



**TOGETHER**  
*for a sustainable future*

## OCCASION

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## RECP Experiences at Stefani & Co

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 **Stefani & Co**, of the largest manufacturers and distributors of beer and non-alcoholic drinks in Albania.

### Achievements at a Glance

The Resource Efficient and Cleaner Production (RECP) project in **Stefani & Co**. RECP implementation in the **Stefani & Co** led to annual savings of EUR 20,900 by investing EUR 86,800 and payback time of 4 year.

The RECP environmental protection measures undertaken in the brewery were focused on emission control and reduction. Pollution reduction was achieved by focusing on a better and more efficient use of the inputs (energy, water, and raw materials). Therefore, process optimization was a main focus of the RECP analysis. An energy conservation strategy was implemented addressing the brewery's electrical, thermal and fuel consumption. Part of this strategy included good housekeeping measures and several investment requiring measures.



Before flow control valves: Uneven filling at PET line



After flow control valves: Equal filling at PET line

### Overview

Stefani & Co. is one of the largest manufacturers and distributors of beer and non-alcoholic drinks in Albania, producing "Birra Stela"; one of the most recognized local beer brands in the country. The company has a strong distribution network covering the entire Albanian territory with all distribution activities carried out in-house. Having a total labor force of 130 employees and a modern production and packaging plant, the brewery has a capacity of producing over 110,000 hl of beer annually.

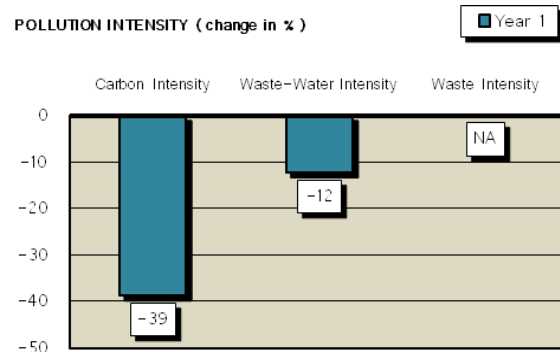
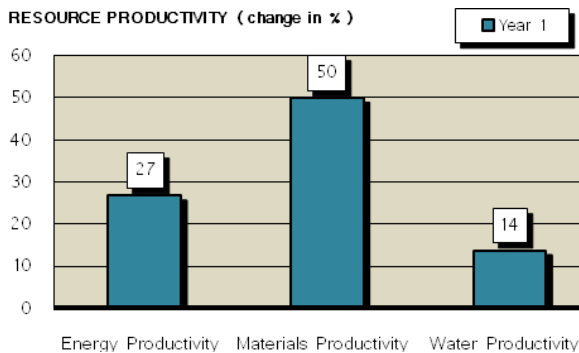
### Benefits

The Resource Efficient and Cleaner Production (RECP) Programme at Stefani & Co started in 2010; however the brewery is led by a very environmentally oriented top management team that has continuously been looking for ways to reduce their footprint on the environment. Notwithstanding, RECP presented a more detailed and structured way for the management to reflect their environmental concerns while reducing their costs.

Absolute Indicator	Change (%) Year 1	Relative Indicator	Change (%) Year 1
<b>Resource Use</b>		<b>Resource Productivity</b>	
Energy Use	7	Energy Productivity	12
Materials Use	0	Materials Productivity	20
Water Use	19	Water Productivity	1
<b>Pollution Generated</b>		<b>Pollution Intensity</b>	
Air emissions (global warming, CO <sub>2</sub> eq)	-18	Carbon Intensity	-31
Waste-water	8	Waste-water Intensity	-10
Waste	15	Waste Intensity	-4
<b>Production Output</b>	20		

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### 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 results were achieved through the implementation of the main following measures:

- Replacement of old equipment, lighting
- Installed computerized controllers
- Better packaging and labeling methods

Principal Options Implemented	Benefits			
	Economic		Resource Use	Pollution generated
	Investment [EUR]	Cost Saving [EUR/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)
OPTION 1. Replacement of old equipment, use of economy lights, timers and thermostats, installment of computerized controllers	86,800	20,900	Reduction in energy use: 261,700 kWh	Reduction in air emissions: 160 tons of CO <sub>2</sub>
OPTION 2. Avoiding leaks and steam traps, increased insulation on heating and cooling pipes				
OPTION 3. Preventative maintenance for steam pipes; Vapor recovery				
OPTION 1. CO <sub>2</sub> (heat) capture from fermentation tanks for water warming				
OPTION 4. Installment low-flow nozzles, flow control valves, equipment sprays	NA	NA	Reduction in water use: 6,300 m <sup>3</sup>	Reduction in waste water discharge: 2000 m <sup>3</sup>
OPTION 5. Use low-volume/high-pressure washers and compressed air				
OPTION 6. Reducing Kieselguhr use and selecting better quality malt	NA	NA	Increased use of recyclable packaging material. Better packaging procedures leading to reduced use of glue	Reduction in solid waste: 140 tons
OPTION 7. Optimizing brew house procedures Using centrifuge to remove yeast				
OPTION 8. Substituting glass bottles with recyclable PET ones				
OPTION 9. Using waterproof labels to reduce the use of glue				

## Approach Taken

Water conservation has been in the forefront of items of concern especially because the brewery used up to 10 liters of water in order to produce just 1 liter of beer. Thanks to the Programme the brewery is starting to experience reductions in this respect and with continual improvements they are aiming to achieve the best international practices of using no more than 5 liters of water/liter beer as outlined by the RECP analysis. Moreover, there are plans to continue implementing energy conservation measures in the future based on a variety of already identified RECP opportunities.

## ***Business Case***

Stefani & Co. has over the years invested significantly into brewery improvements and now has a modern plant with technological advancement at the level of that noted in Western breweries. „Stefani and Co“ was the first brewery in the country to implement the quality systems ISO 9001-2000, HACCP and the first company in the country that implemented ISO 14001 : 2000. It is now involved in a new project for implementing Cleaner Production and Resource Consumption in Albania. Stefani and Co initiated the RECP Programme with the objective of not only providing in-house benefits but also to further develop a specific pollution prevention strategy for Albanian breweries. Therefore the management is fully dedicated to continue the Programme and achieve further successes through producing a cleaner product.

## **Testimony Box**

### **National Cleaner Production Programme in Albania**

Officially launched in 2010, the National Cleaner Production Programme in Albania, is established under the guidance of NCPP Steering Committee with membership of national government counterparts, UNRC, UNIDO, and UNEP. The NCCP is hosted by ECAT Tirana (Environmental Centre for Administration and Technology) established in 1995 by EU/DG Environment, German and Albanian Government to serve as an advisory body for the Ministry of Environment. ECAT has a sound experience of country-specific and capacity building projects related to energy, technical assistance, pollution, waste and healthcare waste, institutional assessment and policies.

The NCCP in Albania has a double fold purpose: to upscale RECP through plant demonstrations and industry outreach activities, and to mainstream RECP policy instruments into country's relevant legislation.

A total of 36 companies of food, beverage, quarry and tourism benefited from practical solutions identified for cost effective reduction of energy, water consumption, waste, effluents and emissions.

A pool of 35 trainee experts coming mainly from academia and industry, have been trained and about 20 trainings have been held. In addition, UNIDO and UNEP supported the NCCP to develop into a national RECP focal point, through contribution to national workshops and conferences, industry and policy consultations (about 17 in total), as well as in development of policy instrument package to promote RECP in Albania as RECP Mainstreaming Strategy; Primer for Albanian SMEs; Sector Specific Guidelines and Success Stories

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## ***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.recplnet.org](http://www.recplnet.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)



