



Developing a mechanism
for supporting better
decisions on our
environment
based on the best
available knowledge.

CALL FOR EXPERTS No.9/2020 EKLIPSE – December 2020

What are the knowledge gaps to be addressed before harvesting the potential of macro-algae culture in providing climate-related and other ecosystem services (i.e. coastal protection; nutrient recycling; lower impact food; lower impact material; etc.) especially at a larger scale? (CfR.5/2020)

Deadline for Call: 8th January 2021

EKLIPSE is inviting experts to join an expert working group to understand the state of knowledge regarding the potential of macro-algae culture in providing climate-related and other ecosystem services, and to identify specific knowledge gaps to be addressed before harvesting this potential. This request was put forward to EKLIPSE by the European Commission – DG MARE.

- Are you an expert in macro-algae culture?
- Would you like to contribute directly to a policy-relevant process in your field of expertise?
- Would you like to expand your network and learn about methods of knowledge synthesis?
- Are you interested in collaborating in a trans-disciplinary and multi-cultural setting?

Then please apply at www.eclipse-mechanism.eu

Important dates and information:

- Interested experts should apply before midnight on the 8th January 2021, following the rules and procedures detailed below.
- The Experts of the working group will be selected and notified by 15th January, 2021 and should start its work immediately thereafter.
- We will aim to have a first online expert group meeting in week starting 25th January, 2021.
- The deadline for 1st draft reporting is 4th June 2021.
- The deadline for reporting is 31st August 2021.
- Participation in this expert working group will require approximately 10% of your time – please find more information on expectations of and support to EKLIPSE Expert Working Groups here.

Eclipse was created in 2016 to help governments, institutions, businesses and NGOs make better-informed decisions when it comes to biodiversity in Europe.

More information on the processes at www.eclipse.eu

1 Invitation to join an expert working group

EKLIPSE is inviting experts to join an expert working group to develop recommendations on how macro-algae culture and the provided ecosystem services can contribute to the Green Deal objectives, and on how the algae sector can contribute to the development of a sustainable European Blue Bioeconomy. Suggestions for improvements should take into account knowledge gaps, informing the debate/discussions on macro-algae cultivation and the provided ecosystem services, including blue carbon, as well as on macro-algae cultivation and marine biodiversity. Results can inform any future algae research or European Commission activities. Identification of knowledge gaps can therefore inform future research and action on macro-algae, as a sustainable natural resource.

The expert working group will cover diverse and complementary skills (including multidisciplinary skills and a broad geographical coverage – see section 6.2) and will interact with relevant stakeholders to ensure appropriate methodological choices and uptake of outputs.

2 Request to be addressed by this call

Background to this request

There is strong need to mitigate climate change, enhance sustainable ecosystem service provisioning and secure biodiversity in coastal and marine areas. This is particularly relevant due to the multisectoral human activities taking place and the need for protection, conservation, and management of coastal and marine ecosystems and natural resources. In this context, the development of macro-algae cultures in these areas offers potential for a range of direct and indirect benefits, by producing sustainable natural resources for food, feed, fuel, cosmetics and bio-active compounds for pharmaceuticals (Campbell et al., 2019); and by maintaining and enhancing local coastal biodiversity (Wood et al., 2017). Macro-algae culture establishment may act as soft measures of coastal protection and that such farms may have positive effects in maintaining and increasing local biodiversity (see Tsiamis et al., 2020).

However, cautiousness is needed before upscaling macro-algae culture due to uncertainties including effects on local biodiversity (e.g., displacement of wild stocks, occurrence of non-indigenous species) (FAO, 2018), challenges emerging when scaling up the production (e.g., related to climate change and seaweed aquaculture technologies like strain development, harvesting, transport and processing) (Kim et al., 2017) and potential trade-offs and negative impacts (e.g., Jean-Baptiste et al., 2019). Therefore, there is a need to map existing knowledge and identify knowledge gaps and trade-offs, to inform future development of macro-algae culture strategies and policies. Existing assessments mention for example following knowledge gaps relating to positive and negative effects of macro-algae, scale of effects and potential cumulative impacts of various macro-algae farms, and knowledge gained by systematic monitoring (Wood et al. 2017). Furthermore, more knowledge is needed to evaluate impacts in terms of water, energy and land use, changes in sedimentation rates and structure of local communities, and potential pollution and risk of releasing invasive species into the environment (<https://ec.europa.eu/jrc/en/science-update/algae-biomass-production-bioeconomy>).

Call for Knowledge

A Call for Knowledge related to this request was launched end of September 2020 and was open until November 6th 2020 (extended from 23rd October 2020). The Call for Knowledge was broadly disseminated through the different Eklipse social media platforms, i.e. LinkedIn, ResearchGate, Twitter, Facebook, Instagram as well as via different mailing lists and networks (e.g. Euromarine, Algae Europe, The European Macro-algae community, etc...). For details, see the Document of Work for this request.

3. Suggested programme of work and methods

A possibility could be a three step approach consisting of 1) Delphi process to identify and prioritize key topics, 2) a scoping review (or similar) to assess knowledge gaps in the priority areas identified in Delphi,

and 3) expert consultation workshop to discuss and verify results of the previous steps. Initial thoughts about these three steps and used methods are provided below.

- 1) **Delphi process** in the first round would identify key areas where knowledge is needed by for example the following questions:
 - What are the ecosystem services (ES) that macro-algae cultivation can provide?
 - What negative impacts / trade-offs may macro-algae cultivation include?
 - What uncertainties need to be resolved before significantly increasing / scaling up macro algae culture?
 - What are future research needs on macro-algae cultivation and the provided ES?
 - What are possible unexpected / emerging issues included in scaling-up macro-algae culture?

In general, these questions should allow Delphi panelists to identify key issues and knowledge gaps as well as present doubts about macro-algae culture being a panacea. The first round of the Delphi would identify rather long lists of issues. The Eklipse EWG will then cluster the items on the lists. In the second round of the Delphi, Eklipse would ask panelists to prioritize identified items under each question. This will result in a set of issues and priorities to inform the scoping review (or other chosen method to identify knowledge gaps). In addition, the question on future research needs will directly inform DG Mare on how expert communities perceive needs for future research thereby contributing to drafting forthcoming Horizon Europe calls. Also, the wide range of ES potentially produced by macro-algae culture will be identified and prioritized in the Delphi process.

- 2) **The scoping review (or other method to identify knowledge gaps)**, will then be narrowed down by prioritized lists of issues. Yet, some flexibility is allowed for the EWG to conduct the assessment of the knowledge gaps, and also choice of the exact method to be used to identify knowledge gaps.
- 3) **A third step** could be used if there are enough time and resources. This would consist of another multiple expert consultation, where selected group of experts could discuss the findings of the Delphi and scoping review. This could take a form of a workshop. There may be funds available from the requester to arrange this. This step could ensure the comprehensiveness of the findings, confirm key knowledge gaps, and deliberate on future research needs. A face to face workshop would allow more in-depth discussions than the rather technical Delphi process. Workshop participants could be identified by using past projects (e.g. PEGASUS; OTHERS) and Annual Seaweed Conference as starting points. Given the Covid-19 situation, a face-to-face workshop may be difficult to arrange, but virtual meeting options can be considered, if the EWG and requester consider this would add value.

For more information on each of these methods, please refer to the [EKLIPSE report on knowledge synthesis methods](#).

4 Implementation steps and timeline

The work is expected to follow the EKLIPSE knowledge synthesis process, i.e. it will include the following steps:

- **Kick-off dialogue meeting with EKLIPSE Knowledge Coordination Body (KCB)** to ensure common understanding of the request among experts (within a week of nomination of expert group).
- **Preparation of the work** (to be concluded within 8 weeks of nomination)
 - Scanning of literature and other sources
 - Development of methodological protocol (with support of the EKLIPSE Method Expert Group for knowledge synthesis methods)
 - Agreement of methodological protocol with KCB and requesters
 - Review of protocol through open consultation (organized by EKLIPSE)
- **Programme of work**

- Early draft (to be discussed with KCB and possibly requesters)
- Full draft completed for review.
- **Finalisation including review**

5 Support provided by EKLIPSE

EKLIPSE team: The expert working group will be supported in all steps by the EKLIPSE Eklipse Management Body in communication, documentation (via the EKLIPSE website), and dissemination of products as required for this request. The working group will be supported thematically and strategically by the KCB. Financial support: EKLIPSE activities rely on in-kind contributions as in similar science-policy processes.

The benefits for experts and institutions arise from the networking in the group and the visibility of expertise to policy and society via the products. EKLIPSE will actively support this visibility of experts and their institution's contributions. In addition:

- kick-off meeting, focus group meeting and final meeting will be hosted by and travel costs covered via EKLIPSE funds as needed (depending on travel restrictions following lockdown development)
- upon specific request, individual experts from Eastern and Southern European countries might be supported via a honorary contract by an EKLIPSE partner institution.
- a maximum budget of € 2.500 can be granted for tasks such as the literature review and synthesis (for this a separate contract is required see section 6).

Technical support: Access to literature databases will be facilitated if needed. EKLIPSE will cover the layout, printing, and dissemination of interim and final products.

6 Eligibility and applicant information

6.1 Selection criteria for the composition of the Expert Group

Selection of the expert working group will be done by the KCB according to selection process and criteria outlined below (6.2) and on the EKLIPSE website. The expert working group should cover all relevant disciplines including natural, social, economic and planning sciences. Gender balance and geographical diversity of EU countries will be considered in the selection. If teams are applying, this will also apply, and the KCB may decide to complement a team selected with additional individual experts. The working group is expected to have up to 10 experts.

6.2 Selection criteria for individual experts

- Demonstrated expertise or experience in relation to the call topic
- Experience with biodiversity and ecosystem services and/or sustainable development as well as with European policy processes.
- Experiences in inter- and transdisciplinary work on topics related to the Biodiversity Strategy and in science-policy interface processes
- Experts will have to comply with the principles and rules of EKLIPSE (e.g. conflicts of interest policy (see http://www.eklipse-mechanism.eu/our_ethical_framework for more detail).
- Project partners of EKLIPSE and KCB members are excluded.

See [Guidance note on Preparing and managing calls for experts](#) for more information.

6.3 Process and eligibility criteria for supporting contracts

Based on the needs identified by the expert working group in its kick-off meeting, EKLIPSE can support the work of the group by sub-contracting some tasks to individual experts (or institutions, from and beyond the Expert working Group) via working contracts up to a total amount of 3,000€. The 2,500€ mentioned in section 5 is included in this subcontract). Please note that this amount of 20,000€ will not be re-adjusted according the overheads of the sub-contracted third party.

The aim of these would be to carry out dedicated work supporting the Group, e.g., a literature search and/or review based on the protocols decided by the Group. An EKLIPSE partner would prepare and issue a (restricted) call for tender for this purpose.

Honorary contracts will be given upon request to experts chosen for the expert groups on an individual basis, if they could not contribute otherwise. We expect this to apply to experts especially from eastern, central and southern European countries that might not be able to join the activities otherwise. In case you require such support please contact the EKLIPSE Management Body (secretariat@eklipse-mechanism.eu).

6.4 Data and information policy

All results will be made publicly available through the EKLIPSE website and transparent procedures will apply, following [Creative Commons Agreement 4.0¹](#), which includes the reference of authorship and involvement.

6.5 Information to provide

The EKLIPSE form should be completed, including a list of relevant publications and outlining relevant experience on the topic and details of experience in previous assessments or knowledge synthesis processes.

7 Application and notification of results

7.1 How to apply

The EKLIPSE expert form can be found on the EKLIPSE website under 'Open calls'. The completed form should be completed in **by midnight on 8th January 2021**. Should you require any further information do not hesitate to contact us: secretariat@eklipsemechanism.eu.

7.2 Announcement of the results

Successful applicants will be notified directly by EKLIPSE KCB by January 15th 2021. As soon as they accept the nomination, names of selected experts will be made public on the EKLIPSE website.

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