**Research specification: Interacting risks**

Tender Reference Number: GH/0718[2]

**Specification of Requirements**

Invitation to Tender for research: Interacting risks

Tender Reference Number: GH/0718[2]

Deadline for Tender Responses: 24th September 2018

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# Introduction and summary of requirements / Preamble

The Adaptation Sub-Committee (ASC) of the Committee on Climate Change (CCC) is the government’s statutory adviser on preparing for climate change. Under the Climate Change Act (2008) the ASC has two main roles.

* To provide independent, expert advice on the UK climate change risk assessment (CCRA).
* To report to Parliament on progress with implementation of the National Adaptation Programme (England only).

To do this the ASC conducts independent analysis into climate change science, economics and policy, and engages with a wide range of organisations and individuals to share evidence and analysis. The CCC and ASC’s past reports are available at <http://www.theccc.org.uk/publications/>.

To inform the ASC’s Evidence Report for the upcoming third UK CCRA, the ASC is commissioning a range of research projects funded by Defra, the devolved administrations and research councils, which aim to improve the science and impact of the CCRA.

This specific project aims to assess and prioritise risks deriving from interactions and cascading effects between the natural environment, built environment and infrastructure. The results will be used throughout the Evidence Report to highlight cross-cutting issues.

# Background

The [second CCRA](https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-2017) (CCRA2) was published in 2017 and was supported by a comprehensive [Evidence Report](https://www.theccc.org.uk/tackling-climate-change/preparing-for-climate-change/uk-climate-change-risk-assessment-2017/) from the Adaptation Sub-Committee (ASC). Defra and the devolved administrations are in the process of drafting updated national adaptation programmes in response to the risks and opportunities set out in the report.

The third CCRA will be published by the government in January 2022, and Defra have asked the ASC to produce an accompanying Evidence Report by summer 2021.To inform this Evidence Report the ASC are commissioning six research projects, funded by Defra, the devolved administrations and the research councils. The ASC has been engaging with relevant stakeholders (e.g. researchers, funders, academies) with a view of addressing key evidence gaps from the CCRA2 report on a variety of timescales. The scientific literature is also being reviewed to identify work that may already exist in these areas.

Effective adaptation cannot be undertaken without careful consideration of the cross-cutting nature of risks, and trade-offs or synergies between adaptation activities. Unless cross-cutting issues are considered, actions could be ineffective, sub-optimal in terms of their costs and benefits, or lead to unintended consequences.

Climate change risks act together to impact upon natural capital, water security, food security, wellbeing, economic prosperity and ultimately global security. For example water security risks interact strongly with those affecting the natural environment (mainly through soil condition and biodiversity). How water is managed in the future will have implications for agricultural production, public health and wellbeing, natural capital and infrastructure service provision.

Understanding how risks interact is also critical for assessing the overall costs and benefits of policy intervention. This understanding enables policy makers to understand how to achieve desired outcomes at least cost and avoid unintended consequences. The [first CCRA](https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-government-report) undertook a detailed and systematic mapping exercise to identify how particular risks create cascading impacts across different sectors. For example, a flood can cause direct damages to buildings, but also have knock-on effects on people’s mental health, on business continuity and on supply chains.

Identifying cascading effects between the natural environment, built environment and infrastructure was identified as a key evidence gap in CCRA2. The current evidence on interacting risks was considered in the chapter for the 2016 Evidence Report on [cross-cutting issues](https://www.theccc.org.uk/tackling-climate-change/preparing-for-climate-change/uk-climate-change-risk-assessment-2017/ccra-chapters/). The work here highlighted that there are significant evidence gaps in our understanding of what the most important types of interactions are. This research project will provide a much more detailed assessment, systematically assessing the links and cascading effects between the different sectors in specific locations by using latest systems models and considering societal interactions.

# Aims and Objectives

The ASC would like to better understand the links and cascading effects between climate risks to the natural environment, built environment and infrastructure by using latest systems models and considering societal interactions. The main research questions are:

* What are the interactions between climate change risks in the natural environment, built environment and infrastructure?
* How do these interactions affect the overall level of risk?
* How do these interactions differ in different locations?
* What is the likelihood and consequences of these risks and what therefore are the priority risks between sectors and why?
* What sorts of responses could adaptation decision makers make to address these interactions in policy?
* Are there also any opportunities or benefits arising from climate change impacts causing interactions in these sectors?

# Methodology

Bids should set out how the above aims and objectives will be met. This should include specifically how the steps below will be addressed within the timeframe and budget provided:

1. An approach to conducting a literature review of existing systems models (for example ITRC/NISMOD, TIM model, National Infrastructure Commission modelling). This should include an assessment of what models can do and their benefits and limitations.
2. A method for assessing the interactions of climate risks between the natural environment, built environment and infrastructure, taken from the results of existing systems models and previous analysis conducted for CCRA1 and CCRA2. This should include, where possible, how bidders will quantify the relative likelihood and consequences of interactions in order to be able to estimate and compare risks. The ASC are particularly interested in understanding how these interacting risks affect people differently, depending on their social environment (e.g. age and income) and the spatial distribution of risks (including for each devolved administration and cross- border issues of risk interactivity).
3. A method or framework for prioritising interactions. The ASC envisage this will include some systems diagrams and interaction matrices.
4. How the research results can be used in the ASC’s assessment of urgency in CCRA3, and by adaptation decision makers in policy making. The ASC will be publishing its updated method and urgency framework for CCRA3 in the autumn of 2018, but the assessment of [urgency](https://www.theccc.org.uk/tackling-climate-change/preparing-for-climate-change/uk-climate-change-risk-assessment-2017/ccra-chapters/approach-and-context/) will be similar to CCRA2.

For step 2 any socioeconomic dimensions driving the project analysis must, in the first instance, be taken from another project commissioned by the ASC entitled “A consistent set of socioeconomic dimensions for the CCRA3 Evidence Report research projects”. If a wider range of socioeconomic dimensions are required then the successful bidder should liaise with the ASC and the socioeconomic dimensions project staff to develop those required dimensions.

# Outputs Required

Contractors must produce a report setting out the findings of the research and including all underlying data and analysis used to produce results. The report should include an executive summary. Data should be presented from all the background analyses in annexes. There needs to be a detailed description of the method employed, including assumptions and limitations and the implications of these for the interpretation of the findings. In developing the report the contractors will need to provide:

* A method statement, including details of the literature review and approach to assessing and prioritising interacting risks.
* A first draft report for the ASC to comment on;
* A revised draft of the report for review by the ASC, chapter authors, the project steering group and academic peer reviewers. The consultants will need to address any issues resulting from the first review into the final version of their report;
* A final version of the report for sign off by the ASC, which includes an annex detailing how the consultants have addressed each of the peer review comments;
* Analysis spreadsheets and diagrams e.g. systems diagrams and interaction matrices.
* Editable graphical representations, such as infographics, maps or charts that describe the results, with visuals optimised for use on social media. The ASC want access to the editable versions and to the text included, for example to allow for translated versions to be prepared; and
* Any further supporting data and annexes detailing the method or providing supplementary results.

The final report will be published on the ASC’s website during January 2020.

# Ownership and Publication

The results of the analysis and all outputs produced will be owned by and published at the discretion of the Adaptation Sub-Committee.

All research publications arising from the contract must include a statement on how the supporting data and any other relevant research materials can be accessed.

# Quality Assurance

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.
* 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 a 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).

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.

For primary research, contractors should be willing to facilitate CCC staff to attend interviews or listen in to telephone surveys as part of the quality assurance process.

The consultant must demonstrate their ability to produce deliverables of quality, in particular following best practice regarding analysis and presentation of results.

# Timetable

An indicative timeline for deliverables is presented below. The contractors can propose modifications to the timeline to better suit their analysis if appropriate, though the final submission date must remain the same. Any proposed modifications should be set out in the bid and will require approval from the ASC secretariat.

| **Phase** | **Deliverable** | **Date** |
| --- | --- | --- |
| Bidding | Bids received | 24th September 2018 |
|  | Interviews conducted (if needed) | w/c 8th October 2018 |
|  | Contract awarded | 12th October 2018 |
|  | Kick-off meeting with ASC | w/c 15th October |
| Project development | Method development – draft method document | w/c 29th October 2018 |
|  | Method development – final method document | w/c 12th November 2018 |
|  | Analysis undertaken | November 2018 to September 2019 |
| Reporting | Initial draft report for comments by ASC  | w/c 9th September 2019 |
|  | Draft report submitted for review by ASC, authors, steering group and academic peer review | w/c 23rd September 2019 |
|  | Final draft report submitted for review by ASC following peer review | 16th December 2019 |
|  | Final report submitted – project completed | 31st January 2020 |

# In order to ensure smooth and rapid progress the project plan should allow for regular interactions and meetings where necessary between the contractors and the ASC project team. We would ask bidders to set out when would be appropriate to meet during the project (after the initial kick-off meeting), given the timetable above. We would expect this to include at least five face-to face meetings between the contractor and the ASC secretariat, and at least five face-to-face meetings with CCRA authors and other project teams.

In addition, the ASC will put together a stakeholder group of representatives of the funding organisations and wider customers of the CCRA (government departments, agencies and adaptation practitioners). Bids should price in attendance of the project team and taking minutes at three meetings of this group; one to discuss the method; one to show the interim results, and one other to be agreed. The ASC will lead on chairing the meetings and putting agendas together.

# Challenges

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

* Identifying a method/framework to assess and prioritise interacting risks
* Accessing data and results from current systems models and other relevant analyses.
* Building on current modelling approaches to provide new results
* Presenting the prioritisations in a balanced, objective and technically robust way.

Bids should also set out other risks and challenges to successfully undertaking this work.

# 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. An ASC project manager will be assigned to the project and will be the central point of contact.

# Skills and experience

For this project the ASC are looking for a project team with a strong knowledge of systems modelling and climate risk. We expect most of the time for the project to be allocated to more senior level staff.

The ASC 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 member’s 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 £240,000 excluding VAT (£300,000 including VAT); 40% of the payments need to be made in the financial year 2018/19 and 60% in the financial year 2019/20.**

Contractors should provide a full and detailed breakdown of costs (including options where appropriate). This MUST include the funding allocated by each task (deliverable) as well as by person. Please include the number of days in the unpriced bid.

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 CCC 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 35 pages, excluding declarations. Tenders will be evaluated by at least three reviewers.

The ASC 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 OF THE PROPOSED PROJECT TEAM** | 30% |
| 2 | **QUALITY ASSURING THE SERVICES YOU PROVIDE** | 5% |
| 3 | **MANAGEMENT STRUCTURE AND MANAGING RELATIONSHIP WITH THE CCC** | 10% |
| 4 | **METHOD** | 35% |
| 5 | **UNDERSTANDING OF REQUIREMENTS** | 10% |
| 6 | **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 |

**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, they are provisionally expected to be held on the week commencing 8th October 2018. If this date changes, the ASC will notify applicants.

The areas to be covered in the interview 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 by email.