

Germany

Working Committee of the Surveying Authorities of the Laender of the Federal Republic of Germany (AdV)

Modernising Germany's land cover mapping system

“Accurate, timely land cover information is fundamental to numerous geospatial applications including urban planning, environmental monitoring, agricultural management, and climate change adaptation. Land cover for Germany is a joint project of the federal government and the federal states that delivers annual, uniform, automated data and I have great confidence that this ongoing, high-quality collaboration will continue to deliver benefits for users of this critical information.”

Kerstin Will

Deputy Chair, Working Committee of the Surveying Authorities of the Laender of the Federal Republic of Germany (AdV)

Germany is improving consistency, reproducibility, and timeliness of nationwide land-cover updates by adopting a standardised, automated mapping method.

In Germany, the standardised Landbedeckung Deutschland (LB – Land cover Germany) product, aligned with the specifications of the Working Committee of the Surveying Authorities of the Laender of the Federal Republic of Germany (AdV), serves as a critical reference dataset for land monitoring and statistical purposes. Traditional manual derivation methods face significant challenges in scalability, consistency, and cost-effectiveness, particularly for nationwide coverage amid rapid landscape changes driven by urbanisation, renewable energy expansion and vegetation shifts.

The LB project, coordinated by Geobasis NRW and the Federal Agency for Cartography and Geodesy (BKG), introduces a transformative AI-based remote sensing product, which aims to assist in fulfilling these requirements. The approach integrates Sentinel-2 spectral information, orthophotos, and Digital Surface Model heights to achieve automated, reproducible classification across Germany's heterogeneous landscapes.



Benefits

- Modernises Germany's land cover mapping system.
- Provides a uniform methodology to deliver nationwide coverage for Germany.
- Meets requirements of rapidly changing landscapes, such as renewable energy sites, with a minimum mapping unit of 100 m² (buildings 10 m²).
- Enables annual updates.