

Recording is on!



EU4Algae

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European Climate,
Infrastructure and
Environment
Executive Agency

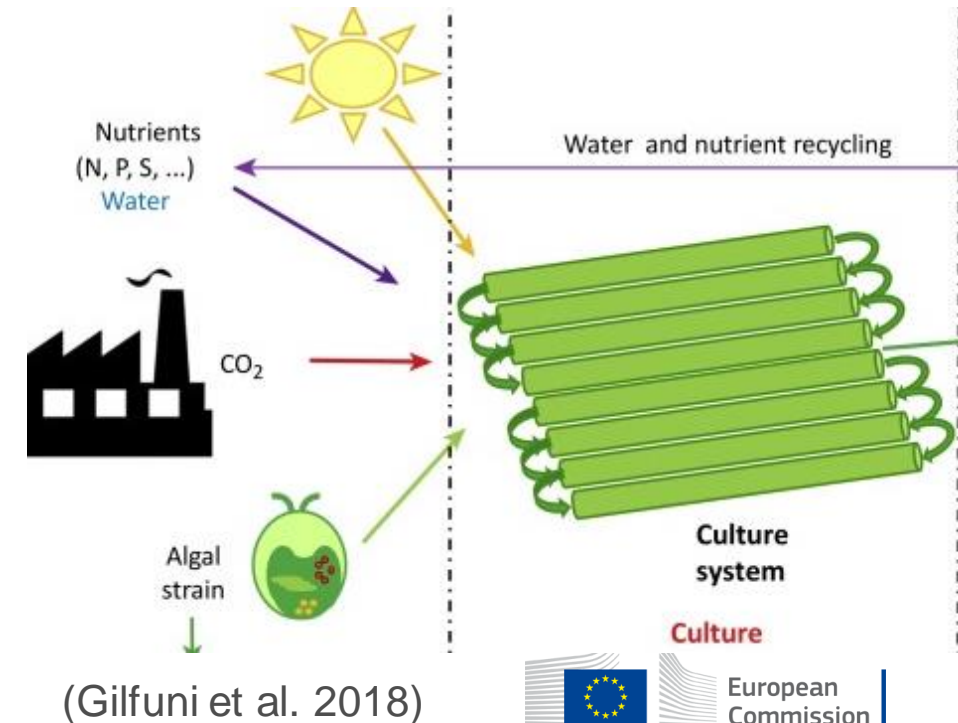
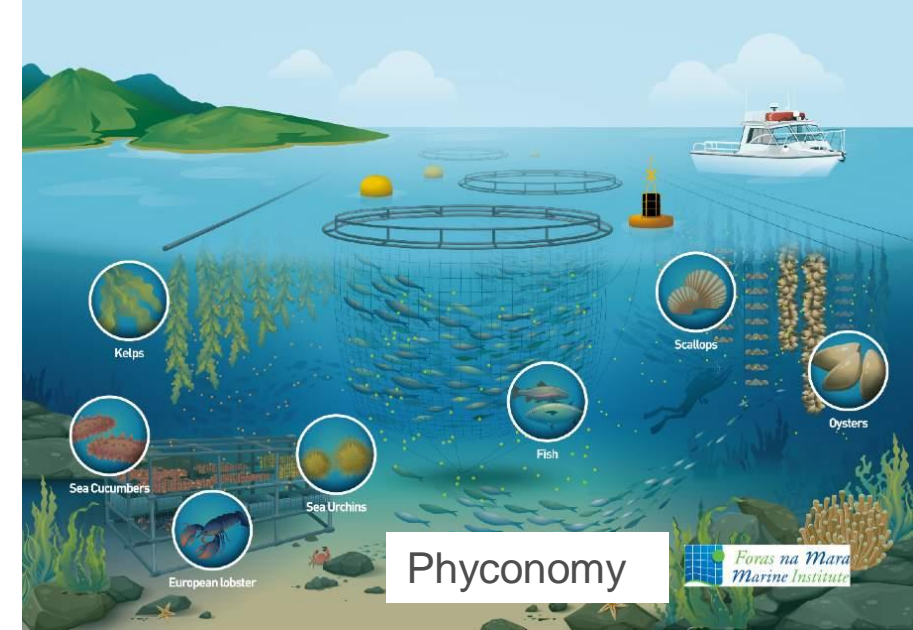
Working Group 5

- on Ecosystem Services / Bioremediation
- *Facilitators: s.Pro, EABA, EurA*
- 6 meetings: (M10, M12, M17, M23, M28, M35)



Ecosystem services and bioremediation with algae

- Macroalgae production – ecosystem services - catch crops
- Macroalgae & microalgae production combined with bioremediation
 - Integrated Multi-trophic systems (IMTA)
 - Industrial symbiosis systems
 - Wastewater treatment



Ecosystem services and bioremediation with algae

- Monitoring systems - traceability
- Business models
- Compensation schemes
- Market and standards: Certification, traceability, labels



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MEASURES

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Show All

Agricultural Activities

Industries

Municipal Wastewater Treatment

Other




€ 10,760
Raised of € 150,000

Phosphorus removal in Kingisepp, Russia
📍 Russia
🕒 78 Days Left



€ 29,253
Raised of € 50,000

Phosphorus removal at Vitebsk WWTP
📍 Belarus
🕒 115 Days Left



€ 500
Raised of € 6,200

Pienet puhdistamot, suuri kuormitusriski
📍 Finland
🕒 332 Days Left

Measure	Costs (€/kg reduced N)
Catch Crops	0,3 – 41,6
Intercrops	7,5 – 13,7
Reduced Fertilization	15,7 – 27,1
Buffer Zones	9,9 – 34,9
Set Aside Farmland	20 – 69,7
Mussels	13 – 42

(A. Schultz-Zehden et al, 2019)



Obstacles/issues

- Fragmented knowledge on
 - algae benefits (taxonomy)
 - monitoring schemes,
 - quantifying ecosystem services
- Lack of understanding of innovation barriers for market uptake
- Fragmented and small Communities of Practice working with ecosystem services - Existing sites of addressing ecosystem services are small and few (only 4 sites are large/demo level),

Suggested objectives

- Develop a knowledge hub on
 - the bioremediation potential of algae on nitrogen, phosphorus, carbon uptake
 - The carrying capacities of EU waters for seaweed aquaculture and marine permaculture and impacts of algae cultivation
 - restoration and harvesting on the health of the ocean and human.
 - good practices providing bioremediation and ecosystem services –

Suggested objectives

- Identify regulatory barriers in taking up ecosystem services and make recommendations
- Promote pilot facilities and success stories for nutrient and energy recovery and facilitate matchmaking between established companies and sectors with new algae circular solutions, and)
- Develop innovation roadmaps to accelerate innovation, based on what worked and did not work in existing Communities of Practice. (consult e.g. Aqualia ecosystem, Almeria, Kalundborg, projects etc)
- Define R&D needs for ecosystem services of algae
- Make recommendations for a monitoring framework and targets for quantifying ecosystem services (metrics, validation, unification).

Actions

- Analyse innovation barriers and develop recommendation on quantification of ecosystem services at scale
- Promote good practices, CoPs, pilot sites, testing labs etc.
- Knowledge integration with project results
- Define next level of R&D needs of most important themes
- Other?

Outcomes/deliverables

- A knowledge hub with a project repository, and factsheets addressing benefits and risks and potential of bioremediation and ecosystem
- Regulatory barriers with recommendations for accelerating innovation and market uptake of bioremediation schemes and ecosystem services
- Factsheets on state of play of and innovation roadmaps for algae bioremediation and ecosystem services R&D needs
- A Framework for quantifying ecosystem services
 - Monitoring
 - Good practices
 - Business models
 - Scalability – sensitivity

Ideas

- WG Name: Algae4Eco
- Aim: Develop recommendations for a monitoring framework and targets quantifying ecosystem services.
- Concept:
 - Piggyback existing events e.g. EMODnet open conference, Blue Cloud
 - Each meeting features speakers presenting tools, project results, and studies, incl. catch crop farming with microalgae & macroalgae, wastewater treatment integration, IMTA, permaculture concepts, etc.
- Timeplan:
 - M10 Algae4Eco: (**1st week of October, online**): Business and support, Validation of Action Plan draft
 - M12: Algae4Eco: (**AlgaEurope, 13-15. December 2022, Rome IT**): Standardisation
 - M17: Algae4Eco:
 - M23: Algae4Eco:
 - M28: Algae4Eco:
 - M35: Algae4Eco:

Next meeting?

NEXT MEETING



- Online
- 3-7.October 2022
- 2-3 hours



Additional information about you!

- List 3 biggest bottlenecks in quantifying ecosystem services
- What systems should we focus?
- How can you contribute/ get involved Algae4Eco?
- Which cross-cutting issues do you see that need more WGs to involve?
- Who should we invite as featured guests in one of the coming meetings??

slido



<https://app.sli.do/event/gjFmDfdh3uE1x6LdTpo9ou/embed/polls/57e6282b-4ae8-4b96-9863-98b05c950f6a>

Thank you

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