



UK Research  
and Innovation

COP26

# Catalysing international action against climate change

UKRI International's COP26 engagements

## Foreword



This November, the international community have gathered in Glasgow for a pivotal moment in the fight against climate change. At its forefront will be the need for international collaboration and agreement, to build on the work begun in Paris in 2015 and to create a common set of goals and initiatives. This brochure sets out some of the key activities UKRI has carried out to inform, influence and advance what could be the world's last chance to get climate change under control.

These last 18 months have highlighted lessons that can be learned and applied to the climate change crisis – the mobilisation of the scientific community, the use of evidence-based policy, the cooperation and camaraderie of the general public and the international community to address the unique challenges of the Covid-19 pandemic. In many ways, the threats and challenges of climate change are as far-reaching and consequential as

those of the health pandemic. Yet, the Covid-19 pandemic also illustrates how we may be able to address the threat of climate change – bringing together the scientific community, policy advisors and decision makers, and our communities once again to stand together with common purpose.

Within UKRI, I am proud of the work carried out by colleagues in the international team, across our four overseas offices and within our Councils. Cutting-edge research has been funded, diverse panel sessions have been organised and a wide range of communication methods have been utilised to demonstrate the impact of our work as the United Kingdom prepares to host COP26. Yet, our work to address climate change will continue long after November and I am confident of the role that UKRI will play in this endeavour.

To address the challenges of environmental change requires international cooperation.

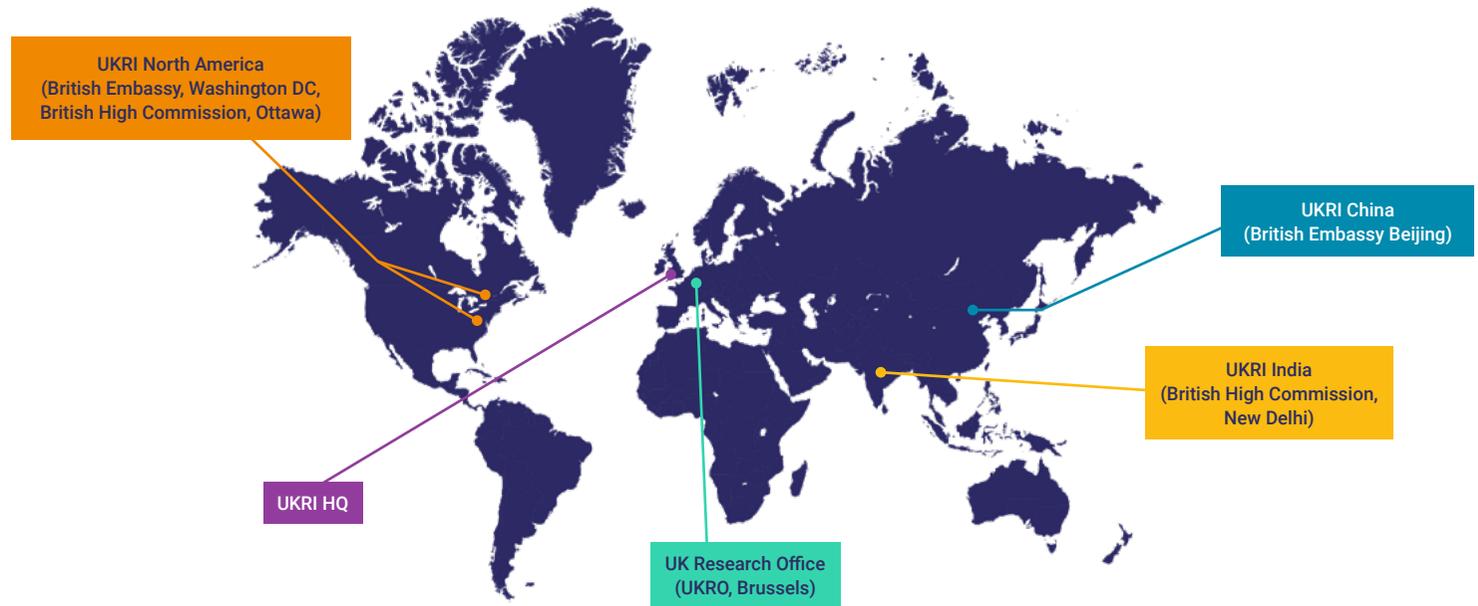
The engagements highlighted here serve as an inflection point, an opportunity to reflect on what has been done but also a means by which to answer our collective call to action. COP26 will conclude on the 12 November but the fight against climate change will continue. As the primary public research funder in the United Kingdom, UKRI will continue to fund ground-breaking research, work closely with partners around the world and help to deliver the critical research and innovation developments, and the contextual information to drive adoption, that we will need to deliver solutions for this generational challenge.

I hope you find this brochure useful and informative.

Christopher Smith, UKRI International Champion

## UKRI offices

UKRI has four overseas offices across five locations that help to establish and develop relations with partner countries and funders. These offices play a core role in helping to deliver programmes, partnerships and policy across their respective regions. In this spirit, they have each played a critical role in delivering UKRI International COP26 engagements.



## Why, what and how?

This brochure focuses on key activities of the UKRI International team, its overseas offices and Councils in the run-up to COP26. The timeline gives an indication of the drumbeat of activity that has taken place over the last year. This is an opportunity to consider the legacy from these key engagements beyond the 12 days of COP26.

The engagements and activities are broad and varied, their audiences diverse, and their impact significant. The solutions to climate change require a coalition of actors and consensus for action.

### WHY is international collaboration in COP26 important?

Climate change crosses borders, and international collaborative action is crucial to meet the global challenge of climate change. UKRI International will achieve this by building new and leveraging existing international partnerships to achieve excellent and impactful solutions to the COP26 campaign goals.

1.5°

Secure global net-zero by mid-century and keep 1.5 degrees within reach



Adapt to protect communities and natural habitats



Mobilise finance



Work together to deliver

### WHAT have we been doing?

UKRI's role is to mobilise the scientific community and support voices at the local, national and international level.

We encourage the use of evidence-based policy making, learning from the lessons of the Covid-19 pandemic and drawing together expertise to tackle this challenge.

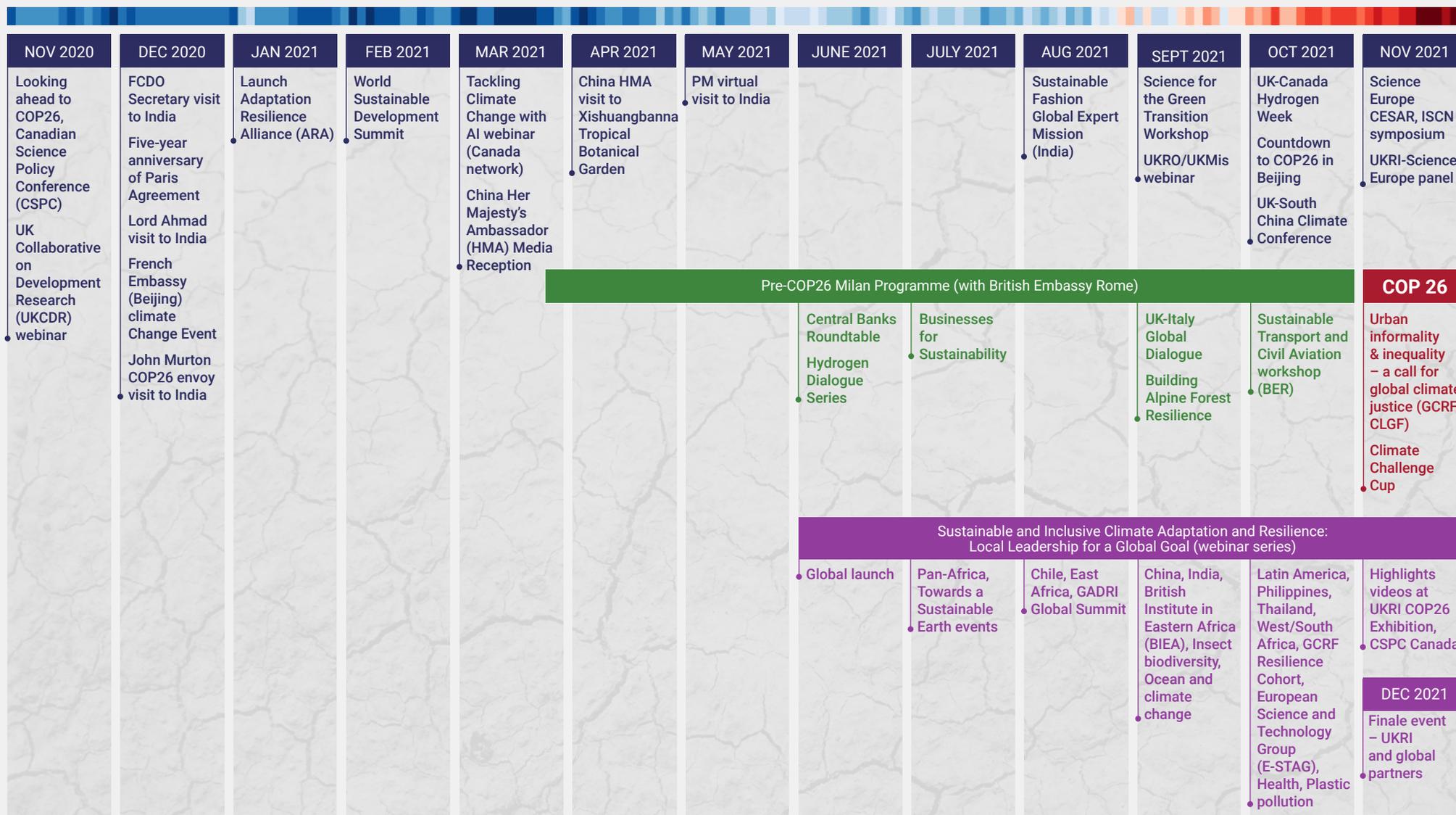
### HOW will we achieve this?

- We will achieve this by enabling change throughout our own organisation. This will include a carbon-friendly travel approach, utilising recent developments in virtual working to reduce overseas travel where possible. We will work closely with our key international partners to deliver robust opportunities for change. We will work closely with our key international partners to agree new funding activities and raise the profile of the organisation, both with policymakers and the general public, by showcasing our innovative work and research.
- We will showcase the work that has and will be carried out by the international research and innovation community, assessing the impact of UKRI International's work alongside the campaign goals of COP26.
- We will act as a key pillar of support to wider UK Government activities, working alongside the Foreign, Commonwealth and Development Office and its embassies overseas to pursue scientific diplomacy with actors around the world.

This brochure is an opportunity to reflect on what has been carried out in the run-up to COP26 but also to steer towards our future engagements. We strongly encourage you to attend our future events and take part in this historic endeavor.

# Timeline of engagement and activities

In the run-up to the UK Presidency of COP26, UKRI International has held a series of high-profile engagements and activities over the last 12 months. These events have sought to highlight the COP26 Presidency themes, catalyse the need for action and highlight the importance of climate change research. The timeline below showcases a selection of these events.



## UKRI Europe



FORMAS



In Europe we have been working with our key partners to develop panel sessions to emphasise the need for closer collaboration between researchers, policymakers, and decision takers. This trifecta-based approach will ensure that the solutions to climate change are driven by research and underpinned by high-quality data. The events highlighted are reflective of this approach and underline the role that UKRI has played to date.

### UKRI-Science Europe

On the 7 September, UKRI co-hosted a joint virtual workshop with FORMAS (Swedish Research Council for Sustainable Research), CSIC (Spanish National Research Council) and Science Europe on the different actors involved in the formation and delivery of policy in relation to the Green Transition. The event contributed to the launch for the new Science Europe Group on Green and Digital Transition.

The workshop included international expert speakers, including UKRI International Director Tim Wheeler, President of the International Science Council Sir Peter Gluckman, and representatives from the European Commission and the Slovenian Presidency of the Council of the EU. The event highlighted areas for progress, including communication and engagement with stakeholders, supporting and rewarding communication and science advice activities within research funding, involving researchers in policy co-creation mechanisms, removing barriers to science-policy interface, training researchers to acquire the necessary skills, and fostering international collaboration.

More information is available [here](#).

The lessons of this workshop informed the UKRI-Science Europe Panel on 10 November. Prominent speakers included Professor Sir Robert Watson and Portuguese Science Minister Manuel Heitor, moderated by Professor Dame Jane Francis. The panel discussed the interconnection between scientific advisors, policy advisors and decision makers, using the lessons of the Covid-19 pandemic in relation to tackling climate change.

### COP26 Preview: How UKRI is responding to climate change

The webinar – *How UK Research and Innovation is responding to climate change* – took place on 28 September. This was the latest in a series of UK Research Office (UKRO) webinars covering key policy drivers for Research in Europe. Tim Wheeler, International Director at UKRI showcased some of the bold initiatives UKRI has delivered in contributing towards the success of the UN Climate Change Conference – COP26 being held in November 2021 in Glasgow.

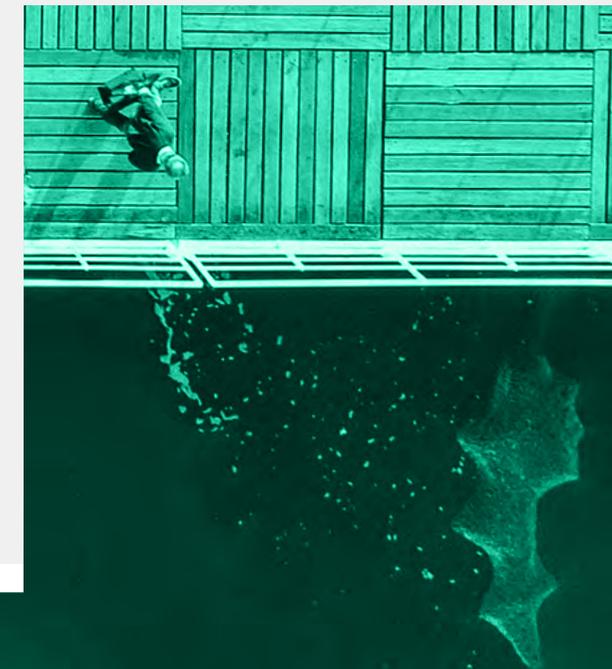


UK Research Office  
Brussels

Claire MacFarlane, People, Partnership and Sustainability Counsellor at the UK Mission to the EU also provided an update on activities and events that are being delivered by the UK government to support COP26 planning and delivery.

This well-attended session brought together a diverse group of organisations across sectors, with participation from UK universities, Royal Academies, EU Member State Research Councils and other Brussels networks.

A link to the slides presented as well as a recording of the session are available on the [event page](#).



# UKRI North America



UKRI North America has utilised its presence in both Washington D.C. and Ottawa to facilitate activities with key partners across Canada, the USA and UK. Collectively, activities have brought together high-profile speakers and funded significant climate change research that will be critical in the longer-term endeavour against climate change.



## Canada

### Green Finance: Opportunities with Canada

Throughout 2020-21, UKRI North America has been in conversation with colleagues within the British High Commission (Ottawa) COP26 team to link up UKRI efforts with wider HMG efforts in Canada on Green Finance. In October 2020, UKRI colleagues joined a policy roundtable organised by the British High Commission on Mobilising Capital to Finance the Net Zero Transition. Conversations continued with UKRI colleagues following the creation of the new, UKRI-funded national **UK Centre for Greening Finance and Investment (CGFI)**, with subsequent engagement with CGFI Director, Dr Ben Caldecott. Most recently, UKRI colleagues joined a policy roundtable organised by the British High Commission and partners on Greening the Financial System, to further advance dialogue on creating a more sustainable financial system through climate related disclosure, climate risk analysis and taxonomy.

### Canada-Inuit Nunangat-United Kingdom Arctic Research Programme

With rapid changes to the Arctic climate, there is a pressing need to understand and respond to the resulting environmental, social and economic impacts. In May 2021, UKRI signed a historic new Memorandum of Understanding (MoU) with several partners in Canada to address this need. The MoU focuses on working in partnership on the development and administration of a new Arctic research programme. The research funded under this programme will focus on changing Arctic ecosystems and the impacts on Inuit communities, and beyond, and will explore innovative and practical mitigation and adaptation mechanisms and technologies to enhance resilience to environmental change.



### Canadian Science Policy Conference (CSPC)

In November 2020, UKRI North America organised a panel for Canada's largest science policy conference on how a green recovery can help build back better. The panel was moderated by the British High Commissioner to Canada and Alison Robinson (Deputy Executive Chair, Natural Environment Research Council) represented UKRI. Panellists discussed the importance of join up across sectors and organisations to advance delivery of scientific and technological benefits to society, and the role of citizen science. Areas such as net zero were highlighted as topics which require further exploration.



Building on the green recovery theme of the 2020 panel, UKRI North America is planning a second CSPC panel in November 2021 to follow on from the COP26 Summit. This panel will discuss approaches and solutions to climate change adaptation in a changing world. Issues covered will include: the importance of international collaboration in addressing climate change adaptation; opportunities and challenges to finding multidisciplinary, cross-cutting solutions and the evolution of equitable partnerships. Discussion outcomes will inform how to organise adaptation research and how to improve future planning post-COP26 in preparation for the first global stock take under UNFCCC in 2023.

### UK-Canada Hydrogen Week: Funding and Collaboration Session

In October 2021, the Science and Innovation Network, Canada organised a UK-Canada Hydrogen Week to explore the Canadian and British hydrogen ecosystems. The five-day event focused on the potential for hydrogen to be used as a tool to decarbonise a range of sectors whilst also tackling critical energy challenges. As part of this event, UKRI North America led a funders session convening, for the first time, funding agencies from both countries for an initial dialogue on specific research interests relating to hydrogen. The session built understanding of current hydrogen activities and allowed funding agencies to consider areas for potential collaboration.

## UKRI North America

### USA

#### Climate Challenge Cup

Launched in August 2021, the Climate Challenge Cup is an international competition designed and delivered by the Science and Innovation Network in the US alongside UKRI, the UK Department for Business, Energy and Industrial Strategy and several other UK and US partners. The Cup showcases transformative research partnerships between research bodies, civic organisations and local communities to combat climate change. It has brought together knowledge and experience from across the UK and USA to create a network of innovators helping affected communities to adapt to climate change or achieve net-zero. Activities culminated in an innovation showcase and award ceremony during COP26 in November 2021.

More information is available [here](#).



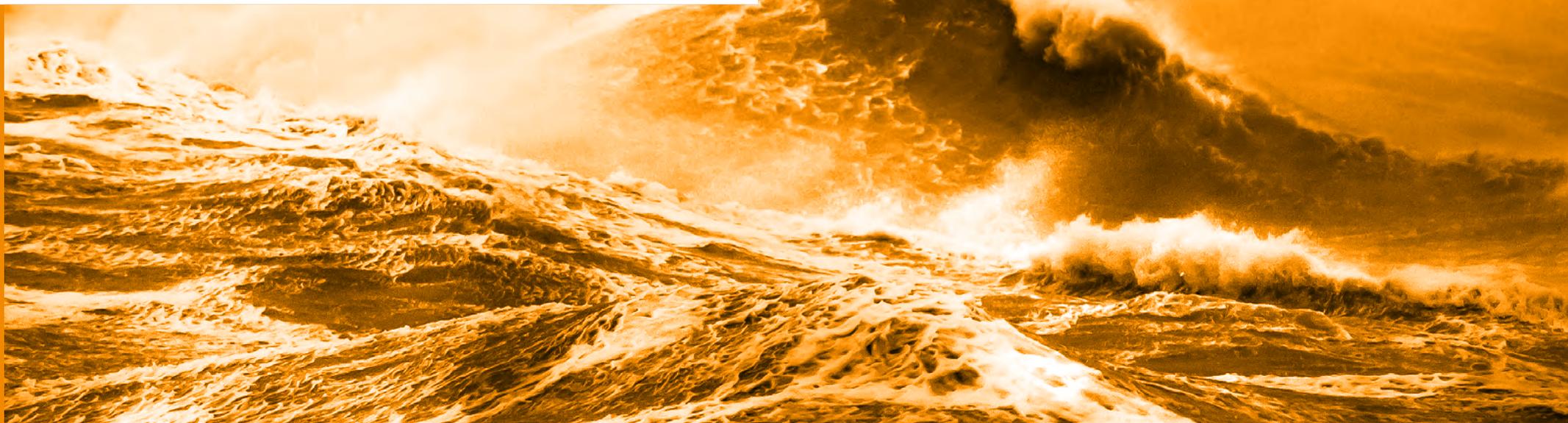
#### Signals in the Soil Fund for International Collaboration

In September 2020, UKRI organised a joint workshop with partners, NSF and the US Department of Agriculture's National Institute of Food and Agriculture (NIFA), to bring together the projects funded under the UKRI-US 'Signals in the Soil' (SitS) programme. Over a hundred researchers and funders convened for discussions around the development of new soil sensors and research problems associated with these, to advance our understanding of soil ecosystems and combat critical issues such as land degradation and soil contamination. The Science and Innovation Network in the US also organised a virtual industry panel with participation from Microsoft and Land'O'Lakes to help researchers understand the potential translation of SitS research projects into the commercial space.

#### Changing North Atlantic Ocean

In November 2020, UKRI and the US National Science Foundation (NSF) announced funding of two new projects under their joint Changing North Atlantic Fund for International Collaboration (FIC) programme. The programme focuses on improving our understanding of the subpolar North Atlantic and its impacts on the global climate system. Extended decadal observations are expected to improve coupled ocean-climate modelling used for prediction, allowing for more accurate forecasting which, in turn, will assist policymakers to develop and hone mitigation and adaptation strategies.

More information can be found [here](#).





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## UKRI China

This is an important year for international leadership. The UK and China have a unique opportunity to work together to protect our planet in 2021 and beyond. UK-China partnerships in **palaeoclimate and biodiversity research** are transforming global understanding of the impact of catastrophic climate change on ecosystems as the UK hosts COP26, while the Convention on Biological Diversity (COP15) held in October 2021 in Yunnan Province of China.

The conjunction of COP15 and COP26 presents a unique opportunity for both the UK and China to take holistic action to both address the climate crisis and move the world towards a more sustainable use of natural resources. This offers a great opening to secure meaningful global commitments to address the linked threats of climate change and biodiversity loss.



### UK-China collaboration on biodiversity: The UK-Xishuangbanna Tropical Botanic Garden (XTBG) project

The UK and China have much to offer on leading the biodiversity and climate debate in the pandemic era. Both countries have prioritised research on environmental science and biodiversity to address vital climate challenges. The bilateral partnership in palaeobiodiversity provides crucial insights on:

- dealing with the current biodiversity crisis;
- predicting future responses to climate change; and
- enabling solutions to strengthen biodiversity resilience.

The evolution of vegetation and biodiversity change during the Paleogene and early Neogene project is part of the UK-China Biosphere Evolution, Transitions & Resilience (BETR) programme, jointly funded by Natural Environment Research Council (NERC) and the Chinese Natural Science Foundation of China (NSFC) since 2017.

The programme is designed to help identify where and how the paleo record is a good analogue for near-future conditions of climate and biodiversity and generate essential knowledge on how biodiversity responds to current changing climate. Continued partnerships in strategic areas of environmental science can help find solutions to tackle climate change challenges.

By developing the long-term partnerships with leading Chinese counterparts, UKRI China Office promote the UK's expertise on biodiversity and environmental science and the value of international collaboration in China. Building on a strong foundation of existing collaboration, UKRI together with China's Ministry of Science & Technology co-hosted the UK-China Climate Adaptation & Resilience Conference and a series of events to support the launch of a global climate research strategy at COP26.



Dame Caroline Wilson DCMG, British Ambassador to China, paid a visit to the Xishuangbanna Tropical Botanical Garden, Yunnan Province on 26 May and said: *"I discovered amazing British and Chinese scientists deep in the rainforest here who impressed upon me the importance of collaboration. They are working to establish how ancient climate change (on what is now the Qinghai Tibetan plateau) affected plants and believe nature can provide us with clues if not solutions to today's challenges."*

### UK-China collaboration on energy efficiency

Energy is at the heart of the solution to the climate challenge. UKRI is bringing together researchers across the engineering, physical, social sciences and humanities to discuss what a 'good' energy transition could look like. We cannot address climate change without working with China. China is the world's largest emitter of greenhouse gases and biggest financier of international coal but also the largest investor in renewable energy.

From 2007 to date, UKRI China has been supporting UK-China collaboration on energy, including infrastructure (grids), low carbon transition in cities, fuel storage, solar power and sustainable built environments and it is the largest area of activity for UKRI's joint research with China. This amounts to a total of ~£36million in UK investment with a matching ~¥71million from China. UKRI China has been supporting UK-China activity mostly in the themes of Electric Grid Technology, Electricity Storage and Air Pollution and what runs through most of these programmes is a concern with energy efficiency.

#### Outcomes include:

##### Thermal Energy Storage

New materials developed through an Engineering and Physical Sciences Research Council (EPSRC) -NSFC funded project on thermal energy storage have now been incorporated into novel thermal

energy storage plants in Zhangjiakou, Hebei. These plants provide reliable heat to a local school and 150 surrounding homes in rural China and infrastructure for the upcoming Beijing Winter Olympics utilising surplus wind energy. Both the UK and China have set ambitious electrification and emissions reduction targets, and more efficient use of renewables will be crucial to the future of energy infrastructure in both countries.

##### Low-Carbon Development

Developing improved carbon capture technology will be crucial to the UK and China meeting their environmental protection and public health commitments. FOCUS, a UKRI-NSFC co-funded project, simulated a process that reduced the energy requirement for CO<sub>2</sub> capture by 25-30%, an outcome which has gone on to allow the integration of jointly developed new carbon capture technology into existing and planned energy infrastructure.

##### Electric Vehicles (EV)

The UK and China have both pledged to phase out petrol and diesel vehicles in a matter of decades. Improving battery technology remains a focal point for global EV research and development. A UKRI-NSFC joint laboratory at Queen's University of Belfast is working with industries in both countries to develop longer-lived, high-powered batteries for mass transit, advanced charging facilities suited to urban power networks, and a mobile wireless charging track for the 2022 Beijing Winter Olympic Games.

## UKRI China

### Meeting global challenges through international collaboration

The UK and China have long-standing collaborations on tackling climate change, especially through partnerships on green finance and energy transition. We look forward to further enhancing collaborations to foster an ambitious COP26 outcome.

UKRI China is actively involved in working across UK Government in China through the COP26 international partnership campaign, Together for Our Planet, and the UN campaign Race to Zero in China, to mobilise all sectors of society to drive ambitious climate actions and invest in world-changing research and innovation.

#### Other activities have included:

#### Together for Our Planet – Countdown to COP26 on 25 October

A countdown event at the Ambassador’s garden to raise awareness of climate change and promote UK-China collaboration in this area. At the event, Jane Goodall, UK Government Chief Scientific Adviser Sir Patrick Vallance and two inspiring panels shared their insights on how the world is being affected by climate change, what individuals can do take action, and what our hopes are for COP26. The event involved the wider FCDO network, key opinion leaders, and media contacts where UKRI China showcased the impact of our work through videos.



### UK-South China Climate Change Conference – Pathway to COP26 and beyond on 28 October

British Consulate General in Guangzhou and Chongqing jointly hosted a Southern China COP26 celebration event on 28 October. A speaker from the Chinese Academy of Sciences shared their experience on UK-China collaboration and best practice from UKRI-NSFC Biosphere Evolution, Transitions & Resilience programme with University of Nottingham (Ningbo), Hainan University, Zoological Society of London and Guangdong Environmental Protection Bureau. Over 150 representatives from government, business and academia met to discuss how we can partner to achieve net zero. The biodiversity session that was supported by UKRI China attracted 278 people online and received 560 likes on social media.

### China COP26 Celebration Event in early 2022

UKRI China together with the Beijing Embassy will jointly host a celebration event in early 2022 to showcase the bilateral collaboration on climate science and engage with key stakeholders. The event will help increase understanding of UKRI China work on climate among the public and key stakeholders in China, enhance existing partnerships to amplify impact of the UK-China joint research and innovation and renewal and development of new partnerships with the aim of exploring opportunities for future collaboration between the two countries.

### Regional crop monitoring and assessment with quantitative remote sensing and data assimilation

The agri-food sector is not only vital to the health and wellbeing of society across the world, but it also has a major role to play in helping us to achieve our net-zero goals.

To tackle climate change, a UKRI funded Newton Prize winning project conducted by University College London and Chinese Academy of Agriculture Sciences has pioneered a new approach which has improved accuracy of crop monitoring by ten percent and produced crop yield estimates over large areas at an unprecedented ten metre resolution – compared to the previous one kilometre resolution estimates. The result is likely to be the most accurate portrait created to date of changing agricultural production in the North China Plain. The project is among the first to make use of data from the new Sentinel and Chinese Gaofen (GF) satellites and has fed directly into agricultural production planning in China, providing more accurate analytics of crop development and responses to different stresses so that more suitable management practices can be deployed. Besides providing better predictions of crop yield and crop growth, the team is training academics to use the software developed during the project, and the state-of-the-art techniques are already being applied to other countries including Ghana, Argentina and the UK.

# UKRI India



India is one of the world's fastest growing major economies, and the UK and India must continue to work in partnership to address the global climate and environmental emergency.



In May 2021, Prime Minister Boris Johnson and the Prime Minister of India Narendra Modi made a historic commitment to strengthen work between the UK and India over the next decade, bringing our countries, economies and people closer together. They agreed a **2030 Roadmap** to provide a framework for future relations, including the two countries' agreement to co-lead global climate action in pursuit of the goals of the Paris Agreement and the United Nations Framework Convention on Climate Change in the run-up to COP26 and beyond.

Since 2008, UKRI and Government of India funding partners have already jointly invested over £240m in bilateral research towards this, on topics spanning energy, water, weather, food security and pollution. This joint investment demonstrates the crucial role of bilateral research and innovation in informing climate action and policy.

In September 2021, UKRI announced over £1m funding towards eight new UK-India projects addressing key environmental research challenges relevant to the COP26 Adaptation and Resilience theme.

UKRI India's recent impact report titled **UK-India: Partnerships for Growth with Research and Innovation** (September 2021) demonstrates how UK-India bilateral research and innovation partnerships strongly align with the Sustainable Development Goals of Affordable and Clean Energy (SDG7) and Climate Action (SDG13).

The Clean Air Street is a collaboration between the Connected Places Catapult and Energy Systems Catapult, receiving UKRI funding under the Newton Fund Innovating for Clean Air programme, in collaboration with the Directorate of Urban Land Transport, Government of Karnataka, India, Indian Institute of Science and Urban Morph, an India-based team of Urban planners, transport planners, traffic engineers and geographers. Together they have transformed Church Street, one of the busiest streets in the central business district of Bengaluru, India into a vehicle free zone. This initiative was launched in November 2020 by the Honourable Chief Minister of Karnataka and a high-level group of government leaders from India and the UK, including the Minister of State for South Asia and the Commonwealth,

Lord Tariq Ahmad of Wimbledon.

Lord Ahmad returned to India in March 2021, leading a high-level delegation to discuss climate-resilient agriculture, biodiversity and sustainability on a visit to the International Crops Research Institute for the Semi-Arid Tropics, Hyderabad, a key partner on the UKRI Global Challenges Research Fund (GCRF) funded Transforming India's Green Revolution by Research and Empowerment for Sustainable Food Supplies (TIGR2ESS) project. This project won the University of Cambridge's Vice Chancellor's Research Impact and Engagement Award for Collaboration in October 2021.

The UKRI GCRF-funded Strategic University Network to Revolutionise Indian Solar Energy (SUNRISE) project, seeking to expand access to electricity in rural India using solar technology, won the International Collaboration of the Year award at the annual Times Higher Education Awards in 2020. The global network includes investigators from nine different research organisations in India and was visited by the UK government's then Foreign Secretary, Dominic Raab, in December 2020.



## UKRI India

In early August 2021, the UKRI India office with Innovate UK and KTN organised a Global Expert Mission (GEM) on Sustainable Fashion to assess the potential to build collaborations between Britain, a fashion design leader, and India, an international textile and garment manufacturer. This work will address environmental challenges, as well as socio-economically benefiting both nations. The focus of the mission was on Circular Economy, Digitalisation and Policy and Tradition, and brought together influential players from both countries to dwell on the scope for Sustainable Fashion, and opportunities for collaboration. The outcome of the GEM is a detailed report to be launched in 2022, followed by a physical mission to dive deeper into the area.

In September 2021, India became the first Asian country to develop a plastics pact, launching a

ground-breaking new initiative to bring together leading businesses at a national level to make commitments for building a circular system for plastics. The India Plastics Pact has launched as a collaboration between WWF India and the Confederation of Indian Industry. The pact is supported by UKRI and Waste and Resources Action Programme (WRAP) and Endorsed by the British High Commission in India, with a commitment of £250,000 from UKRI to enable WRAP to establish the Pact, initiate start-up, engage the Indian government and develop the appropriate targets and priority work streams for India.

Further, in September 2021, the British High Commission Kolkata and the Bengal Chamber of Commerce and Industry hosted a roundtable discussion on Gender Equity and Climate Change

with focus on Sundarbans and COP26. Sumana Banerjee at Jadavpur University participated in this, sharing recent findings of the UKRI funded GCRF Living Deltas Hub on gender differentiated impacts and women's agency in disaster recovery in Indian Sunderbans.

On 8 October 2021, UK Business and Energy Secretary Kwasi Kwarteng met virtually with India's Minister for Power and New & Renewable Energy, Raj Kumar Singh, for the third UK-India Energy for Growth Dialogue. They discussed strengthened collaboration on accelerating the move to global clean energy in the decade ahead, including how COP26 is an opportunity to show global leadership on clean energy. The UKRI and Department of Science and Technology, Government of India funded Joint India-UK Clean Energy Centre was highlighted in this conversation.



## Adaptation and Resilience

UKRI, in partnership with a number of COP26 delivery partners and international colleagues, has hosted a series of events focused on climate adaptation and resilience in the run-up to COP26. The aim of the events has been to showcase research that is collaborative, locally led and globally relevant and aligned to the UK COP26 presidency's adaptation and resilience theme. Events have highlighted key climate adaptation and resilience challenges faced by each co-host country and demonstrated the need for and importance of international research in this space.

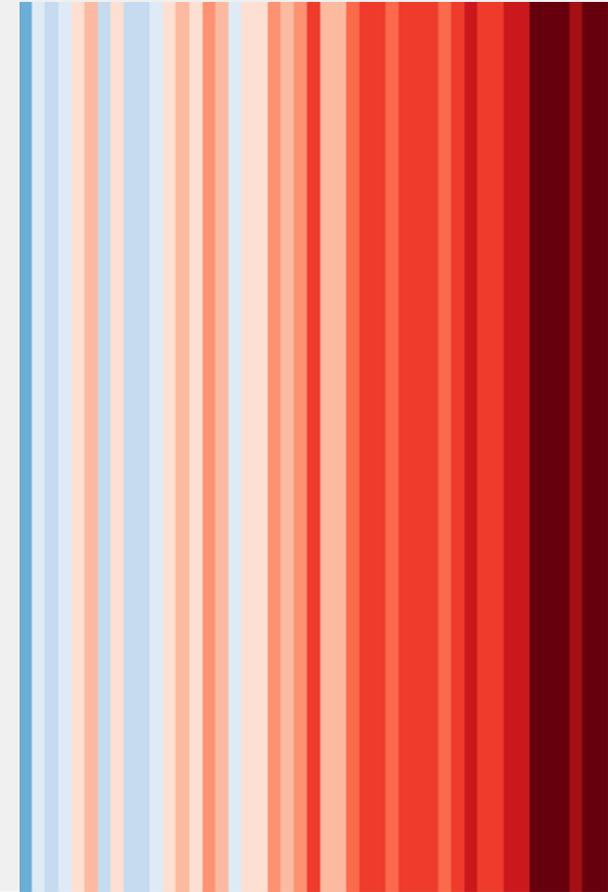
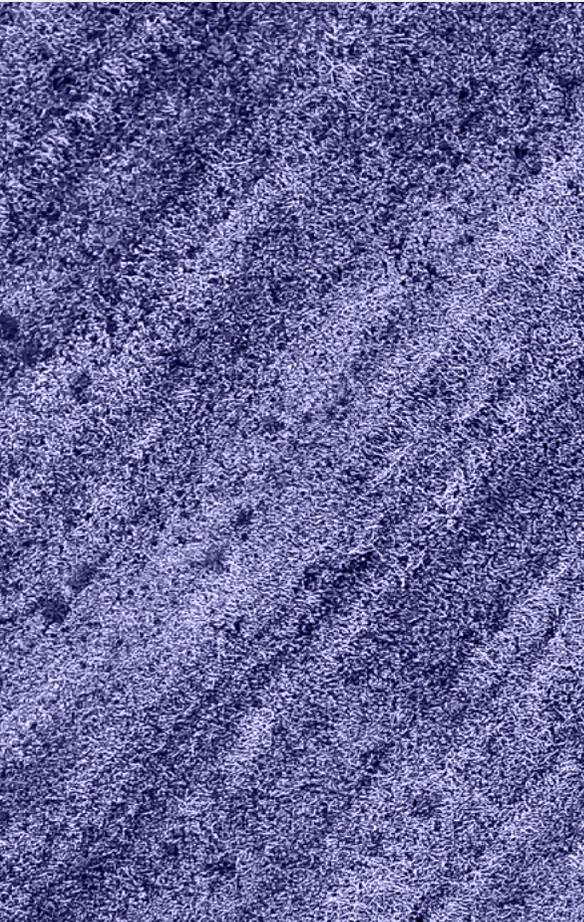
Collectively, these events have fostered open dialogues between key stakeholders (including governments and policy-makers, funders, interdisciplinary researchers and research end-users), around how climate risks and their impacts are understood and managed, providing a voice to communities which may otherwise have been marginalised. They have showcased the collaborative international efforts we are supporting to enhance adaptation and resilience in a wide range of locations impacted by climate change.

These events have taken place across the globe, empowering local citizens and researchers to provide input ahead of COP26 and the finale event, where the messages to date will be synthesised to

highlight commonalities expressed by participants but also reflect some of the unique threats that some nations are facing. Views expressed at these events will be brought directly into the conference as part of the Adaptation Day showreel on the UKRI COP26 Green Zone exhibition stand on 8 November. The finale event will take place post-COP26 and showcase outcomes and research achievements from the series through a panel discussion around next steps and focus for research in the decades ahead.

Events in the series have highlighted the importance of:

- interdisciplinary research
- equitable research partnerships, with co-design embedded from the outset
- cross-stakeholder collaboration, combining diverse sources of knowledge – enabling transformative research partnerships
- incorporating local knowledge and embedding solutions in local contexts
- strengthening links between research, policy and practice
- identifying opportunities to scale up or translate findings to other locations
- connecting and coordinating adaptation action globally.



# Adaptation and Resilience

## Case study: India

In September 2021, UKRI and Ministry of Earth Sciences (MoES), Government of India, held a virtual Partnership Event and Workshop on *Sustainable and Inclusive Climate Adaptation and Resilience: Local Leadership for a Global Goal*, attended by over 140 people.

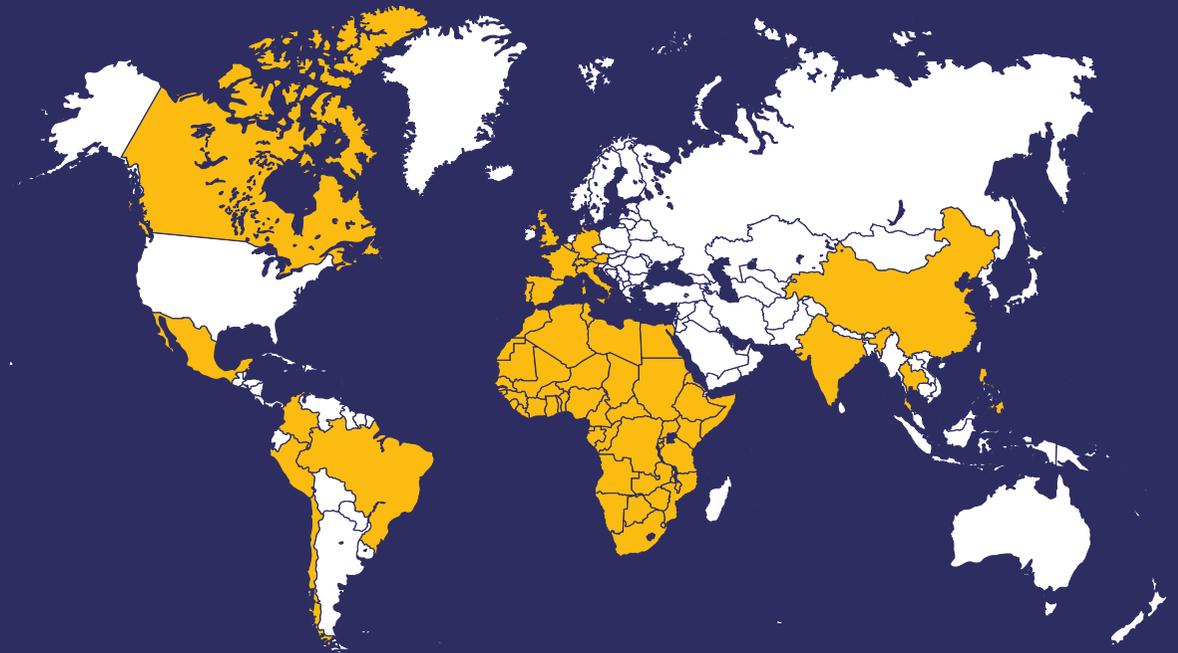
The event celebrated achievements of the bilateral MoES and UKRI partnership to date and explored the gaps, feasibility and opportunities for adaptation and resilience research in a panel discussion between senior representatives from Government of India's MoES, National Disaster Management Authority and Coalition for Disaster Resilient Infrastructure, Department of Biotechnology, Department of Science and Technology and Ministry of Jal Shakti, The Energy and Resources Institute and the Foreign, Commonwealth and Development Office.

The event included a keynote address by Prof K. Vijay Raghavan, Government of India's Principal Scientific Adviser, highlighting the importance of research and innovation in understanding how earth systems can successfully adapt to extreme and devastating effects of weather heightened by a changing climate, and research showcases by five leading research institutes in India. It culminated in an interactive workshop exploring adaptation and resilience research priorities across the themes of multi-hazard vulnerabilities, food and water security, energy security and health which will help shape future research opportunities.



## Events held to date

There have been ten country-led events (UK-led global launch, Pan-Africa, East Africa, West/South Africa, Chile, China, India, LATAM, Philippines, Thailand) and a further nine thematically focused events that have been self-organised by the research community as part of the series (see timeline). The thematic events focused on key climate adaptation challenges in relation to the Sustainable Development Goals (SDGs), disaster risk reduction, historical and cultural perspectives of resilience, insect biodiversity, ocean resilience, health and plastic pollution and will help inform future potential research partnerships.



## Case study: China

On 15 September 2021, The Administrative Center for China's Agenda 21 (ACCA21) of the Ministry of Science and Technology of China (MOST) and UKRI co-hosted the workshop *Sustainable and Inclusive Climate Adaptation and Resilience in a Carbon Neutral Future: Local Leadership for A Global Goal*. Attendees were representatives of MOST, Chinese Academy of Social Sciences, UKRI, as well as higher education institutions including Tsinghua University, Renmin University of China, Chongqing University, and University of Glasgow.

The workshop aimed to identify the priorities and challenges in regional research on climate



adaptation and resilience building, and to share best practices of such regional effort towards the global goals, thus contributing to climate response and sustainable, including development. It was agreed that action needed to focus on three core tenants:

1. Deepen cooperation in science and tech

innovation in the field of climate change adaptation.

2. Conduct joint research on climate change adaptation policies.
3. Collaborate research on financial products and financial mechanisms developed for climate change adaptation and responses.



## The future

As the United Kingdom's primary research funder, UK Research and Innovation has a key role to play in ensuring that Research and Innovation is at the heart of climate change action. **UKRI will galvanise the whole research and innovation system – global talent, great ideas and international partnerships – to tackle climate change at a systemic level.** We will use our presence at COP26 to promote and demonstrate what we have achieved so far and set out transformative solutions to the challenges ahead.

The activities detailed in this brochure are illustrative of the course that **UKRI will continue to take forward beyond COP26** – convening the research and innovation community through informed and thought-provoking panels, funding world-class research and innovation that benefits communities at the local, national and international level to act against climate change by forming and strengthening partnerships throughout the globe based on a common spirit of international collaboration.

The actions that are undertaken by UKRI will be guided by the vision and commitments of COP26, driven by equitable partnership for climate change adaptation in a changing world. It is clear that action against climate change will be driven by research and innovation and joint collaboration by nations and organisations across the globe.

UKRI's partnerships will also play a pivotal role in delivering a legacy beyond COP26. **Our overseas offices will help to act as catalysts for change** by driving forward collaborative locally led innovative programmes that provide critical research and innovation funding to projects that take a systemic approach to addressing the grand challenges associated with climate change and addressing the Sustainable Development Goals in key areas of energy, environmental sustainability, biodiversity, and transport.

UKRI cannot address climate change alone. It is a historic endeavour that requires close cooperation between international stakeholders across all ways of life. UKRI will drive forward increased dialogue and awareness through strengthened coordination with fellow research funders and research drivers. **The Belmont Forum is a standing example of the opportunities and progress made possible when organisations work together and collaborate closely.** There is also a need to bring about closer cooperation between policy makers, research funders and Government to tackle climate change by ensuring that progress is driven by research.

Importantly the action against climate change can be driven by research and innovation. **The UK Government's commitment to increase research and innovation spending to 2.4% of GDP by 2027** highlights the importance of attracting investment. This also includes the private sector, who will play an important role in identifying and supporting commercial innovations to help shift the global economy towards a green revolution. The role of investment, with its catalytic nature for driving science and technology growth, will act as a pillar of action against climate change.

We all have a role to play in addressing this historic challenge and it is imperative that we seize the initiative of COP26 to rise to the occasion. The work that UKRI and its research councils have funded over the last half a century has increased awareness of climate change as well as how its effects can be mitigated. Yet, in many ways, **our work has only just begun.**



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