

# Portfolio of Project Factsheets (Bivalves)

A Horizon 2020 funded project

**Full project title:** ERA-NET Cofund on Blue Bioeconomy - Unlocking the potential of aquatic bioresources (BlueBio)

**Website:** [www.bluebioeconomy.eu](http://www.bluebioeconomy.eu)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 817992

**Project start date:** 1 December 2018

**Duration:** 66 months





# Overview

These factsheets outline the outputs and commercialisation needs for the 36 BlueBio funded projects as of November 2023. This includes 17 projects from the cofunded call (🇪🇺), 9 projects from the 1st additional call (🇩🇪), and 7 from the 2nd additional call (🇩🇪).

Each factsheet contains the following information:

- Project Name
- Brief description/tagline
- Relevant Blue Invest sectoral opportunity icon (see next page for description)
- Website (if applicable)
- Country flags of industry partners in the consortium
- Outputs (including Technology Readiness Level (TRL), brief description, Intellectual Property Rights (if provided))
- Commercialisation Needs or Next Steps

More information on the projects available on [www.bluebioeconomy.eu](http://www.bluebioeconomy.eu)

# Blue Invest Sector Opportunities

## Aquaculture



Aquafeed



Equipment



Broodstock



Rearing/  
Harvesting



Disease battling  
& fish welfare

## Blue Biotechnology



Biofuels



Nutraceuticals



Cosmetics



Pharmaceuticals



Food & Feed



Waste Reduction



General

## Blue Biotechnology



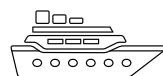
Fishery Services



Fishing Gear



Fishing



Ship Equipment



Advanced Materials using  
Biogenic Calcium Carbonate  
from Seashell Wastes

<https://site.unibo.it/caseawa/en>

# Portfolio of Outputs and Commercialisation Needs



Project consortium  
includes 1 company:



## Outputs

Biogenic CaCO<sub>3</sub> micro-  
& nano-particles



TRL 4/5

The grounded particles still  
preserve the compositional and  
texture features of the pristine  
seashells



Calcium phosphate  
biomaterials



TRL 3

Apatite micro-nano particles with  
osteogenic and luminescent properties  
obtained by innovative one-pot low  
temperature hydrothermal method.



Strengthened & conductive  
Levirex® compounds



TRL 4/5

Antistatic Levirex® sole shoes  
developed using conductive  
biogenic CaCO<sub>3</sub> particles.

Universität  
Konstanz



## Commercialisation Needs

Upscaling

Regulatory  
aspects for  
food by-  
products

Collection and  
storage chain  
of waste  
seashells

Industry  
Network  
(companies &  
services)



# Portfolio of Outputs and Commercialisation Needs

Sustainable utilisation of MARine resources to foster GREEN plant production in Europe

<http://www.marigreen-project.eu/>



Project consortium includes 3 SMEs & 2 Large Enterprises:



## Outputs

### Residue treatment methodologies



TRL 4

Treatments of fish, seaweed and mussel residues to obtain fertilisers/biostimulants.

### Organic fish farming sludge treatment methodology



TRL 4

Innovative treatment of RAS sludge from organic fish farming to obtain a composting material with a high carbon content.

### Fertilisers and Biostimulants



TRL 5

Developed using different treatment technologies (grinding, mixing, pelletising, composting, extraction, compost fermentation, biochar impregnation).

## Commercialisation Needs

**Upscaling production and equipment**

**Designing fertilisers/biostimulants targeted to market preferences**

**Linking raw material suppliers with processors/farmers**



Mussel mitigation  
feeds and supply  
system technological  
development

<https://bluebioeconomy.eu/mussel-mitigation-feeds-and-supply-system-technological-development/>



Project consortium  
includes 1 SME and  
3 large enterprises:



# Portfolio of Outputs and Commercialisation Needs

## Outputs

### Commercial mussel meal



TRL 5

Bioprocessing of waste material from mussel production, including optimisation of raw product and industrial-scale processing of meals.

### Waste stream byproducts



TRL 4

By-products generated from waste streams of mussel production and processing of mussel meals.

## Commercialisation Needs

Upscaling of raw  
product and  
processing lines

Raising  
Awareness

Informed  
regulatory  
framework for  
expanding  
industry

Product  
development  
for sidestream  
fermentation

Valorisation of  
ecosystem  
services



# BIVALVI

Advancing  
European bivalve  
production systems

<https://bluebioeconomy.eu/advancing-european-bivalve-production-systems/>

# Portfolio of Outputs and Commercialisation Needs



Project consortium includes 1  
Large enterprise, 1 SME, and  
associated industry partners:



## Outputs

### Disease identification



from TRL  
1 to >6\*

List of diseases in  
bivalve production in  
Norway and Ireland.

### Farming technology



from TRL  
4 to >7\*

Protocols for farming  
technology for Manila  
clam.

### Clam Selective Breeding



from TRL  
2 to >6\*

Selective breeding  
programme for  
Manila clam.

### Blue Mussel Selective Breeding



from TRL  
2 to >4\*

Pilot selective  
breeding programme  
for Blue mussel with  
sterile end products.

### Disease resistance genes



from TRL  
1 to >5\*

Candidate genes  
for bivalve disease  
resistance.

\*indicates changes in TRL level during project

## Commercialisation Needs

Identify biotic  
and abiotic  
threats for  
bivalve  
production

Advance bivalve  
production  
systems

Ensure seed  
supply from  
healthy and  
well performing  
bivalves

Develop  
selective  
breeding  
programmes for  
bivalves

Engage with  
stakeholders