Review summer 2022

The summer of 2022, with record heat, record drought and forest fires of unprecedented proportions in France and many southern European countries, showed the force with which man-made climate change can also strike Europe today. But all scientific analyses indicate that all this is only the first sign of an increasingly hot climate in the future. But how did the summer turn out for us?

Last summer (months of June, July and August) 2022 was 2.9 degrees too warm at 20.2°C (weather station Dresden-Klotzsche), with the very warm months of June and August in particular. A total of 17 hot days (daily maximum greater than/equal to 30°C) and 53 summer days (daily maximum greater than/equal to 25°C) were recorded. In recent years, the number of summer days has increased just as significantly as the number of hot days. In the long term, summer temperatures have already increased by 2.4 degrees between 1961 and 2022, far more than the global average.

The sun shone much more frequently and for longer than normal, and the total sunshine duration came to an increase of 196 hours. Thus, 2022 moved up to 3rd place after 2019 and 2018, even leaving the exceptional summer of 2003 behind. In the long term, sunshine duration has already increased by 129 hours between 1961 and 2022.

With total precipitation of 153 mm, the summer of 2022 in Dresden-Klotzsche was 65 mm too dry. The month of July in particular stood out with a minus of 53 mm. Only August recorded a slight plus of 15 mm. It was also striking that rainfall of more than 5 mm was recorded on only 7 days (negative record together with the years 2020 and 2018). In the long term, summer precipitation has so far increased by 21 mm between 1961 and 2022.

Summa summarum, i.e. in the synopsis of spring and summer 2022, we experienced the fourth drought year in a row in the period since 2018 (with the exception of 2021). It is still true that there has never been a comparably critical situation with regard to drought in Germany since measurements began. In nature, the drastic consequences of this drought can be seen in the continued death of various tree species on an unprecedented scale. The main causes of this development here and in many other regions of Europe are largely known, but will not be discussed here.

Fig.2: Drought-stricken English oaks in summer 2022 in Radebeul-Lindenau. Even the oaks known for their resilience are struggling to survive here (photo source: Küchler/15.08.22).