

ecoval

PROJECT LEADER

CETAQUA
CENTRO TECNOLÓGICO DEL AGUA

PARTNERS

USC
UNIVERSIDAD DE SANTIAGO DE COMPOSTELA

BioGroup
Group of Environmental Biotechnology

CRETUS

nereus⁺
sustainable recycling systems

FEUGA
FUNDACIÓN EMPRESA-UNIVERSIDAD GALLEGA

Porto.
Porto
Ambiente

ÁGUAS DO
TEJO ATLÂNTICO
Grupo Águas de Portugal

PARQUE TECNOLÓGICO
DE VALLADOLID

Junta de
Castilla y León

INSA
TOULOUSE

tbi
Toulouse Biotechnology Institute
Bio & Chemical Engineering

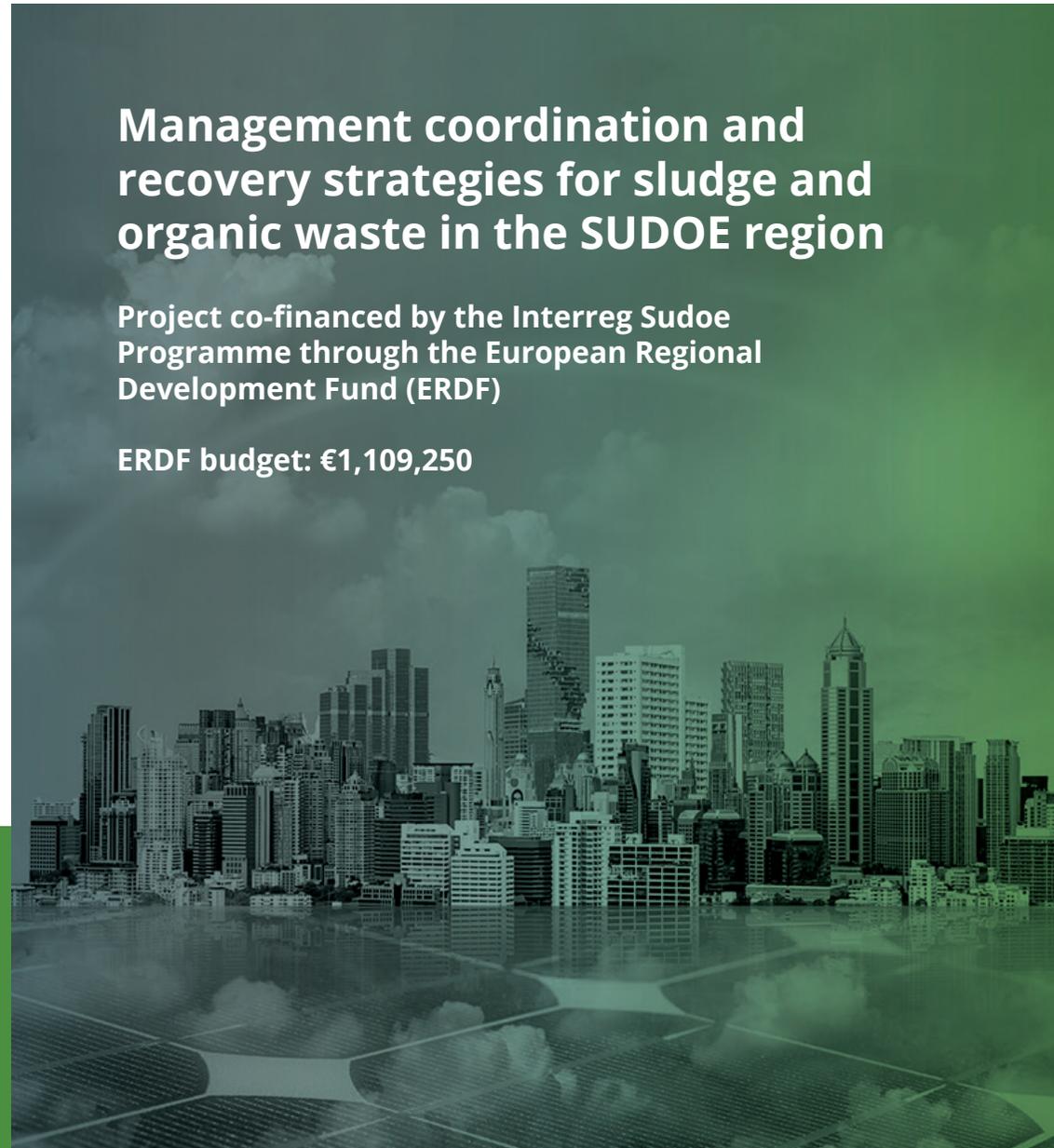
Interreg
Sudoe
ecoval



Management coordination and recovery strategies for sludge and organic waste in the SUDOE region

Project co-financed by the Interreg Sudoe Programme through the European Regional Development Fund (ERDF)

ERDF budget: €1,109,250



www.ecoval-sudoe.eu



ECOVAL proposes a new approach for the **management of urban organic waste** that has a lower environmental impact and promotes the circular economy, thanks to the conversion of waste into resources.

« The project will promote the biofactory model, replicable throughout the European Union, to **obtain bio-products with high added value from sewage sludge and urban bio-waste.** »

ECOVAL will develop the complete value chain from the collection of waste to the marketing of the end product, through the development of innovative biotechnological processes that allow volatile fatty acids to be obtained from sludge and urban organic waste.



To meet the objectives set, a series of activities will be carried out from 2020 to 2023.

- GT1** Study of the current sludge and urban bio-waste management systems: barriers and opportunities for their recovery in the SUDOE space.
- GT2** Optimisation of the production of volatile fatty acids from urban sludge on a pilot scale.
- GT3** Optimisation of the production of volatile fatty acids from urban bio-waste on a pilot scale.
- GT4** Adaptation of the end products to market needs.
- GT5** Comprehensive urban organic waste management model and measurement of its social and legal impact.
- GT6** Replicability and transfer of the business model and its environmental and economic assessment.

In the Sudoe region each individual generates **136 kg of organic waste** per year.

Thus, the generation of **11 million tonnes of organic waste per year is achieved**, 9 of which are food scraps.

In the case of sewage sludge, the figure for this waste reaches **1 million and 300 thousand tonnes** per year.

How is this waste managed?

65% of this organic waste is incinerated or deposited in a landfill, due to a low implementation of selective collection.

In the case of sewage sludge, its main final destination is agricultural use (56%), after the conversion of organic matter into biogas and the application of digestate as fertiliser. The remaining percentages are incinerated (24%) or sent to landfill (10%).



What does ECOVAL propose?

A change in urban waste management systems, to integrate separation at source and replace the current linear consumption model with a circular one, through the recovery of sludge and organic waste thanks to the development of innovative technologies that are more economically and environmentally sustainable.

The urban organic waste and sludge generated during the wastewater treatment are a potential source of organic carbon that can be transformed into bio-products with high added value, such as volatile fatty acids (VFAs).

To do this, **ECOVAL** will demonstrate techniques and tools to control the anaerobic process, which are based on inhibiting the last stage of the anaerobic digestion process to obtain biogas, thus promoting the fermentation process of acidogenesis.

