

Workshop on Chemical Pollution and Biodiversity

*Wallenberg Conference Centre, Gothenburg, 23–24 November 2026,
Lunch-to-lunch*

Concept note

8 October 2026

Organizers



BECC

BECC

*(Biodiversity and
Ecosystem services in
a Changing Climate)*



FRAM

*(Centre for Future Chemical Risk
Assessment and Management
Strategies)*



GGBC

*(Gothenburg Global
Biodiversity Centre)*

1. Rationale and background

Global assessments identify pollution as one of the key direct drivers of biodiversity loss and impacts on ecosystem processes, alongside other drivers such as land- and sea-use change, direct exploitation of organisms, climate change, and invasive alien species (IPBES, 2019). However, chemical pollution is often underrepresented in biodiversity and ecosystem research, despite evidence that a wide range of chemical contaminants, far beyond well-studied cases such as mercury and pesticides, affect species, ecosystems, and ecological processes (Groh et al., 2022; Sigmund et al., 2023; Sylvester et al., 2023; Samuel et al., 2023).

Chemical pollution also interacts with other drivers of biodiversity loss in complex ways, including through combined stressors, mixture effects, indirect effects on species interactions, and impacts on ecosystem functioning and resilience. These interactions create pressures that remain insufficiently understood and are often difficult to address within established disciplinary and policy frameworks (Sigmund et al., 2023; Sylvester et al., 2023; Samuel et al., 2023). There is therefore value in creating a space where biodiversity researchers, ecosystem scientists, environmental chemists, ecotoxicologists, risk assessors, and governance scholars can jointly explore this interface.

The workshop will bring together two complementary research environments and a biodiversity research–policy interface:

- BECC (Biodiversity and Ecosystem services in a Changing Climate) is a strategic research area based at Lund University and the University of Gothenburg. BECC focuses on the dynamics of biodiversity and ecosystem services under climate and environmental change. Website: www.becc.lu.se
- FRAM (Centre for Future Chemical Risk Assessment and Management Strategies), based at the University of Gothenburg, focuses on understanding and managing risks from chemical pollutants to human health and the environment. Website: www.gu.se/en/fram-chemical-risk-assessment
- GGBC (Gothenburg Global Biodiversity Centre) is a biodiversity network hosted by the University of Gothenburg. Its broad network can help identify relevant biodiversity expertise and provide links to wider policy-oriented and societal perspectives as the initiative develops: Gothenburg Global Biodiversity Centre, University of Gothenburg

While these research-focused environments address aspects of environmental change, there has so far been limited structured interaction focused specifically on the links between chemical pollution and biodiversity.

2. Purpose of the workshop

The purpose of the workshop is to stimulate discussion and mutual learning across BECC, FRAM and GGBC around chemical pollution as a driver of biodiversity change. The workshop should help participants identify where existing research interests, methods and policy questions overlap.

The workshop aims to:

- Facilitate exchange between researchers working on biodiversity and pollution-related topics.
- Identify key knowledge gaps and research questions at the interface of pollution and biodiversity.
- Discuss opportunities for future activities, including joint proposals, pilot studies, or synthesis efforts.

3. Possible workshop themes

The planning group will refine the workshop themes based on the suggestions and input received from interested participants. Based on the input received, the planning group will develop parallel themes to be discussed during the workshop.

Potential themes include combined environmental stressors, particularly interactions between chemical pollution, climate change and land use, as well as chemical mixtures and real-world exposure in terrestrial and aquatic ecosystems. Relevant contaminants include plastics, PFAS, pesticides, pharmaceuticals, metals and other chemicals of concern. The workshop could also address how contaminants affect species interactions, food webs and ecosystem resilience, and how chemical pollution and biodiversity can be monitored through improved study design, methods, impact assessment and governance.

A second cluster of themes concerns how emerging tools and decision frameworks can better address these challenges. This includes the use of AI, data science and predictive modelling to assess potential effects of chemical pollution on species, communities and ecosystems, as well as policy, governance and risk-assessment approaches that better account for biodiversity impacts. Discussion could also cover societal responses to chemical pollution and biodiversity loss, including policy instrument design, valuation of pollution costs and remediation benefits, and stronger links between scientific evidence and decision-making.

4. Format

The workshop will be organised as a lunch-to-lunch meeting at the Wallenberg Conference Centre in Gothenburg on the 23–24 November. We are aiming for a mixed group of participants from BECC, FRAM and GGBC and a small number of adjacent expertise areas where relevant. Travel and accommodation of BECC researchers from Lund will be covered.

The workshop will combine plenary framing, interactive networking and parallel group discussions. Day 1 will focus on building common ground across disciplines through introductory plenary sessions, research speed dating, a matchmaking exercise and interdisciplinary group discussions on knowledge gaps, promising research avenues and possible collaborations. Day 2 will move toward developing these ideas further in thematic groups shaped by participant input and Day 1 discussions, followed by a final plenary on key messages, possible follow-up activities and next steps. Informal exchange during breaks, lunch and dinner will complement the structured sessions.

5. Possible outputs

Expected outcomes include a shared overview of relevant research interests and expertise, identification of a small number of promising themes for further development, and agreement on whether follow-up activities should be coordinated through a small planning group. The workshop may also help determine whether to pursue a BECC Action application or other small-scale funding opportunities, and, where there is sufficient interest, provide initial material for a short white paper, synthesis note or research agenda.

6. Next steps

The planning group will finalise the workshop agenda based on participant registrations and submitted suggestions. Practical arrangements, including meals, travel and accommodation where relevant, will

be confirmed once registration closes on **23 October 2026**. Participants will receive the final programme and practical information ahead of the workshop.

References

Groh, K.J. (2022) “Anthropogenic chemicals as underestimated drivers of biodiversity loss: Scientific and societal implications,” *Environmental Science & Technology*, 56(2), pp. 707–710. Available at: <https://doi.org/10.1021/acs.est.1c08399>.

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Sylvester, F. (2023) “Better integration of chemical pollution research will further our understanding of biodiversity loss,” *Nature Ecology & Evolution*, 7, pp. 1552–1555. Available at: <https://doi.org/10.1038/s41559-023-02117-6>.