POLLINERA

Understanding pesticide-Pollinator interactions to support EU Environmental Risk Assessment and Policy

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PROJECT SUMMARY

PollinERA aims to move the evaluation of the risk and impacts of pesticides and suggestions for mitigation beyond the current situation of assessing single pesticides in isolation on honey bees to an ecologically consistent assessment of effects on insect pollinators using a systems approach.

SPECIFIC OBJECTIVES & ACTIONS

SO1 | Fill ecotoxicological data gaps to enable realistic prediction of the source and routes of exposure and impact of pesticides on pollinators and their sensitivity to individual pesticides and mixtures.

ACTION | Reporting on the identification of pesticide sources, routes, and levels of exposure as well as acute, (sub)chronic and interactive effects of pesticides on pollinators representing different taxonomic groups.

SO2 | Develop and test a co-monitoring scheme for pesticides and pollinators across European cropping systems and landscapes, developing risk indicators and mixture exposure information.

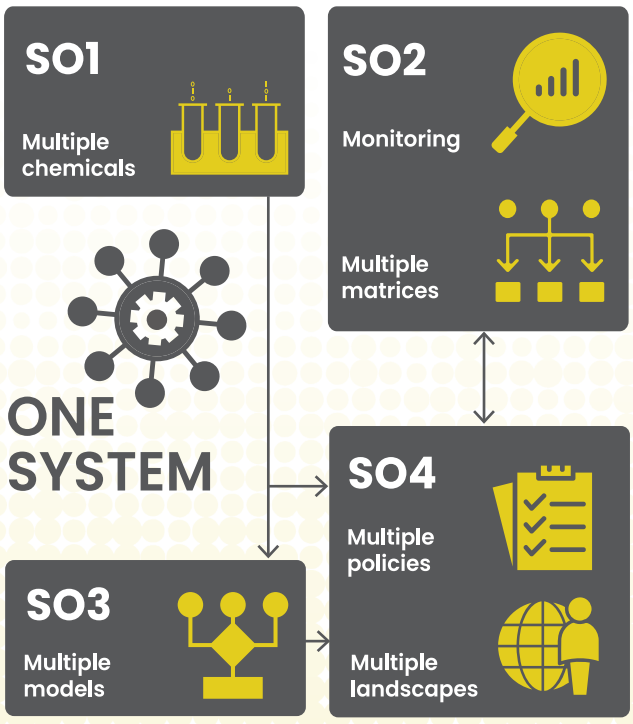
ACTION | Pesticide and pollinator co-monitoring scheme (PPCoMS) prototype and protocols made available through the EU Pollinator Hub.

SO3 | Develop models for predicting pesticide toxicological effects on pollinators for chemicals and organisms, improve toxicokinetic/toxicodynamic (TKTD) and population models, and predict environmental fate.

ACTION | *In silico* models related to chemical structure implemented in VEGAHUB (platform for QSAR (quantitative structure-activity relationship) models) and TKTD published on EFSA's TKPlate and species model papers published in the FESMJ open collection.

SO4 | Develop a population-level systems-based approach to risk and policy assessment considering multiple stressors and long-term spatiotemporal dynamics at a landscape scale and generate an open-database for pollinator/pesticide data and tools.

ACTION | Documentation of the integrated systems ERA tools completed. Predictive ERA tools are co-developed and reality-benchmarked with monitoring data.



WORK PACKAGES

- **WP1** Pollinator Exposure and Sensitivity
- **WP2** Predictive Toxicology
- **WP3** Pollinator Modelling
- **WP4** Monitoring and Risk Indicators
- **WP5** Systems Approach for Pollinator ERA and Policy Support
- **WP6** Communication, Dissemination and Exploitation
- **WP7** Project Management

DURATION

4 years
January 2024 - December 2027

CONSORTIUM

11 partners from 8 countries

The PollinERA consortium is comprised of 11 partners across 8 European countries. It brings together key experts from diverse realms of knowledge – from pollinator ecology, pesticide exposure and toxicological testing, to stakeholder engagement and communications.

PROJECT COORDINATOR

Prof. Christopher John Topping

Head of the Social-Ecological Systems Simulation centre (SESS)

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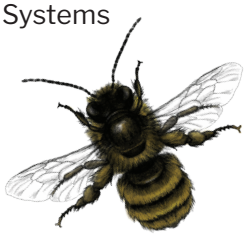
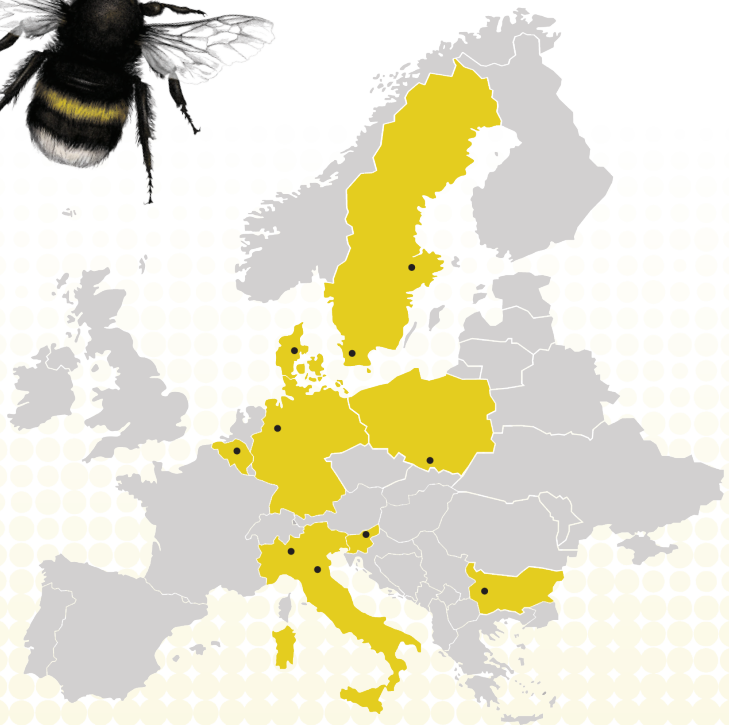


PARTNERS

- Aarhus University
- Lund University
- Swedish University of Agricultural Sciences
- BeeLife European Beekeeping Coordination
- Pensoft Publishers
- University of Osnabrück
- Jagiellonian University
- Institute of Nature Conservation of the Polish Academy of Sciences
- University of Bologna
- Mario Negri Institute for Pharmacological Research
- Zip Solutions



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