



SUSTAINABLE AGRICULTURE TANZANIA

An IPEN Case Study

Lush Spring Prize 2017: **Established Project**

Project Summary

Sustainable Agriculture Tanzania (SAT) works face-to-face with small-scale farmers, in a holistic way, to enable, exchange and refine agroecological methods. SAT's system of education uses training, demonstration, research, dissemination and application approaches with a focus on strengthening livelihoods, while regenerating soils and landscapes.



Basic and Intermediate agroecology training is delivered at the SAT Farm Training Centre.



SAT's Permaculture & Agroecology Education Lessons

Reaching a large number of small farmers and developing long-term education relationships with them – an active learning network, focused on local agroecology best practice.

Practical agroecology best practice is demonstrated and taught in a small farms context, with an annual programme including PDC's (Permaculture Design Course) and Training of Teachers (ToT) – a self-seeding model of training.

Best practice in connecting small farmers to agriculture students and research projects - to build and share a credible knowledge base, creating a feed-back loop into teaching development and demonstration.

Linking network development to SAT Saving & Lending Groups (SSLG's) as a micro-credit enabling system.

Introducing and training in use of smartphones to improve networking and sharing of learning and best practice.

SAT has created a self-learning system of education-for-action which grows and improves best practice over time, and harvests multiple beneficial outcomes.

Hadija's Story, a Beneficiary

Hadija Kibwana from Towelo Village, Morogoro, joined SAT in 2010 and is currently chairperson of Maendeleo Farmer Group.

Since joining SAT Hadija was able to regenerate her land using terraces, compost and green manure/cover crops. She also improved the diversity of her farm and has more than 15 different crops growing on it. In the past she only relied on maize and when the soil was depleted, productivity reduced.

Since practicing agroecology, she has been able to improve the general situation of her farm and family. Her daughter is the first child in the village to graduate from the university and is now a good ambassador for agroecology. Hadija has trained more than 500 farmers in Morogoro and Tanga regions as a model farmer. Due to her leadership skills in the group, fellow farmers also appointed her as a village leader.

The Changes Achieved (High Level Outputs & Outcomes)

- Over 3000 small-scale farmers have been brought into the agroecological farming movement by teaching and demonstrating practical agroecology at a village level.
- For SAT trained farmers, compared to before the training: the average income increase is 38%; 66% of farmers have increased production; 61% of farmers have reduced input costs; 76% of farmers report a more balanced diet and health benefits; and 97% report an improved situation overall through SAT training.
- The project works across a producing and learning network of 120 groups using farmer field schools as demonstrations in 70 villages, led by village teachers, and supported by a 200 acre Farmer Training Centre.



Elizabeth Girangai, Facilitator

Elizabeth’s Story – a SAT Team Member

“I joined SAT as an intern and over the years I grew to be a facilitator. I facilitate farmers on agroecology, saving and lending and entrepreneurship skills. For now, I am working as a facilitator on financial inclusion where I make sure that farmers have full access to and usage of financial services through their own money in groups (saving and lending). My interest is to support the community. Since SAT is doing the same, I was attracted to join SAT to serve the community, leaving no one behind through its projects on sustainable agriculture. The diversity of the SAT Team and organization culture has been favourable for me. I have acquired the knowledge of agroecology - something of which I had little knowledge of before I joined SAT.”

The Project’s story

“SAT is an exemplary organization in Tanzania that is paving the way for agroecology. The young and committed team is doing a very good job in developing training content and delivering to farmers in the remotest areas in the country. Over the years they have grown from volunteers to a full-fledged organization and the impact they make in the lives of small-holder Tanzanian farmers is commendable. I have had the honour to see the dream of the founders become a reality.”

Prof. Method Kilasara, Sokoine University of Agriculture (SUA)



Conservation agriculture training

SAT’s Examples of Good Practise: What It Has Done

SAT programmes link farmers, educators, researchers and government to generate and inspire locally-relevant practical knowledge.

- **Annual Training Programme:** Training covers Organic Agriculture (Basic & Intermediate); Enterpreneurship & Agribusiness Development; Natural Medicine; Permaculture Design Course (PDC); Training of Teachers; Agriculture Camp for Youth; Sustainable Waste Management; etc.
- **The Farmer Training Centre (FTC) linked to 52 Farmer Field Schools:** An 80ha / 200acre demonstration farm is a hub connected to a network of village demonstration plots, over-laid with an equivalent network of FTC teachers and village teachers. Since 2013 the FTC has hosted more than 2,200 farmers, extension officers and youth from all over East Africa, and is close to becoming financially self-sustaining.
- **SAT Innovation Platform:** Over 3000 small farmers from 120 groups form the Core-Network that builds SAT’s Innovation Platform. Using the experience and knowledge of farmers, SAT gives and receives information, so that agroecological knowledge is incubated and refined. All experiences from the field are accessible to a national community of more than 50,000 farmers, and public and private stakeholders, achieving outreach through the SAT Farmer Training Centre (FTC). The monthly Farmer Magazine “Mkulima Mbunifu”, published in Swahili, provides technical agroecological farming guidance, reaching up to 45,000 farmers.

SAT’s work within the Core-Farmer-Network is based on a holistic approach. Different modules are facilitated which cover agroecology in all its facets. Farmers receive in-village facilitation on agriculture, life skills, saving and lending, entrepreneurship and are accompanied through organic certification using a Participatory Guarantee System. SAT follows a social-entrepreneur philosophy. It provides high-quality products which are unique, disseminates them through appropriate marketing and uses a strong financial planning and control model. Combined together, SAT’s activities, facilities and systems represent best practice in Food Sovereignty.

SAT Goals and Objectives

Vision: The majority of farmers are using acknowledged agroecological methods to improve their livelihoods, conserve the environment and reduce pressure on natural resources

Mission (Objectives):

1. To transform farming practices in Tanzania through effective knowledge dissemination
2. To build the capacity of farmers so that they can effectively participate in the value chain
3. To collaborate with relevant partners in the public and private sector to strengthen their capacity in agroecology
4. To work as a credible organization, which has a transparent, accountable and cost-efficient approach to the holistic transformation of agriculture into an environmentally friendly and economically viable sector.

SAT's Ways of Achieving Good Practise: How It Is Done

SAT uses impact-proven strategies which are based on four holistic pillars:

- **Dissemination of Knowledge:** SAT teaches agroecology practices through face-to-face practical teaching sessions for farmer groups in their villages using demonstration plots. SAT empowers the group leaders to successfully spread the knowledge among other community members, involving adults and youth in the process. Content is based on farmer interests and issues, and includes entrepreneurial skills, and saving and lending culture. SAT also offers short-courses about agroecological practices at the Farmer Training Centre, where trainees from all over East Africa benefit from the practical solutions demonstrated there. SAT provides farmers, extension officers and NGOs with materials written in Swahili covering many issues including composting, effective microorganisms, soil checks, plant nurseries and specific information for key crops. Knowledge is also distributed with the monthly farming magazine Mkulima Mbunifu, and offers practical, easily understandable information about agroecological farming methods. Social media keeps SAT networks abreast of current projects and news.
- **Application and Marketing:** Living the 'practice what you preach' philosophy, SAT is active in the whole value chain of agroecological food production - agricultural production, processing, packaging, marketing and creates an awareness among consumers about organic food. SAT supports farmers efficiently by demonstrating that agroecology can transform livelihoods in a positive way. SAT trains farmers in organic certification principles for product marketing, and links farmers with a national certification organisation and organic markets.
- **Research:** To produce credible agroecology knowledge SAT collaborates with farmers and universities to create demand-driven research. An annual Workshop for Participatory Research Design brings together farmers and students from Sokoine University of Agriculture (SUA) to identify collaboration opportunities. They are invited to develop relevant research topics, and if selected, students receive funding to support their study. SAT provides national and international researchers access to agroecological farmers and gains scientific evidence of the potential of agroecological methods through research on the demonstration farm. All research results are published and become available to SAT farmers and networks, at the SAT Farmer Training Centre and in the field.
- **Networking:** To achieve maximum impact, national and international workshops and conferences bring together small-scale farmers, NGOs, the private sector, the Government and its public institutions. These events enable the farmers and other stakeholders to share experiences from the grassroots level, demonstrating success stories and existing challenges from the farming community in Tanzania.

OUTCOMES SAT's Small Farmers Network Has Achieved

- Small farmers can create more resilient food growing systems, are more financially self-reliant and more self-organising to meet their training and education needs.

Through its farmer-based research, SAT has gathered information on the impacts experienced by those farmers:

- Through applied agroecology methods, shown in the demonstration plots, farmers can increase their income – a recent follow up study indicates an average increase in income of 38%, compared to before the training.
- Economic benefits from increases in production - reported by 66% of facilitated farmers.
- The farm profit can be maximized by using on-farm inputs, hence reducing costs for inputs bought from shops - a reduction of input costs reported by 61% of the farmers.
- Through multi-cropping systems, farmers become less vulnerable to climate change, weather and market changes - 76% of facilitated farmers reported their diet is now more balanced, with positive health impacts.
- Through applied agroecological practices, farmers can revive and re-use land previously subject to overuse of chemicals, soil degradation and erosion - 64% of farmers reported that they could reuse land; 91% were using erosion control measures after the SAT training programme, whereas 30% used them previously.
- By avoiding the use of chemicals, exposure to environmental toxins is reduced to almost zero.
- Due to diversification and organic production, farmers benefit from new market opportunities - up to 50% of trained farmers reported having access to new markets.
- Farm biodiversity is protected and enhanced through maximizing use of locally-available resources.
- Through soil management, farmers fight erosion and reduce the water consumption - experienced farmers reported a reduction of 59% in water consumption.
- Through applied agroecology, farmers no longer depend on slash and burn practices - research in 2014 showed 95% less burning by farmers who were facilitated by SAT.
- More than 6,000 trees (spices, leguminous and timber) planted across 76 groups for agroforestry, mostly by the Tree Planting Heroes, has reduced dependence on adjacent forestlands that are under harvest pressure. Research with farmers has shown that on average a farmer in the Uluguru Mountains can plant around 150 trees on their land without reducing farm productivity.
- Overall, 97% of the facilitated farmers reported an improved general situation (from combinations of productivity and income increases, cost reductions, health benefits, etc) after working with SAT.

SAT has engaged over 100 agricultural students in research collaboration or through practical field trainings. Some former students are now in top-level positions, promoting sustainable and safe solutions in agriculture.

Permaculture Principles & Design in Action

SAT demonstrates the successful development of 'relevant-to-user' agroecology and permaculture education and demonstration, in the most relevant physical context and local language, listening and responding to local needs.

Removal of limiting factors: Saving & Loan Groups, critical to overcome financial limitations, enabling more dynamic economic actions to emerge; smartphone use and training overcomes many constraints in network communication, enabling more dynamic, effective and creative communication and sharing of best practice.

Permaculture Principles in Action: Multi-function; multi-supply; small change for big effects; relative location; observe & interact.

From Inspiration to Action

The SAT Saving and Loan Groups and use of smartphones feed and lubricate the education-for-action systems described above, and have multiplied and grown the diversity of beneficial impacts they produce. What experience from SAT could help your project, community or network in relation to:

- a) Project development and evolution, and scaling-up in valuable ways at the local level?
- b) Permaculture and agroecology education, teacher training and demonstration that relates to local needs?

Summary of the Difference arising from the Lush Spring Prize

The Prize has helped: strengthen the Morogoro SAT network to ensure more farmers are actively involved; more group leaders can participate in forums, share success stories on agroecology, and be active in the Seed Platform and SAT Saving and Lending Groups (SSLGs); all on top of their usual activities of food production.



Legal Status, Structure & Size: Project start date: June 2011 (SAT registration)

Sustainable Agriculture Tanzania (SAT) is a non-profit organization registered under the Tanzanian Society Act [CAP. 337 R.E. 2002] with registration number: S.A 17581

SAT has a team of 17, including six network and project facilitators, two project managers, managers covering Accounts, Communications, Sales and the FTC, a monitoring and evaluation officer, an Executive Director and a Director of Operations.

Funding, Finance, Resources

Biovision Foundation for ecological development – Switzerland; Entwicklungshilfe Klub – Austria; City of Vorarlberg – Austria; Austrian Development Agency and private individuals.

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International Permaculture Education Network (IPEN)

Increasing the effectiveness and coherence of permaculture education internationally

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