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The **LIFE-W2B** Project: **“Sustainable Transformation of Waste to Biomethane, through Innovative Upgraded Anaerobic Digestion and Gasification”**, with the acronym **LIFE24-CCM-EL-LIFE-W2B** and project number: **101213273**, is funded by the **LIFE funding program**, based on the call **LIFE-2024-SAP-CLIMA** and topic: **LIFE-2024-SAP-CLIMA-CCM**.

Granting authority is the **European Climate, Infrastructure and Environment Executive Agency (Grant managed through EU Funding & Tenders Portal)**.

Project Manager HMU: Prof. Thrassyvoulos Manios (<https://agro.hmu.gr/en/academic-staff/manios-thrassyvoulos-professor/>)

Project duration: 48 months

Start date: 01.09.2025

End date: 31.08.2029

Project Description

The main aim of the LIFE-W2B project is to demonstrate in one complete and of considerable size facility, the combination of SD, AD and GF (including biochar production and addition to AD), as a complete and adequate valorization method of organic waste of various origins and characteristics, into the production of fuel gases, that of biogas and syngas, which in turn will be upgraded into biomethane through state of the art biological processes units. This will enable a synergistic mitigation of each technology's limitations, while maximizing their potential, by leading to the production of high added value biomethane and rich in nutrients biochar, that can really have an overall positive environmental foot print and secure economic viability.

This will be achieved through a pilot / demonstration facility, managing up to 1,000 t of waste / year and which will be operated continuously for a period of at least 24 months, in a constant effort to optimise operation, collect as many data as possible that will allow to evaluate its overall efficiency (environmental and economic, see next objective), demonstrate beyond doubt the commercial potential of the process and facilitate the transition to a fully commercial unit or the utilisation of components in existing facilities.

On the overall, the preliminary CO₂ balance for the W2B process is -5.5 tCO₂/y (without considering the avoided CO₂ obtained diverting waste from landfilling). Thus LIFE-W2B (at a capacity of 1,070 t/y of waste) becomes a sink of 5 t CO₂-eq/y or about 5 kg CO₂-eq per t of biowaste, while conventional processes have positive impact. Assuming that an average car emits 2 tCO₂/y, W2B can eliminate the equivalent of almost 3 cars per year, which become more than 1,500, if the landfill diversion is also taken into account.

The Project Partners

1. 'the coordinator': ENVIROPLAN MELETITIKI -SYMVOULOI ANAPTYKSIKON & TEXNIKON ERGON ANONYMI ETAIREIA (ENV)
2. ELLINIKO MESOGEIAKO PANEPISTIMIO (HMU)
3. UNIVERSIDAD DE VALLADOLID (UVa)



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4. UNIVERSITA DEGLI STUDI NICCOLO CUSANO TELEMATICA ROMA (UNC)

5. DEPA COMMERCIAL SMSA (DEPA)

Total eligible costs: 4,315,907 € (HMU: 599,628 €)

Max grant amount: 2,589,544 € (60% funding rate)

website: www.LIFE-W2B.eu

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