

BIOZOOSTAIN

Sustainable utilization of zooplankton as by-products

About the project

The main objectives of BIOZOOSTAIN is to fully process valuable ingredients, such as astaxanthin, chitin, polyunsaturated omega-3 fatty acids, wax-esters and enzymes from marine zooplankton, such as *Calanus finmarchicus*, which are taken ashore and introduced as a side raw material or by-catch during pelagic fishing. The aim is to use these ingredients to develop new high quality products for the food supplement, cosmetic and nutra-/pharmaceutical markets in a sustainable and ethical way. Novel processing methods will be compared to traditional methods to obtain optimized processing lines for environmentally friendly and sustainable utilization of the zooplankton as bycatch and attain a zero waste goal in the process of pelagic fisheries. Novel high quality product prototypes for human consumption (foodfirst) from sustainable zooplankton will be developed within the project, based on their physicochemical, sensory, bioactivity and metabolomic/FoodOmic characteristics these prototypes may have on the human body upon consumption. The feasibility and environmental impact of the production of these prototypes will be assessed by life cycle assessment (LCA) and their market introduction will be prepared.

Prediction tools for identification of catching hot-spots and times for the pelagic species and their by-catch will be developed, as well as spectroscopic prediction tools for processing optimization. The innovation potential of the BIOZOOSTAIN project is both very high and ambitious, but also realistic based on the current knowledge and excellence of the project consortium.



Project Overview

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Priority Area:

Exploring new bioresources

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