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DAFNI NEWSLETTER, JULY 2026

Dear {{ contact.FIRSTNAME }}

Welcome to the DAFNI July 2026 newsletter!

We are pleased to announce to the community that our new feature called **'DAFNI Pages**' is now available on the DAFNI platform. This enables users to showcase their work in one central place, highlighting any stand-out assets, linking to any publications, affiliations, external sites and more. If you are interested in creating or viewing **DAFNI Pages, please click here**.

Our project work with the NERC Digital Solutions Hub (DSH) project is nearly complete and we're excited to soon launch our **new DAFNI 'Data Bridge' tool**. This piece of work has been led by Saiful Khan, Senior Data Scientist, who has collaborated with STFC's JASMIN and the Centre of Environmental Analysis (CEDA) to build a tool which enables the sharing of data between the DAFNI and CEDA platforms.

This benefits academics manually handling data and significantly accelerates research workflows. We look forward to sharing more details on this next month, if you would like to use this tool or have any queries please contact info@dafni.ac.uk

Following our DAFNI 2026 Conference update last month that we will be running a **Clean Energy workshop in partnership with EPSRC's Supergen Energy Networks Hub**, I am delighted to announce that **Cadent Gas** and **Kraken Technologies** will be joining us!

Professor Robin Preece will lead the workshop. He is the Deputy Director of the Supergen Energy Networks Hub, and leads on research focused on making power systems more resilient. Based at the University of Manchester, he works with industry, government, and academic partners to tackle the challenges of the energy transition. His research focuses on the operation, stability, and resilience of future low-carbon power systems, with particular emphasis on integrating renewable generation and inverter-based technologies into secure and reliable electricity networks.

Cadent Gas is the UK's largest gas distribution network, bringing gas to 11 million homes and businesses. Kraken Technologies is the industry's leading operating system for energy, powered by Utility-Grade AI™. Kraken Technologies has been developed specifically to overcome the unique and evolving challenges facing the industry today and works with global giants, including EDF, Tokyo Gas and Octopus Energy.

This workshop is an excellent opportunity to 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.

In case you missed it, you can catch up on our latest webinar **'Optimise your LinkedIn use for researchers'**' with our Media Manager, Catherine Dhanjal. Catherine shared 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.

Dr Brian Matthews, DAFNI Programme Lead

News from our central team

DAFNI commissioned Icebreaker One (IB1) to explore the requirements and impact of supporting an improved sharing of national

infrastructure data with publicly funded researchers, focusing on energy, water and transportation.

Better data sharing can enable research that can improve efficiency and reduce infrastructure costs.

"We were trying to enhance the understanding of the landscape, capture typical practices, and identify what organisations' barriers to sharing were," says **Ceri Stanaway,** a Senior User Needs Researcher assigned to the project.

The literature review and the final report of Icebreaker One's DAFNI-DINI research including key findings and recommendations are available in the full DAFNI-DINI report.

Icebreaker One hopes that researchers will make full use of the report and that it will act as a spur for private organisations to share data more fully with researchers to overcome the critical barriers addressed.

Click to download or read the full case study

The IB1 team:
Ceri Stanaway (Senior User Needs Researcher), **Lucy Stewart** (Design Researcher), **Miranda Sharp** (Domain Expert & Specialist Technical Input), **Ewan Jarvis** (Researcher), **Charlotte Horler** (Project Manager), **Emily Judson** (Head of Research), **Gea Mikic** (Programme Director), **Caroline Fraser** (Programme Manager) and **Zoe Swiderski** (Head of Project Management).

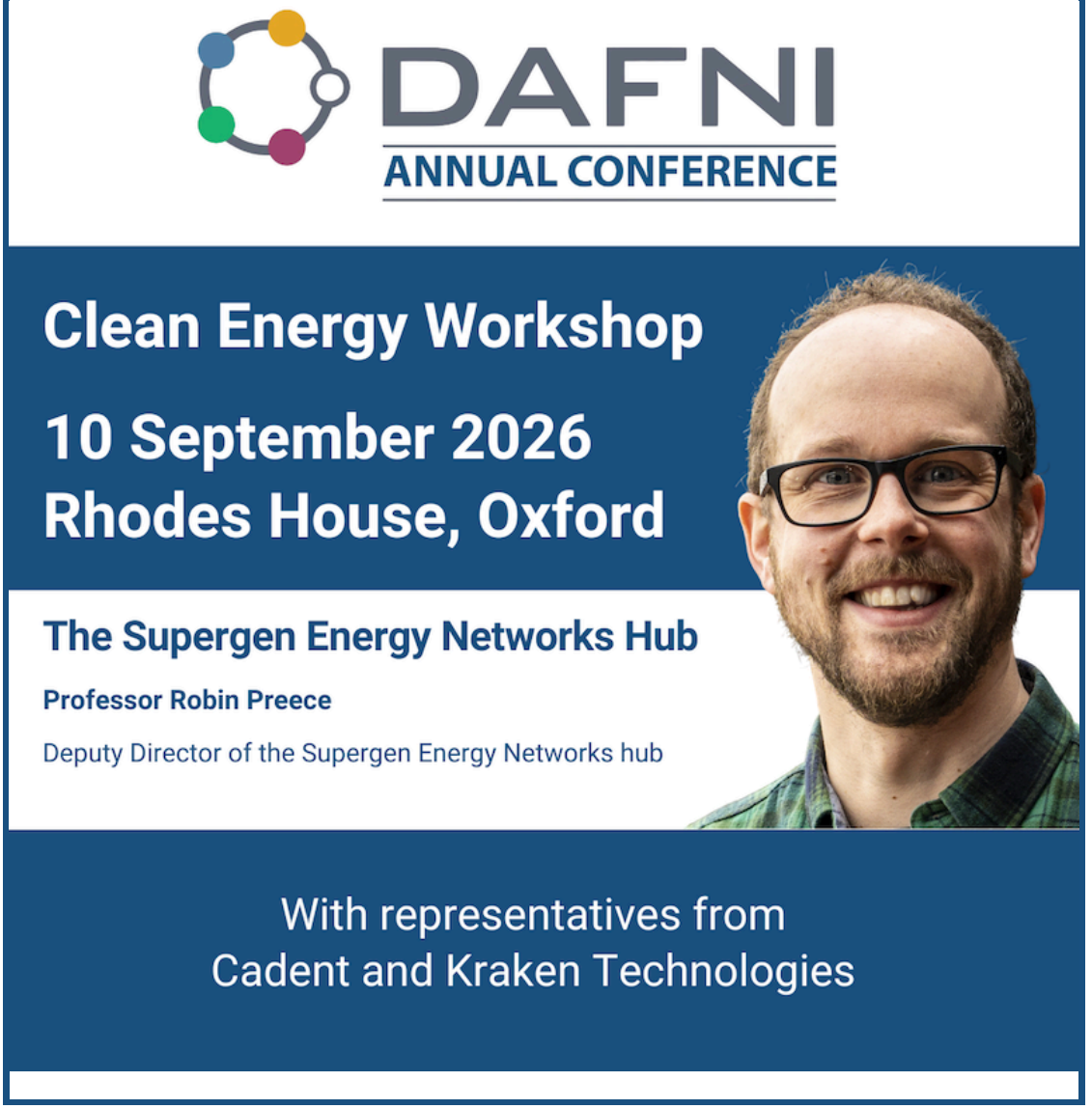
Book now for the 2026 DAFNI Conference

📌 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)



Shaping clean energy through collaboration

Our afternoon workshop at Conference is 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 including Caden and Kraken Technologies 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.

Secure your space

Watch the webinar recording: 'Optimise your LinkedIn use for researchers' with **Catherine Dhanjal**, DAFNI Media Manager and Director of TheAnswer Ltd.

Catherine explored how researchers can use LinkedIn strategically throughout their careers, from PhD students and early-career researchers to established academics.

Publishing in academic journals remains essential, but it is no longer enough on its own. Funders, universities and research organisations increasingly expect researchers to demonstrate how their work reaches wider audiences and influences practice. LinkedIn provides a practical way of extending the reach of research and engaging directly with people who may never encounter it through academic publications.

DAFNI Fellow Tom Mansfield, Data Systems Architect at Plymouth Marine Laboratory, commented, "*A great training course to help scientists communicate... and I'm already applying things I learnt!!*"

Watch the webinar recording at:
https://www.dafni.ac.uk/news-and-events/events/webinar-optimise-your-linkedin-use/

User liaison news

An update on OpenLAND

OpenLAND continues to grow on DAFNI. As new models are onboarded and existing ones evolve, DAFNI is excited to support an expanding ecosystem of tools that help researchers explore future land-use pathways for the UK. From established models such as the Urban Development Model (UDM) and CropNet, to the next generation of models currently being integrated, the platform is becoming an increasingly rich resource for the OpenLAND community.

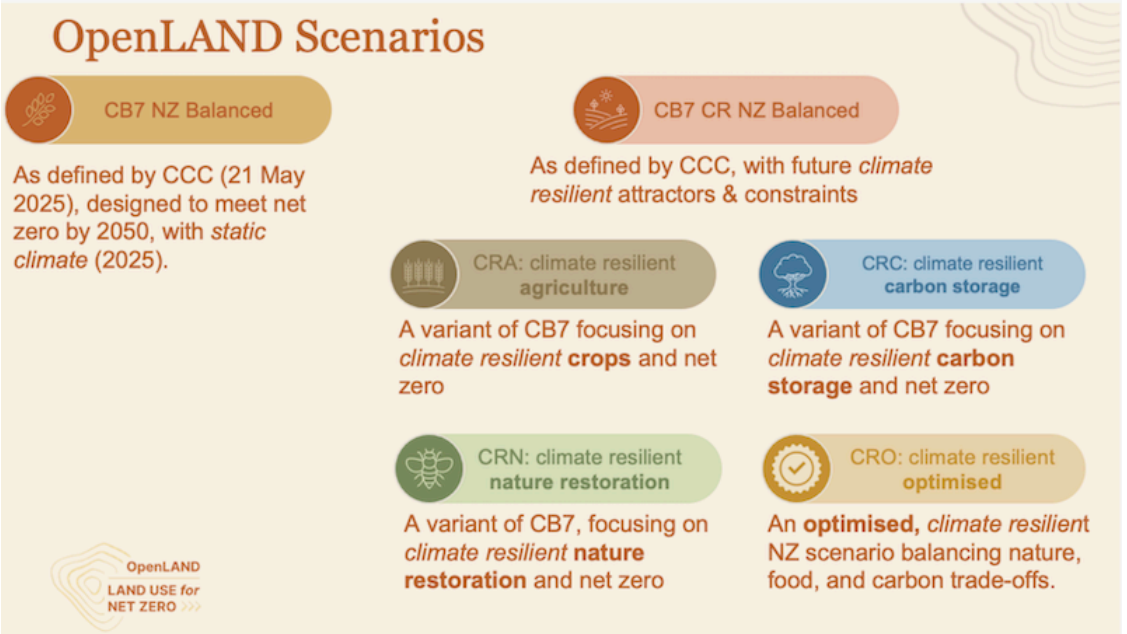
It is a three-year project that builds on DAFNI's previous work on OpenCLIM. It focuses on exploring how changes in UK land use could support net zero goals, soil health, biodiversity, and agriculture. The project is being delivered in collaboration with researchers from the Tyndall Centre for Climate Change Research and the School of Environmental Sciences at the University of East Anglia (UEA), as well as partners from UKCEH, Newcastle University, and Sayers & Partners.

At the heart of OpenLAND are six interconnected scenarios. The project begins with the Climate Change Committee's balanced net zero pathway before introducing climate resilience and exploring three alternative futures centred on agriculture, carbon storage, and nature restoration. These are then brought together into a final optimised scenario that seeks the best balance between food production, biodiversity, carbon sequestration, and net zero.

As OpenLAND continues to grow, so too will its collection of models and workflows on DAFNI, creating a lasting resource for researchers to explore, reuse, and build upon.

The models and data on DAFNI can support decision-makers to optimise British land use policy and legislation outside of the EU.

https://www.dafni.ac.uk/projects/openland/



DAFNI recently attended the ISC High Performance Conference in Hamburg, Germany, where one of DAFNI's developers and user liaison team members, Elizabeth Mamchits, supported the Scientific Computing Department (SCD) exhibition booth. As one of the world's leading HPC conferences, ISC provided an excellent opportunity to showcase DAFNI, connect with researchers and industry partners, and exchange ideas on the future of research computing, user support and AI-enabled workflows.

The conference in June also provided opportunities to reconnect with colleagues from the National Quantum Computing Centre (NQCC), Hartree Centre and Edinburgh Parallel Computing Centre (EPCC), and to engage with the international Women in HPC community. Across the technical programme, discussions highlighted the growing role of HPC in enabling research through applications such as digital twins, AI-enhanced weather forecasting and large-scale geophysical simulations - areas that closely align with DAFNI's mission to provide accessible computational infrastructure for complex modelling and decision support.

These conversations, new connections and emerging ideas will help inform the continued development and support of the DAFNI platform.

Partnership news

Connect to Change 2026 conference
In July DAFNI attended the Connect to Change 2026 conference at the Institution for Civil Engineers ICG Conference 2026 | Institution of Civil Engineers (ICE). The event was organised by the Infrastructure Client Group of the ICE and the Built Environment Connective who are championing a systems thinking approach towards the built environment.

Their systems thinking approach takes into account digitalisation of assets and infrastructure and has significant potential to optimise the government's investments and change how our large scale infrastructure projects are managed. From a digital perspective, linking to concepts such as Digital Twins, this systems based approach is replicated within DAFNI and the work we have done on projects such as Data Infrastructure for National Infrastructure (DINI).

The event was a great opportunity to hear about the benefits of a systems-based approach to infrastructure projects. These ranged from the co-ordination within a community around coastal erosion to identifying the wider impact of localised bridge closures and influence on national supply chains. In alignment with DAFNI's current projects such as CReDO, many were particularly focused around climate mitigation and the power of creating and then linking models specific to infrastructure.

DAFNI's Science Lead, **Tom Kirkham**, also recently attended a series of workshops at the Connected Places and Digital Catapult linked to the current Consumer Led Flexibility for the Green Energy Superpower Mission Innovate UK competition Competition overview - Consumer Led Flexibility for the Clean Energy Superpower Mission - Innovation Funding Service This competition is a great opportunity to join up with modellers and data owners from a variety of domains to create solutions that can present and encourage flexibility in the energy consumption market to address the challenge to decrease demand by two GW by 2030.

DAFNI workshop at the Durham HPC Days
Lewis Sampson, DAFNI Research Software Engineer, attended the #DurhamHPCDays conference in June on behalf of DAFNI, the Cloud Native Special Interest Group (CNSIG) and Computational Abilities Knowledge Exchange (CAKE), to deliver a new Kubernetes (K8s) tutorial for the HPC and DRI communities.

The following day, Lewis stepped in to showcase his role as a CAKE Fellow, presenting facilitating knowledge exchange and collaboration across the UK Digital Research Infrastructure communities.

Read his blog at: https://www.cake.ac.uk/news/k8s-cake-at-dhpcd/

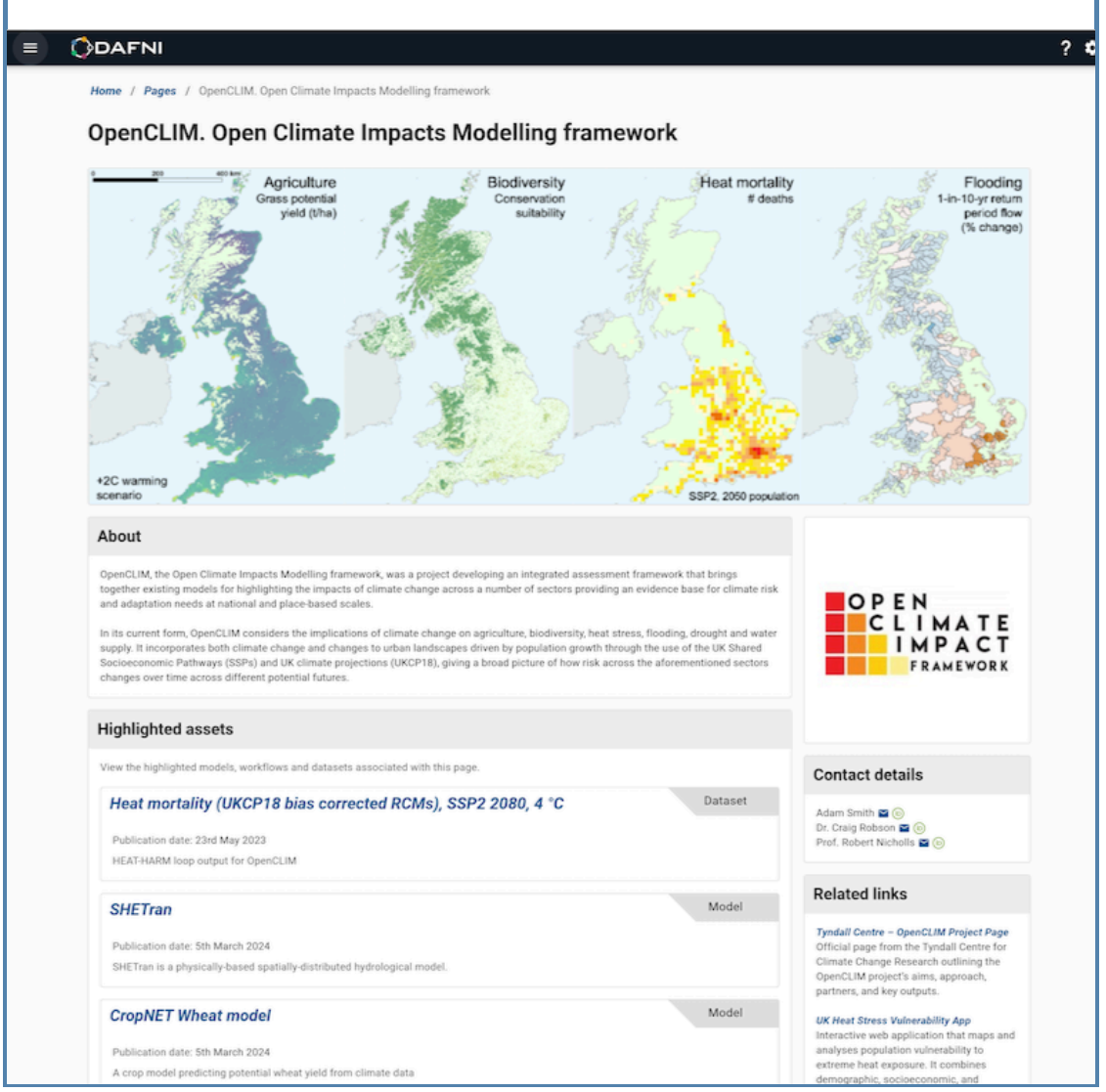
DAFNI platform features and updates

DAFNI Pages are now available

*We are pleased to announce the release of our new **DAFNI Pages** feature on the platform.*

DAFNI Pages provide users with a central place to showcase their work, highlighting key assets, publications, affiliations, external links and more.

To explore existing DAFNI Pages or create your own, visit: https://public-facility.secure.dafni.rl.ac.uk/pages (requires DAFNI log in)

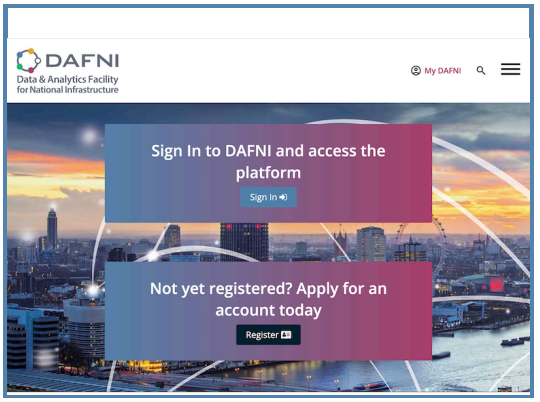


The **OpenCLIM** (Open Climate Impacts Modelling Framework) Page demonstrates how this feature can be used to present a research project in a structured and accessible way. OpenCLIM brings together models to assess the impacts of climate change and socio-economic change across sectors including flooding, drought, heat stress, agriculture, biodiversity and water resources.

The DAFNI Page for OpenCLIM brings together key project outputs, assets and supporting information, making it easier for users to discover and engage with the research.

We are also preparing to release **Reference Datasets**, a new Data catalogue asset type designed for projects that need to represent datasets held outside DAFNI, for example due to size constraints or licensing restrictions. These metadata-only entries will allow datasets to be catalogued and discovered through DAFNI while linking users to their original source.

Your views sought
Following Reference Datasets, we are exploring a similar capability for models through **Reference Models**. This feature would allow users to include models, supporting tools and other workflow components that cannot be run directly on DAFNI as reference steps within a workflow, enabling complete research pipelines to be represented. As this is still in early development, we would welcome feedback from users interested in this functionality.



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

Standard and expert user accounts are available - find out more at the foot of this email.

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 plan to run a training session within the next few weeks, so now would be an ideal time to register.

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https://www.eventbrite.co.uk/o/dafni-31793198351

DAFNI researchers' news

Liz Varga, Professor of Complex Systems at Loughborough University, delivered the keynote speech at the Chartered Institution of Building Services Engineers (CIBSE)'s one-day conference covering Technology and Innovation on 1 July 2026.

Liz is a member of DAFNI's Strategy Board and was awarded Commander of the British Empire (CBC) in the King's birthday honours for services to critical infrastructure. Her key research themes include infrastructure resilience, sustainable innovation, and decarbonisation. She is a commissioner with the National Preparedness Commission and the project manager for ISO22372 on infrastructure resilience. She is director of UKCRIC Ltd, and an Executive of UKCRIC, a 20+ university collaboration for research in infrastructure and cities.

She led the DAFNI **Water Systems Leakage (WSL)** project as part of the 2024-2025 data sharing project 'Data Infrastructure for National Infrastructure' (DINI). With almost 20% of water resources in the UK wasted in seepage and escapes, this project used data to enhance leakage detection in water distribution systems, identify barriers to data sharing, and propose solutions that would facilitate cooperation between stakeholders.

Read the full case study at: https://www.dafni.ac.uk/resources/case-studies/wsl-how-data-sharing-can-identify-leakages-in-vital-water-infrastructure/

Congratulations to DAFNI Fellow Manuel Herrera for his paper presented at the iEMSs - The International Environmental Modelling & Software Society international congress in Dublin in July! Manuel presented very interesting work on leak detection and localisation in water distribution networks, focusing on physics-informed autoencoders.

He says: "The approach combines two stages. First, a variational autoencoder identifies unusual pressure behaviour across the sensor network. Then, a physics-informed neural network focuses on the relevant local subnetwork and ranks the most likely leaking pipes while enforcing Hazen–Williams and mass-conservation constraints.

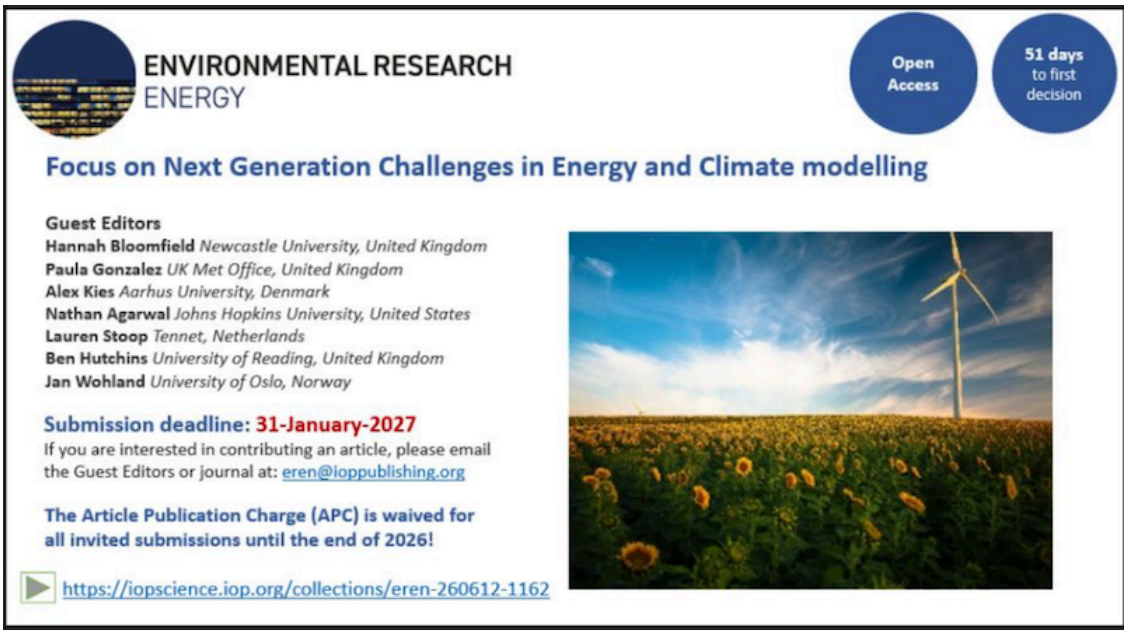
"The key idea is to combine fast data-driven screening with targeted hydraulic reasoning, rather than applying the physics-informed model across the entire network.

"In the Modena case study, the method achieved above 80% accuracy within the top-three adjacent pipes."
https://conference.iemss.org/

In his DAFNI Fellowship, Manuel is concentrating on how to make national infrastructure more resilient through data-driven methods.

He says, “Using a flooding case-study, my work will explore how trustworthy AI can support infrastructure asset management decisions under uncertainty. To encourage the wider adoption of AI across water and other infrastructure systems, I will develop reusable outputs on DAFNI and host a dedicated workshop for key stakeholders to help translate these lessons into practice.”

https://www.dafni.ac.uk/team/manuel-herrera/



Contribute your article to the new special issue in Environmental Research: Energy, with a focus on the next generation challenges in energy and climate modelling.

Submit via: https://iopscience.iop.org/collections/eren-260612-1162

Dr Hannah Bloomfield, PI for the DAFNI BRINES project is one of the guest editors.

BRINES (Building Risk-Informed redundancy for Net-zero Energy Systems) is a collaboration project led by Dr Hannah Bloomfield from Newcastle University. The team is made up of **Professor Sean Wilkinson** and **Dr Colin Manning** from Newcastle University and **Dr Ji-Eun Byun** of Imperial.

As we increase our reliance on renewable energy in Great Britain, energy systems are becoming significantly more affected by extreme weather. Challenging conditions range from storms damaging parts of the network, to exceptionally cold temperatures causing network components to freeze and high demands, to unusually warm days affecting assets' efficiency. In addition, climate change is causing already complex meteorological challenges to become even more difficult for energy providers to navigate, as the frequency and intensity of many types of extreme weather is increasing.

The BRINES project studied the challenging question of whether our present and future energy systems are prepared, and how to manage them during these weather-driven periods of stress on the networks.

Read more at: https://www.dafni.ac.uk/projects/brines/

Community news

The latest publication from the Government Office for Science highlights the research and innovation helping build resilience for the future: Climate Adaptation Research and Innovation Programme Inventory

Building on the Climate Adaptation Research and Innovation Framework (CARIF), this inventory provides an overview of Government- and UKRI-funded research and innovation (R&I) programmes that support climate adaptation, mapping current activity against the CARIF system challenges to provide a cross-government picture of adaptation-related R&I activity. It focuses on programmes where adaptation is a core or significant component, recognising that some adaptation-related research is delivered through broader programmes that may not be fully captured here.

Find out more at:
https://www.gov.uk/government/publications/climate-adaptation-research-and-innovation-programme-inventory

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Registration is now open for experts to review the First Order Draft of the Working Group I contribution to IPCC's Seventh Assessment Report.

The Working Group I contribution assesses the latest physical science basis of climate change, including observed and projected large-scale climate changes, climate processes and feedbacks, and regional climate information.

The expert review is the first of multiple review stages and runs from 10 August to 2 October 2026.

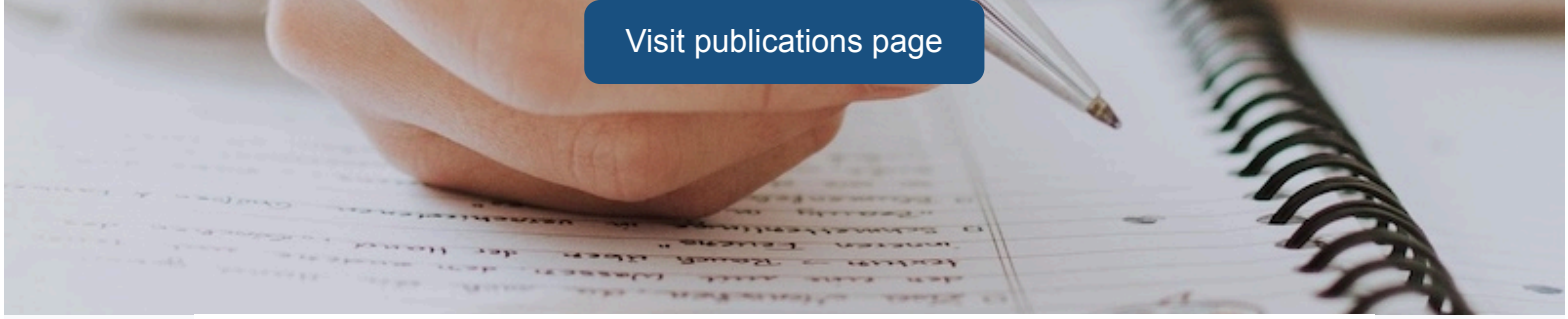
Interested experts are invited to register by 23:50 CEST on 25 September 2026:
https://apps.ipcc.ch/comments/ar7wg1/register.php?q=fod

The 2025 edition of the annual State of the UK Climate report, led by the Met Office, looks back at last year's long-running drought, emphasises how the UK's climate has rapidly changed in recent years.

It features input by UKCEH hydrologists for the first time. The key change in the UK's climate is the ongoing rise in temperatures; 2025 was the UK's warmest year on record, the sixth time this record has been broken in the 21st Century so far. There has been warming of around 0.25°C per decade since the 1980s. Spring and summer 2025 combined saw less than 40% of 1991–2020 average rainfall in the driest areas.

The total flow of rivers in England during March to August 2025 was the second lowest since 1961, lower even than several summer droughts except 1976.

The report has been published as an open access paper by the Royal Meteorological Society (RMetS) Society:https://rmets.onlinelibrary.wiley.com/doi/10.1002/joc.70470



Watch our past webinars

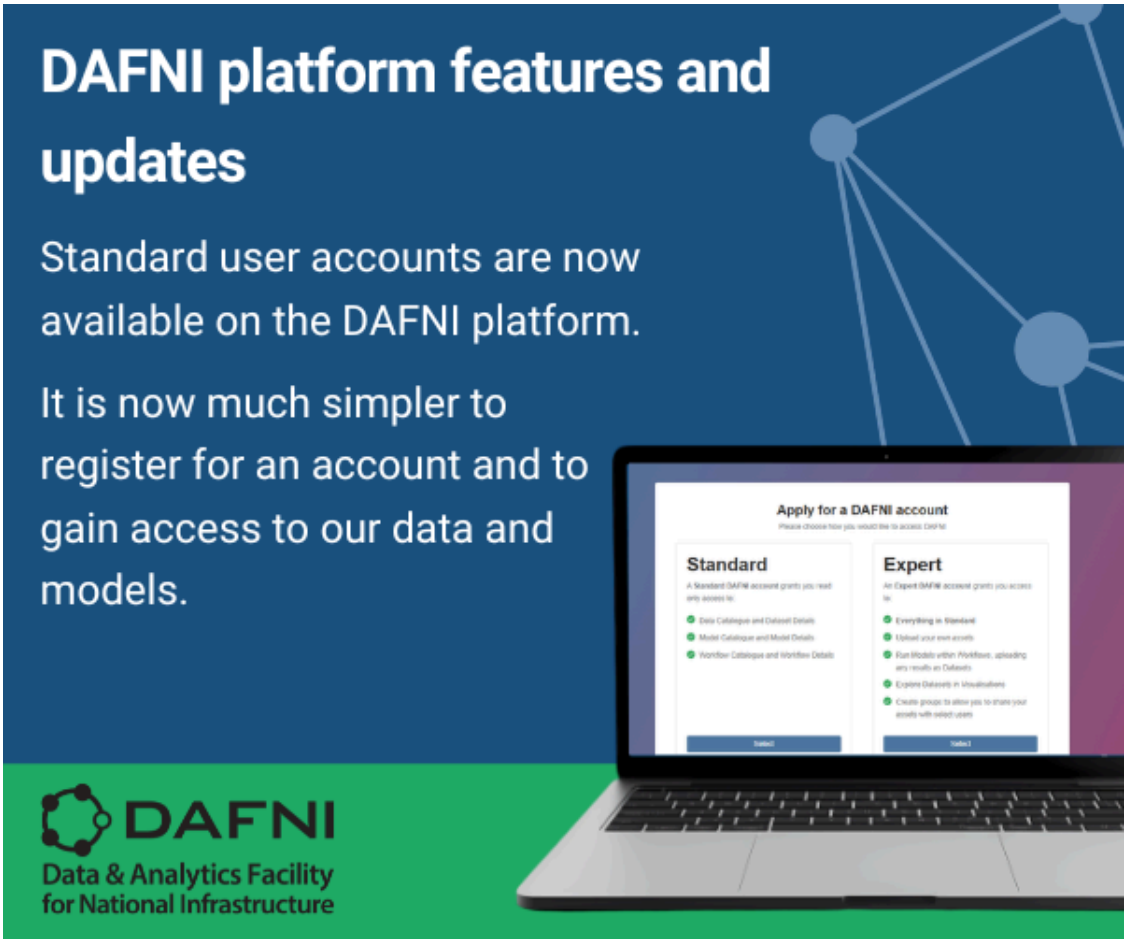
View recordings of past webinars at https://www.dafni.ac.uk/news-events/events/webinars/

DAFNI YouTube channel: catch up on conferences and interviews

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

Access our help

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



Apply for a DAFNI account: interested in working with infrastructure data, models and analytics? Creating an account on the Data & Analytics Facility for National Infrastructure (DAFNI) is the first step.

DAFNI offers two account options depending on how you want to use the platform:

🔎 Standard account
Provides read-only access to explore:
• Data catalogue and dataset details
• Model catalogue and model details
• Workflow catalogue and workflow details

⚙️ Expert account
Includes everything in the Standard account, plus the ability to:
• Upload your own assets
• Run models within workflows and upload results as datasets
• Explore datasets through visualisations
• Create groups to share assets with selected collaborators

Whether you want to explore infrastructure datasets or actively run models and collaborate, DAFNI provides the tools to support research and innovation in national infrastructure.

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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