SWITCH AFRICA GREEN CASE STUDY

INDUSTRIAL SYMBIOSIS

STORIES FROM BENEFICIARIES
**BIO-DATA**

<table>
<thead>
<tr>
<th><strong>Project Title:</strong></th>
<th>Enhancing resource productivity and environmental performance of MSMEs through the concept of industrial symbiosis</th>
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</thead>
<tbody>
<tr>
<td><strong>Grantee:</strong></td>
<td>Ghana National Cleaner Production Centre</td>
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<td><strong>Partner:</strong></td>
<td>Africa Roundtable on Sustainable Consumption and Production</td>
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<td><strong>Enterprise (MSME):</strong></td>
<td>Cadbury Ghana Limited</td>
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<td><strong>Year Established:</strong></td>
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<tr>
<td><strong>No. of Employees:</strong></td>
<td>248</td>
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<td><strong>Sector:</strong></td>
<td>Integrated Waste Management</td>
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<td><strong>Type of Business:</strong></td>
<td>Manufacturing of cocoa confectionery.</td>
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<td><strong>Location:</strong></td>
<td>North Industrial Area, Accra, Ghana.</td>
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**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**

Cadbury Ghana Limited is a manufacturer of a wide range of milk powders and cocoa products. The company has an installed and operating capacity of 7000tons/annum. This case study is centered on their packaging waste, specifically the paper packaging from their raw materials namely sugar, whey powder and natural cocoa powder. Due to the large quantities generated per month the company disposing off the waste paper and even started burning them but this produced a lot of smoke which was harmful for the community. This resulted in the community reporting to the EPA. Fortunately, the company participated in the Industrial Symbiosis training and were very keen in implementing the concept.

The company was thus successfully linked with another MSME on the project, Fine Print a waste paper recycling company. Ensuing from that Fine Print is now sourcing waste paper from Cadbury for their Kraft paper and egg crates plants.
**PROJECT IMPACT**

4880 kg/month of waste paper was diverted from the landfill and GHG savings of 8784 kg CO₂e per month.

Approximately GH₵ 3785 per year from the sale of the paper waste.

Smoke from the burning of the waste paper is no longer an issue in the community and the relationship between Cadbury and the community has greatly improved resulting in improved corporate image.

**CHALLENGES IN IMPLEMENTATION**

The initial challenge the team encountered was finding an appropriate end user of the waste.

**LESSONS LEARNT/FUTURE PLANS**

The concept of industrial symbiosis clearly is capable for identifying end users for waste generated but results in the overall improvement of an MSMEs corporate image.

Also the concept is useful in assisting MSMEs meet their Environmental obligations in terms of waste management.
From top to bottom, the images of the waste paper packaging and resulting Kraft paper.

CONTACTS

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GHANA NATIONAL CLEANER PRODUCTION CENTRE