



The RECP methodology

Resource Efficient and Cleaner Production (RECP) is the integrated and continuous application of preventive environmental strategies to **processes, products, and services** to increase efficiency and reduce risks to humans and the environment. RECP is all about producing with fewer resources while minimizing environmental impacts and increasing overall productivity. For **Small and Medium-Sized Enterprises (SMEs)**, the RECP methodology is an effective means to lower production costs whilst improving the SMEs' competitive advantage and applying environmentally friendly practices. RECP is also an effective tool to introduce and promote Circular Economy principles among SMEs.

"CHATEAU MUKUZANI" LTD - WINE PRODUCTION



Company overview

Location: Gurjaani municipality, Velistsikhe village

Key products: wine

No. of employees: 35

Main markets: Georgia

Founding year: 2014



"Chateau Mukuzani" is a mid-sized enterprise that uses modern technological equipment to produce various types of premium wines, yielding an annual output of 2,000 to 3,000 tonnes of grapes and 7,500 litres of wine. Despite the difficulties caused by the pandemic, in 2020, it increased production and purchased additional equipment, adding spirits to the production (using approximately 60 tonnes of fruits per year). As a result, the company started using natural gas for the first time and increased its workforce to 35 employees. Motivated to address the costs related to removing waste (which is stored on a nearby open field or donated to local farmers as fertilizer) and high annual energy costs, the company participated in the RECP Demonstration Project under EU4Environment (2019-2024). This publication shows the company's experience reported after the monitoring exercise.

BENEFITS FROM IMPLEMENTING RECP OPTIONS

1

Implementation of 1 RECP option (focused on solid waste and energy efficiency)

2

Short payback period (less than half of a year)

3

Neutralized annual costs for solid waste removal

4

Reduction of annual energy costs

Action implemented by:

The project's approach

The RECP assessment examined the production site and identified several RECP options, out of which the following was prioritized, having a short payback period of only three months:

RECP Option 1. Substitution of natural gas with biomass waste: The measure mainly consists of using the generated waste in the form of biomass as the main source of energy (instead of natural gas). Biomass can be stored, dried, and afterwards used as biofuel. Therefore, it is necessary to also modify the existing steam boiler (working on natural gas) and make it ready for the use of biomass. This measure will result in a decrease of annual energy costs, as well as a reduction of solid waste.

SAVING ACHIEVEMENTS

RECP measure

OPTION 1

Substitution of natural gas with biomass waste

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	114,000	350,000	0.3

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)	WASTE (TONNES/YR)
Total:	208	1,848

Resource savings

RECP OPTIONS	NG (KWH/YR)
Option 1:	1,029,000

“ The company was looking for means to reduce energy consumption and the generation of waste. Thanks to the UNIDO RECP Demonstration Project, the company now plans to improve production, increase awareness of staff and improve waste management in order to decrease annual energy costs and minimize organic waste and CO₂ emissions. Insofar, the RECP project has inspired staff to be open to new ideas and approaches regarding the implementation of RECP measures in future, said the company manager, Mr. Zaza Dolmazashvili. ”

The introduction of RECP has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **Chateau Mukuzani** joined the RECP training and assistance programme to be monitored under EU4Environment. Follow-up visits have also been conducted to check on the implementation of the recommended RECP options. EU4Environment helps the EU's Eastern Partnership countries preserve their natural capital and increase people's environmental well-being by supporting environment-related action, demonstrating and unlocking opportunities for greener growth, and setting mechanisms to better manage environmental risks and impacts. For more details, visit: www.eu4environment.org

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