



A Vision for Agriculture Green Growth in the Southern Agricultural Growth Corridor of Tanzania (SAGCOT): Overview

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The development of this document was led by a team from EcoAgriculture Partners, reporting to the SAGCOT Centre and the SAGCOT Green Reference Group.

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The **SAGCOT Vision for Agriculture Green Growth** is described in a set of documents produced in 2013. Follow the hyperlinks in the list below to access any of the documents.

A Vision for Agriculture Green Growth in the Southern Agricultural Growth Corridor of Tanzania (SAGCOT): Overview

Sara J. Scherr, Jeffrey C. Milder, Louise E. Buck, Abigail K. Hart, and Seth A. Shames

A Framework for Agriculture Green Growth: Greenprint for the Southern Agricultural Growth Corridor of Tanzania (SAGCOT)

Jeffrey C. Milder, Louise E. Buck, Abigail K. Hart, Sara J. Scherr, and Seth A. Shames

Green Growth Opportunities for Businesses and Investors: Greenprint for the Southern Agricultural Growth Corridor of Tanzania (SAGCOT)

Seth A. Shames, Sara J. Scherr, and Rachel Friedman

Applying an Agriculture Green Growth Approach in the SAGCOT Clusters: Challenges and Opportunities in Kilombero, Ihemi and Mbarali

Jeffrey C. Milder, Abigail K. Hart, and Louise E. Buck

Six Opportunities to Green Agricultural Production in the Southern Agricultural Growth Corridor of Tanzania (SAGCOT)

Jeffrey C. Milder, Louise E. Buck, Abigail K. Hart, Seth A. Shames, Sara J. Scherr, and Raffaella Kozar



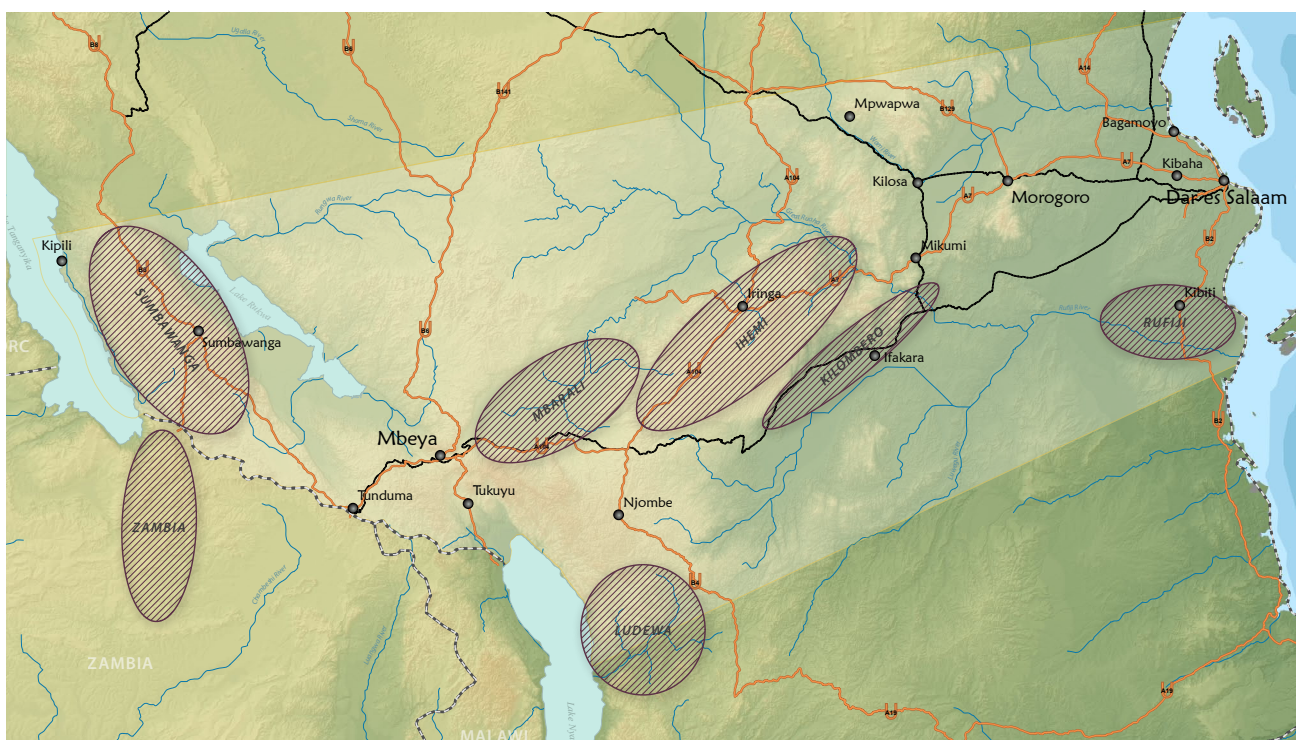
Introduction: The SAGCOT Initiative

In 2010, the Government of Tanzania launched the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) initiative as a public-private partnership dedicated to ensuring food security, reducing poverty and spurring economic development in Tanzania's Southern Corridor. Stretching from the Indian Ocean to the Zambian border, the Southern Corridor encompasses nearly 300,000 square kilometres stretching along both sides of the infrastructure backbone that extends inland from Dar es Salaam. While the region has considerable agricultural potential, it currently suffers from low productivity, low levels of investment, and high rates of poverty.

To unlock the region's potential, the SAGCOT Initiative seeks to attract more than US \$3 billion of investment to greatly increase food production, increase annual farming revenues by more than US \$1.2 billion, benefit small-scale farmers and the rural poor, and establish southern Tanzania as a regional food exporter. To meet these ambitious goals requires a targeted strategy and realistic action plan to deploy resources, engage partners, and coordinate activities and investments throughout the Corridor. In 2011, the SAGCOT Blueprint was released, describing where and how investment in the agriculture sector could be scaled-up and better coordinated to establish productive clusters of new economic activity.

The Blueprint identified issues of climate change, environmental conservation, and natural resource management as critical to the Corridor's long-term economic development, and smallholder farmers as key actors, but did not provide detailed plans to address them. The purpose of this Framework for Agriculture Green Growth in SAGCOT (the 'Greenprint') is to refine the SAGCOT strategy to ensure that development in the Corridor is environmentally sustainable, socially equitable and practical to implement. Specifically, the Greenprint lays out a strategy for 'Agriculture Green Growth' (AGG) to reduce poverty, improve food security and strengthen resilience to climate change that also conserves the natural resource base that supports agriculture, mitigates climate change and ensures the long-term health and values of the region's rich forest, water and wildlife resources. The AGG framework presented here reflects input from more than 150 stakeholders in Tanzania from business, farmer, conservation, civil society and local and national government sectors.

Figure 1-1. Map of the Southern Corridor



Why Green Growth for SAGCOT?

Environmental considerations are not peripheral to SAGCOT or its farmers. Productive agriculture in the Southern Corridor is not possible without a suitable climate, sufficient water and fertile soils. Currently, the region's farmers are highly vulnerable to climate change, with the vast majority relying on rainfed agriculture and inadequate access to reliable input supplies or markets. Water scarcity is the most critical challenge facing agricultural and economic development, as well as environmental health, and it stands to worsen over the next decade in light of climate change, deforestation-related desertification and competition amongst water users. Where agriculture has been intensified, it often has had severe environmental impacts, undermining not only long-term productivity, but also the development of other important sectors like forestry, wildlife tourism and water.

The AGG approach recognizes that the most sustainable and least risky farming systems will be those that build in agronomic, environmental, and social management practices resilient to climate change and other risks and shocks. The approach moves beyond environmental and social safeguards. Agricultural development in SAGCOT can leapfrog over conventional technologies to follow a new course in which farmers embrace technologies and management systems that produce more food with fewer inputs, less waste, and less pollution. The approach recognizes that society now looks to agricultural landscapes to provide a range of goods and services—not just food—and that markets increasingly reward farmers for doing so. In this way, resource conservation, efficiency, and sustainability are not costs of doing business; on the contrary, they are woven into the core logic and business case of all new land-based investment.

The AGG framework also recognizes that 85 per cent of the population relies on farming, forestry and nature tourism for their livelihoods. Smallholder farms have 70 per cent of the population in the Corridor and 28 per cent of the arable land. Women play a large and growing role as agricultural producers and resource stewards. Smallholder farmers and the conservation community hold a wealth of knowledge about their land and water resources, and the social and economic needs of communities, that inform SAGCOT strategies, along with cutting-edge innovations adapted from around the globe.





Agriculture Green Growth in Action

The Greenprint highlights AGG investment opportunities in diverse segments of the agricultural economy. Many are ready to scale up now while others will require some adaptation and development.

Sustainable crop and livestock intensification

At the farm level, sustainable crop and livestock intensification is a core strategy for AGG. Systems such as **conservation agriculture** and **system of rice intensification** have been demonstrated to increase grain yields by 100 per cent or more, including on smallholder farms. **Agroforestry** and the integration of **high-value horticulture and livestock products in smallholder farming systems** can increase and diversify income while reducing economic and ecological risks. **Sustainable intensification of beef production** offers significant opportunities for both small-scale livestock keepers and commercial ranches. With increasing water scarcity, new opportunities are arising for **commercialization and processing of drought-resistant crops**.

Sustainable farm inputs

On large commercial farms and block farms, **precision agriculture** can greatly increase the amount of food produced per unit of water, nutrients, or other inputs—thereby reducing costs, increasing profit, and reducing pollution. **Rainwater harvesting** can provide a sustainable strategy for irrigation. Crop production can be increased through **commercial bio-inputs** for nutrients and pest control. Resilience requires the availability of **high-quality seed for diversified production systems**, drawn from both crop breeding programs and community seed conservation and exchange.

Forest, energy and eco-enterprises

Forests and energy are also ‘investable assets’ that can be a focus of private sector as well as public and community investment. Sustainable management can maintain and increase the productive capacity of natural forests, while securing their environmental and social functions in the landscape. **Plantation and community forestry enterprises** can make forest conservation and restoration viable while supplying rapidly growing demand for forest products. Big increases in energy demand for agriculture and agro-processing can be met in part through green energy such as **biogas and solar energy**. **Payments for ecosystem services** provide a new vehicle for compensating communities for their investment in natural resources, while maintaining resources of importance



to others, such as clean water, wildlife habitat and carbon stocks. Agroecotourism can provide supplemental income to farmers from investments that benefit nature.

Greening the value chain

New **differentiated markets and eco-certification** offer direct economic incentives for farmers to use sustainable practices and steward resources. There is scope to scale up the already expanding tea and coffee certification in the Corridor, to adopt existing eco-standards for sugar and beef, and develop a locally suitable eco-standard for rice, as well as to expand organic and Euro-gap certification. By mainstreaming sustainable crop and livestock intensification in the smallholder sector, the Greenprint strategy will support large numbers of farmers to generate marketable surpluses. For this reason, it will be critical to invest in resource- and energy-efficient **post-harvest value chains**, including storage and agro-processing facilities, value addition enterprises, and distribution networks. Tanzanian businesses and cooperatives already engaged in such efforts could expand through increased access to finance, training, and technical assistance. Meanwhile, standards can be established to ensure best **green infrastructure** practices are adopted in the design and construction of road, rail, electricity and other infrastructure planned.

Creating Fertile Ground for AGG

As promising as these AGG practices are, they are unlikely to be implemented at full scale unless they are supported by key public and civil society institutions. The Greenprint identifies four priority actions to create 'fertile ground' for AGG:

Land and water allocation and planning

The process for allocating land and water resources for private and community uses can be refined to reconcile multiple objectives. These include optimizing economic returns from available resources, ensuring equitable land allocation and land rights, ensuring wildlife corridors and critical watershed areas are conserved, and creating a transparent, streamlined process.

Mobilising action through local organisation and local leadership

SAGCOT partners should invest in local organisations and leadership, including farmers associations, savings and credit cooperatives, water user groups and community conservation organisations. They will be key catalysts for AGG, testing and disseminating best practices, linking smallholder farmers to markets and stewarding natural resources.

Extension systems for AGG

A systematic program of agricultural extension for AGG should be designed and deployed, with the aim of reaching at least 70 per cent of the Corridor's farm households over 20 years. This program will draw from proven participatory extension methods already in use in the Corridor, involve diverse institutions, and integrate the latest research on context-appropriate AGG practices.

Collaborative approaches to SAGCOT Cluster Development

To generate and sustain the full range of products and services needed with the Cluster landscapes (for food, timber, water, energy, biodiversity and healthy human settlements), to reduce potential trade-offs and to take advantage of potential synergies, a collaborative approach to Cluster development is needed. New spatial tools and facilitation for multi-stakeholder planning can guide allocation of grants to pilot and monitor innovations.

Finance and Investment for Agriculture Green Growth

The Green Growth approach must engage a wide range of investors, going well beyond business-as-usual. Finance and investment strategies include adapting existing finance sources, attracting new types of investors, defining AGG investment Principles, and proactively attracting the kinds of investments supportive of AGG.

'Greening' existing sources of finance

Many of the existing sources of finance from government programs, multilateral development banks, national bank and finance systems, district development funds and donors can be adapted and channelled to AGG investments. This may be done by defining AGG criteria for preferential access, encouraging investments that align with AGG cluster development plans and incorporating social and environmental benefits explicitly.

New sources of finance for AGG

AGG can also tap new sources of finance. These include the SAGCOT Catalytic Fund, sustainable land management investment funds, financial institutions with sustainability screening criteria, international companies that have incorporated environmental and social values in their business models, impact investors, climate finance, conservation finance, and community associations.



Guidelines for AGG investment

SAGCOT stakeholders from diverse sectors should pursue further dialogue to develop agreed Guidelines to help steer investors toward AGG practices with broad social and environmental benefits. These Guidelines would encourage green investment, help to brand SAGCOT as a champion of AGG, and guide preferential access to financing, going beyond environmental and social safeguards put in place through other mechanisms. A ‘Green Star’ certification program could even be developed to raise the profile of the most innovative businesses.

Mobilising investment for AGG

AGG should be mainstreamed into the SAGCOT Investment Partnership Program to position the Southern Corridor as a place that attracts best in class investors and innovators that integrate sustainability into their business plans. An AGG investment pipeline and investment generation facility can link investors with projects in the Corridor that suit their needs, while also supporting mechanisms which finance small, medium and cooperative enterprises.

AGG Vision of Success: The Potential

If the above innovations and supports are implemented, there will be significant benefits for food production, economic output, local livelihoods and environmental conservation.

Greater food production, income and food security

Compared to a scenario of agricultural intensification based on prevailing practice, within 18 years the AGG strategy could generate an additional 2.2 million tons of rice and field crops per year, worth approximately US \$600 million (936 billion TzSh) at 2012 market prices. Production gains will come primarily from smallholder farmers who are unaffiliated with large commercial enterprises. Because such farmers encompass such a large share of land holdings in the region, enabling them to sustainably intensify production will generate large benefits for household income and food security, and food surpluses for cities and other parts of East Africa. Larger-scale producers will benefit economically from more efficient use of inputs, more secure irrigation, and reputational benefits that are increasingly valuable in national and international markets.





Improved water security

Strategies to improve watershed management and increase water use efficiency will mitigate water conflict between communities and sectors that would otherwise occur. The Greenprint strategy will save nearly one billion cubic meters of water per year due to increased irrigation water use efficiency, while also increasing water availability and retention for rain-fed agriculture. These improvements will reduce scarcity and create the possibility for expanding water use for irrigation, for other economic sectors and for ‘environmental flows’ to support stream habitat, wetlands and wildlife.

Habitat production and reduced greenhouse gas emissions

As a broad segment of the agricultural sector realizes substantial yield gains that reduce pressure for agricultural expansion, and inter-sectoral land planning is improved, 300,000 fewer hectares of forest may be cleared by 2030 than without AGG. Habitat corridors will be protected and connectivity restored for wildlife movement. The carbon contained in these forests, combined with emissions reductions associated with AGG, will generate net emissions reductions of about three million tons of CO₂-equivalent per year by 2030. Over 18 years, an additional 30 million tons of CO₂-equivalent could be mitigated by adopting local biogas-based energy systems to replace wood energy.

Next Steps

The next two years will be a pivotal period to jump-start and build momentum for the AGG approach to development in SAGCOT. The SAGCOT Centre and partners can take specific actions now to generate momentum and lay the foundation for scaling up AGG investments in the region:

1. **Engage key national and local stakeholders** in refining and grounding the AGG vision through national and Cluster-level dialogues and a focused effort to raise awareness and highlight strategies for water management in agriculture;
2. **Strengthen and demonstrate integrated planning** in selected Clusters, including land use and conservation corridor planning;

3. **Catalyse investment in AGG** by marketing the SAGCOT Investment Partnership Program to foreign and domestic investors; integrating AGG into the Catalytic Fund and SAGCOT Investment Partnership Program, providing small grants and loans for AGG business planning; and shaping supportive policy; and
4. **Strengthen the knowledge base for AGG** in SAGCOT by piloting the delivery of an AGG Extension curriculum, developing a SAGCOT eco-standard for SRI rice, tracking climate change impacts and benefits in the Corridor and mobilizing research support for AGG.

An Inspired Vision, A Practical Strategy

The SAGCOT Initiative offers an inspired vision of what could happen if farmers, communities, investors, government, and civil society come together to tackle the challenges of food security, poverty, environmental degradation and climate change in southern Tanzania. Taken together, the SAGCOT Blueprint and this Greenprint lay out a framework—and an attainable investment programme—to begin realizing this vision.

The full acknowledgments for this work may be found in 'A Framework for Agriculture Green Growth: Greenprint for the Southern Agricultural Growth Corridor of Tanzania (SAGCOT).'

The development of the SAGCOT Framework for Agriculture Green Growth was led by a team from EcoAgriculture Partners, reporting to the SAGCOT Centre and the Green Growth Reference Group.

About EcoAgriculture Partners

EcoAgriculture Partners is a non-governmental organisation that works internationally to support the integrated management of rural landscapes to simultaneously improve rural livelihoods, sustainably produce food and fiber, and conserve healthy ecosystems. The organisation does so by providing training, research, policy solutions, and support to farmers, communities and organisations at the local, national and international levels.

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About the SAGCOT Centre

The SAGCOT Centre seeks to improve the economic performance of the Tanzanian agricultural sector and secure a place for Tanzania farmers in global value chains by coordinating, supporting and facilitating activities in the Southern Corridor and fostering an environment where innovation can thrive and dedicated leaders can make a real difference.

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