



Developing biobased ropes for use in mussel and seaweed and creation of biobased value chains and circular economy

EATiP FORUM on OFFSHORE AQUACULTURE,

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 @BIOGEARS_EU

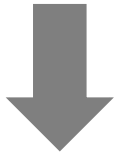
www.biogears.eu

THE CHALLENGE



**Farm to Fork
European Green Deal
Circular Economy**

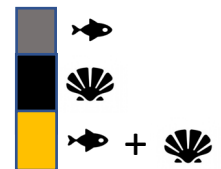
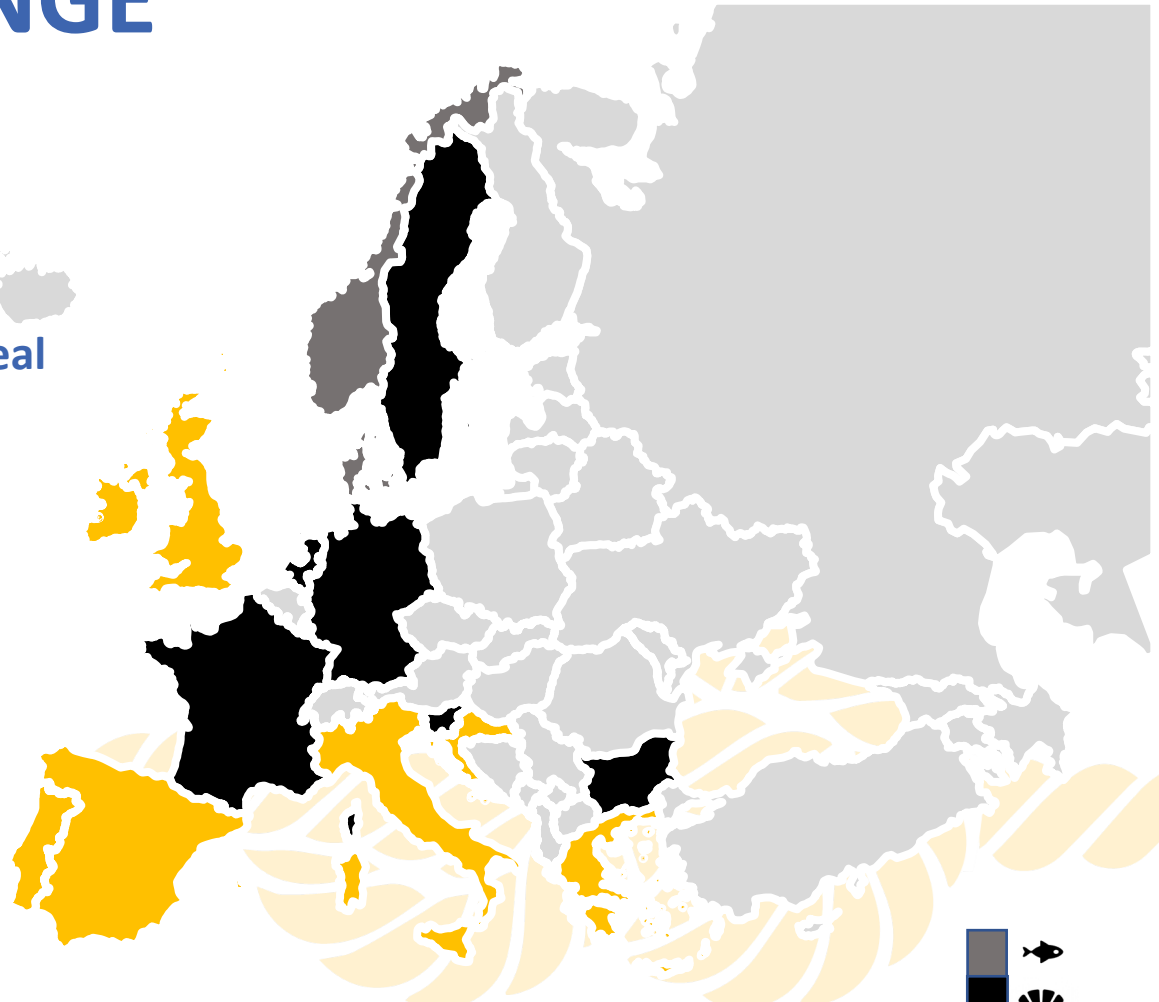
100% plastics-fossil source



Marine litter
Impact on ecosystems
Carbon Footprint
Climate Chance



Sustainable food systems?¿





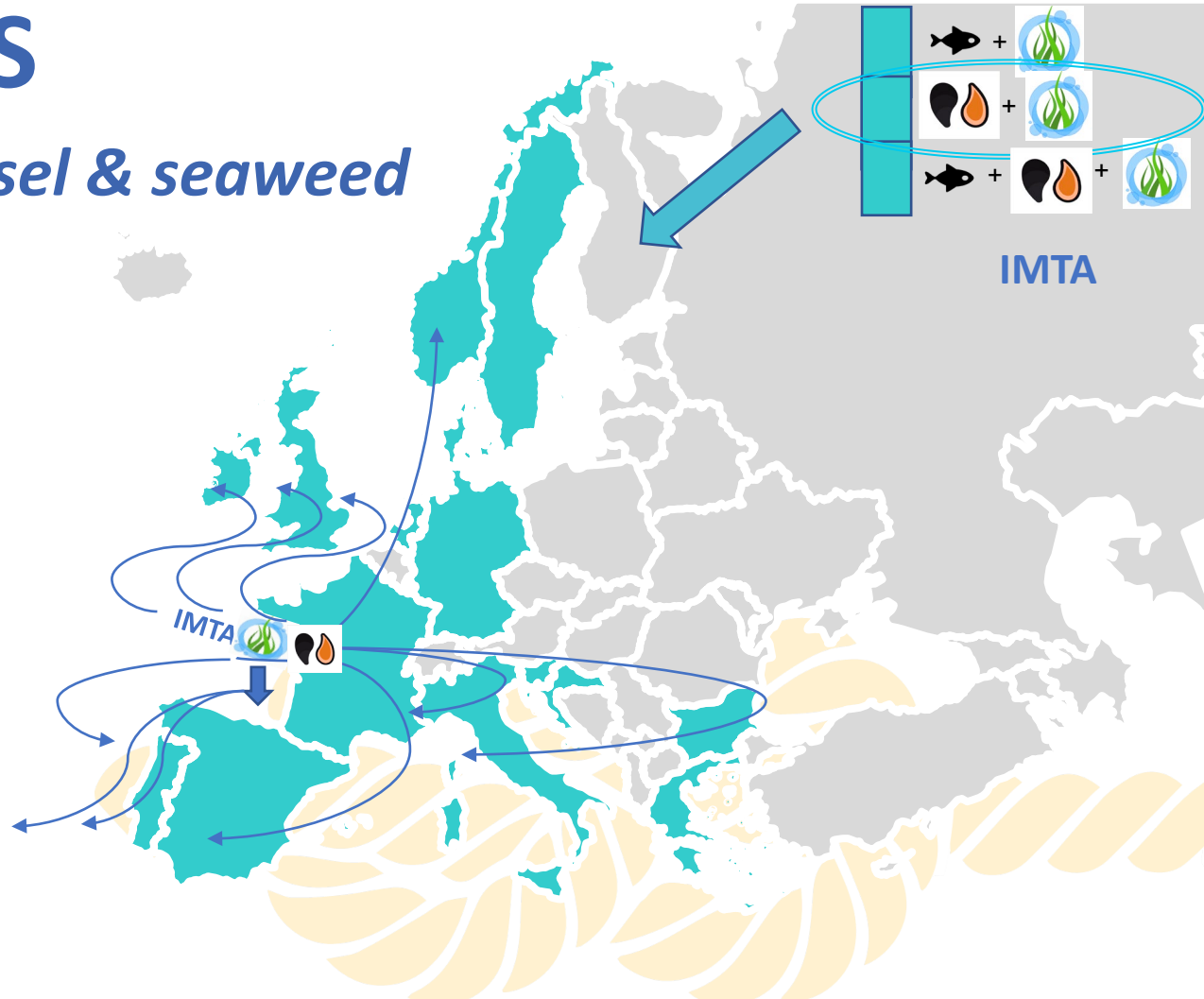
OBJECTIVES

Biogears for mussel & seaweed

BLUE LAB

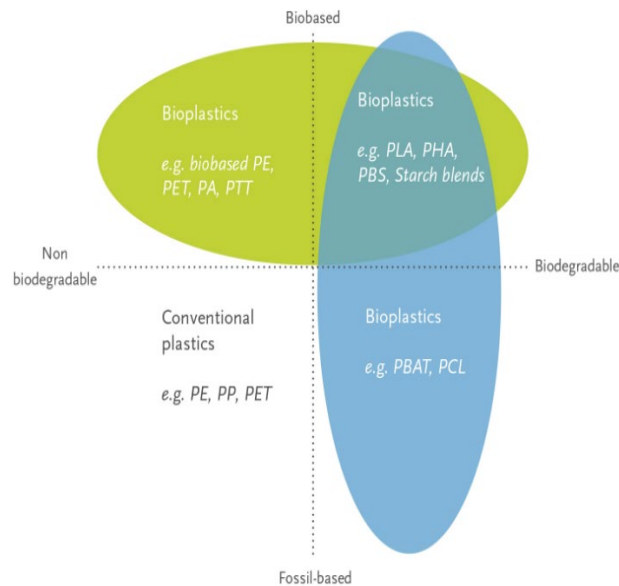


- IMTA  
- Sustainable aquaculture
- Biobased products
- New value chain



THE SOLUTION

BIOGEARS prototype development



Conventional ropes (GROPE)

MUSSEL PROTOTYPES



SEAWEED PROTOTYPES

Figure: Classification of bioplastics (covered by the areas green and blue) in the axes defined according to source based (up and down) and the biodegradability character (left to right). Source: European Bioplastics.eu

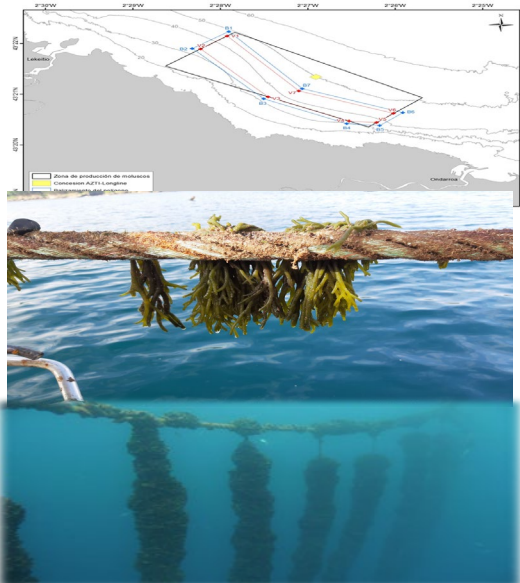
THE SOLUTION

BIOGEARS validation

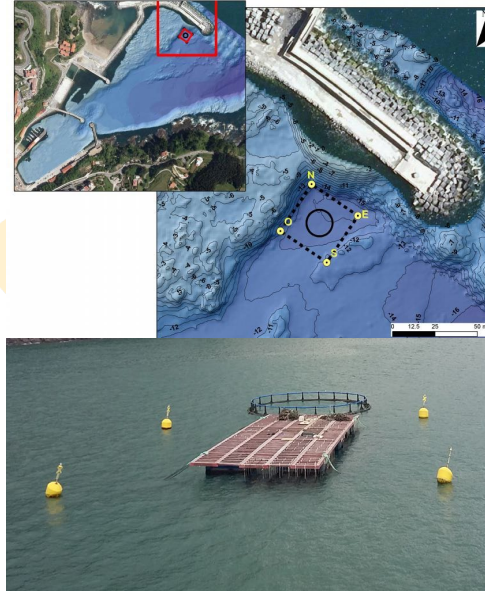
SEA TESTS



High energy-longline



Low energy-raft

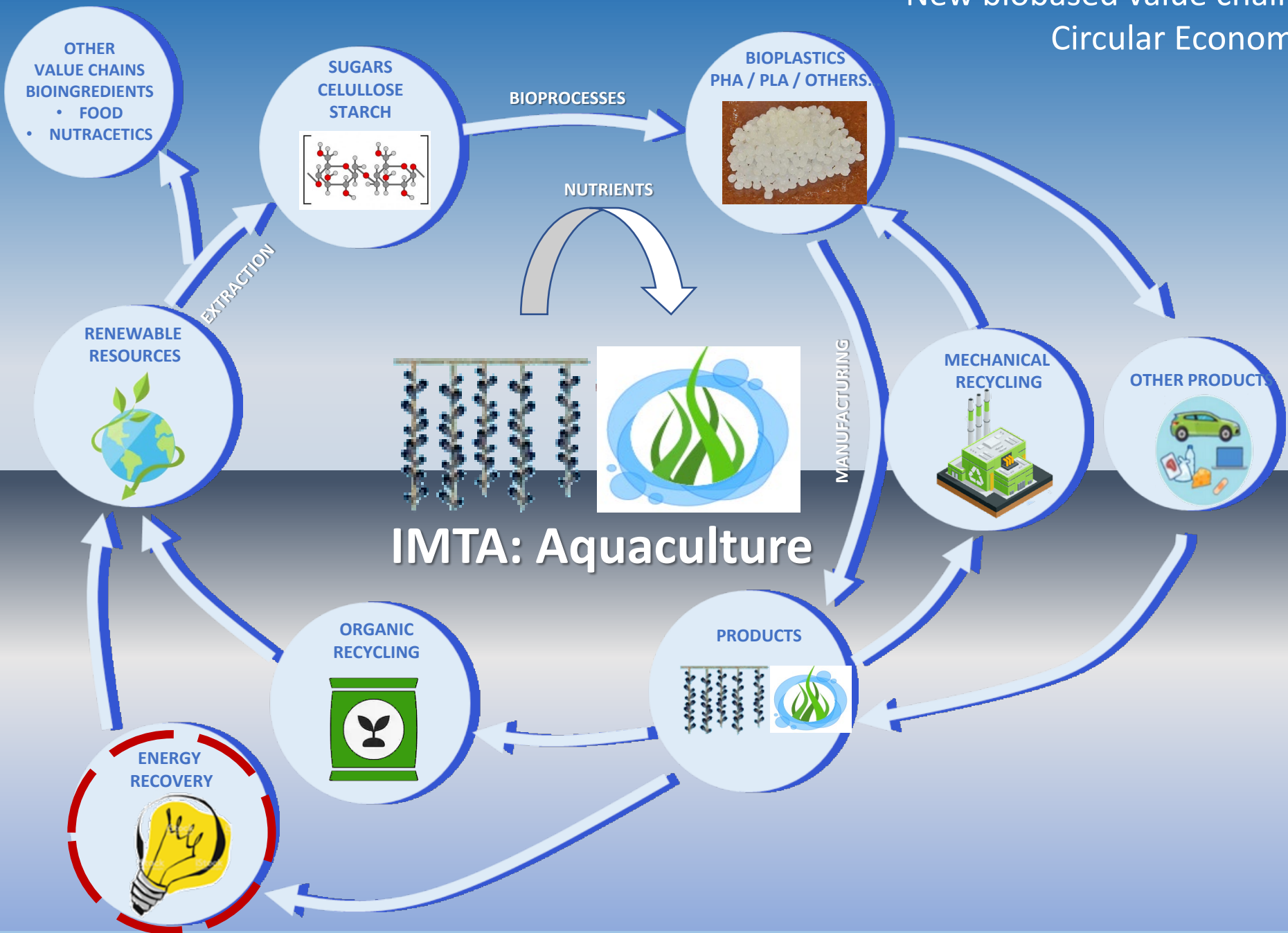


Proof of concept IMTA



New biobased value chains

Circular Economy



Circular Triple BOTTOM line Business Model (CBM)

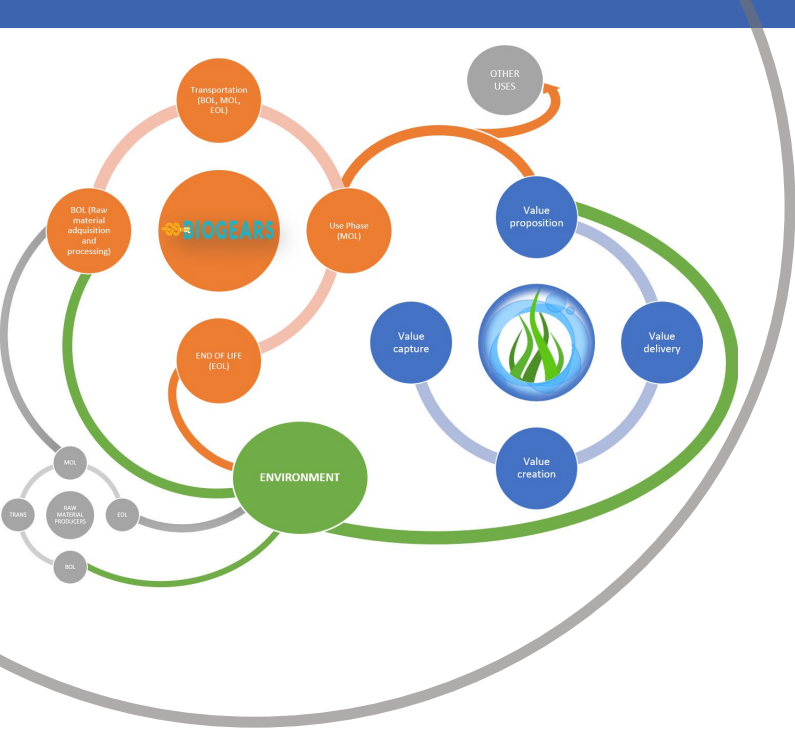
ex 1. Triple layered business model canvas (TLBMC)



BIOGEARS PRODUCER

ENVIRONMENTAL

SOCIAL



Horizontal coherence

Vertical coherence

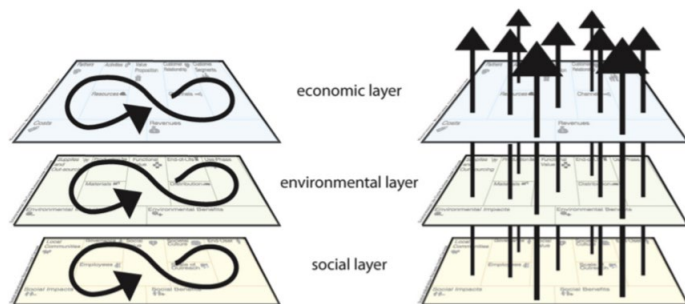


Fig. 4. The triple layered business model canvas creates two new dynamics: horizontal and vertical coherence.

RESULTS & IMPACTS



BLUE LAB



SUSTAINABILITY

BIOBASED ROPES
IMTA TECHNOLOGY
ECO-FRIENDLY
AQUACULTURE

ECONOMIC

AQUACULTURE GROWTH
NEW BIOBASED PRODUCTS
NEW BIOBASED VALUE CHAINS

SOCIAL

POLICY ON PLASTIC IN SEA
NEW EMPLOYMENT
QUALITY PRODUCTS
RESPONSIBLE CONSUMPTION

13 CLIMATE ACTION



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



3 GOOD HEALTH AND WELL-BEING



THE TEAM



AQUACULTURE



COMPUNDING



TEXTILE



KNOWLEDGE TRANSFERENCE



ROPE MANUFACTURER





Thank you!

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GAiKER



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