



Blue Bioeconomy ERA-NET Cofund "Unlocking the potential of aquatic bioresources" 1 December 2018 - 31 May 2024

Identify new and improve existing ways of bringing bio-based products and services to the market

17 countries - 30 partners (funding agencies and ministries)

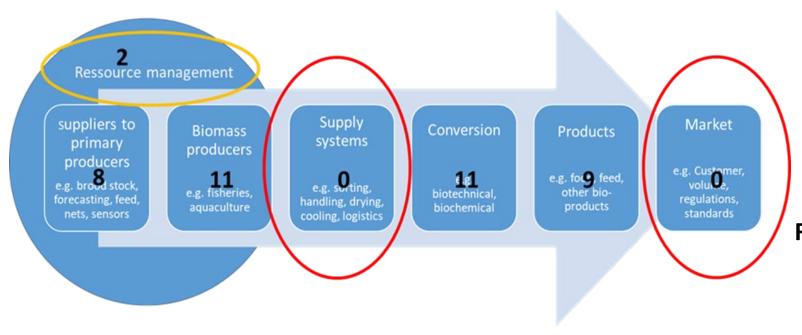




Value chain approach



Launched three calls: December 2018, June 2020 and June 2021



2020 call

Supply systems

13 countries, 11 mill €

Funded 10 projects

2021 call

Resource management and market

Currently 8 countries, 7.5 mill €

Possibly 6 or 7 projects

Industry involvement is mandatory!





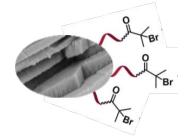
ADVANCED MATERIALS USING BIOGENIC CALCIUM CARBONATE FROM SEASHELL WASTES (CASEAWA)





grinding

chemical functionalization





Alma Mater Studiorum - Università di Bologna **Giuseppe Falini (Coordinator)**



University of Konstanz Helmu Coelfen (PI)



Consejo Superior de Investigaciones Científicas Jaime Gomez Morales (PI)

FINPROJECT®

Gabriele Maoloni(PI)

A CaCO₃ filler does not interact with the polymer

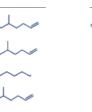
State of the art

Commercial Graphene



Expensive commercial graphene solutions are used for CaCO₃/polymeric compounds with electrical properties

State of the art

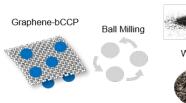


CASEAWA conductive FbCCP

bCCP polymeric chains bounded interacting in

the polymer matrix. Functionalized bCCP can be

electrical conductive







Conductive polymer compound from low cost graphite powder and waste seashells

State of the art

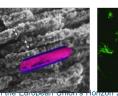


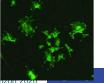
Synthetic hydroxyapatite forming needle like crystals



research and innovation programme biogenic CaCO₃ converted in hydroxyapatite – the crystals are

CASEAWA doped apatites





ucaconfrom wasters \$259611 converted in hydroxyapatite doped with lanthanides and interaction with cells

AquaHeal3D: All-marine 3D printed Wound Healing Accelerant

Project scope



Tunicates Cellulose



Seaweed Alginate



Salmon Roe HTX – Bioactive

(skin re-epitelialization)







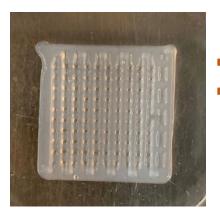


3D Printed Patch



3D bioactive Wound **Healing Patch**

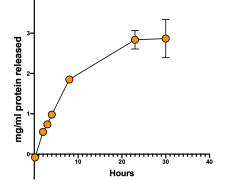
Status June 9th





- Prototype
- HTX: marine bioactive ingredient integrated in bio-ink

- Initial release kinetics satisfactory
- Slow-release kinetics



- Bioassays pending (fibroblast collagen production)
- Animal testing on wounds in Q1 2021 (mini-pigs Charles River)
- Clinical study in patients in 2021/2022





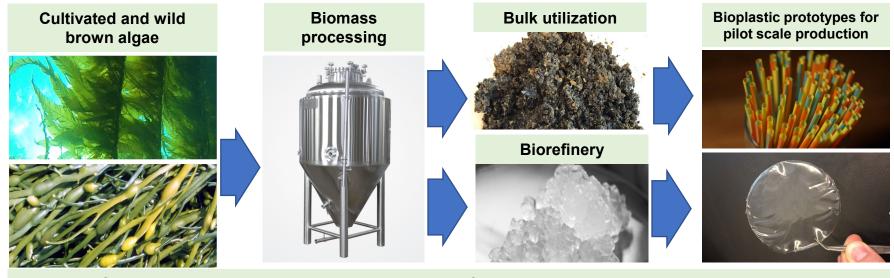


Novel enhanced bioplastics from sustainable processing of seaweed

Project duration: 01.03.2020 - 01.03.2023

Project coordinator: SINTEF Industry, Dept. of Biotechnology and Nanomedicine (Øystein Arlov)

https://www.sintef.no/plastisea





LCA, sustainability and economical assessment of seaweed harvest, processing and products

The PlastiSea project will

- Introduce novel bioplastics with enhanced processability and performances toward single-use materials for the food industry, and for applications in pharmaceutical packaging or coating
- Expand the knowledge on brown algae biomass and processing for medium- and large-scale applications union's Horizon 20:
- Identify opportunities and challenges of upscaling and boosting European seaweed-based industries
- Uphold an active dialogue with industry end users and consumers for results exploitation





One of the more common routes from policy to solutions is through publicly funded research and innovation.

But where do we go after the R&I projects have been funded? How do we get to the solutions?





As public funders in BlueBio, we connect European national R&I priorities in the blue bioeconomy.

Our method is to use calls and networking between our projects, encompassed by our value chain approach.





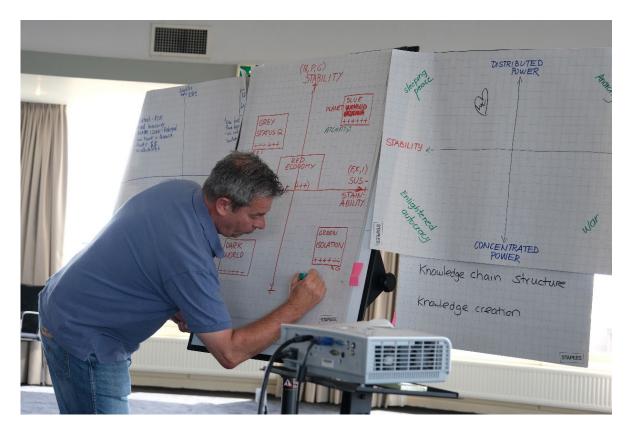
But "uptake" is about reaching the market. And how do you get from a public funded R&I project to the market?

And what do you do when the professor (probably) doesn't want to start a spin-out?

What we do: supportive activities



- Create connectivity and stimulate synergy among projects
 - Online networking meetings
- > Human capacity building
 - > Targeted webinars and training courses for students and non-students
- ➤ Commercialization support





Targeted commercialization support



Impact and market readiness

- Move up in Technology Readiness Level.
- Learn to prepare for commercialization.
- Meet potential investors.
- Plan for post-BlueBio.





Challenges in public funded innovation



- I. From public funding to the market: almost no overlap in TRL level between public funders and Venture Capital.
- II. From open science to Intellectual Property Rights: who owns what?
- III. Time will tear us apart: very different pace at research institutions and industry partners.



Process of support action for commercialization

- Input from mid-term meeting and presentations (March -22).
- 2. Initial meetings with actors in the innovation and start-up space (spring -22).
 - 1. Blue Invest
 - 2. EIT Food
 - 3. Katapult Ocean
 - 4. Bioeconomy Ventures
 - 5. EATiP
- 3. Survey to all project coordinators (August -22).
- 4. E-coffee meeting on commercialization support (October -22).
- 5. Matchmaking with European instruments.











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New BlueBio ERA-NET COFUND on the Blue Bioeconomy

