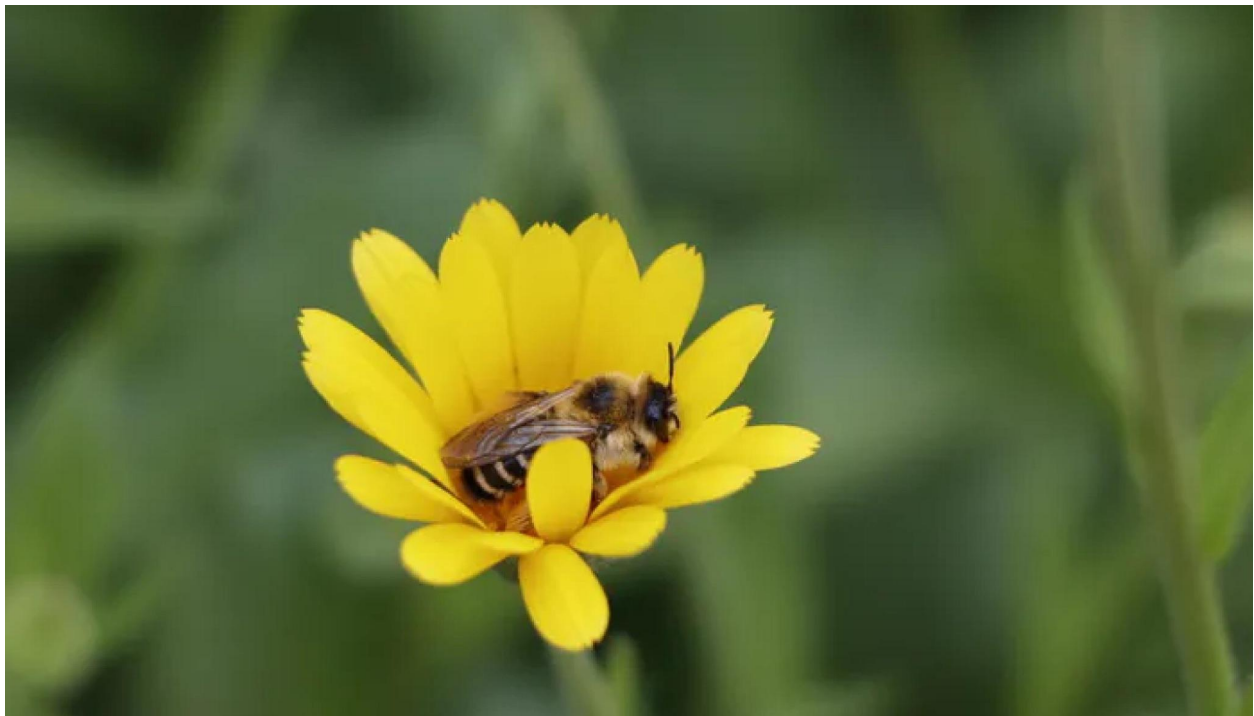


August 20th 2026

Climate Change: Already a Reality – Including for Beekeeping

Beekeeping is already feeling the effects of climate change: nectar sources are drying up, and extreme weather events are destroying apiaries. The German Beekeepers' Association therefore calls for more decisive climate action at European and national level and better support for agriculture and beekeeping in adapting to climate change.

By Sebastian Spiewok - Deutscher Imkerbund e.V.



Heat records, drought, water shortages, dried-up rivers and devastating wildfires: the summer of 2026 is once again showing us the effects of climate change that are already



being felt today in Europe. In Germany alone, the number of [heat-related deaths](#) is estimated at around 11,900 by the end of July. At the same time, extremely low water levels are causing considerable disruption to inland shipping. On the [Rhine, vessels](#) can in many places only operate with significantly reduced loads. The energy supply is also coming under pressure from heat and water shortages. In France, the [output of several nuclear reactors](#) had to be reduced because of high river-water temperatures and low water levels. In Romania, historically low water levels on the Danube led to the [shutdown of both reactors](#) at the Cernavodă nuclear power plant.

The fact that there have also been hot summers and individual extreme weather events in the past is not an argument against the existence of climate change. What matters is the long-term development in the frequency, duration and intensity of such events. Anyone who equates individual weather events with long-term climate trends is confusing weather with climate (see text box).

Weather or climate – what is the difference?

“It was hot in the past, too.” That is true. Hot summers, droughts and individual extreme weather events are not new phenomena. What matters, however, is not whether such events have occurred before, but how their frequency, duration and intensity change over the long term.

A single hot summer therefore says little about climate change. Only looking at many decades can show whether the climate is changing. This is precisely what climate scientists observe: temperatures are rising over the long term, and certain heat extremes are becoming more frequent and more intense. Weather is what happens today or tomorrow. Climate describes how weather develops statistically over long periods of time.

When nectar sources dry up

In several countries, the relatively wet spring appears to have partly mitigated the situation for beekeeping this year. However, we are receiving reports of changing nectar conditions from different regions of Europe.

In some regions, certain summer nectar sources were severely affected by heat and drought or failed completely. Where lush clover meadows once stood, in some cases only dry, brown areas remained. Romania shows how serious the consequences for beekeeping can be: in 2024, a decline in honey production of around [40–45% was reported](#) as a result of extreme weather conditions. Regional losses of up to 70% were reported for the acacia flow.

Flames and floodwaters

Wildfires have even longer-lasting effects when they destroy important nectar sources. Major wildfires in 2021 in Turkey's Muğla Province and on the Greek island of Evia destroyed pine forests and thus the basis of pine honey production in those areas. Entire apiaries are also repeatedly destroyed by such fires. At the other extreme, flooding caused by torrential rain can have devastating consequences for beekeeping. For example, during [Storm Daniel in Greece in 2023](#), almost 10,000 beehives were affected by flooding.

It is not only the quantity – the food itself is changing

Climate change is also altering the long-term food supply for bees. When plants are exposed to severe water stress, flowering and nectar production can decline or fail altogether. A [study published in 2025](#) shows that rising temperatures and lower

precipitation can significantly reduce the diversity and availability of food resources for honeybees in Europe. This can also alter the conditions under which bees forage.



The quality of food can also change. A [study](#) published in 2016 showed that increased CO₂ concentrations were associated with lower protein content in goldenrod pollen. This mechanism may also allow climate change to affect the nutritional basis of pollinators.

Parasites benefit

Parasites and pests can also benefit from changing climatic conditions. Higher seasonal temperatures can [increase Varroa mite infestation in honeybee colonies](#). They can also facilitate the further spread of the [Asian hornet \(*Vespa velutina*\)](#) in Europe. At the same time, [Tropilaelaps](#), another parasite, is moving closer and could benefit from the absence of a brood break during winter.

Shifts in flight and flowering periods

Wild bees are also affected by these changes. Heat and increasing drought can worsen their living conditions and [alter the composition of wild bee communities](#). At the same time, the flight and flowering periods of pollinators and plants are shifting, which can [disrupt](#) their temporal synchronisation.

Unusually fast

Over the past 800,000 years, atmospheric CO₂ concentrations remained significantly lower than today as part of the natural cycles of the ice ages, fluctuating within a range of roughly 50 to 100 ppm. Before industrialisation, concentrations were around 280 ppm. Today, the global concentration is already around 428 ppm.

This is not only about reaching a new high. The current increase is also occurring at an exceptionally rapid rate. Ice-core studies show that natural changes in atmospheric CO₂ concentrations in the past occurred much more slowly than the increase observed since industrialisation.

The [cause of this rapid increase](#) is known: through the burning of fossil fuels, land-use changes and other activities, humans are releasing large amounts of greenhouse gases. The [Intergovernmental Panel on Climate Change \(IPCC\)](#) therefore assesses human influence on current warming as unequivocal.

What affects agriculture also affects beekeeping

The consequences extend far beyond beekeeping. At the end of July 2026, the European Commission's Joint Research Centre reported widespread crop damage in parts of Western and Central Europe as a result of repeated heatwaves and persistent water deficits. Yield expectations for crops including sunflowers were revised downward by [6–7%](#).

Climate action needs greater determination

From the perspective of the German Beekeepers' Association, the already visible consequences of climate change require greater reliability and ambition in climate action. This includes a consistent expansion of renewable energies and the necessary infrastructure. At European level, the political framework conditions for this must be created. At the same time, agricultural policy must support farms in adapting to changing climatic conditions. We need a resilient agricultural landscape, diverse food resources for pollinators, healthy soils, responsible water management and the use of plants that can withstand climate change.

European climate policy – as well as policies in many Member States – must be critically reviewed and consistently developed further. We are seeing efforts in many Member States being undermined. In 2026, the European Union set its legally binding 2040 climate target at a 90% reduction in net greenhouse gas emissions compared with 1990. The decisive issue now is to ensure that this target is followed by sufficiently ambitious measures.

Beekeeping may have come through this year relatively unscathed in some places. This, however, is no reason for complacency. Experiences from some regions of Europe show how quickly conditions can change.

Climate change does not stop at national borders. What affects bees and beekeepers ultimately affects society as a whole.

Go to the original article: [Klimawandel: Längst Realität – auch für die Imkerei](#)