

# SPF UK Climate Resilience Programme



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# Recognition of the need in policy

The impacts of extreme weather, including flooding and heatwaves, and climate change permeate through society affecting lives and livelihoods and impacting policy in many areas.



# Funding and management

- The programme is jointly led by UKRI and the Met Office
- It has £18.6m of funding from Wave 1 of Strategic Priority Fund
- Jointly led by NERC on behalf of AHRC, ESRC and EPSRC and Met Office
- Governance:
  - **Programme Board** (UKRI and Met Office)
  - **Steering Committee** (Chaired by Jim Hall; includes academics and non-academics)
  - **Programme champions** (Suraje Dessai and Kate Lonsdale at University of Leeds)



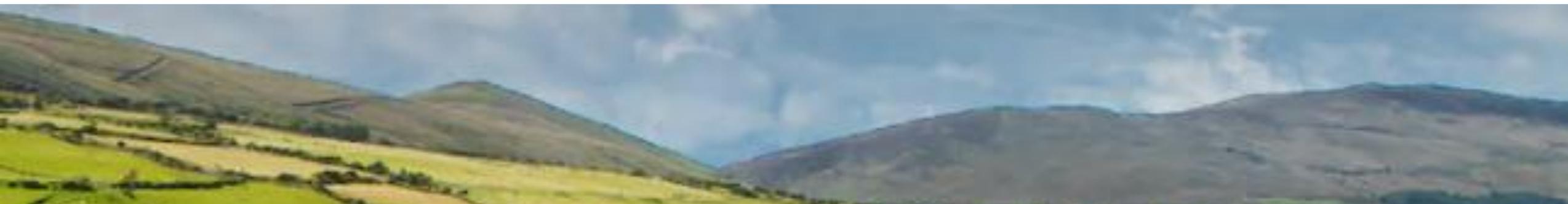
# UK Climate Resilience Programme vision:

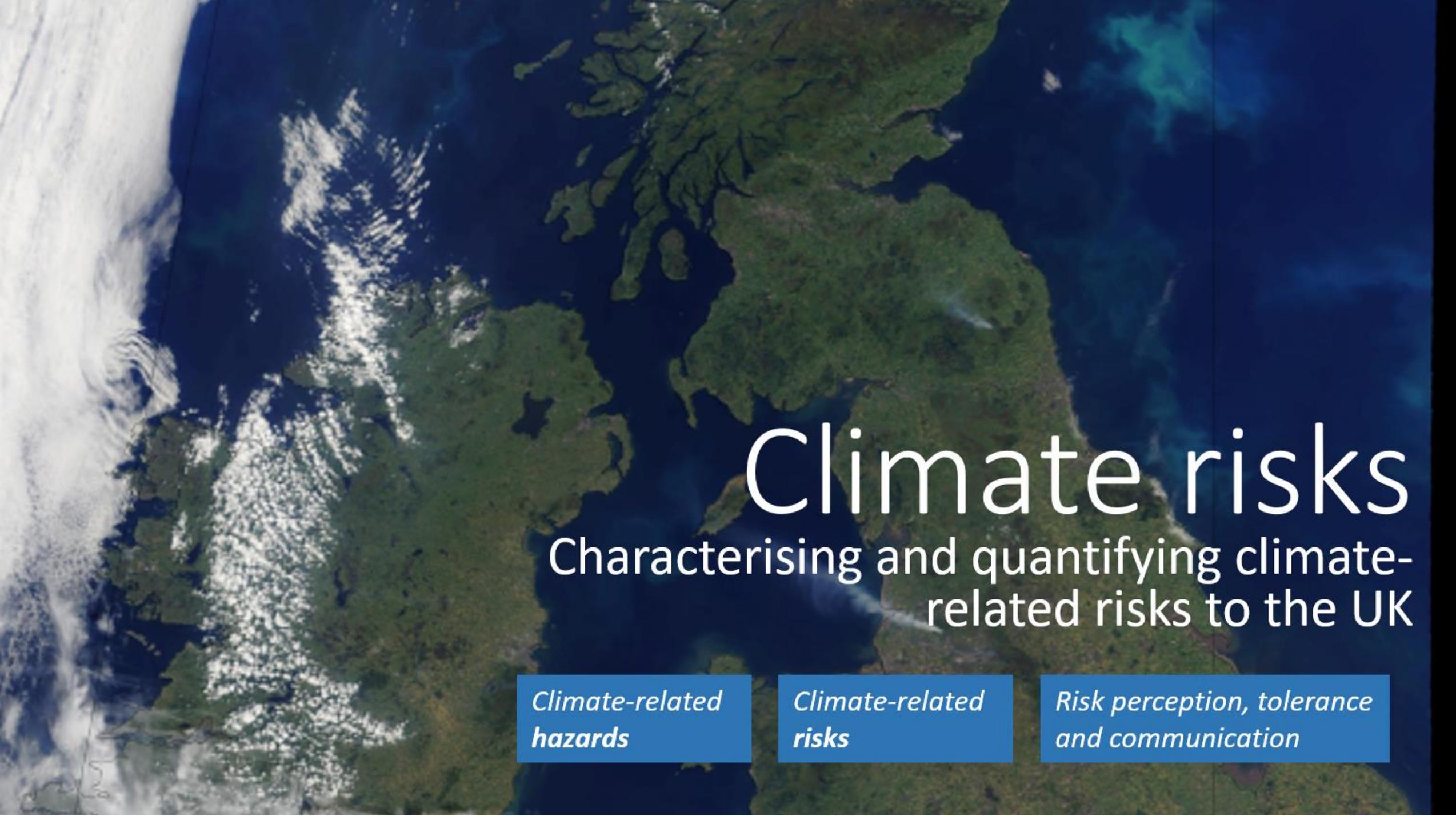
To enhance the UK's resilience to climate variability and change through frontier interdisciplinary research and innovation on climate risk, adaptation and services, working with stakeholders and end-users to ensure the research is useful and usable.

The programme has **three main objectives:**

- Characterising and quantifying climate-related risks
- Managing climate-related risks through adaptation
- Co-producing climate services

<https://nerc.ukri.org/research/funded/programmes/ukclimate/news/jsp-champions/ukcr-jsp/>





# Climate risks

Characterising and quantifying climate-related risks to the UK

*Climate-related hazards*

*Climate-related risks*

*Risk perception, tolerance and communication*

# Climate adaptation

Managing climate-related risks through adaptation

*Governing  
adaptation*

*Living with  
uncertainty*





# Climate services

Working with partners to turn climate information and knowledge into action and usable services

*Understanding the emerging field*

*Piloting some examples*

# UKRI funded projects

- A prototype real-time sting jet precursor tool for forecasters
- Building UK climate resilience through bridging the qualitative-quantitative data divide
- CROP-NET: Monitoring and predicting the effects of climate change on crop yields
- Characterising and adapting to climate risks in the UK wine sector
- Climate Resilience of Care Settings
- Climate Risk Indicators: developing indicators of climate risk using UKCP18 to support risk assessments and enhance resilience
- Coastal resilience in the face of sea-level rise: making the most of natural systems
- Delivering resilience to climate impacts on UK freshwater quality: towards national-scale cyanobacterial bloom monitoring and forecasting
- Designing Resilient and Adaptable Water management - Integrated & Interactive Tools (DRAW-IT)
- Erosion Hazards in River Catchments: Making Critical Infrastructure More Climate Resilient
- FUTURE-DRAINAGE: Ensemble climate change rainfall estimates for sustainable drainage
- Financial risk and the impact of climate change
- Forecasting Risk of Environmental Exacerbation of Dissolved Organic Matter - Building Climate Change Resilience (FREEDOM-BCCR)
- Impacts and Risk Assessment to better inform Resilience Planning (IMPRES)
- Mobilising Citizens for Adaptation: building local flood resilience through cooperative rainwater harvesting (MOCA)
- Monitoring and predicting the effects of climate change on crop yields
- Smart Systems Approaches for Climate Resilient Livestock Production
- Towards a microbial process-based understanding of the resilience of UK peatland systems
- Understanding UK Perceptions of Climate Risk and Resilience (RESILRISK)
- Unlocking the potential of surface water flood nowcasting for emergency services in a changing climate

# Recent progress on Met Office activities



**UK Research and Innovation** **Met Office**

**Joint UKRI & Met Office Science Plan**

SPF UK Climate Resilience Programme  
18 July 2019

Vision: To enhance the UK's resilience to climate variability and change through frontier interdisciplinary research and innovation on climate risk, adaptation and services, working with stakeholders and end-users to ensure the research is useful and usable.

The programme is jointly led by UKRI and the Met Office and has £18.6m of funding to achieve three main objectives:

1. Characterising and quantifying climate-related risks
2. Managing climate-related risks through adaptation
3. Co-producing climate services

**The Challenge**  
Climate variability and change affect all sectors of society through both human and natural systems. Effective adaptation builds capacity to respond to this variability and change and is one of two broad and increasingly important strategies (along with mitigation) for climate risk management.<sup>1</sup> Even under the most optimistic mitigation scenarios there is an urgent need to **build resilience and accelerate adaptation** to climate variability and change.<sup>2</sup> Informing the extensive range of actions needed to manage climate risks, reduce damage without exacerbating existing inequalities, and realise emerging opportunities, is a **critical scientific and societal challenge**.

It is widely recognised that single disciplinary approaches will not be able to 'solve' this complex challenge and that multi- and inter-disciplinary research efforts that include e.g. the natural sciences, social sciences, engineering, the arts and humanities are needed. It is also recognised that the engagement and involvement of a wider range of stakeholders comprising e.g., of practitioners and policy-makers, is essential in addressing this challenge.



### **Topic A: Enhanced Climate Change Risk Assessment capability**

To produce improved UK spatial modelling of climate-related risks, characterisation of interdependent risks and representation of adaptation strategies in integrated assessment models of impact and adaptation. One **interdisciplinary proposal** up to the value of £2m (at 80% FEC) for 28 months to include researchers across natural, physical, engineering, health, arts and social sciences.

### **Topic B: Governing Adaptation**

To enhance our understanding of the social, institutional and cultural contexts, including behaviour, capacity and governance of individuals, organisations and policy, and the interactions between them, in delivering adaptation.

Max of **two projects**, (£750,000 (at 80% FEC)) for 28 months.

Deadline **4pm on 5 December 2019**

### **Town hall meeting**

**3 October 2019** in London to further communicate the remit and objectives of the programme and the specific requirements of this call, and bring together researchers from a variety of disciplines with interests in climate impacts and resilience in the UK. Not mandatory for applicants.

<https://nerc.ukri.org/research/funded/programmes/ukclimate/news/townhall/>

# Second UKRI funding opportunity

<https://nerc.ukri.org/research/funded/programmes/ukclimate/news/ao-ukri2/>

Title	Amount	Call ref.	Funding period
Review of climate resilience mainstreaming into regulatory and voluntary standards, national guidance, and other sectoral/industry codes of practice	£60,000	DN420232	01/11/19-31/08/20
Risk estimates using techniques from catastrophe modelling: UK flood	£250,000	DN420242	01/11/19-31/03/21
Demonstration of a climate service to address the resilience needs of the UK health sector	£150,000	DN420172	01/11/19-31/10/20
Development and provision of UK socio economic scenarios for climate vulnerability, impact, adaptation and services research and policy	£500,000	DN420214	01/11/19-30/04/21
Climate service prototype development - enhancing the resilience of the water sector to drought events	£300,000	DN420192	01/11/19-31/03/21

# Met Office calls

Further calls will follow later this financial year and then later in the programme.

<https://www.metoffice.gov.uk/research/approach/collaboration/spf/spf-opportunities#Bids%20invited%20for%20the%20UK%20Climate%20Resilience%20programme>

# Pre-announcement for UK Climate Resilience funding opportunities

UKRI will shortly be inviting applications for further UK Climate Resilience funding opportunities. This will be split into several topic areas:

- Present & future climate hazard (led by NERC): Developing and evaluating new methods and techniques to characterise current and future climate hazards and underlying driving processes.
- Embedded Researchers (led by NERC): Providing support for researchers to undertake UK based climate resilience research through close collaboration with non-academic host partners.
- Living with Uncertainty (led by AHRC): Exploring the understanding of what it means to live with uncertainty – Town Hall meeting 16 December in London

Website: <http://www.ukclimateresilience.org>

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