

IMPERIAL

Grantham Institute

Climate Change and the Environment

An Institute of Imperial College London

2023–24

Outlook

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Imperial startup creates first garments from plant-based sequins

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Foreword

Launched in March 2024, Imperial’s new strategy sets our vision and ambition for the next two decades. It will help guide our major decisions; position us to grasp new opportunities; and inspire others to join us, partner with us and invest in us.

This strategy, *Science for Humanity*, will be rooted in our commitment to attracting and nurturing the best talent, regardless of background; creating an innovative and interdisciplinary research powerhouse that can match the scale and urgency of twenty first century challenges and opportunities; and accelerating the impact of new discoveries, inventions and ideas, globally.

Our founding mission was “to be useful”; an understated precis of all that our exceptional teaching, research and innovation have made and continue to make possible. Few issues unite our Imperial community with such determination and urgency as our desire to address the interlinked existential challenges of climate change, biodiversity loss and pollution.

Imperial today offers a wide variety of education programmes in climate-related science, finance, technologies and policy. Our research portfolio is among the strongest in the world. We are using our expertise and research to accelerate a sustainable transformation for industry and society and Imperial experts are working with governments, industry and civil society to advocate for urgent change.

By 2025, Sustainable Imperial will be established as an Imperial-wide strategy to deliver evidence-based solutions, embrace new technologies, challenge conventional thinking and open new debate in our efforts to solve this growing global crisis. ■



*Professor Hugh Brady
is President of Imperial
College London*

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Editors: Siân Halkyard and Simon Levey

Comments and feedback: grantham@imperial.ac.uk

Contributors: Hana Amer, Caroline Brogan, Lottie Butler, Claudia Cannon, Franca Davenport, Conrad Duncan, Hayley Dunning, Deborah Evanson, Pete Ford, Jez Fredenburgh, Talat Gokdemir, Emily Govan, James Heyburn, Neil Jennings, Stephen Johns, Nicole Kuchapski, Conor McNally, Ian Mundell, Victoria Murphy, Phoebe Ross, David Silverman, Laura Singleton, Jamie Taylor, A Thousand Monkeys, Joanna Wilson, Lynsey Wynton.

Cover photo: Sara Hibbert for Radiant Matter.

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Introduction from the Director

RALF TOUMI

*Professor of Physics and
Co-Director of the Grantham Institute*

This year we celebrated the 15th anniversary of the founding of the Grantham Institute. It is right to celebrate the major contributions that we and our close community at Imperial College London have made to solutions for the climate and environmental crises, while recognising the work there is still to do.

Our innovation activity, [Undaunted](#), led by [Alyssa Gilbert](#), is going from strength to strength. I am always excited when I hear about the many successful innovations they support and uplifted by the enthusiasm of our entrepreneurs.

In the pages of this magazine you will also read about the successes of Imperial's cross-cutting researchers, who are advancing the knowledge needed to find solutions to climate change, restore biological diversity and protect human rights and basic needs including good physical and mental health. This space only allows us to pick subjective highlights, so sign up to our newsletter for the latest news, events and updates.

In the education space, our joint MSc course with Imperial College Business School on climate change management and finance continues to grow, with ever more outstanding



applicants. I am also delighted to announce that our Director of Education, [Anne Houston](#), has (together with the Dyson School of Engineering) won approval for a new MSc in cleantech innovation. This is another landmark in our history.

In the summer, our new Director of Policy and Translation, [Dr Caterina Brandmayr](#), and her team organised a major, widely-covered event marking the half way point to the UN Framework Convention on Climate Change's annual climate conference, COP28. We intend to host this type of event with the Delegation of the European Union every year as a stocktake on the way to the annual negotiations.

Imperial's international reach is outstanding. You will not have missed the extensive media coverage of our Grantham Senior Lecturer,

[Dr Fredi Otto](#), whose team works tirelessly to inform the public on climate change attribution of high impact weather events around the world.

Looking forward, we are embracing the new Imperial strategy, *Science for Humanity*, with sustainability as a top priority across the university. Like many organisations, Imperial has been on a path of transformation of both its research and its own operation. We are pleased to be at the heart of this and strengthening efforts to create a better future for all.

Finally, I would like to congratulate [Professor Richard Templer](#), our former Director for Innovation, for his award of an OBE for services to climate innovation. ■



HIGHLIGHTS

A roundup of Imperial climate change and environment activities in 2022–23 that contributed towards the Grantham Institute's vision for a sustainable, resilient, zero-carbon society

① Contributing to Greta Thunberg's climate book

Three Imperial experts on cloud science, dangerous weather and biodiversity have contributed to a newly published “essential guide for saving the planet”. Environmental activist **Greta Thunberg** brought together a 100-strong team of world experts including **Dr Paulo Ceppi**, **Professor Andy Purvis** and **Dr Friederike Otto** for *The Climate Book*. Dr Ceppi said: “I hope this will be an enlightening read for anyone wanting to know why climate change is happening, and what they can do about it.”

©Natural History Museum, London



READ MORE

[Imperial scientists appear in first book by climate activist Greta Thunberg](#)

② Environmental Audit Committee's 25th anniversary

The Environmental Audit Committee, a cross-party group of MPs established to examine environment and sustainable development policies across government, held its 25th anniversary celebration at Imperial in March 2023. The event, organised by **Imperial Policy Forum** and the Grantham Institute, heard from former Prime Minister **Theresa May**, policymakers, academics and expert voices from across environmental policy, to reflect on the past work of the committee and look ahead to future challenges.

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WATCH THE HIGHLIGHTS

[Environmental Audit Committee's 25th anniversary](#)



READ MORE

[Environmental Audit Committee celebrates 25th anniversary at Imperial College](#)

3 Brian Eno delivers Annual Lecture

The Grantham Institute's Annual Lecture explored how climate change narratives can be shaped and changed through culture, creativity and innovation. **Brian Eno**, a highly influential musician, producer, visual artist and activist who reformed the music industry's action toward climate change, spoke to more than 700 attendees in November 2022. His lecture was followed by a panel discussion including scientists, artists and publicists, chaired by **Baroness Lola Young**.



READ MORE
[Grantham Institute 2022 Annual Lecture](#)

4 Cleantech for UK launches

Imperial hosted American businessman and philanthropist **Bill Gates** and Prime Minister **Rishi Sunak** for the launch of a new initiative to supercharge UK cleantech innovation in February 2023. **Cleantech for UK**, a coalition of investors and venture-builders with combined funds of over £4 billion, will accelerate the translation of scientific research into world-leading cleantech scale-ups. It will also connect the UK's policymakers with those creating, incubating, investing in and scaling up cleantech companies. Imperial's climate change innovation activity **Undaunted** is a founding member and continues to put pressure on the UK government through reports, direct meetings with government officials, and media and press activity.



READ MORE
[Undaunted Director's blog](#)
[The published report](#)
[The letter to UK government](#)



MEDIA COVERAGE
[Evening Standard news story](#)



5 £10m for new microscopic life research centre

A new research centre to probe the mysteries of microscopic ecosystems has been launched at Imperial's Silwood Park Campus. The **Leverhulme Centre for the Holobiont** is funded by the Leverhulme Trust, which will provide £10 million funds over 10 years to understand the numerous ways by which microbes interact with their hosts, and how this knowledge can be used to address global challenges. The new centre includes partners from nine research institutes and will tackle urgent applied questions in conservation biology, restoration ecology, and agriculture.

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READ MORE
[Leverhulme Centre launch](#)
[About the centre](#)

6 30 years of the Environmental Research Group

2023 marked 30 years since the founding of the Environmental Research Group (ERG). Director **Professor Frank Kelly** led a two-day symposium and monthly seminar series on environment and health challenges in a changing world, which showcased some of the group's major achievements in air pollution research and public engagement, and discussed the ongoing influence of climate change on air and water quality and public health.

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LISTEN
[Listen to an interview with Frank Kelly](#)
[Celebrating 30 years 1993–2023](#)





YEAR IN NUMBERS



Train

Empower future leaders through postgraduate training programmes

166

students started on our Climate Change, Management and Finance Master's programme

42

students joined the tenth intake of our Science and Solutions for a Changing Planet Doctoral Training Partnership

56

learners joined our interactive online training programme about climate change and risk management

750

visitors to events organised by students in the 'Music of the Earth' challenge team, with a mission to sonically preserve nature and foster climate action



Innovate

Accelerate climate change innovation and low-carbon startups

£1 billion

total funding granted to startups supported by Imperial's climate accelerator since 2012

69,000

tonnes of carbon dioxide equivalent saved by end 2030 by organisations supported by Undaunted

51 million

cubic metres of freshwater projected to be saved up to 2030 by supported companies

76 million

tonnes of waste forecast to be avoided by 2030 across the portfolio of supported companies

11

of the Sustainable Development Goals supported by at least 15% of Undaunted's organisations



Inform

Communicate knowledge to help inform and shape decision-making

1,742

downloads of our briefing on the environmental impact of pet parasiticides

12,000+

pieces of media coverage about climate change and the environment, across 20+ countries

15,000+

mentions of studies carried out by the [World Weather Attribution \(WWA\)](#) group

100+

young people took part in the *Design a Climate Action Mural* workshops at the Great Exhibition Road Festival

2022–23



Research

Initiate, develop and support multidisciplinary research on climate change and environment

33,000

downloads of Grantham Institute publications on Spiral, Imperial's open-access depository

60,000

users of the DreamLab app, using their smartphone to simulate tropical cyclones and help scientists predict the likelihood of a damaging storm

7,622

downloads of the WWA study showing climate change made the extreme heat in North America, Europe and China in July 2023 much more likely

100

times more likely – the impact of climate change on unseasonal heat in South America in August and September 2023



Connect

Foster new collaborations and networks at Imperial and beyond

1,200

entries to our Grantham Climate Art Prize, which focused on solutions to the climate crisis

288

participants from 82 countries took part in regional dialogues organised by the Climate Cares Connecting Climate Minds project

200+

journalists attended media briefings about 13 studies published by the World Weather Attribution initiative

97

members in the Imperial Climate Communications Network



Lead

Generate thought leadership and forge consensus on key issues

9

Imperial delegates at the UN Biodiversity Summit (COP15) in December 2022

19

Imperial delegates at the UN Climate Change Summit (COP27) in November 2022

1,000+

views of our COP27 event on early-warning systems

100+

UK universities and research institutes in Imperial-led UK Universities Climate Network



CROSS-CUTTING RESEARCH

The Grantham Institute has published a series of FAQs on how climate change affects wildfires, El Niño and heatwaves. They were authored by staff and students from the Grantham Institute and the Leverhulme Centre for Wildfires, Science and Society.



Imperial College London is a world-leader in climate change research, and uniquely placed to deliver the scientific, technological and policy solutions we need to make our zero emissions and zero pollution vision a reality.

We pioneer a multi-disciplinary approach to global problem-solving. Our research is transforming financial systems and attitudes to risk and resilience. It is revealing the impact of pollution on human and animal health, and how to mitigate it. We are driving advances in sustainable energy distribution, chemical production, electric vehicles and batteries, nature-friendly agriculture, helping to ensure food security across the world and preparations for a changing climate.

We do things differently. We transcend traditional fields, bringing together researchers and forging new approaches that converge disciplines – from fundamental science and engineering to systems thinking, human health, new business models, and policymaking. We support the rapid translation of ideas into new sustainable products, services and companies, through our rich entrepreneurial ecosystem and our support of innovation and translation.

Imperial is reshaping its research portfolio to support our sustainability goals. Our research covers a range of areas, with impact on society and policy at the heart of everything we do. ■

Dr Joyce Kimutai

PROFILE



Research Associate,
Grantham Institute

As the newest member of the World Weather Attribution (WWA) group, **Dr Joyce Kimutai** is applying her knowledge of the African climate to extreme weather events across the world. “The characteristics of extreme weather events in the current world have changed compared to a world without climate change,” she explains. “Our team evaluate ‘attribution’ – to what extent climate change has modified these events – either their magnitude, frequency or duration.”

With a background in meteorology, Dr Kimutai’s work can inform an ongoing debate over financial assistance that less developed countries receive for climate-related ‘loss and damage’, by drawing a more tangible picture of the links between climate change and its impacts. As a negotiator for Kenya at COP28, she is looking to support a new global Loss and Damage Fund established at COP27.

Earlier this year, she co-wrote a report calling for more investment in weather data collection in central Africa, to improve the accuracy of climate models in the region and to help communities and governments anticipate and adapt to changing weather extremes.

Following an unprecedented year of weather extremes, the WWA have published a range of new studies. But alongside the science, they also engage extensively with the media and communicate about their work, something Dr Kimutai particularly enjoys. She adds: “We need to raise awareness with the public and journalists; it’s such important work. I’ve had lots of support and training in my first six months here and I really enjoy talking to people and explaining what we do.” ■

READ MORE

[Dr Joyce Kimutai’s research](#)

[More about World Weather Attribution](#)

Pet flea and tick treatments are polluting UK freshwaters



©Tatomm/iStock

The parasite treatments and preventatives that many vets and owners put on their pets are getting into UK rivers in concentrations that are toxic to aquatic species. In a briefing paper published in 2023, Grantham Institute researchers highlighted an urgent need to review risk assessments and prescribing practices for these chemicals.

Parasiticides are commonly applied as ‘spot-on’ treatments on dogs and cats; many of them contain a class of chemicals called neonicotinoids that kill insects. These chemicals have been banned for agricultural use on crops as evidence shows they impact bees and other pollinating insects important for our food supply.

Dr Andrew Prentis, Visiting Fellow in the Grantham Institute, and a member of Vet Sustain, said: “So far, our use of parasiticides for pets has focused primarily on the animal and human health benefits, but even these are not well evidenced. Chemicals that have been banned in one sector are used indiscriminately in another with seemingly little consideration of the possible risks. This not only results in increased pollution of UK waterways – which are under myriad threats from other sources of pollution – but could also lead to parasite resistance due to overuse. It’s time for a reassessment of clinical need and treatment recommendations.” ■



READ MORE

[About parasiticides](#)

[Briefing paper](#)

[Research team](#)



MEDIA COVERAGE

[I News](#)

[The Times](#)

[Vanity Fur magazine](#)

Tyre wear particles are toxic

Imperial experts are calling for more to be done to limit the harmful impact of toxic tyre particles on health and the environment.

The team from the [Transition to Zero Pollution Initiative](#), warn that even though electric vehicles run without creating fuel exhaust emissions, their tyres are a significant source of microplastic pollution in the air and water – containing many toxic chemicals.

Vehicles produce six million tonnes of tyre wear pollution globally

each year. Despite this, research on their impact and solutions has not been a priority.

In a new briefing paper, a multidisciplinary group of Imperial experts including engineers, ecologists, medics and air quality analysts argue that reducing tyre pollution should be seen as a critical part of making transport cleaner and more sustainable, alongside reductions in CO₂ and other exhaust emissions.

Lead author **Dr Zhengchu Tan** said: “We urge policymakers and scientists to embark on ambitious research into tyre wear pollution to fully understand and reduce their impacts on biodiversity and health, as well as research to reduce the generation of these particles.” ■



READ MORE

[Tyre particles report](#)

[Transition to Zero Pollution](#)

Imperial expert to clean up power grid with £4m grant



Professor Mark O'Malley has joined Imperial as the Leverhulme International Professor of Power

Systems. He will lead a research team of 13, working to decarbonise the electricity grid, supported by £4 million in funding from The Leverhulme Trust.

The grant will focus on developing technologies to integrate renewable energy into the network that delivers electrical power from producers to consumers.

Professor O'Malley said: "Climate change is the biggest challenge of our generation. A powerful way to tackle this will be transitioning to a fully decarbonised electricity grid,

and one way of doing this is by going towards 100% renewable.

"No one organisation, no matter how large or well-resourced, can solve this challenge alone. Therefore, a global collaborative approach is required, working across research, industry and end-use communities to solve the challenges at the pace and scale that is needed."

The research will be done in collaboration with the Global Power System Transformation Consortium (G-PST), which Professor O'Malley co-founded when he was Chief Scientist of Energy System Integration at the National Renewable Energy Laboratory in the United States. ■

[READ MORE](#)
[Decarbonisation of the grid](#)

New approaches for climate finance in southeast Asia

Imperial College Business School's Centre for Climate Finance & Investment (CCFI) has published clear evidence that tropical forests with ambitious biodiversity and climate mitigation objectives make the best investments.

Forestry-Backed Assets Design, produced by the CCFI's Singapore Green Finance Centre, advises that forest carbon credit investment portfolios containing a diverse range of forest ages, geographies and ecosystems are half as likely to lose value.

A further report from the centre, **Nature Investment as a Response to the Climate Crisis: Opportunities in Southeast Asia**, argues that well-structured capital market instruments

such as sustainability-linked bonds (SLBs) can help scale up investment in much-needed nature restoration projects in the region.

The guidance comes at a time of both ecological and economic uncertainty for the region, as climate change continues to disproportionately impact Asian economies. The annual cost of nature restoration across Southeast Asia could total \$200 billion. ■



[READ MORE](#)
[Carbon credits](#)
[Financial tools](#)
[Forestry-backed Assets Design](#)

Ones to watch

1

Ebba Engstrom, a graduate student on the Science and Solutions for a Changing Planet DTP, is researching green initiatives in vineyards, following the boom in British winemaking in recent years. Her work is looking at how producers can improve their output and sustainability, for example by introducing 'cover' crops that regenerate the soil, hedgerows and flower strips that support biodiversity, or grazing animals to manage weeds. She hopes her findings will be applicable across other agricultural fields and environmental land management schemes.

2

A major consortium led by Imperial and chemical company **BASF** is to help make chemical manufacturing more efficient, resilient, and sustainable. Imperial and its industry partners will receive £17.8 million from the **Engineering & Physical Sciences Research Council (EPSRC)** to carry out the work. The partnership, led by **Professor Mimi Hii**, will advance 'flow chemistry', a technique in which liquid chemical production takes place in continuous operation rather than in batches.

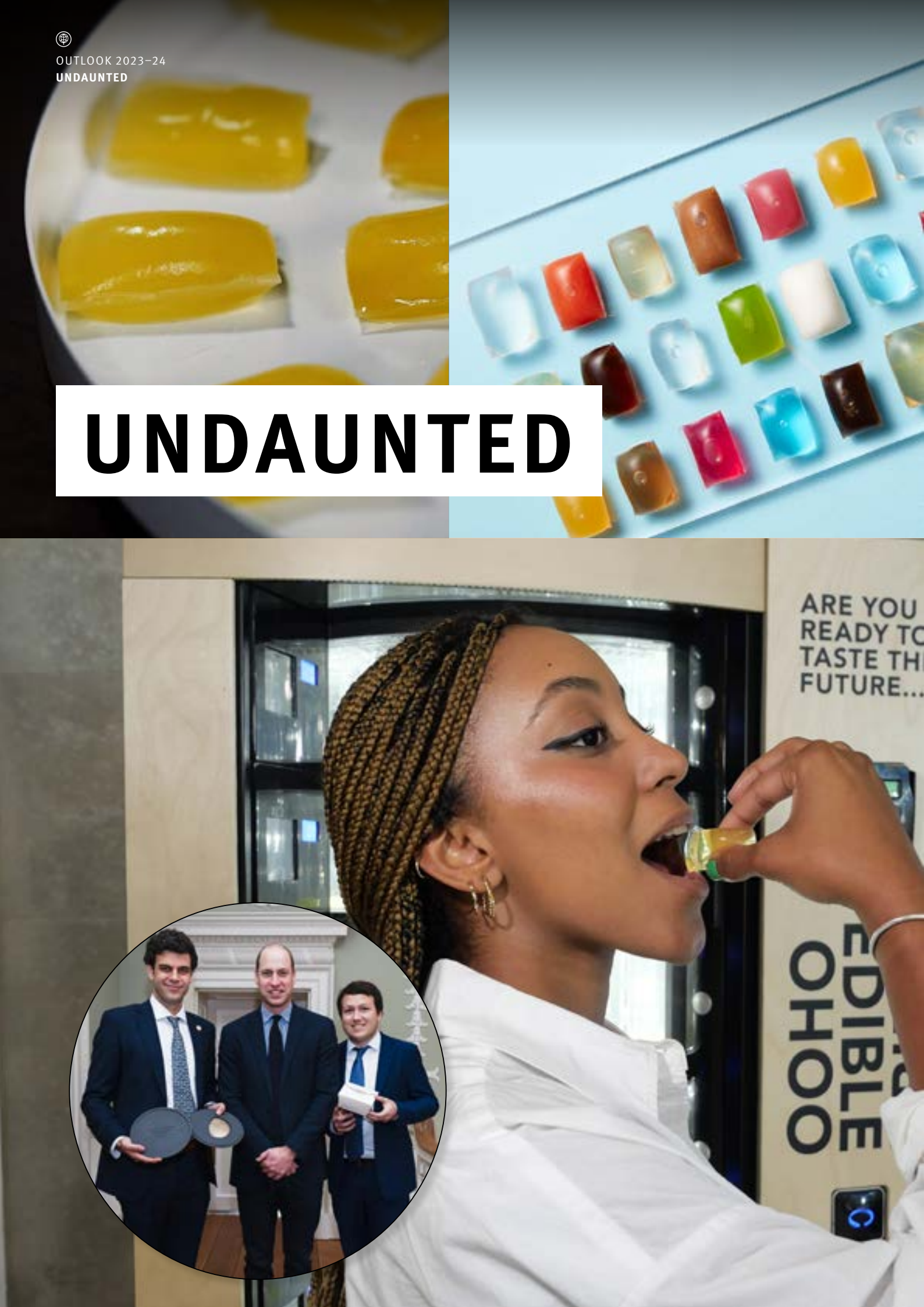
3

The UK's flagship institute for battery research has announced £19 million investment in four projects including one jointly led by **Dr Chun Ann Huang** from Imperial. **The Faraday Institution** consists of 27 universities with leading electrochemical energy storage research. Elsewhere at Imperial, **Dr Qilei Song** is aiming to scale-up more cost-effective and environmentally friendly technology for redox flow batteries thanks to a new **European Research Council** grant.



OUTLOOK 2023-24
UNDAUNTED

UNDAUNTED





Above and left: Notpla's edible Ohoo capsules, one of the products developed by the Earthshot-winning startup.

As an official Earthshot Prize nominator, Imperial College London is proud to be part of a global community selected for our ability to identify the most impactful solutions across all sectors, worldwide.

Inset, left: Notpla founders Pierre Paslier and Rodrigo Garcia Gonzalez receive the Earthshot Prize from HRH Prince William.

Imperial College London is fostering an innovation ecosystem that aims to make London and the UK a great place to start and scale solutions to the climate challenge.

The Grantham Institute's [Undaunted](#) initiative is creating new routes into entrepreneurship, envisioning a world where diverse founders leading businesses of all sizes can deliver substantial emissions reductions and climate resilience sustainably and at scale.

From its new home in London's [White City Innovation District](#) our unique [Greenhouse](#) programme – Europe's leading climate innovation accelerator – comprises three key components: startups, investors, and access to Imperial's world-leading researchers, facilities and scale-up space.

The new [Better Futures Retrofit Accelerator](#) lays the path to commercial success for startups in the built environment, offering a gateway into London's growing market for carbon-neutral buildings. It aims to unlock barriers to market entry, setting the foundation for successful commercial scale up and reducing London's greenhouse gas emissions significantly.

Imperial has also launched a new [MSc Cleantech Innovation](#), led by the [Grantham Institute](#) and [Dyson School for Design Engineering](#). This programme provides aspiring entrepreneurs from diverse backgrounds, with broad skillsets, the opportunity to create revolutionary climate solutions across areas such as energy, materials, manufacturing, water, transport and food. ■

Notpla founders

PROFILE



Pierre Paslier and Rodrigo Garcia Gonzalez, *Notpla Co-Founders, Imperial Alumni*

A startup founded by Imperial graduates **Pierre Paslier** and **Rodrigo Garcia Gonzalez** became the first UK team to win the Prince of Wales' Earthshot Prize in 2022.

Notpla's seaweed-based biodegradable alternative to plastic was recognised in the 'Build a Waste-Free World' category. Their products include a coating for takeaway boxes, film, paper made from seaweed pulp, and a rigid plastic alternative, also made from seaweed.

Notpla was founded by Paslier and Garcia Gonzalez while they were students, with support from Imperial's well-established entrepreneurial ecosystem. Co-founder Garcia Gonzalez explains: "Notpla wouldn't exist if we didn't have the support of what is now Undaunted. They were

the first ones to believe in us and the idea, and provided the necessary guidance and connections to start this journey.

"Thanks to them we have been able to create a company that now employs 74 people and directly replaces single-use plastic items in the millions in different geographies."

A year on from their win, Notpla's goal is to provide regenerative solutions that help restore planetary health. Co-founder Pierre Paslier adds: "We have brought our packaging to thousands of restaurants and events globally, and we are working with seaweed farms that give back to the environment and the local economy. Our goal is to eliminate single-use plastic for good." ■

READ MORE

[About Notpla](#)

[The Earthshot Prize](#)

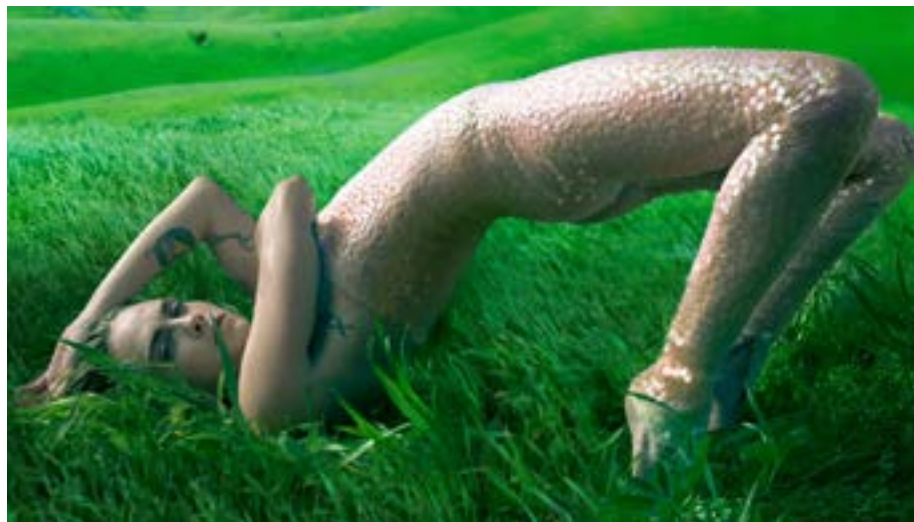
[About the Earthshot win](#)

First garments made from plant-based sequins

Radiant Matter, a startup that graduated from Undaunted’s climate innovation accelerator The Greenhouse, is moving the fashion industry away from plastic use by creating the world’s first BioSequin™.

Made from a plant-based material called cellulose, the tiny structures mimic naturally sparkly materials. Founder **Elissa Brunato** explains: “I wanted to create materials that are ethical and healthy for the planet without aesthetic compromise. Using no metals, minerals or pigments, our materials have natural structural colour; like the fantastic colourful glimmer that you see with insects and birds’ feathers.”

This year the company collaborated with designer Stella McCartney to debut the first garment crafted from BioSequins™ – a jumpsuit modelled by actress and eco-activist Cara Delevingne on the cover of Vogue



© Annie Leibovitz (@annieleibovitz) for Vogue Magazine

Magazine (pictured), and then later presented at COP28. Brunato was also nominated by the Dezeen Jury for the inaugural Bentley Lighthouse Award, recognising designers whose work has had a beneficial impact on social and environmental sustainability.

Her next step is to develop the material technology and work with

key industry partners to integrate these materials into their supply chains. “We are building a whole new category of sparkle,” Brunato adds. ■

READ MORE

[Radiant Matter; the Vogue story](#)
[Stella McCartney collaboration;](#)
[Dezeen Award nomination](#)

Cultivated meat startup Multus raises £7.9m



© Multus

Multus Biotechnology has raised £7.9 million from investors to support further research on lab-grown meat and manufacturing its first commercial products. The company was founded four years ago by students who met through Imperial’s Synthetic Biology Society.

Cultivated meat is produced from stem cells, special animal

cells that can multiply, diversify and develop into tissues such as muscle. Under the right conditions, they can be grown or ‘cultured’ on a mixture of basic nutrients and proteins – known as a growth medium. Multus are developing affordable growth media products so that some cultivated meat can replace livestock, having benefits

for both climate emissions and animal welfare. “There is a huge opportunity in cultivated meat, but still some fairly large technical challenges in getting to scale and price parity with farmed products,” says Cai Linton, co-founder and chief executive of the company. “A solution to those challenges, designed for the food industry, doesn’t really exist, so we want to create that.”

Founders Reka Tron, Cai Linton, Kevin Pan (pictured, left) and Brandon Ma started out in Imperial’s Advanced Hackspace. They are now based at Scale Space, part of Imperial’s White City Innovation District. ■

READ MORE

[Multus raises £7.9m](#)

White City Innovation District hosts ClimateTech summit



©Fergus Burnett/Imperial College London

“Undaunted’s mission is to make London and the UK a healthy ecosystem for the start-up and scale-up of climate solutions,” Undaunted Director **Alyssa Gilbert** told an audience of policymakers, academics, investors and corporate decision makers from the UK’s climate technology sector at the

2023 Jawdrop Summit at Imperial’s White City campus.

The event – a collaboration through the Deep Tech Network created by the London Borough of Hammersmith and Fulham and Imperial – sought to build bridges between Undaunted’s climate innovation ecosystem and the existing concentration of start-ups, entrepreneurs and Imperial academic experts in the White City Innovation District. It was hosted by **Professor Mary Ryan**, Vice-Provost (Research and Enterprise) at Imperial. ■

READ MORE

[White City hosts climate tech summit](#)

Support for student startups

A new student-led society that runs a unique pre-accelerator for climate tech is helping students to test and launch their innovative ideas while they are still studying.

Founded by **Filippo Varini** (Computing) and **Elliot Queisser de Stockalper** (Medical Biosciences), the **Climate Entrepreneurs Club (CEC)** gathers students from more than ten universities to form diverse teams and create their own climate tech startups from scratch.

Teams are supported by workshops led by professionals in the climate tech space across various industries, as well as each being paired with a personal mentor to guide them with one-to-one feedback and advice. Speaking to Forbes Magazine, Varini explained: “We believe in cross-university interaction – by joining forces we can increase

the support to student founders.” Queisser de Stockalper added: “We wanted to set something up that will inspire people and give clear opportunities and possibilities at the end.” The CEC community, now in its second year, extends to over 300 undergraduate and postgraduate students and 500 weekly newsletter readers including industry experts, professors and startup founders. The new student team, led by **Naman Sharma** and **Lina Rhmari Tlemcani** is supported by Undaunted, the Imperial Enterprise Lab and the Grantham Institute, along with other sponsors. ■



READ MORE

[Climate Entrepreneurs Club](#)

[Read the Forbes article](#)

Ones to watch

4

Imperial has secured two years of London Shared Prosperity funding (SPF) to overcome practical barriers to climate innovations in the built environment sector. The Better Futures 3.0 team with the **Greater London Authority**, West London Business and Sustainable Ventures, will deliver economic growth and increase climate action through a new type of support for small businesses.

5

UNICEF’s Innovation30 initiative aims to curate a pipeline of scientifically proven and scalable solutions to the climate crisis developed by young people under 30, and – importantly – to unlock the financial capital for these founders, enabling them to reach maximum climate impact through their innovations. At **COP28**, young climate innovators from across the globe who were selected by the Innovation30 panel presented their solutions at a state-of-the-art holographic exhibition. Imperial is part of UNICEF’s consortium of academic partners and innovation accelerators working together on Innovation30: commissioned through Imperial Consultants.

6

Imperial has launched a new MSc Cleantech Innovation for aspiring climate entrepreneurs, with broad skills and diverse backgrounds, to create revolutionary solutions in areas such as energy, materials, manufacturing, water, transport and food. Starting in Autumn 2024, the new twelve-month, full-time programme – jointly delivered through Imperial’s Dyson School of Design Engineering and the Grantham Institute – will embed students in Imperial’s thriving climate innovation community, and deliver a wealth of expertise in climate science, design engineering and business.



IMPACT AND INFLUENCE



“Art has the potential to inspire minds and touch emotions in a way that science alone often finds challenging.” Martin Siegert, Visiting Professor at the Grantham Institute



Four murals designed by young people for the 2023 Grantham Climate Art Prize, sponsored by Octopus Energy and Ballymore. The Prize invited young people – who will be most affected by climate change – to create bold designs for outdoor public murals focused on their vision for a greener, cleaner future world inspired by our 9 things you can do about climate change.



Top left, Ian Whitaker; middle left, Michael Batchelor; bottom left, Karla Rosales García; right, Globel Brothers

Imperial College London builds partnerships from the local to the global scale to drive the transition to a cleaner, greener, fairer future – engaging business, governments, civil society, our local communities and the wider public.

Through prizewinning outreach projects at the Grantham Institute, we draw together like-minded artists, educators and research engagement professionals to connect ordinary people with climate change and the environment – through the issues that matter most to them and meeting them on their level. We are proud that the Grantham Climate Friendly Pop-Up Kitchen run by our dedicated colleagues won the 2023 President’s

Award for Excellence in Culture and Community.

We are active in communicating scientific evidence to support greater awareness and decision-making that leads to sustainable innovations and practices. We engage in policy discussions, share our expertise through the media and lead on a wide range of engagement activities to strengthen the dialogue between the academic community and wider society.

We strive to unpack the latest climate science, highlight evidence around the co-benefits of climate change action and explore the steps needed to ensure real world emission cuts and resilience-building. ■

Dr Caterina Brandmayr

PROFILE



Director of Policy and Translation, Grantham Institute

The transition to net zero will require changes across all parts of the economy. Designing and implementing measures that can scale up the industries of tomorrow, ensuring that the transition is fair and equitable, and maximising the benefits that come from tackling climate change, is a complex challenge.

As the Grantham Institute’s new Director of Policy and Translation, **Dr Caterina Brandmayr** is tasked with connecting the policy community to the academic community, to strengthen access to scientific evidence and answer the key questions that inform climate action.

Caterina explains: “Our job is to facilitate that two-way conversation. We make sure that the policy community is aware of the latest evidence and can leverage it for decisions, and that the academic

community is aware of the emerging questions that policy makers are facing as they drive the transition forward.”

Caterina’s background is in environmental policy research and advocacy, but it was the range of expertise embedded at Imperial that attracted her to the role. She explains: “This is one of the few academic centres that really understands the value of policy engagement and can dedicate capacity and resources to cultivating that dialogue.”

She adds: “I enjoy working with people who really know the ins and outs of their sector. We have to think together about how their research can help address pressing questions that decision makers are grappling with and how you communicate complex ideas to a non-expert audience.”

Read more about Caterina’s team’s plans for 2024 on page 19. ■

Imperial experts study air pollution exposure in 100 London homes

A groundbreaking Imperial-led study is looking at exposure to air pollution indoors at more than 100 homes in west London.

The WellHome study, led by Imperial's Environmental Research Group (ERG), is a first-of-its-kind community-based study examining the various contaminants such as chemicals, biological agents, and microplastics that are present within the home environment.

The researchers aim to improve our understanding of how air pollution behaves inside homes, where it comes from, and how harmful it is.

Professor Frank Kelly, Director of the ERG, explained: "Exposure to outdoor air pollution is associated with a range of health impacts, including

© Thomas Angus / Imperial College London



asthma exacerbation, bronchitis, heart attacks, and increased susceptibility to respiratory infections. Although less studied to date, indoor air pollution is gaining attention as a potential source of health effects, particularly given that we spend 80–90 per cent of our lives indoors."

Crucially, the study has been developed from the start with

community groups in London's diverse White City district. Participants help shape the design and dissemination of the research, ensuring that it aligns with their needs and experiences. ■



READ MORE
[Experts study air pollution](#)

Festival explores foods of the future



© Linsey Wynton/Imperial College London

Imperial's Societal Engagement team have created the *Future Fridge*, a project that aims to engage community audiences with the environmental and health impacts of different foods.

With government funding from UK Research and Innovation and the Royal Society of Arts, the Future Fridge was designed in collaboration with design agency The Liminal Space, Imperial researchers and community partner Nourish Hub. The project joined Grantham's Climate-Friendly Pop-Up Kitchen – offering plant-based food samples prepared by chefs and interactive games about climate friendly foods – at the first ever Food Zone of the Great Exhibition Road Festival in 2023.

The Future Fridge has doors and drawers that open to reveal a range of familiar foods, futuristic alternative

ingredients (such as plant-based milks or chicken nuggets containing insect protein) and engineered foods (such as lab-grown meat, chocolate bars made less calorific by adding minute air bubbles).

The thoughts and feedback from community audiences have provided valuable insight to researchers into what drives the choices people make about food.

Ffion Hayward, Nourish Hub Manager, observed: "It's been great to see how much people have enjoyed interacting with the fridge. It has enabled people to socialise, have fun and learn." ■



READ MORE
[Exploring future foods](#)

Ones to watch

7

Imperial's **Climate Change and Sustainability Communications Network** are running their first community engagement campaign to support the College's new Sustainable Travel policy in early 2024. It focuses on cutting the percentage of Imperial's carbon emissions that are caused by business flights. A particular aim is to change people's decisions about trips that can be made under five hours by train, and reducing the proportion of business class flights, which are three times more polluting than a standard seat.

8

A **new report** looking at how UK citizens perceive the co-benefits of climate action paves the way to explore how people's views on this topic change over time. Using evidence gathered in 2023 from a survey of 1,000 members of the UK public and eight focus groups, **Dr Neil Jennings** and **Dr Pauline Paterson** looked at how perceptions varied across demographic factors, and exposure to the things that co-benefits could improve – for example air pollution and fuel poverty. They plan to evaluate the results of new nationwide surveys every six months.

9

In the run up to COP30, the UK needs to propose and deliver further measures to meet its domestic climate targets and Paris Agreement commitments. Grantham Institute's **Policy and Translation team** will provide decision makers with the information they need to advance UK climate action in 2024, focusing on supporting policy makers with academic expertise, unpacking the latest climate science, highlighting evidence around the co-benefits of climate change and exploring the steps needed to ensure emission cuts and build resilience.

Smartphone users help simulate cyclones and predict effects of climate change

Imperial researchers are partnering with the Vodafone Foundation to crunch data about cyclones using sleeping smartphones.

Tropical cyclones, including hurricanes and typhoons, devastate millions of lives and cost billions of pounds in damage each year. However, there are so few of the most harmful cyclones that researchers cannot accurately predict where or when they will hit. The Vodafone Foundation's DreamLab app is now helping researchers to simulate thousands of virtual cyclones in a computer programme that helps to understand real ones. The app harnesses the micro-processors that power smartphones while their users

sleep. With over two million downloads across 17 countries, the network is equivalent to a virtual supercomputer capable of processing billions of calculations, without collecting or disclosing any user data.

Lead researcher of the project **Professor Ralf Toumi**, Co-Director of the Grantham Institute, said: "By simulating extreme weather events to understand their effects on communities, we can help people to better prepare and adapt to some of the worst effects of climate change." ■



WATCH
[Video](#)



DOWNLOAD
[App](#)

Year-long project spurs global climate and mental health dialogues

A new international consortium led by Imperial's Institute of Global Health Innovation and the Grantham Institute, and funded with £1.8 million from Wellcome, aims to facilitate a unique series of regional and global dialogues on climate change and mental health, including with youth and indigenous communities.

The ambitious year-long project called 'Connecting Climate Minds' is convening experts across diverse research disciplines, policy, practice, and those living with mental ill-health affected by climate change.

To date, the mental health impacts of climate change have received much less attention than the physical health impacts. The Imperial team – under

the banner of the Climate Cares Centre – has pioneered work in this sector and is headed by **Dr Emma Lawrance** (see profile interview page 21).

Dr Lawrance commented: "We believe this project can catalyse a better-aligned global research community deeply connected to lived experience. One that is more equipped to understand and advocate for the actions that support mental wellbeing and a liveable climate." ■



READ MORE
[New global research](#)
[Connecting Climate Minds](#)

Jim Skea

Chair of the Intergovernmental Panel on Climate Change and Emeritus Professor, Imperial College London



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Professor Jim Skea was elected IPCC Chair in July 2023. He was previously Co-Chair of IPCC Working Group III. Since 2009, Skea was Professor of Sustainable Energy at Imperial College London, becoming Emeritus Professor in 2023. He was Research Director of the UK Energy Research Centre 2004–12 and Director of the Policy Studies Institute 1998–2004. Professor Skea was a member of the UK Committee on Climate Change from 2008–2018, and Chair of Scotland's Just Transition Commission from 2018–2023.



WATCH

[Professor Skea in conversation with Alyssa Gilbert](#)

Congratulations on being elected chair of the IPCC.

Why did you want the role?

I really enjoy working at the interface between science and policy, and there's no better job to do that than this. I see how much work there is to be done to improve and enhance the IPCC and I can't wait to get my hands on it and hopefully make a difference.

What are you hoping to achieve?

This is the decade of climate action. I want to enhance our interdisciplinarity and see the IPCC interacting more with our sister UN groups such as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

What do you think is the greatest limiting factor to addressing climate change?

Taking a scientific approach, we find that while geophysical, technological, and economic issues all play a part, it's the institutional and societal issues that are proving

the trickiest, in terms of limiting ambitious climate action.

Why is it important that wider society feels included in climate change action?

There are people and communities who could be harmed as we transition to net zero, and that does lead to tension. From a practical and ethical point of view, it is crucial that the transition is seen as fair and equitable, to ensure broader acceptance for it. Without it, the transition simply will not take place.

What action can people take to adapt to what's coming?

It's not just about individual choices, like remembering to turn the lights off, or turn the thermostat down. We need the technologies and infrastructure in place that allow people to make these choices in a way that fits in with their lives. You can't expect people to switch to public transport if there are only two buses a day. That's not up to individuals, it's up to the planners and policymakers. ■

Emma Lawrance

Mental Health Lead and Climate Cares Centre Lead, Institute of Global Health Innovation (IGHI) and Grantham Institute



© Apolitical

Dr Emma Lawrance is the Mental Health Lead at the Institute of Global Health Innovation, and Lead of the Climate Cares Centre. The Climate Cares Centre seeks to understand and respond to the deep interconnections between the climate crisis and mental health and wellbeing. As a graduate student she founded her own youth mental health charity, *It Gets Brighter*, of which she remains Chair of Trustees.



READ MORE
[Connecting Climate Minds website](#)

AND ALSO
[Read more about Emma's latest project on page 19](#)

Where did your interest in mental health and climate change begin?

My graduate studies in neuroscience explored the role that the processing of uncertainty plays in anxiety. Having grown up in Australia, with a strong bond with nature and climate activism, I started to link the uncertainty of the climate crisis, strong emotions, and mental health.

How did that lead to working with the Grantham Institute?

When I began reading the scant literature, it became obvious that the climate crisis was directly multiplying the risk of traumas and ultimately mental health challenges. There appeared to be little recognition of this, and I was delighted the Grantham team were open to partnering. Our joint briefing paper was the first of its kind and caught the attention of the World Health Organization (WHO) and international media.

How are young people handling their mental health and climate change?

Our research shows UK young people were more distressed by climate change than the

Covid-19 pandemic in 2020, and US youth who self-report experience of climate events have higher ecoanxiety. Young people also reported that taking pro-environmental action benefits their mental health. We launched a guided journal, which helps young people explore their emotional responses to climate change and develop healthy coping strategies and agency.

How can we protect the mental health of people working in this space?

Working with a huge sense of urgency and engaging with emotionally difficult facts can be challenging for those in climate careers. But there can be huge positives too, particularly from acting alongside others towards a common goal. In 2021, we ran the first ever mental health event at a UN Climate Change Conference and have provided support to others such as the Met Office. Attendees report huge benefit to sharing their feelings. ■



LEARNING FOR THE FUTURE



How we teach matters.

We are educating the next generation of scientists, engineers, clinicians, and economists, empowering them with the necessary skills to create a more sustainable world.

Our portfolio of sustainability courses is designed to equip students with the expertise to become leaders in their fields. We are also working to integrate sustainability-related knowledge and skills into all learning across Imperial whether it's undergraduate, Master's, postgraduate research, or short courses.

We offer many exciting opportunities to have an impact on the lives and futures of Imperial students. The Student Assistance Fund, for example, ensures that all students receive the support needed to thrive.

PROFILE: Jacob Francis

PhD Researcher, Natural Environment Research Council, Science and Solutions for a Changing Planet DTP

“I am passionate about creating an equal, diverse and inclusive space for all”

Based in the Department of Mathematics, **Jacob's** research is trying to improve the way that scientists verify the models that underlie weather forecasting.

He is a member of the Grantham Institute's student equity, diversity and inclusion (EDI) committee and was part of the team who led the event 'Our fight: protecting our planet and environment', which engaged members of Imperial's local communities in climate action and policy. Hosted at The Invention Rooms at the White City campus, this event included a discussion and activity stands covering upcycling, food waste and air quality, as well as nature-inspired music and food, and an immersive video room for children.

Jacob explains why he got involved: "Policymaking can feel abstract and it can be difficult to know how to engage. I am passionate about creating an equal, diverse and inclusive space for all to thrive, and this event

was an opportunity for academics and local residents to discuss what climate policy is and how we can make our voices heard."

Jacob is enjoying the benefits of being part of the SSCP DTP and expanding his network outside of his field: "Through the DTP I have been exposed to the breadth of Imperial's research and have had many interesting conversations both within my cohort and with world learning researchers."

Imperial trains postgraduate researchers to address society's big challenges in government-funded PhD programmes that harness academic study, talent and imagination; all supported by extensive professional development.

The Science and Solutions for a Changing Planet NERC Doctoral Training Partnership aims to inspire a new generation of experts and leaders to tackle some of the toughest environmental challenges of our time. ■



READ MORE

Imperial College/Jacob Francis
Student EDI Committee



PROFILE: Rachael Zhu

MSc Climate Change, Management and Finance alumni

“I never thought I would pivot into the world of finance”

Rachael Zhu has always had an interest in environmental science, but never quite knew how to combine it with her consultancy work.

Undertaking the graduate programme at PwC Australia, she spent five years gaining a commercial grounding in how businesses work. But it was running a sustainability project for a dairy company that made her realise how challenging it is for large organisations to reach net zero and brought her to Imperial.

Rachael became Vice Chair of Positive Investment Imperial (PII), a student-led organisation that is dedicated to raising awareness of sustainable investing across the student community. The team of 11 hosted education and networking events and published a weekly newsletter diving into investment trends and regulatory insights.

Rachael explains: “We were particularly proud to bring back PII’s flagship Sustainable Finance Symposium for the first time since Covid-19. Though being part of the amazing CCMF band ‘The Scopes’ was another highlight!”

Now interning in the climate investment team at Lightrock, a global impact growth equity platform, Rachael says she never imagined she would pivot into the world of finance.

“The CCMF programme has made me realise the power of capital in enabling the development and deployment of climate technologies, at speed and at scale,” she adds. “I very much intend to continue to contribute to this space going forward!”

Imperial places great emphasis on the integration of Master’s courses with world class research activities. The award winning MSc Climate Change, Management & Finance, taught by the Grantham Institute and Imperial College Business School, provides graduates with the interdisciplinary skills required in business on issues relating to climate change and sustainability – and has expanded to 160 student places per year due to high demand. ■

PROFILE: Zeyad Khalil

President’s PhD Scholar

“I hope to make a contribution to help build more resilient societies worldwide”

Imperial President’s PhD Scholar, **Zeyad Khalil**, has always wanted his research to have an impact on society. After moving to the UK from Egypt, he decided to apply his ever-growing interest in earthquake engineering to a renewable energy challenge. The success of offshore wind as a source of clean renewable energy means that turbines are increasingly being built in earthquake-prone countries, such as Italy, Greece, Taiwan, Japan, China, and the United States. Ensuring the resilience of these structures is vitally important in maintaining the power infrastructure in these regions, after an earthquake.

Zeyad explains: “My work will help provide a better understanding of the seismic risk imposed on offshore wind turbines, thus enabling them to be designed to withstand seismic loading, and to continue working after a quake.”

Zeyad is conscious that he would not have this opportunity without the support of the people who have donated to Imperial to help fund his scholarship. “I am really grateful for the generosity of the donors,” he explains. “They are not only supporting high-impact research, but they are also giving me a life-changing experience. I hope to use this chance to make a contribution to help build more resilient societies worldwide,” he adds.

The President’s Scholarship enables students to make the most of their studies and all that Imperial has to offer. It allows them to take up opportunities like unpaid internships or summer research opportunities to develop skills to prepare them for the workplace. The President’s Scholarship ensures Imperial’s long history of academic excellence can continue, by enabling us to attract the most talented students. ■



READ MORE

Imperial College/
Zeyad Khalil



LinkedIn/Rachael Zhu





PROFILE: Macey Utting
Undergraduate President's Scholar 2021–25

“The idea of making a difference to worldwide problems is very inspiring”

When it comes to choosing a university, an in-house carbon capture plant isn't at the top of every student's wish list. But for undergraduate President's Scholar **Macey Utting**, the opportunity to study carbon capture and sustainable energy in practical terms was a real priority. She explains: “Growing up in a society that is constantly being educated about the implications of climate change but also being told that not enough action is being taken to prevent it, is scary. I worry about the state of the planet we are leaving future generations to deal with.”

It was this drive to help combat climate change that led Macey to study at Imperial. “I really enjoy seeing how all of the modules can be scaled up and brought together in a real plant in the department,” she explains. “The idea of making a difference to worldwide problems, especially one as prevalent as climate change, is very inspiring.”

Macey's aim is to work in sustainable energy, a goal that feels more achievable thanks to the support of her President's Scholarship. ■



READ MORE
[LinkedIn/Macey Utting](#)

PROFILE: Dr Christiana Udoh

Chemical Engineering MSc 2014, PhD 2018, Winner of the Emerging Alumni Leader Award 2023

“I am grateful to the phenomenal women who unconsciously showed me I could and should occupy any space I desired”

Behind **Dr Christiana Udoh's** drive to become a chemical engineer lies a long-standing belief that science can be a catalyst for change.

Growing up in Nigeria, she saw first-hand the impact of poverty on local fishermen and the impact of rising sea levels on her community. It was a desire to help resolve the consequences of climate change and inequitable energy provision that brought her to Imperial.

After completing an MSc in Advanced Chemical Engineering and a PhD in advanced polymers, Christiana secured a role at bp that offered her the chance to address climate change issues head on, developing cutting edge processes to transform carbon dioxide into low carbon aviation fuel.

Alongside her research work, she has volunteered as a bp mental wellbeing ambassador facilitating virtual conversation cafes, as well as inspiring the next generation of young scientists by providing homework support to children on free school meals and leading schools' outreach programmes.

This year, Christiana's efforts have been recognised with an Emerging Alumni Leader Award.

She commented: “This award is very special to me. I am particularly grateful to the phenomenal women who unconsciously showed me I could and should occupy any space I desired. I now realise it was a rare gift to an impressionable young girl.”

*The **Imperial Emerging Alumni Leader Award** recognises and celebrates our rising stars, innovators, game-changers and future leaders. Eligible alumni have graduated from Imperial College in the last 15 years and are making significant contributions to advancing their field; are inspiring role models, mentors or champions for equality; have demonstrated determination and motivation whilst leading and striving for excellence and will have made a positive contribution to society through their voluntary or charitable activities. ■*



READ MORE
[Imperial College/Dr Christiana Udoh](#)
[LinkedIn/Dr Christiana Udoh](#)

COP28 commentary

December 2023 saw representatives from 197 nations convene in the United Arab Emirates for COP28, the annual climate summit organised by the UN.

More than 20 Imperial experts attended the summit, addressing audiences, giving evidence and launching reports.

Here, delegates talk about their experiences at COP28 and their reflections on the outcomes.



“While the COP28 outcome is a step in the right direction, it is also a hesitant and insufficient step. It is far from clear that this will keep global warming within the safety limits set out by the Paris Agreement.”

Professor Joeri Rogelj,
Director of Research

“Progress on the loss and damage fund at COP28 has been extremely disappointing. The finance promised is a pittance that will hardly make a difference for developing nations who are being battered by climate-related disaster after disaster.”

Dr Joyce Kimutai,
Research Associate at the Grantham Institute, on the lack of progress to distribute funds to countries under threat from climate change impacts.

“The COP negotiations are ultimately negotiating human health and wellbeing – mental and physical. It is encouraging that physical and mental health has featured so strongly at COP28. It is critical that health is the ultimate measure for progress on the climate crisis and a just transition.”

“The lukewarm agreement reached at COP28 will cost every country, no matter how rich, no matter how poor. The short-term financial interest of a few have again won over the health, lives and livelihoods of most people living on this planet.”

Dr Friederike Otto,
Senior Lecturer in Climate Science



READ MORE
[The Imperial COP28 Delegation](#)
[COP28 Events](#)
[Pre-COP calls to action](#)

Dr Emma Lawrance,
Climate Cares Lead and Mental Health Lead, commenting on the first official health-themed day at a COP



The Grantham Institute employs more than 42 staff across academic research, and professional and support services. We welcomed 18 new members of staff to the team in 2023. Here are some of the highlights from the Grantham Community.

New faces in Professional Services

We spoke to some of the new starters in professional services about their roles and their background.

Alex Gibbs is Education Programmes Manager in the Training team where she manages the SSCP DTP PhD scheme and other training programmes. She will be building on her interdisciplinary experience at Imperial, including helping to set-up education, research and enterprise streams at Imperial-X, the new AI co-working initiative in White City.

Jennifer Bird is Campaign Manager in the Policy and Translation team. Her interests lie in increasing the use of research evidence by people and organisations outside of the academic community in order to work towards a zero-carbon society. She has worked on both sides of the policy-research interface; most recently as Head of the Policy Impact Unit for UCL's Faculty of Engineering Sciences.

Chloe Thompson is PA and Administrative Assistant in the Operations team. She grew up in rural North Yorkshire's Nidderdale AONB where she did work experience and volunteering. She commented: "Living in such a naturally beautiful environment, I learnt to appreciate the importance of environmental research and conservation work. I'm so excited to support the Grantham Institute's vital work."

NERC Research Fellowships

Two of our new research fellows have won prestigious Independent Research Fellowships from the Natural Environment Research Council (NERC).

Dr Fiona Simpson has been awarded £1m for a five-year project which uses electromagnetic arrays to produce new models of magma flows beneath Scotland, Iceland, and Greenland.

Dr Fengjie Liu is based at Silwood Park and is investigating the impact of human activities such as pollution and climate change on the way ecosystems function.



Honour for Professor Templer

Richard Templer, Emeritus Professor of Climate Innovation, founder of Undaunted and co-founder of The Greenhouse was awarded an OBE for services to climate innovation in the 2024 New Year Honours List.

He said: "My journey from conventional academic to someone who helps others to find solutions to climate change has been one that I took with a community of colleagues – hundreds of them. This OBE is for all of you." ■



[READ MORE](#)

[About Richard's work](#)

Get involved

In 2007, the Grantham Foundation for the Protection of the Environment made the visionary decision to support an Institute at Imperial to provide a vital global centre of excellence for research and education on climate change. Today, the Grantham Institute is established as a leading authority on climate and environmental science.

The Grantham Institute is one of Imperial's seven Global Institutes established to promote interdisciplinary working and to address some of the greatest challenges faced by society. We drive forward discovery, convert innovations into applications, train future leaders and communicate academic

knowledge to businesses, industry and policy makers to help shape their decisions.

***Our vision is for
a sustainable, resilient,
zero-carbon society.***

Work with us

Partner with Imperial College London experts, plus climate change education and engagement experts at the Grantham Institute, who focus on some of the most important, relevant and timely questions.

Study at Imperial

See [pages 22–24](#) or visit our website to find out more about Master's, PhD and professional online training programmes at Imperial College London.

Support us

If you would like to offer support or discuss the role you could play in helping us achieve our goals, please contact Gabbie Filmer-Pasco, Trusts and Foundations Manager at g.filmer-pasco@imperial.ac.uk or +44 (0) 20 7594 6128.

Come to our events

Join our [mailing list](#) to hear about research seminars and public lectures delivered by leading figures from research, business and government.

Engage with our students

Become an education partner and offer a secondment or opportunity to our brightest students.

Join our climate innovation vision

Become a member of Undaunted and help to finance and shape the vision for this exciting project (see [page 12](#)). Businesses who are interested in getting involved or connecting with innovators should contact Christopher Parker at Imperial Business Partners, at christopher.parker@imperial.ac.uk.

Friends of the Grantham Institute

Staff and student alumni are invited to join and make new contacts in our new knowledge-sharing network. Join on [LinkedIn](#).

Become a Grantham Affiliate

Imperial staff can access funding opportunities, studentships and other support through our [affiliates scheme](#).

Visiting Fellowships

The Grantham Institute offers short-term visiting fellowships for external stakeholders in business, policy or the third sector. To join us and work on a research area of your interest, contact grantham@imperial.ac.uk.

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Grantham Institute

Climate Change and the Environment

An Institute of Imperial College London

South Kensington Campus

Imperial College London

London SW7 2AZ, UK

☎ +44 (0)20 7594 9666

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