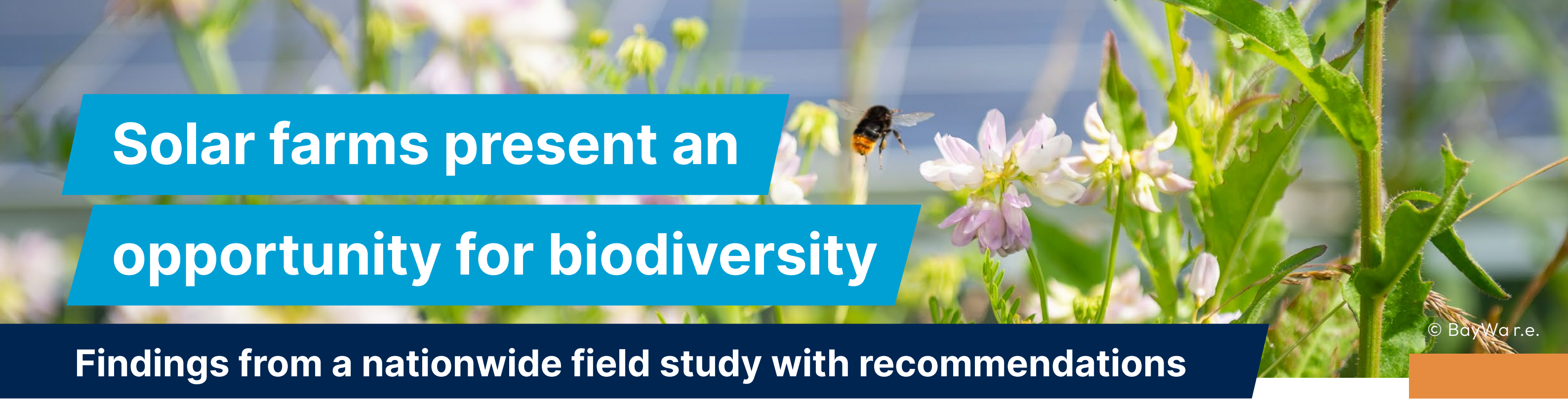


Solar farms present an opportunity for biodiversity

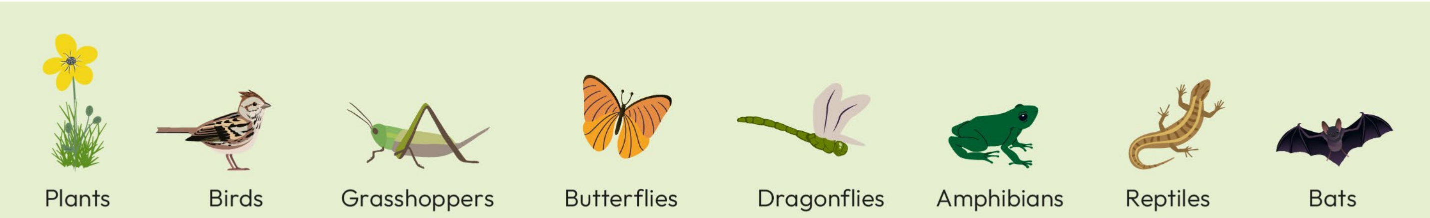
Findings from a nationwide field study with recommendations

Solar farms are an integral part of our modern energy system. They can be built quickly and are capable of generating safe and clean energy with predictable costs for electricity production over the course of several decades. Well-planned solar farms have another advantage – their value to biodiversity in a cultural landscape shaped by agriculture. They can make a positive contribution to environmental protection and nature conservation. The study **"Biodiversity in Solar Farms – A Nationwide Field Study"**[1] gives tangible form to this value and provides insights that are likely to be of considerable relevance to how solar farms are viewed from a conservation perspective.

An insight into the study: structure and focal points

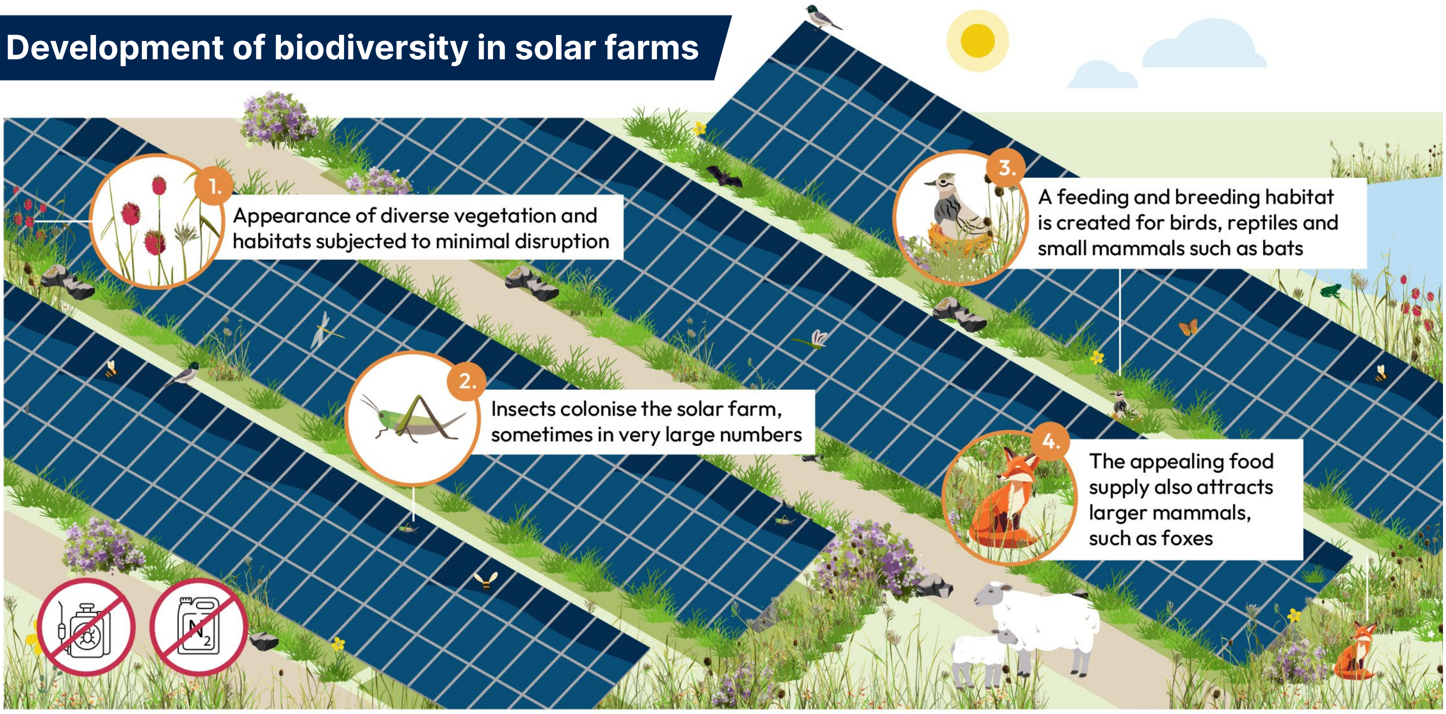
The study surveyed and evaluated biodiversity in **29 solar farms** across Germany. The focus of the surveys was on solar farms situated on land **formerly used for agriculture,** which is in line with the expansion focus covering both the EEG tendering procedure and the PPA segment. **Eight groups of species** were recorded on several occasions in 2024 by the study authors and commissioned experts in over 100 individual surveys carried out across the different solar farms:

Groups of species studied



There was a particular focus on recording the **botanical features and structural elements** relevant to biodiversity at all the solar farms. Other randomly recorded species supplemented the collected data, enabling the biologists to identify more than 550 species in total. The study also took into account current surveys as well as information provided by the operators relating to site maintenance or construction methods, for example[2].
"Biodiversity in Solar Farms" is the continuation of the bne biodiversity study from 2019, which significantly shaped the subject of biodiversity in solar farms at the time.

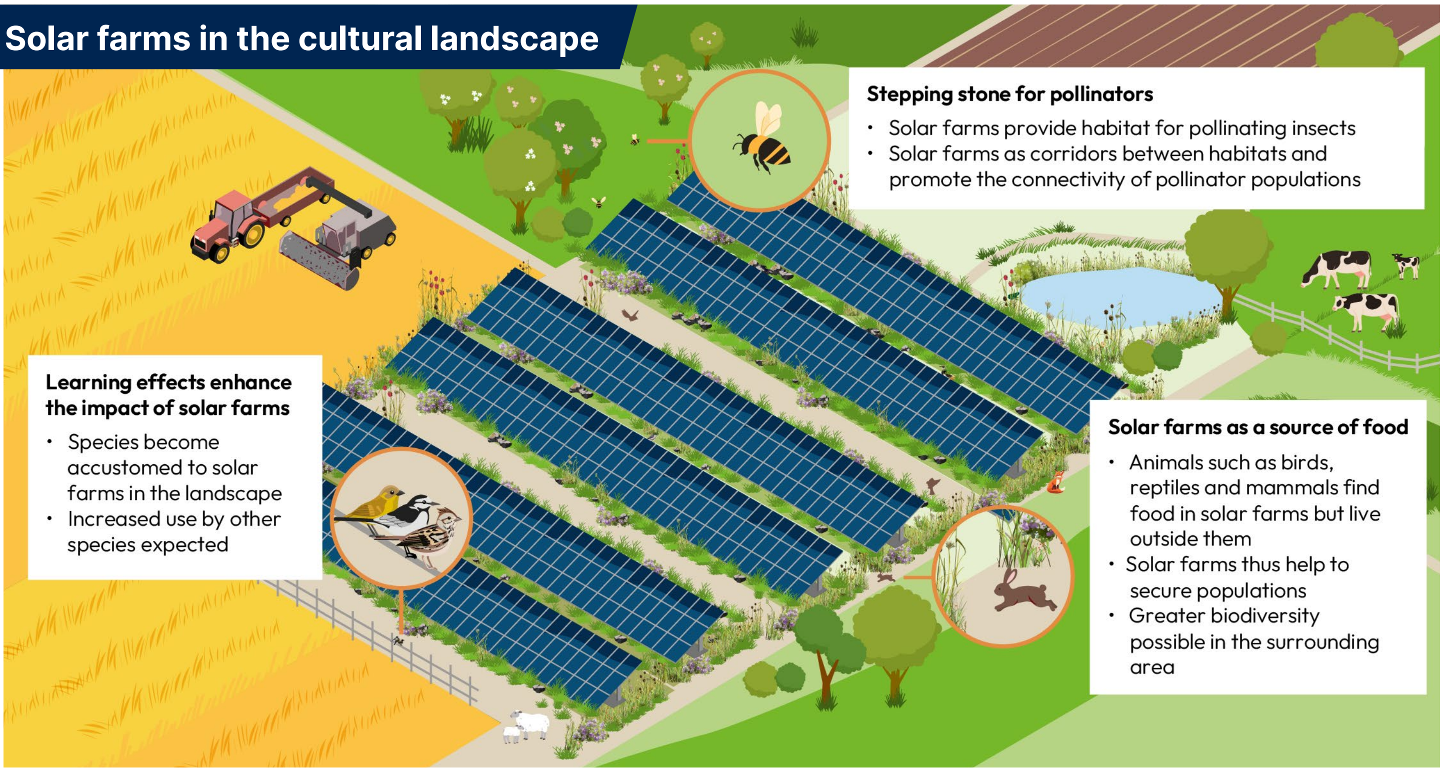
Development of biodiversity in solar farms



Animals discover solar farms as a habitat and feeding ground

Another finding from the study concerns the **learning ability of creatures** such as birds and bats. The increase in floriferous vegetation produces an **appealing food supply** on the PV power plant sites in the form of insects, which in turn attracts these groups of species. Amid this agricultural landscape, solar farms are **structures that cause minimal disruption** and stay in place for decades. This produces a learning effect, with the animals becoming aware that they can use this comparatively new environment as a **feeding and breeding habitat.**

Solar farms in the cultural landscape



Findings on flora and fauna:	Findings on construction methods and site management:
• Solar farms provide a structural diversity that is lacking in today's agricultural landscape and promotes biodiversity.	• The way in which a solar farm is maintained has a greater impact on biodiversity than the construction method itself.
• Many groups of species use solar farms as a habitat, sometimes very soon after it has been built (e.g. bats) and in large populations (e.g. grasshoppers).	• Flexible mowing dates are important in light of climatic changes.
• Skylarks have been seen, sometimes in large populations, which is why compensation measures may even occur within the site itself.	• Solar farms differ considerably from one another, even facilities that are located in a similar area and have been built in the same way. This difference indicates that solar farms need individual maintenance concepts.
• Bats actively use solar farms as foraging grounds and more so than adjacent arable land.	• Wider spacing between the rows of modules promotes the build-up of biomass.

The importance of biodiverse solar farms to policymakers and the economy

"Biodiversity in Solar Farms – a Nationwide Field Study" reinforces the value of well-planned solar farms to biodiversity. The **minimally disruptive structures** on these sites provide **valuable habitats** for rare and endangered species, which is one of the reasons why they meet criteria similar to those under the concept of **"High Nature Value Farmland"**[3] and should therefore also play a role in delivering the **National Strategy on Biological Diversity 2030**[4]. No funds from the federal budget would have to be made available for this measure. Solar farms help to achieve several goals – and this should also be reflected in planning practice and land use. For **biodiverse solar farms to become the standard,** project developers need planning certainty and landowners need protection against risk – by preserving the **status of sites as agricultural land,** for example.

[1] Available at https://sonne-sammeln.de/en/biodiversitaet/biodiversitaets-studie/
[2] Detailed information on the individual solar farms has been published at sonne-sammeln.de in the form of profiles
[3] HNV Farmland (High Nature Value Farmland) refers to agricultural land where farming practices sustain high levels of biodiversity. These areas provide habitats for rare or special animal and plant species that could not survive in landscapes where intensive forms of agricultural management are practised. Further information can be found at www.bfn.de/monitoring-von-landwirtschaftsflaechen-mit-hohem-naturwert
[4] Find out more at www.bmuv.de/download/die-nationale-strategie-zur-biologischen-vielfalt-2030-nbs-2030

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About the study: