**Specification for Review of Attributable Climate Impacts in the UK**

Tender Reference Number: RM-1122

**Specification of Requirements**

Invitation to Tender for **Review of Attributable Climate Impacts in the UK**

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Deadline for Tender Responses: **5th December 2022 at 5pm**

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# Background

**The Climate Change Committee**

The Climate Change Committee (CCC) was set up as part of the Climate Change Act. The CCC is an independent body that advises both on reducing emissions in the UK and adapting to the climate changes in the UK.

The CCC’s full range of past reports are available here:

[http://www.theccc.org.uk/reports/.](http://www.theccc.org.uk/reports/.%C2%A0%20HYPERLINK%20%22http%3A/www.theccc.org.uk/reports/.%C2%A0)

**The UK Climate Change Risk Assessment**

Under the Climate Change Act 2008 (section 57), an assessment of the risks facing the UK from the current and predicted impact of climate change is required every 5 years. The CCC is responsible for providing independent advice to the UK Government to inform that assessment.

The Committee has recently provided its advice to the UK Government on the risks and opportunities facing the UK from current and future climate change as part of the third Climate Change Risk Assessment (CCRA3) – this was summarised in its Independent Assessment of UK Climate Risk which was published in summer 2021.

The fourth UK Climate Change Risk Assessment (CCRA4) is due for completion by June 2026. CCRA4 will assess climate change risks to the UK using a more spatially defined approach than previous CCRAs, giving an assessment of the spatial distribution of climate risks across the UK and a more localised view of adaptation needs.

To inform the next CCRA we are looking to commission a review of formally attributable impacts from past and present climate change in the UK. This review will draw on existing literature and cover both the attribution of changes in climate impact drivers as well as attributable impacts on human systems and ecosystems in the UK.

# Aims and Objectives

This project is aiming to assess the attributable impact of climate change to-date on the UK. This covers both the changes in the physical hazards but should also extend into the attribution of key impacts on human and natural systems. This project seeks to close a gap to extend the formal detection and attribution framework used by the Intergovernmental Panel on Climate Change (IPCC) down to a UK-specific assessment.

The key tasks in this project will be:

1. Detection and attribution of changes in aspects of the UK’s weather and climate
2. Attribution of impacts on the UK’s human and natural systems to climate change

# Methodology

*Task 1: Detection and attribution of changes in aspects of the UK’s weather and climate*

This task should assessment the evidence regarding which aspects of UK weather and climate have currently detectable changes over the observed period and where these changes can be attributed to human activity with confidence. A formal detection and attribution approach – aligned with the methodology used in the IPCC AR6 WG1 report should be deployed here.

Requirements from this task:

* + This task should focus on making an assessment for impact-relevant aspects of the UK’s weather and climate. This should include the groups of climate impact drivers (CIDs) used within the most recent IPCC physical science assessment report (working group 1 – Table 12.1) but may also be extended to additional variables where that is valuable. It is expected that a full approach for this task, including the list of CIDs, should be agreed with the CCC at the project kick-off meeting.
	+ We welcome approaches to this task that would rely on expert assessment of existing published literature and/or approaches that propose additional analysis. Where analysis is proposed we would encourage approaches that build on new approaches to national-level attribution in the literature such as [Hawkins et al. 2020](https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2019GL086259). Analysis approaches should draw on peer-reviewed methods in the literature.
	+ We encourage proposals that aim to provide an assessment of attributable changes in CIDs with spatial disaggregation across the UK. At a minimum level, assessments for changes in CIDs for England, Scotland, Wales and Northern Ireland is required, with finer spatial resolution encouraged where possible.
	+ The approach used is expected to be consistent with the assessment methodology used in IPCC AR6 WG1 Ch 12 for the European-wide assessment to document historical emergence (Table 12.7).
	+ This task should be focused exclusively on observed change and their attribution – a forward look to how these CIDs might change further in future is not required as part of this project.
	+ We are interested in understanding where changes in CIDs cannot currently be attributed to climate change as well as where changes are clear. Therefore the likely lack of attributable signal should not be used as a filter for which CIDs are proposed for assessment.

*Task 2: Attribution of impacts on the UK’s human and natural systems to climate change*

This task should focus on assessing the state of the evidence regarding the extent to which to specific impacts on human and natural systems in the UK has been formally linked to global climate change. A database should be produced documenting where robust linkages have been made in the scientific literature.

Requirements for this task:

* + This task should look to document the evidence for current & past impacts attributable to human-induced climate change on multiple natural and human systems in the UK. These should include: nature and ecosystems (freshwater, terrestrial & marine/coastal), working lands and seas (farming, forestry and fisheries), infrastructure systems (energy, transport, telecoms & ICT, water), human health, settlements (flooding, overheating), economic impacts, impacts on society. A set of systems for examination is expected to be agreed with the CCC at the project kick-off meeting.
	+ It is expected that this task is completed using literature assessment and expert judgment. It is not expected that additional bespoke modelling will take place under this task.
	+ An approach to detection and attribution of impacts consistent with that used in IPCC WG2 should be followed in this task. Other contributing factors (such as changes in exposure and vulnerability over time) should also be clearly acknowledged where appropriate.
	+ Impacts assessed can include those driven by human-induced changes in the statistics of CIDs, as well as the impacts associated with historical extreme weather events that themselves can be linked to human-influence on the climate system. As such, evidence from the event attribution literature is welcome here.
	+ Attributable UK impacts arising from changes in climate occurring outside of the UK are also within scope of this task.
	+ A key source for this project should be the assessment by IPCC WG2 Chapter 13 (Europe) including its assessment of attributable impacts in Figure 13.27 – this is expected to be a key source for identifying UK-specific literature on attribution of impacts in human and natural systems.
	+ Where possible, the scale of the attributed impacts should be clearly documented along with the direction.

# Outputs Required

The outputs of the work should include:

* **A report,** setting out the scope of work, assumptions, methodology and findings for all tasks. This report should also highlight where significant evidence gaps remain.
* **Spreadsheets** documenting evidence sources relied upon in this project and a database on attributable impacts documented in Task 2.
* **Data sets** of the attributable changes in climate impact drivers across the UK provided in an open and accessible format.

Where excel workbooks are used these should be shared, fully unlocked and linked to rest of the excel workbook deliverable above, allowing future capability to update assumptions.

We envisage that bidders may need to make use of pre-existing knowledge to enable delivery and welcome this. However, this should not limit the transparency of approaches used in this project and all outputs should be provided in a publishable format. In the event of any limitations on sharing (e.g. in wider sharing beyond the CCC), these should be specified as part of the tender.

In addition to the above, we also expect interim deliverables to be required, including slide packs for the purposes of milestone meetings.

# Ownership and Publication

The key deliverables will be handed over to the CCC, who may choose to publish these as supporting evidence on their website. Spreadsheets should be open access and unrestricted, to enable full QA of results and assumptions.

# Quality Assurance

This project must comply with the ‘CCC – Quality Assurance of Evidence and Analysis’ guidance1 and bidders must set out their approach to quality assurance in their response to this ITT.

All research tasks and modelling must be quality assured and documented. Contractors should:

* Include a quality assurance (QA) plan that they will apply to all of the research tasks and modelling,
* Specify who will take lead responsibility for ensuring quality assurance and ensure that this responsibility rests with an individual not directly involved in the research, analysis or model development,
* Provide QA log to demonstrate the QA undertaken, including who undertook the QA and the scope, type and level of QA that has been undertaken (e.g. a log entry only stating ‘the data was checked’ will not be sufficient),
* Allow for a meeting with CCC staff to run through QA performed.

Sign-off for the quality assurance must be done by someone of sufficient seniority within the contractor organisation to be able take responsibility for the work done.  Acceptance of the work by the CCC will take this into consideration. The CCC reserves the right to refuse to sign off outputs which do not meet the required standard specified in this invitation to tender.

The successful bidder will be responsible for any work supplied by sub-contractors and should therefore provide assurance that all work in the contract is undertaken in accordance with the quality assurance expectation agreed at the beginning of the project.

# Timetable

The proposed timetable for the project is set out in the following table. Ability to start work in early January is highly desirable for this project.

|  |  |
| --- | --- |
| **Date**   | **Action**   |
| w/c 2Jan 2023 approx | Kick-off meeting   |
| March 2023 | First interim presentation/report on progress |
| May 2023   | Latest date for delivery of final report, analytical outputs and assumptions log   |

In addition to the formal reporting points, the CCC would expect to have regular scheduled discussions (meetings or calls) to ensure the work is progressing as expected. It is expected a more detailed timeline would be proposed in bids documents and agreed with the CCC at the kick-off meeting.

# Challenges

The specific challenges that the CCC envisage with this project include:

* Data availability for spatially disaggregated assessment.
* Ensuring consistency of approach across the project

Bids should set out how these risks will be managed alongside any

other risks and challenges to successfully undertaking this work.

The successful contractor will be expected to identify one named point of contract through whom all enquiries can be filtered. A CCC project manager will be assigned to the project and will be the central point of contact.

# Ethics

All applicants will need to identify and propose arrangements for initial scrutiny and on-going monitoring of ethical issues. The appropriate handling of ethical issues is part of the tender assessment exercise and proposals will be evaluated on this as part of the ‘addressing challenges and risks’ criterion.

We expect contractors to adhere to the following GSR Principals:

1. Sound application and conduct of social research methods and appropriate dissemination and utilisation of findings
2. Participation based on valid consent
3. Enabling participation
4. Avoidance of personal harm
5. Non-disclosure of identity and personal information

# Working Arrangements

The successful contractor will be expected to identify one named point of contract through whom all enquiries can be filtered. A CCC project manager will be assigned to the project and will be the central point of contact.

# 11 Skills and experience

CCC would like you to demonstrate that you have the experience and capabilities to undertake the project. Your tender response should include a summary of each proposed team members experience and capabilities.

Contractors should propose named members of the project team, and include the tasks and responsibilities of each team member. This should be clearly linked to the work programme, indicating the grade/ seniority of staff and number of days allocated to specific tasks.

Contractors should identify the individual(s) who will be responsible for managing the project.

# Consortium Bids

In the case of a consortium tender, only one submission covering all of the partners is required but consortia are advised to make clear the proposed role that each partner will play in performing the contract as per the requirements of the technical specification. We expect the bidder to indicate who in the consortium will be the lead contact for this project, and the organisation and governance associated with the consortia.

Contractors must provide details as to how they will manage any sub-contractors and what percentage of the tendered activity (in terms of monetary value) will be sub-contracted.

If a consortium is not proposing to form a corporate entity, full details of alternative proposed arrangements should be provided. However, please note CCC reserves the right to require a successful consortium to form a single legal entity in accordance with Regulation 28 of the Public Contracts Regulations 2006.

CCC recognises that arrangements in relation to consortia may (within limits) be subject to future change. Potential Providers should therefore respond in the light of the arrangements as currently envisaged. Potential Providers are reminded that any future proposed change in relation to consortia must be notified to CCC so that it can make a further assessment by applying the selection criteria to the new information provided.

# Budget

The budget for this project is up to £60,000 excluding VAT.

Contractors should provide a full and detailed breakdown of costs (including options where appropriate). This should include staff (and day rate) allocated to specific tasks.

Cost will be a criterion against which bids which will be assessed.

Payments will be linked to delivery of key milestones. The indicative milestones and phasing of payments can be adjusted and agreed with the contractor and Project Manager. Please advise in your tender response how this breakdown reflects your usual payment processes:

In submitting full tenders, contractors confirm in writing that the price offered will be held for a minimum of 60 calendar days from the date of submission. Any payment conditions applicable to the prime contractor must also be replicated with sub-contractors.

The Committee on Climate Change aims to pay all correctly submitted invoices as soon as possible with a target of 10 days from the date of receipt and within 30 days at the latest in line with standard terms and conditions of contract.

# Evaluation of Tenders

Contractors are invited to submit full tenders of no more than 20 pages, excluding declarations and CV’s. Tenders will be evaluated by at least three CCC staff.

CCC will select the bidder that scores highest against the criteria and weighting listed below, see the ITT for further information.

**EVALUATION CRITERIA AND SCORING METHODOLOGY**

|  |  |  |
| --- | --- | --- |
| Criterion | Description | Weighting |
| 1 | RELEVANT EXPERIENCE / DEMONSTRATION OF CABABILITY | 20% |
| 2 | MANAGING YOUR RELATIONSHIP WITH THE CCC | 5% |
| 3 | QUALITY ASSURING THE SERVICES YOU PROVIDE | 10% |
| 4 | MANAGEMENT STRUCTURE | 5% |
| 5 | PROJECT TEAM – SKILLS AND KNOWLEDGE | 15% |
| 6 | METHOD, ABILITY AND TECHNICAL CAPACITY | 20% |
| 7 | UNDERSTANDING OF REQUIREMENTS | 15% |
| 8 | RISK AND CHALLENGES | 10% |
|  |  | 100% |

**Scoring Method**

Tenders will be scored against each of the criteria above, according to the extent to which they meet the requirements of the tender. The meaning of each score is outlined in the table below.

The total score will be calculated by applying the weighting set against each criterion, outlined above; the maximum number of marks possible will be 100. Should any contractor score 1 in any of the criteria, they will be excluded from the tender competition.

|  |  |
| --- | --- |
| **Score** | **Description** |
| 1 | Not Satisfactory: Proposal contains significant shortcomings and does not meet the required standard |
| 2 | Partially Satisfactory: Proposal partially meets the required standard, with one or more moderate weaknesses or gaps  |
| 3 | Satisfactory: Proposal mostly meets the required standard, with one or more minor weaknesses or gaps. |
| 4 | Good: Proposal meets the required standard, with moderate levels of assurance |
| 5 | Excellent: Proposal fully meets the required standard with high levels of assurance |

**Scoring for Pricing Evaluation**

Price will be marked using proportionate pricing. Please see the example below.

Marking proportionate to the lowest price.

Price will be scored as set out below.

There will be a maximum of e.g. 20 marks

The lowest priced bid will receive the full 20 marks, all other bids will then be marked as set out below.

Proportionate Pricing scoring example

If 20% = 20 marks

|  |  |  |
| --- | --- | --- |
| Supplier | Price | Marks |
| 1 (lowest bid) | £50,000 | 20 |
| 2 | £55,000 | 50/55 \* 20 = 18 |
| 3 | £60,000 | 50/60 \* 20 = 16.5 |

**Structure of Tenders**

Contractors are strongly advised to structure their tender submissions to cover each of the criteria above and supply a price schedule specifying the daily rates (ex-VAT) you will charge for each level of your staff.

**Evaluation for Interviews, if held**

CCC reserves the right to award the contract based on applicants’ written evaluation only if one candidate emerges from the evaluation stage as significantly stronger than the others.

Should interviews go ahead, CCC will shortlist the top suppliers with the highest marks from the written proposals. Interviews are provisionally expected to be held in the week of 5th December 2022 or soon after. If this date changes, CCC will notify applicants.

The areas to be covered in the interview, and markings allocated to each topic area will be sent to the shortlisted supplier prior to interview.

Further details of interviews will be sent to successful applicants on selection.

**Feedback**

Feedback will be given in the unsuccessful letters or emails.