



Novel enhanced bioplastics from sustainable processing of seaweed

Portfolio of Outputs and Commercialisation Needs



Project consortium includes 2 SMEs:



Outputs

Processing of cultivated brown algae



TRL 5

Production of biopolymer extracts with low costs and energy use, and utilisation of residual materials.

Bioplastic product manufacturing



TRL 4-6

Methods for casting films and producing thermoplastic pellets based on seaweed biopolymers and residual biomass.

Transparent flexible films



TRL 5-6

Fibre-enforced alginate-based films that are compostable and have mechanical properties that can be tuned through formulation and manufacturing method.

Thermoplastic composite materials



TRL 5

Composites of seaweed-based alginate and fiber fractions with biobased thermoplastic polymers, allowing manufacturing with conventional plastic processing equipment.

Commercialisation Needs

Technology transfer research

Market and consumer aspects

Engagement with large industry (biomass providers, technology providers, end users)

Increased incentives for biobased materials and/or restrictions on conventional plastics

Establishment of sustainable and economically feasible supply chains for raw materials

