

Country: Ghana
Sector: Integrated Waste Management
Project: One-Stop Business and Policy Center for the Establishment of Eco-Innovative MSMES and Supporting Policies in the E-Waste and End-of-Life Vehicle Sector [ECOBPC] in Ghana
Grantee: University of Cape Coast
Partner: The University of Northampton

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 One-Stop Business and Policy Center for the Establishment of Eco-Innovative MSMES and Supporting Policies in the E-Waste and End-of-Life Vehicle Sector [ECOBPC] in Ghana 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 University of Cape Coast in partnership with the University of Northampton with the support of the SWITCH Africa Green National Focal Point Lambert Faabeluon, Environmental Protection Agency (EPA), Ghana; GNCP and National Coordinator Kingsley Bekoe Ansah, United Nations Development Programme (UNDP), Ghana. 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 by Communications Division, UNEP.

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BACKGROUND

Electrical and Electronic Equipment (EEE) has become an increasingly indispensable part of life over the last couple of decades all around the globe leading to a rise in the number of discarded older and outmoded electronic equipment. According to the global e-waste monitor (2017), 44.7 metric million tons of e-waste was generated globally in 2016 with the USA reporting an estimated 40 million personal computers becoming obsolete every year. In Ghana, 49,000 kilotons of e-waste are generated annually¹. The 'Agbogbloshie' dump site in Accra, Ghana, processes an average of 10,000-13,000 metric tons of e-waste annually².

The increasing demand for newer and more efficient technology has led to a shortened lifespan for electronic products. Older equipment is becoming obsolete faster and is discarded in increasingly large amounts even though they contain precious metals like gold, silver, palladium, platinum as well as toxic substances like lead, mercury, cadmium, beryllium among others. This causes e-waste to be a threat not only to our planet but also to the community members and animals once in contact with the toxic substances.

The project on e-waste sought to reduce the environmental impacts arising from the improper treatment of e-waste and established a technical, commercial and legislative base to turn these wastes into resources.

OBJECTIVES

The overall objective of the project was to facilitate green business development in the e-waste value chain in the Greater Accra region (Accra and Tema) and Ashanti Region (Kumasi).

The Specific objectives were to:

- Promote sustainable consumption and production patterns through a resource efficient e-waste management system.
- building capacity on eco-entrepreneurship among micro, small and medium-sized enterprises
- Contribute to poverty alleviation by improving working and living conditions of those involved in waste dismantling, refurbishing and recycling
- Reduce negative environmental and health impacts of the improper recycling of e-waste.
- Foster dialogue with decision-makers on policies to encourage MSMEs to adopt green practices in e-waste management and support informed-decision making.

BENEFICIARIES

The beneficiaries of the project included 122 MSMEs and 2,800 participants in the informal and formal e-waste sector that were involved in refurbishment and recycling of e-waste in the Greater Accra and Ashanti regions.

Other beneficiaries included the local community, stakeholders and local government authorities in the e-waste sector.

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OUTPUTS

Improved capacities of business development services to promote SCP practices by MSMEs

Code of conduct for sound disposal of e-waste developed

A survey of e-waste recycling and refurbishing facilities in Accra, Tema and Kumasi was carried out and the grantee identified major knowledge gaps with respect to e-wastes management within the organizations. Through the survey, the grantee was able to support bulk consumers in coming up with a voluntary code of conduct for sound disposal of e-waste. A complete ban on the importation of e-waste was suggested to the government officials and special provisions for companies who could manage the e-waste in an environmentally sound manner were also made.

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¹ Step E-Waste Worldmap: [Http://Step-Initiative.Org/Index.Php/Overview_Ghana.Html](http://Step-Initiative.Org/Index.Php/Overview_Ghana.Html)

² Source: Socio-economic assessment by Oeko-institute

Increased networking among green businesses

Networking events organized

The project supported the organization of networking events such as conferences, seminars and workshops. Through the events, the MSMEs who were engaged gained knowledge on e-waste management systems. Members of the community were sensitized and trained in e-waste management and providing appropriate support services for e-waste generators, users, and recyclers.

Improved capacities of workers in green sectors

MSMEs trained on entrepreneurship

A total of 122 MSMEs were trained in entrepreneurship and business fundamentals which enhanced their capacity to improve their record keeping. The entrepreneurs also learned how to use the standard dismantling techniques prior to the “crushing and hitting” technique used to recover valuable components from electronic waste. The MSMEs recorded an increase in their recovery rate for valuable fractions such as lead, copper gold silver and aluminium.

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Knowledge products and tools developed

A handbook on e-waste which contains basic dismantling information and exercises on electronic waste management was developed. The handbook has detailed information on the processes and procedures of starting and managing an e-waste business. The guidebook is also useful for potential businesses that wish to ensure that all their e-waste value chain activities such as

During execution of the project activities, about 42 per cent of those who benefitted from the sustainable product innovation and energy efficient practices were women.



collection, transportation, storage, dismantling or refurbishment, are carried out in a manner that causes no harm to the environment and its inhabitants.

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Business and Waste management models developed

The program managed to implement two business training programmes in Kumasi. The models demonstrated the key process involved from collecting, categorizing, dismantling, processing and disposal of electronic waste. Additionally, the models were shared with individuals and organizations interested in starting businesses in the e-waste sector. Below is an illustration of the business model activity that was carried out by the MSMEs.

Course on SCP developed

A draft liberal and entrepreneurship course on sustainable consumption and production for students of the University of Cape Coast Business school was developed. Through the course, students at the university level can be trained on green business development in preparation for the market upon completion.

The models were shared with individuals and organizations interested in starting businesses in the e-waste sector.

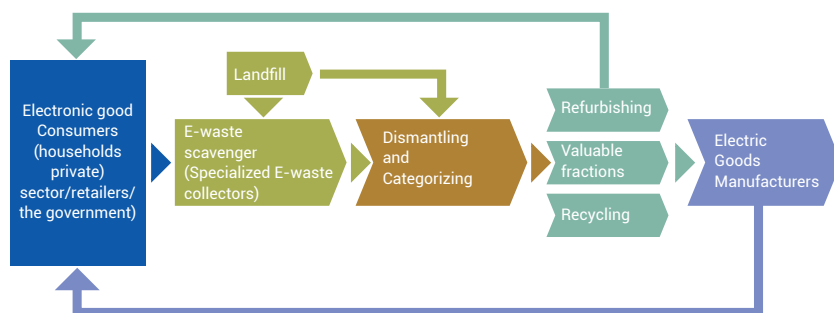


Figure 1: E-waste management process model

OUTCOMES

Enabling frameworks for inclusive green economy developed

Implementation of the national law on e-waste supported

The project grantee contributed to discussions on the e-waste legislation in Ghana. Recommendations on how the provisions of the Hazardous and Electronic Waste Control and Management Act 2016 can be implemented based on the e-waste project results were also presented to the parliamentary committee members of the Ministry of Environment, Science and Technology.

The project supported the establishment of the policy center which was set up to provide advice to individuals and business contractors interested in starting and managing sustainable businesses in the e-sector.

Improved business performance of MSMEs supported

Increased turnover for MSMEs

During project implementation, the grantee surpassed their target of the MSMEs they had initially planned to work with. This was driven by increased demand among businesses dealing in electronics and electronic equipment for support in managing the waste. Following





project implementations, 78 of the MSMEs reported a 136 per cent increase in revenue.

IMPACTS

Environmental Impacts

Reduction in waste

There was a 20 per cent reduction in waste generated following project implementation. In 2015, at the start of the project, the average amount of waste that was being generated was 1,240kg per day and this reduced to 1,000 kg per day after the intervention of SWITCH Africa Green Programme.

A liberal and entrepreneurship course on sustainable consumption and production for students of the University of Cape Coast Business school was developed.

Economic Impacts

Net additional income from sale of high-value components recovered from e-waste

High-value components like gold, silver and steel were recovered from manual dismantling and separation of reusable parts of e-waste or electrical and electronic equipment. The sale of these components provided additional revenue stream and created additional job opportunities for the MSMEs.

The informal waste processors and their families directly benefited from the project in the refurbishment and recycling sector. In addition, 113 new jobs were created by MSMEs who participated in the project.

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Social Impacts

Improved e-waste management practices

The MSMEs were sensitized on the environmental and health impacts of e-waste and were provided with 50 personal protective equipment. Four technical training programmes were held on the safe dismantling of e-waste. The entrepreneurs stopped burning e-waste and therefore reduced the toxic smoke that was harmful to their health and that of the neighbouring communities.

Reduced health hazards

A reduction of health hazards from the toxic components recovered was noted; there was a 52 per cent reduction in the number of accidents recorded from June 2015 to August 2017 due to the use of simple dismantling tools. In addition, there was a decrease in the number of illnesses reported by local community members using groundwater.

Impact on youth

Of the total people trained in e-waste management, 45 per cent were youth who had dropped out of school.

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LESSONS LEARNED

- Stakeholder engagement at the start of the project makes it possible to foster cooperation and collaboration among key players even after completion of the project. This facilitates sustainability and continuity of projects.
- The laws governing management of e-waste need to create an enabling framework for all, for instance, it was noted that there is need to amend the prohibitive provision that e-waste be sold to the highest bidder and the management of the e-waste fund needs to be revised.
- A structured monitoring and evaluation system containing an oversight responsibility from the project team and not tied to individual roles facilitates successful project implementation.
- Business linkages facilitate implementation of successful e-waste programme. The e-waste project benefited from alliance with partners from Nigeria to obtain additional e-waste so that they could meet the required capacity for mechanical processing.
- Strong partnerships are important for successful implementation of projects, the grantee partnered with the environmental protection agency (EPA) of Ghana in implementing the Switch Africa Green project on E-waste.

“The findings of the project will inform the implementation of the Hazardous and Electronic Waste Control and Management Act 2016”.

Mr. Clement Kofi Humado,
From the Parliamentary select committee on Environment, Science
and Technology in Ghana.



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