PRACTICE ABSTRACT

Organic Integrated Multi-Trophic Aquaculture (IMTA) with sea bass/sea bream, shellfish, and seaweed to produce blue food

Problem

Conversion to organic fish farming often requires significant investments, which can be difficult for small and medium-sized farms to finance independently.

Solution

Greek fish farmers can diversify to Integrated Multi-Trophic Aquaculture (IMTA) and certify both the seaweed, shellfish and the sea bream/sea bass organic (Figure 1).

Applicability box

Theme

Animal husbandry, Production systems, Aquaculture

Keywords

Aquaculture

Context

Greece

Benefits

IMTA increases the techno-economic and environmental sustainability of aquaculture and improves the final product quality.

Practical recommendations

- Develop **new reproduction and hatchery protocols** for seedling production of the macroalgae.
- Evaluate the **nutritional profile** of the target species according to the EU-labelling requirements for organic blue food.
- Develop a **conversion and investment plan** aligned with EU organic regulations and national program requirements.
- Secure **support in the transition phase** with a focus on professional and technical areas.
- **Collaborate** and co-create in Living Labs, and on-farm experiments: Hellenic Centre for Marine Research, Aristotle University of Thessaloniki.
- Locate **organic certification requirements:** Certification bodies (Agrocert, BioHellas, TÜVHellas).
- **Administrative assistance:** mainly in the application process for organic subsidies: Advisors working in the network of Geotechnical Chambers of Agriculture, and independent advisors.

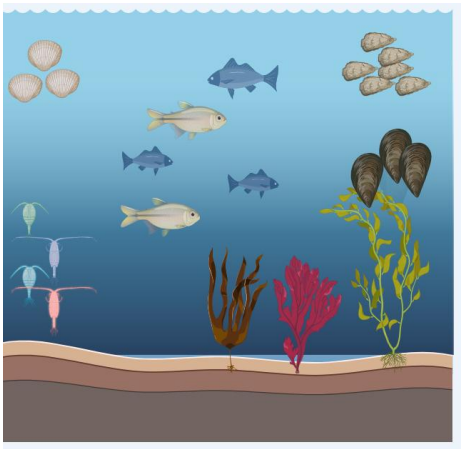

Figure 1. IMTA Farm: multitrophic aquaculture with fish, seaweed, and shellfish.

Organic Integrated Multi-Trophic Aquaculture (IMTA) with sea bass-sea bream and seaweed to produce blue food. OrganicTargets4EU, AUTH, Practice Abstract, 2025.

Further information

Further reading

- National Strategic Plan on Aquaculture (GR)
- Can IMTA provide added ecosystem value services in the fish farms of Greece? 2023, Papageorgiou, N., Dimitriou, P. D., Chatzivasileiou, D., Tsapakis, M., & Karakassis, I., Frontiers in Marine Science.
- Changes of the Mediterranean fish farm sector towards a more sustainable approach: A closer look at temporal, spatial and technical shifts. Ocean Coast. 2021, Papageorgiou, N., Dimitriou, P. D., Moraitis, M. L., Massa, F., Fezzardi, D., & Karakassis, I., Science Direct.
- Is Europe ready for integrated multi-trophic aquaculture? a survey on the perspectives of European farmers and scientists with IMTA experience. 2018, Kleitou, P., Kletou, D., & David, J., Elsevier.

Weblinks

- Hellenic Aquaculture Producers Organisation
- Check the Organic Farm Knowledge platform for more practical recommendations.

Other useful links:

- Ministry of Rural Development and Food
- Aristotle University of Thessaloniki, School of Veterinary Medicine, Laboratory of Aquaculture and Aquatic Animal diseases
- Hellenic Centre of Marine Research (HCMR)

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