal bulletin but it was discontinued after about a year of implementation because some of the information shared ended up overlapping with the external newsletter, making it repetitive for internal stakeholders.

Incorporate indicators for K&L as part of the programme framework

RFS employs the SmartME platform for programmatic monitoring and evaluation, but the original framework lacked indicators for K&L. While the PCU tried to address this issue through revisions on the Regional Hub project's results framework (through Component 4 indicators), incorporating them at the programme design, including at the partner and country project levels, would have helped bolster the knowledge management strategy. Doing so calls for a programmatic Theory of Change dedicated to K&L.

Sensitise national stakeholders on the importance of knowledge management

Limited awareness of the importance of knowledge products in advocacy efforts at the country project level can be a bottleneck in terms of connecting the vast amount of learnings with wider audiences. Increased efforts to sensitise teams on the role of communications and knowledge management in the wider programmatic objectives can help country teams better allocate resources toward engaging with the Regional Hub on the creation and dissemination of knowledge products.

Be consistent and proactive with translations

When operating in both anglophone and francophone African countries, knowledge products and communications need to be easily accessible in the target language of stakeholders. This necessitates proactive translation of materials so that French and English versions can be posted at the same time. Similarly, simultaneous translation for events and workshops held within the programme or where the programme is engaging in global dialogue is necessary for active participation from all stakeholders.

Monitor and facilitate uptake of knowledge products

The RFS Resource Library is home to close to 250 documents aimed at cross-country learning – a major part of the RFS programmatic approach. While these resources were regularly disseminated by the PCU, and the process of reflection during production is a useful exercise for project staff,

there was only anecdotal evidence to suggest that these products had been taken up before the MTR. In response to this gap and feedback from the MTR evaluator, ICRAF set up a dashboard with website and analytics indicators using Databox to support planning for knowledge products, events, and communications.

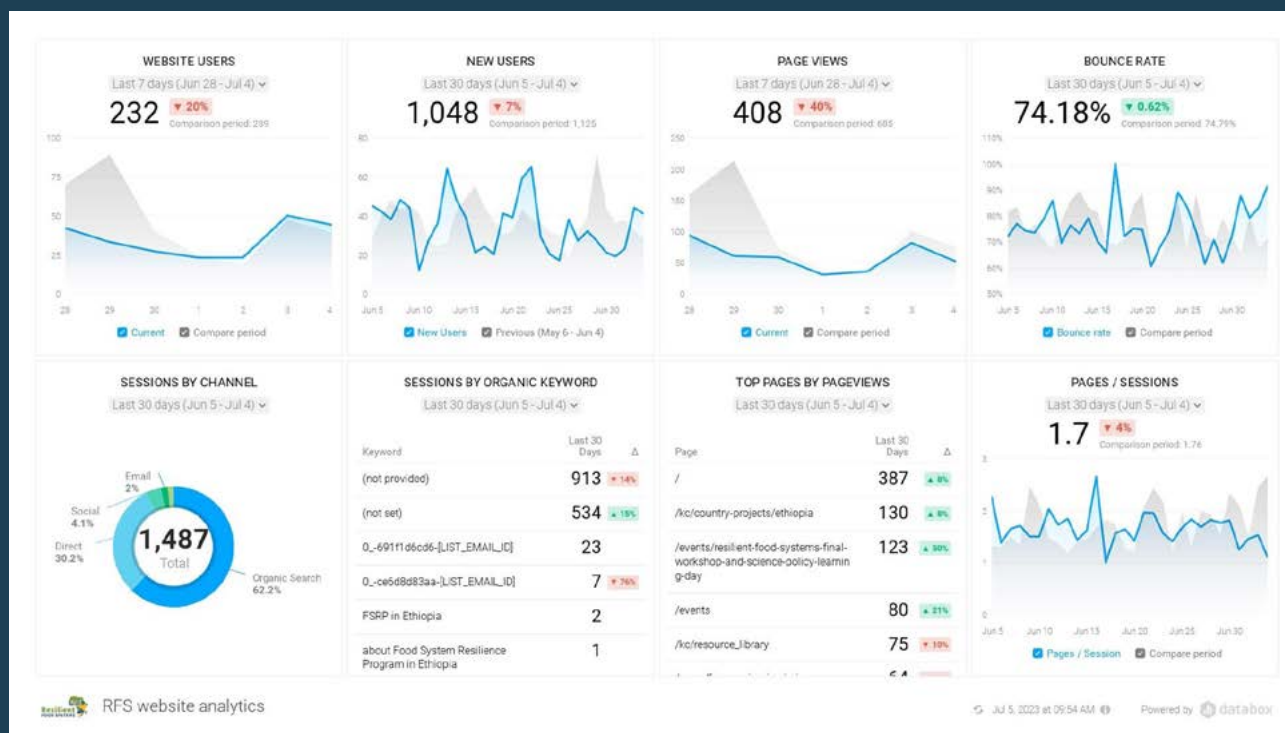


Figure 9. RFS website analytics dashboard generated by Databox for the period of August 2022 - June 2023

Adopt a bottom-up approach to shared learning

The structure of the annual RFS workshops has evolved from a top down to bottom up approach to learning, based on feedback from programme stakeholders and the adoption of the SHARED approach led by CIFOR-ICRAF. Facilitating knowledge exchange through the **SHARED Learning Labs** have formed the basis of recent workshops and garnered positive feedback.

Conclusions

The COVID-19 pandemic and multiple biophysical, security and climatic shocks impacted the implementation of the programme across the 12 countries and in some instances inhibited the execution of entire activities, both at country level and in terms of the interventions planned at the regional level. Despite this, the RFS programme has in its lifespan succeeded in making tangible the integration of multiple projects to ensure synergies and to learn from one another to transform smallholder agriculture in Africa and steer it on sustainable pathways.

As a pilot IAP, the RFS will not be continued beyond its completion in 2023. Therefore, there is a strong need to ensure the sustainability of its legacy both at the regional and country level.

HUB PARTNERS

The Regional Hub project has worked towards the sustainability and scaling-up potential of many activities. This is ensured by the fact that many activities will be carried forward by well-established Agencies.



All interventions implemented by FAO are anchored within existing institutions and partnerships. Their work with FFS has been fed into the Global FFS Platform to inform future global initiatives, and FFS in RFS project sites have had sustainability embedded in their design and are being carried forward.



The programme's scientific knowledge support interface is already integrated into UNEP's medium-term strategies as a key approach to addressing climate change and biodiversity. The SPI platform is also currently supporting Common Country Analysis and SDG reporting, with funds being leveraged from other donors to expand to additional countries.



The DATAR tool is being upscaled into new contexts and countries and integrated into other programmes. The tool is continuously being developed and is supported by GEF and IFAD.



Continuing work on the catalytic grants in Tanzania, Burkina Faso and Malawi, creating knowledge products and linking green food value chains with private sector partnerships, to strengthen their respective value chains.



- The Resilience Atlas platform will continue to host project sites' layers, contextual factors, stressors and shocks assets, as well as capacities data for as long as possible. CI uses the platform for its various products - as such the future use of the RFS Resilience Atlas is guaranteed.
- Trends.Earth is continuously being improved and maintained in support of the UNCCD Land Degradation Neutrality, therefore, it will be available for various partners and other users for different projects.
- The Guidance for monitoring ecosystems services, socioeconomic benefit and resilience of food security developed by CI is published and can be used to guide monitoring and evaluation/assessment of future projects.



Right now is a critical moment in Africa for capturing and contributing to agroecological transitions through dialogue and by building a community of practice. Informed decision-making can only happen with evidence, and we need to make sure we are measuring and communicating results to incite change. While maintaining the RFS consolidated knowledge (through its website and Knowledge Centre) publicly available beyond programme completion (for at least two more years), so it can inform GEF-8 design and other initiatives, CIFOR-ICRAF will also continue to work to strengthen partnerships to advance agroecological approaches and address evidence and information gaps for food systems transformation in Africa.

COUNTRY LEVEL

RFS country projects have also defined sustainability strategies and opportunities for scaling. Here are some examples from each project:



The **Burundi** project is calling for an evaluation of the project outcomes on the ground, as well as mobilising resources toward expanding the pilot project to other areas of the country.



The **Burkina Faso** project is looking for additional opportunities to engage in knowledge sharing with other country projects.



The **Ethiopia** project is capturing best practices and lessons learned through evidence generated from the clear project-level monitoring and evaluation framework to inform the production of guidelines and context-based approaches.



The **Eswatini** project has reported useful lessons learned at the regional level and is looking for opportunities to mobilise resources and scale the approach.



The **Ghana** project has reported an increase in women having access to land and funds to develop it, indicating increased landscape benefits. The project is now calling for activities to upscale the integrated approach.



The **Kenya** project defined an exit strategy at design, and the UTNWF is now an independent Trust, operated through stakeholders engaged through the project. The project is engaging in South-South learning with other emerging Water Funds and looking for additional exchange opportunities.



The **Malawi** project was embedded in the PRIDE project from the Government of Malawi, so the lessons learned are being taken up by future initiatives and informing additional catchment-level projects in the country.



The **Niger** project was part of the pre-existing 3N Initiative from the Government of Niger, so the lessons learned are being taken forward in future national programming. The project results will undergo an evaluation to assist in advocating for resource allocation from partner institutions to engage in a follow-up project.



The **Nigeria** project has, among many achievements, influenced attitude shifts among rural people where women now own and operate farming land under SLM. Through capacity building with government actors, policymakers are more able to support women farmers now and in the future.



The **Senegal** project worked alongside local institutions and influenced several policies toward building independence within the country to streamline development work in the future.



The **Tanzania** project is calling for a reporting mechanism that communicates results to Heads of State after the project end, and will seek to be ambassadors to future projects, linking them with lessons learned.



The **Uganda** project is engaging with Government departments toward upscaling the project approach.

REGIONAL PROGRAMMING

The implementation of this multi-partner programme heralded rich lessons in terms of optimising the integrated approach. The lessons learned through this pilot are already being used to inform the implementation and design of future integrated approaches.



The results, practices, and lessons learned during the RFS IAP have been and are being fed into the GEF-7 implementation (shaping food systems transformation), the GEF-8 programming (moving into Integrated programming for systems Transformation), as illustrated by Figure 10 below.

Evolution of GEF's Integrated Programing

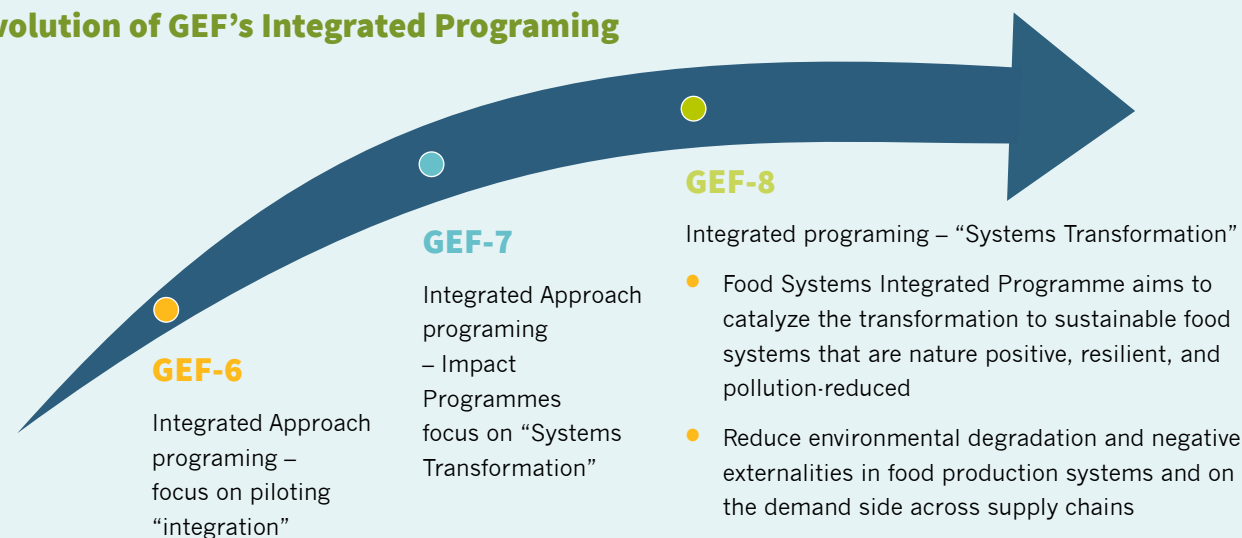


Figure 10. Evolution of GEF programming



The RFS lessons learned and experience have been instrumental for IFAD's similar regional initiatives such as the Great Green Wall umbrella programme and the GEF-8 GEF Food Systems Integrated Program (IP-FS) co-led with FAO.

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