PCP WISE

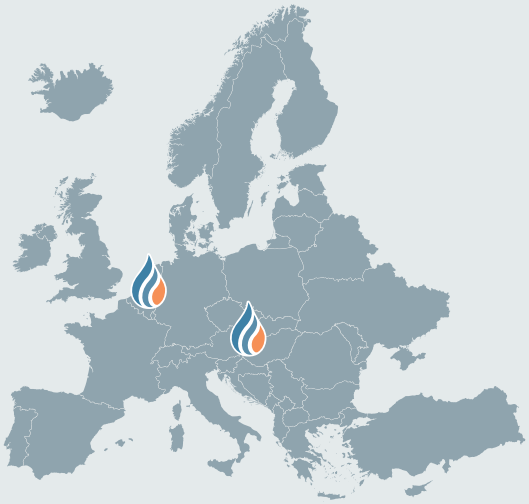
USE CASE 3

RURAL DROUGHT (Northwest-Central Europe)

Partners: **Grenspark Kalmthoutse Heide (BE, NL)**, SEA (SK), Ministry of Interior (SK), STOWA (NL)

OVERVIEW

Use Case 3 focuses on addressing rural challenges in Northwest and Central Europe caused by **extreme climate variability, such as intense rainfall and prolonged droughts**, which impact natural and agricultural processes, leading to wildfires and reduced crop yields in the Grenspark Kalmthoutse Heide (BE/NL). Unlike Southern Europe's structural water scarcity, this region faces **uneven water distribution that fluctuates annually**. The objective is to enhance water management and climate resilience through smart technologies like satellite data and data science, by continuously monitoring soil moisture, groundwater levels, surface water, and evapotranspiration. This approach aims to **anticipate and mitigate risks from rural drought, including wildfires and agricultural losses**, while leveraging long-term historical data to improve interventions and foster resilient ecosystems and stable agricultural outputs.



USE CASE 3 IN DETAIL

Pain points & user needs

Stakeholders from the Gresnpark report a **lack of cross-border datasets** which makes management of cross-border risks like fire and flooding very difficult. Furthermore, stakeholders raised issues concerning the **lack of clear roles and responsibilities** and ownership of data, as well as a general issue with a **lack of good visualization and interpretation support**.

Available tools and data examples

- KNMI Meteo Data: a climate dashboard that includes a large number of graphs showing trends, forecasts, and various future climate scenarios
- EFFIS Portal (Fire risk): European Forest Fire Information System (EFFIS) Portal with an interactive data viewer on fire risk
- Rijkswaterstaat Data: covers topics like water levels, water temperatures, wave heights, and wind speed.
- Flanders Data Repository: Digital Elevation Model Flanders, among others.

HOW PCP WISE CAN HELP

- Continuous (& historical) monitoring of soil moisture and groundwater conditions
- Development of risk indicators for drought-related issues that may trigger rapid-onset crises affecting ecosystems and agriculture
- Crisis intelligence on wildfires through daily and spatially explicit risk indicators
- Intuitive viewer for end-users and aligned with existing crisis response protocols
- Assessments of water availability and biomass (as fire fuel) for both natural and agricultural vegetation

Funded by the European Union. This project has received funding from the Horizon Europe Framework Programme (HORIZON) under grant agreement N° 101182917.