



**National Centre for
Atmospheric Science**
NATURAL ENVIRONMENT RESEARCH COUNCIL

NERC's commissioning of the second round of Long-Term Science Multi-Centre (LTSM) programmes

Rowan Sutton

Director of Science (Climate)

National Centre for Atmospheric Science

University of Reading

Context

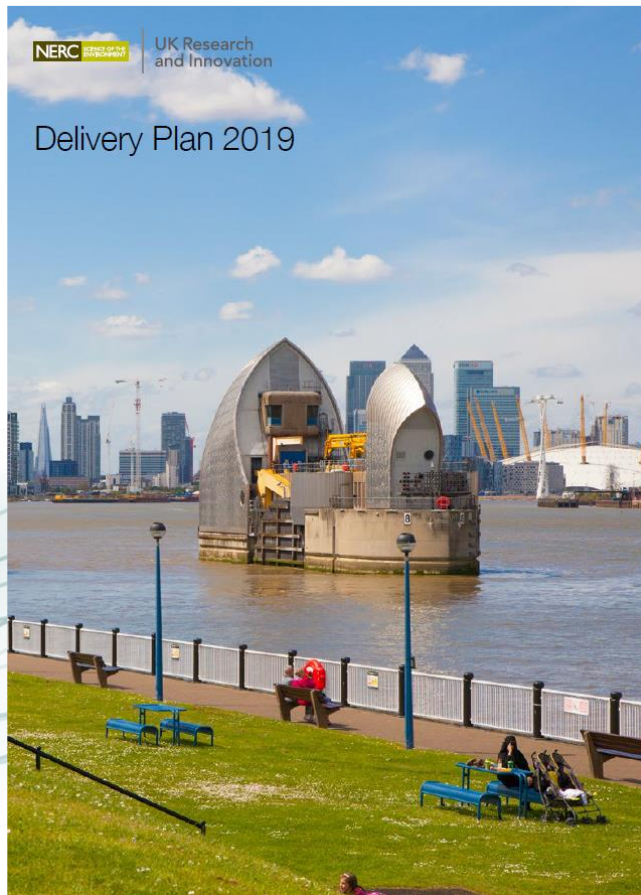
- NERC Commissioned 5 LTSM programmes for the period April 2016-March 2021:
 - UKESM
 - ACSIS
 - ORCHESTRA
 - LOCATE
 - ASSIST
- All these programmes have been invited to submit proposals this summer for one year extensions to cover the period April 2021-March 2022
- NERC intends to commission a second round of LTSM programmes to start in April 2022
- Total budget ~£8m pa; £40m over 5 yrs

NERC Requirements: National Capability

- NERC's National Capability Funding comprises four streams:
 - **National Capability Science**
 - services, facilities and data
 - large research infrastructure
 - national and public good
- NC Science:
 - Science at scale: directed teams to address challenging long-term problems in environmental science
 - Benefit to the wider UK community of scientists and users in government and wider society
 - Leading and supporting international partnerships
- LTSM: “to enable a more ambitious, integrated approach to research challenges that require large-scale, long-timeline insights and more than any one NC Provider can deliver alone”

NERC Requirements: LTSM2

- Contributes to delivering on the ambitions of the NERC Delivery Plan



Environmental Solutions

- Pushing the Frontiers of Understanding
- Productive Environment
- Healthy Environment
- Resilience Environment
- Digital Environment
- Global Environment

Addressing challenging science problems
and delivering tangible societal benefits
(typically requires partnerships)

LTSM2 - Process and timeline

2020

- June: Centre Directors agree a list of topics for initial scoping
- June-August: Small cross-centre groups develop high level ideas
- July-November: further development of ideas in consultation with:
 - NERC Centre Staff
 - NERC Executive
 - Potential non-NERC partners (e.g. Met Office, other RCs)
 - Potential beneficiaries (e.g. government departments)
- December: Discussion at NERC Council

2021

- January: Announcement of Opportunity
- Preparation of proposals, peer review etc

2022

- Programmes commence - April

Example template for ideas

1. Science Challenges

- What are the science questions that this idea addresses?
- What are the new opportunities to make progress?
- What is the need for National Capability? Which NERC Centres will be involved?

2. Fit to the NERC Delivery Plan

- Which NERC Delivery Plan priorities will be addressed?
- What problems and solutions will be addressed and who are the intended beneficiaries?

3. Partnerships

- What other partnerships are required?

Opportunities for UKESM

- The set of ideas for initial scoping includes a programme on global change science under the working title:
 - “Quantifying, explaining and predicting Earth System change”
 - This idea will be further developed over the coming months in consultation with the groups previously indicated, including the Met Office.
- UKESM could also potentially contribute to other LTSM2 ideas.