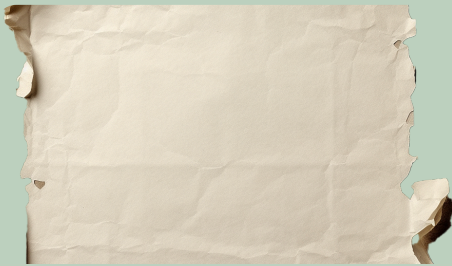


Advancing resource efficient and cleaner production in Armenia

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.

GOHAR HARUTYUNYAN PE - "TOO2P" - PAPER RECYCLING



Company overview

Location: Shirak marz, Gyumri
Key products: recycled paper, recycled game gadgets
No. of employees: 3
Main markets: Armenia, Liechtenstein
Founding year: 2020

Gohar Harutyunyan PE, better known to consumers as **"TOO2P"**, started its activities in 2020 as a waste processing organisation. Initially, the company primarily produced decorative paper that was mechanically recycled from over three types of waste. The paper's composition mainly included organic, vegetable, and paper waste. These paper products were mainly used for individual items such as invitations, postcards, notebooks, and bookmarks. In 2022, thanks to improvements in mechanical paper recycling technology, the company began producing recycled paper for printing (primarily used for certificates, diplomas, certificates of appreciation, and contracts). Motivated to address production costs and improve energy efficiency, the company participated in the RECP Green Clubs project under EU4Environment (2019-2024). This publication details the company's experience reported after the assessment exercise conducted in 2024.

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 four were prioritised by the company. These include medium and low-cost measures:

RECP option 1: Expanding the production area: To expand the company's activities and simultaneously improve the working conditions of the employees, this measure would help utilise the free space available in the attic.

RECP option 2: Installing photovoltaic (PV) solar panels: With a capacity of 2.5 kWp, the PV panels would sufficiently cover the facility's own needs, including the additional electricity demand of the expanded area (the expanded roof loft). The annual generation of electricity from the PV system would be of around 3.8 MWh.

RECP option 3: Using organic waste for fertilisers: Once the production of recycled paper goods is completed, up to 20% of the raw materials and waste remain unusable. This residual waste could be used as a fertiliser, with the cost of fertiliser being estimated at about 15,000 AMD (approximately 36 EUR) per 1 tonne.

RECP option 4: Repurposing wastewater for irrigation: If implemented, the recycling technology would allow for 80% of the water to be reused for irrigation purposes. Overall, a total of 2,200 liters of wastewater could be utilised for irrigation, annually.

SAVING ACHIEVEMENTS

Main RECP actions

OPTION 1	Expanding the production area
OPTION 2	Installing photovoltaic (PV) solar panels
OPTION 3	Using organic waste for fertilisers
OPTION 4	Repurposing wastewater for irrigation

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	1,000	-	-
Option 2:	1,875	402	4.7
Option 3:	-	7.1	-
Option 4:	-	0.5	-

Resource savings

RECP OPTIONS	WATER (M ³ /YR)	ENERGY (KWH/YR)
Option 1:	-	-
Option 2:	-	3,750
Option 3:	-	-
Option 4:	2.2	-

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)	GENERAL WASTE (T/YR)
Total:	1.6	0.198

“ In addition to our daily work, in 2023, we introduced a new product to the market, the “TOOP recycling” game-app. Prior to this, we also developed the concept of an “eco-hero”, aimed at teaching people to recycle paper waste. The core aim of the Armenian eco-heroes is to integrate a cultural and educational aspect into recycling by instilling eco-conscious knowledge and responsibility among children and young people, said Ms. Lilit Makaryan, Gohar Harutyunyan PE – “TOO2P”. ”

The introduction of the RECP GREEN Clubs has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, “TOO2P” PE joined the Clubs 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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