



UKRI Policy Fellowships 2023: Fellowship Opportunity Description

Fellowship Title: Defra Embedding Economics into the Fourth UK Climate Change Risk Assessment

Host Organisation: Department for Environment, Food and Rural Affairs (DEFRA) Department for Environment, Food & Rural Affairs - GOV.UK (www.gov.uk)

Host Team: Climate Adaptation Evidence

Summary: Opportunity to explore and advise how the research programme underpinning the UK's fourth Climate Change Risk Assessment can embed and make best use of economic analysis and evidence.

Fellowship Theme: Building a Green Future. *Please see the full call text 'What We Are Looking For' for a detailed summary of the research themes targeted in this call*

Policy Topic: Climate and the Natural Environment - Although climate impacts are very cross-cutting and will affect multiple areas of policy and the economy, including health and wellbeing, work, growth and productivity, the natural environment and data and evaluation.

Research Council: ESRC

Academic Discipline/s: Economics (with expertise in environmental or climate economics as an added bonus)

Research Career Stage: Early to mid-career

Fellowship Structure

Inception Phase:

Estimated Start Date: October 2023. *Exact date to be confirmed by the host depending on onboarding and security clearance requirements*

Duration: 3 months

FTE: 0.4 FTE

Main Placement Phase:

Duration: 12 months

FTE: 0.6-1 FTE

Knowledge Exchange Phase:

Duration: 3 months

FTE: 0.4 FTE

Work Arrangements

Location Requirements: Defra has offices around the UK. The base location for this fellowship will be agreed with the successful fellow. The fellow will work closely with the Climate Change Committee, based in London, and we would expect the fellow to visit Defra and CCC offices in London during the term to collaborate with colleagues and attend meetings. Eligible T&S costs are supported in the main UKRI grant. Please see full call text and guidance for more details.

Hybrid Working: Defra operates a hybrid working model with a mix of office and home working. We will discuss suitable working arrangements with the successful fellow.

Security Clearance: Baseline Personnel Security Standard, usually takes around 6 weeks. We would expect the successful applicant to start the security clearance application process, with support from the host team, as soon as

their Fellowship has been confirmed by ESRC. Ideally the security clearance process would be completed before the inception phase begins. See [National security vetting: clearance levels - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/national-security-vetting-clearance-levels).

Fellowship Opportunity Description

The aim of this research project will be to ensure and improve the embedding of economic and social research methods to maximise impact in the UK's fourth Climate Change Risk Assessment (CCRA4) to complement the scientific evidence. This project will involve working with DEFRA, the CCC and senior academics on research requirements for CCRA4 and conducting research and writing up outputs of the economic advisory panel.

The Climate Change Risk Assessment is set out under the Climate Change Act and must be published by government every 5 years. Government must then respond to the CCRA with a National Adaptation Programme setting out how government is taking action on the various climate risks identified. The CCRA, therefore, is an influential publication with direct impacts on government policy making. Although DEFRA-led, adaptation to climate change (responding to and managing the risks posed) is mainstreamed across government, meaning that multiple departments are responsible for ensuring resilience of their policy and risk areas. This is a truly cross-cutting project with real tangible policy impacts.

The latest CCRA3 Advice Report from the CCC (2021) shows that the gap between the level of risk we face and the level of adaptation underway has widened. 56% of the 61 risks and opportunities identified in CCRA3 were given the highest urgency score, compared to just 36% in CCRA2 in 2016. In the absence of further adaptation, the number of risks with annual impacts costing in the order of £billions per year could triple by the 2080s.

The UK's climate change risk assessment has a strong and proven reputation for excellent scientific evidence on the level of climate risk facing the country, however, in the past there has been less exploration of the economics of climate adaptation in the UK. Filling economic evidence gaps is now one of the priorities for CCRA4 to aid in communicating the role for government in adaptation, identifying cross-cutting policy levers to incentivise action, and build the evidence on the value for money of adaptation measures. This will impact decision making in government by making the case for adaptive action and framing policy options in terms of a changing climate and trade-offs.

The CCRA4 has a £6million budget over the next 3 years to dedicate to research and analysis into the climate change risks facing the UK, set to be published in 2027. As part of this research envelope, DEFRA would like to ensure the presence and improvement of economic analysis to complement the excellent scientific evidence underpinning the current approach to previous CCRA4s.

The specific details of the project will be discussed with DEFRA and the CCC and to be agreed on appointment. Some of the main areas of research interest for economics in CCRA4, and examples of potential research topics include:

- Strategic approach to adaptation
 - Researching the current approach to mainstreaming adaptation across government and proposing alternative approaches.
 - Exploration of incentives and policy levers to encourage public and private adaptive action.
- Economic methodologies
 - Exploring appropriate models and methods for valuation and appraisal across the areas of risk and opportunity in CCRA4, including:
- Microeconomic risk-level analysis
 - Analysis of the valuation of individual areas of climate risk and opportunity identified in CCRA4s.
 - Evaluation of the effectiveness and value for money of adaptation interventions to build evidence around what works.
- Macroeconomic analysis
 - Reviewing modelling of the macroeconomic impacts of climate change on the UK and exploring the fiscal impacts.
 - Researching the macro cost of a well-adapted UK.

The fellow will have the opportunity to co-design clear research tasks in collaboration with officials in government based on policy needs and the fellow's interests/skills during the inception phase of the fellowship.

In terms of what the day-to-day work and tasks, this could involve:

- Engaging closely with the CCRA4 Advisory Group on the Economics of Climate Risk and Adaptation of academic, public sector, and private sector economists;
- Contributing research to, and helping to draft, the published outputs of the Economics Advisory Group, including creative and innovative framing of the economics of climate risk and adaptation. This will involve engaging with high-profile economists to assist in establishing a narrative around the broad economic benefits of climate change adaptation;

- Conducting pilot / case studies of economic research projects to provide proof of concept and inform the direction of CCRA4 economic research;
- Application of economic and social research methods to new and innovative research approaches in the space of climate change.
- Input to the current proposals and ITTs for economic research for CCRA4;
- Consult and engage with academics, government departments etc. to determine customer needs, identify evidence gaps and explore feasibility of analysis;
- Developing research plans and proposals across stakeholders to meet objectives.

The approach to CCRA4 will require working across multiple systems and sectors, with a whole-economy approach to climate impacts. This will mean working across multiple areas of government and departments, as well as the potential to reach out to academics from different backgrounds, and to industry groups.

The fellow will benefit from:

- Working closely with senior academics on the Economics Advisory Group;
- The opportunity to influence the direction of the economic research underpinning a high-profile government publication;
- Insight to the research and process in national climate risk assessment;
- Conducting original research with the potential to use innovative methods in the economics of climate risk;
- Engaging across stakeholder groups including government, the independent Climate Change Committee, academics and industry;
- Experience not only conducting novel research but also contributing to the development of a prominent research programme, drawing together stakeholders and views to set direction.

Person Specification

Applications will be assessed against the following opportunity-specific requirements in addition to the generic eligibility and call criteria.

Essential Criteria:

- Academic experience in environmental / climate economics.
- Ability to review evidence, identify evidence gaps and develop research proposals.
- Experience of establishing effective research partnerships.
- Strong networking and communication skills with ability to build strong working relationships.
- Willingness to engage in and adapt to ways of working in government.
- Ability to communicate complex economic analysis to a wide range of stakeholders, both technical and non-technical.

Desirable Criteria:

- Knowledge of issues and challenges in climate adaptation with deep experience of some field(s) of climate adaptation, such as infrastructure, health, and the natural environment
- Knowledge of application of economics in a geographic / spatial context
- Experience of multi-disciplinary research.