



Country: Kenya
Sector: Agriculture
Project: Up-scaling sustainable commercial production of medicinal plants by community-based conservation groups at Kakamega forest in Kenya
Grantee: International Centre of Insect Physiology and Ecology (ICIPE)
Partner: Muliru Farmers Conservation Group (MFCG)

Acknowledgements

The SWITCH Africa Green programme was developed by the European Commission to support African countries in their transition to an inclusive green economy, the main objective being to promote sustainable development. This is based on sustainable consumption and production (SCP) patterns, while generating growth, creating decent jobs and reducing poverty.

This impact sheet on 'Up-scaling sustainable commercial production of medicinal plants by community-based conservation groups at Kakamega forest in Kenya' provides a snapshot of results and achievements of this project under the Green Business Development Component of Phase I (2014-2019) of the SWITCH Africa Green programme. This component supported micro, small and medium-sized enterprises (MSMEs) to apply and adopt SCP practices in their business operations.

The project was implemented by the International Centre of Insect Physiology and Ecology (ICIPE) in partnership with Muliru Farmers Conservation Group (MFCG), with the support of the SWITCH Africa Green National Focal Point Dr. Charles Mutai, Ministry of Environment and Forestry, Kenya and National Coordinator Dr. Lily Chebet Murei, United Nations Development Programme (UNDP), Kenya. The grants were managed by the United Nations Office for Project Services (UNOPS) and coordinated by Celia Marquez with support from Mercy Gatobu.

Supervision and coordination for development of the impact sheet was done by Rhoda Wachira and Patrick Mwesigye and programme support was provided by Carolyne Kilel and Sylvia Munuhe, Africa Office, United Nations Environment Programme (UNEP).

The impact sheet was compiled by Sheila Karue consultant, UNEP. Editing, layout and design was coordinated by the communication division, UNEP.

UNEP is grateful for the financial support provided by the EU for implementation of the SWITCH Africa Green programme.

Background

The project on sustainable production of commercial medicinal plants was implemented in a community located near the biodiversity rich Kakamega forest in Western Kenya. The forest is highly threatened by unsustainable practices of exploiting the natural resources by the local community, which is driven by pressure from an increasing population and the need to earn a livelihood. The forest provides a source of traditional medicinal plants that are widely used by the community for primary health care and also sold in the marketplaces.

At inception, the farmers and households near Kakamega forest engaged in the commercial cultivation and processing of medicinal plants participated in a baseline assessment. This involved livelihood analysis including capabilities; assets; activities; environmental, cultural and socio-economic conditions relating to the target groups; identification of gender participation; and their engagement in SCP practices. The MSMEs were mobilized to participate in a consultation workshop that focused on identifying and reviewing the range of medicinal plants and products the farmers were engaged in, and to explore the potential for expansion of other medicinal plants.

Through implementation of the SWITCH Africa Green supported project, the capacity of the MSMEs was enhanced to integrate SCP practices in producing medicinal plants. Links to markets were also established. Results of the project led to improved efficiency in operations and sustainability of the MSMEs, improved quality and yield of products, increased income as well as reduced unsustainable reliance on forest resources by the community.

Beneficiaries

The project engaged 10 MSMEs to implement and demonstrate value addition derived from adoption of SCP practices in growing and processing medicinal plants.

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Objectives

- Transform community-based commercial production of medicinal plants and derived products at Kakamega forest in Kenya into small and medium-sized green social enterprises
- Minimize the rampant use of harmful and hazardous synthetic chemicals in the cultivation of medicinal plants
- Improve community livelihoods
- Contribute to conservation of the environment

Outputs

Training products developed

Through the project, 20 toolkits were developed on SCP practices that covered cultivation, harvesting and processing of medicinal plants, as well as health and safety manuals. A total of 3,120 copies of the toolkits were distributed for use by the community. The toolkits were also translated to Kiswahili, the local language widely spoken nationally.

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Awareness raising

A stakeholder meeting was held to engage the 84 participants, of which 35 were female and 49 were male, in the practices of SCP and environmental conservation. Representatives from MSMEs, policy makers, the private sector, public health sector and non-government organisations attended. By the end of the project, 18,505 beneficiary community members, including school children, were engaged in these practices.

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Institutional coordination mechanisms established

By providing training to community members on the benefits of collaborative efforts through cooperative societies, the MSMEs were given support to formally establish two cooperative societies namely: Muliru Farmers' Cooperative Society and Kakamega Environmental Education Programme (KEEP) Cooperative Limited. Through these cooperatives, the farmers have achieved easier access to markets and higher bargaining power for prices of their products.

Market links created

Through the project, a total of 38 market links were created, where agreements were drawn up with hospitals, private clinics, chemists, supermarkets and market stalls to buy products from the MSMEs. For instance, an agreement was signed with 14 marketplaces in Kakamega County for the sale and marketing of some products like Naturub, Mozigone, Kamili mosquito and fly repellent candles, Mondia tonic, raw mondia whytei roots and seedlings, through MSMEs. A distributor was appointed, *Milba Brands*, to advertise and market one of the products, Naturub. Market links were established with *Alisam Products Development & Design* for the export of essential oils and other medicinal plants.

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Increased networking among green businesses

Selected beneficiary MSMEs participated in the SWITCH Africa Green-SEED Replicator Connect Workshop and SEED Africa Symposium, both held in Nairobi in 2016; and in the SWITCH Africa Green Regional Networking Forums Uganda (2016) and in Burkina Faso (2018). Inclusive business models in promoting positive social and environmental impacts, replicating sustainable business and effective finance were among the messages taken away from these networking forums. Contacts established



with the Kenya Industrial Research Development Institute (KIRDI) raised awareness on the availability of development services for MSMEs to facilitate advancement.

Improved capacities of workers in green sectors

Five training sessions were held, whereby 118 members of the community received training on various subjects such as internal operations, organization and management, production operations, sales and marketing, establishing partnerships, access to finance, cooperative formation and benefits, and financial management. Additionally, two model farmers were trained as training of trainers (ToT) in the use of banana leaves and stems in seedling production. This involved using them as pouches for propagating the seedlings in their nurseries. Muliru MSME provided community members with 24,600 seedlings from indigenous trees.

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Figure 1: More than 90 per cent of the stems of plants that were harvested using the secateurs (left) sprouted (regenerated) successfully and 70 per cent harvested using machete (right) did not sprout.



Support on access to finance

The project supported establishing contacts with one microfinance institution, Level Moja Capital (LMC) based in Kenya. Links with the institution allowed MSMEs to access credit to further their initiatives.

National environmental awards

Results from implementing the SWITCH Africa Green supported project led to the recognition of two beneficiaries, Kakamega Environmental Education Programme (KEEP) and the Muliru Farmers Conservation Group (MFCG), who were given the TOTAL Eco-challenge award in 2016 for their contribution towards tree planting and conserving the natural environment.

Outcomes

Adoption of SCP practices by MSMEs

About 627 community members adopted SCP practices. These included mulching; planting pollinator plants in their homesteads and farm hedgerows; water harvesting

by installing water gutters on the roofs of their houses and using water tanks; straight row planting; intercropping to maximize efficiency of land use, yield and value of produce and use of secateurs instead of a machete for cutting the stems of the medicinal plants during harvesting, see figure 1.

627 community members adopted SCP practices

Registration of products with national regulatory bodies

The process of registering the spin-off product Uzimax with the Pest Control Products Board (PCPB) of Kenya was initiated and was at the final stage by the end of the project period. The product had passed all the independent tests conducted on toxicity, efficacy and physical-chemical properties. Uzimax is now registered with PCPB as a pest control product for the control of mosquito larvae.

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Improved business performance from additional revenue streams created

Raw *mondia whytei* roots and seedlings were developed as spin-off products which began to generate additional income for the community MSMEs.

Access to financial resources

An agreement was signed between ICIPE and Muliru Enterprise MSME for the supply of USD 56,500 worth of processed plant material by the community for developing additional products.

Impacts

Environmental impacts

Increased water savings

Following the installation of water tanks 2,820 litres of rainwater was harvested. This led to significant savings, particularly from the perspective of time factor. Approximately 141 hours (6 days) of savings were made on time spent in water collection from the river by children.



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Adoption of renewable energy

One of the enterprises, Muliru Enterprise, applied the use of a solar water heating system to preheat the water for the hydro-distillation processing equipment. This contributed to 50 per cent reduction in the use of LPG and subsequent reduction in the cost of production and processing by 40 per cent.

Turning agricultural waste to organic manure

During the project implementation period, community members recycled waste from processed medicinal plant material and 5,010 kg of waste material was used by community members as organic manure.

Economic impacts

Increase in income of the MSMEs

Adoption of sustainable practices such as intercropping led to a 96.3 per cent increase in production which resulted in a 110 per cent increase in income to the farmers. Participating community members earned a total of USD 44,864.4 during the project period.

Social impacts

Improved occupational health and safety

Toolkits on health and safety were developed and the beneficiaries were trained on interpreting the various signs and symbols used. The MSMEs were also provided with a variety of health and safety signs to display in appropriate places in their processing facilities.

Impact on youth

Through the project, beneficiaries were linked with Khwisero Sports Academy, a youth group of 70 members (comprising 44 boys and 26 girls) which operates two stalls in Butere town in Kakamega County. This created an opportunity for the young members to benefit from economically gainful activities.

Lessons learnt

- The success of future similar projects will be enhanced by including technology use. Collaboration with private sector partners to focus on the commercialization and marketing of products developed, as well as local government support to enable registration of products developed and assist with input to policy recommendations is also necessary.
- Use of a participatory approach, where the farmers were actively involved from project inception to completion, thus improving the success of the project by ensuring the needs of farmers and other MSMEs are met.
- Sound record keeping and accounting of project related farm activities, along with a frequent review of the data helps flag gaps, identify actual sales by individual farmers and forms a basis for decision making.
- It is important to work with business plans from the beginning of community projects to guide the growth of the groups and small enterprises.



“This project of Ocimum has enabled me do a number of things including; taking my children to school, improving my farming practices and valuing environmental conservation. I used to go and split timber in the forest before I joined this project but currently, I am one of those who take care of the forest,”

Maurice Abungana, who lives 50 meters from the Kakamega forest.



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