



Alternative PROteins from Microbial fermentation of non-conventional SEA sources for Next-Generation food, feed, and non-food bio-based applications

Welcome to PROMISEANG

PROMISEANG is a 48-month project focused on developing **innovative alternative proteins from underexploited marine sources**, including marine invertebrates, macroalgae discards, and industrial biowastes. Using **advanced biomass fermentation techniques** (solid-state and submerged processes), the project aims to generate **new microbial protein biomass** suitable for food, feed, and non-food applications (biomedicine, pharma, and cosmetics).

The project will demonstrate a **technically and economically viable biorefinery for microbial-based protein production**, ensuring higher yields, shorter production periods, reduced environmental impacts, decreased imports, and lower production costs.

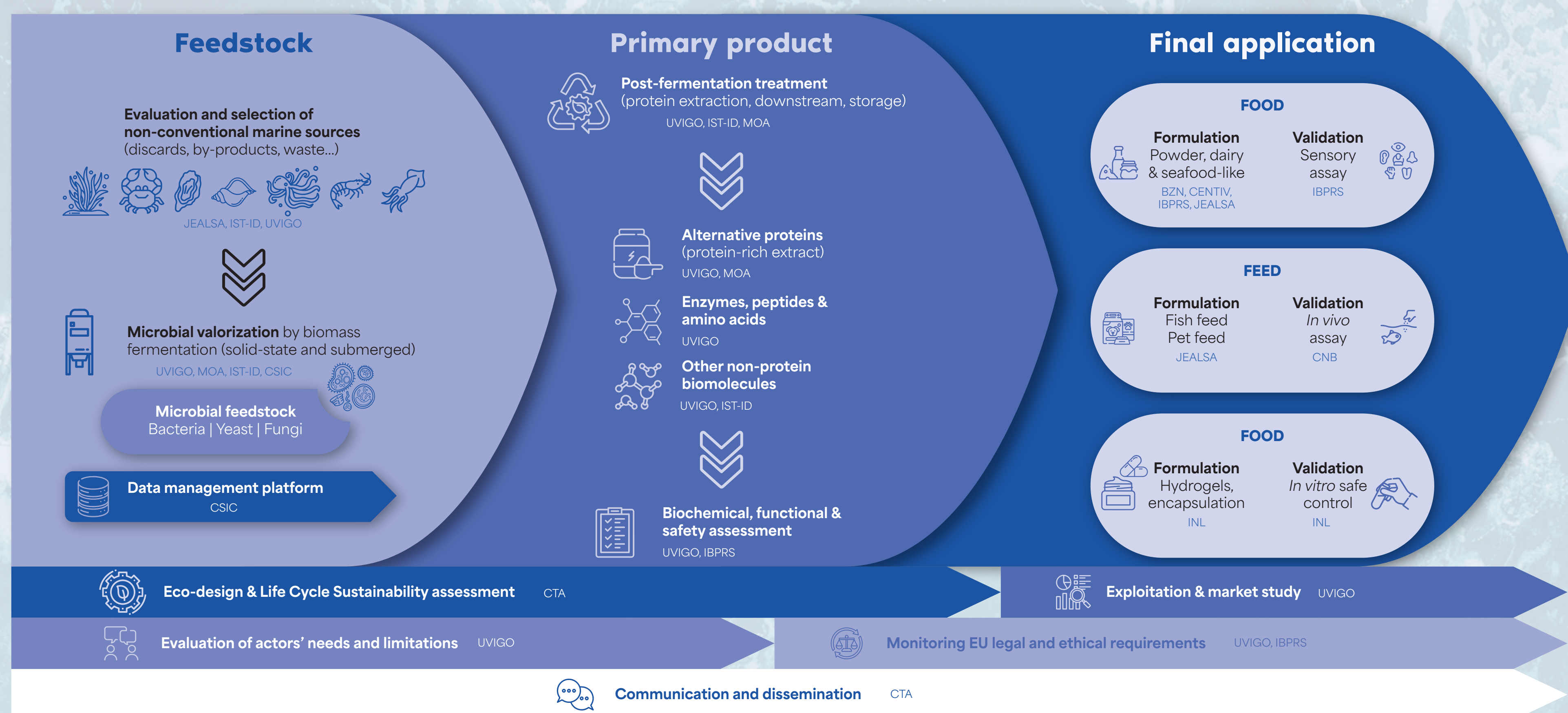
Collaboration for a greener Europe

PROMISEANG supports the **Circular Bio-based Europe Joint Undertaking (CBE JU)** with a translational, multidisciplinary, and multi-actor approach, fostering collaboration between industries and academia across the EU to achieve a greener bio-based Europe.

By adopting a zero-waste strategy, the project will also **recover and biosynthesize valuable non-protein bio-compounds** (e.g., polysaccharides, lipids, polyphenols, PHA) for diverse applications. Researching **novel protein streams** from sustainable sources will enhance protein availability in the EU and reduce dependency on imports.

Bridging academia and industry for Bio-Based innovation

The project encompasses the upcycling of marine food wastes (WP2), application of innovative and sustainable technologies (biotechnology, biochemistry, microbial fermentations, digital tools, and machine learning) (WP3), validation of the nutritious, safety, and bioactivities of protein products (WP4), valorization of fermentation side streams through nanotechnology (WP5), and the design, development and validation of food, feed and non-food products in relevant environments (WP6). Additionally, PROMISEANG aims to improve environmental, economic, and social aspects, and production-efficiency (WP7), supported by comprehensive and strong communication, dissemination, and exploitation plans (WP8).



Consortium



Funded by the European Union under **Grant Agreement 10112378**. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Innovation Council. Neither the European Union nor the granting authority can be held responsible for them.