

COP26 Adaptation and Resilience Launch Event Report

As part of the UKRI contribution to COP26, UKRI in collaboration with our partners (see annex) have convened a series of Climate Adaptation and Resilience events. The report below is a synthesis of points raised during break-out discussions held at the series launch event on 3rd June 2021, as well as through the pre-event consultation. Contributions to discussions were made by a range of adaptation and resilience research stakeholders based in different locations around the globe, including academics, businesses, government representatives, Non-Government Organisations (NGOs), research funders and policy makers.

Sustainable and Inclusive Climate Adaptation and Resilience: local leadership for a global goal

While we are all now familiar with the concept of climate change, we are not so familiar with what can be done or should be done to address it. Climate change mitigation has been around for a while – we've all heard about the move from coal to wind power and the transition from petrol and diesel to electric vehicles, but that is just one aspect of dealing with climate change and helping to prevent it getting worse; we also need to accept that the climate is changing and adapt to that change, for example through changes in approaches to farming and land management, construction, flood defences, water storage and city planning to name just a few. In order to enhance the resilience of communities around the world who are at risk of the impacts of climate change, we need to understand where we are now in terms of our ability to adapt to these impacts, using a range of information sources to better understand the global climate and the associated systems which are interlinked. We also need to consider the social and economic impacts of climate change and whether our policies are currently enhancing our resilience to those impacts or further exacerbating them. These concerns raise questions of social justice and ecological sustainability – to understand who benefits from innovation and investment in adaptation and how this will contribute to wider development causes, especially the Sustainable Development Goals. Can lessons be shared between richer and poorer nations? In the current context we might also ask: how do adaptation actions interact with COVID-19 response and recovery, including work to reduce vulnerability to future pandemics?

As part of the UK's COP26 presidency, we have been looking to address the key challenges facing us globally around making us more resilient to climate change and as such have asked an international group of IPCC authors to come up with a set of questions that events in the series will seek to address. These were posed at the launch event and through the pre-event consultation.

The questions are:

Q1: What research is needed to respond to the adaptation gap?

Where the adaptation gap describes the difference between current adaptation actions and those needed to avoid harm and enable wellbeing.

Q2. How to evaluate the feasibility of adaptation options and outcomes for resilient and sustainable development?

We know a good deal about what adaptation options are available, but do not routinely assess feasibility and the outcomes of adaptation.

Q3: What examples are there of transformative adaptation research enabling action through addressing issues such as social justice, capacity building and governance?

Research which enables a step change in the ability of people and ecosystems to adapt through processes that enhance inclusive and equitable development outcomes and support ecological sustainability.

Q4. How can research funders, universities and data managers best champion inclusive, urgent and solutions-oriented adaptation research?

Rethinking institutional roles and functions, for example through open data, new research funding mechanisms and new roles for universities as points of capacity and stability in fast changing social and policy contexts.

Q1: What research is needed to respond to the adaptation gap?

One thing is clear; there is not a single solution that will work for everyone as we are not all starting from the same place. Tackling climate change needs a bigger systems approach, we need to connect research globally, build trusted relationships and learn from each other. Just considering the impact on the land or the weather or the ocean in isolation will not give us implementable solutions, we need an interdisciplinary approach that takes into account people's needs, behaviour and actions in multiple geographical locations and ecological contexts. We need adaptive organisation of resources across international borders over short and long-term timescales to understand how action-orientated research outcomes can be embedded into society. Likewise, we also need to look at reducing the risk of failing to adjust to the impacts of climate change, known as 'maladaptation'.

The connection between climate change, land-based ecosystems and biodiversity loss, has featured in academic works and made media headlines around the world for many years. Maintaining healthy oceans and understanding their role in supporting global climate resilience still requires large scale international collaboration and long-term investment. This is hard to achieve when many countries experience short-term funding cycles and political instability.

Academic solutions alone won't make us globally more resilient; combining these with end-user driven approaches to climate change adaptation and Disaster Risk Reduction will. The local voice from indigenous people needs greater prominence in research and policy making and we need better mechanisms for local communities and policy makers to engage (for example, arts-based approaches have worked well in Columbia through storytelling to convey key messages). Research can play a key role in helping people express, communicate and understand diverse adaptation needs. Community-level vulnerability assessments to co-develop and document local understanding of injustices, capacity needs and relevant knowledge are key to effective climate adaptation. There is a need for research to develop more innovative finance-based approaches to mitigate climate-related risk for the most vulnerable, for example through insurance initiatives that are accessible to local communities. We also need to take into consideration the ethical dimensions which can be overlooked. Adaptation methods can easily fail if local knowledge and dominant cultural norms and values and existing power relations are not fully understood.

Research is needed into the barriers that slow the application of adaptation planning and policy into adaptation action. Many countries have 'National Adaptation Plans of Action' but are failing to implement them due to a poor understanding of the economic, social, environmental and wider value-driven costs of failure. Part of the gap is in communicating the systemic and cascading nature of climate-associated risks to policy and decision makers. In climate change adaptation research, more than in many other fields, close collaboration between the scientists, policy/decision makers *and* local actors at risk is the key. In most countries – rich and poor – such linkages don't exist. This is now being recognized as a major gap and local people, researchers and governments are starting to look at better ways to work together, but we need to accelerate this awareness, using more defined examples as best practice.

We need to combine advances in climate-forecasting with understanding of hazard and vulnerability drivers to communicate potential impacts of climate change on local places. We also need to incentivize interdisciplinary working – the UK is funding interdisciplinary, solutions-oriented research aimed at benefitting developing countries through programmes such as the Global Challenges Research Fund (GCRF), however universities need to ensure that researchers are enabled and rewarded for participation in this type of research. Researchers also need to have an awareness of the other disciplines that complement their

efforts to enable effective collaborations and drive uptake of research outputs – again this is relatively new and not adopted globally - yet. Finally, we need greater financial security to enable us to research the adaptation and resilience gaps over long and short-term timescales and share this through open access to data.

Q2: How to evaluate the feasibility of adaptation options and outcomes for resilient and sustainable development?

There is no “one size fits all” to managing risk; it will depend on what is being done by whom and where. A very recent example of this has been the global pandemic; the approaches to combat the pandemic have varied at the national and local scale with differing degrees of success. Approaches such as closing all borders is easier to implement when you’re an island rather than part of a large continent, and these global challenges don’t respect international boundaries. We must tailor the approach to the situation. The pandemic has taught us that vulnerability and resilience change, these are not static. Similarly, the rate of adaptation isn’t constant – it can be fast-paced and ‘transformative’ or incremental, both can be effective in different scenarios.

While there may be an overarching high-level common approach in certain settings, the feasibility of options will vary depending on cultural preferences, location and scale – a national initiative will feel very different to a local initiative and their success must be measured in different ways. Adaptation options must be co-designed with the end-users at all scales, testing their feasibility and evaluating outcomes so we can learn from mistakes, and surprises as well as sharing success. This is especially important, and challenging, for climate change adaptation which necessarily cross-cuts and is embedded in other policy and practical domains – from transport planning to food security and land-use, education and social care. It’s all too easy for policy makers to come up with measures of success that are expensive and time consuming to collect, if not impossible for some projects, often focussing on economic returns rather than wider value-driven assets and longer-term sustainability goals. Additionally, while there is a huge array of tools and methodologies in existence, they are not necessarily suitable or practical; they need to be able to differentiate between everyday development and progress towards climate adaptation and resilience and to be applied as part of everyday project and policy decision-making.

Adaptation research also needs evaluation; built in from the start of any research and co-designed into the programme alongside the participants who hold the knowledge and experiences of local communities, including those that are often marginalised. These key stakeholders of our research must be listened to and considered to ensure that the metrics/approaches used to measure success are worthwhile and appropriate. Communicating the success or failure of adaptation options also needs to be done in a way that will appeal to policy makers, or translated in a way that offers a solution-driven approach (UK policy makers often take an evidenced-based approach to decision making). Perhaps most importantly, we need baselines for climate adaptation and resilience that enable long term comparisons to be made. This means that data needs to be obtained and shared, urgently and in a consistent manner. Of course, this is idealised and it’s important to recognise that there can be a scarcity of data, it’s therefore important to build in proxy indicators which can be used where there are evidence gaps.

Feasibility studies are useful, however they also need to be scalable from the outset, so a key question is how to ensure we have locally meaningful measures that resonate globally. This will enable us to develop knowledge and best practice that can be more easily transferred to multiple locations facing similar climate-related risks around the world.

Q3: What examples are there of transformative adaptation research enabling action through addressing social justice, capacity building and governance?

There are a various examples of transformative adaptation research taking place internationally which produce a step change in approach and result in real-world action. In the UK, the Global Challenges Research Fund (GCRF) supports cutting-edge research to address challenges faced by developing countries and provide socio-economic benefits. The programme aims to promote challenge-led disciplinary and interdisciplinary research, strengthen capacity for research, innovation and knowledge exchange in the UK and developing countries through equitable partnerships, while providing an agile response to emergencies where there is an urgent research need.

The GCRF One Ocean Hub (<https://oneoceanhub.org/>) has deployed innovative (including arts-based) methods and an integrated research design to capacity build, share knowledge and connect dialogue across a broad spectrum of stakeholders at different levels of governance. The Coastal Justice Network enables small-scale fisheries leaders to work together with researchers, local civil society organisations and legal professionals. They have enabled an opening dialogue across scales to bring together stakeholders from the local to the international level to co-define challenges and co-develop potential solutions e.g. work with UN Division for Ocean Affairs to deliver a training session on 'Climate Change: Impact and Adaptation' for the UN Nippon Fellows and Alumni, the majority of whom are government officials from low and middle income countries. A key aim is to improve education on climate change for youth and wider citizens, so they have worked with primary school teachers in West Province to develop a challenge-led ocean education programme, which integrates Pacific culture, indigenous knowledge and science.

Other examples include the UKRI and Met Office funded "Community Climate Resilience through Folk Pageantry", which is an arts and social action led project using embedded and situated research working across resident communities, policy makers, local government managers and activists in Manchester as part of the [UK Climate Resilience Programme](#). The GCRF 'Tomorrow's Cities Hub aims to embed sustainability of learning beyond the project period; they have founded the African Research and Impact Network (www.arin-africa.org) to link the Hub with cities across Africa and support the mentorship of young policymakers and researchers.

The GCRF GRIPP Project (<https://www.gripp.net/>) – is another good example, being a network of networks to promote Gender-Responsive Resilience & Intersectionality in Policy and Practice. GRIPP is trying to address issues from a feminist and decolonial perspective. This type of network helps to avoid the creation of unintended ethical issues if included in the research planning. The [Escazu Agreement](#) in Latin America and the Caribbean is another example of working with communities to understand rights to nature/ environmental rights.

We need to support equitable research partnerships, share learning and promote best practice for climate adaptation research and interventions. We must avoid poor research practice too, for example Shack Dwellers International (SDI), which is made up of 33 countries and 500+ cities with community networks (<https://sdinet.org/>) collect data to aggregate their own challenges. They have found that researchers from the global north tend to come with ready planned solutions and often treat them as data collectors rather than as genuine partners. We need to change our thinking and perceptions, as well as our research methods.

What makes the earlier examples effective is in part down to their clear communication which makes the research accessible to a wide audience. They have engaged with a wide

range of stakeholders from different sectors, particularly local stakeholders and bring together a range of different research disciplines to fully understand climate challenges from multiple perspectives, at the outset. Equally important is that funders such as UKRI have funding frameworks in place that enable interdisciplinary and cross-sector working. Any new networks or collaborations in this area need to ensure they are supporting cross-disciplinary partnerships and that we can translate the research into clear messages for policy makers through to the local populations.

We are now at another crossroads. We've seen the leap from funding research disciplines in isolation, to greater investment in multi-disciplinary, action-oriented research programmes. We need to bring together funders, NGOs, businesses, government, communities and researchers to co-design the next generation of climate adaptation research programmes together. We need to translate research into action.

Q4. How can research funders, universities and data managers best champion inclusive, urgent and solutions-oriented adaptation research?

There are several immediate answers that are obvious, such as increase the proportion of funding going to least developed/low-income countries that are most vulnerable and strengthen global and regional cooperation to support vulnerable countries and regions, to enable a more joined up approach. However, there is a lot more to these answers than initially meets the eye. In order to increase the proportion of funding the recipients need to have the infrastructure in place to be able to effectively utilise the funding; this can require capacity building as well as better understanding of existing capability. Research funders and universities can play an effective role in enhancing global adaptation research capability through supporting equitable international research partnerships.

UKRI and our COP26 delivery partners such as the British Academy have been working to enhance strategic alignment and collaboration with funders in both the global south and the global north. The inclusion of research excellence as a criteria has helped to ensure that researchers in receipt of funding are the most competitive rather than the most well-known. However, one problem that research funders still need to address is when researchers are too heavily influenced by the funding source and are unable to choose their own partnerships.

The research pipeline from idea through to implementation needs to have transdisciplinarity built in from the start; we need to go beyond academic research to innovation and provide career opportunities through the translation of research into real world solutions. This needs the integration of social sciences, to understand the social, political and economic context that research is being conducted in and where solutions are applied. Various international funders around the world are starting to invest in interdisciplinary and cross-sector calls for research, but not all of them.

Funders need to partner with charities and other organisations who can help to build capacity and ensure strategic coordination while avoiding duplication. The Adaptation Research Alliance (ARA) concept being developed in association with COP26 will, providing the principles and governance model is correct, help to ensure that there is a diversification of funders (both public and private sector), researchers and research institutions, working together to build capacity, support and provide a greater proportion of funding to southern organisations and partners so that they can engage and lead. We need to work together to ensure that we have the right enabling systems which allow for people to build relationships and trust which is vital for cross-stakeholder collaboration.

In addition, we need to look at ways of overcoming budget and funding timescale constraints, as three to five-year funding cycles (typically seen in European countries) don't allow for continuity of partnerships. This needs engagement at the government level to put in place long-term budget allocations that will enable funders to support more sustainable research programmes and partnerships.

Finally, research needs to be demand-driven. This does not preclude funders or governments from initiating top-down strategic research programmes, however it does mean we need to fully consider the range of actors (individual, local, regional, national) operating at each level during their development. This will enable us to develop bespoke research-based solutions that can be tailored to address the needs of different actors through inclusive and equitable partnerships.

In conclusion...

There were many commonalities across the responses to the questions raised, around incorporating local knowledge and ensuring we foster interdisciplinary and cross-sector research which can be enabled through innovative, accessible funding routes. There is a need for metrics to measure where we are now, and what else needs to be done for people and the environment to become more resilient to climate change, as well as to understand whether adaptation interventions are really working. Partnerships need to be equitable and research projects co-designed with local stakeholders from the outset, building in tacit knowledge from communities. We need to identify and overcome the barriers to this type of research and ensure everyone is invested in tackling climate change, from policy makers in government through to funders, researchers and people on the ground. Climate and the environment don't recognise political barriers so neither should the financing mechanisms needed to address adaptation and resilience.

The current historical moment is very clear, as articulated in policy discussion in this year of COP26, and the reports of the IPCC Sixth Global Assessment. Climate change is impacting with increasing strength. Urgent and deep mitigation is essential, but so too is adaptation. Even with the deepest possible mitigation, climate change impacts will increase in severity over the coming decades as carbon remains locked into the atmosphere. Adaptation is now as urgent as mitigation. We know a good amount about how to adapt individual sectors but much less about the best ways to adapt at scale and in ways that also enhance wider development goals – including climate mitigation. The aim must be, in the words of the Sustainable Development Goals to adapt in ways that 'leaves no one behind'.

Through this series of international events, we aim to consider climate adaptation and resilience through local lenses, whilst acknowledging this is a global challenge. We will look in more detail at the different research needed to respond to the adaptation gap in different locations around the world. We will also seek to understand how we can share knowledge and data to learn from each other and add value to our research outputs. We will share examples of effective, action-oriented research and transformative adaptation best practice and look to recommend how best funders, researchers and institutions alike can champion research-based solutions that help to mitigate the climate change-related risks we all face.

UKRI and COP26 Delivery Partners, July 2021.

Annex 1 – UK and overseas delivery partners for the COP26 Adaptation and Resilience Events Series

Working together towards COP26...

