



**TOGETHER**  
*for a sustainable future*

## OCCASION

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## Experiences in SAVE projects

### Achievements at a Glance

ASSIST is a regional Non Profit focussed on Green initiatives, in particular Green Industry & Green Economy. Using its internal technical experts, ASSIST implemented RECP approaches for the supplier of PUMA and H&M...in 5 countries. The Project SAVE was funded by the German Government through KfW and was implemented as a PPP by ASSIST.

The main target of the SAVE project is at the participating factories to achieve 25% reduction in energy, GHG, water and waste levels by end of 2015, in comparison to the 2011 baselines. The work is still on-going, but after 6 months of implementation, reduction in some areas can be recorded. 3 participating factories of SAVE project in Cambodia, and Bangladesh are selected to present some saving opportunities.

	
<p>Figure 1: Shenzhou (Cambodia) Old wood log boiler</p>	<p>Figure 2: Shenzhou (Cambodia) New-installed Rice Husk Boiler</p>
	
<p>Figure 3: Steam distribution system</p>	<p>Figure 4: Steam trap replaced</p>

### Overview

SAVE project, co-financed by DEG (KfW bankgroup) and PUMA, and co-implemented by Puma and ASSIST has a timeframe of three years. The primary purpose of SAVE is to create more environmentally friendly production sites across the footwear, apparel and accessory supply chain in developing countries of Asia. SAVE targets the manufacturing locations of Indonesia, Cambodia, Bangladesh and China and it has an ultimate goal of reducing their energy, water, waste and greenhouse gas emissions by 25% as compared to the 2011-year baseline.

While in year one and two SAVE focuses on capacity building; performing energy, water, waste assessment and creating the sustainability roadmap towards RECP, year three aims for technical assistance on how to bring down resource consumption compared to 2011 baseline.

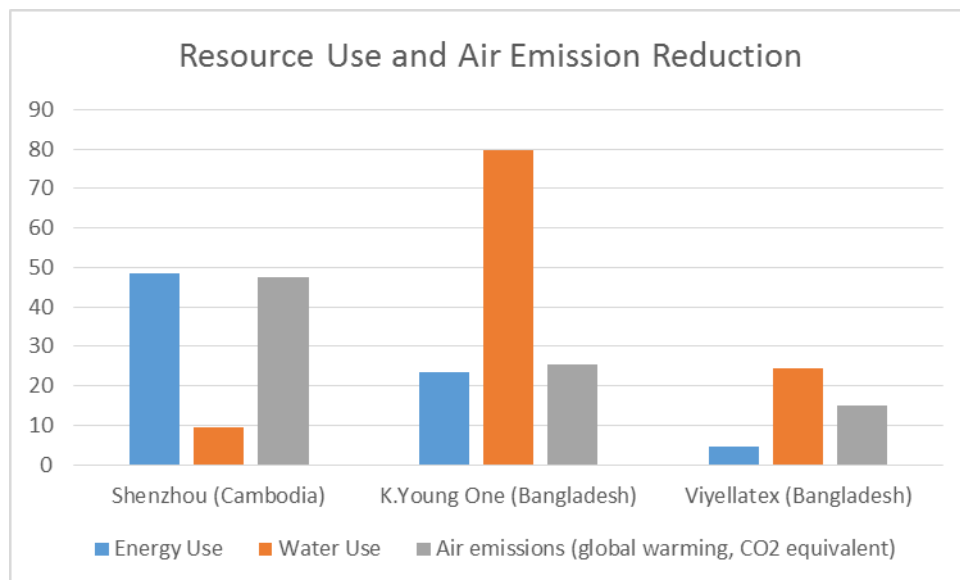
### Benefits

Most of factories concentrate on energy consumption reduction, material use which definitely makes good business sense. RECP also helps factories achieve the 2015 sustainability targets defined by PUMA. After 6 month implementation, Shenzhou in Cambodia has significant reduction in energy use by more than 48%, and relatively CO<sub>2</sub> emission decreased by 47.6%. Karnaphuli Young One and Viyellatex also achieve 23.5% and 4.4% in energy consumption. Thus they reduce 25.3% and 15% CO<sub>2</sub> emission respectively.

Absolute Indicator	Reduction (%) 6 months			Relative Indicator	Change (%) 6 months
	Shenzhou (Cambodia)	K.Young One (Bangladesh)	Viyellatex (Bangladesh)		
<b>Resource Use</b>				<b>Resource Productivity</b>	
Energy Use	48.6	23.5	4.4	Energy Productivity	N/A
Materials Use	N/A	N/A	N/A	Materials Productivity	N/A
Water Use	9.5	79.8	24.3	Water Productivity	N/A
<b>Pollution Generated</b>				<b>Pollution Intensity</b>	
Air emissions (global warming, CO <sub>2</sub> equivalent)	47.6	25.3	15	Carbon Intensity	N/A
Waste-water	N/A	N/A	N/A	Waste-water Intensity	N/A
Waste	N/A	N/A	20	Waste Intensity	N/A
<b>Production Output</b>	N/A	N/A	N/A		

**Note:** The *absolute indicators* provide a measurement of how much resource use/pollution output has changed in absolute terms e.g. units of energy used or tons of waste generated. A negative percentage indicates a decrease and a positive percentage indicates an increase. The *relative indicators* provide a measurement of changes in resource use/pollution in relation to production output. *Resource productivity* provides a measurement of how much product output can be produced per unit of resource use, from a sustainability perspective, productivity should increase. *Pollution intensity* provides a measurement of how much pollution is generated per unit of production output, from a sustainability perspective, intensity should decrease.

## RECP Profile



**Note:** The RECP profile provides a visual overview of resource productivity and pollution intensity shown as change in % compared to the baseline values. Environmental performance is improved when resource productivity increases and when pollution intensity decreases.

## Resource Efficient and Cleaner Production (RECP)

**Resource Efficient and Cleaner Production (RECP)** entails the continuous application of preventive environmental strategies to processes, products and services to increase efficiency and reduce risks to humans and the environment.

RECP addresses three sustainability dimensions individually and synergistically:

- *Production efficiency*

- > Through improved productive use of natural resources by enterprises

- *Environmental management*

- > Through minimization of the impact on nature by enterprises

- *Human development*

- > Through reduction of risks to people and communities from enterprises and supporting their development



## Success Areas

The results were achieved through the implementation of the following measures:

- Replacing modified wood log boiler with new rice husk one (2TPH)
- Harvesting rain water for toilets flushing
- Utilizing natural light for storage and sewing area without reducing the lux standard
- Controlling the furnace's efficiency and improving coal quality
- Preparing and replacing steam trap in steam distribution system
- Recovered the steam condensate
- Switched off unnecessary lights during day time
- Reduce spillage and develop efficient chemical management
- Repairing water leaks and educate staff to turn off after use
- Repairing compressed air leakages, and improving steam pipe and valve insulation
- Boiler feed tank insulation to avoid heat loss

	Principal Options Implemented	Benefits			
		Economic		Resource Use	Pollution generated
		Investment [USD]	Cost Saving [USD/yr]	Reductions in energy use, water use and/or materials use (per annum)	Reductions in waste water, air emissions and/or waste generation (per annum)
Shenzhou Ltd (Cambodia)	Replacing wood log boiler with new rice husk one (2TPH)	US\$ 260,000	US\$ 64,000	Reduction of wood log consumption by 280,840 MJ	901 tons (CO <sub>2</sub> emission) reduced
	Harvesting rain water for toilets (2 tanks of 6,000 litres each)	US\$ 2,000	US\$ 658	Reduction of water usage by 1,316.5 m <sup>3</sup>	1,316.5 m <sup>3</sup> water reduced
Karnaphuli Yound One Shoes Ltd (Bangladesh)	Controlling the efficiency of the furnace and improving coal quality	US\$ 2,000	US\$ 48,900	Reduction of coal consumption by 300 ton	843.6 tons (CO <sub>2</sub> emission) reduced
Viyellatex Ltd (Bangladesh)	Repairing and replacing steam traps in steam distribution system	US\$ 630	US\$ 7,097	Reduction of natural gas consumption by 108,019 Nm <sup>3</sup>	232.2 ton (CO <sub>2</sub> emission) reduced

## Approach taken

The methodology used were to assess the data found in the Enablon that the factory was reporting on an annual basis to PUMA. As agreed, baseline data of 2011 as the indicative reference for comparison of 2012 and current 2013 reports, at the time of the assessment. A desk study will help identify significant energy/water usage and waste generation area before onsite assessment. Walk-throughs were rolled out to visually check and observe each process. Output of onsite assessment is report which presenting saving opportunities from low-hanging fruit to significant investment technologies. This approach allows factories to select the opportunities which align with their business strategy and PUMA Sustainability Target.

## Business case

Even though initially most of factories focus on energy efficiency such as boiler, furnace, and steam system; other indirect benefits has been obtained in safety issues, using environmental friendly material which allow factories to achieve savings from downtime, legal compliance on environmental pollution

<b>Testimony Box</b>
<b>Shenzhou (Cambodia)</b>
<b>Contact Details</b>
<b>English Abstract (where applicable)</b>
N/A

## ABOUT RECP EXPERIENCES

Through the joint Resource Efficient and Cleaner Production (RECP) Programme, the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Programme (UNEP) cooperate to improve the resource productivity and environmental performance of businesses and other organizations in developing and transition countries. The Programme is implemented in partnership with the Global Network for Resource Efficient and Cleaner Production (RECPnet). This series of enterprise success stories documents the resource productivity, environmental and other benefits achieved by enterprises in developing and transition countries through the implementation of RECP methods and practices.

These successes were achieved with the assistance of the National Cleaner Production Centres, which are part of RECPnet established with support of the UNIDO and UNEP. The success stories employ the indicator set described in *Enterprise Level Indicators for Resource Productivity and Pollution Intensity*, UNIDO/UNEP, 2010. The primer with accompanying calculator tool and further case studies are available at [www.recenet.org](http://www.recenet.org), as well as on [www.unido.org/cp](http://www.unido.org/cp) and [www.unep.fr/scp/cp](http://www.unep.fr/scp/cp).