AQUAFISH

Interreg Atlantic Area

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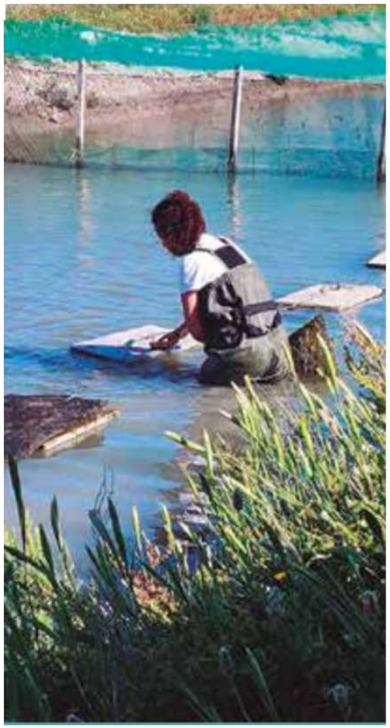
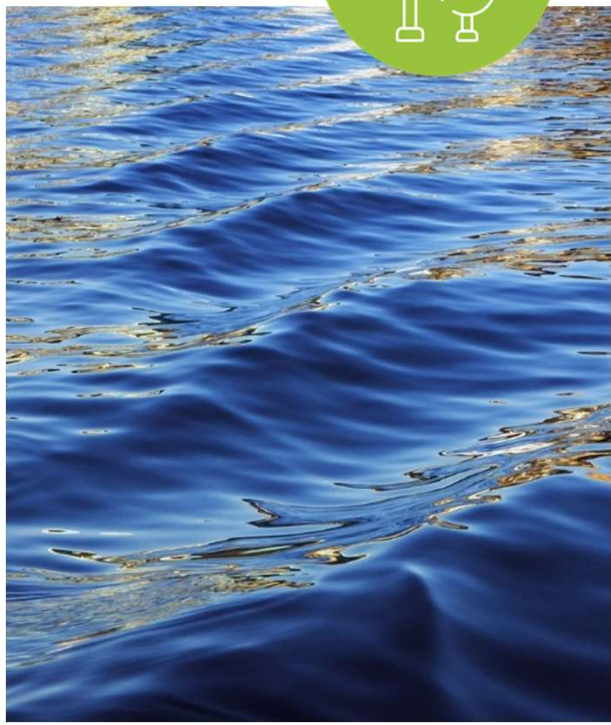
Vers une valorisation durable des produits de la mer

AQUACULTURE & FISHERIES 0.0

16 avril 2026





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What insights have been gained from the pilot projects?

João Araújo- IPMA (PT)

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Objectives

- ✓Sustainable productive models and creation of innovative good products
- ✓Complement the portfolio of innovative products with additional ones, in each of the territories of the project

From aquaculture systems to innovative food products: closing the loop

Validation of 4 new products/systems prototypes

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Pilot actions

1. Circular Aquaculture in Action: Seaweed Production in RAS and IMTA Systems
2. Sustainable Sea Urchin Farming through Seaweed-Based Feed
3. IMTA-Based Cultivation of Seaweeds and Sea Cucumbers for Sustainable Food Innovation
4. IMTA Co-Culture of Abalone and Sea Cucumbers for Sustainable Production and Product Innovation

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Key insights

Pilot action 1

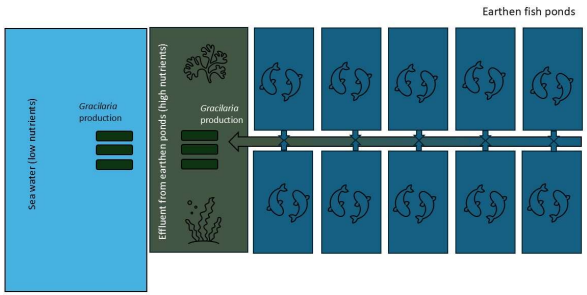
A- Cultivation of Ulva ohnoi in water bioremediation tanks within a RAS system for sea bream

- ✓ Mean daily biomass gain reaches 24%
- ✓ Great potential for **RAS bioremediation** systems, and **a sustainable source of seaweed biomass**

Pilot action 1

B- Cultivation of Gracilaria gracilis in settling tank for effluent from earthen ponds

- ✓ In progress
- ✓ Compare growing conditions and assess *Gracilaria gracilis* production



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Key insights

Pilot action 2

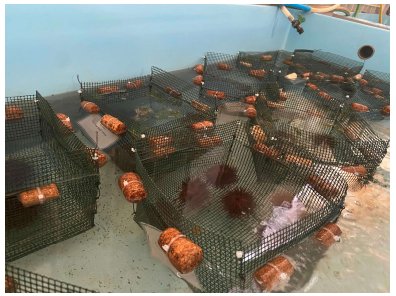
A- Sustainable use of algae biomass (Ulva sp.) in sea urchin (Paracentrotus lividus) feed

- ✓ System can reliably support about 3,000 sea urchins at a 5% daily intake rate
- ✓ Exclusively supports moderate growth. Incorporation into formulated feeds promotes great development

Pilot action 2

B- Use an invasive seaweed as feed for Paracentrotus lividus (dried and inert feeds)

- ✓ Poor results when fed exclusively on *Rugulopterix okamurae*
- ✓ Good growth and nutritional value of the gonads (10% *R. okamurae* inert feeds)
- ✓ Next: test higher content



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Key insights

Pilot action 3

IMTA-Based Cultivation of Seaweeds and Sea Cucumbers for Sustainable Food Innovation for Sustainable Food Innovation (sediment and feeds trials)

- ✓ The absence of substrate/sediment limited the growth of *H. arguinensi*
- ✓ Mud sediment + *Chaetomorpha* sp. and commercial feed most effective in promoting the growth

Pilot action 3

IMTA-Based Cultivation of Seaweeds and Sea Cucumbers for Sustainable Food Innovation for Sustainable Food Innovation (location trials)

- ✓ Temperature is the key parameter affecting growth
- ✓ Subtidal cultivation brings more stable results throughout the year

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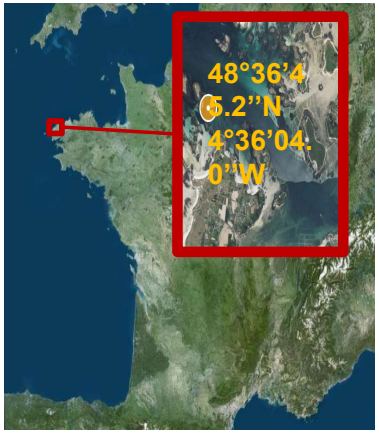
Key insights

Pilot action 4

IMTA Co-Culture of Abalone and Sea Cucumbers for Sustainable Production and Product Innovation

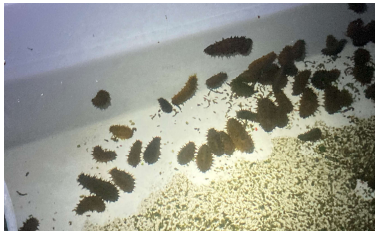
- ✓ *H. forskali* doesn't affect abalone growth, and co-culture is feasible
- ✓ *H. forskali* first showed better growth in co-culture with abalone than in mono-culture. This trend then reversed. Insufficient abalone waste or spatial competition between the 2 species



Pilot action 4

IMTA Co-Culture of Abalone and Sea Cucumbers for Sustainable Production and Product Innovation

- ✓ *Density of up to 77 ind/m² has shown good growth performance in co-culture but can be increased*



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Conclusions

- ✓Identify potential resources of commercial interest
- ✓Contribute to increasing knowledge of the production of various marine organisms
- ✓Identify the limitations of each production system
- ✓Valorize the resources and reduce waste
- ✓Create food products in line with the zero-waste philosophy

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Thank you
Obrigada
Go raibh maith agat
Merci
Gracias