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Your ref.:

Our ref.:
2023/6352

Contact person:
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Influence of keeping honeybees (*Apis mellifera*) on wild pollinators

The Norwegian Environment Agency refers to the cooperation agreement entered between the Norwegian Environment Agency and The Norwegian Scientific Committee for Food and Environment (VKM) 31.01.2019, as well as authorization for assignment to VKM on risk assessment in 2023 and hereby requests VKM to carry out a Knowledge summary on possible/known impact and assessment of risk of wild pollinators in Norway because of keeping honeybees. We also ask for an assessment of whether there are risk-reducing measures for adverse impacts from honeybee keeping on wild pollinators in Norway.

Background to the case

The National Pollinator Strategy points out that beekeeping may be a risk for wild pollinators. The action plan for wild pollinating insects therefore includes the following measures:

The Norwegian Scientific Committee for Food and Environment (VKM) is commissioned to provide knowledge status and assessment of risk of negative impacts on species of wild bees and other pollinators because of various influences from honey production with honeybees.

Knowledge of pollinators has increased considerably in recent years, and at the same time interest in beekeeping has increased. Surveys have also been carried out internationally on the relationship between honeybees and wild bees (see, for example, Valido et al. 2019; Nanetti et al. 2021 and Wojcik 2018). Identified risks associated with keeping honeybees go in mainly on increased competition for resources, and the transfer of diseases and parasites.

The public administration needs as good documentation and knowledge as possible of how serious the risks associated with honeybees are in Norway. This as a basis for considerations regarding special geographical or local considerations in connection with beekeeping. This knowledge will be important in various actors' assessments of where and how many beehives that can be set out against consideration for areas important for pollinating insects.

Mission/mandate

Honeybee *Apis mellifera*

The honeybee has been naturally occurring in Europe north to southern Sweden and south to South Africa, but according to the Norwegian Species Data Bank, it is uncertain whether it has been natural occurrences in Norway before we began to domesticate the species in the 1700s. All honeybees in Norway now come from domesticated populations (Artsdatabanken 2023). The honeybee is one of several bees that are eusocial and form swarms made up of workers, queens and drones. One hive contains 50 – 60,000 individuals. In Norway there are about 1,300 tonnes of honey produced and about 1,000 beekeepers registered. In addition to revenue from the sale of honey, some beekeepers derive income from the bees' pollination in horticulture.

Given the extent of beekeeping in Norway, honeybee keeping may represent a risk to indigenous biodiversity. This can happen through increased competition, displacement, transmission of infection and parasites to other bees and wild insects. In Norway it is registered 207 species of wild bees in addition to the honeybee. In addition, wild pollinators represent a group of several thousand species which use the floral resources to varying degrees as a food source.

The Norwegian Environment Agency asks VKM to do the following:

- 1) Make a brief knowledge summary of the available literature of the influence on holding of honeybees on wild pollinating insects.
- 2) Assess whether keeping honeybees in Norway has, or could have, a negative impact on the population development of wild pollinators. Including
 - significance of the number of beehives and distance to resources for wild pollinators
 - the importance of the deployment of beehives in relation to how vulnerable populations of wild pollinators are (for example, near endangered species)
- 3) Identify and assess possible risk-reducing measures to:
 - help prevent/reduce the risk of wild pollinators when keeping honeybees

Data, reports, regulations, etc.

National Pollinator Strategy [Nasjonal pollinatorstrategi \(regjeringen.no\)](https://www.regjeringen.no)

Action plan for wild pollinating insects

[Tiltaksplan for ville pollinerende insekter 2021–2028 \(regjeringen.no\)](https://www.regjeringen.no)

Several laws and regulations regulate the keeping of honeybees. An overview can be found here:

[Bier | Mattilsynet](#)

Conditions

The assessments and the basis for these shall as far as possible be available in tabular form and be made available together with the report in digital form.

The report must be written in English with a Norwegian summary.

The Norwegian Environment Agency shares all relevant received data/information with VKM.

The report is published in dialogue with the Norwegian Environment Agency.
The Norwegian Environment Agency also refers to the cooperation agreement between the Norwegian Environment Agency and VKM.

Schedule

The deadline for submitting the report is June 15, 2024

References provided in the text above:

Artsdatabanken 2023. Honeybee (artsdatabanken.no)

Nanetti, A.; Bortolotti, L.; Cilia, G. Pathogens Spillover from Honey Bees to Other Arthropods. *Pathogens* 2021, 10, 1044. <https://doi.org/10.3390/pathogens10081044>

Valido, A., Rodríguez-Rodríguez, M.C. & Jordano, P. Honeybees disrupt the structure and functionality of plant-pollinator networks. *Sci Rep* 9, 4711 (2019).
<https://doi.org/10.1038/s41598-019-41271-5>

Wojcik, V. 2018. Floral Resource Competition Between Honey Bees and Wild Bees: Is There Clear Evidence and Can We Guide Management and Conservation? | *Environmental Entomology* | Oxford Academic (oup.com)

Contact persons in the Norwegian Environment Agency

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Best regards

Norwegian Environment Agency

This document has been signed electronically

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