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RECP Implementation Experiences of Uzbekistan, at Etikod Mebel Ltd

The efficient and environmentally sound use of materials, energy - 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 and energy resources, minimize generation of waste, and foster safe and responsible production.

Achievements at a Glance

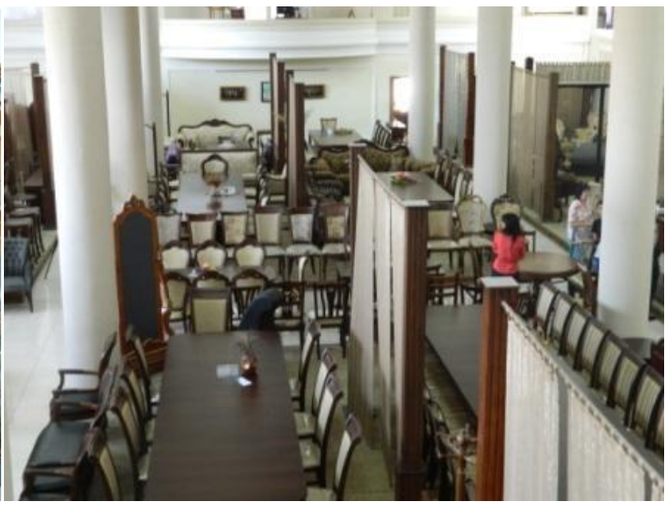
Center of Expertise and Cleaner Production is Unitary Enterprise under CCI Uzbekistan. Center implemented RECP approaches for small & medium enterprises in Uzbekistan as part of the GIZ project “Lean Production” and within other commercial projects.

This achievement is a reflection of activities in one of the 5 enterprises. **Etikod mebel Ltd** has demonstrated that taking care of materials, energy and waste makes good business sense. RECP covers the application of preventive management strategies that increase the productive use of natural, energy and human resources, minimize generation of waste.

Overview

Etikod mebel Ltd is a medium scale furniture producing enterprise located in Tashkent, Uzbekistan. It produces unit-based exclusive furniture from tree (walnut) in small lots. The company has 150 workers and generates a yearly turnover of around USD 1 200,000.

The Centre has made an agreement with **Etikod mebel Ltd** on a commercial basis for 4000 USD with implementation period from January to April 2015.



Benefits

The RECP project was mainly focused on minimizing the waste by cutting down the material use without affecting the quality and quantity of the production. By undergoing this project Enterprise was able to understand the specific requirement of material, energy, and other resources necessary for production.

It has to be kept in mind that implementation of large-scale events with Centre's recommendation has just started and that tangible results will only be available by the end of 2015.

With this, preliminary economic research has showed that economy effect will be 40 000 – 50 000 USD per year from the implementation of the proposals advised by the Centre.

Before Set temperature reduction

After set temperature reduction

2 open holes in the boiler room, January 2015

Storage wood waste. Each day approximately around 5 cubic meters.

Technological wood waste.

Plywood process waste

Absolute Indicator	Planned results (%) Year 1	Relative Indicator	Change (%) Year 1
Resource Use		**Resource**	
Energy Use	-15-20.0	Energy Productivity	-15-20.0
Materials Use	-20-30.0	Materials Productivity	-20-30.0
Humane (Time)Use	-20-25.0	Humane Productivity	-20-25.0

Note: The absolute indicators provide a measurement of how much resource use 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.

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:

- Personnel training on RECP methods and instruments;;
- Improving production processes with the purpose of reducing losses;
- Regular monitoring and maintaining of processes to improve the productivity;
- Adapting technological process;
- Changing furniture details;
- Replacement of the entrance documents;
- Temperature changes when heating the wood.

Table 2: Options implemented

Principal Options Implemented	Benefits-40 000-50 000 USD			
	Economic		Resource Use	Pollution generated
	Investment [USD]	Cost Saving [USD/yr will be defined in the end of 2015	Reductions in energy use, and materials use (per annum)	Reductions in waste, air emissions and/or waste generation (per annum)
Improving production processes with purpose of reducing losses	0		Reductions in energy use, and materials use	Reductions waste, air emissions and waste generation
Improving the efficiency of the boilers	0		Reductions in energy use	Reductions air emissions
Implementing a complete effluent and waste treatment management plan	0		Reductions in energy use, and materials use	Reductions waste, and waste generation
Changing technology of drying wood in a large drying room	0		Electricity and heat consumption reduced	Reductions air emissions and waste generation
The introduction of air into the mixing chamber small drying system for Pump камере system for Pump	0		Electricity and heat consumption reduced	Reductions air emissions and waste generation
Modifications plywood chair seat	0		Reducing the consumption of materials, heat, electric. energy	Reductions air emissions and waste generation
Change of plywood chair seats production technology	0		Reducing the consumption of materials, heat, electric. energy	Reductions air emissions and waste generation
Regular monitoring and maintenance of equipment	0		Reducing the consumption of materials, heat, electric. energy	
The introduction of pre-drying wood by natural factors (wind, solar)	0		Reducing the consumption of materials, heat, electric. energy	Reductions air emissions and waste generation

Changing (simplification) design chairs, commonality of parts of chairs	0		Reducing the consumption of materials, heat, electric. energy	**Reductions air emissions and waste generation**
Good housekeeping	0		Reducing the consumption of materials, heat, electric. energy	**Reductions air emissions and waste generation**

Approach taken

A complete process study was conducted by the project team for deriving the key indicators for the process. Subsequently these indicators were used to calculate the specific material, energy, human and other necessary resource required for production. The specific indicators showed us the critical areas were the resource use can be minimized without affecting the quality and quantity of production and thereby increasing the profitability of the company.

Business case

Although the RECP project was mainly focused on reduction of resource and energy use, but also decreases pollution to the environment, which benefits the surrounding community and builds the credibility of the industry.

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 Project is implemented in partnership with the Global Network for Resource Efficient and Cleaner Production (RECP*net*). 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 RECP*net* 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.