

RECP Experiences at RECIGROUP-Honduras

The efficient and environmentally sound use of materials, energy and water - coupled with the minimization of waste and emissions - makes good business sense. Resource Efficient and Cleaner Production (RECP) is a way to achieve this in a holistic and systematic manner. RECP covers the application of preventive management strategies that increase the productive use of natural resources, minimize generation of waste and emissions, and foster safe and responsible production. Benefits are eminent in many enterprises, regardless of sector, location or size, as demonstrated by the experiences of RECIGROUP.

Achievements at a Glance



Overview

RECIGROUP is a company with 150 employees; the main process is recycling polyethylene and polypropylene plastics for industrial use. They produce products for different companies in Honduras and exported to Central American, United States, Mexico and Asian Countries.

Among the weaknesses that were found in the company they are:

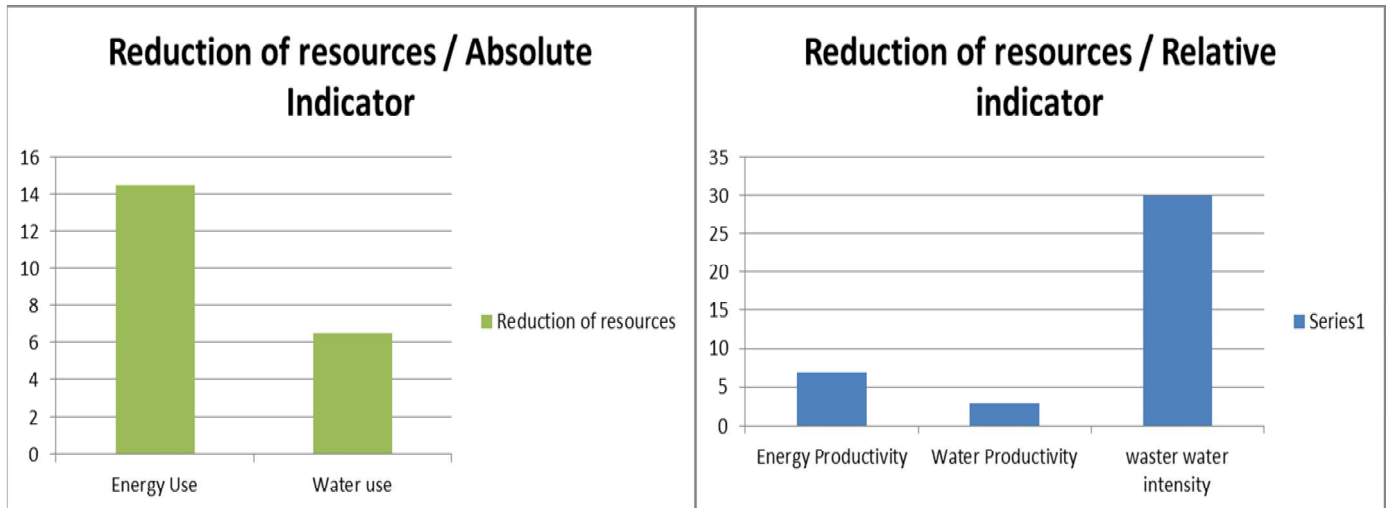
- High energy consumption in the process
- High generation of waste water

Benefits

- Increase the efficiency in the company RECIGROUP.

Absolute Indicator	Change (%) Year 1	Change (%) Year 2	Relative Indicator	Change (%) Year 1	Change (%) Year 2
Resource Use			Resource Productivity		
Energy Use	14.5		Energy Productivity	8.2	
Materials Use	N/a		Materials Productivity	N/a	
Water Use	7.2		Water Productivity	4.5	
Pollution Generated			Pollution Intensity		
Air emissions (global warming, CO ₂ equivalent)	10.8 Ton per year		Carbon Intensity	8 %	
Waste-water	N/a		Waste-water Intensity	30%	
Waste	N/a		Waste Intensity	N/a	
Production Output					

RECP Profile



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 company implemented the following options:

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)
Replacing the lighting system with LED technology at both plants.	\$ 17000.00	\$ 5500.00 / yr.	14.5 %	10.8 Ton
Replacing three-ton air conditioning technology SEER 16	\$ 2000.00	\$ 1600.00 / yr.		
Replacement engine for high-efficiency equipment	\$ 5000.00	\$ 4000.00 / yr.		

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)
Implementation of a water recirculation system	\$ 3500.00	\$ 1500.00 / yr.	7.2%	6,000 m ³ / year

Approach taken

The principal approach was:

- Reduce the consumption of energy.
- Reduce the generation of waste water.
- reduce the consumption of water

Business case

As initial diagnostic stage, we worked on the identification and damping of the main environmental aspects related to the operation of the company:

- Energy efficiency: after an inspection in engines, compressors and air conditioners, they could identify potential energy saving measures; these measures consisted of replacing lighting system with LED technology at both plants, replace air conditioning equipment and replacing engine for high-efficiency equipment
- Water efficiency: after analyzing recommend measures to optimize water use by implementing a system of water recirculation.

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English Abstract (where applicable)

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 Centers, 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.recpnet.org, as well as on www.unido.org/cp and www.unep.fr/scp/cp.