

Integral valorisation of seaweed biomass for the development of sustainable, high nutritional quality food products

## CONTEXT

- While almost 100% of the seaweeds consumed in Asia are farmed, in Europe most of the seaweeds exploited for food are of wild origin.
- Some species are extensively used in the food industry to produce polysaccharides, however, their use as alternative sources of food proteins has been much less explored.

## AIM

Unlock the full potential of seaweeds for **food applications** (ingredients, food products and packaging materials) while increasing the **sustainability** of the whole value chain and bringing **added value** to seaweed species less exploited in the food industry

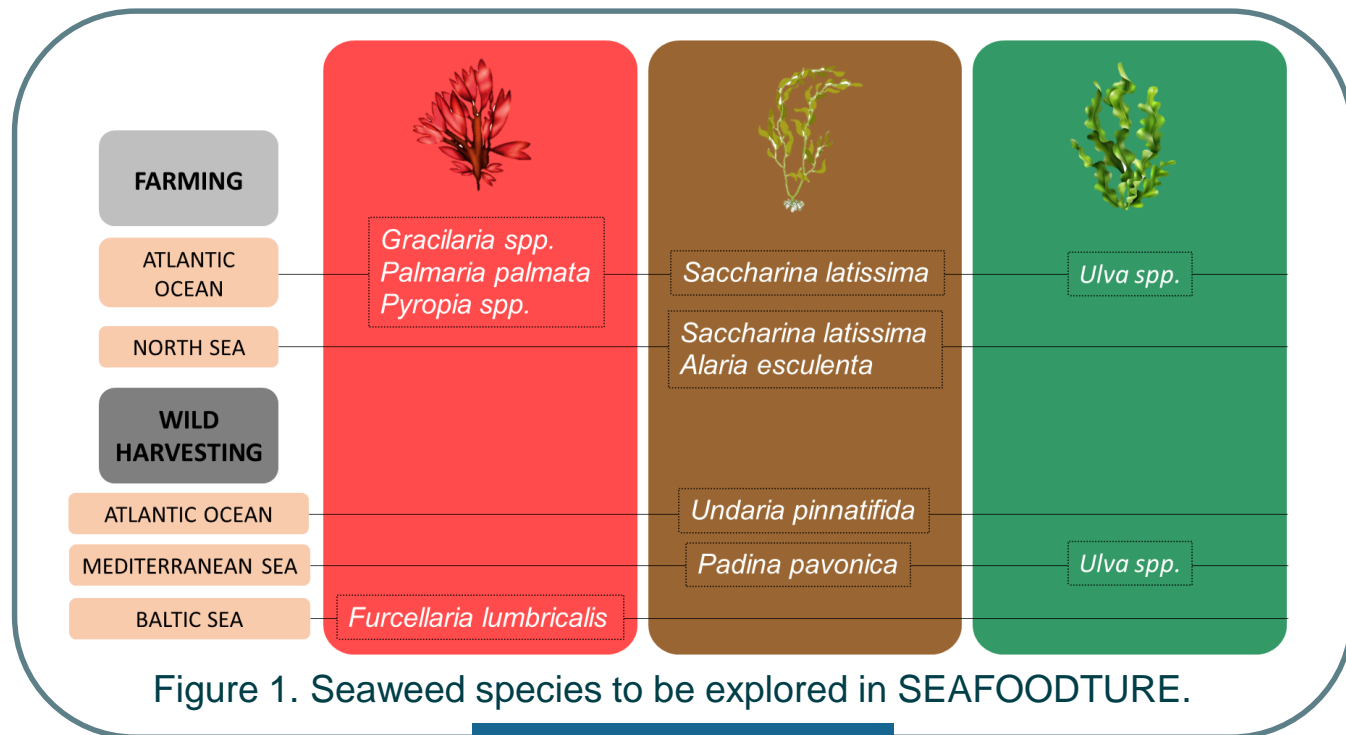


Figure 1. Seaweed species to be explored in SEAFOODTURE.

## SCIENTIFIC OBJECTIVES

- Sustainable and up-scalable cultivation.
- Composition and multi-scale structure of different seaweeds.
- Sustainable less refined protein-rich ingredients.
- Nutritional properties, digestibility and allergenicity.
- Organoleptic properties.
- Seaweed-based food prototypes.
- Bio-based packaging materials.
- Sustainability from a life-cycle perspective.
  - Promote the consumption of seaweed-based products.

## METHODOLOGY

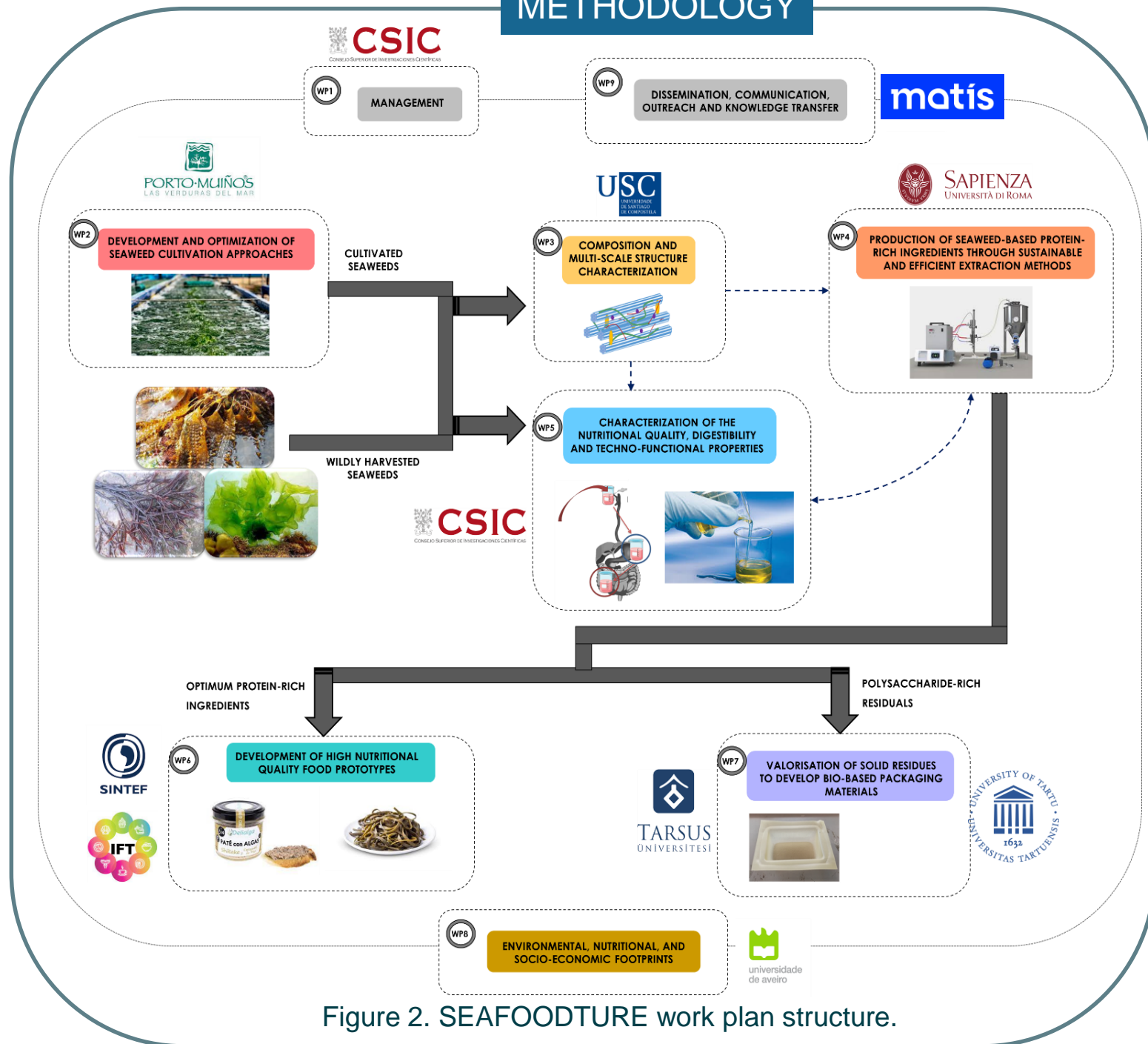


Figure 2. SEAFOODTURE work plan structure.

## IMPACT

- ✓ Climate change: Mitigate the environmental impact of the current food system and the massive use of conventional plastics.
- ✓ Health & nutrition: Promote the consumption of seaweeds as a protein rich food source, thus shifting dietary habits towards a more diversified protein supply.