Methodological Protocol to assess the impacts of pesticide and fertiliser use on adjacent pollinator conservation measures

Prepared by the EKLIPSE Secretariat, Knowledge Coordination Body Focal points, and Methods Expert Group Focal Point working on:

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?

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List of abbreviations

AEPM: Agri-Environment-Pollinator Measures

CAP: Common Agricultural Policy

DG AGRI: Directorate-General for Agriculture and Rural Development

DG ENV: Directorate-General for Environment

DoW: Document of Work

EC: European Commission

EFA: Ecological Focus Areas

ES: Ecosystem Services

EU: European Union

JFF: Joint Fact-Finding

JRPF: Joint Research Priority Finding

Introduction

This protocol is based on a request initially put to EKLIPSE on its third call for requests (CfR.3/2018) by Pollinis, a European NGO based in France, which campaigns for the protection and conservation of pollinators, notably bees, and promotes the transition towards alternative agricultural practices, away from the systematic use of pesticides in Europe.

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 cross-compliance and 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 habitats. 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.

This protocol should be read in conjunction with the Document of Work (DoW), which explores the existing knowledge in this area, who the main knowledge holders are, how the request relates to existing policy processes at the EU level, and identifies the most suitable programme of work and methodology for answering this request. The protocol aims to describe the programme of work and methodology in more depth and to allow for its review by the larger community.

The request

As mentioned previously, the request has been reformulated in a scoping phase as follows: "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?"

Initially, the following methods were suggested to address the request:

- Rapid evidence assessment: if the scoping review (Call for Knowledge) suggested sufficient evidence available, and a clear set of keywords could be identified to filter relevant evidence from the vast quantity of evidence on land management for pollinators and pesticide impacts upon them.
- Expert consultation: if there was little available published evidence.
- Joint Fact-Finding (JFF): if there was little available published evidence.

The call for knowledge revealed the number of available peer-reviewed studies on the specific topic to be rather limited. Expert consultation and Joint Fact-Finding methods were therefore considered more carefully (Dicks et al. 2017[1]).

The JFF method was chosen because it suits a situation where there is little published evidence available, but relevant evidence may be held by the private sector or NGOs; where there are likely to be different viewpoints and beliefs among stakeholder groups; and where there is potential for controversy in both the evidence and public opinion. However, the full JFF method is a several stage method that incorporates other research synthesis activities. It has the disadvantages of being time-consuming and resource intensive and having a high potential for bias according to who takes an active role in the process. For these reasons, the initial steps in a JFF approach was selected for this activity, where research needs are identified, based on existing knowledge among the stakeholders.

Methodological approach

We propose a multi-stakeholder consultation based on the first phase of a Joint Fact-Finding activity, focused on identifying research priorities. This involves representatives of all perspectives and opposing positions, including experts from relevant disciplines and non-experts, to ensure a participative process that balances all views.

A Joint Research Priority Finding (JRPF) approach

In the Joint Fact-Finding (JFF) method described in Dicks et al. (2017), separate coalitions of scientists, policy-makers and other stakeholders with differing viewpoints and interests work together to develop data and information, analyse facts and forecasts, and develop common assumptions and informed opinions. Finally, they use the information they have developed to reach decisions together. As such, according to Schultz[2], "joint fact-finding is really mediation within mediation – an attempt to resolve a sub-conflict over facts as part of an effort to deal with the overall conflict."

[1] Dicks LV, Haddaway N, Hernández-Morcillo M, Mattsson B, Randall N, Failler P, Ferretti J, Livoreil B, Saarikoski H, Santamaria L, Rodela R, Velizarova E, and Wittmer H. (2017). *Knowledge synthesis for environmental decisions: an evaluation of existing methods, and guidance for their selection, use and development – a report from the EKLIPSE project.*

[2] Schultz, Norman. "Joint Fact-Finding." Beyond Intractability. Eds. Guy Burgess and Heidi Burgess. Conflict Information Consortium, University of Colorado, Boulder. Posted: July 2003. http://www.beyondintractability.org/essay/joint-fact-finding

We will use the same type of multi-stakeholder committee and the same principle of focusing on available data and information to mitigate conflict, but the ultimate objective will be to jointly identify research needs and priorities (stage 1 in JFF). We call the truncated process 'Joint Research Priority Finding' (JRPF).

JFF has the following characteristics (Dicks et al. 2017), which also apply to JRPF, except that we expect it to be less time-consuming:

Cost	Resources to run the process. Usually requires a skilled facilitator or mediator
Time required	Usually rather time-consuming; however depends on when it is used and the nature of the question (complex and contested vs. relatively straightforward)
Repeatability	Medium. The outcome depends on personalities involved; process rather than "a method"
Transparency	Creating protected spaces might sometimes be needed, especially in mediation; however, the result and the process can be communicated transparently
Risk of bias	High if not all relevant groups included and the process is not well facilitated
Scale (or level of detail)	Any
Capacity for participation	Can be limited to relevant scientists/stakeholders holding opposing views but can also include elements to involve the general public
Data demand	The process does not require any data at the outset. The subsequent data demands depend on what is requested by participants, and the question to be addressed
Types of knowledge	All
Types of output	Shared understanding and clarity about remaining disagreements Policy learning
Specific expertise required	Qualified facilitators or mediators are essential for success

Susskind et al. (2007)[3] identify six steps in JFF (for more information on the full six steps of a traditional JFF see Annex 1), the first three of which are described below and will constitute our JRPF process. These steps have been complemented with the findings of Ehrmann et al. (1999)[4]:

- Step 1 (prior to the workshop): Assess the need for JFF/JRPF – identify dispute, identify a convener, identify a neutral professional, undertake JFF assessment; determine whether JFF is an appropriate method. Through the last EKLIPSE Call for Requests, Pollinis identified a societal need around the potential impacts of pesticide and fertiliser use on adjacent pollinator conservation measures. EKLIPSE acted as 'convener' and helped scope the question with Pollinis. In addition,

[3] Susskind, Lawrence, Patrick Field, Mieke van der Wansem, and Jennifer Peyser. "Integrating scientific information, stakeholder interests, and political concerns." Integrated resource and environmental management: Concepts and practice (2007): 181-203.

[4] Ehrmann, John R., and Barbara L. Stinson. "Joint fact-finding and the use of technical experts." The consensus building handbook (1999): 375-99.

EKLIPSE put out a Call for Knowledge to identify the key knowledge on the topic, and potential knowledge gaps. EKLIPSE, including representatives of the Knowledge Coordination Body and the Methods Expert Group assessed based on the above that an adaptation of JFF focusing on research priorities would be an appropriate method for addressing the issue put to EKLIPSE by Pollinis. EKLIPSE appointed Estelle Balian as neutral professional to lead the JRPF process. As part of her role in this first step, she is responsible for documenting stakeholder interests and determining incentives to participate in the JRPF process.

- Step 2: Convene the JRPF process. At the JRPF workshop, the participants come to agreement on ground rules, roles, responsibilities and timeframe. In addition, participants review existing knowledge (building on the outcomes of the Call for Knowledge), conflicting data and interpretations; identify key issues (carried out in large part through the scoping of the request); generate general questions. The neutral professional identifies and helps balance differences in stakeholder capacities.
- Step 3 (during the workshop): Define the main knowledge gaps and research needs. The participants during the JRPF workshop will identify the main knowledge gaps remaining from the general questions (Step 2); agree the research questions needed to address these knowledge gaps; identify relevant methods of information gathering/analysis and highlight the benefits and disadvantages of each; determine costs and benefits of additional research; determine whether proposed research will enable stakeholders to meet their interests. One methodology potentially used in this step could be the Nominal Group Technique[5], to first elicit and then agree on what the research priorities are.

There are a number of potential advantages in using our JRPF approach to address this request. These are as follows:

- There is relatively little information on the topic of "impact of pesticides and fertilizers on pollinators conservation measures", with what appears to be an element of factual disagreement.
- A comparatively small group can be involved, as long as all opposing positions are represented.
- The short time frame for this request means that the first three steps of the JFF could be a viable approach.
- There may be other benefits to the JFF, including bringing potentially conflicting stakeholders together to start developing joint research priorities and building trust through a focus on facts, rather than potentially more intractable issues such as values or worldviews.

Stakeholder assessment

[5] Hugé, J, Mukherjee, N. The nominal group technique in ecology & conservation: Application and challenges. Methods Ecol Evol. 2018; 9: 33– 41. https://doi.org/10.1111/2041-210X.12831; Colton, J. W., & Bissix, G. (2005). Developing agritourism in Nova Scotia: Issues and challenges. Journal of Sustainable Agriculture, 27, 91–112. https://doi.org/10.1300/J064v27n01_06.

A key step in the process is the initial stakeholder assessment. The aim is to identify all key stakeholders relevant to this request at the EU scale and assess their interests, capacities, and potential for reaching consensus-based agreements.

In the case of this request, a number of key stakeholders will be needed, including representatives of:

- conventional farming organisations
- organic farming organisations
- landowners' organisations
- agro-chemical manufacturers
- NGOs promoting pollinators
- beekeeping organisations
- EU level decision-making on pollinator conservation
- EU level decision-makers on agriculture

We propose to invite experts from all these perspectives to join an Expert Working Group. An open call for experts will be launched to invite relevant experts to join the JRPF and a group of about 18-20 experts will be selected to ensure balance in disciplines and sectors.

Our resulting expert working group will include members of each of the key stakeholder groups.

EKLIPSE JRPF process

In order to come to an agreement on stakeholder representatives (above), ground rules, an agenda, timetable and facilitator, in EKLIPSE we take a much more in-depth approach than suggested by Suskind et al. by putting this protocol out for review, to get comments and suggestions back from the wider public.

In addition, we suggest the following in terms of the JRPF process:

Ground rules

A few principles should be applied during the process:

- The process is voluntary and will require the agreement by key stakeholders to constructively engage in the effort
- Different views should be expressed with mutual respect and the use of correct language
- Confidentiality of the discussions is required: "Chatham House Rule" applies. Quotes/photos on social media are not allowed. Delegates will jointly agree on what is communicated of the discussions after the workshop.
- Facilitation is neutral and impartial.

Agenda

The workshop will last 1.5 days:

- Day 1: 12h-18h: the first day will focus on currently available evidence and identification of gaps and uncertainties/disagreements
- Day 2: 9h-17h: The second day will focus on research needs and priorities and ways to address them.

Timetable

August 2019	Methodological protocol (MP) submitted for peer review
End August 2019	Finalization of methodological protocol and approval by the KCB
September 2019- November 2019	Call for experts to join the JRPF
	Finalizing JRPF design
Early December 2019	JRPF workshop
Mid-December 2019	Review process via open consultation, organized by EKLIPSE
End January 2020	Final report to requesters

Facilitator

The suggested facilitator is Estelle Balian, an independent professional facilitator and conflict mediator, also member of the EKLIPSE Knowledge Coordination Body.

According to Susskind et al., the role of the facilitator in JFF is as follows:

- encouraging effective representation and participation of all stakeholders;
- helping the group meet its agreed goals as efficiently as possible;
- helping individual participants and the group as a whole with essential steps in the JRPF process;
- identifying and helping to resolve conflicts among participants, acting as an impartial mediator and problem-solver.

Consultation on the report

Feedback on the findings from the workshop will be sought from a range of stakeholders with the report publicised on the EKLIPSE KNOCK forum and encouraging comments. After

a month-long consultation, all comments will be summarized and added to the report in an Annex.

Expected outputs and formats

There will be three outputs of this work:

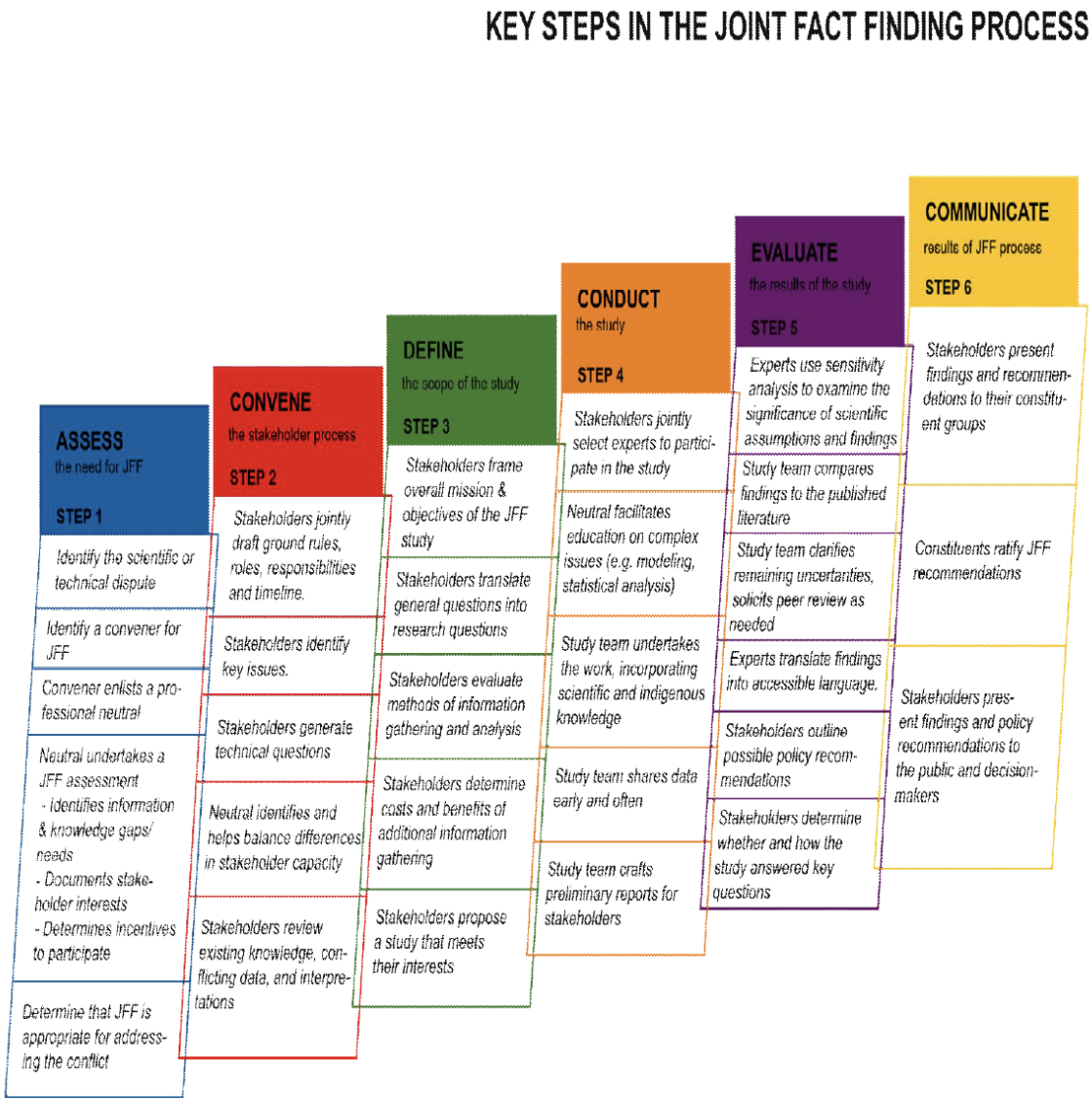
1) A report providing the key findings related to the joint fact-finding activity including comments from a public consultation.
2) A PowerPoint presentation for POLLINIS and key stakeholders presenting the key findings of the request.
3) A press release outlining the key findings of the report.

Anticipated tasks

To support the process, EKLIPSE will facilitate the following tasks:

- Carry out preparatory work and facilitate a Joint Research Priority Finding workshop The workshop will allow delegates to:
    - Exchange currently available facts and knowledge on the impact of pesticides and fertilisers in farmland on adjacent pollinator conservation measures
    - Discuss and agree on some of these facts and knowledge
    - Identify further knowledge/research needs to support the effective conservation of pollinators.
- Outline the summary of the workshop in a draft report, which will be put out for consultation, with feedback being added to a final report and handed over to the requester, as well as being publically available on the EKLIPSE website.

Annex 1. Full JFF process



Source: Adler et al., https://www.mediate.com/pdf/Joint%20Fact%20Finding.pdf