

Introducing the DAFNI Data Bridge

Interview with Saiful Khan,
Senior Data Scientist, DAFNI



Introduction

The Centre for Environmental Analysis (CEDA) supports environmental science community by specialist data and information services. The CEDA archive holds specialist climate data, including earth observation datasets, airborne and satellite data, imagery and observations, and numerical weather predictions.

CEDA is located within the Science and Technology Facilities Council (STFC)'s RAL Space, operating data centres and delivering data infrastructure for the UK and European environmental science communities.

In order to make CEDA's data more accessible to researchers within the wider scientific community, a project is near completion, which creates a feed from the CEDA Archive to the DAFNI platform, the Data & Analytics Facility for National Infrastructure, also an STFC facility.

The project is funded by Natural Environment Research Council (NERC) and delivered as part of the NERC Digital Solutions Hub, a free-to-use, online, open-access platform that makes it easy to find, view, and use environmental, social, health, and economic data.



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It provides access to information from the Natural Environment Research Council (NERC) data centres as well as data from trusted organisations such as the Department for Environment, Food & Rural Affairs (DEFRA), the Environment Agency, Natural England, Natural Resources Wales, Scottish Environment Protection Agency (SEPA), the Office for National Statistics, and the Met Office. The data can be used by policymakers to make data-driven and informed long-term planning decisions, as well as providing real-time data useful for short-term planning.

The DAFNI Data Bridge is expected to launch September 2026.

What would you identify as the main impact of this work?

The CEDA Archive of earth observation, atmospheric, and climatic data will be available to a new audience of researchers via the DAFNI platform. This project will enable seamless access to trusted national environmental data within advanced infrastructure modelling environments. By enabling the sharing of data between integrating the CEDA and the DAFNI platform, it removes manual data handling and significantly accelerates research workflows. This leads to faster, more reliable analysis and supports better evidence-based decisions on infrastructure resilience, sustainability, and climate risk at a national scale.

Key challenges that the project aims to solve

Currently, researchers use hundreds of CEDA datasets on DAFNI along with models, workflows, and visualisations. The data on the CEDA Archive is held in a variety of formats and scales, with datasets available as part of the NERC Environmental Data Service.

One-to-one interviews were conducted with modelling scientists and academics to understand what CEDA data they use, what they would like to be accessible, and the challenges that they currently face transferring data from CEDA to DAFNI. Currently, researchers must carry out manual data transfers or downloads, which has a direct impact on researchers' time, with this tool it will save researchers the manual work and enable more time for research.

What was the key aim of the project?

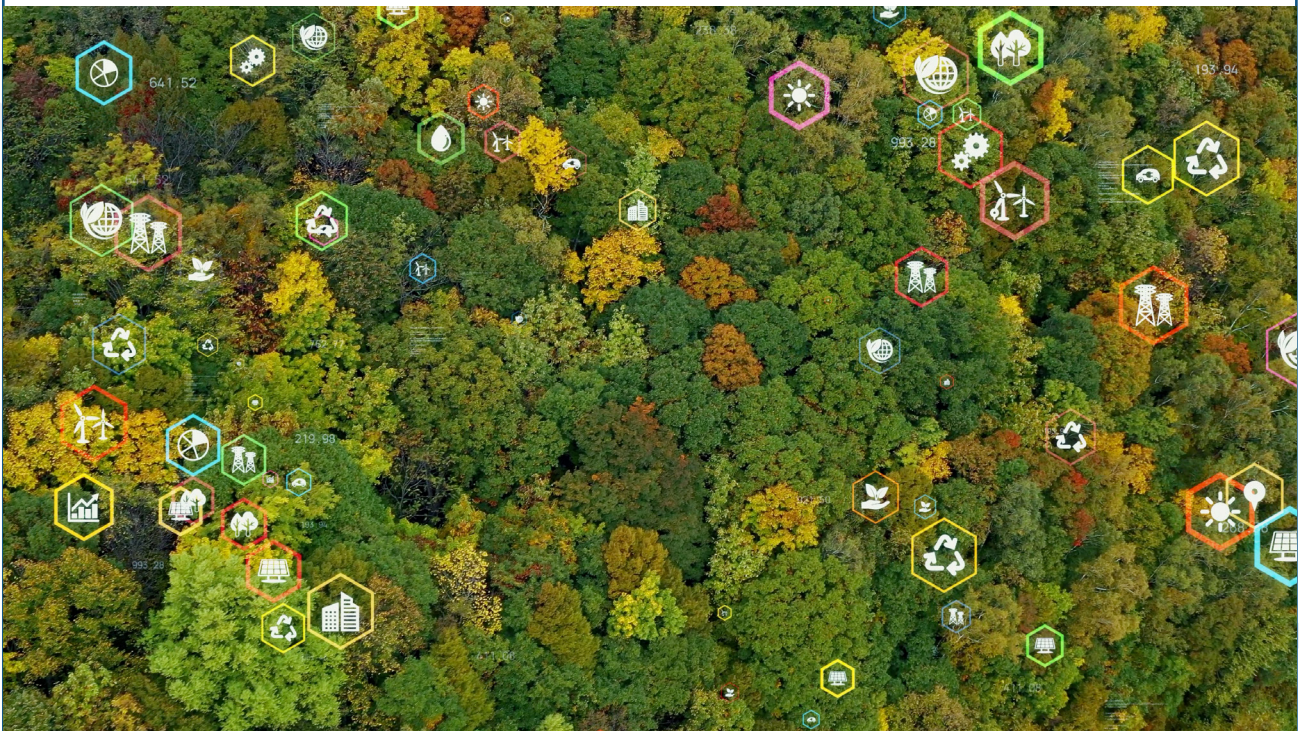
CEDA Archive data will be available via the DAFNI platform, without DAFNI researchers having to obtain individual datasets or carry out manual data transfers or downloads. The vast archive will be available via DAFNI's trusted platform to a wider audience of modelling scientists working on projects in the climate and infrastructure field.



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What will DAFNI allow researchers to do that they can't do otherwise?

Making the data available on DAFNI will speed up research by creating a reliable data transfer between CEDA and DAFNI, allowing for faster evidence-based research. This will lead to accelerated research and improved decision-making by infrastructure, climate and sustainability researchers and policymakers.



Future

The DAFNI Data Bridge has been created to be reusable across other platforms, offering the potential to open links between data and science beyond the initial CEDA – DAFNI project.

