Indicator Factsheet: Mowing frequency and mowing time

Indicator: Intensity of grassland use **Sub-indicator: Mowing frequency / mowing dates**	
Description	The indicator describes the intensity of use of permanent grassland, temporary grassland and non-productive grassland areas in the open countryside. The intensity of use is quantified using the mowing frequency (M) and the timing (DOY = day of year) of the first and second grassland cuts. The final maps are corrected using a time series of phenological observations from the Deutscher Wetterdienst (DWD), whereby identified cuts occurring before the average (1992–2024) date of the first cut (minus two standard deviations) are excluded.
Data basis	Mapping of grassland areas (Blickensdörfer et al., 2022). Mapping of mowing events based on Sentinel-2 and Landsat satellite data time series using a rule-based approach at the pixel level (Schwieder et al., 2022). Time series of phenological observations from the DWD (1992-2024).
Calculation	M = number (n) of mowing events per year for total grassland area M_{PGL} = number (n) of mowing events per year for permanent grassland M_{TGL} = number (n) of mowing events per year for temporary grassland DOY_i = day of the year on which mowing event *i* took place
Spatial reporting level	**Coverage**: National; **Resolution**: hexagons (100 ha, proportion of open land > 25%); **Reference area**: Grassland
Reporting period/ interval	From 2017 / annually
Interpretation	A low mowing frequency generally indicates extensive use and promotes greater species diversity. A later first mowing of grassland in the season (after flowering) is generally beneficial for the biodiversity of grasses and thus also for their pollinators. In nature conservation contexts, there are sometimes restrictions on the earliest mowing date; furthermore, late (first) mowing dates are encouraged as part of agri-environmental measures.
Limitations	Mowing detection may be affected by the lack of cloud-free satellite data. The evaluation of the results is based on a limited amount of reference data. The first and second mowing events can be detected more reliably than subsequent mowing events due to higher biomass accumulation. No distinction is made between grassland types (meadow, pasture, hay meadow).
Latest Update	2025