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Advancing resource efficient and cleaner production in Moldova

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 can effectively 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.

"ARAMA R" LTD - FURNITURE PRODUCTION



Company overview



Location: Chişinău

Key products: kitchen, upholstered, wooden furniture

No. of employees: 140

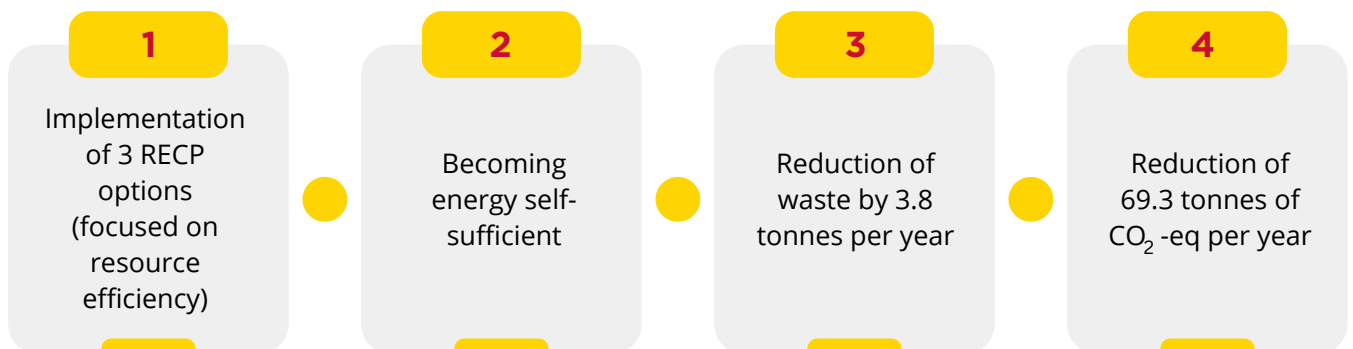
Main markets: Moldova, Europe

Exportation quota (%): 20-40

Founding year: 1995

"ARAMA R" is a furniture producer, well-known for its strong reputation both within national and international markets. In 2016, the company was fully renovated and equipped with high-end machines and equipment. It specialises in the production of durable, elegant, and high-quality furniture made of natural wood. Furthermore, the company is engaged in the production of commercial and office equipment, based on request (gallantry, storefronts, counters, office tables, office cabinets, and so on). It also offers additional services to its customers, namely delivery, installation, and consultation services with its designers. Motivated to embrace renewable source of energy and lower its environmental impact, the company participated in the RECP Demonstration Project under EU4Environment (2019-2024). This publication shows the its experience reported after the monitoring exercise conducted in 2022-2023.

BENEFITS FROM IMPLEMENTING RECP OPTIONS



Action implemented by:



The project's approach

The RECP assessment examined the production site and identified several RECP options, out of which the following three were prioritised by the company. The suggested RECP recommendations require a payback period of less than five years:

RECP Option 1. Installing photovoltaic (PV) solar panels: This measure consists of installing PV panels with a nominal power of 200 kW in order to cover the energy needs of the company, simultaneously helping it become energy-independent and significantly reducing electricity costs.

RECP Option 2. Installing a variable speed drive (VSD) on the ventilation plant's fans: Consisting of the installation of a variable SFD on the fans, this measure would significantly increase electricity savings by changing the speed of the fans simultaneously with the change of the load.

RECP Option 3. Installing a wood gasifier: This measure consists of installing a wood gasifier, operating on the principle of wood pyrolysis, in order to develop a uniform gas for consecutive clean combustion. It would reduce the waste generated from the production processes and significantly increase the heat efficiency.

SAVING ACHIEVEMENTS

Main RECP actions

OPTION 1	Installing PV solar panels
OPTION 2	Installing a SFD on the ventilation plant's fan
OPTION 3	Installing a wood gasifier

Economic key figures

RECP OPTIONS	INVESTMENT (MDL)	SAVINGS (MDL/YR)	PAYBACK PERIOD (YR)
Option 1:	4,400,000	1,026,000	5
Option 2:	32,000	8,208	4.9
Option 3:	310,400	55,663	/

Resource savings

RECP OPTIONS	ELECTRICITY (KWH/YR)/%	FUEL (KG/YR)/%
Option 1:	250,000/83.7	/
Option 2:	2,000/0.7	/
Option 3:	/	3,823/9

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (T/YR)	WASTE (T/YR)
Total:	69.3	3,823

“ Our company joined the project to reduce its impact on the environment, especially by switching towards renewable source of energy. Thanks to the RECP Demonstration Project, we learned that there is a need for conducting a systematic analysis of the efficiency in both our production and energy systems. As we plan to continue making our business even more green and become energy-independent, the RECP Project has inspired us to come up with new ideas and approaches regarding implementation of RECP measures in the near future, said the owner, Mr. Igor Aramă. ”

The introduction of RECP has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **ARAMA R** joined the RECP Demonstration Project 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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United Nations Industrial Development Organization
Ms. Tatiana Chernyavskaya
EU4Environment Project Manager
Tel: +43 1 26 0 26 5520
E-mail: t.chernyavskaya@unido.org



Organisation for Entrepreneurship Development
Bulevardul Ștefan cel Mare și Sfânt 134
Chișinău, Republica Moldova
Tel: +373 22 295 741
E-mail: info@oda.md