



European  
Commission

# European Big Data Hackathon 2025

Earth Observation: from Space to European Statistics

Brussels, 6–11 March 2025



eurostat 



# Leafy Lines

A Dashboard for Monitoring Small Woody Features on Agricultural Land

Patricia Wagner, Joshua Jäger, Carola Stolle



**European Big Data Hackathon 2025**

Earth Observation: from Space to European Statistics

Brussels, 6–11 March 2025

**eurostat** 



# Background

- Policy Relevance:
  - Common Agricultural Policy (CAP)
- Regulation on statistics on agricultural input and output (SAIO)
  - Obligation for EU member states to deliver datasets on agriculture
  - Among those are Landscape Features on agricultural land



**European Big Data Hackathon 2025**

Earth Observation: from Space to European Statistics

Brussels, 6–11 March 2025



**eurostat** 

# Idea and Motivation

- Delivering landscape features on agricultural lands is a challenge for many EU member states

Our idea:

- Assessing usability of CLMS layer “Small Woody Features” as possible replacement for statistics
  - Creating a dashboard for easy visualisation and analysis



**European Big Data Hackathon 2025**  
Earth Observation: from Space to European Statistics  
Brussels, 6–11 March 2025

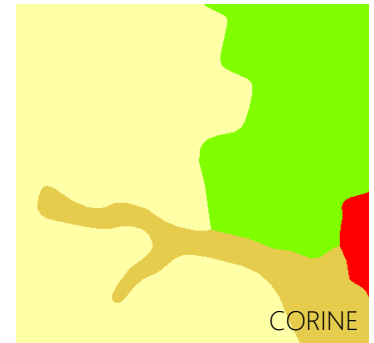
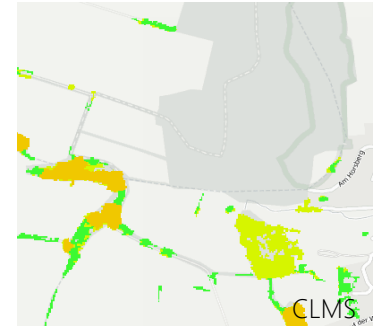


**eurostat** 

# Datasets

All datasets are open source and available for all EU member states:

- **CLMS Small Woody Features 2015 & 2018**
  - Shows hedges, small crops of trees etc, Vector Layer, 5m resolution
- **CORINE Land Cover 2018**
  - Pan-European Land Cover information, 44 thematic classes, Vector Layer
- **IACS (Integrated Administration and Control System in Europe) Data**
  - shows land parcels and landscape features



**European Big Data Hackathon 2025**

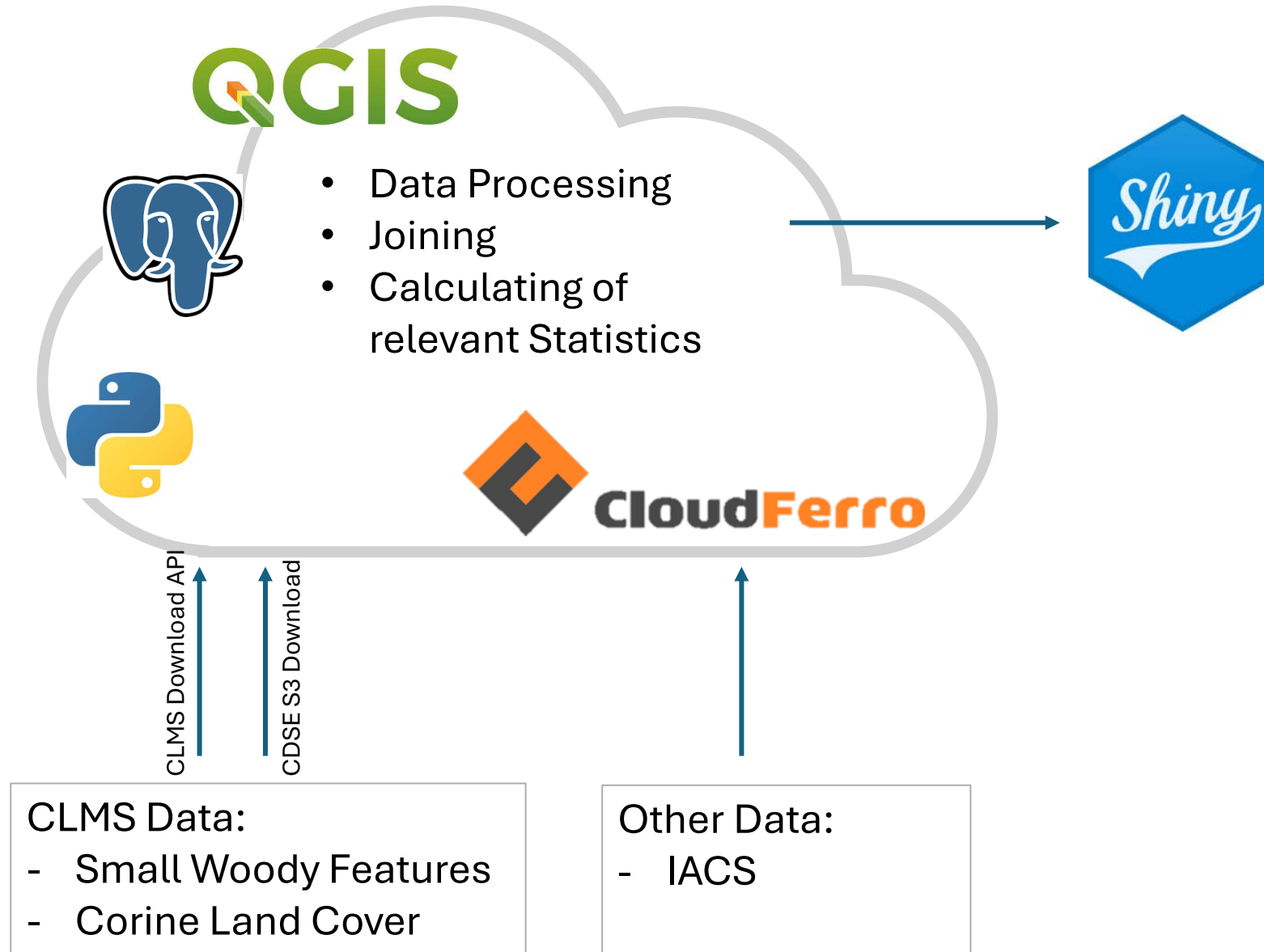
Earth Observation: from Space to European Statistics

Brussels, 6–11 March 2025



**eurostat** 

# Technical Infrastructure



# Statistics Calculated

- Total area of Small Woody Features (SWF) per NUTS3 area
  - total features, and per feature class
- Total area of SWF in the different CLC agriculture classes per NUTS3 area
- Difference between SWF and landscape elements recorded in IACS data



**European Big Data Hackathon 2025**

Earth Observation: from Space to European Statistics

Brussels, 6–11 March 2025



**eurostat** 



## About

The app gives a visual overview of small woody features on agricultural land. We propose a method to display small woody features overlapping with agricultural land. There is ongoing demand for data required based on the SAIO.

Please use the slider below to choose the year. The map will reflect data for the input

Select Nuts2

DE40

Select Nuts3

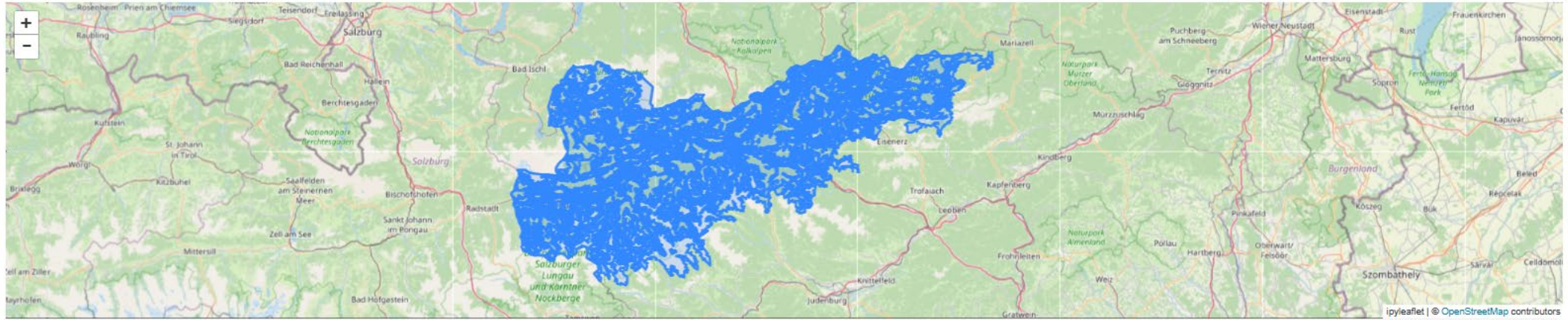
Liezen

## Dataset Information

For the app, we have chosen data from CORINE Land Cover, Small Woody Features, for Quality assurance InVeKoS. The analysis covers data from 2015 and 2018 for the countries Germany and Austria.

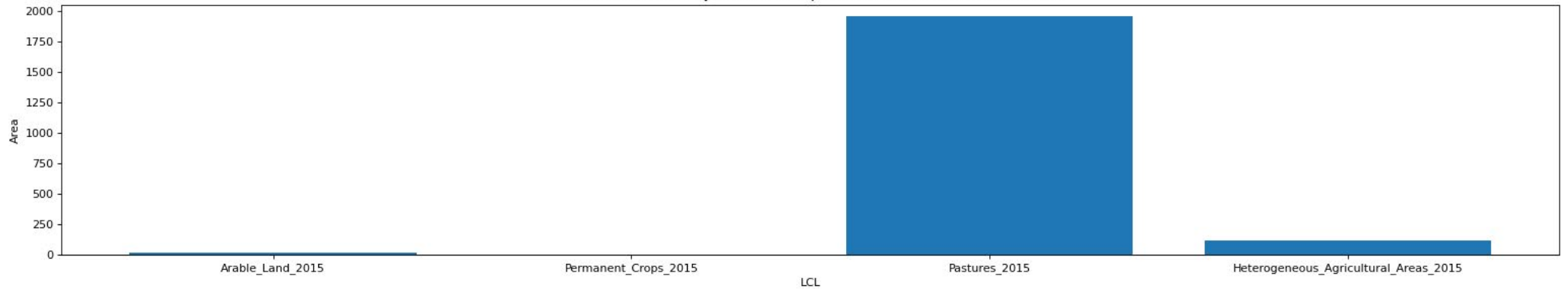
- [Corine Land Cover](#)
- [Small Woody Features](#)
- [InVeKoS SOURCE TO BE FILLED](#)

**Note:** Since 2015 the SMF data was collected at every 3-year mark. That is, the SMF data is only available for 2015, 2018, and 2021 onwards is still being produced.



NUTS_ID	NAME_LATN	2015_SWF_area_ha	2018_SWF_area_ha
AT222	Liezen	11484.51	19062.7

Share of Small Woody Features (ha) per CLC class Oberhavel (GER) 2018



European Big Data Hackathon 2025

Earth Observation: from Space to European Statistics

Brussels, 6–11 March 2025



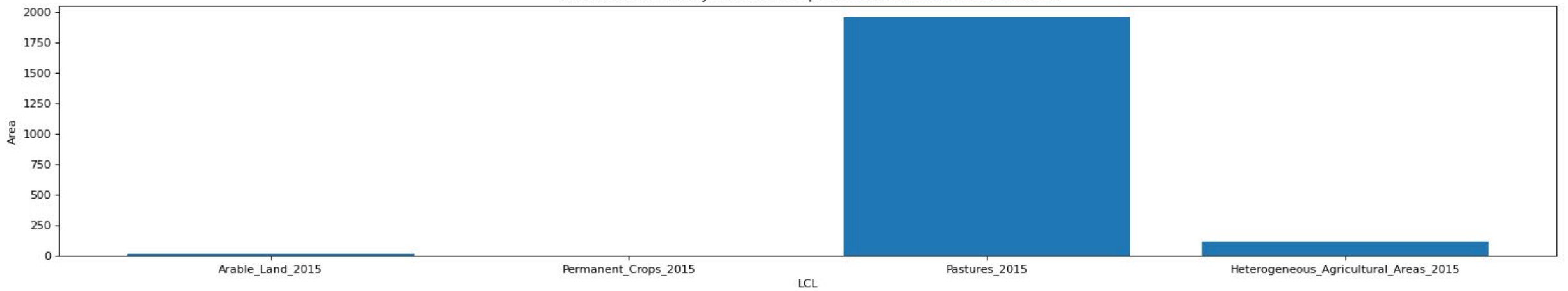
eurostat





NUTS_ID	NAME_LATN	2015_SWF_area_ha	2018_SWF_area_ha
AT222	Liezen	11484.51	19062.7

Share of Small Woody Features (ha) per CLC class Oberhavel (GER) 2018



# Thank you for your attention!



**European Big Data Hackathon 2025**

Earth Observation: from Space to European Statistics

Brussels, 6–11 March 2025



**eurostat** 

# Appendix



## European Big Data Hackathon 2025

Earth Observation: from Space to European Statistics

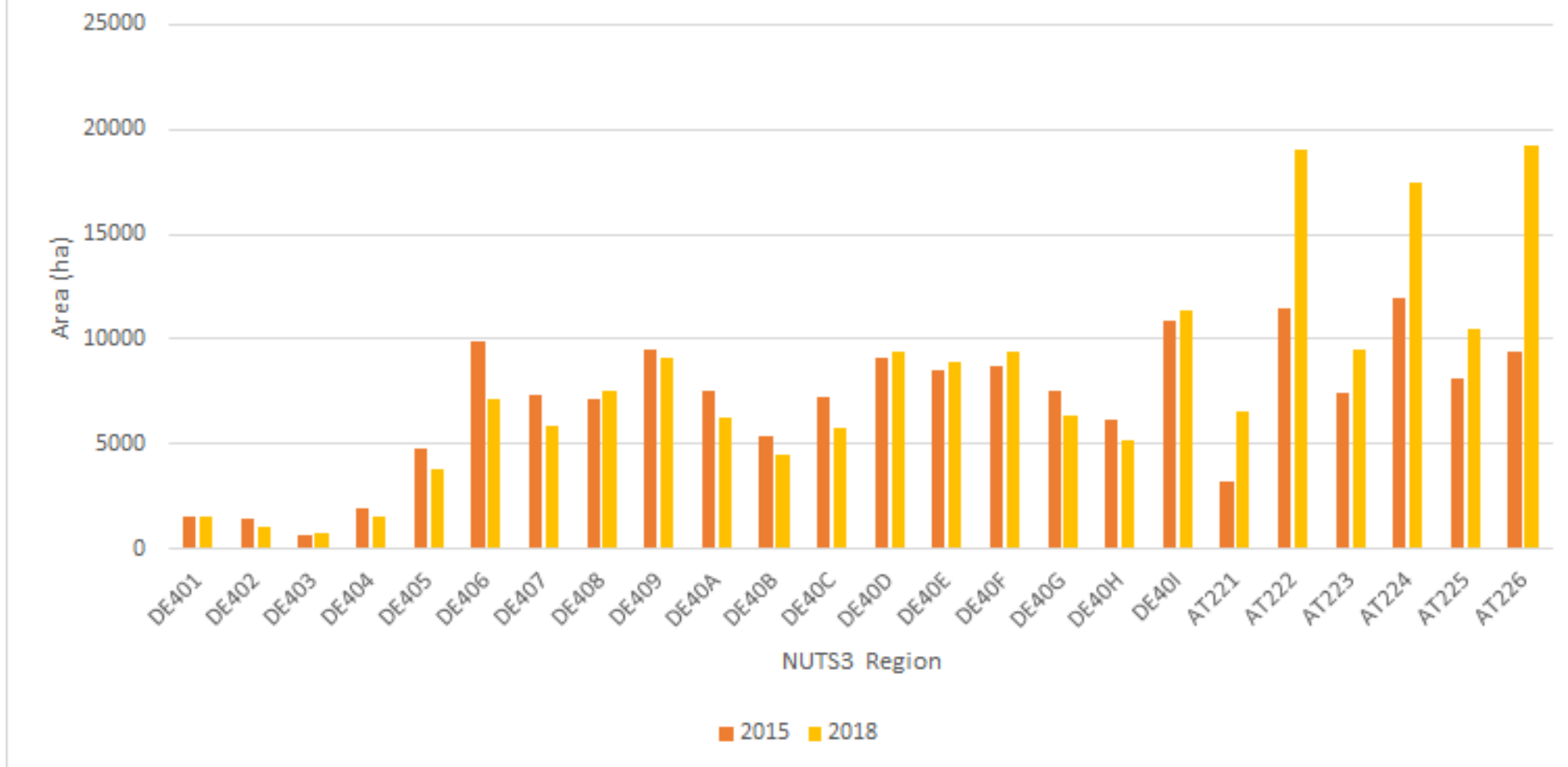
Brussels, 6–11 March 2025



eurostat 



## Area (ha) of Small Woody Features in the NUTS3 regions of Brandenburg (GER) and Styria (AUT)



**European Big Data Hackathon 2025**

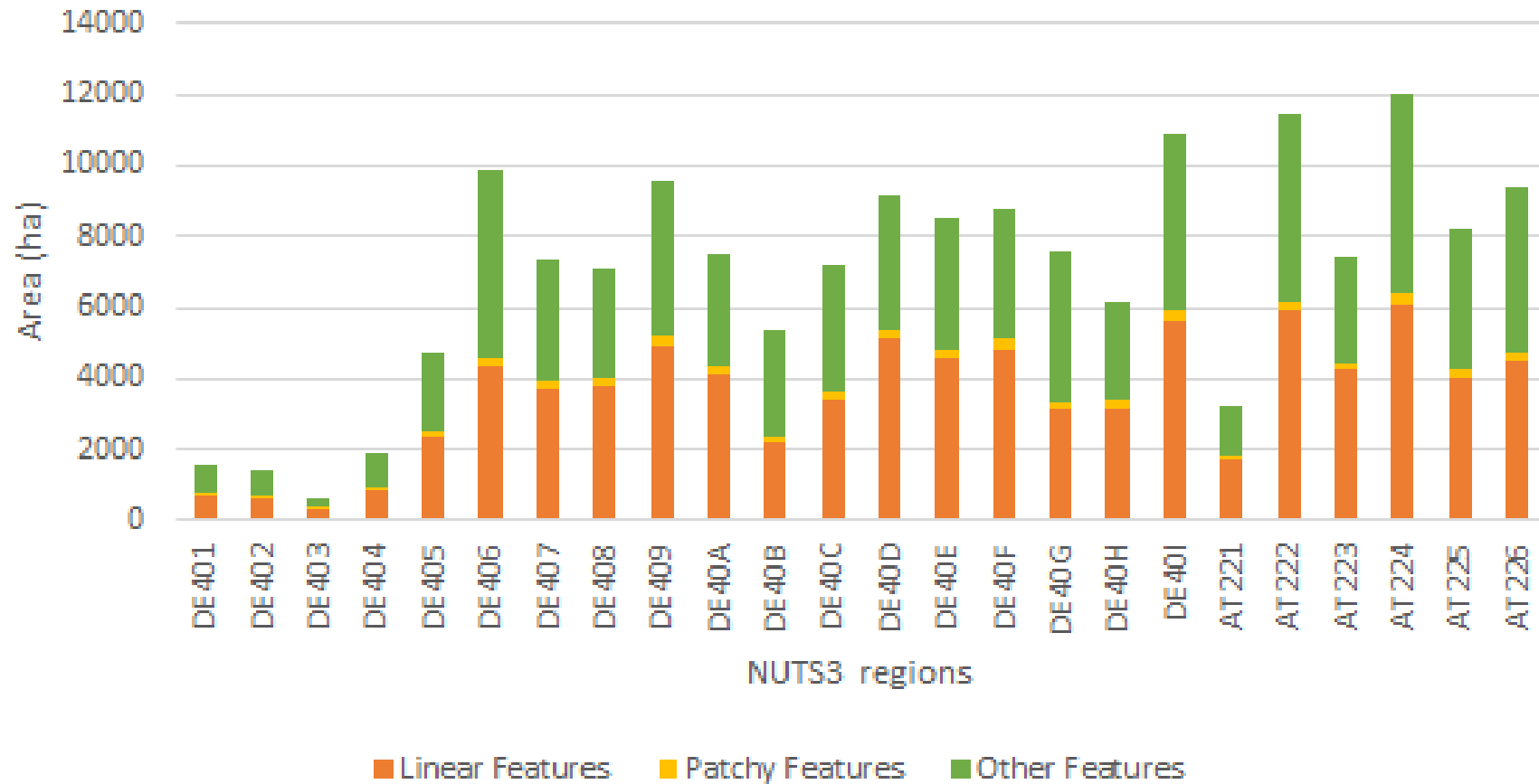
Earth Observation: from Space to European Statistics

Brussels, 6–11 March 2025



**eurostat**

## Area (ha) per class of Small Woody Features for NUTS3 regions of Brandenburg (GER) and Styria (AUT)



**European Big Data Hackathon 2025**

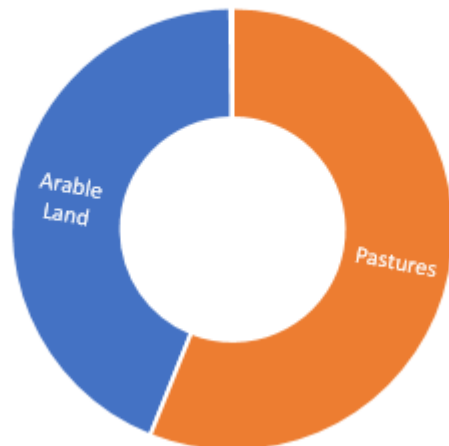
Earth Observation: from Space to European Statistics

Brussels, 6–11 March 2025

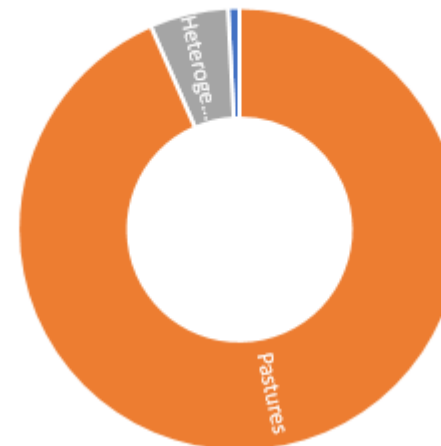


**eurostat** 

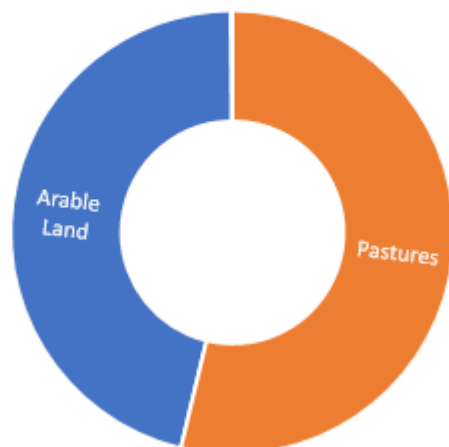
Share of Small Woody Features (ha) per CLC class  
Oberhavel (GER) 2015



Share of Small Woody Features (ha) per CLC class  
Liezen (AUT) 2015



Share of Small Woody Features (ha) per CLC class  
Oberhavel (GER) 2018



Share of Small Woody Features (ha) per CLC class  
Liezen (AUT) 2018

