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PP-555 [Pollination and Bee Flora]

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Managed and wild bees: enemies or allies?

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Introduction

Many pollinators are declining, calling for appropriate mitigation policies to ensure ecosystem functioning, food security and human well-being.

There is consensus that factors such as pesticides and land management cause these declines. The role other potential stressors remain controversial[1,2]. For example, competition for resources with and pathogen transmission from managed bees are increasingly considered as contributing to wild bee declines, generating conflicts among beekeepers, farmers, conservationists and scientists.

To reconcile wild and managed bee proponents, we advocate increased communication and collaboration between stakeholders to co-create policies integrating ecological and socioeconomic dimensions.

We propose using modern analytical tools to improve our understanding of bee interactions in different contexts, alongside stakeholder engagement to reconcile managed and wild bee proponents[2].

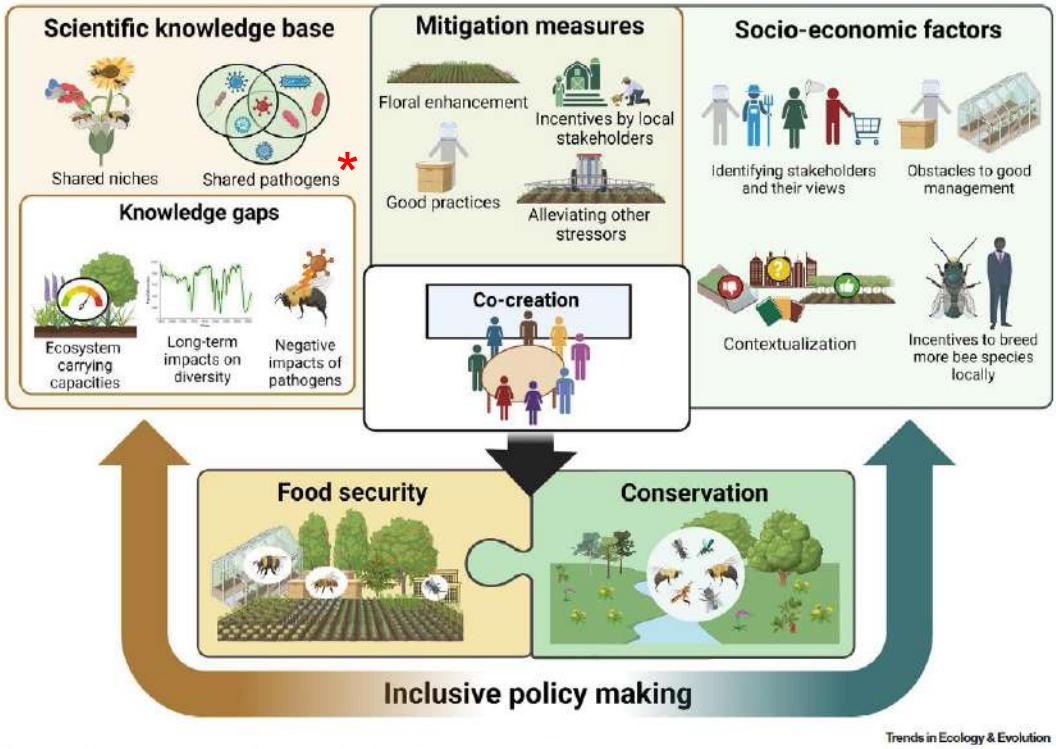

Figure 1. Guidelines towards inclusive bee policy-making. Inclusive policy-making to better integrate food security and conservation needs can be developed by taking into account both available and missing knowledge in a co-creation process considering socioeconomic factors. Figure created with Biorender.com.

Discussion

Following these guidelines will help promoting the dialog between wild and managed bee proponents, prioritizing the most impactful measures, and co-create consensual measures which can be used for policy-making to the benefit of all pollinators.

1. Dicks et al. 2021. A global-scale expert assessment of drivers and risks associated with pollinator decline. *Nature Ecology & Evolution* 5, 1453–1461
2. Beaurepaire et al. 2025. Avenues towards reconciling wild and managed bee proponents. *Trends in Ecology & Evolution* 40, 7–10
*see poster Probst A. et al. Pathogens on the move.

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Many pollinators are currently declining, calling for appropriate mitigation policies to ensure ecosystem functioning, food security and human well-being. While there is consensus that some factors, such as pesticides and land management, play an important role in these declines, other potential stressors remain more controversial. In recent years, competition for resources with and pathogen transmission from managed bees have been increasingly considered as contributing to wild bee declines, generating conflicts among beekeepers, farmers, conservationists and scientists. We argue that scientific knowledge of the interactions between managed and wild bees is insufficient to resolve the conflicts through contextualized, evidence-based policies. Existing studies are correlational and limited in space and time. This prevents a high level of confidence in the potential effects of managed bees on wild bees and hinders the creation of contextualized mitigation measures. In addition, effects on wild bee population sizes and genetic diversity, which are key to assessing long-term impacts, were never estimated. Potential negative interactions between managed and wild bees also need to be weighed against other stressors known to affect bees, such as land management, pesticide use, and climate change. To prioritize mitigation efforts, we advocate increased communication and collaboration between stakeholders to co-create policies integrating ecological and socioeconomic dimensions. To work towards this aim, we propose combining modern molecular and modelization tools to better understand the interactions in different contexts with stakeholder engagement to reconcile managed and wild bee proponents for the benefit of all bees. The availability of more contextualized and consensual bee conservation measures will allow a productive and sustainable beekeeping activity aligned with the conservation of biodiversity.