



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

WASTE MANAGEMENT

Moving towards a sustainable and integrated management of the waste cycle.

The research of the University of Bologna covers a wide range of issues:

Prevention

- Design of dedicated policy interventions and environmental impact assessment methodologies
- Production, stabilization and packaging of stable by-products/raw materials
- Implementation of industrial symbiosis practices and exchange of materials among different value chains - Food waste: Georeferenced mapping of industrial food by-products; Analysis of consumers and business behaviour; Awareness campaigns to sensitize the population

Re-use

- Development of a new generation of reliable, robust and cost-effective packaging materials
- Recommendation on legislation inducing companies to re-use components from end-of-life products

Recycling

- Pre-treatment plants for the removal of hazardous, rare earths and valuable components
- Development of urban systems and technologies for circular and regenerative cities
- Development of new plants, processes and technologies for the recycling of by-products and secondary raw materials from end-of-life products
- Application of LCA for the assessment of alternative recycling scenarios

Recovery

- Innovative waste to energy plants
- Chemicals and energy recovery from biomass

Disposal

- End of life landfills exploitation and mining

HIGHLIGHTS

The University of Bologna has established an extensive network of collaborations with multi-utilities, public authorities, SME and industries and it is member of the Emilia Romagna Region [Food Crossing District](#) that selects strategies and solutions for agri-food waste valorization and re-use.

The University participates in the **Italian Circular Economy Stakeholder Platform** and it is **partner of the EIT Raw Materials** and **EIT Climate-KIC**.

Over the years the University of Bologna has been involved in national and EU funded projects, among them: [RES URBIS](#) - Resources from urban bio-waste; [REFRESH](#) - Resource Efficient Food and dRink for the Entire Supply cHain; [NOAW](#) - Innovative approaches to turn agricultural waste into ecological and economic assets. [Bio-Based Industry JU: FIRST2RUN](#) - Flagship demonstration of an integrated biorefinery for dry crops sustainable exploitation towards; [Agrimax](#) - Developing and demonstrating the production of multiple, high-value products from crop and food-processing waste; **INSIGH, eCircular** **Flasghsip programme, Surplus mall** (EIT Climate-KIC).