

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 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.

"SIS ALP" LTD - DAIRY PRODUCTION

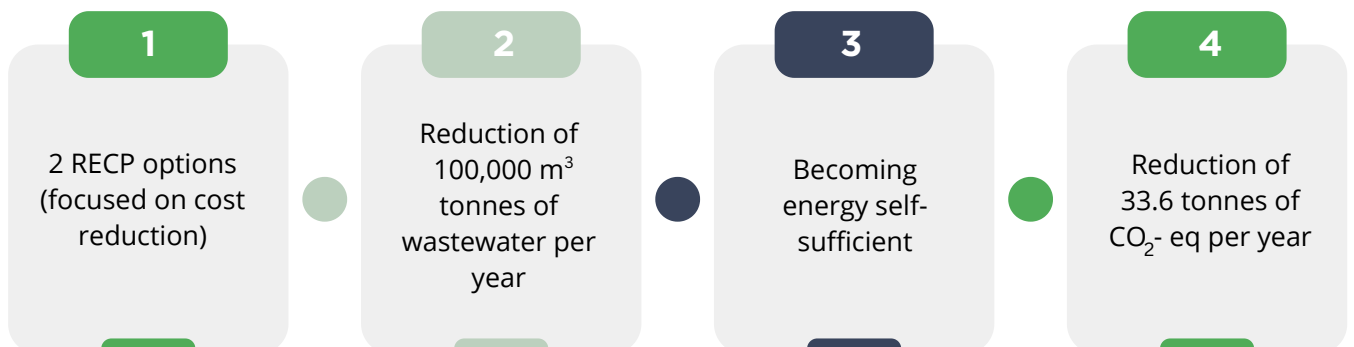
Company overview



Location: Sisian
Key products: dairy products
No. of employees: 11-18
Main markets: Armenia, Russia
Exportation quota (%): 25
Founding year: 2007
Certifications: ISO 22000/HACCP (in progress)

"Sis Alp" was established by its current executive director Husik Stepanyan in 2007, on the premise of the previously state-owned factory "Sisian Kat". The executive director also provided the space needed for the production area and infrastructure. The company specialises in the production of six types of dairy (cheese, bottled milk, kefir, matsun, butter, and curd), and 33 sub-categories, with the potential to further expand its goods to fruit milkshakes, protein powder, and animal food from residuals. The main challenge the enterprise is facing is the excess wastewater and residuals from cheese production, which are not properly stored or recycled. Motivated to address the waste issue and improve its production, 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 prioritised by the enterprise. These include medium-cost measures:

RECP Option 1. Installing photovoltaic (PV) solar panels: This measure would help the company end its dependence on natural gas, electricity from the grid, and diesel fuel used during the pasteurisation and refrigeration processes, and enable it to become energy self-sufficient.

RECP Option 2. Purchasing an AAFBR-5 wastewater treatment plant: This measure would provide a multi-staged treatment of wastewater. Currently, wastewater only undergoes a mechanical treatment in the precipitation basin, and is then directly discharged into the environment. Hence, the measure would reduce the negative impact of the company's wastewater on the environment.

SAVING ACHIEVEMENTS

Main RECP actions

OPTION 1

Installing PV solar panels

OPTION 2

Purchasing an AAFBR-5 wastewater treatment plant

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	40,000	35,500*	/
Option 2:	17,000	2000	/

*These consist of diesel fuel savings worth 21,000 EUR, natural gas savings of 11,000 EUR, and electricity savings of 3,500 EUR

Resource savings

RECP OPTIONS	MATERIALS (TONNES/YR)	WATER (M ³ /YR)	ELECTRICITY (KWH/YR)	FUEL(M ³ /YR)
Option 1:	25.7**	/	95	100
Option 2:	/	100,000	/	/

** 8 tonnes account for natural gas and 17.7 tonnes account for diesel fuel

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)	WASTEWATER (UNITS/YR)
Total:	33.6	100,000

“ Our company was struggling with high energy costs and wastewater management issues. Thanks to the RECP Demonstration Project, we learned how to take advantage of the sources of renewable energy and gain energy independence, thus, eliminating the costs for diesel fuel, natural gas, and electricity from the grid. As our company plans to invest in new ways to use waste serum from the current production and develop new products, the RECP project has inspired us to come up with new ideas regarding the future implementation of RECP measures, said the director, Mr. Husik Stepanyan. ”

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