The Southern Agricultural Growth Corridor (SAGCOT) runs from Dar es Salaam, down Tanzania’s central rail, road and power backbone, to the borders with Zambia and Malawi. Spanning about one-third of the country, and containing some of its most fertile lands, extensive forests and reliable water resources, it is an area on the cusp of major agricultural growth, facing huge opportunities and critical risks.

TNC has been leading two initiatives in the SAGCOT region. The SNAPP: Science for Nature and People Partnership for SAGCOT was a two-year collaboration, from January 2015 to December 2016, aimed at generating practical decision support tools to help policy-makers and investors avoid risks and guide sustainable agriculture intensification throughout the corridor. Implemented during the same period, our other project was supported by the Consultative Group on International Agricultural Research – Water, Land and Ecosystem (WLE) program and focused on laying the foundations for effective landscape planning in the Ihemi Cluster area of SAGCOT through workshops and investigations into socio-economics and hydrology, and gender equity. The timing and location of these initiatives are crucial. In 2009, Tanzania embarked on a national Agriculture First – or Kilimo Kwanza – strategy to meet the needs of a rapidly growing, and more aspirational, population. SAGCOT – a public-private partnership launched in 2010 with the aim of boosting agriculture and integrating small-scale farmers into value chains in the fertile corridor known as the food basket of Tanzania – is a key component of this national plan.

The opportunities are immense. Tanzania’s huge agricultural potential is largely unrealized and the government knows that it will not be possible to ensure food security and achieve sustainable development without a transformation in farming. But, the risks are equally daunting. Decisions and investments are being made with insufficient attention to natural landscapes and social inclusivity.

SAGCOT is also one of the most important wildlife corridors in East Africa, and faces mounting pressure and uncertainty due to climate change. It is essential that the Kilimo Kwanza strategy puts not only agriculture, but also the longer term needs of communities and nature, at the forefront of Smart Planning.
Which is where TNC’s work comes in. In 2012, the government officially committed to a SAGCOT “Greenprint” to steer the “greening” of agricultural investment, but the strong base-line data required to deliver this wasn’t there. It was also clear that the rapidly evolving technologies of mapping and spatial analysis could paint a clearer picture of the pressures on the landscape. By consulting local managers and farmers, we identified the three areas where scientific evidence and support is most urgently needed:

- SUSTAINABLE LAND USE – focused on crop suitability, land use/cover and soil analysis, and biodiversity mapping;
- SUSTAINABLE WATER FLOWS – focused on catchments, hydrological modelling, and climate change;
- BEST PRACTICE FOR INVESTORS – focused on environmental and social inclusivity investor guidelines.

By producing detailed assessments and practical decision support tools in these three critical areas, the SNAPP and WLE interventions are helping policy-makers, investors and local institutions choose the best locations, plant the best crops, and use the best farming practices to realize this land’s full potential.

WHAT’S NEW?

Speed and science do not always go together, but in this case they had to. Taking five years to fill these knowledge gaps would have been too long; the chance to steer Tanzania’s farming transformation towards sustainable, inclusive, agriculture intensification would be missed.

Luckily, the SNAPP Vision is: A Quick, Clear Pathway to Impact. It uses multi-disciplinary Working Groups – teams of scientists, practitioners and stakeholders – to deliver rapid results. This does not mean cutting corners, but finding out what is most needed and focusing on delivering it, fast.

SNAPP is designed to be targeted, multi-dimensional, responsive and results-driven. In this case, three Working Groups were formed to carry out deep investigations into the land and resources, engage with smallholders and other local stakeholders, and identify future trends and risks in the three key areas. Our work helps the government’s SAGCOT Centre to take on the role of neutral broker and information hub, armed with the knowledge needed to negotiate with investors.

WHAT CHANGES DO WE WANT TO SEE IN THE WORLD BECAUSE OF THIS INTERVENTION?

Decision-makers are more responsive to scientific advice if it is clear, practical and targeted at providing the information needed for their specific program, and recognizes the real budgetary and time constraints they face. Experts can make more of an impact if they join the process early, present alternative solutions, and show both the evidence behind them and the benefits to be gained.

In countries like Tanzania, where development needs are acute and where governments have expressed good intentions to follow a sustainable path, scientists have a chance to play a key role in shaping the future. The SNAPP and WLE projects show that by producing useful, evidence-based tools – when they’re needed – experts can be agents of positive change. We want to see more scientists, governments and investors working together in positive, constructive ways that achieve results.
HOW DOES THIS PROJECT CONTRIBUTE TO THE TNC AFRICA VISION OF A FOOD-SECURE AND PROSPEROUS CONTINENT THAT VALUES NATURE?

Land use and land cover are changing rapidly across Africa, as populations grow and with the impact of climate change. Investing in sustainable agriculture intensification will help achieve the goal of producing more food with less impact on the environment, while building resilience and ensuring the natural resource base is sustained for future generations. The SNAPP and WLE projects are models for how scientists, and other experts and practitioners, can become agents of change towards achieving this goal.

The decision support tools TNC produced are highly practical, and respond directly to the concerns of local stakeholders. We created crop suitability maps based on an evaluation of 23 common crops; hydrological models; an online interactive mapping tool showing agricultural constraints and opportunities; gender inclusivity tools; and an Environmental and Social Performance Investment Screen designed for use by SAGCOT in its early exchanges with investors. These can help position agriculture intensification in the most productive areas, where constraints are lower, and guide crop and livestock choices with the best chances of success. They also point out relatively simple solutions, like correcting soil acidity, and can help limit the need for irrigation in favor of rain-fed agriculture. This information is useful for both smallholder farmers and big agri-business, in the SAGCOT region and beyond, especially in Africa’s other development corridors.

WHAT ADDITIONAL BENEFITS ARE LIKELY AS A RESULT OF INTERVENTION IN THIS AREA?

Pointing the way towards productivity gains on the most suitable land will reduce the pressure to extend agriculture into marginal and protected areas. This will help conserve water and forest resources, and avoid encroachment into the wildlife conservation areas and corridors so essential to Tanzania’s biodiversity and tourism industry.

As investment in farming increases under Kilimo Kwanza, we hope more people will be active in the decisions which affect a sector that employs 80% of the nation’s workforce. By helping to create an enabling environment for inclusive, sustainable agriculture, the project will not only help attract responsible private investors, but also encourage more women, smallholder farmers (many of whom are women), youth and other groups to become excited about agriculture intensification.
WHO ARE THE MAIN ACTORS?
The SNAPP and WLE projects are collaborations between The Nature Conservancy’s Africa Regional Program, the International Center for Tropical Agriculture (CIAT), and Sokoine University of Agriculture in Morogor. Other key partners include the Wildlife Conservation Society, WWF, IUCN, and SAGCOT Centre Ltd, which coordinates investments in the SAGCOT region and is a keen supporter of the project.

WHAT NOW?
Success now depends on the uptake of the decision-support tools by planners, investors and other stakeholders. A TNC technical expert is refining the products into more practical, useable forms, and working closely with the SAGCOT Centre to design a dissemination strategy for getting these tools to target users. A monitoring system is being embedded in the strategy to assess progress on the adoption and impact of the project’s outputs.

Simultaneously, TNC will be coordinating an extensive stakeholder validation exercise for the land use and hydrological models, including field surveys. Now that these tools have been created, it’s time to make sure they start driving agricultural Smart Planning.

WHAT’S OUR DREAM HEADLINE?
“Tanzania celebrates world’s first truly Green Revolution: hunger eliminated, wildlife flourishing, thanks to Smart Planning”

NEXT STEPS
TNC is looking for resources to embed a data manager into SAGCOT to help the Tanzanian government bring the best science into its planning in the corridor, and to build out the TNC science team in-region to enable us to promote responsible land-use planning, especially around developing decision support systems. The SAGCOT Centre is at the intersection of many processes, and in a key position to mobilize and accelerate sustainable agricultural growth; our team can contribute science, strong logic, and pragmatism to assist. Priorities for the TNC data manager and science team over the next three years include improving crop suitability modeling, carrying-out explicit mapping of the whole SAGCOT region into “go” and “no-go” zones, and the development of integrated screening tools to guide investors.

“One of Unilever’s Tea Farms in Mufindi Iringa. @SAGCOT and Partners

“Performance payoffs for intensification in the most suitable areas are extraordinary. For the important traditional maize crop, farm yields in the SAGCOT region could potentially increase tenfold to 10 mt/ha. The SNAPP project brings science, strong logic, and pragmatism to help achieve this.” Felix Kamau, TNC

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FURTHER INFORMATION
These factsheets are part of a global series highlighting TNC’s work around the world to improve agricultural practices as demand for food and land increases.

The Nature Conservancy is a global conservation organization dedicated to conserving the lands and waters on which all life depends. Guided by science, we create innovative, on-the-ground solutions to our world’s toughest challenges so that nature and people can thrive together. We are tackling climate change, conserving lands, waters and oceans at unprecedented scale, and helping make cities more sustainable. Working in more than 65 countries, we use a collaborative approach that engages local communities, governments, the private sector, and other partners. To learn more, visit www.nature.org or follow @nature_press on Twitter.