



DAFNI NEWSLETTER, MAY 2026



Dear {{ contact.FIRSTNAME }}

Welcome to the DAFNI May 2026 newsletter!

Our annual conference is continuing to take shape and I am very pleased to let you know that, alongside **Professor Jim Hall**, our second keynote speaker will be **Margaret Read**, Strategy and Policy Director at the **National Infrastructure and Service Transformation Authority (NISTA)**.

Margaret was previously Director of Policy at the National Infrastructure Commission, where she led the Commission's policy work on energy, water and wastewater, flood risk management and infrastructure resilience.

Before her role at the Commission, she worked as part of the RAPID leadership team, a joint Ofwat, Environment Agency and Drinking Water Inspectorate unit to speed up water supply infrastructure delivery. She has extensive experience leading policy development in Whitehall, principally on water supply, flood and coastal erosion risk management, access to the environment and a number of other environmental issues.

I am further delighted to let you know that **James Daniel, UK Power Networks** and **Elliot Christou, Connected Places Catapult** will also be joining us to give an update on CReDO. The Climate Resilience Demonstrator (CReDO) is a groundbreaking digital twin platform for climate change adaptation that improves system-wide resilience across infrastructure networks. James and Elliot will give a talk on the CReDO+ Beta project which aims to predict and mitigate the risks to energy networks from extreme weather events.

Our Conference theme this year is '**Climate and Security Resilience**', with a dual focus on Government Industrial Strategy, and on Clean Energy. Book now for 10th September 2026 – we look forward to welcoming you to Rhodes House in Oxford.

Our new Fellows are settling into their roles, each of whom are now an ambassador for DAFNI. They will further sustainable research, promote their research within the DAFNI Centre of Excellence for Resilient Infrastructure Analysis, build networks across government, industry and academia and input into DAFNI's Roadmap. You can find out more about them at our dedicated [DAFNI 2026 Fellows page](#) on our website and follow our [LinkedIn page](#) for a detailed introduction to them and their projects.

Dr Brian Matthews, DAFNI Programme Lead

News from our central team

To help improve countries' drought resilience, the Pywr-WREW water resource systems model for England and Wales aims to enable strategic analysis and foster improved water supply planning. It simulates water movement from source to end user, through major supply infrastructures, going beyond regional or water company scale to national scale.

The project took a previous model (WREW, built using proprietary water systems modelling software) and rebuilt it using the open-source, Python-based water modelling software Pywr to allow for greater collaboration with stakeholders. Researchers can now use regional models built using the Pywr-WREW framework with strategic

CASE STUDY
The Pywr-WREW water resources model for England and Wales – improving drought resilience

Dr Anna Murgatroyd, Lecturer in Hydrology, School of Engineering, Newcastle University.

Introduction

With climate change comes longer, hotter summers and more frequent, widespread, and intense droughts. In the UK, this already affects the levels of reservoirs, rivers and other water sources in multiple areas, from Northumbrian Water to South East Water. Reduced water levels have a negative effect on household water usage, farming and agricultural outputs, river life, and the wider environment.

In August 2025, the Environment Agency reported that five of its operational areas in England were experiencing drought and that a further six were experiencing a period of prolonged dry weather. Ten reservoirs were less than half full by 19th August 2025.

To help improve countries drought resilience, the Pywr-WREW water resource systems model for England and Wales aims to enable strategic analysis and foster improved water supply planning. It simulates water movement from source to end user, through major supply infrastructures, going beyond regional or water company scale to national scale.

¹<https://commonslibrary.parliament.uk/droughts-in-england/>
²<https://www.gov.uk/government/publications/dry-weather-and-drought-in-england-summary-report/dry-weather-and-drought-in-england-15-to-21-august-2025>



assets, from boreholes to rivers, to test water systems against hundreds of different future climate scenarios.

“The models allow analysts to make better sense of what the future might look like and provides evidence for regulators and water company operators to make more informed policy and infrastructure decisions,” explains Dr Anna Murgatroyd, Lecturer in Hydrology, School of Engineering, Newcastle University.

[Click to download or read the full case study.](#)

The Pywr-WREW team:

Principal Investigator, **Dr Anna Murgatroyd**, Lecturer in Hydrology, School of Engineering, Newcastle University, (formerly at University of Oxford), with Co-Investigator, **Professor Jim Hall**, University of Oxford, and **Tom Russell**, University of Oxford.

Book now for the 2026 DAFNI Conference

 10th September 2026
 [Rhodes House in Oxford.](#)

We would be delighted to welcome you.

Our theme is ‘**Climate and Security Resilience**’ with a dual focus on Government Industrial Strategy, and on Clean Energy.

Tickets are £50 per person (£25 students)

Secure your space



DAFNI
ANNUAL CONFERENCE

10 September 2026
Rhodes House,
Oxford

Margaret Read
 Strategy and Policy Director
National Infrastructure and Service Transformation Authority (NISTA)



Margaret Read is Strategy and Policy Director at the **National Infrastructure and Service Transformation Authority (NISTA)**. She was previously Director of Policy at the National Infrastructure Commission, where she led the Commission’s policy work on energy, water and wastewater, flood risk management and infrastructure resilience. Margaret has extensive experience leading policy development in Whitehall, principally on water supply, flood and coastal erosion risk management, access to the environment and a number of other environmental issues. Her teams have supported Ministers in developing primary and secondary legislation and in working with delivery bodies to implement policy.

James Daniel is an innovation consultant specialising in digital and data innovation for regulated energy infrastructure. He is currently

embedded at **UK Power Networks**, where he leads discovery projects across capital programmes, network resilience and data-driven decision making. James is leading the CReDO+ SIF Beta project bringing experience of translating complex, multi-partner programmes into practical digital solutions.

Dr Elliot Christou is Head of Data and Digital Products at **Connected Places Catapult**, the UK's innovation accelerator for transport, construction, data infrastructure and local growth. He leads the CReDO programme, which is developing a digital platform to understand cascading climate risk to infrastructure. Elliot has a background in data science and theoretical physics.



10 September 2026

**Rhodes House,
Oxford**



The CReDO+ Beta project
James Daniel,
UK Power Networks



Elliot Christou,
Connected Places Catapult



10 September 2026

Rhodes House, Oxford

Clean Energy Workshop
Led by EPSRC Supergen Energy Networks Hub



Shaping clean energy through collaboration

We are currently designing a new workshop for the Conference in partnership with EPSRC's Supergen Hub, focused on the UK Government's Industrial Strategy, with particular emphasis on clean energy.

The workshop will bring together perspectives from academia, government and industry to explore shared challenges, opportunities and priorities in this area. Insights gathered will inform a report and impact report, which will be shared with UKRI councils and government to help shape future thinking and activity.

We are particularly keen to ensure broad representation across sectors, so if this is of interest to you, please register for the conference now.

DAFNI WEBINAR SERIES 2026



DAFNI

Data & Analytics Facility for National Infrastructure

Join us on 8th July for our webinar 'Optimise your LinkedIn use' with Catherine Dhanjal, Director of TheAnswer Ltd.

Catherine will share practical guidance on using LinkedIn effectively to increase impact and engagement of your work and to enhance your professional profile whether you are at the start of your journey with LinkedIn or further along.

With extensive experience as a writer, journalist, and PR specialist, she helps organisations communicate complex ideas clearly and engage key stakeholders across government, industry, and professional services.

Don't miss this opportunity to strengthen your online presence and maximise your impact.



DAFNI

Grow your LinkedIn

**Ready to elevate your
professional profile and
make LinkedIn work for
you?**

LinkedIn



**Join Catherine Dhanjal, Director of
TheAnswer Ltd**

Catherine will share practical guidance on using LinkedIn effectively to increase impact and engagement of your work and to enhance your professional profile whether you are at the start of your journey with LinkedIn or further along.

Secure your seat now - email info@dafni.ac.uk
(Wednesday 8th July, 12 noon)

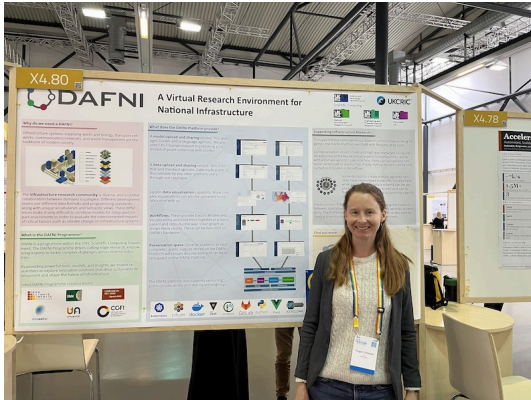
User liaison news



EGU Conference: this May, DAFNI team members - Server Kasap, DevOps Engineer; Kyle Stevenson, User Liaison; and Teagan Zoldoske, Data Curation Officer - travelled to Vienna, to attend the General Assembly of the European Geosciences Union.

During the week-long event, members of the [CrossEU collaboration](#), of which DAFNI is an active member, presented results from ongoing CrossEU studies on the social-economic impact of climate change. Multiple posters also were displayed demonstrating progress on CrossEU work.

Teagan presented an update on DAFNI's contribution to the CrossEU programme, as part of the Climate and Society Session, and during the week the DAFNI team members were able to catch up with CrossEU colleagues, many of whom were in attendance.



DAFNI provides core computational support for the CrossEU project, acting as a central storage facility for data and research outputs, and forming the back-bone of the of the CrossEU Integrated Assessment Framework (IAF). DAFNI also works closely with partners in WEMC, to provide policymakers and stakeholders with access to results, visualisations and recommendations, which will be provided through the CrossEU DSS (Decision Support System).

Partnership news



High-Performance Computing workshop at DAFNI: we would like to thank Dr Tariq Umar from the University of West England (UWE), Bristol for recently contacting DAFNI to host a HPC full-day training workshop.

The event was jointly organised by DAFNI in collaboration with the [UWE](#) as part of the project "[Enhancing HPC Adoption Through User-Centred Design: A Roadmap for Inclusive Innovation in Environment, Health, and the Built Environment](#)," led by Principal Investigator [Dr Tariq Umar](#).

The workshop was designed to introduce participants to **high-performance computing (HPC)** and demonstrate how these tools can support research and innovation across areas including the **environment, health and the built environment**.

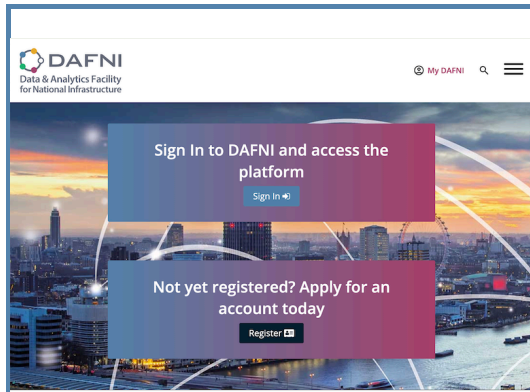
Held at DAFNI's facilities on the Harwell Campus, the workshop combined introductory sessions, a broader overview of the DAFNI platform, and a guided facility visit to give attendees a practical understanding of both the technologies involved and the infrastructure that underpins them.

The day was structured to support those who are new to HPC, helping participants build confidence, develop awareness of available capabilities, and explore how advanced computing can be applied to real-world challenges.

By combining training with direct engagement and discussion, the workshop also created an opportunity for attendees to connect with the project team, ask questions, and gain a clearer sense of how DAFNI can support future research and collaboration.

Photo courtesy of Tariq Umar

DAFNI platform features and updates



This month the DAFNI development team has been continuing to work on an upcoming feature that will allow users/groups to create public pages to display their work. These pages will be a fantastic new way to showcase the work you/your group/your project has done on the DAFNI platform.

This work is now in its final testing phase before it's released onto the platform, and you can expect to hear more about it in next month's newsletter!

Access our help

If you are a user of the platform and have any feedback or platform requests, please contact support@dafni.ac.uk

DAFNI researchers' news



International
Water Resources
Association

IWRA

Addressing Water Challenges for AI and Data Centres

14:00 - 15:30 CEST • 3 June 2026 • webinar no 78

Panellists



Franck Gbaguidi
Eurasia Group



Manuel Herrera
Newcastle University



Raúl Sánchez Calvo
Universidad Politécnica
de Madrid



Mishaal Ashkanani
Texas A&M University



Michael Lesniak
Aquatech



Daylen Smith
Meta



Renée Martin-Nagle
A Ripple Effect | IWRA

Moderator

Part 2 of the IWRA Webinar Series

The Promises and Challenges of AI, Data Centres & Freshwater Futures

Dr Manuel Herrera, new DAFNI Fellow, is speaking at an International Water Resources Association (IWRA) Webinar on 3 June. As extreme weather intensifies, Manuel's research is helping shape smarter, data-led approaches to managing flood risk in cities.

 **Don't miss this upcoming event** to learn more about how AI is transforming flood risk management and supporting resilient urban infrastructure.

Register for the webinar at: <https://www.iwra.org/webinar-78/>

For DAFNI, Manuel's research work in his Fellowship focuses on trustworthy AI for infrastructure, and lessons from flood management: <https://www.dafni.ac.uk/who-we-are/dafni-2026-fellows/>



Congratulations to **Dr Fabian Steinmann** who spoke at the ITF - International Transport Forum at the OECD 2026 in Leipzig, Germany in early May 2026. He presented the **MARS aviation mass diversion tool** developed in a DAFNI project with **Irene Moulitsas** and **Desmond Bala Bisandu**.

Read more about MARS - Modelling Aviation Resilience Scenarios: <https://www.dafni.ac.uk/projects/mars/>

Photos: courtesy of Fabian Steinmann / ITF

Community news

The [Climate Change Committee's 'A Well-Adapted UK' report](#) is now available, discussing how to protect our way of life from the changing climate and the risks this brings.

The Committee recommends government focus on:

-  Better cooling.
-  Stronger flood protection.
-  A more secure water supply.

These are the most critical priorities to address the three biggest climate risks: heat, flooding and drought.

Find out more at: <https://www.theccc.org.uk/publication/a-well-adapted-uk/>



Watch our past webinars

DAFNI YouTube channel: catch up on conferences and interviews

Visit <https://www.youtube.com/@dafnifacility118>

DAFNI technical training



If you would like to attend a DAFNI Technical Training Event covering how to best use DAFNI to complement your work and projects, please visit our Eventbrite page to register your interest. We hope to run training sessions in the near future. <https://www.eventbrite.co.uk/o/dafni-31793198351>

Access our help

Please contact us directly for any assistance on info@dafni.ac.uk



Apply for a DAFNI account

Apply for a DAFNI account

Join our community

If you would like to join the community of DAFNI users, please visit the [DAFNI website](#) for more information.

Current users of DAFNI

Get updated on the latest technical updates and features, visit: <https://www.dafni.ac.uk/my-dafni/>

About DAFNI

The DAFNI platform supports research that aims to provide the UK with a world-leading infrastructure system that is more integrated, efficient, powerful, reliable, resilient and affordable. It is enabling the community to conduct research that is able to generate new insights at a higher level of detail and accuracy than ever before.

DAFNI was originally funded by an £8 million EPSRC investment in the UK Collaboratorium for Research in Infrastructure and Cities (UKCRIC) and a £1.2m grant under EPSRC's Resource Only Strategic

Equipment. Its aim has been to become the national platform to satisfy the computational needs in support of data analysis, infrastructure modelling and visualisation, and encourage whole-system thinking for the UK's infrastructure research needs.

In March 2023 UKRI awarded £4m to STFC Scientific Computing to establish a national Centre of Excellence for Resilient Infrastructure Analysis, and move the Data & Analytics Facility for National Infrastructure (DAFNI) into its new phase.

To find out more about DAFNI, visit: www.dafni.ac.uk



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