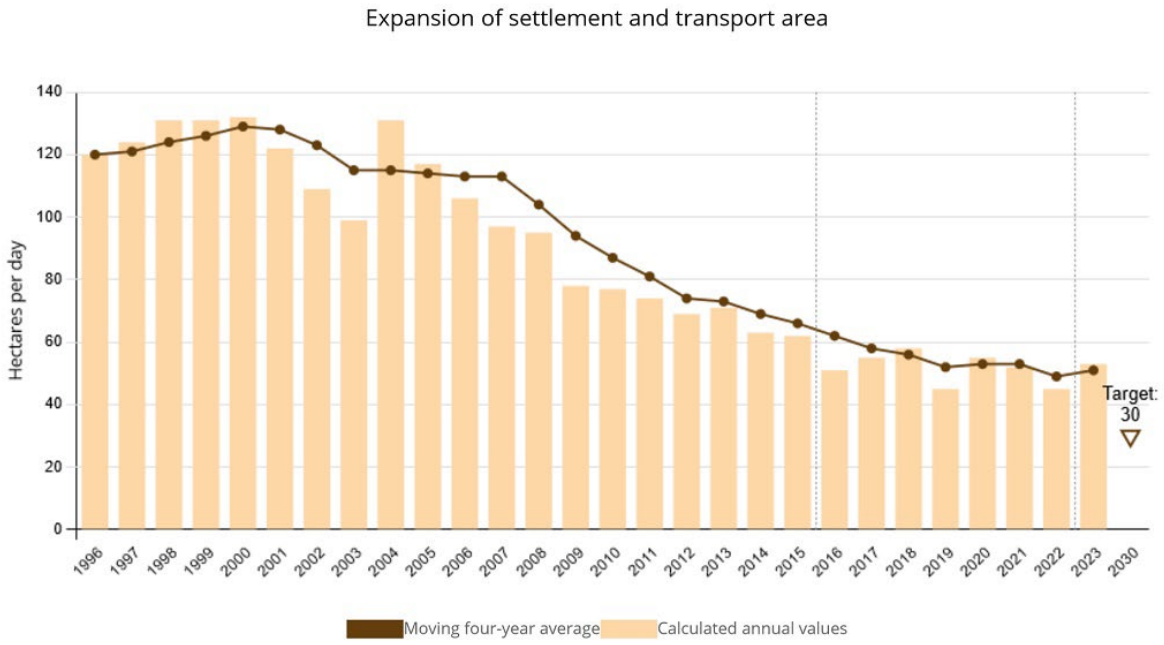
Land use – *Using land sustainably*

11.1.a Expansion of settlement and transport area



Definition(s):
• Settlement area (built on): Housing, industry and commerce (excluding exploitation area), public facilities.
• Recreation area, cemeteries: sports, recreation and leisure area, cemeteries.

Note(s):
From the 2016 reporting year onwards, the official land survey is based on the Official Real Estate Cadastre Information System (ALKIS). – With the changeover of the documentation for modelling the geoinformation of the official surveying system from version 6.0.1 to 7.1.2 in 2023, the list of land use types was expanded once again. This makes it harder to compare with previous years and calculate changes. The settlement and transport area determined after the changeover largely contains the same types of use as before. – The data on the annual values and the moving average for the years 2020 to 2022 have been corrected. For the period mentioned, the surveying administration carried out a large number of reclassifications from vegetation to transport areas, which do not correspond to any change in land use in reality. The present results have been adjusted for these reclassifications.

Data source(s):
Federal Statistical Office

Definition

The indicator represents the average daily increase in settlement and transport area (in hectares per day).

Intention

Land is a limited resource. Agriculture and forestry, settlement and transport, nature conservation, raw material extraction and energy production, for example, compete for its use. The use of additional land for settlement and transport purposes should therefore be limited.

Target

Reduction to an average of less than 30 hectares per day by 2030; net zero land consumption by 2050

Content and progress

The indicator represents the average daily increase in settlement and transport area (SuV). Settlement area includes, among other things, residential building land, industrial and commercial areas, land for public facilities, recreational areas and cemeteries. Extraction land, that is, areas used for mining and open-cast mining, is in principle also part of the SuV but is not taken into account for the calculation, as it is assumed that such land will be repurposed in the long term, for example as post-mining landscapes. The indicator differs from the increase in sealed surfaces, as it includes not only sealed land but also undeveloped and unsealed settlement areas such as private gardens, parks, green spaces, roadside greenery and other unsealed transport surfaces. According to calculations by the Environmental-Economic Accounts of the Länder, the proportion of sealed surfaces within the SuV in Germany averaged around 45% in 2023.

The data basis is the land survey by type of actual use (official land use statistics) of the Federal Statistical Office, based on the official cadastral survey of the Länder. Due to the harmonisation of the cadastral systems, in recent years there have been reclassifications of areas, even without actual changes in use. To offset these effects, a moving four-year average is applied, which covers the current reporting year as well as the three preceding years. In 2016, a switch was made to a new land-use classification, which hampers comparability with previous years. For example, areas formerly used for agriculture were reassigned to new categories such as recreational areas or mixed-use areas. As a result, a detailed breakdown by land use for 2016 is not available.

A further extension of the land-use classification was implemented in 2023 with the introduction of a new modelling of the geospatial information of the official surveying system (GEOInfoDok), accompanied by changes to the modelling criteria for actual use. To minimise distortions of the land indicator caused by this methodological change, effects not corresponding to actual changes are excluded from the calculation. As the migration to the new GEOInfoDok is completed at different times in the Länder surveying authorities, these effects may occur at different times depending on the Land and may affect results over several years. In the medium term, this methodological change will lead to significant quality improvements in land use statistics.

In 2023, the total SuV amounted to 50,788 square kilometres[1], of which around 64% were settlement areas and 36% transport areas. The proportion of SuV in Germany's total area was around 14%. The largest land use was agriculture, with 179,891 square kilometres (50.3%), followed by woodland with 106,886 square kilometres (29.9%). Between 2000 and 2023, a total of 6,849 square kilometres were converted into SuV – more than twice the size of the Saarland and around 1.91% of Germany's total area.

Growth in SuV was driven primarily by the designation of new settlement land: since 2000, 85% of the increase was in settlement areas, and 15% in transport areas. The moving four-year average of newly claimed land fell to a low of 49 hectares per day by 2022 and most recently (2023) stood at 51 hectares per day. The politically determined target of reducing daily land take to below 30 hectares by 2030 will not be met if the current trend continues.

[1] The figures for the annual values and the moving average for the years 2020 to 2022 have been revised. In this period, the surveying authorities carried out extensive reclassifications from vegetation to transport areas, which did not reflect any actual changes in land use. The results presented here have been adjusted accordingly.

Type of target
Target with specific target value

Assessment
The expansion of settlement and transport areas should be reduced to a maximum of 30 hectares per day by 2030 (averaged over the years 2027 to 2030).

As indicator 11.1.a is calculated as the average of the current year and the three preceding years, the politically defined target value must be achieved on average across 2027 to 2030. However, if the development observed over the past six years continues, the indicator would only decline to around 44 hectares per day by 2030. The gap to the target value therefore remains so substantial that indicator 11.1.a is assessed as cloud for 2023.