

Technologies for the recovery of urban wastewater treatment sludge and municipal waste

The project funded by the Sectoral Program of MCI aimed to establishing viable and applicable solutions at national level for the recycling and recovery of waste that require final disposal, as well as recovery solutions for sludge from municipal wastewater treatment plants, which are currently stored on their existing platforms.



- **Partners**

P1 – University POLITEHNICA of Bucharest (UPB)

P2 – CEPROCIM SA

P3 – National Institute Of Research-Development For Machines And Installations
Designed To Agriculture And Food Industry – INMA

P4 – Institute for Research and Design for Machine building – ICTCM SA

- **Project Coordinators**

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Deputy Coordinator: Ecol. MĂRCUȘ Iuliana, Scientific Researcher III

Financial Coordinator: Ec. BOBOC Mădălina, Scientific Researcher

- **Period**

09.11.2017 – 10.12.2018

- **Financed via**

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Objectives

- Non-compliant landfills characterization and mapping; identifying waste recycling methods in order to avoid their disposal;
- Urban wastewater treatment plants mapping; identifying the types of resulted sewage sludge and the annual quantities to be recovered;
- Establishing solutions for increasing the technical and qualitative level of waste recycling and recovery technologies;
- Encouraging the private sector and promoting the access of SMEs to the results of R&D and innovation activities in order to increase the capacity to assimilate in production the research results carried out within the project;
- Increasing the applicative research competitiveness and capitalizing their results in the economic sector of municipal waste management field;
- Solving the problems related to non-compliant landfill non-conformities by the superior valorization of the waste and sludge from the urban wastewater treatment plants

Results

- Database of non-compliant landfills
- Database of urban wastewater treatment plants
- 11 maps with the representation of non-compliant landfills based on the following criteria: closure period, closure stage, rehabilitation stage, disposal by development regions
- 3 maps with the representation of urban wastewater treatment plants based on the following criteria: questionnaire information, information reported to the European Environment Agency, classification according to the quantities of the generated sewage sludge

- Waste treatment/ recovery technologies: 1 technology for CRT (WEEE) recycling in mortars, 1 Non-ferrous metal smelting technology using microwave energy, 1 Glass waste recycling technology in cellular glass using energy microwaves by indirect heating; 1 Technology for PET bottles valorization by obtaining organic polyols; Technological solutions for sewage sludge valorisation
- 1 ecological reconstruction technology of landfills with Miscanthus crops tested in demonstration mode
- 5 SWOT analyzes on municipal waste treatment/recovery technologies and sewage sludge treatment/valorisation technologies
- Study on national legislation harmonization with EU legislation in order to improve the recovery of sewage sludge and municipal waste technologies
- 4 dissemination conferences of the project results: Bacau, Tulcea, Cluj-Napoca, Bucharest