

Priestley Centre for Climate Futures

Launch Event Programme



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OF LEEDS

Welcome

Thank you so much for joining us to celebrate the launch of the Priestley Centre for Climate Futures. As the Priestley Centre enters this new era with an expanded team and offer, I am excited to work with the University of Leeds community, our partners, and collaborators across business, policy and civil society to drive climate action.

The Priestley Centre's core aim is to unlock the full potential of the University of Leeds to meaningfully contribute to addressing the climate crisis through impactful programmes of research, education and knowledge exchange. We have exciting new plans that will build capacity, capability and agility to catalyse and accelerate climate action in the real world by working with local, national and international partners. I hope that you see the potential and value in the Centre's new offer and that you continue to provide us with feedback about how we can better support you.

Thank you once again for showing your support. I hope you enjoy engaging with this celebration showcase which illustrates the huge commitment of so many colleagues. I am looking forward to the exciting new activities and initiative we can work on together to tackle the climate crisis.

Professor Piers Forster

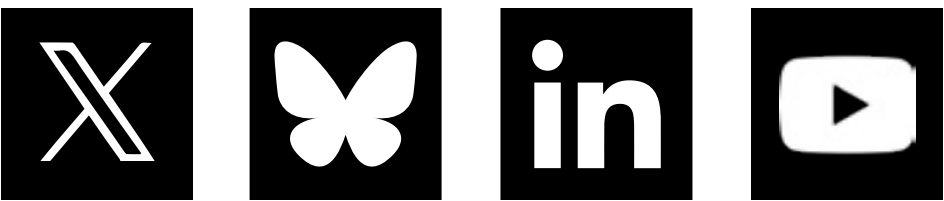
Director, Priestley Centre for Climate Futures

Meet the Priestley team

If you are meeting us for the first time, welcome! Make sure to [sign up to our newsletter](#) to receive updates about our work and events.

University of Leeds staff and postgraduate students can also [register to become a member of the Priestley Centre](#).

And don't forget to follow us on social media!



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Director of the Priestley Centre



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Priestley Centre for Climate Futures

[The Priestley Centre for Climate Futures](#)

is a leading climate change centre hosted at the University of Leeds. We connect University of Leeds climate experts with partners from industry, government and civil society to turn our insight into action.

We're hosting this wonderful event to celebrate our extended remit and growing team, and to mark the beginning of our journey to delivering innovation, policy and education initiatives, all informed by the latest climate research.

At the event, you can find out more about what we do, discover why we're called the Priestley Centre, and speak to us about how we could collaborate with you or your organisation.

Climate
creatives

Gaia giant puppetry performance

Gaia is a 9ft giant puppet based on the classic statue Millennial Gaia that was created by Oberon Zell in 1998. It is a prototype puppet built by postgraduate researcher Bev Adams as part of her [research into Sustainable Puppetry Practices](#): Investigating the Communicative Efficacy of a Giant Climate Change Themed Puppet in Public Space.

Through theory and practice, the project investigates how audiences react to climate change information received via methods of street theatre (specifically non-verbal giant puppetry) and aims to make a case for further and future use of artistic and narrative climate change communications, not simply as a data communication tool but as an alternative communication method.

A close-up, shallow depth-of-field photograph of piano keys. The keys are dark and light, with the focus on a few keys in the foreground, while the rest are blurred. The lighting is soft and warm.

The piano is an environment

“The piano is an environment” is an artistic intervention that positions the piano/pianist as an analogue for a natural ecosystem.

The pianist plays a selection of classic piano pieces, which could only have evolved due to the delicate balance of physical constraints in the instrument and the player, alongside skills and affordance to exploit those physical constraints to make music. We undermine this delicate balance by slowly accumulating objects inside the piano’s mechanism that eventually make these pieces impossible to play, the pieces can no longer survive as their ecosystem changes beyond the music’s ability to adapt.



Dreams of a Low Carbon Future

As part of the [‘Dreams of a Low Carbon Future’](#) project, James McKay – ‘the man who draws the future’ – is creating an artwork to show Leeds as a positive, sustainable, zero carbon future society in about 2050-2080.

Positive visions are vital to inspire people about the possibilities for a transition to such a future, and to counter the prevailing doom and gloom messaging we receive daily via the media.

The artwork is interactive, so bring your ideas for net zero infrastructure and behavioural choices which can be incorporated into the picture. It may also be possible to have your portrait incorporated!

Poetry place

Poets have long used their craft to reframe issues, convey emotion and share ideas. And climate change is an increasing feature of poetry shared across the world.

To mark the launch of the Priestley Centre for Climate Futures, we paired [University of Leeds poets](#) with Priestley Centre climate researchers to have a conversation that inspires a new poem.

Take a seat and enjoy these brand new works of poetry which are displayed alongside a poem from Simon Armitage, poet laureate and Professor of Poetry at the University of Leeds.

Climate Plan corridor



Climate Action Training

The University of Leeds Business School developed [Climate Action Training \(CAT\)](#) in conjunction with experts at the Priestley Centre for Climate Futures in 2022.

CAT is an e-learning masterclass designed to improve the carbon literacy levels of staff and students at the University.

With businesses worldwide prioritising sustainability, CAT equips learners with the knowledge and tools to make a difference. There are plans to offer the training to a wider audience and learners study at their own pace and join a global community committed to positive change.

How much do you know about climate change and your role in it? Find out about this and how literacy can drive climate action.



Gair Wood

[Gair Wood](#) is one of the most significant woodland creation projects in the North of England, with 66,000 trees planted in early 2023.

Tree planting at Gair Wood will increase biodiversity and public access, provide research, teaching, and social opportunities, as well as capture carbon as part of the [University of Leeds Climate Plan](#).

Gair Wood contributes to the [White Rose Forest](#), the community forest for North and West Yorkshire, whose vision is to create a sustainable and well wooded landscape across the region, benefitting local people, the economy, and wildlife.





Geosolutions Leeds: geothermal showcase

[Geosolutions Leeds](#) is a cross-disciplinary Centre at the University of Leeds, funded under the [Climate Plan](#), supporting the refocusing of geoscience research to support the energy transition and deliver on net-zero goals.

Geosolutions Leeds brings together world-leading expertise in geology, engineering and social science to deliver an integrated-systems approach to energy geoscience.

We're showcasing one of our major projects, investigating geothermal energy potential on campus and the Leeds City region. Our stand will demonstrate our geothermal living lab, including how geothermal heating/cooling could work on campus and what our research has revealed about how we could use and develop geothermal energy.



Meet the Sustainability Service at the University of Leeds

The [Sustainability Service](#) is a team at the University of Leeds dedicated to helping support a more environmentally and socially sustainable University. From collaborating with community organisations through to supporting the delivery of the University's Climate Plan, find out how we can help you deliver climate action right here in Leeds.

Have a go at creating your own Blueprint action plan, explore the Living Lab digital twin of the Roger Stevens Pond, have your say on business travel, and find out about some of our community partnership initiatives.

Delivering on
decarbonisation

Next generation carbon capture

[C-Capture](#) was founded in 2009 to help decarbonise industries, and the world, with transformative carbon capture solutions.

Carbon capture is recognised by the Intergovernmental Panel on Climate Change as necessary to hit net zero targets, however legacy technologies are too inefficient, impractical, or expensive to make the material impact required.

Next generation technologies, such as those developed by C-Capture with support from blue-chip energy producers BP and Drax, and venture capitalists IP Group and Northern Gritstone, will be essential to avoid the worst impacts of climate change this century. We are currently piloting our radically innovative capture technology at Drax as a final stepping stone before full-scale commercial roll-out.





Sustainable flowers: Sammie's Flowers

The [Sustainable Flowers Project](#) aims to encourage people to buy flowers grown on local farms, rather than flowers shipped from abroad. Imported flowers are more expensive and contribute significantly to carbon emissions when transported by air or sea.

Researchers from [Leeds University Business School](#) have partnered with [Sammie's Flowers, at Kiddal Quarry Farm](#) in Leeds. The aim of the initiative is to bolster the local flower industry while upholding sustainable development principles, working towards reducing carbon footprints and protecting the area's biodiversity.



Encouraging the use of sustainable transport through inclusive design

This project aims to explore whether fulfilling the UK population's transport needs can encourage people to use more sustainable transport.

It looks at what people express they need for an inclusive transport system and then how these needs can be applied to three sustainable transport modes: Demand-Responsive Transport, Shared Mobility and Micro Mobility. Encouraging the use of inclusive sustainable transport modes should help to reduce the carbon output produced by private car journeys by offering viable options for people to travel by.

This stall showcases a 'game board' used in the research process to help participants visualise how their journeys could be made with sustainable transport modes. It includes how sustainable transport modes could be inclusively 're-imagined' according to the research's participants.

Food on the
first floor



Feel for Food: understanding mouthfeel to design sustainable protein food

At the [School of Food Science and Nutrition](#) we are designing the “food of tomorrow” and improving plant proteins with sustainability in mind.

Visit our stand to discover the crucial role of friction (tribology) in our eating experience and its importance in food enjoyment. Hold our cool 3D printed tongues that we use to measure friction, predict sensory experience and play our friction inspired games!

Learn how our research is transforming unappetising foods, enabling fat replacement for healthier options without sacrificing taste, and enhance more sustainable plant protein products to match animal proteins without the off-mouthfeel.

the BRAGG centre
FOR MATERIALS RESEARCH

Global Food and Environment Institute



The [Global Food and Environment Institute \(GFEI\)](#) is an interdisciplinary research community at the University of Leeds.

We envisage a radically different global food system aligned with nature, ensuring universal access to safe and nutritious food. Together, we can create a food system that is socially-just, climate-smart and goes beyond sustainability.

A combination of environmental and climatic changes, and external shocks to governance systems, food systems and supply chains are creating new challenges for meeting the [UN Sustainable Development Goals](#). These challenges are interconnected in complex ways.

[FoSTA Health](#) is a project that will take an interdisciplinary and systems approach to evaluate the medium and long-term implications of food system change in southern Africa.



University of Leeds Research Farm

At the [University of Leeds Research Farm](#), we work with academic and industry partners across the UK to co-develop high quality research programmes that address modern agricultural challenges.

Find out about two important projects we are working on:

- **FixOurFood** explores examples of regenerative farming in Yorkshire and beyond, and what we can learn from them and the contribution to combat global warming if these techniques are scaled up nationally. Trials are happening with crops at our farm.
- **ClieNFarms** aims to co-develop and scale up systemic, locally relevant solutions to foster climate-neutral and climate-resilient farms across Europe. Trials are happening with the pig feed and slurry at our farm.





Untangling cell walls for future climate-resilient crops

Our [research aims to address global concerns on food security, climate change and sustainable living](#) by providing by ways to improve crop production and environmental resilience.

How important are different cell wall components in ensuring resilience to drought? Take a look at different plant tissues under the microscope and try to identify them!

You can also compare the texture of agri-waste films with plastic – are these potential substitutes that would reduce our need for plastic, and reduce food waste?

Fresh from the UN
climate conference



Empowering the eco-anxious

[‘Empowering the eco-anxious’](#) is a poster created by a student-led team at the University of Leeds, developed for the 2024 Action for Climate Empowerment (ACE) Gallery event at the 60th session of subsidiary bodies (SB60).

The poster considers the theme of the education and empowerment of children and youth, interrogates what the University of Leeds does to address the eco-anxiety of young people, and the empowerment of eco-anxious young people.

How well do you think the University does in addressing the eco-anxiety of young people?




Indicators of Global Climate Change

The [Indicators of Global Climate Change \(IGCC\)](#) initiative provides an annual, peer-reviewed update of key climate indicators, building on established [Intergovernmental Panel on Climate Change](#) methodologies in a fully transparent manner.

The global climate system is changing rapidly, and policymakers and governments need to make decisions based on the latest climate science to avoid the worst impacts.

The ambition of IGCC is to provide trusted and up to date indicators on the state of the climate directly to annual UN climate negotiations in a rapidly changing world where policies can shift quickly.

Imagining
futures



Envisioning Tomorrow: climate stories from the art collection – a collaborative book

Envisioning Tomorrow: Climate stories from the [art collection at The Stanley & Audrey Burton Gallery](#) was an exhibition using art works to facilitate discussion around the climate crisis.

By using art as a conduit for discussion it can create a safer space to explore these issues and delve deeper into the emotions one needs to feel to take action.

A central theme explored in the exhibition is the ‘shifting benchmark’, where what is normal in terms of the abundance and range of species we expect to see in nature shifts with each generation, and how art can help us reset our collective memory.

Today we are asking – what one thing in nature would you like future generations to see in abundance that were once or are currently abundant, but may be threatened by climate change?

Please add a sketch or description of this to our nature spotters guide for the future!



Speculative Visions

What vision do you have of a positive, post-carbon future? The [‘Speculative Visions’ project](#) combines art and AI as a participatory research and public engagement tool to facilitate grassroots-driven visioning of climate-positive futures with communities coming from underserved informal settlements in New Delhi, India.

This novel approach was tried in a pilot with community members through a live session to explore the potential and limitations of this approach. The hope is to empower individuals coming from intersecting marginalised contexts to engage with and communicate their future visions.

Regional
climate action



Engagement and outreach at the University of Leeds

How do we inspire the next generation of climate change leaders?

[Meet the University of Leeds teams](#)

dedicated to sharing ideas, igniting curiosity, and paving the way for higher education in environmental studies. Take part in the Yorkshire and Humber Climate Change challenge and design your dream future town on our giant map. Stop by, chat, and share what inspired your career.

Yorkshire & Humber Climate Commission

[Yorkshire & Humber Climate Commission \(YHCC\)](#) and [Leeds Climate Commission](#) are supported by the University of Leeds and run by a secretariat based at the [Sustainability Research Institute](#).

Leeds was the original climate commission, founded in 2017, forerunner to a network of other commissions around the UK.

Yorkshire & Humber Climate Commission was launched in 2021 and is the only regional climate commission. Like the Leeds Commission it is partnership based, working collaboratively with people from the public, private and civic sectors, including the region's local and mayoral authorities, to drive ambitious climate action.



Risk, resilience
and adaptation



An ethnoclimatology of climate risk

This newly launched project is working with Inuit communities across the Arctic to bring together science and Indigenous Knowledge to model how climate risk may change this century.

The Arctic has warmed nearly four times faster than the global average since the 1970s and is expected to see the most warming this century. Our research will help to visualise how these changes might be experienced, understood, and responded to over time.

Can we improve how we think about the future risks of climate change? How can climate modelling be made more relevant to decision choices? How can communities be meaningfully involved in envisioning climate futures?



GENERATE: creative approaches to building inclusive and climate resilient cities in Indonesia and Uganda

The [GENERATE project](#) combines applied arts and social sciences to tackle inequalities that are exacerbating climate impacts.

In collaboration with communities, artists, civil society and governments in cities across Indonesia and Uganda we are creatively delivering new evidence and interventions to promote climate and disaster justice.

Together with some of the most marginalised urban communities, we co-design and implement arts-led interventions to better understand – and challenge! – how intersecting inequalities and injustices are shaping impacts and responses to climate change and disasters. Our interventions are co-led by some of the most marginalised urban communities including women, people with disabilities, youth and older people, LGBTQI+ people, refugees and asylum-seekers, Indigenous communities, and informal workers.

UK Centre for Greening Finance and Investment: hazard and vulnerability explorer tool

The [UK Centre for Greening Finance and Investment \(CGFI\)](#) is a national centre set up to accelerate the adoption and use of climate and environmental data and analytics by financial institutions.

The Leeds Innovation Hub, hosted at Nexus, University of Leeds, connects wider UK science and innovation with the finance sector, and provides a route through which needs are understood and the latest climate science is made accessible and commercialised.

The Assessing Physical Climate Risks to Pensions Funds project uses a climate analytics tool to assess and visualise risks to integrate climate considerations into investment decisions (for example, in risk visualisation for real estate and clean energy).



Water, water
everywhere

Ice Club: from the top to the tap VR

Climate change is causing glaciers worldwide to retreat at unprecedented rates, but these glaciers serve as a water resource for hundreds of millions of people.

In this virtual reality (VR) experience, you will follow the journey of a single snowflake as it falls on the summit of Everest, works its way through the Khumbu glacier, and down into the rivers that provide drinking water for the towns of the lower Himalaya – from the top to the tap.

Ice Club is a network of early career researchers at Leeds who are devoting our careers to understanding the drivers and [impacts of change in the cryosphere](#) (the world's coldest regions) and finding solutions to these issues.





Seas of change: how changing cold oceans and the ocean floor affects our future

The ocean is especially good at absorbing and storing carbon that would otherwise make our planet warmer. Research at the University of Leeds is helping to understand how cold seas and seafloor processes allow so much carbon to be absorbed from our atmosphere.

By studying the impacts of ocean warming, deep-sea mining and bottom trawling of the ocean floor in field projects from the Southern Ocean to Equatorial Pacific and UK shelf seas, our research is spearheading learning around how our ocean and ocean floor affects our future.

Dr Will Homoky will show you what you need to wear to work in the Antarctic seas, and let you handle the ocean resources we study that affect marine life and society today.

West Yorkshire Flood Innovation Programme

The [West Yorkshire Flood Innovation Programme \(WYFLIP\)](#) is a collaborative, innovative programme to reduce the impact of flooding and climate change in the region.

It was launched by five lead Local Flood Authorities, the Environment Agency, Yorkshire Water, and West Yorkshire Combined Authority with support from academic partners, community-based groups and Third Sector organisations.

The [Yorkshire Integrated Catchment Solutions Programme \(iCASP\)](#) is providing a scientific lead and ensuring the latest research is embedded into new techniques.

Find out more about our new virtual spray can tool developed to understand local flood issues; a network of digital sensors across West Yorkshire that is being developed to give people earlier flood warnings; and an online survey launched to identify gaps in capacity and skills needed to improve Blue Green Infrastructure in the region.



Wetropolis Flood Investigator: visualising extreme flooding events

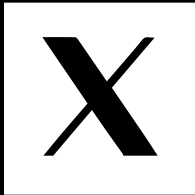
The Wetropolis Flood Investigator [visualises how often extreme flooding events occur on average](#). It allows us to understand that an event with a return period of 100 years occurs at random rather than regular intervals, which is often misunderstood.

Wetropolis is a portable model with a weather machine leading to random rainfall onto a river landscape. “Wetropolis-days” occur in 10 seconds real time, meaning that you can visualise rare events without having to wait for long periods of time.

On average, Wetropolis-city experiences floods, super or mega-floods every 5, 25 or 125 Wetropolis-days. How does the weather machine lead to these flooding return periods? How might climate change affect these results?

Priestley Centre for Climate Futures

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