



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

EKLIPSE is developing a European Mechanism to answer requests from policy makers and other societal actors on biodiversity related issues

More information on the processes and the EKLIPSE project funded by the EU in H2020 is available at www.eclipse-mechanism.eu

CALL FOR KNOWLEDGE FOR INITIAL SCOPING – CfK 01/2019, EKLIPSE – MAY 2019

Responses by: June 20th 2019

TOPIC:

What are the impacts of pesticide and fertiliser use in farmland on the effectiveness of adjacent pollinator conservation measures such as flower strips and hedgerows?

1 Invitation to share knowledge for informed decision-making

A number of policy actions at the European level are now in place that may support populations of pollinators and ensure the sustainable provision of pollination services. These include different measures under the EU Common Agricultural Policy (CAP): voluntary agri-environment and climate adaptation/mitigation measures under the rural development policy, as well as the 3 mandatory “Greening” measures under Pillar 1 (crop diversification, maintenance of permanent grassland and 5% of arable land dedicated to Ecological Focus Areas (EFA), for example trees, hedges).

The recent “EU Pollinators’ Initiative” sets strategic objectives and a set of actions to be taken by the EU and its Members States to address threats to pollinators. One action under this EU Pollinators’ Initiative is the development of a guidance document on land management practices that benefit pollinators, which is aimed at managing authorities, advisory services and farmers.

Part of this guidance will cover pollinator conservation measures, such as management of field margins, hedgerows or other non-cropped habitat. There remains, however, a need to understand better the impact of actions in the wider environment on these pollinator conservation measures. In particular, there is a need to determine the impact of pesticides and fertilisers in farmland on adjacent pollinator conservation measures, in order to develop guidelines on the most effective pollinator-friendly agro-

infrastructure. For example, systematic insecticides and fungicides have been found to contaminate wild flowers growing adjacent to arable fields (Botias et al 2015, 2016; David et al 2016).

EKLIPSE is therefore inviting 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 current knowledge on the impacts of pesticide and fertilizer use in adjacent farmland on the effectiveness of pollinator conservation measures, we invite you to answer the following questions:

- Do you know of any projects, papers, reports, grey literature that have or are exploring the impacts of pesticide and fertiliser use in adjacent farmland on the effectiveness of pollinator conservation measures such as flower strips and hedgerows?
- Could you share your experiences of on-the-ground actions aiming at understanding and increasing the effectiveness of pollinator conservation measures such as flower strips and hedgerows where pesticides and fertilisers are used in nearby farmland? These can be successful or unsuccessful processes – we can learn from both!
- Do you have any suggestions on what knowledge is needed to better understand the impact of pesticide and fertiliser use in adjacent farmland on the effectiveness of pollinator conservation measures such as flower strips and hedgerows 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 (POLLINIS), and will be further discussed with stakeholders such as DG ENV and DG AGRI 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.

Please contribute your comments and knowledge/references through the [online KNOCK forum](#).

How to contribute to the Call for Knowledge

All knowledge collected through this call for knowledge will be collected and discussed on the [KNOCK Forum](#). To upload documents and participate in the discussion, please register at our quick and easy '[Keep me Posted](#)' page. Then, click on the relevant thread to upload your information. 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** and can include:

- Links to open access papers.
- Links to published and unpublished grey literature or case studies.
- Description of on-going research projects, or knowledge compilations, expected to deliver results within the next year.
- Your on-the-ground experiences in this field.

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 whether missing knowledge is hampering the effectiveness of approaches that aim to restore biodiversity and ecosystem function and services was proposed by [POLLINIS](#) to the third EKLIPSE Call for Requests (CfR.3/2018). 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.

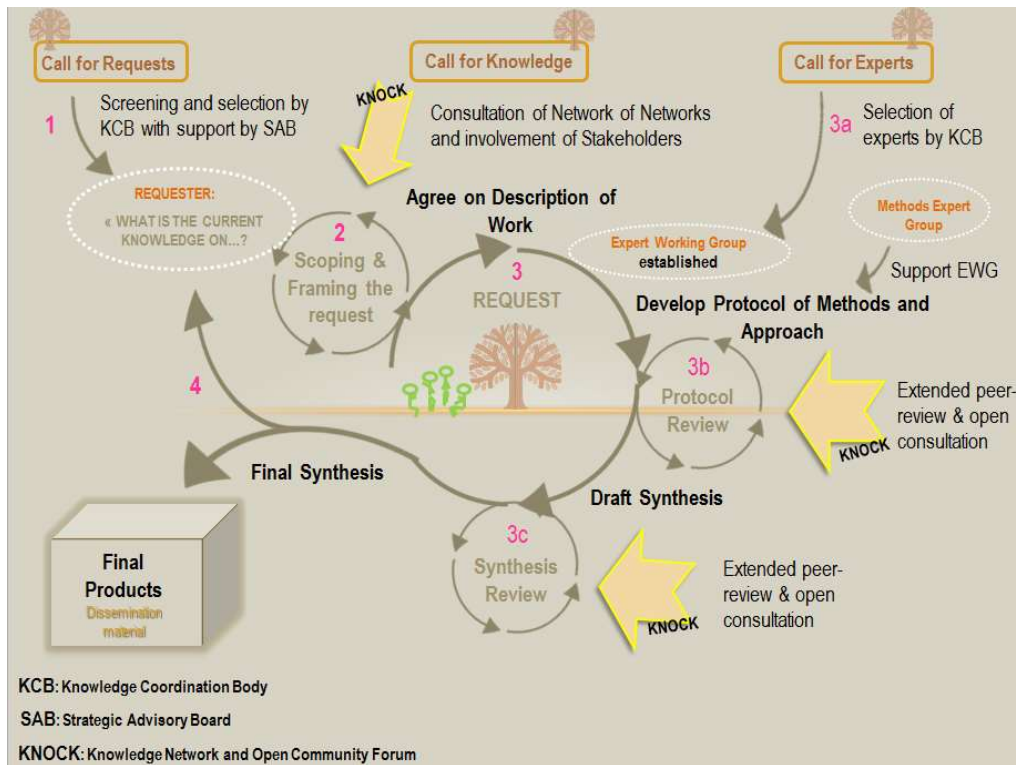
The success of EKLIPSE and its resulting mechanism is in everyone's hands:

- 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 3 c 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 Forum and other dissemination channels to ensure a broad coverage of disciplines and geography. The selected group will be supported financially by the EKLIPSE project for travel expenses and in certain cases through honorary contracts.

6 References

- Botías, C., David, A., Hill, E.M., Goulson, D., 2016. Contamination of wild plants near neonicotinoid seed-treated crops, and implications for non-target insects. *Sci Total Environ* 566-567, 269-278.
- Botías, C., David, A., Horwood, J., Abdul-Sada, A., Nicholls, E., Hill, E., Goulson, D., 2015. Neonicotinoid Residues in Wildflowers, a Potential Route of Chronic Exposure for Bees. *Environmental Science & Technology* 49, 12731-12740.
- David, A., Botías, C., Abdul-Sada, A., Nicholls, E., Rotheray, E.L., Hill, E.M., Goulson, D., 2016. Widespread contamination of wildflower and bee-collected pollen with complex mixtures of neonicotinoids and fungicides commonly applied to crops. *Environ. Int.* 88, 169-178.