

Catalyzing Resilient and Sustainable Food Value Chain Development in Africa











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List of abbreviations

AGRA Alliance for a Green Revolution in Africa

AICC African Institute of Corporate Citizenship

CSA Climate-Smart Agriculture

GEF Global Environment Facility

IAP Integrated Approach Pilots

IFAD International Fund for Agricultural

Development

IMpART Improved Market Linkages for Increased

Incomes and Rural Transformation Project

LSF Lake Zone Smart Farms

MoU Memorandum of Understanding

MSME Micro-Small and Medium Enterprises

RFS Resilient Food Systems

UNDP United Nations Development Programme

UNIDO United Nations Industrial Development

Organisation

USD United States Dollar



About this brief

The brief introduces the Resilient Food Systems (RFS) programme and its twelve projects, currently being implemented across sub-Saharan Africa. It outlines the programme's coordination mechanism, the Regional Hub, and its integrated approach to transforming the agricultural sector and ensuring sustainable food production. The brief then describes the resilient and sustainable food value chain development (RSFVCD) approach and its relevance to smallholder farming systems. It closes with the three grant winning project proposals for catalyzing the development of resilient and sustainable food value chains in RFS countries. The grants were awarded by the Alliance for a Green Revolution in Africa (AGRA) and the United Nations Development Programme (UNDP), lead organisations for the RFS Regional Hub's Component 2 work on 'upscaling of integrated approaches'.

Background

The Resilient Food Systems Programme is one of three Integrated Approach Pilots (IAPs) funded by the Global Environment Facility (GEF). Through RFS, GEF seeks to position the management of natural capital as a priority in ongoing efforts to transform the agricultural sector and ensure resilient and sustainable food production in sub-Saharan Africa. Implementation is led by the International Fund for Agricultural Development (IFAD) in collaboration with 12 African countries and several regional partners.

A five-year initiative (2017-2022), the RFS targets four regions in sub-Saharan Africa namely, Sahel, East African Highlands, Horn of Africa and Southern Africa. These regions are seriously affected by environmental degradation and a loss of ecosystem services resulting in low crop and livestock productivity and ultimately food insecurity. Twelve countries (Burkina Faso, Burundi, Eswatini, Ethiopia, Ghana, Kenya, Malawi, Niger, Nigeria, Senegal, Tanzania and Uganda) within these regions are actively engaged in the RFS programme. These countries are well placed to harness good practices for long-term sustainability and resilience of food production by reducing land degradation and biodiversity loss, enhancing natural vegetation cover and improving soil carbon content.

Twelve countries actively engaged in the RFS programme

SENEGAL

Agricultural Value Chains Resilience Support Project

Improve the sustainability and resilience of smallholder agricultural systems and food value chains by safeguarding and maintaining ecosystem services.





BURKINA FASO

Participatory Natural Resource Management and Rural Development Project

Promote sustainably managed agro-ecosystems to ensure food security and increase smallholder farmers' resilience in the northern region of Burkina Faso.



GHANA

Sustainable Land and Water Management Project

Scale up integrated landscape management practices in Northern Ghana to improve food security and maintain ecosystem services.



NIGER

Family Farming Development Programme

Strengthen sustainable family farming and climate change adaptation and improve market access for smallholder farmers.



NIGERIA

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

Foster sustainability and resilience for food security in Northern Nigeria through addressing key environmental and socioeconomic drivers of food insecurity across three agro-ecological zones.



ESWATINI

Climate-Smart Agriculture for Climate-Resilient Livelihoods

Increase the adoption of diversified, climate-resilient agricultural production practices and promote associated market linkages to enhance the food security and livelihoods of smallholder farmers.



ETHIOPIA

Integrated Landscape Management to Enhance Food Security and Ecosystem Resilience

Enhance long-term sustainability and resilience of food production systems by addressing the environmental drivers of food insecurity in Ethiopia.



UGANDA

KENYA

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

Upper Tana-Nairobi Water Fund

Achieve a well-conserved Tana River basin with

improved water quality and adequate quantities

for downstream users and strong benefits for

agricultural communities in the watershed.

Improve food security and the long-term environmental sustainability and resilience of food production systems in the Karamoja sub-region by addressing environmental drivers of food insecurity and their root causes.





BURUNDI

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

Increase the adoption of resilient, improved production practices for sustainable food and nutrition security through integrated landscape management and sustainable food value chains.



■ TANZANIA

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

Reverse land degradation trends in central Tanzania and Pemba (Zanzibar) through sustainable land and water management and ecosystem-based adaptation.

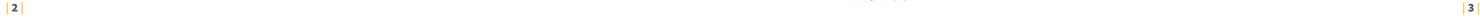


MALAWI

Enhancing the Resilience of Agro-ecological Systems

Enhance the provision of ecosystem services and improve the productivity and resilience of smallholder agricultural systems through addressing land degradation, loss of agrobiodiversity and climate change adaptation and mitigation.





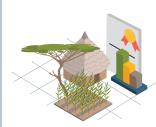


One Regional Hub

The 12 country projects are connected by the Regional Hub which ensures overall coordination by facilitating the exchange of knowledge and upscaling of best practices, as well as joint tracking of impacts at the national and regional

levels. The Hub has four key components, led by institutional partners with key technical expertise to support science- policy linkages, implementation and monitoring within the country projects.

COMPONENT 1



Institutional frameworks

Create and
strengthen integrated
institutional
frameworks and
mechanisms for
scaling up proven
multi-benefit
approaches





COMPONENT 2



Upscaling of integrated approaches

Scaling up integrated approaches and practices, including resilient and sustainable food value chains







COMPONENT 3



Monitoring & assessment

Monitoring and assessment of global environmental benefits and agroecosystem resilience







COMPONENT 4



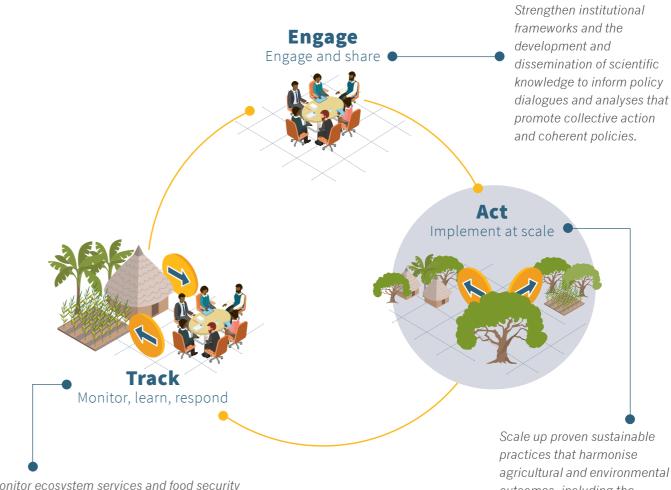
Programmatic impact, visibility and coherence

Coordination, reporting and general management functions across RFS projects for programmatic impact, visibility and coherence



Programme approach

The integrated approach of the RFS is founded on three guiding principles, which are reflected in the core components of each project.



Monitor ecosystem services and food security resilience to assess progress and enable informed decision-making. This includes gathering high-quality data, applying proven analytical methods, establishing information-sharing protocols and integrating risk- management approaches for evaluating the trade-offs and synergies between food production, nutritional security, poverty alleviation and ecosystem services.

practices that harmonise
agricultural and environmental
outcomes, including the
development of resilient
and sustainable food value
chains, thereby striking a
balance between food security
demands and safeguarding
vital ecosystem services

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Developing resilient and sustainable food value chains in sub-Saharan Africa

USEFUL TERMS

Greening (activity): making environmentally responsible decisions on a value chain activity and turning them into actions. Environmentally responsible decisions and actions are those that reduce the negative impact on the environment by conserving resources, using resources efficiently, and minimising pollution.

Economic sustainability: the ability of a value chain or value chain activity to maintain its viability over time.

Environmental sustainability:

responsible interaction with the environment to avoid depletion or degradation of natural resources and allow for long-term environmental quality.

Resilience (of ecosystems): the ability to function and provide critical ecosystem services under changing conditions.

Agricultural value chain: the whole range of goods and services necessary for an agricultural product to move from the farm to the final customer.

(Source: AGRA and UNDP, 2020)

Greening of the food value chain, also known as the resilient and sustainable food value chain development (RSFVCD) approach, generates and recaptures value at each level of the food value chain, proactively reducing the exploitation of the natural environment to lessen adverse environmental impacts, and in some cases

generate positive ones. The approach further considers the disposal and recycling of waste generated throughout the value chain (AGRA and UNDP, 2020).

Transformative interventions using the RSFVCD approach can lead to improved human wellbeing (economic impact) and social equity (social impact), significantly reducing environmental risks and ecological scarcities (environmental impact) (UNEP, 2011) while also considering the economic efficiency of such processes. Further, through innovative projects and integrated initiatives, socio-environmental progress, socio-economic (inclusive) growth, and enviro-economic impacts (green growth) are attainable.

While various value chain development initiatives deliver interlinked benefits, the RSFVCD approach makes it possible for practitioners to merge the three forms of growth. Combining economic objectives with environmental and social goals, along with an enabling institutional environment, enhances the quality of growth (AGRA and UNDP, 2020). Hence, RSVCD is a concept that combines sustainable, environmentally-friendly practices with a resource-efficient food value chain approach for the social and economic wellbeing of the value chain actors.

For RFS projects, adopting an agri-food value chain approach means designing and implementing interventions that address challenges that exist within specific links of an agricultural production system, from input suppliers to end markets.



The role of agricultural value chain greening in the transformation of agriculture in Africa (Adapted from AGRA and UNDP, 2020)

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Sub-Saharan Africa context

African smallholder farmers' agricultural operations are characterised by low productivity and financial returns, small budgets, low-quality standards, and vulnerability to environmental concerns such as pollution, climate change and climate variability, environmental and soil degradation, and limited capacity to adapt (Hilmi, 2019).

Smallholder farmers in RFS countries tend to produce agricultural products for household consumption or operate within informal agri-food value chains that supply their local community.

They often sell their produce, either directly or through middlemen, to small local stores or markets. These markets are characterised by low value products, low prices, and low and inconsistent returns for farmers.

This presents an opportunity, as the smallholder farming system has the potential to create value-added products using environmentally-friendly practices that could contribute towards more resilient and sustainable food value chains, ultimately enhancing long-term food security, environmental sustainability, social wellbeing, and economic growth.



However, to achieve this, a number of challenges need to be overcome:



Lack of capital;



Inefficient information flows;



Poor access to inputs;



Social and economic inequalities;



Limited agricultural and agribusiness skills; and



Weak market linkages.

Introducing the training manual for resilient and sustainable food value chain development in Africa

Who developed the manual?

The Alliance for a Green Revolution in Africa (AGRA) and the United Nations Development Programme (UNDP) collaboratively developed the manual as part of the Resilient Food Systems programme.

Who is the training manual for?

 It is designed for development practitioners in Africa.

Why is it needed?

For the establishment of a structured process in green food value chain development.

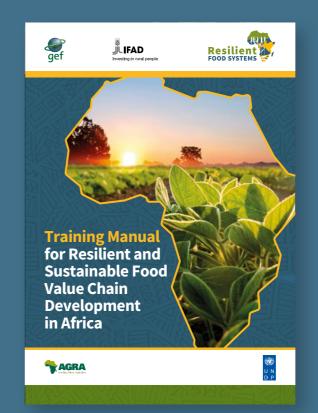
What is the purpose of the training manual?

To advance a holistic approach to agricultural productivity and agribusiness development in smallholder farming systems as well as the health of the ecosystem.

To impart capacities and analytical skills to help value chain actors, especially smallholder producers and farmer support service providers such as extensionists and marketers, to embrace value chain greening.

What is in the manual?

- The training manual is based on the green food value chain concept as an approach that generates and recaptures value at each level or link of the food value chain, proactively reducing the usage of the natural environment so as to diminish or mitigate adverse environmental impacts. The food value chain greening approach is also referred to as the RSFVCD approach.
- The manual blends best practices and lessons learned from projects, programmes, and initiatives that promote RSFVCD.







RFS Country Projects awarded AGRA and UNDP grants

Adopting a resilient and sustainable agri-food value chain approach is vital for RFS projects. In support of this objective, in 2019, two Regional Hub partners · AGRA and UNDP · hosted a training workshop for RFS country project teams on greening agricultural food value chains. The purpose of the training event was to:

- Gauge country project teams' understanding of the value chain greening concept.
- Build capacity in the application of value chain concepts to farming operations.
- Raise technical awareness of how to make food value chains more sustainable and resilient.
- Identify the training needs within country-specific value chains.

Building on this, in April 2020, AGRA and UNDP invited applications for sub-regional catalytic grants. The grants were to be awarded to organisations working to strengthen the resilience and sustainability of agri-food value chains and the integration of natural resource management into African food systems.

Sixty-three concept notes were received from interested organisations across the twelve RFS countries, nine of which were shortlisted and further developed into full project proposals.

In November 2020, AGRA and UNDP selected three grant winners namely, Kilimo Trust and Musoma Foods Pvt Ltd in Tanzania and Uganda; the GRAD Consulting Group in Burkina Faso; and African Fertilizer and Agribusiness Partnerships in Malawi and neighboring countries.

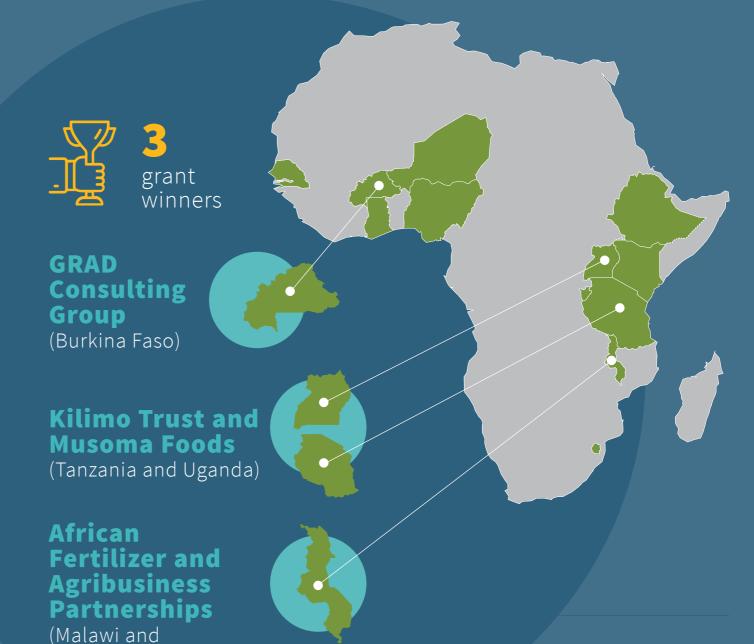
12 RFS countries



neighboring countries)



Shortlisted applications





Grant Winner 1 Kilimo Trust and Musoma Foods

The **Lake Zone Smart Farms (LSF)** project will promote sorghum value chains in the Lake Zone farming region by strengthening market linkages and promoting regional trade structures between Tanzania and Uganda.



To contribute to competitive and inclusive green transformation of smallholder farmers through the promotion and integration of the sorghum value chain by increasing productivity and economic returns through localised value addition and strengthening of market linkages, thereby building socioecological resilience in the Lake Zone farming region.

The project aims to directly support the transformation of 25,000 smallholder-farming households, 40% of which will be woman-led, thereby contributing to the programme's goal of mainstreaming gender considerations. The project will also impact 100 MSMEs of sorghum aggregators, input and other service providers in the Lake Zone.

The project addresses the following challenges:

- Low farmer incomes due to limited production-for-sale operations, low sales volumes and limited crop diversification.
- Low sorghum productivity due to the insufficient use of technology for crop production, rendering farmers vulnerable to climate shocks.
- Limited access to input finance. Financial institutions tend to refrain from lending to farmers unless they have a reliable market for their produce. In addition, farmers' lack of records, poor understanding of credit terms and non-registration of farm-based organisations, all contribute to making farmers unattractive to commercial lenders.
- Limited access to structured markets and a lack of structured marketing facilities lead to farmers selling their produce at a loss early in the season as they are unsure of a guaranteed market at a later stage.



- Strengthened/formalised farmer/locally owned sorghum aggregation centres.
- Sustainable and structured sorghum trade agreements between local input and output markets' service providers (entrepreneurs, agro-processors, smallholder farmers and off-takers) in Tanzania and Uganda.
- Increased incomes per household due to increased productivity and market transactions from sorghum.
- At least 2,000 sorghum producers and 100 agro-preneurs have access to finance products (including insurance).
- At least 30,000 MT of sorghum aggregated and sold through national and regional structured markets.
- Sustainable regional sorghum trade structures developed (from Uganda to Tanzania).

The project will support 25,000 smallholder-farming households 40% of which will be woman-led



Expected outcomes

- Lower food insecurity per smallholder farmer household (measured by reduced hunger months per year).
- Increased diversified farm income activities per average household.
- Reduced post-harvest losses at each stage of the value chain.
- Sustainable adoption of green technologies and good agricultural practices that enhance productivity, reduce post-harvest losses and production costs.
- Increased farm(er) level resilience due to crop diversification.



Role of government

- To provide extension services and climatesmart agriculture (CSA) training to new and existing lead farmers. The farmerextensionist ratio is to be increased to at least 1: 250/300.
- To promote local entrepreneurship and complement agribusiness development.
- Embrace and promote green value chain technology from national research centres.
- Build capacity on gender mainstreaming at the community-level.



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The project 'Linking Farmers to the Private Sector for Enhanced Sustainable and Resilient Rice Value Chains in the Boucle de Mouhoun Region of Burkina Faso' will develop rice value chains in Burkina Faso by scaling up sustainable productivity-enhancing technologies, improving post-harvest and storage technologies, and supporting agro-processing business units and farmers groups.

The project aims to increase rice yields by at least 30% and sales by at least 50% of the current sales volumes and transactions. At least five knowledge products will be produced on resilient and sustainable agribusiness development and farming technologies in the rice value chain, including case studies and knowledge exchange visits between Burkina Faso and other West African RFS countries.



To improve nutrition and rice incomes for smallholder farmers through localised agroprocessing, women and youth participation in service markets and inclusive agribusiness models, productivity enhancement and integrated environmentally sound interventions along rice value chains in Burkina Faso and neighbouring countries.

The project addresses the following issues:

- Unavailability of quality rice for processing, particularly due to poor crop management and post-harvest handling.
- Little/no access to working capital and capital expenditure credit to buy enough paddy to fully operate and maintain milling and parboiling plants.
- Competition with imported milled rice products from large corporates.



Main Objectives

- To sustainably increase smallholder producers' rice productivity.
- To create/strengthen small enterprises operating along the rice value chain into competitive and growing business units.
- To promote coordinated marketing models and access to quality inputs to ensure consistent paddy quality.





Expected outcomes

Increased adoption of sustainable productivityenhancing agricultural technologies:

- 2,000 rice producers adopting and using at least two integrated soil fertility management components.
- Increase in crop yields by at least 30% for inland valley and irrigation production.
- At least 60% of farmers secure improved inputs (seed and fertiliser) through contract farming mechanisms.
- 40% of the 5,000 participating farmers have access to land preparation services.

Increased quality of paddy for participating farmers:

- 3,000 farmers adopting and using improved postharvest technologies.
- 10 women cooperatives trained in parboiling and equipped with innovative systems for energy generation and drying facilities, linked to lines of credit on capital equipment.
- 40% of the 5,000 farmers have access to post-harvest services/operations (threshing, cleaning, sorting) service.
- 2,000 participating farmers have access to tillage services to timeously plant their crops and synchronise harvesting for efficient marketing logistics (warehousing, transport and parboiling).

Increased rice sales for the target farmers via the out-grower schemes by at least 50% of the current sales volumes and transactions:

- 3,500 targeted producers contracted to sell their paddy rice to milling firms.
- Technical assistance provided to at least three agro-processors towards the development of business plans for expansion.
- Off-take contracts and marketing MoUs signed between farmers and four processors or markets.

Increased agricultural employment and entrepreneurship:

- 31 businesses supported (13 producer cooperatives, 10 mechanised service providers, 5 parboiling cooperatives and 3 small-to-medium-sized processors).
- 45 new jobs created for young people and women.
- New agro-processing farmer groups/ cooperatives formed and provided with business development and business management skills support.

Reduced soil erosion and land degradation in the targeted rice growing landscapes:

- Farmers using integrated soil fertility management technologies on their farms.
- Micro dosing technologies in fertiliser application adopted by farmers.

At least five knowledge products produced on resilient and sustainable agribusiness development and farming technologies in the rice value chain.

- Three case studies written on smallholder farmers who have transformed their productivity, output and household income through the rice value chain greening project.
- Two rice value chain greening business cases developed and shared with the greater rural farming community for replication and scale up.
- Knowledge exchange visits between Burkina Faso and other West African RFS countries.



Role of government

Government's role in this project is not direct but through its work on setting a conducive policy environment for the increased supply of inputs and increased market transactions in the rice value chain.

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The 'Sustainable Agriculture and Marketing for Rural Transformation (SAP-MaRT)' project will scale up climate-smart agriculture (CSA) technologies in groundnut value chains, restore and protect soil health, and connect women and young groundnut farmers with markets in Malawi and neighboring countries.

The grant will support 9,600 women and 3,200 young farmers in adopting CSA technologies, including the use of certified seeds, inoculants, Aflasafe (to reduce aflatoxin), double row and integrated pest management practices; as well as labour-saving agricultural inputs and services. These farmers will be connected to profitable local and regional groundnut markets and will improve their business management, banking and financial knowledge.



To improve women and youth agricultural productivity, improve soil fertility and increase income generation through enhanced access to local and regional markets among smallholder farmers in the Mchinji, Mzimba and Dowa Districts.

Further, at a marketing level, the project will address structural weaknesses of the groundnut value chain for both domestic and export markets, including poor farmer organisation, high post-harvest losses in groundnuts, low participation and investment by the private sector due to inadequate engagement and unconducive policy environment as well as ineffective dissemination of modern and recommended technologies for groundnut production.

The project will promote aflatoxin standards for exporting groundnuts at a regional level, through knowledge sharing and joint capacity building of African traders and farmers. Through the strengthening of the groundnut value chain, the project will also address the problem of continued environmental and soil degradation in agricultural landscapes in Malawi.



Main Objectives

- To improve groundnut production by women and young farmers.
- To improve market linkages (domestic and external) for the groundnut value chain.
- To foster regional standards and capacity for effective aflatoxin management in rural groundnut value chain activities as the main post-harvest loss management strategy.

Grant will support 9,600 woman 3,200 young farmers



Expected outcomes

- 9,600 women and 3,200 young farmers adopt CSA technologies in the groundnut value chain and labour-saving agricultural inputs and services.
- 9,600 women and 3,200 young farmers access profitable and reliable local and regional markets for groundnuts.
- Lower aflatoxins in peanut kernels, not exceeding 20 microgram/kilogram for marketed crops.
- Increase entrepreneurship skills among 50% of the targeted women and youth, focusing on business development, processing, value addition, and saving and banking.
- 5% of groundnuts and associated products are utilised by targeted women and youth.
- 50% of targeted women and youth have improved diets through eating a minimum of three meals a day.

Enhanced coordination and collaboration among partners within the groundnut value chain.



Role of government

District and sub-district level government staff in conjunction with AFAP field staff will be responsible for designing, planning, implementing and monitoring site-specific project activities. Through documentation and sharing of groundnut value chain greening lessons, best practices and evidence-based results, AFAP will work with other stakeholders to overcome production inefficiencies, gender inequality and high aflatoxin contamination.

Further, AFAP will work with the departments of the Ministry of Agriculture to address challenges that women farmers are facing, to scale up best groundnut farming practices and to improve access to inputs and finance for project beneficiaries.



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ABOUT THIS KNOWLEDGE BRIEF

This brief is part of a series of knowledge products prepared by the Regional Hub project of the Resilient Food Systems programme. This brief falls under the Act theme, with other knowledge products categorized under the other programme pillars Engage, Act and Track, or within a Cross-cutting tag.

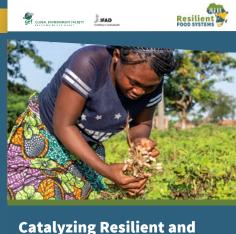






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Sustainable Food Value Chain Development in Africa















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