



SWITCH Africa Green  
is funded by the  
European Union



# SWITCH AFRICA GREEN CASE STUDY

9

## INDUSTRIAL SYMBIOSIS

STORIES FROM  
BENEFICIARIES

## BIO-DATA

<b>Project Title:</b>	Enhancing resource productivity and environmental performance of MSMEs through the concept of industrial symbiosis
<b>Grantee:</b>	Ghana National Cleaner Production Centre
<b>Partner:</b>	Africa Roundtable on Sustainable Consumption and Production
<b>Enterprise (MSME):</b>	Shinefeel Limited
<b>Year Established:</b>	2012
<b>No. of Employees:</b>	450
<b>Sector:</b>	Integrated Waste Management
<b>Type of Business:</b>	Paper and Plastic Recycling and Paint manufacturing
<b>Location:</b>	Asutwale, Greater Accra Region, Ghana.

## PROJECT BACKGROUND

The Industrial Symbiosis Project introduced to MSMEs the concept of useful uses for waste generated either in-plant or by another company. This was to aid in the effective management of waste by moving waste generated up the waste hierarchy.

Through the project the MSMEs were trained in the following:

- Concept of industrial Symbiosis and Benefits to the MSME
- Process Mapping to identify resource inputs, product output and waste streams either for a specific product line or the entire facility.
- Data Collection/Gathering for resources/wastes.
- Prioritizing waste stream for Industrial Symbiosis
- Waste segregation.

## ISSUES ADDRESSED

Shinefeel Gh limited, a paper and plastic recycling company with a combined installed capacity of 150MT/day (90MT for paper and 60MT for plastic). Their products include Egg crates, T-roll, food and non-food plastics and paints.

Through the In-Depth Assessment section of the Project, it was realized that the MSME was operating below its capacity with respect to the paper recycling plant. They even cited instances where they had to go outside the country to look for waste paper. The GNCPC then suggested that they consider using middlemen to source waste paper from governmental offices, printing presses and other MSMEs under the project in Accra. This led to an increase of about 10 MT/day of waste paper supplied to the facility at a discounted cost.

## PROJECT IMPACT

As a result of this synergy  
**10 tons**  
of waste paper was diverted  
from the landfill and GHG  
savings of  
**18000kg**  
CO<sub>2</sub>e per day

Shinefeel was able to save  
approximately  
**GH¢ 350**  
per day from the purchasing  
of the paper waste. Cheap  
Source of waste paper in  
country as compared to  
going beyond the borders of  
Ghana.

Through this synergy jobs  
have been created for  
intermediaries that collect  
and transport the waste  
paper to Shinefeel. A total of  
**6**  
new jobs were created in this  
particular case.

## CHALLENGES IN IMPLEMENTATION

- The initial challenge face was the collection and transportation of the waste paper since the sources of the waste were scattered in the city and the company was located 100km away on the outskirts of the city.
- The waste sources located initially were in small quantities thus this made it economically not viable for the company.

## LESSONS LEARNT/FUTURE PLANS

Due to the positive reception received from the MSMEs concerning the whole concept of Industrial symbiosis with its accompanying benefits, there is a commitment on the part of the Shinefeel Ltd, middlemen and printing press houses to keep the business relationships formed in place to ensure sustainability and continuity, even beyond the duration of the project.





From top to bottom, waste paper transformed into egg crates.

## CONTACTS

John Awuku Dziwornu  
Shinefeel Gh Ltd  
+233244115537  
[dzijoh@gmail.com](mailto:dzijoh@gmail.com)



## SUPPORTING PARTNERS



## IMPLEMENTING ORGANIZATIONS

[www.ncpcgh.org](http://www.ncpcgh.org)

info@ncpcgh.org

**GHANA NATIONAL CLEANER PRODUCTION  
CENTRE**