



EKLIPSE

Knowledge & Learning Mechanism
on Biodiversity & Ecosystem Services

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

Eklipse 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 and on Eklipse at
www.eklipse-mechanism.eu

CALL FOR KNOWLEDGE FOR INITIAL SCOPING - Eklipse- Cfk 01/2020

September 2020

Responses by October 23rd, 2020

TOPIC:

What is the state of knowledge regarding the potential of macro-algae culture in providing climate-related and other ecosystem services, focusing on knowledge gaps?

1 Invitation to share knowledge for informed decision-making

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>).

Given the above-mentioned uncertainties regarding the potential of macro-algae culture in providing climate-related and other ecosystem services, Eklipse invites scientists, policy makers, practitioners and other societal actors to share their knowledge on this specific selected request to explore available resources and evaluate if the request requires a knowledge synthesis process, structured knowledge gap analysis and/or consultation on research priorities.

To scope the current knowledge on the potential of macro-algae culture to provide a range of benefits and ecosystem services, Eklipse invite you to answer the following questions:

- Do you know of any projects, papers, reports, grey literature that have explored or are exploring the potential of macro-algae culture in providing climate-related and other ecosystem services?
- Could you share your experiences of on-the-ground actions aiming at understanding the potential of macro-algae cultivation to provide ecosystem services and related trade-offs. These can be actions that worked or didn't work– we can learn from both!
- Do you have any suggestions on what knowledge is needed to better understand the potential of macro-algae culture to provide range of benefits and ecosystem services, or how existing knowledge could be better mobilized to this end?

The final framing of the request is being developed through an interactive dialogue between the EKLIPSE scientists and the requester (EU Commission - DG MARE), and will be further discussed with stakeholders such as DG ENV, JRC.ISPRA; DG AGRI, DG CLIMA and DG RTD to ensure relevance for policy making regarding biodiversity and ecosystem services. We want to explore the amount of knowledge that exists in this area, who the main knowledge holders are and, if after scoping we decide to answer this request, we want to identify the most suitable methodology for answering it.

Contributing to the Call for Knowledge:

Please contribute your comments and knowledge/references through the Eklipse Forum on Eklipse LinkedIn page. We invite you to add any information that you think is relevant for this request and justify its inclusion (e.g. additional information from countries, scales, or disciplinary perspectives not covered sufficiently).

Relevant information should be grouped under the following: (1) literature reviews, (2) empirical studies/practical experiences, (3) modelling studies, and (4) conceptual papers.

Contributions may include: (a) links to open access papers, (b) links to published and unpublished grey literature or case studies, (c) descriptions of ongoing research projects or knowledge compilations expected to deliver results within the next year, or (d) your on-the-ground experiences in this field.

Using the LinkedIn Forum:

The successor of the Eklipse KNOCK forum, the Eklipse Forum group on LinkedIn is a platform where the public, policy makers, and scientists can exchange knowledge, experience, and advice on biodiversity and ecosystem services, engage with calls for knowledge, share relevant reports and media, and discuss hot science-policy topics. Those wishing to join and use the forum can click the Request to Join button on the group page; permission will then be granted by a group admin. Members of the group also have the ability to invite other new members with whom they are connected on LinkedIn to join.

During a moderated topical discussion, participants will be encouraged to reply to posted prompts and materials (documents, media, etc.) in the comments section with their own related questions, answers, and insights. If a new (relevant) topic is being introduced or a new document is being shared, a new post should be made. Others will then be able to comment on this post. Moderated discussions may be used to facilitate a call for knowledge and the various stages of gathering feedback for a request.

To comment on a post, scroll to the lower section, click “comment”, and post. Relevant documents and files can be attached and uploaded in the Eklipse Forum group on LinkedIn through the thumbnail option up to the size of 100MB. The members of the group can view and download the document with the accessibility. Files exceeding the max size can be uploaded as links in the forum through the attach link option available. Photos and links may be attached to comments, while the direct attachment of documents is only possible when making a new, individual post. Hashtags can be added to forum posts to increase the chance of being seen by members of the public who are following relevant hashtags (i.e. #biodiversity). Persons and organizations relevant to the forum discussion at hand can be brought into the conversation by tagging in posts (i.e. “@European Commission” or “@Marie Vandewalle”). This can be done by using the “@” symbol and then selecting the relevant party from the display list. The selected parties will automatically be notified of any post in which they are tagged.

2 Objective of the call and request to be addressed by this call

EKLIPSE coordinates innovative and transparent approaches for science, policy and societal actors to jointly provide the best available evidence leading to better informed decision-making and to identify current and future research priorities. A request on the state of knowledge regarding the potential of macro-algae culture in providing climate-related and other ecosystem services, focusing on knowledge gaps, was proposed by [EU Commission– DG MARE](#) to the fifth EKLIPSE Call for Requests (CfR.5/2019). The objective of this call for knowledge is to launch an initial scoping process on the request meant to identify available assessments, existing studies and other resources.

3 Background on EKLIPSE

EKLIPSE is an EU-funded project that started in February 2016. With support from the European Commission and a high level Strategic Advisory Board (SAB), the project aims to establish a robust and flexible long-term mechanism for policy support on biodiversity and ecosystem services, communicating and engaging a wide set of knowledge holders and ensuring tailor-made outreach of results to knowledge requesters and society more broadly.

The success of EKLIPSE and its resulting mechanism is in everyone’s hands:

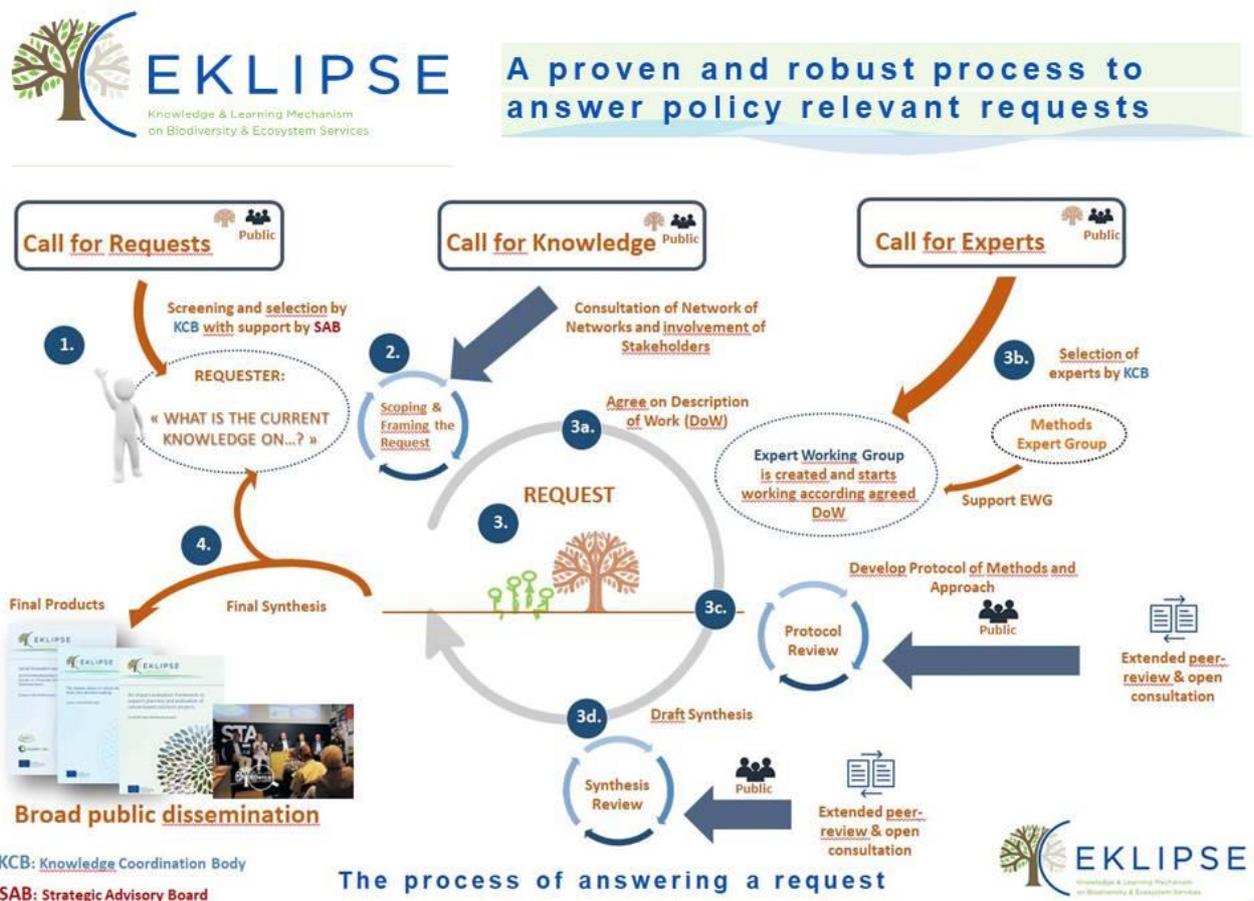
- the ‘requesters’ from policy and society who need to know what knowledge is out there to answer their policy or societal needs;
- the knowledge holders (be they scientists or other citizens) who want their knowledge to mean something; and
- the extensive networks working on biodiversity and ecosystem services who have the enthusiasm and knowledge to make the mechanism work in the long term.

4 The process: how Eklipse answers requests

The Eklipse process consists of several steps (see figure below): After the Call for request (step 1), the second step is the Call for Knowledge that supports further Scoping and Framing the request (step2). Based on the findings of the Call for Knowledge, EKLIPSE and the requester discuss how to proceed with the request (step 3). If already sufficient knowledge on the request is available or other reasons exist for not continuing with the request, the request will not be taken further, and the outcome is the collection of knowledge identified in second step. If EKLIPSE and the requester agree on continuing, the request will

be framed and finalised jointly with relevant science, policy and societal actors. EKLIPSE then organizes a Call for Experts inviting experts to form an expert working group on the request (step 3a).

The selected expert group will, together with the Knowledge Coordination Body (KCB) and the requester, agree on the methodological approach to be taken for the knowledge synthesis. This will be compiled in a protocol, made publicly available and peer reviewed (step 3b). During the process of gathering, integrating and synthesizing the best available evidence, communication between all relevant actors will be key. Finally, the results of the co-generated evidence will be peer reviewed before being communicated in targeted ways to the requester (e.g., as a report or brief or other output to be discussed with the requester), as well as relevant decision-makers, the knowledge community and the general public (steps 3c and step 4).



5 Next steps: How Eklipse will continue with this request

If EKLIPSE decides to carry out a new knowledge synthesis based on the responses to this call for knowledge, it will invite experts on the topic to express their interest in joining the Expert Working Group. The expert working group will cover diverse and complementary skills (including multidisciplinary skills and a broad geographical coverage) and will interact with relevant stakeholders to ensure appropriate methodological choices and uptake of outputs.

The Call for Experts will be widely publicized on the Eklipse website, on the Eklipse social media and other dissemination channels to ensure a broad coverage of disciplines and geography. The selected group will be supported financially by the request for travel expenses and in certain cases through honorary contracts.

6. References

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