SWITCH AFRICA GREEN CASE STUDY

INDUSTRIAL SYMBIOSIS

STORIES FROM BENEFICIARIES
**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**

Voltic Ghana limited is one of the leading producers of bottled mineral water in Ghana. Despite running an efficient system, the company sometimes incur some waste PET bottles. This waste comprises mainly of waste PET preforms, empty water bottles used on the site as well as PET bottles that do meet the standards required due to deformity or some other reason. Also produced in significant quantities is paper waste. This mainly comprises of paper cartons used in packaging of the products. Some paper cartons produced do not meet the standards required hence they become unfit for customer consumption. These contributed significantly to the company’s waste disposal costs.

Through the Industrial Symbiosis project, Voltic was able to form a synergy with Hseih Plastics and Paper Recycling Company, who like their name suggests, require PET bottles and paper cartons as raw materials in their processes. This collaboration provides cheap and a dependable source of raw material for the recycling company as well as a reduction in disposal costs for the former.
PROJECT IMPACT

As a result of this synergy, 1MT/MONTH of waste paper was diverted from the landfill and GHG savings of 1800kg CO₂e per day as well as 1.5MT/MONTH of waste PET bottles was diverted from the landfill and GHG savings of 9000kg CO₂e per day.

Approximately GH₵ 1100 per day earned from the sale of the waste paper and PET bottles and reduction in disposal costs by roughly GH₵ 3000 per month.

Diversion from the landfill consequently leads to a reduction in the resources used by the District Assemblies in tackling waste management.

CHALLENGES IN IMPLEMENTATION

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

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 MSMEs and grantees to keep the business relationships formed in place to ensure sustainability and continuity, even beyond the duration of the project.
From top to bottom, images of crushed PET bottles and baled paper cartons

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