

Twinn4MicroUp

Plastics pervade many industries, with production soaring from 1.5 Mt in 1950 to 359 Mt in 2019, and virgin plastics reaching 8,000 Mt in 2020. The result? A surge in plastic waste and environmental threats, with 20 Mt entering aquatic ecosystems annually—dubbed the "7th continent of plastic." Traditional waste management is failing, driving the need for sustainable solutions.

Twinn4MicroUp leads with an innovative approach, transforming plastic monomers, derived from green plastic depolymerization technologies, into high-value biomaterials and bioactive compounds via Synthetic Microbial Biotechnology. This project aims to build an EU value chain, converting single-use and hard-to-recycle plastics into next-generation bioactive compounds and biomaterials, ensuring high environmental and economic value.

