Multiwaste

UC 4 - Italy

- Wastewater treatment sludge
- Agro-industrial residues
- Digestate and fish-farm sludge
- Volcanic ash
- Availability, characterisation and seasonality study

Process

- Composting and stabilisation
- Multi-matrix blending
- Industrial symbiosis approach
- Product validation

Outputs

- Circular fertilising products
- Nutrient-rich soil amendments
- Recovery of organic matter and nutrients

LANDFEED

Mixed Waste Streams to Circular Fertilising Products

The Italian Use Case addresses the challenge of managing diverse organic and inorganic waste streams that are often costly to dispose of and difficult to treat separately. Through an industrial symbiosis approach, wastewater treatment sludge, agro-industrial residues, digestate, fish-farm sludge and volcanic ash are stabilised through composting and combined using multi-matrix blending techniques. Rather than treating each waste stream individually, the process creates balanced circular fertilising products that can be used in agriculture and soil improvement. The approach promotes nutrient recovery and organic matter recycling, reduces disposal needs and environmental impacts, and supports more sustainable waste management practices while creating value for Mediterranean agriculture.

Circular Bio-based Europe Joint Undertaking

Bio-based Industries Consortium

Co-funded by the European Union