

European projects promoting circular economy and sustainable development in Varna region, Bulgaria

by PHD Mihail Ivanov | Department of Industrial Management, Technical University of Varna

INTRODUCTION

The circular economy is a model aimed at extending the life cycle of products. In practice, this means sharing, borrowing, reusing, repairing and recycling existing materials and products as long as possible. When a product reaches the end of its life, the materials from which it is composed can continue to be used in other ways. This can be done over and over again and thus minimizes waste disposal. The concept of a circular economy is built in opposition to the traditional linear model where raw materials are used, things are created from them, they are consumed and the leftovers are thrown away.

This model relies on large quantities of cheap and accessible materials and energy sources.

The circular economy also contributes to reducing greenhouse gas emissions. Figures from the European Environment Agency show that industrial processes and product use are responsible for 9.1% of greenhouse gas emissions in the EU, and 3.3% of emissions are related to waste management.

In February 2021, the European Parliament approved its position on the new circular economy plan, calling for additional measures to achieve environmental sustainability and carbon neutrality by 2050. Recommendations include tougher recycling requirements and binding targets for material use and reduction of the impact of consumption on the environment by 2030.

SUCCESSFUL PRACTICES IN VARNA REGION

The company "ECOINVEST ASSETS" AD was established in 2007 with the main activity: "Design, construction and operation of a plant for the processing of household waste, including the provision of services for its processing and management of waste activities". Through the implementation of the project "Energy efficiency and sustainable management of household waste" financed by the EU with a budget of 1,242,000 euros, the company completed the construction of a new installation for the disposal of solid household waste with a capacity of 450 t/day. In 2014 under a self-financed project, an installation for the production of RDF (fuel from waste) was added to the plant, which solves the problem of

residual waste going to a landfill. The RDF shredding line has a maximum capacity of 224 t/day or 82,000 t/year. It is located in three rooms - a reception hall with buried conveyors and a preliminary shredder, a main hall for shredding and separation and a hall for storing the finished RDF product.

In the period 2022-2023 municipality of Valchi dol successfully implemented the project "Clean, separated and ecological in the municipality of Valchi dol" financed by the operational program "Environment" worth 163,000 euros. The project implemented a new technology for collecting and using treated household waste that is generated on the territory of Valchi dol municipality.

On the one hand, the project activities aim at preventing the generation of household waste, preparing it for reuse and recycling. Composters were purchased to be provided to the population for composting organic household waste. A transport vehicle with the necessary equipment was purchased for the removal of the finished compost. A broad explanatory and informational campaign was also carried out under the project with the aim of raising awareness and public self-awareness for compliance with the principles of household waste management and their reuse.

Projects for the closure and reclamation of municipal landfills for household waste in the territory of the municipalities of Byala, Devnya, Suvorovo and Vetrino were also implemented with European funds under the operational program „Environment”, with a total project value of more than 3,670,000 euros.

At the moment in Bulgaria, the procedure "Measures for construction, expansion and/or upgrading of municipal/regional systems for separate collection and recycling of biodegradable waste" with a total budget of 168,000,000 euros is open for project applications, where specific beneficiaries have been determined the municipalities of Provadia, Avren, Vetrino, Valchi dol, Devnya, Dolni Chiflik, Dulgopol, Suvorovo, Byala, and the indicative budget for them is over 10,000,000 euros.