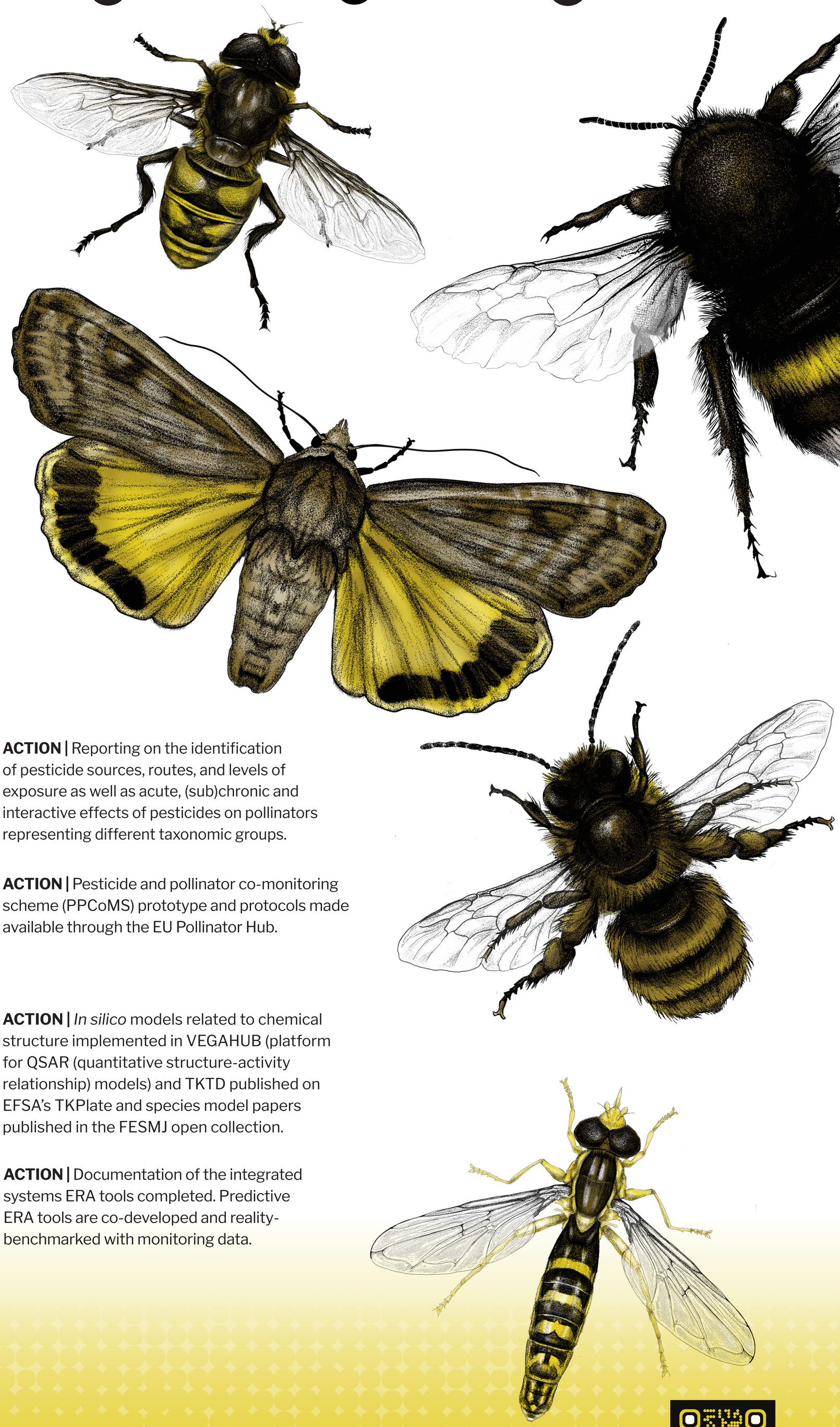
Understanding pesticide-Pollinator interactions to support EU Environmental Risk Assessment and Policy

pollinera-horizon.eu | pollinera-horizon.eu | PollinERA Project | @pollinera_eu | @PollinERA_eu



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.

GENERAL INFORMATION

CONSORTIUM | 12 institutions, 8 countries
STRUCTURE | 7 work packages
DURATION | January 2024 - December 2027

COORDINATOR

Prof. Christopher J. Topping

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

Aarhus University, Denmark

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.

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

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.

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 | 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.

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

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.

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

Funded by the European Union

Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union (EU) or the European Research Executive Agency (REA). Neither the EU nor REA can be held responsible for them.