



Funded by the European Union



Advancing resource efficient and cleaner production in Armenia

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.

"UNIGROUP" LLC - PLASTIC PRODUCTION

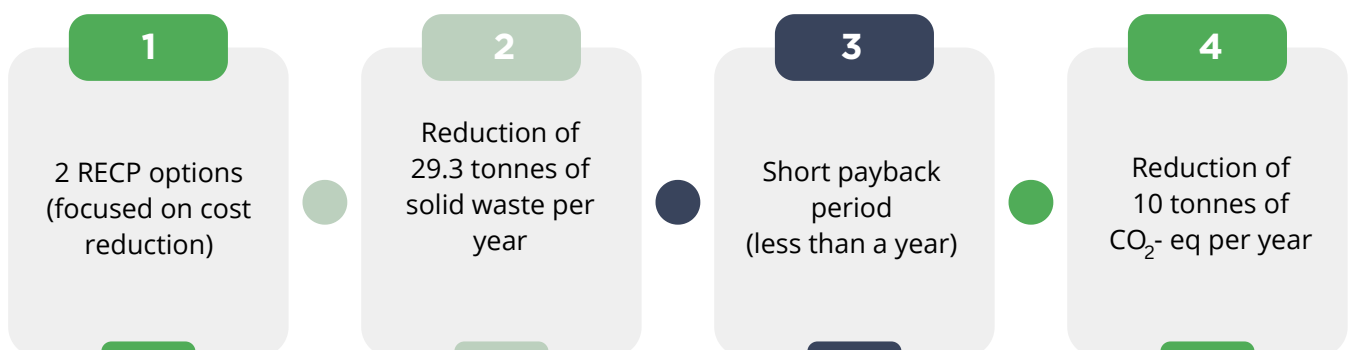


Company overview

Location: Agarak
Key products: bottle caps, plastic bottles, adhesive tape, polyvinyl chloride (PVC) films, boxes
No. of employees: 40
Main markets: Armenia
Founding year: 2015

"Unigroup" is a manufacturer of various plastic products. Established in 2015, the company comprises 40 workers (25 men and 15 women). It spreads across 1.25 hectares, and makes the quality of its products a top priority. The production of plastics is based on two methods, blowing and extrusion, and a part of the enterprise's total sales is based on a closed market trade. Here, the supply is sold to other companies under the current owner, in order to satisfy their needs for various plastic products. The enterprise is interested in acquiring new technologies, in improving its operational system, reducing emissions and pollutants, and setting forth a better management of plastic waste. Future plans include the expansion to new markets, and an overall increase in sales. Motivated to invest in cost reduction and improve product quality, the company participated in the RECP Demonstration Project under EU4Environment (2019-2024). This publication shows the company's experience reported after the monitoring exercise conducted in 2022-2023.

BENEFITS



Action implemented by:



The project's approach

The RECP assessment examined the production site and identified several RECP options, out of which the following two were prioritized by the company. These include medium and low-cost measures:

RECP Option 1. Applying an anti-adhesive covering on the shafts: This measure would provide protection for the equipment. By eliminating the sticky surfaces from the shafts and cylinders, the speed of materials passing through the equipment can significantly increase. Hence, equipment productivity would increase while costs would decrease. Moreover, instead of an old and inefficient way to ensure anti-adhesive protection (paints and varnishes), the carbon additives are a better coating option for the equipment to form an anti-adhesive layer.

RECP Option 2. Production of synthetic fiber (sintepon): This measure would increase the efficiency of the inputs during the production of plastic products, significantly reducing the generated waste. Furthermore, sintepon could be further sold to furniture manufacturing companies on the market.

SAVING ACHIEVEMENTS

Main RECP actions

OPTION 1	Applying an anti-adhesive covering on the shafts
OPTION 2	Production of synthetic fiber (sintepon)

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	1,200	12,564	0.1
Option 2:	4,850	23,437.5	0.21

Resource savings

RECP OPTIONS	ELECTRICITY (KWH/YR)/%
Option 1:	20,600/4
Option 2:	/

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)	WASTE (TONNES/YR)
Total:	10	29.3

“ Our company wanted to address the low efficiency of producing adhesive tape, and check the breakdown of the equipment due to the inefficient removal of the adhesive. Thanks to the RECP Demonstration Project, we learned how to rationally use the resources available at hand, and, as a result, increase resource efficiency. As we plan to increase sales and continue optimizing the production processes, the RECP project has inspired us to come up with new ideas regarding the future implementation of RECP measures, said a member of staff. ”

The introduction of RECP has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **Unigroup** 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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