

9.5

STEP WP 5: effects of mass-flowering crops on pollinator communities in agricultural landscapes.



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Pollinator communities are negatively affected by multiple environmental pressures, but combined effects of these pressures and consequences for pollination functions across Europe are not well understood. One important factor that influences pollinators is the current expansion of mass-flowering crops. Spill-over effects between these crops and semi-natural habitats can enhance pollinators. On the other hand wild plants may compete with mass-flowering crops for pollination services. To study these effects a network of 96 study sites was established in six countries in 2011 in the framework of the EU-project STEP. We focus on local, landscape and temporal scale effects of mass-flowering crops on pollinator visitation rates and diversity. In a common study design we survey pollinator communities in semi-natural habitats and different mass-flowering crops. Additionally, population dynamics and reproductive success of bee-populations and crop pollination services are assessed. With the establishment of 32 wild flower strips in four countries we extended the basic design to evaluate the effects of a mitigation strategy on flower visiting insects. The overall aim of the work package is to perform a comprehensive and comparable study on a European scale and by this fill the gaps of knowledge that were identified by other work packages. We will give an overview of the structure in work package 5 in the STEP project and present first results from the German study region.

9.6

First European Red List for bees.

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Assessing the status of the several thousand species of European pollinators is a major task that requires a coordinated large-scale effort involving specialists from across Europe as well as a standardized framework of assessment. The STEP project is using the IUCN Red list procedures to guide the development of a Red Data Book for European bees (and a roadmap for European hoverflies) while at the same time realizing that the knowledge base for this assessment is both taxonomically and geographically incomplete. We are involving taxonomic specialists and national/regional experts in a series of intensive workshops, which will aim at: (i) agreement on standardized assessment criteria relevant for pollinators; (ii) training of experts to improve consistency of the assessment; (iii) identifying leaders for assessment of specific taxonomic groups; (iv) conducting initial broad assessments of the status of European pollinator species; (v) identifying knowledge gaps and ways to overcome them; and (vi) developing a process towards accurate assessment of the status of European pollinators as a basis for policy decisions concerning their conservation.

A Red Data Book for European bees will be published as both an open access e-book and in print version, and a roadmap for developing a Red Data Book for hoverflies will also be drafted.

for your remarks: