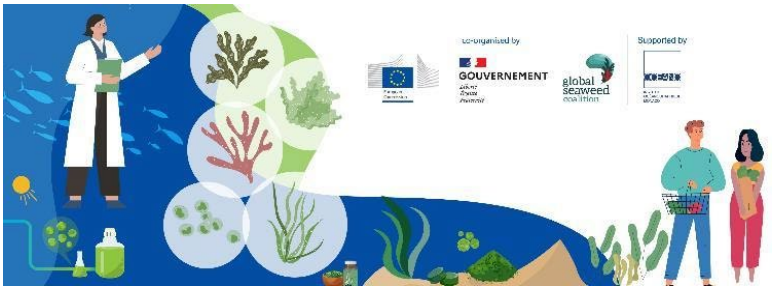

La Maison de l'Océan I PARIS
5-7 OCTOBER 2023
1st EU ALGAE
AWARENESS SUMMIT

Q&A

Examples from Asia

This document includes questions received via slido during the 1st EU Algae Awareness Summit and answered by the speakers after the event. Only answered questions are included here

Q: A major constraint identified by the World Bank report is lack of macroalgae biomass what is situation with micro algae

Fengzheng Gao answer: microalgae is 100 times less than macroalgae. Further scaling up production is needed.

Q: Are there any sustainability and environmental impact feedback measurements after so many years of experience in Japan, China and INDONISIA to share with us?
Fengzheng Gao answer, LCA with accurate data are generated in recent years. Personally, I don't have data yet to share.

Q: What government financial support is available in china, japan, india or indonesia for algae farmers?

Fengzheng Gao answer: There is strong local support from Inner Mongolia, China for local producers (near 30 companies). National open funding is also available.
Q: There was mention of the $2/kg spirulina from Chad (important to not disrupt this food source) BUT do you think this can/should be recreated elsewhere?
Fengzheng Gao answer: It is possible in China. However, increasing value is more important than deceasing price/producing cheaper biomass for algae producers.
Q: How can countries without seashore participate in algae production? Do you see a profitable economic Q: opportunity in microalgae that these countries invest in it?
Fengzheng Gao answer: Currently, the major commercial microalgae species with large production scales are freshwater species. These countries for sure can participate in these microalgae production with photobioreactors or open raceway ponds. Inner Mongolia, China, is the biggest Spirulina production area in the world, which is an inland province without seashore at all.

Examples from North America

Q: Are there reasons limiting the potential of cultivating in the Gulf of Mexico coastal states?

Anoushka Concepcion: Only native species of seaweeds can be produced in coastal waters, therefore, it is important to determine which species is native to the region to ensure non-native or invasive species are not introduced. In addition, seaweed cultivation has to be conducted in areas where there are no existing uses (i.e. protected marine habitats or species, migration routes, commercial fishing, tourism/recreational activities). Seaweed aquaculture can't displace other activities. There also has to be a consistent market for the species being cultivated.

Q: Could Anoushka elaborate on the measures being used to address social licence

Anoushka Concepcion answer: Please reach out to Bailey Moritz (Bailey.Moritz@wwfus.org) at the World Wildlife Fund

Q: What is the possibility of farming seaweed in warm, oligotrophic seas, like Mediterranean?

Anoushka Concepcion answer: Please check with a phycologist, however, keep in mind, seaweeds require nutrients to grow and therefore, will not grow in low nutrient areas.

Anoushka - What are the biggest barriers posed by state/local governments and what needs to be addressed?

Anoushka Concepcion answer: All aquaculture activities require vetting by federal, state and local governments to ensure there are no user conflicts or displacement of current activities. The process can be lengthy, taking time to review what is existing in an area to ensure no entanglements or other conflicts like impacting maritime businesses (i.e. protected marine habitats and species, migration routes, commercial fishing grounds, recreational/tourism activities, etc.). Permitting authorities are supposed to be stewards of the environment and serve to protect current businesses working in the area.

Q: For Catriona: what standard measures are being made and who decides what those are for seaweed CDR?

Catriona Hurt answer: THere are no standard methods or frameworks for seaweeds. There are for seagrass and mangroves. We provided a framework in Hurd et al 2022, but this would need to be further developed. Dr Melissa Ward is working on this, worth talking to her.

Q: We have dealed with the CO2 sequestration for macroalgae. Can we say the same for their holobionts ?

Catriona Hurt answer answer: Do you mean the microbiome (holobiont is the seaweeds + the microbiome). I have not seem any work on this, but our measures of photosynthesis are for the holobiont.

Co2 seq.by seeweeds was supergreat and valuable presentation!

Catriona Hurt answer: thank you:)

Q: Would it be helpful with the CDR questions to consider the conclusions more as opportunity rather than problems?

Catriona Hurt answer: I think many many people have looked at it as an opportunity - there is substantial literature and media on the potential of seaweeds for CDR. Nevertheless, the reality is that it will be complex to measure CDR by seaweeds in a way that will legitimately qualify them for carbon credits. The challenge is linking two processes that are temporally and spatially separate (air-sea CO2 equilibration - tracking the water from which dissolved organic carbon was removed by seaweed photosynthesis; and tracking seaweed carbon into storage pools). We are making good progress on working out the fate of seaweed carbon. Air-sea CO2 is an evolving topic, see Bach et al. 2023 for the challenges and some solutions.

Examples from Middle East and Africa

Q: To Flower , what do they do with the salicornia ? Extract agar or only export ?

Flower Msuya answer: They use it in making pickles and other products

Q: Flower: has seaweed been incorporated more into local diets since local farms have grown at larger scales? Or is the seaweed mostly for export?

Answer: Although we are trying to use our seaweed, we are still exporting 97% of the seaweed. But, the number of people who are using seaweed at home for food has been increasing since 2006 when ZaSCI started

Q: For Flower … How can women get more involved in the value chain? Is there opportunity for them to process locally…such as for biostimulants, not just commodity

Answer: Flower: the knowledge of making seaweed extract is available thanks to UNIDO's work. Some farmers use (raw) seaweed as fertiliser whereas very few are making seaweed fertiliser. So there is big potential that is waiting to be taped. The market can easily be expanded as people learn more about natural organic fertilisers