

**BLUE**  **WAYSE**

blue ways to a sustainable Europe

**BLUEWAYSE PROJECT**



**BLUE WAYS TO A  
SUSTAINABLE EUROPE**

Photo: Nofima

# WHAT IS THE PROJECT ABOUT?

The project will develop high-quality proteins and bioactives from European aquaculture and fisheries side streams combined with microalgae systems for applications in nutritional supplements, innovative food, cosmetics, biomaterials, and animal feed, targeting a holistic food first zero-waste approach.

Photo: Nofima

Photo: a4f

## PROJECT OBJECTIVES

### BLUEWAYSE will develop of:

- practices with industrial applicability for marine residue processing for food first
- industrial protocol for microalgae cultivation using up-cycled nutrients from fish residue processing



Photo: Nofima

- biorefining process that produces valuable fractions of microalgae biomass
  - upgraded salmon feed formulation that integrates valuable fractions of microalgae biomass (antioxidants, omega-3 oils) and processed fish residues
  - healthy food products with integration of protein-rich microalgae biomass
- fish side stream and microalgae-based food supplement with bioactive properties against low-grade chronic inflammation, male infertility, and its long-term consequences



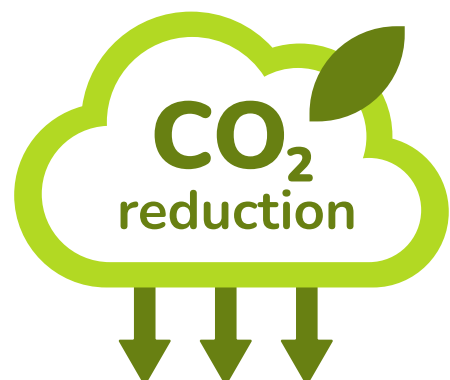
- safer sunscreen creams replacing synthetic preservatives and reducing UV-filters using microalgal extracts and sun protection factor boosters from fishbones, respectively
- biomaterials from fisheries biomass processing residues, such as bone minerals

### Also, to calculate...

- the environmental, societal, and economic risks and benefits & Inform, co-create, communicate, disseminate the public, and target stakeholders to open new markets, enable investments and enhance market acceptance and demand for BLUE food and feed.

## IMPACT

- Save up to 10.5 million tons CO<sub>2</sub> equivalents by using marine biomass for human food first
- Increase marine resource usage efficiency, reduce imports and pressure on marine biodiversity & deforestation
- Enable the knowledge-based BLUE change in food, feed, cosmetics, and material sectors including documentation for the consumers
- Inform; Educate; Change food choice attitudes; improve consumer health; increase the markets for BLUE ingredients; Increase food security.
- Reduce the environmental footprint of aquaculture; improve animal welfare; reduced use of chemicals.





# PROJECT COORDINATOR

Katerina Kousoulaki is a nutritionist, currently working as Senior research scientist at Nofima, dpt Nutrition and Feed Technology for the last 19 years (2007-2026). She has 29 years' research experience from the aquaculture industry, small and large research institutes. The topics of her recent research are within nutrition, aquaculture and animal and plant-based raw material development. Currently, she is the coordinator of a.o. the BLUEWAYSE project funded SBEP Cofund, as well as the recently concluded BBI JU Horizon 2020 funded project AQUABIOPRO-FIT that developed new marine circular feed ingredients and nutritional supplements. Among her special interests are downstream processing of microalgae biomass and other low trophic plant and animal species aiming at the development of new, responsible, and healthy food and feed ingredients and aquaculture products.

## FUNDED BY



Co-funded by  
the European Union



Sustainable Blue  
Economy Partnership



The Research  
Council of Norway



fct  
Fundação  
para a Ciência  
e a Tecnologia



FORMAS



AGENCIA  
ESTATAL DE  
INVESTIGACION



## PARTNERS



Nofima



a4f  
algae for future



algiskey  
ALGAE BASED SOLUTIONS



Consiglio Nazionale  
delle Ricerche



INSTITUTO  
SUPERIOR D  
AGRONOMIA  
Universidade de Lisboa



seagarden



UNIVERSITAT DE VALÈNCIA



LUND  
UNIVERSITY



UNIVERSITY OF CRETE

## CONTACT

Dr. Katerina Kousoulaki  
Nofima A.S.  
Kjerreidviken 16  
5141 Fyllingsdalen  
Norway  
mob. phone +47 47910710  
e-mail katerina.kousoulaki@nofima.no

[www.bluewayse.eu](http://www.bluewayse.eu)  
BLUEWAYSE| LinkedIn