

RECP Experiences at Bentoproduct Ltd.

The efficient and environmentally sound use of materials, energy and water - coupled with the minimization of waste and emissions - makes good business sense. Using Resource Efficient and Cleaner Production (RECP) this can be achieved in a holistic and systematic manner. RECP applies preventive management strategies to improve natural resources productivity, minimize generation of waste and emissions, and foster safe and responsible production. As experiences of Bentoproduct Ltd. Bosnia and Herzegovina show, benefits are obvious in many enterprises, regardless of their line of business, location or size.

Achievements at a Glance

The company Bentoproduct has a poor dedusting system and significant loss of product during charging. Selected RECP measures focus on material recovery and energy efficient lighting. The Resource Efficient and Cleaner Production (RECP) project in company Bento Product will achieve annual savings of EUR 109,707 with investment of EUR 109,619 and payback time of 1 year.



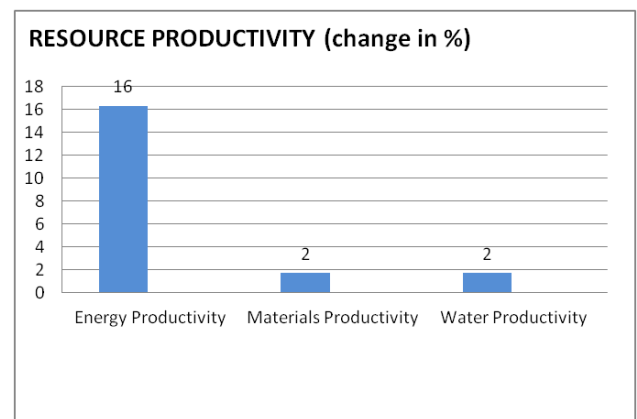
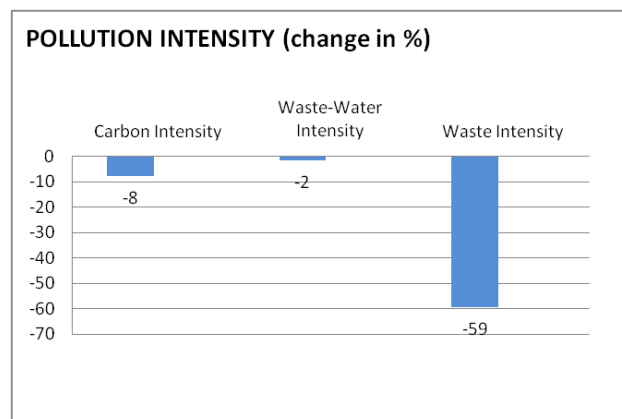
Overview

Bentoproduct Ltd. was founded in 2007 and it presently has 340 employees. The company manufactures calcium and sodium bentonite. The installed capacity enables the production of about 50,000 tons of various products of exceptional quality. The production plant is designed based on current scientific knowledge about the optimal technical and technological solutions for bentonite processing. The company has implemented ISO 14001: 2004.

Benefits

Absolute Indicator	Change (%)	Relative Indicator	Change (%)
Resource Use		Resource Productivity	
Energy Use	-13	Energy Productivity	16
Materials Use	-	Materials Productivity	2
Water Use	-	Water Productivity	2
Pollution generated		Pollution Intensity	
Air Emissions (global warming, CO2 eq.)	-6	Carbon Intensity	-8
Waste-Water	-	Waste-Water Intensity	-2
Waste	-59	Waste Intensity	-59
Product Output	2		

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

RECP measures	Benefits				
	Economic			Resources	Waste flow
	Investment EURO	Savings (EURO/year)	Pay back period		
Construction of a prefabricated building for storage of raw material	76,693.8	37,324.3	2 y	Reductions in energy use, water use and/or materials use (per annum) LPG 48,525.75 kg	Reductions in waste water, air emissions and/or waste generation (per annum) CO ₂ 162t
Installation of central dedusting and dust recovery	32,925.5	72,383.6	5,5 month	Bentonite 363 t	Dust 363 t
Preventing losses during charging of products in tanks	511.3	1615.7	4 months	Bentonite 8,1 t	Waste product 8,1t
Replacement of high pressure mercury vapor lamps in the production plant with high-pressure sodium lamps	5,887.4	2,396.2	1 year and 6 months	Electric energy 27,376 kWh	CO ₂ 11,2 t



RECP Experiences



Approach taken

The Company participated in the National Cleaner Production Program in Bosnia and Herzegovina as one of the ten selected companies. The RECP assessment was performed by the company team and national experts trained in RECP methodology. The RECP assessment was supervised by international experts. The purpose of assessments made at the beginning of the project was to prepare a material balance, an energy balance and balances of water consumption and wastewater. After consultation with expert teams the company management decided that improvement of workplace safety by installation of dedusting system was a priority. The raw material is exposed to atmosphere thus with increased content of moisture. By construction of a prefabricated building for storage of raw material the company will reduce LPG consumption by 48525,75 kg/y.

Testimony Box

National Cleaner Production Program in Bosnia and Herzegovina

The program is designed to foster expertise, service delivery capacity and implementation of RECP practices and policies in the country, building on UNIDO's experience in supporting National Cleaner Production Programmes (NCPPs) and Centres (NCPCs), in collaboration with UNEP, under the global joint RECP Programme. The program that was officially launched in 2015, contributes to improve the resource efficiency and environmental performances of businesses and other organizations in Bosnia and Herzegovina. With the application of a systematic RECP approach, the project aims at providing:

- Training to national experts on UNIDO's RECP methodology
- Assessment services to companies
- Information dissemination and awareness raising

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