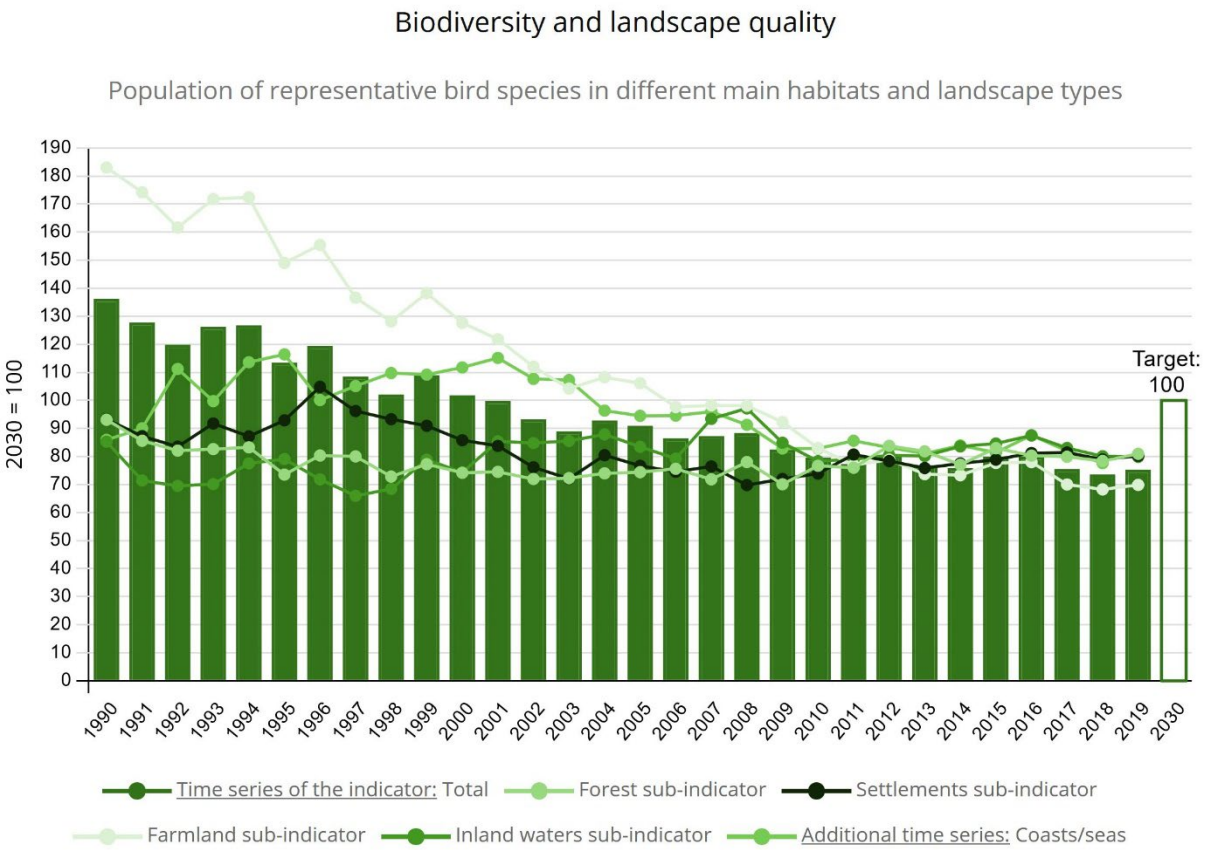
Biodiversity – *Conserving species – Protecting habitats*

15.1 Biodiversity and landscape quality



Note(s):
• Sub-indicator Alps: Data series suspended.
• Sub-indicator inland waters and coasts/seas: Data extrapolated for individual years.

Data source(s):
Federal Agency for Nature Conservation

Definition
The indicator represents the population trends for 41 selected bird species in the form of an index. The indicator summarises the changes in the populations of selected bird species that represent the most important types of land use and landscape in Germany (sub-indicators for farmland, forests, settlements and inland waters).

Intention
A large diversity of animal and plant species is an essential prerequisite for an efficient ecosystem and forms an important basis of human life. If the quality of the habitats increases as a result of a reduction in pressures, an improvement in the sustainability of utilisation or the successful implementation of nature conservation measures, this is reflected in increasing numbers of the selected bird species and thus in a positive development of the indicator. As other species besides birds are also linked to a richly structured landscape with intact, sustainably utilised habitats, the indicator also indirectly

reflects the development of numerous other species in the landscape and the sustainability of land use.

Target
Reach the index value of 100 by 2030

Content and progress
The indicator for biodiversity and landscape quality approximates biodiversity as well as landscape quality by means of population trends of selected bird species. It depicts the population development of 41 bird species that are representative of the main landscape and habitat types in Germany. For the sub-indicators forests, settlements, and inland waters, ten species are used respectively, while agricultural land is represented by eleven species. The sub-indicators coasts and seas (also ten bird species) and Alps are additionally presented, as their developments are particularly influenced by specific conservation measures. However, the landscape type Alps is currently not depicted due to insufficient data availability.

Population sizes of the bird species are recorded annually within monitoring programmes conducted by the Dachverband Deutscher Avifaunisten (DDA) in cooperation with the Federal Agency for Nature Conservation (BfN) and are each related to defined target values. These target values for the year 2030 were species-specifically defined by an expert panel within a research and development project. Historical reference values for 1970 and 1975 were reconstructed based on the Red Lists. For each sub-indicator, the arithmetic mean of target achievement across the respective ten or eleven species considered is calculated. The overall indicator results from a weighted sum of the sub-indicators, with the weighting factors corresponding to the area shares of the respective main habitat or landscape types (agricultural land: 49%, forests: 29%, settlements: 13%, inland waters: 9%).

Between 2019 and 2022, the indicator was retrospectively reviewed and revised as part of a research and development project of the BfN. Both the target values and the species selection were updated to reflect current conditions. Consequently, the time series were recalculated retrospectively. Although the indicator is based on bird species, it indirectly reflects the development of numerous other species as well as the sustainability of land use, since many species depend on intact and sustainably managed habitats.

The overall indicator value in 1990 was significantly below the reconstructed values for 1970 and 1975. In the last ten reporting years (2009 to 2019), the decline continued: the indicator value decreased from 82.5% of the target value in 2009 to 75.3% in 2019. If this trend continues, the politically established target for 2030 is unlikely to be achieved.

The development of the sub-indicators for the different habitat types varied over the same period: the sub-indicator for agricultural land fell from 92.3% in 2009 to 69.9% in 2019, while that for inland waters decreased from 84.9% to 79.9%. In contrast, the sub-indicators for forests and settlements showed positive trends: the sub-indicator for forests increased from 70.1% (2009) to 80.9% (2019), and that for settlements improved from 72.0% to 80.3% over the same period. The sub-indicator for coasts and seas, which is not included in the overall indicator, recorded a decline from 91.3% in 2008 to 77.6% in 2018. Data for 2019 were not available at the time of publication.

Type of target
Target with specific target value

Assessment
The population of representative bird species across various main habitat and landscape types should be increased to at least an index value of 100 by 2030.

According to the target formulation, indicator 15.1 is assessed as thunderstorm for 2019, as the indicator values have, on average over the past six years, not developed in the desired direction.

Note: Due to the calculation methodology of the indicator, the target is not treated as an annually to-be-achieved value if it was reached ahead of schedule (as was the case before 2001).