



SAG-SEED AWARD  
WINNER 2016

SEED Case Studies



## Safi Organics

Empowering smallholder farmers in Kenya through an agricultural circular economy



**SEED**

promoting entrepreneurship  
for sustainable development

Founding Partners



# About SEED

SEED promotes eco-inclusive solutions of small and growing enterprises in support to sustainable development by increasing their organisational resilience in local, national and regional markets and shaping an enabling environment.

SEED was founded by the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP) and IUCN (International Union for Conservation of Nature) at the 2002 World Summit on Sustainable Development in Johannesburg and is hosted by adelphi research gGmbH, based in Berlin, Germany.

adelphi research (AR) is a leading think-and-do tank for policy analysis and strategy consulting. The institution offers creative solutions and services regarding global environment and development challenges for policy, business, and civil society communities.



Founding Partners



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### About SWITCH Africa Green

The overall objective of SWITCH Africa Green (SAG) is to support 6 countries in Africa to achieve sustainable development by engaging in transition towards an inclusive green economy, based on sustainable consumption and production patterns, while generating growth, creating decent jobs and reducing poverty. The objective will be achieved through support to private sector led inclusive green growth. SAG is implemented by the United Nations Environment Programme with the assistance of the European Union.



## LOCAL CHALLENGES

### Soil degradation and climate change

The Kenyan population is highly dependent on farming as a major income source, with agriculture contributing around 20 percent to Kenya's gross domestic product.<sup>1</sup> However, soil degradation in Kenya has increased significantly in recent years as the result of both natural and human factors. Approximately 61.4% of Kenya's total surface area is characterised by a high level of soil degradation. In particular, human activities, including the destruction of vegetation, overgrazing and excessive forest conversion, play a significant role in this development. The increased occurrence of extreme weather events due to climate change, such as droughts and floods, combined with insufficient land management has led to reduced agricultural productivity in many areas. It is increasingly challenging for farmers to produce sufficient harvest to feed their families and escape poverty.<sup>1</sup> In some areas, cultivable land has halved. A family who could have grown sufficient manioc on three hectares ten years ago is no longer able to produce the same amount today. As a result, farmers are producing smaller crop yields and experiencing greater income and food insecurity.<sup>2</sup>

### High rural poverty

Nearly half of the population in Kenya lives below the international extreme poverty line of \$1.90 per day. These Kenyans do not have enough money to meet their basic needs. More than three quarters live in rural areas, where people are the most reliant on subsistence farming and 70% of the population is employed in the agricultural sector.<sup>3,4</sup> Access to sanitation, drinking water and medical care is limited, and most adolescents and young adults face high levels of unemployment. Additionally, Kenya is characterised by social inequality and poor wealth distribution.<sup>5</sup>

1 Republic of Kenya 2016. <http://www.environment.go.ke/wp-content/uploads/2017/10/LADA-Land-Degradation-Assessment-in-Kenya-March-2016.pdf>

2 GIZ 2017. <https://www.giz.de/en/worldwide/317.html>

3 IFAD 2015. <https://www.ifad.org/documents/10180/bf67bad8-a182-4c79-a919-433af31eba02> and Worldbank 2018. <http://www.worldbank.org/en/news/video/2017/04/14/what-are-poverty-lines>

4 UNDP 2017. <http://www.ke.undp.org/content/kenya/en/home/countryinfo.html>

5 GIZ 2017. <https://www.giz.de/en/worldwide/317.html>

## HOW THE BUSINESS WORKS

Based in Mwea County, one of the largest producers of rice in Kenya, **Safi Organics** is an eco-inclusive enterprise that aims to reverse declining agricultural yields, improve the income and food security of local farmers, and provide opportunities for local youth. The area has been used to grow rice continuously for around 70 years, with farmers experiencing slow declines in yield and productivity. Farmers also face challenges around the disposal of waste rice husk, which is traditionally burned in an uncontrolled manner, and high costs of imported inorganic fertiliser.

Safi Organics has connected these problems by creating an agricultural value chain from the local organic waste stream. Using an open source technology, the enterprise produces valuable agricultural inputs such as fertiliser and soil treatments designed to meet local conditions.

Waste rice husk is collected from farmers and processed into biochar, the biochar is then stored, processed, and a local enzyme is added to enable microbial growth. The fertiliser and soil treatments are sold back to the farmers directly or through agents. Safi Organics has created a local circular economy that enables farmers to exploit the value of their waste in an environmentally friendly manner, as well as gain access to cheaper fertilisers and soils treatments. Safi Organics also employs a number of local youths, providing them with an income stream, and access to valuable training and experience.

### Key Facts:

- Location: Mwea County, Kenya
- Founded: 2015
- Annual turnover: 42,000 USD
- Workers: 22 (8 full time)
- Female workforce: 40% of full time workers
- Average salary: \$12,000 in wages (across 8 full-time, and 14 part-time)
- Bags of product produced: 1,600



# Creating innovative solutions to local challenges

Watch how we do it!



” We have a product that is affordable to the farmers, which in the end improves their yield and income.  
*Samuel Rigu, Founder and CEO, Safi Organics* ”



# The power of partnerships



## Government Organisations

The **Kenyan Agricultural and Livestock Research Organisation (KARLO)** works on demand-driven solutions to local agricultural challenges. Their office in Mwea focuses specifically on rice-related challenges. The organisation aims to catalyse sustainable growth and development in agriculture value chains through agricultural research.

KARLO and Safi Organics are key partners and share a joint interest in developing solutions to local agricultural challenges. KARLO supported Safi Organics with the initial testing of their products, and continues to assist in training farmers in organic production and facilitate farmers' access to technical specialists and soil scientists. KARLO's support allows Safi Organics to continue to develop their value chain.

The partnership with Safi Organics helps KARLO to achieve its sustainable agriculture goals

and address central rice-related challenges. Furthermore, Safi Organics provides KARLO with information and data needed to develop a rice value chain training manual for local farmers. The partnership is an illustrative example of a public-private partnership that enables governments and institutions to jointly fulfil their mandates.

Linked closely with KARLO, the **Agriculture Sector Development Support Program (ASDSP)** similarly uses a public-private partnership to encourage technology generation to improve the lives of farmers, and to promote sustainable farming practices. ASDSP has assisted Safi Organics in developing its value chain, marketing its technology and products to farmers, and advising on funding opportunities. ASDSP benefits by being able to promote Safi Organics as a vivid example of a start-up enterprise in the agricultural waste management sector.

*Learn more about the partnership!*





## University

As a part of the **Massachusetts Institute of Technology** Venture Monitoring Service, **Takachar** has been working with Safi Organics by providing funding, skills training, and support related to research and development activities. Additionally, Takachar produces the equipment that enables Safi Organics to complete the waste to biochar conversion. The aim of Takachar is to prove the long-term financial viability of the enterprises that use the equipment, which is traditionally used to make charcoal briquettes. In Mwea County however, due to the specific characteristics of the rice waste husk, Takachar and Safi Organics, along with other partners, developed a solution to fortify the biochar with local enzymes to create a product which could replace traditional inorganic fertilisers.

Takachar relies on private donations to fund their operations, and Safi Organics allows the institute to collaborate with the enterprise for fundraising, with a portion of the funds raised benefiting the enterprise.

“ Partners have come in very handy to help us achieving the big dreams that we have. They have given us funding, training, support and mentorship.

*Samuel Rigu, Founder and CEO, Safi Organics*



Discover the partnership with SEED!



“ The work with SEED helped them improve the robustness of their business plan and made them understand that it is a moving document.

*Kennedy Mbeva, SEED Advisor, African Centre for Technology Studies*



# Creating impact



## SOCIAL IMPACT

Safi Organics has improved livelihood opportunities for farmers. These farmers are now able to earn a decent living wage, fund their children's education and meet their household responsibilities. Additionally, Safi Organics provides income and training opportunities for local farmers and youth employed in the enterprise's production facility.

### Key impacts

- Generates 8 full-time positions for youth under 35 year of age
- Improvements of smallholder farmers, which has indirect impacts on family life and subsequently children schooling
- Has built skills and increased knowledge of 400 local farmers



## ECONOMIC IMPACT

Safi Organics has created an innovative value chain in the waste management sector by using technology to produce natural fertiliser. The business model provides a market for farm waste by purchasing discarded rice husks from local farmers. Safi Organics subsequently process the waste into valuable farm inputs such as fertilisers and soil conditioners, which are sold back to farmers and used to increase soil productivity. Safi Organics increases farmers' income streams by purchasing waste from the farmers and allows farmers to scale up their activities through increased yields and decreased spending on agricultural inputs.

### Key impacts

- Increased farm yields by up to 30%
- Created 8 full-time jobs and 20 part-time or casual jobs
- Purchased 150 tonnes of waste husk from local farmers
- Produced and sold 1,600 bags of agricultural products

# Sustainable development goals

## SDG 1

### No Poverty

By improving farmer incomes through higher productivity, Safi Organics contributes to a reduction in rural poverty. Increased income generation allows rural farmers to reinvest in health, education and sanitation, thereby improving the overall well-being of the local community. Investment in children's education offers farming communities an escape from poverty.

## SDG 2

### Zero Hunger

The use of Safi Organics' fertiliser increases productivity and results in greater agricultural yields. The increased yields improve food security and contribute to hunger eradication in rural Kenya.





## ENVIRONMENTAL IMPACT

Safi Organics' main environmental objective is to reverse declining soil fertility and reduce the burden of chemical fertiliser on the local environment. Safi Organics contributes to enhanced soil conditions by encouraging local farmers to use rice husks for soil maintenance. Prior to their involvement with Safi Organics, local farmers were unaware of this sustainable, local alternative to chemical fertilisers.

### Key impacts

- Converted 150 tonnes of waste materials to beneficial products
- Trained 400 local farmers in the use the Safi Organics organic fertiliser
- Carbon sequestration of 1.5 tonnes of CO2 per acre of product use
- Reduction in transportation distances of imported fertiliser



### SDG 13

#### Climate Action

By creating a circular rice economy, Safi Organics prevents the uncontrolled burning or disposal of waste and thus reduces greenhouse gas emissions.

See how we create impact!



“ Safi Organics is encouraging the use of rice husks in soil management, before most farmers didn't know they could use it. But now there are other people trying to do it themselves  
*Vincent Kega, Head of Rice Program, KARLO* ”

## FUTURE PLANS

- Improve the level of automation in the production processes and the production capacity
- Acquire a certification from the Kenya Bureau of Standards (KEBS)
- Establish a series of decentralised production facilities in other regions in Kenya



Find more interesting and informative case studies on [www.seed.uno](http://www.seed.uno)!



## SEED Case Studies Series

### Demonstrating Sustainable Development on the Ground through Locally-Driven Eco-Inclusive Enterprises

Eco-inclusive enterprises, also known as green and social enterprises, have a critical role to play in achieving a global Green and Inclusive Economy, tackling the Sustainable Development Goals or implementing the Paris Agreement. By embracing the added values of social improvement and resource management eco-inclusive enterprises that have won a SEED Award are living proof that entrepreneurial partnerships between various stakeholders can create innovative and novel solutions for delivering sustainable development at the grassroots level and be economically sustainable.

Since 2005, SEED has supported over **240 Award Winners in 37 countries**. While the value of eco-inclusive enterprises in delivering sustainable development is increasingly recognised and harnessed in the development sphere, there is still very little data available on the triple bottom line impact of these enterprises and their contribution to sustainable development. The SEED Case Studies are designed to help fill that gap by generating insights for policy and decision-makers on the role of green and inclusive enterprises in achieving sustainable development, and on enabling factors that can help them overcome barriers, reach scale and replicate.



**SAFI SARVI**

Fortified Organic Fertilizer

Ecocert Certified

**Safi Organics**

**PLANTING**

GUARANTEED VALUES

N	3%	BATCH NO	2018
P	5%	MFG DATE	MA
K	3%	EXP DATE	MA
ORGANIC MATTER	55%	NET WEIGHT	20kg
MOISTURE CONTENT	20%		
	7.1		

P.O. Box 173 20318 Kenya  
safiorganics@gmail.com  
safiorganics.co.ke

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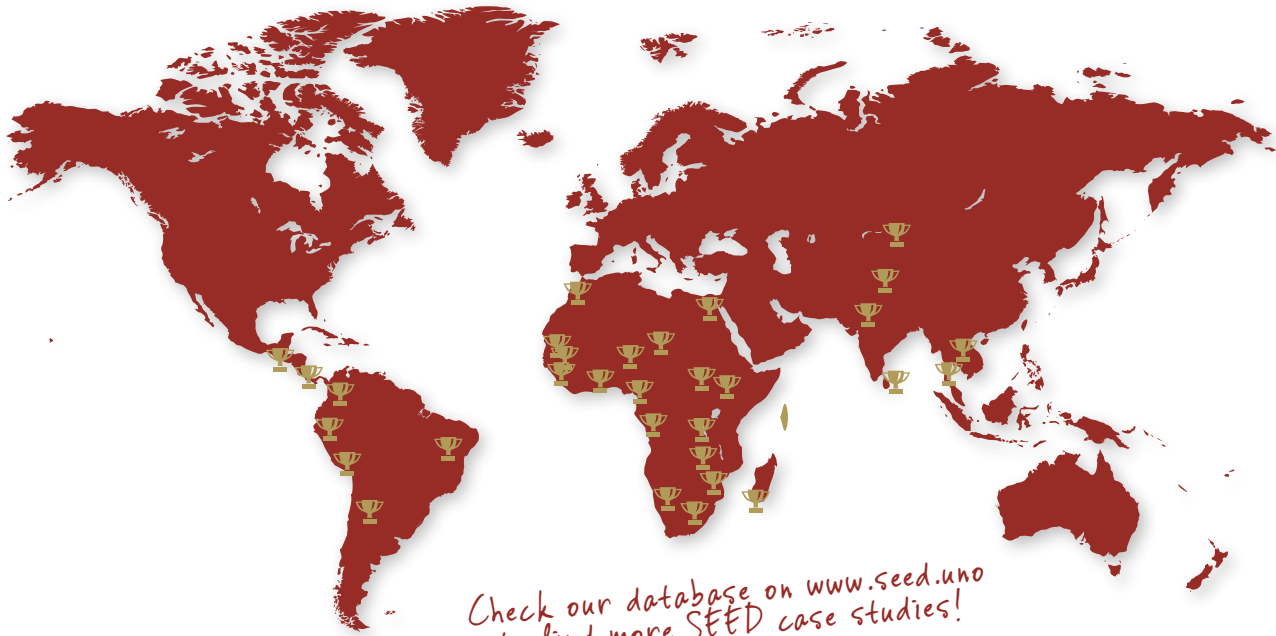
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