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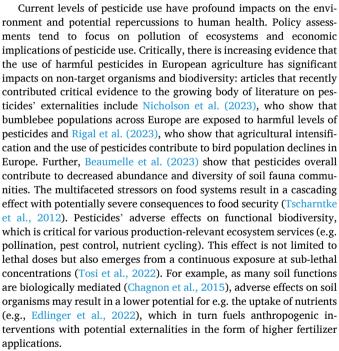


Policy Comment

Europe needs better pesticide policies to reduce impacts on biodiversity

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These recent findings contribute further evidence that current European regulatory systems currently fail to safeguard non-target organisms and ecosystems (Schneider et al., 2023). However, a recent proposal for the Sustainable Use of Pesticides in the European Union has faced considerable political pushbacks (Candel et al., 2023), especially due to concerns about food production and economic implications (Schneider et al., 2023). Consequently, the proposal was rejected by the European Parliament in December 2023 and withdrawn by the European Commission in February 2024. There seems to be a mismatch

between the increasing amount of scientific evidence on pesticides' externalities and their consideration in the political decisions taken. The better integration of the existing and recently emerging evidence in the political process requires the quantification of potential negative feedbacks of pesticide use (e.g. through biodiversity) on mid- to long-term food production and agricultures economic viability. To this end, new tools and approaches are needed, for example quantifying risk and external costs. However, methods and data for such estimations are currently still lacking (Candel, 2022, Mesnage et al., 2021). New analytical approaches are urgently needed to underline the importance of biodiversity related impacts also beyond nature conservation. Importantly, that would also highlight that there are significant potential costs of *not* acting on biodiversity loss for food production and its economic viability in the long run (Schneider et al., 2023).

To meet the goals outlined in the European Green Deal and the Kunming-Montreal Post-2020 Global Biodiversity Framework (Schneider et al., 2023), a holistic approach to pesticide policies is needed that combines different societal goals and reduces their tradeoffs with food security and farms' economic viability. A truly effective approach to reducing pesticides' impacts on non-target organisms and ecosystems would have to go beyond banning single active ingredients. Instead, a holistic transformation of agricultural systems and practices is needed, including large-scale substitution of potentially harmful pesticides with more sustainable pest management practices. This requires a fundamental redesign of farming systems: i) to reduce pest and disease pressure, e.g. by diversifying agricultural landscapes and ii) to create economic conditions that support farmers in the large-scale uptake of alternatives to pesticide use. To realize these developments, a mix of public and private policy measures is needed: An increased investment into R&D of effective and efficient alternatives to pesticides needs to be combined with legislative approaches that may include pesticide taxation and targeted support for farmers adopting low-or no-pesticide practices (Möhring et al., 2020). The results of Nicholson et al. (2023), Rigal et al. (2023) and others underline the urgency of implementing

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tangible and powerful policy measures now.

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