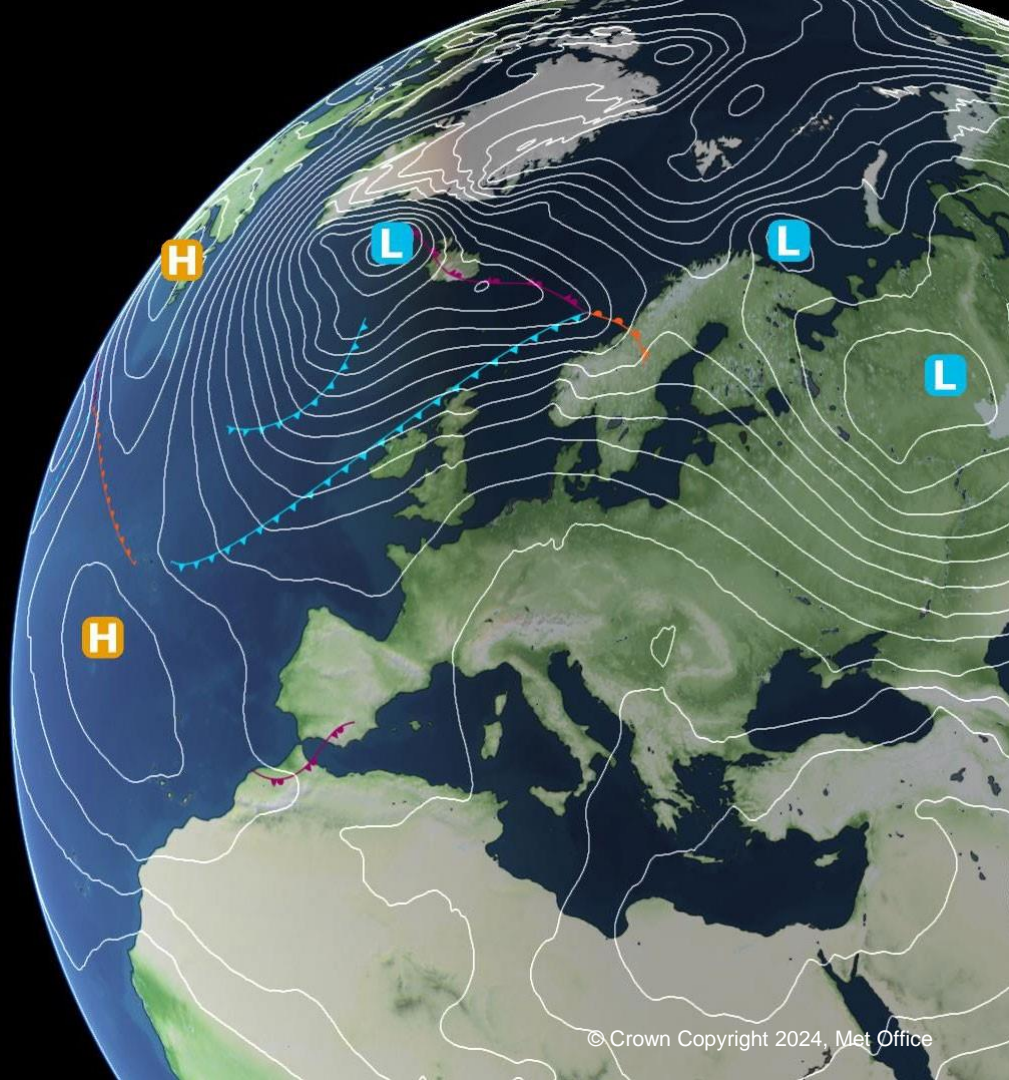


# CCRA4-IA Technical Report Briefing

15.7.2024



Introduction

The wider context

Our approach

Our consortium

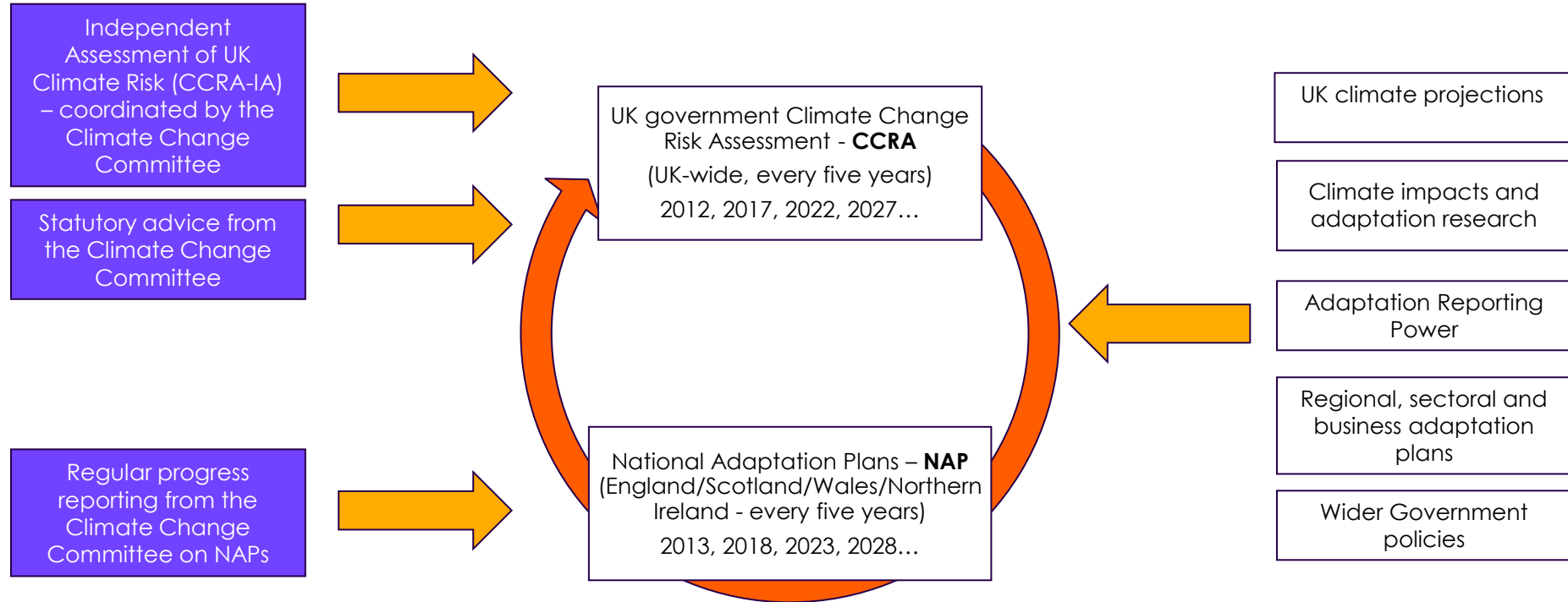
Ways to get involved

Questions



# 1. Introduction to the UK's Climate Change Risk Assessments

## The UK's adaptation policy cycle




## 2. Evolving our approach to CCRA4-IA

### Priorities for this cycle of the CCRA

For the CCRA4 Independent Assessment we are seeking to:

- **Build on previous assessments** to ensure continuity with earlier CCRAs
- **Provide authoritative, evidence-based and up-to-date** insight to government
- **Support adaptation action** by setting out the case for near-term adaptation action within and beyond government
- **Ensure the assessment is useful to and usable by** decision-makers

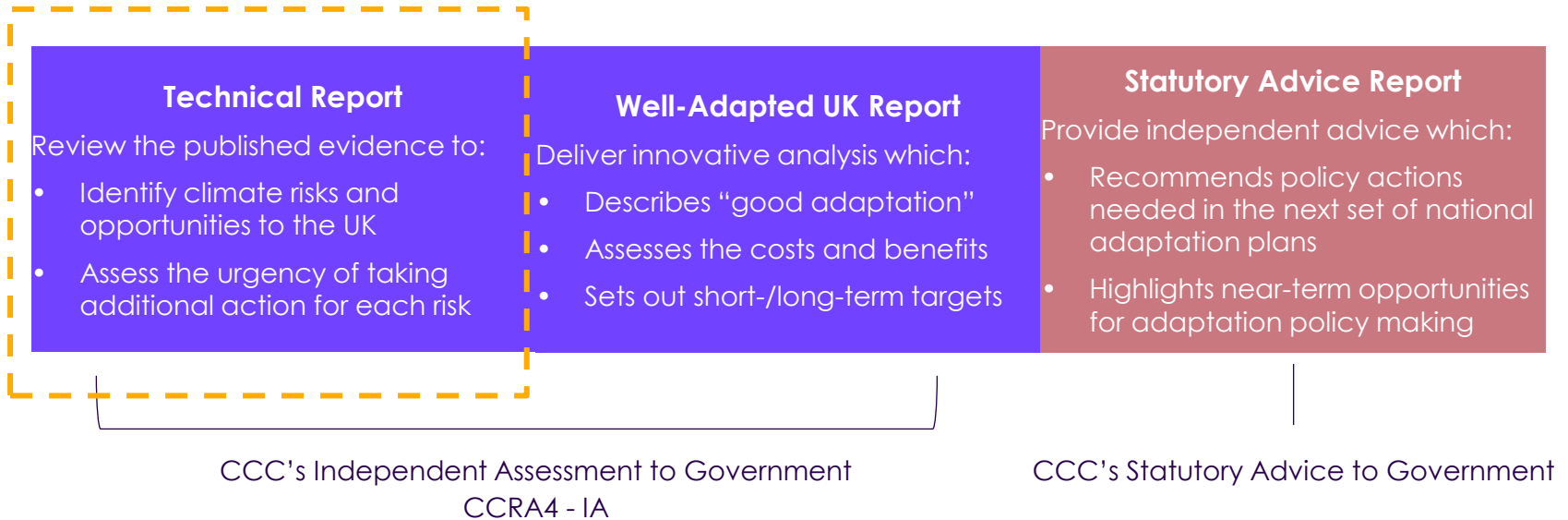


Proposed methodology for  
the Fourth Climate Change  
Risk Assessment -  
Independent Assessment  
(CCRA4-IA)

May 2024

## 2. Evolving our approach to CCRA4-IA

### Planned main outputs from CCRA4-IA



**The Technical Report underpins the Well-Adapted UK Report and Advice Report, and the description of risks is critical for mobilising responses by governments and other stakeholders**

## 2. Evolving our approach to CCRA4-IA CCRA4-IA Technical Report

The Technical Report will provide a synthesis of the most up-to-date evidence on the range of risks and opportunities facing the UK from climate change.

Key elements of the approach will include:

- **Updating** the CCRA3 Technical Report using the most recent sources of information on UK climate risk
- **Refining** the urgency scoring framework from CCRA3 to enable clearer identification of national priorities
- **Co-developing** an accessible report that is easy to understand and use for a range of decision-makers

A consortium, led by the UK Met Office, has now begun work to deliver the CCRA4-IA Technical Report – this work will continue until late 2025.

UK CLIMATE  
RISK

UK Climate Risk  
Independent  
Assessment (CCRA3)

**Technical Report**

# Met Office Moving beyond CCRA3 technical report



The “Exam question” for CCRA4

“How has the evidence on the full range of risks that face the UK, and their urgency, continued to evolve over the last five years?”



We will focus on the **change** since CCRA3



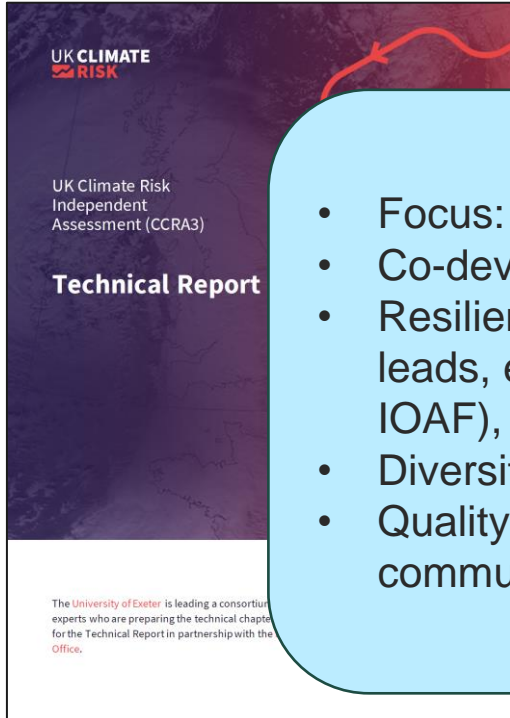
We will work with stakeholders to agree a more manageable list of risks



We will work with the adaptation committee to agree if an extra “urgency” category would be helpful



# Met Office Moving beyond CCRA3 technical report



The "Exam question" for CCRA4

- Focus: what's changed? What's most urgent?
- Co-development with stakeholders
- Resilience within the consortium including joint chapter leads, existing structures (e.g. MOAP), relationships (e.g. IOAF), capabilities (potential outputs)
- Diversity of ideas
- Quality – Science Assurance, independent panel, community review

the full UK, and involve over

will work with adaptation committee to agree if an extra "urgency" category would be helpful



# Met Office What we've learned about users of CCRA3



- Risks are not always sufficiently well targeted at those responsible for policy (how to address different departmental remits across different nations)
- Suggestions:
  - Do not reduce number of risks? Bucket and Thimble.
  - Increase attention to interdependencies and challenges of ownership of interdependent risks
  - Include confidence rating in level of available data/ evidence
  - Acknowledge bigger systemic changes
  - Highlight possible nature and impact of sudden shocks
  - Include logical flow map/grid of hazards -> risks -> impacts -> risk owners
  - Strengthen economic analysis of impacts

# Approach to risks in CCRA4

- CCRA3 had 61 risks
- 34 of 61 risks were ranked as 'more action needed'
- Feedback indicates the lack of granularity in the highest category is not helpful for prioritising action
- Aim to arrive at a **relevant set of risks** that can be more **clearly prioritised**.
- Includes a proposal to increase granularity in the 'more action needed' score to allow the identification of a smaller, more select number of 'highest priority' risks

**Table 2.2**  
CCRA3 Risks and Opportunities by Urgency Score (UK-wide scores)

|  |   |  |  |   |
|--|---|--|--|---|
| 101 Risk to terrestrial species and habitats from pests, pathogens and F&M                         | 102 Risk to terrestrial species and habitats from pests, pathogens and F&M            | 103 Risk to soils from changing conditions, including seasonal wetting and erosion                     | 104 Risk to natural carbon stores and sea level rise from changing conditions                                | 105 Risk to sea opportunities for agriculture and forestry production                         |
| 106 Risk to agriculture from pests, pathogens and F&M  | 107 Risk to forestry from pests, pathogens and F&M                                    | 108 Risk to freshwater species and habitats  | 109 Risk to freshwater species and habitats from pests, pathogens and F&M                                    | 110 Risk to marine species, habitats and fisheries  |
| 111 Risk to marine species and habitats from pests, pathogens and F&M                              | 112 Risk and opportunities to coastal species and habitats                            | 113 Risk to infrastructure services from sea level rise  | 114 Risk to infrastructure services from ice and surface water flooding                                      | 115 Risk to transport, roads, air ports and embankment failure                                |
| 116 Risk to public water supply from reduced water availability                                    | 117 Risk to transport from high and low temperatures, high winds, lightning           | 118 Risk to health and wellbeing from high temperatures  | 119 Risk to people, communities and buildings from flooding  | 120 Risk to people, communities and buildings from heat stress                                |
| 121 Risk and opportunities from summer and winter seasonal energy demand                           | 122 Risk to health from vector-borne diseases   | 123 Risk to cultural heritage  | 124 Risk to health and social care delivery  | 125 Risk to education and other services  |
| 126 Risk to business sites from flooding   | 127 Risk to business locations and infrastructure from coastal change                 | 128 Risk to access from disruption to energy, climate and distribution networks                        | 129 Risk to UK food availability, safety, and quality from climate change extremes                           | 130 Risk to international and governance from climate change extremes that will impact the UK |
| 131 Risk to sea level rise from international systems, sea level rise, including freshwater change | 132 Risk to UK public health from climate change extremes                             | 133 Risk from climate change on international trade routes   | 134 Risk to digitalisation from UK data security and cascades of global risks across systems and geographies | 135 Opportunities from new species, infrastructure in terrestrial habitats                    |
| 136 Opportunities for agricultural and forestry production from new species                        | 137 Risk to ecosystems and agricultural land from sea level rise, subsidence, erosion | 138 Opportunities for marine species, habitats and fisheries   | 139 Risk and opportunities from climate change to landscape character  | 140 Risk to infrastructure services from coastal flooding and erosion                         |
| 141 Risk to bridges and pipelines from flooding and erosion  | 142 Risk to high-voltage and surface infrastructure from sea or high river flows      | 143 Risk to subterranean and surface infrastructure from subsidence                                    | 144 Risk to energy generation from reduced water availability  | 145 Risk to energy from high and low temperatures, high winds, lightning                      |
| 146 Risk to digital from high and low temperatures, high winds, lightning                          | 147 Opportunities for health and wellbeing from higher temperatures                   | 148 Risk to building fabric  | 149 Risk to health and wellbeing from changes in air quality   | 150 Risk to food safety and food security   |
| 151 Risk to health from poor water quality and increased water supply interruptions                | 152 Risk to business from coastal flooding  | 153 Risk to business from reduced energy production, infrastructure disruption and higher temperatures | 154 Opportunities for business changing demand for goods and services  | 155 Opportunities for marine species, habitats and fisheries                                  |
| 156 Risk to offshore infrastructure from storms and high waves                                     | 157 Risk to finance, investment, insurance, access to capital and high waves          | 158 Risk to the UK financial sector from climate change extremes                                       | 159 Opportunities for UK food availability and exports   | 160 Risk to the UK from climate related international human mobility                          |
| 161 Opportunities including risks to wildlife from international trade routes                      |   |  |  |   |

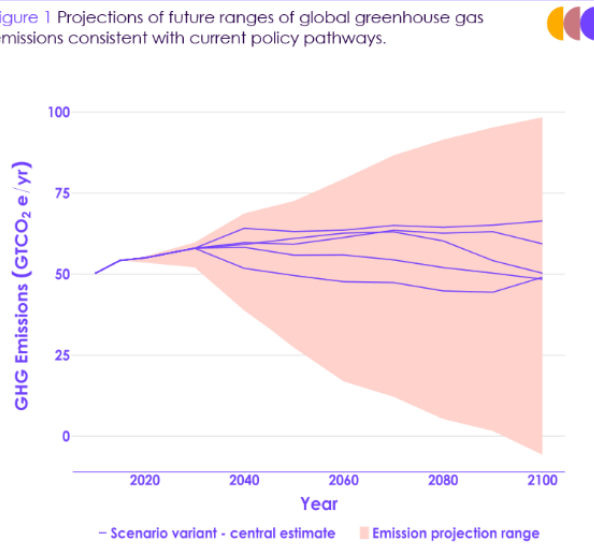
● More Action Needed    
 ● Further Investigation    
 ● Stable Current Action-Waiting Brief

Source: The First UK Climate Change Risk Assessment Technical Report (Bells R.A., Howard A.B. and Pearson, K.V. July 2). Prepared for the Climate Change Committee, London.

Notes: A UK-wide score has been derived using the highest urgency score awarded since the four UK indices for each risk or opportunity.

Urgency scores for CCRA3 risks (CCC, 2021)

Figure 1 Projections of future ranges of global greenhouse gas emissions consistent with current policy pathways.



A range of emissions scenarios broadly consistent with current global emission pledges are considered



Table 1

Global warming levels and sampling of UK climate hazards to be considered at each time period for the CCRA4-IA assessment

|   | Central scenario          |                         | High climate hazard sensitivity |                           |
|---|---------------------------|-------------------------|---------------------------------|---------------------------|
| Time period                                       | 2030s                     | 2050s                   | 2030s                           | 2050s                     |
| Global warming level (above preIndustrial levels) | 1.5°C                     | 2°C                     | 2°C                             | 2.5°C                     |
| UK climate hazards                                | Median of UKCP18 at 1.5°C | Median of UKCP18 at 2°C | Upper-end UKCP18 at 2°C         | Upper-end UKCP18 at 2.5°C |

CCRA4 will use global warming levels and consider effect of their being reached at 2030s and 2050s

State of the climate chapter will also consider climate beyond 2050 and Higher Impact Lower Likelihood scenarios.



# Our consortium



Met Office



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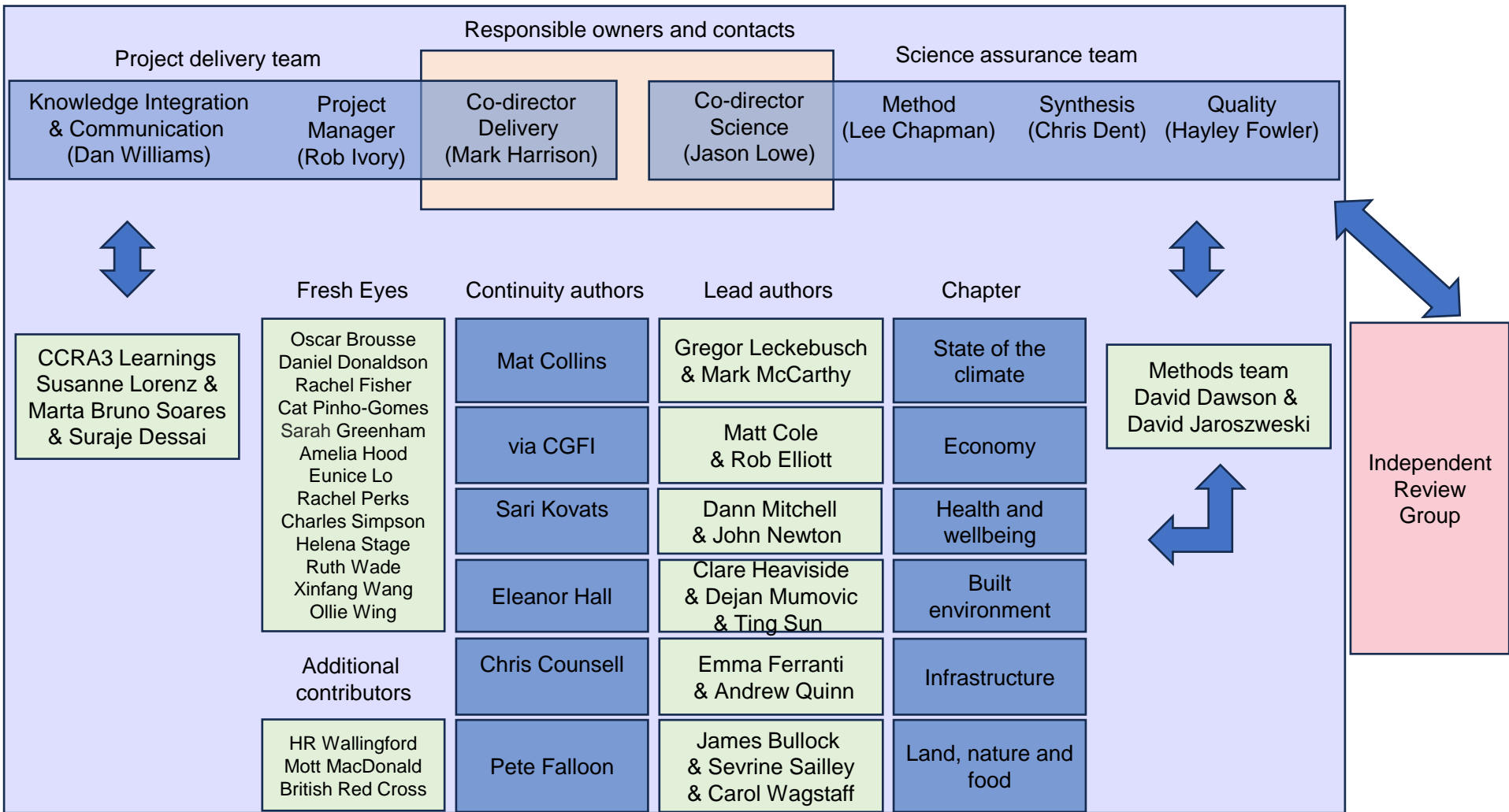
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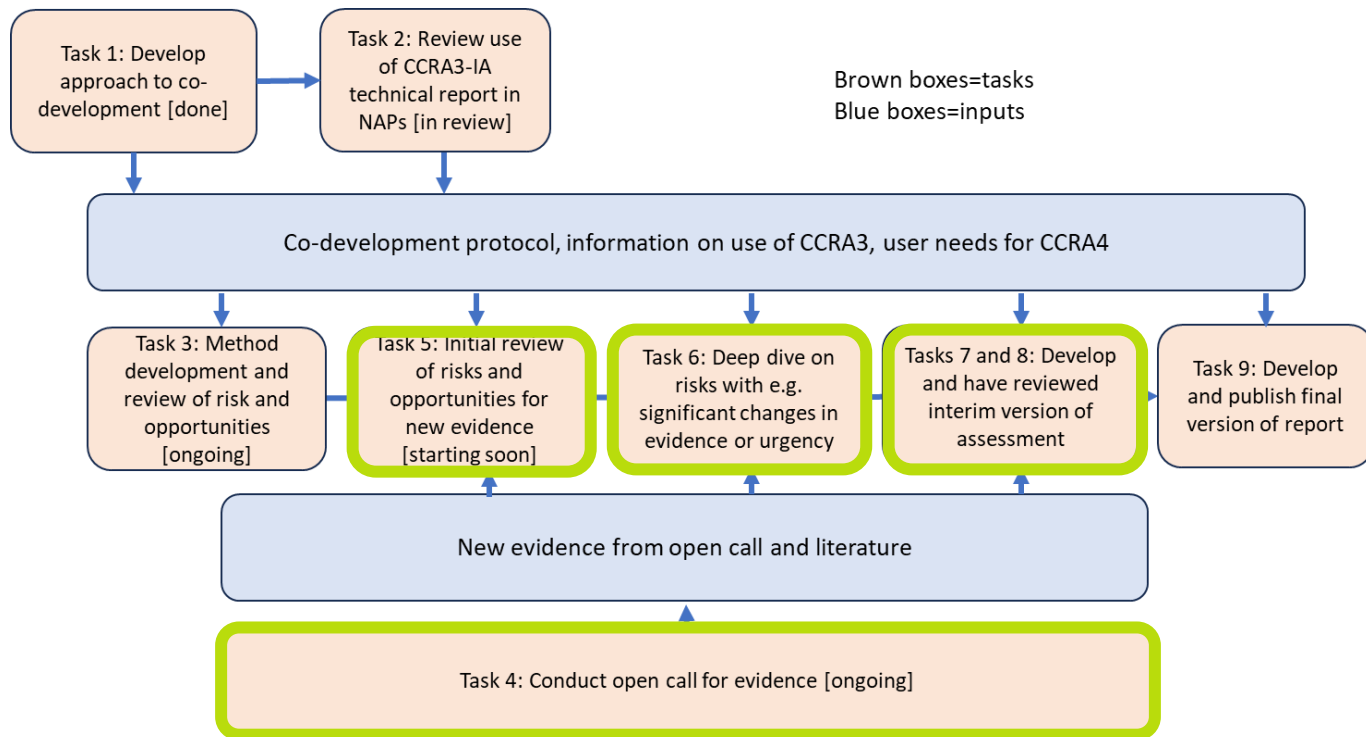
UK Centre for  
Ecology & Hydrology



[CCRA4-IATechnicalReport@metoffice.gov.uk](mailto:CCRA4-IATechnicalReport@metoffice.gov.uk)



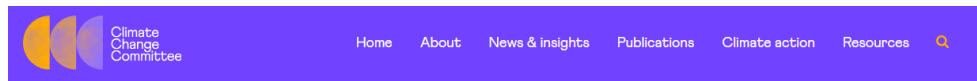
# Ways to get involved



# Open call for evidence

[Call for evidence - Climate Change Committee \(theccc.org.uk\)](https://theccc.org.uk)

- Current call for evidence - September 2024
  - Academic papers
  - Project reports (supporting policy briefs)
  - Other Grey literature (conference proceedings, webinars, PhD or Masters theses, etc)
- Two further calls in due course
  - Target evidence gaps



[Home](#) / [Climate action](#) / [Calls for evidence](#)

## Calls for evidence

The Climate Change Committee regularly issues calls for evidence to gather the views of a wide range of experts, businesses and organisations when developing its advice.

### [Climate Change Risk Assessment Independent Assessment \(CCRA4-IA\) Technical Report](#)

- The CCC is seeking your evidence and information on UK climate risk, to inform the next Climate Change Risk Assessment Independent Assessment (CCRA4-IA) Technical Report. The call for evidence is a key part of the process and we're keen to update our understanding of climate risks. Find out more and [respond to the call for evidence on the Met Office website](#).



# Engagement opportunities

## A chapter example



**May 2024**

Chapter leads to begin engagement with tech/academic stakeholders



**Aug/Sep 2024**

Set of chapter-led technical surveys



**Oct/Nov 2024**

Set of workshops, drilling into detail of cross-cutting themes and urgency scores



**April 2025**

Interim report for community review