



- Country:** Burkina Faso
Sector: Agriculture
Project: Transformation des déchets ménagers en fertiliz agricole
(Transformation of household wastes into fertilizer)
Grantee: Association Jeunesse Solidaire pour le Développement Véritable
(AJSDV)
Partners: Bang N-Tum association of handicapped persons of Ouahigouya
and the Association Bayiri Malguere du Zandoma

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 Transforming Household Waste into Agricultural Fertilizers provides a snapshot of results and achievements of the 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 Association Jeunesse Solidaire pour le Développement Véritable (AJSDV) in partnership with Bang N-Tum association of handicapped persons of Ouahigouya and the Association Bayiri Malguere du Zandoma with the support of the SWITCH Africa Green National Focal Point Polycarpe Bationo, Ministry of the Environment, Green Economy and Climate Change (MEEVCC) and National Coordinator Albert Compaoré, (MEEVCC), Burkina Faso. The grants were managed by 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 Carolyn Kilel and Sylvia Munuhe, Africa Office, United Nations Environment Programme (UNEP).

The impact sheet was compiled by UNEP consultants, Sheila Karue and Mercy Mumo. Editing, layout and design was coordinated Communications Division, UNEP.

UNEP is grateful for the financial support provided by the European Union (EU) for implementation of the SWITCH Africa Green Programme.



Background

Municipal waste in Burkina Faso forms more than 50 per cent of its composition from food and garden waste, with an estimate of 330,000 tons of waste produced annually in Ouagadougou. Improper waste disposal is becoming a challenge due to recent increase in household waste production from high rates of urbanization and population growth. Ultimately, this has led to diseases caused by poor sanitation such as diarrhea, cholera, malaria and other related diseases. The waste also nets insects, rodents, and reptiles capable of transmitting diseases and that cause health hazards once in contact with food.

The project: 'Transforming Household Waste into Agricultural Fertilizers', was developed to assist Burkina Faso transition to an inclusive green economy and to promote the shift to sustainable patterns of consumption and production practices. The project was implemented in three (3) regions of Northern Burkina Faso namely: Yatenga, Loroum, and Zondoma for a period of 30 months.

The Association Jeunesse Solidaire pour le Développement Véritable (AJSDV) reached a 100per centrate of completion in meeting its five key indicators in the number of households sensitized in the use of conventional bins, the number of people aware of the value of household waste generating organic compost manure, the number of waste processors networked, and the number of green jobs created as well as green entrepreneurs engaged in the project.

Additionally, the project assisted the MSMEs to substitute the use of chemical fertilizers for organic inputs as a way of greening agriculture and promoting sustainable consumption and production practices. Through this, environmental conservation was met and thus fostering sustainable human development by ensuring that household waste was well managed.

Objectives

The project's main objective was to support the MSMEs in processing biodegradable household waste into agricultural

fertilizer in the Northern Burkina Faso as a way of greening agriculture. The specific objectives of the project were to:

1. Demonstrate that household waste is an opportunity for agricultural productivity through the production of well-decomposed organic fertilizers that could sustain agricultural land.
2. Demonstrate waste as a source of income diversification and job creation in the 3 regions.
3. Promote good practices of sustainable consumption and production methods.

Beneficiaries

The project engaged 97 MSMEs in green entrepreneurship in waste recovery through composting and recycling as a source on income-generating activity for the community. More than 150,000 households and businesses were sensitized on the implementation of sustainable waste management procedures through a synergy of action between people, associations and local authorities.



Other beneficiaries included local authorities from the waste management department, local partners especially from Bayir Malegre Association of Zondoma (ABMZ) under the municipal action and integrated waste management, various NGOs that specialized in compost production through local replications and national authorities from the Ministry of Environment of Green Economy and Climate Change.

Outputs

Increased networking among green businesses

Networking events

The beneficiaries participated in the National Academy on the Green Economy in Ouagadougou, prompting the improvement to their visibility with several beneficiaries from different regions in Burkina Faso. AJSDV participated in sharing their experience on sustainable agriculture, waste disposal and recycling measures with the Ter-Mer Rodriguez Association a Switch Africa Green grantee in Mauritius.

The beneficiaries participated in the 2018 SWITCH Africa Green Regional Networking Forum held in Burkina Faso where they exhibited and showcased their products. Additionally, they participated in the 2017 Third Session of the UN Environment Assembly that was held in Kenya. The beneficiaries had a chance to meet experts in the green economy and discuss opportunities, challenges and barriers that the private sector was facing in advancing green business and sustainable consumption and production practices in Africa. They also took the opportunity to exhibit their products.

Improved capacities of workers in green sectors

Training on Business Development

The entrepreneurs were trained on cost control, finance opportunities in the waste sector, customer identification techniques and in marketing and product design. Two retraining courses were organized and benefited 38 microentrepreneurs on non-biodegradable waste.

Skills development

Through 25 training sessions, the capacity of 129 actors was enhanced on composting and sustainable agriculture using only compost waste as fertilizer. Trainees acquired skills in the construction of compost pits, categorizing the waste to be used in the composting pit, and monitoring the composting cycle until maturity.

Improved awareness on waste management

Sensitization through radio campaign

Approximately 1,000,000 listeners were sensitized on waste management techniques and sustainable management of household waste through Radio Voix du Paysan. The interactive programs were developed with the involvement of the Ouahigouya Town Hall, the provincial agricultural directorate and the general directorate of the green economy and climate change.

Awareness raising events

A total of 1,980 households were sensitized directly on the use of conventional garbage cans and about 150,000 households and

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exceeding the initial target of collecting 3,000 tons of waste by an additional 23 per cent.

businesses were sensitized on the implementation of sustainable waste management procedures through a synergy of action between people, associations and local authorities.

Communal workshops were held every quarter with some 1,000 participants benefiting and waste collection systems being set up in collaboration between community members and local authorities.

The MSMEs developed guidelines on handling, sorting and collecting waste in various shops, restaurants, and other business centers. Signage with information on waste disposal was installed and wall murals placed on the uncontrolled landfill sites warning against reconstruction on the landfills.

Outcomes

Uptake of SCP practices by MSMEs supported

Sustainable Consumption Practices adopted

All the 97 MSMEs adopted various sustainable consumption and production practices, including use of organic fertilizers from household waste, production of compost manure for subsistence and commercial farming and substituted archaic bins with conventional garbage cans for waste collection.

Uptake of composting by MSMEs

A total of 58 MSMEs learned how to identify a composting site, construct compost pit, sort the waste to be used and monitor temperature and humidity conditions of the pit. The enterprises produced compost for commercial use and others substituted it for chemicals fertilizers.

Green products development

The MSMEs made brooms from plastic bottles and plastic cans. Groceries bags were made using old plastic bags and fabrics.

Some of the MSMEs engaged in glass recycling where broken glassware, light bulbs, and bottles were crushed into powder and used to paint buildings. Paper briquettes were made from compressed paper pulp and sawdust and used as a source of energy for cooking.

Improved business performance of MSMEs supported

Creation of green jobs

Through the project, 90 direct green jobs were created and 300 indirect jobs were created in compost production. This generated employment of more people by the MSMEs who are now able to earn a source of livelihood.

Savings from improved resource efficiency

The effect of using organic fertilizer on productivity compared to synthetic fertilizer (NPK) was tested on two crops; onions and potatoes. The highest yield was obtained from the plot on which organic manure was combined with a small amount of inorganic fertilizers (25 per cent NPK fertilizer) as illustrated below.

Impacts

Environmental impacts

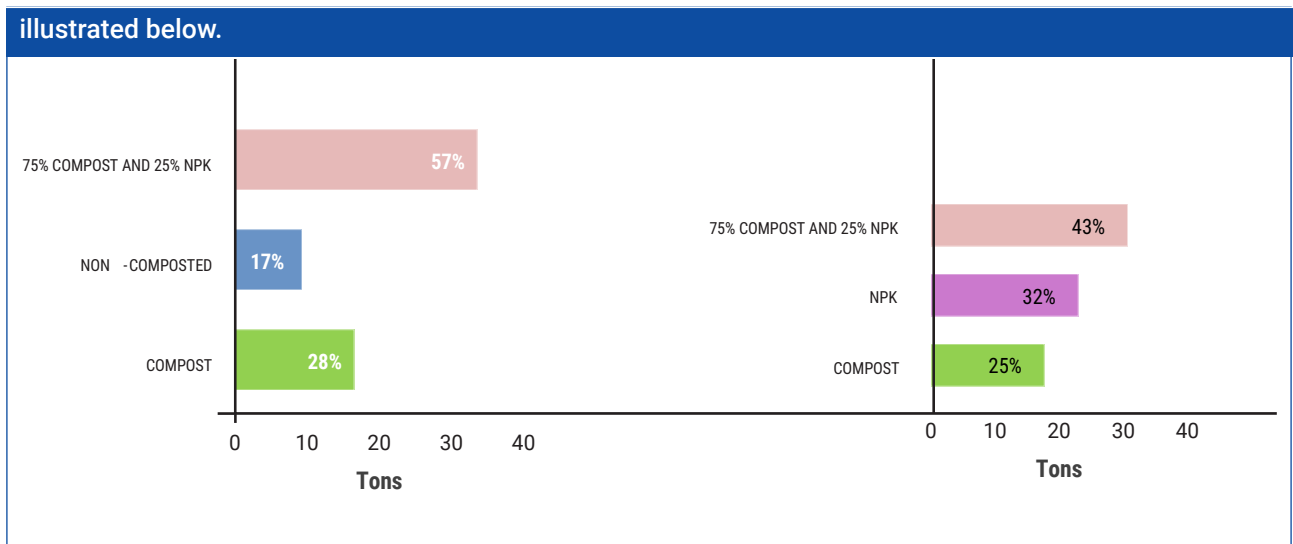
Reduction in chemical fertilizer use

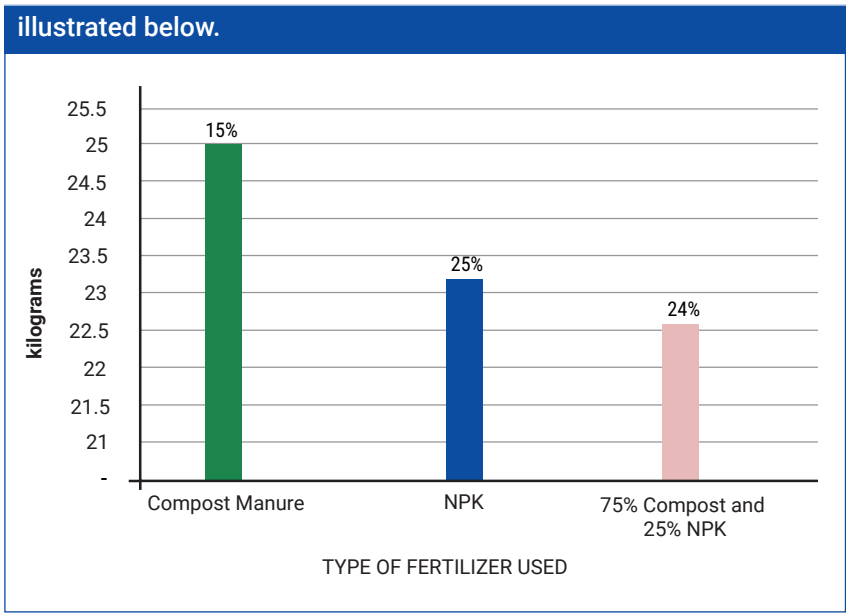
Wend Panga Services enterprise, one of beneficiaries of the project, recorded a decrease in the use of chemical fertilizer by 75per cent, from an average use of 30 bags of inorganic fertilizers to seven bags annually. The MSME also recorded an average reduction in the use of pesticides by 33.3per cent.

Waste reduction

The production of organic fertilizer reduced the amount of household waste disposed into the environment leading to degradation. It also created a revenue stream for women and youth involved in waste recovery, collection and recycling. In collaboration with the local authorities, 790 tons of waste was removed from uncontrolled landfills.

Over 3,700 tons of waste was put into productive use through composting and recycling, exceeding the initial target of collecting 3,000 tons of waste by an additional 23 per cent.





Farmers involved in growing millet, maize, and sorghum recorded an annual increase in production from 17.6 tons to 29.3 tons. Increased production resulted in an increase in the revenue of USD 727.80. Additional revenue of USD 38.12 was generated from the sale of recycled plastic waste.

Economic impacts

Increase in revenue

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Social impacts

Improved occupational health and safety

Training on health and safety was given to actors along the value chain of waste in the municipality of Séguéneka. This was upon the request of MSMEs following rampant health issues. The training was led by a specialist in health and hygiene issues at the Regional Hospital Center North. Awareness of the participants was raised on diseases and risks to their health common in those working in the waste sector. The local authorities established more sanitary waste collection systems.

Reduction in pesticide use led to a decrease in the rate of respiratory related diseases such as asthma.

Impact on women and youth

Three women’s associations in waste collection and recovery were created with a total of 148 women members in Touya, Seguenega, and Tougo.

Lessons learned

- Improved agricultural practices enhance productivity and reduce pollution and environmental degradation for instance, the application of compost manure by the MSMEs increased productivity in their plots and reduced volumes of waste rotting away in the dump sites.
- There is need for continuous communication and awareness raising in promoting the uptake of turning waste into a resource.
- There is need for training MSMEs in product design and standards to facilitate marketing of green products such as plastic brooms and carrier bags made from plastic and fabric waste.



“Market gardeners have benefited greatly from the project through the production of compost in innovations. The increase in the living standards of the beneficiaries and the production of products without chemical fertilizers has led to the adaption of better conservation measures on the environment and has acted as a source of income to the members of the community.”

A member of the WPS (Wend Panga Services) association.



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