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SMART ADRIA



EUROPEAN UNION



Montenegro

Ministry of Economic Development



E.C.C.I.A.I.

European Commission of Interregional and Intercultural
Cooperation of the Adriatic Region



REGIONE
PUGLIA



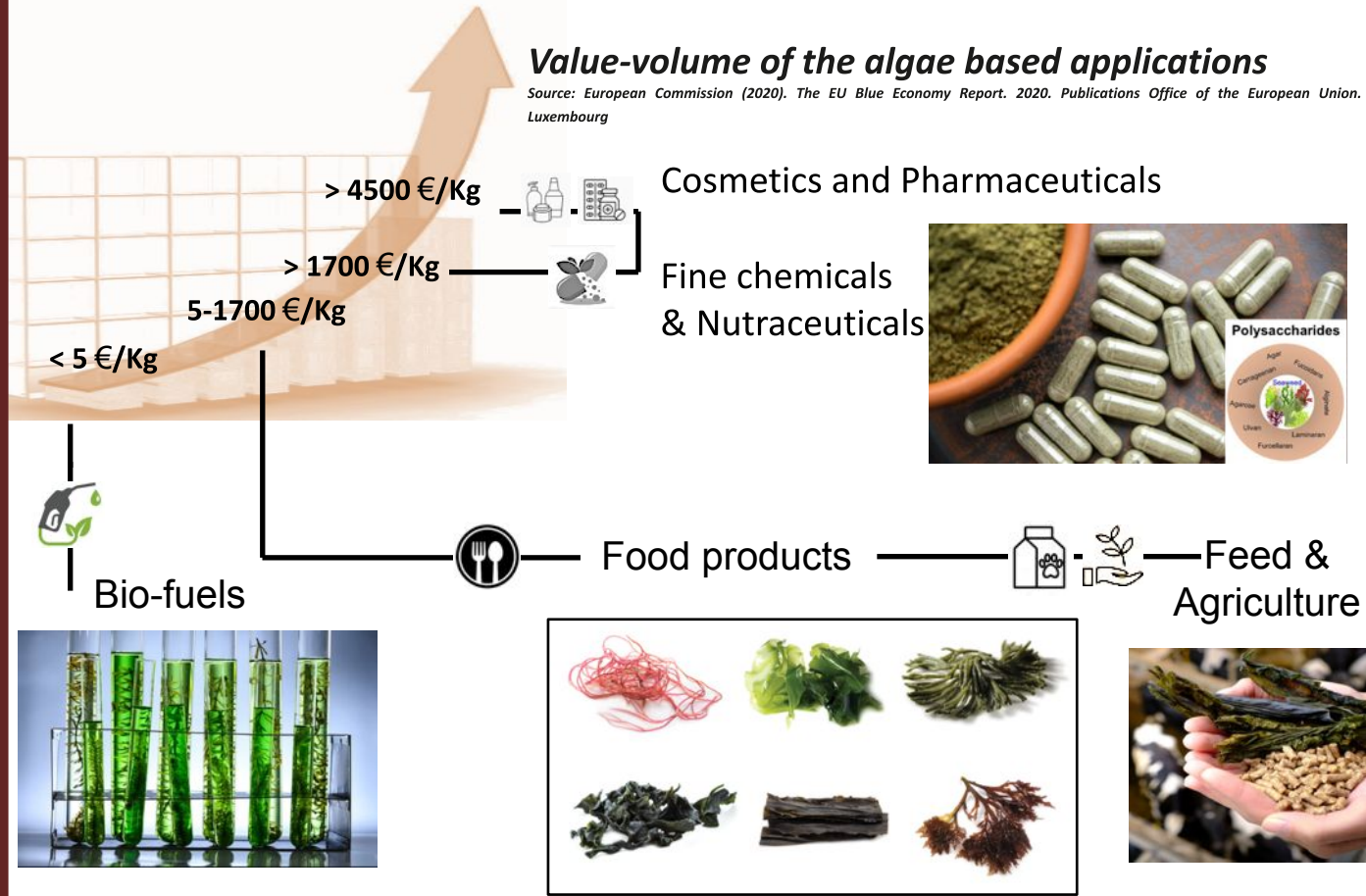
Seaweeds in the Mediterranean Sea Exploitation of a new Food Resource in Blue Economy

26 January 2021 – Gianluca Bleve – Researcher at CNR-ISPA

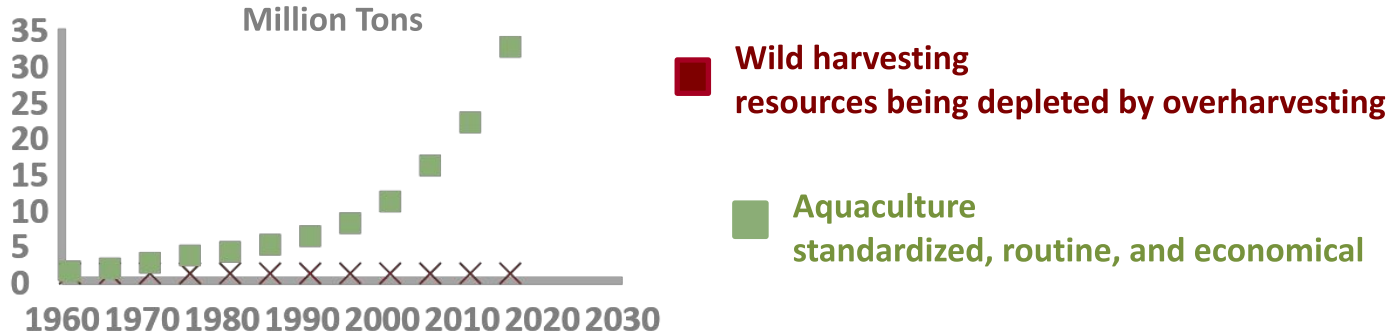
Seaweeds or Macroalgae - The context – THE MARKET

Value-volume of the algae based applications

Source: European Commission (2020). The EU Blue Economy Report. 2020. Publications Office of the European Union. Luxembourg



Seaweeds or Macroalgae - The context – RESOURCE SUPPLY



GLOBAL FACTS

30

MT/year

8.1

Billion €/year

50

Countries

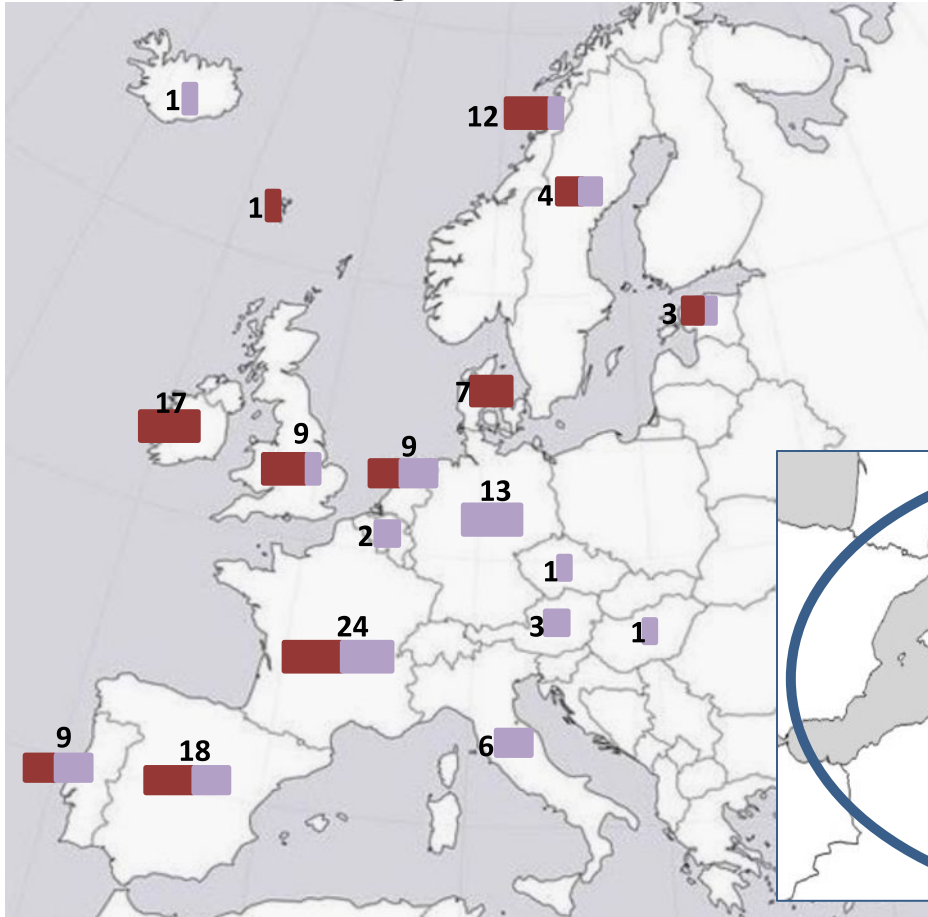
Global

EU

> 96%

98%

Seaweeds or Macroalgae - The EU context



Companies

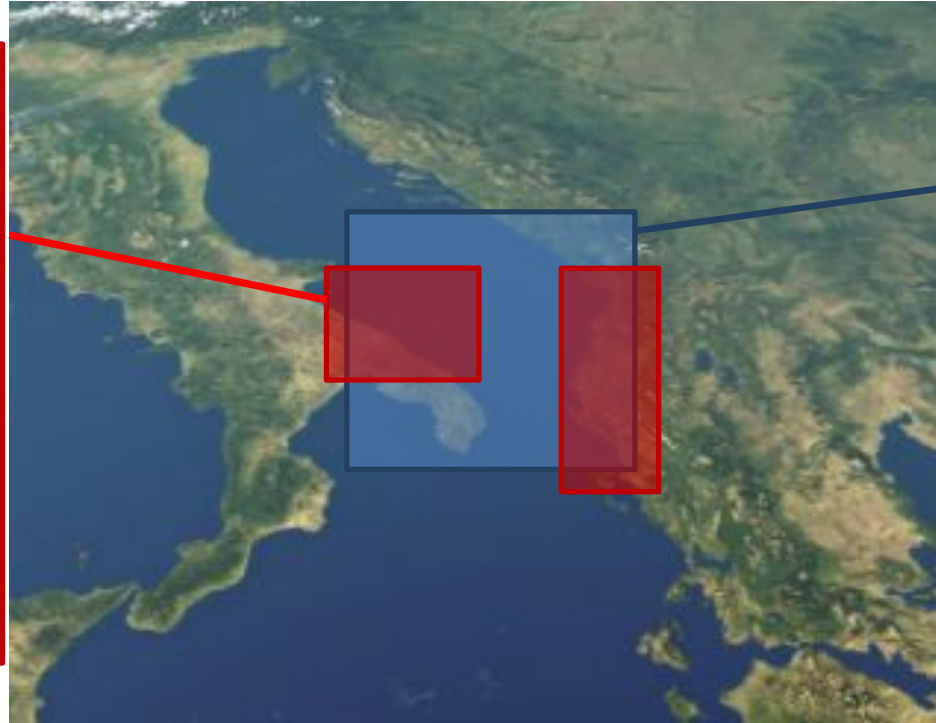
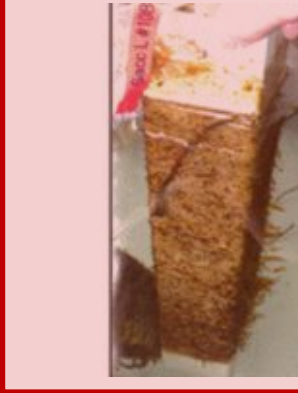
Macroalgae
(wild harvesting)

Microalgae



Blue Growth strategies to face new challenges... ..a shared development model?

Land

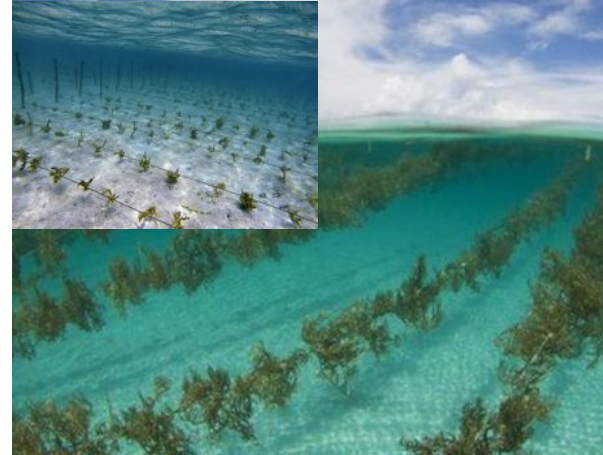


Sea/aquaculture



Seaweeds or Macroalgae - The context

Seaweed cultivation – Full Cycle Farming



Current Biology

REPORT | VOLUME 29, ISSUE 18, P3007-3093 E3, SEPTEMBER 23, 2019

Blue Growth Potential to Mitigate Climate Change through Seaweed Offsetting

Halley E. Froehlich ¹ ² • Jamie C. Afferbach • Melanie Frazier • Benjamin S. Halpern • [Show footnotes](#)

[Open Archive](#) • Published: August 29, 2019 • DOI: <https://doi.org/10.1016/j.cub.2019.07.041> •



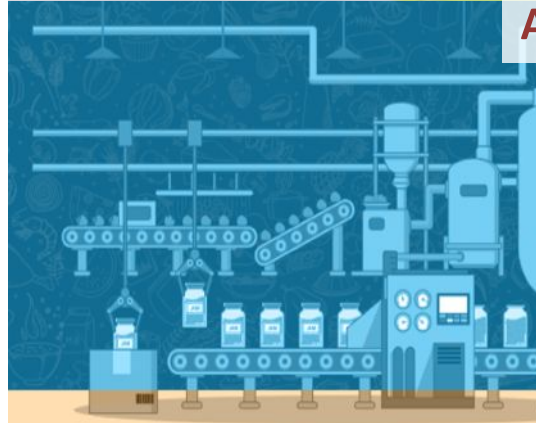
Highlights

- ca. 48 million km² of the oceans are suitable for seaweed aquaculture (SA)
- Offsetting the aquaculture sector requires 14%–25% of current farmed seaweeds
- Production scale and cost are too limiting to sequester global agricultural CO₂eq
- SA could help buffer eutrophic, hypoxic, or acidic waters in at least 77 countries

JAPAN & CHINA

- Considerable government support
- Extensive basic research was funded in the 1960s and 1970s and a network of scientific advisors was set up.
- The Seedling Centers charge a fee for the seeding of nets on a per-net basis

Seaweeds or Macroalgae – AIMS -



A dedicated food/processing chain

New food products for EU citizens

Safety and quality parameters

Appropriate preservation methods

Consumers awareness and knowledge

IMPACTS

- **Sustainable activity**
- **Alternative livelihoods for small scale fishing communities**
- **Integration with intensive fish farming**
- **New job positions/opportunities**
- **Alternative to water scarcity, grounds salinity, seawater intrusion**



Seaweeds or Macroalgae – Weaknesses and threats



Seaweed edible species in the Mediterranean Sea?

Conditions for algae cultivation?

Impact on the environment (alien species, new pathogens and parasites)?



Small size and untrained market

Small size enterprises

Challenging changeover of coastal activities

Competitiveness with international producers of wild and cultivated algae



Seaweeds are uncommon food

Awareness? Acceptance? Expectations?

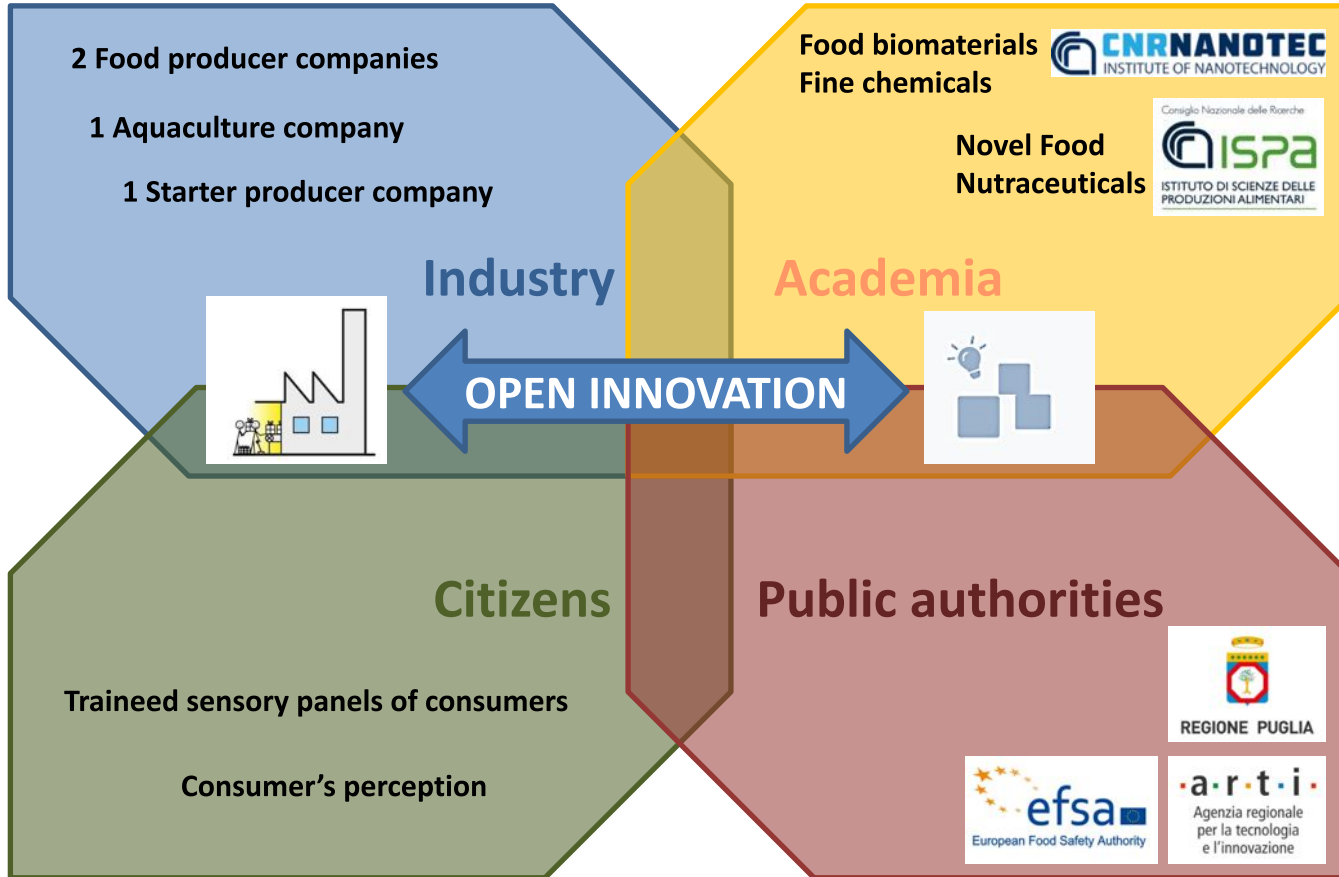


Policy, regulatory and administrative procedures?

Certification and market requirements?

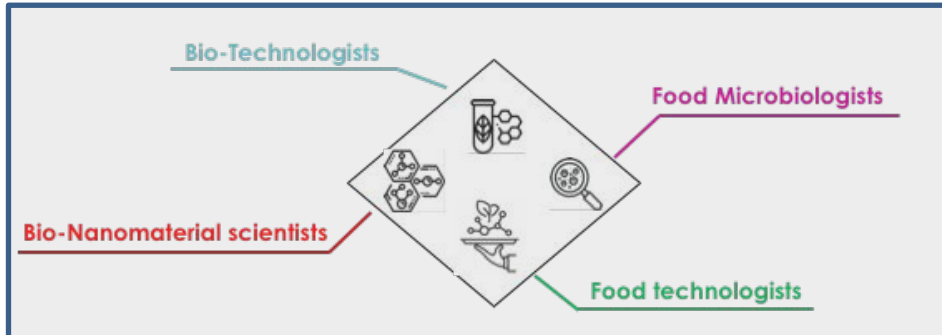
Novel food standards/regulation

Seaweeds or Macroalgae – Quadruple helix approach

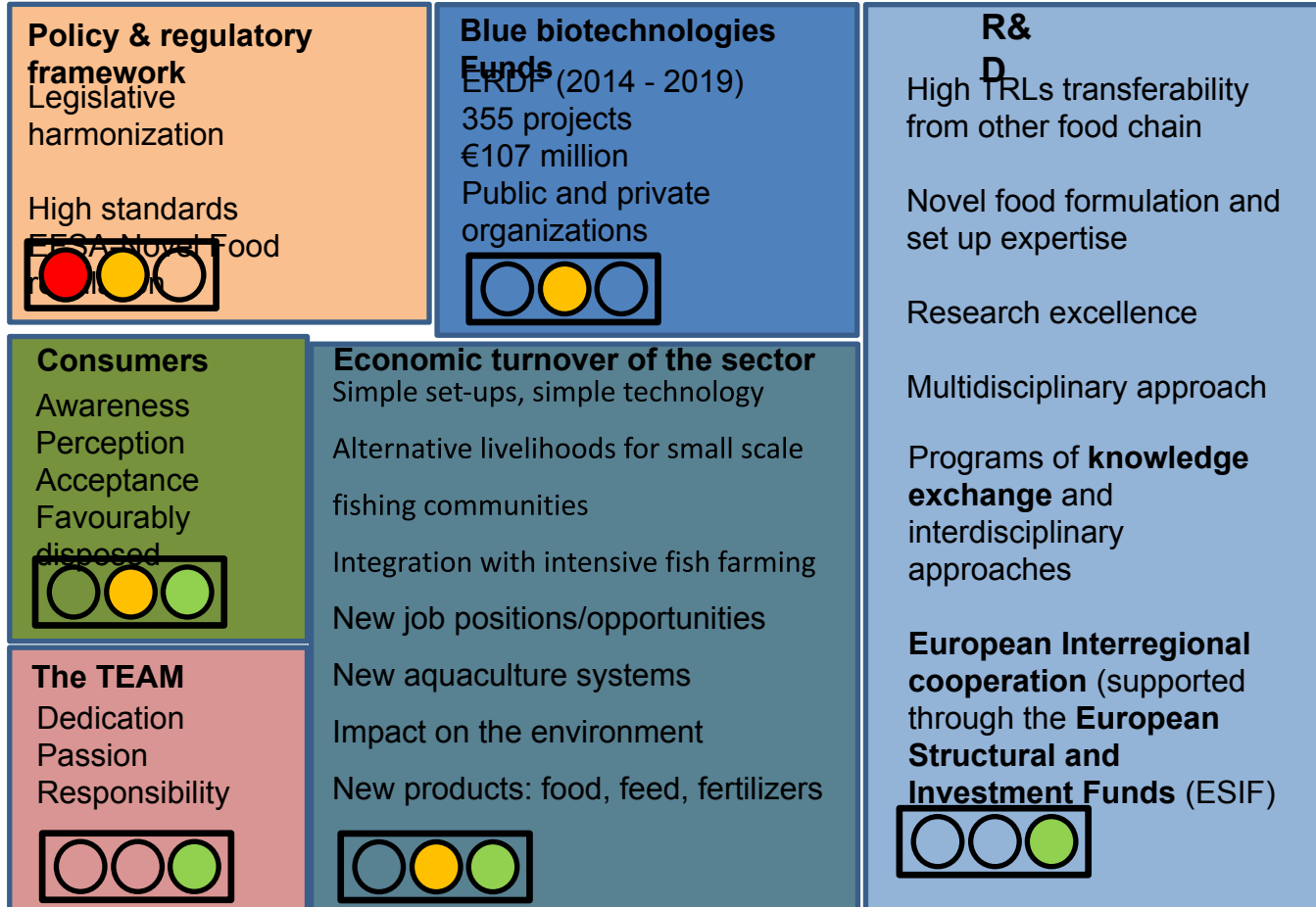




THE RESEARCH TEAM



Seaweeds or Macroalgae – Project success prediction



Thanks for your attention

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