CropLife EUROPE

Problem formulation
risk assessment

Considerations for ecotoxicology testing strategy for substances of low concern

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Problem formulation principles

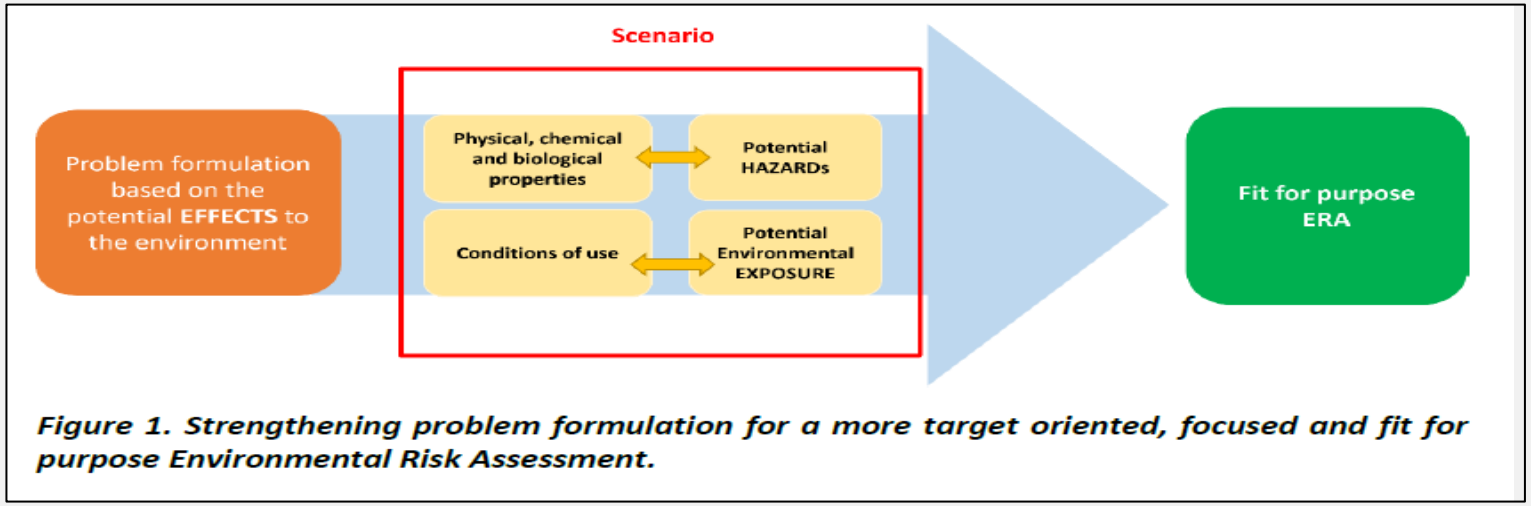

Figure 1. Strengthening problem formulation for a more target oriented, focused and fit for purpose Environmental Risk Assessment.

Data requirements for active substances and plant protection products*

1.5. The information shall include a full and unbiased report of the studies conducted as well as a full description of them.

*Such **information shall not be required**, where one of the following conditions is fulfilled:*

- *(a) it is not necessary **owing to the nature of the product or its proposed uses**, or it is not scientifically necessary;*
- *(b) it is technically not possible to supply.*

- *In such a case **a justification shall be provided***

Product characterization is key

(1) use all available information to create conceptual model for potential hazards and exposure
e.g. **properties of** the substance, literature, intended use pattern, read-across to comparable substances, experience from established uses and

(2) target the assessment to species which could be affected by the mode of action or physical hazard of the substance AND will be exposed based on the intended application method

Are there plausible pathways to harm?

How can these be assessed?

Toxicity to relevant species: Tier I acute data

Is testing technically feasible?

Does WoE address concern?

Conduct at appropriate high concentrations/rates to exceed environmental exposure.

e.g. Aquatic studies up to 100 mg a.s/L

Non-target arthropods at the max single application rate (xMAF)
If no adverse effects good indication of low toxicity

Adapt duration of acute studies depending on substance MoA and potential for delayed effects e.g dsRNA or physical effects such as desiccation

Toxicity to relevant species: Chronic toxicity

Chronic studies required when:

Acute effects are shown

Substance is stable in environment or prolonged exposure may occur from repeated application

MoA or literature trigger concern to different life stages e.g. larvae or sub-chronic effects

There is a latency to the MoA which could affect multiple life stages

Is testing technically feasible?

Alternative approaches to address concern?

Environmental fate and risk assessment

Estimate exposure

Based on the properties of the biochemical, what are the essential 'need to know' fate data to conclude low risk?

Apply default, worst case exposure assumptions

Calculations and modelling: 'Reverse risk assessment'

Margins of safety

Relative to existing occurrence of exposure

Key considerations:

- **Flexible approach required to focus assessment on relevant species and exposure pathways**
- **Early engagement with regulatory authorities essential to discuss testing strategy, waivers and WoE assessments**

- **Challenges with technical feasibility of studies**
  - Due to properties of the biochemical pesticide standard guideline studies may not be technically feasible or biologically relevant e.g. rapid degradation/instability
  - Regulatory acceptance of adapted/non-standard studies?
  - Alternative scientific approaches to address concern e.g. assessment of barriers to uptake (pH, stability)

- **Tiered approach to environmental fate data**
- What is the 'need to know' data to conclude low risk
  - Apply default worst case assumptions for exposure
  - Margins of safety
  - Relative to existing occurrence of exposure

EFSA Project - Develop a stepwise approach for a fit for purpose risk assessment, in particular for low concern active substances and uses (Part A)

EFSA Workshop
Thessaloniki, 15-16 January 2025

Perspective of the Biocontrol Industry

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EFSA Project - Develop a stepwise approach for a fit for purpose risk assessment, in particular for low concern active substances and uses (Part A)

- **IBMA supports a robust and efficient safety evaluation for all biocontrol products**
- **IBMA is calling for the introduction of a fit for purpose risk assessment scheme that takes into account the different biology and modes of action of biocontrol products, supported by appropriate expertise and capacities in competent authorities**
- IBMA participates to initiatives on the definition of a fit for purpose risk assessment for biocontrol such as the RATION project (Risk Assessment Innovation for Low-Risk Pesticides)

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EFSA Project - Develop a stepwise approach for a fit for purpose risk assessment, in particular for low concern active substances and uses (Part A)

- IBMA understands that the low-concern concept may be used as **presumption of low-risk** and may also have other risk assessment implications.

    - **It is not clear how the low-concern and low-risk concepts could articulate with each other and help overcoming the difficulties with the low-risk criteria** (low hazard versus low risk, status granted at the end of the RA, lack of MS harmonization with the application of the criteria at product level)

    - How the low concern concept could be further applied in practical terms and what would it mean for applicants to **streamline the risk assessment** and **speed up of approvals of active substances** .

- In our view, a **case-by-case analysis** will be necessary for the attribution of the low concern status to each active substance. Therefore, we would appreciate if a **panel of biocontrol experts could examine each substance against the low concern criteria** and **decide upon the attribution of the low concern status at the time of submission**.

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EFSA Project - Develop a stepwise approach for a fit for purpose risk assessment, in particular for low concern active substances and uses (Part A)

- "Regarding the risk assessment IBMA would like to promote a tiered approach based on the "need to know" concept as it is now in use with the microbial data requirements. The data decision tree published by IBMA in 2023 lays out such an approach for natural substances and it is also considered in line with the draft of the problem formulation guidance published at the beginning of 2024."
- The Data Decision Tree on Natural Substances was introduced in RATION and a few case studies have been produced on its application to a range of model active substances. Case study on its application on a peptide was also presented to the OECD Expert Group on Biopesticides (Q1 2024)

Data decision tree for identifying potential risks for natural substances when used in plant protection (published 6 June 2023)

https://www.tandfonline.com/doi/full/10.1080/09583157.2023.2210268

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MAIN COMMENTS on the Problem formulation document

1. INTRODUCTION

- The definition of LCASs and purpose of it seems vague and could be precised, in our opinion.

2. Problem formulation using Pathways to Breach the Protection Goal

- Lack of clarity over the use of this problem formulation and analysis plan. Could it be part of a pre-submission meeting GD?
- We note the introduction of new hazards (such as suffocation, desiccation) and non-target organisms might hinder a workable fit-for-purpose risk assessment since there are no guidelines on how to test for these hazards.

3. When and how to apply PF using PBPGs in the assessment

- The definition of sufficiency could be precised: What constitutes sufficient certainty and who decides that?
- Usefulness of the application of this method to those substances that do not fit the conventional GD and quantitative approach.

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MAIN COMMENTS on the Problem formulation document

3.1 To which substances can the method be applied?

- For example, SCLPs, which is the term used in Appendix A, there are currently no leaching assessments/argumentation/waiver conducted due to the volatile nature. Not to create new data requirements

4. Toolbox for problem formulation using PBPGs for the ERA of PPP

4.3 Likelihood assessment

- Vague differentiation of the likelihood descriptors. For instance, between *highly unlikely* and *negligible* (“exceptional circumstances”).
- Preference to work with descriptors expressed as pondering coefficients rather than words.

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MAIN COMMENTS on the Problem formulation document

5. Case studies

- Background levels not to be restricted only to semiochemicals. However, many substances concerned in this exercise are naturally occurring and there are natural background level concentrations.
- For example, some oily substances used as insecticides are basic substances. Can it be clarified whether basic substances do fall or will not fall under this document?

Appendix A – Generic pathways to harm and generic analysis plans

- **NAMs are frequently mentioned without further explanation**, doubts about the availability of **QSAR databases.**
- The C-Cycle should be removed from the analysis plan as **only the N-Cycle is relevant for the protection goal**
- Regarding Desiccation/bees: since the **rain frequency** will strongly differ per region, **how to use in a zonal assessment?**

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MAIN COMMENTS on the Problem formulation document

Appendix B – Case studies

- Regarding toxicity to aquatic organisms the rapid degradability of the substance in aquatic systems should be demonstrated" might be problematic for **complex mixtures**, e.g. complex plant extracts since **standard biodegradability tests do not work**; what to analyse?

- In the conclusions of the case studies, it is stated several times regarding the PBPGs involving new hazards such as hypoxia or desiccation that "without the availability of a risk assessment scheme, in case the body of knowledge is insufficient to assess the likelihood of breaching the protection goal**, only field studies are currently available** to assess if effects can be considered to be acceptable.". Relying on field studies seems counterintuitive to a fit-for-purpose RA. The interpretation of field studies is very complex, and the costs often prohibitive for SMEs that want to register biocontrol substances of low concern.

MAIN COMMENTS on the Problem formulation document

- **IBMA welcome problem formulation initiatives such as the PBPG which aims at streamlining the risk assessment for biocontrol. Such document could complement the GD on problem formulation developed by the European Commission.**
- IBMA notes an **increasing number of initiatives** developed from a **chemical standpoint** regarding biological control. We would like to **ensure that the mode of action and biology of biocontrol products** such as those included in the scope of this project **would be considered**. Therefore, the intrinsic characteristics and the natural occurrence of the active substance should be considered from the start.
- In our opinion, the document would need **more definition** to avoid room for interpretation. Participation from EFSA in pre-submission meetings as well as all member states having to engage in scientific discussions with the applicant would be required.
- This document goes a few steps further than the existing problem formulation initiatives. It **raises new questions** about effects that are not toxicity-driven (e.g. suffocation) and for which no studies or exposure models are available. **So, in the end this would result in an open question during the risk assessment and also the evaluation, therefore; how to conclude the risk assessment?**

Thank You!

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