

## **UK Ocean Acidification Research Programme**

### **Call for Proposals – Carbonate Laboratory**

Closing date: 16:00 on 16<sup>th</sup> December 2009

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#### **1. Summary**

Proposals are invited for a service for carbonate chemistry measurements as part of the *UK Ocean Acidification Research Programme*. This £12M collaborative programme is a *Living With Environmental Change* (LWEC) accredited programme and is co-funded by NERC, the Department for Environment, Food and Rural Affairs (Defra) and the Department of Energy and Climate Change (DECC).

This integrated strategic programme directly relates to the delivery of the NERC Strategy (Earth System Science and Biodiversity Science Themes) and the UK Government's Strategic Objectives with respect to adapting to, and mitigating climate change and ensuring a healthy resilient, productive and diverse natural environment.

This call is for proposals to address deliverable seven of the programme – a service for carbonate chemistry measurements, to provide high quality carbonate chemistry measurements across the programme. Up to £385k is available for this call.

Eligibility for this programme includes the UK Government Departments' marine laboratories.

The closing date for proposals is 16:00hrs on the 16<sup>th</sup> December 2009.

#### **2. Background**

In the last decade there has been growing scientific concern over changing ocean carbonate chemistry caused by ocean uptake of anthropogenic atmospheric carbon dioxide (CO<sub>2</sub>) and how this will affect marine organisms, biodiversity, biogeochemistry, habitats and ecosystems. This knowledge has been exchanged with policy makers and stakeholders and there have been calls to reduce uncertainties in effects of and responses to future ocean acidification (Royal Society 2005; Turley et al. 2006; IPCC 2007). The UK Ocean Acidification Research Programme is a response to this need with £12M

funding from NERC, Defra and DECC. This 5 year programme will address the policy and societal need for a greater understanding of the implications of ocean acidification and its risks to marine biogeochemistry and biodiversity and impact on the whole Earth System, through the delivery of seven Science *Deliverables*. Programme activities (excluding global scale modelling) will be focused on the North-East Atlantic (including European shelf and slope), Southern and Arctic Oceans. The programme will encourage strong collaboration, where appropriate, with other national and international programmes, primarily the newly funded German ocean acidification programme, BIOACID, and the EU Programmes, EPOCA and MEECE, to maximise the delivery of the programme's three *Objectives*.

#### Ocean Acidification Programme Objectives

- a) To reduce uncertainties in predictions of carbonate chemistry changes and their effects on marine biogeochemistry, ecosystems and other components of the Earth System.
- b) To understand the responses to ocean acidification and other climate change related stressors by marine organisms, biodiversity and ecosystems and to improve understanding of their resistance or susceptibility to acidification.
- c) To provide data and effective advice to policy makers and managers of marine bioresources on the possible size and timescale of risks to allow for development of appropriate mitigation and adaptation strategies.

### **3. Scope of this Call**

This document must be read in conjunction with the UK Ocean Acidification Science and Implementation Plans, which details the full scope of the programme. This call is for proposals to address deliverable seven of the programme – a service for carbonate chemistry measurements, to provide high quality carbonate chemistry measurements across the programme.

Up to £385k is available for this call, where this is 80% of the Full Economic Cost (FEC).

#### Proposal Requirements

- 1) Proposals must provide a measurement service capable of analyzing up to 10,000 samples over 4 years;
- 2) The service should operate for 4 years;
- 3) The service must measure the parameters DIC and total alkalinity following accepted protocols and best practice, and calibrated against international certified reference materials (CRMs) (see section 5 of the Implementation Plan and Dickson et al. 2007).
- 4) It is required that an inter-comparison exercise be organised and undertaken in collaboration with carbonate chemists already undertaking these measurements in the UK and with relevant European counterparts such as the BIOACID programme and with SNAPO-CO<sub>2</sub>, the French facility.
- 5) Applicants should describe their proposed ability to analyse carbonate chemistry on small volume samples arising from culture experiments, from which it may not be possible to take 250 mL.
- 6) Proposals should specify:
  - a) required start-up costs (to cover, e.g. employment costs for extra technician staff and new instrumentation);
  - b) how much they will charge per sample. It is expected that charges will be in the region of £12 per sample to cover consumables only;
- 7) The expected processing time (time from receipt of samples to return of measurements) should be specified.
- 8) Proposal should detail how the service will provide users with advice on sample collection e.g. such as how to fill the bottles, the need to add a poison, the need to measure accurately temperature, salinity, silicate and phosphate concentrations etc.
- 9) Applicants should also provide a full project management plan that includes contingency plans for possible losses of key staff and/or equipment failures.

Other participants in the ocean acidification programme not possessing their own measurement capability will be required to include costings for their carbonate measurements using this service in their project proposals.

#### **4. Eligibility**

Outline bid proposals are invited from eligible UK researchers (see the NERC [Research Grants Handbook](#) for eligibility). In addition the Government Departments' marine laboratories are eligible for this call.

#### **5. Application Procedure**

Applications must be submitted using the Research Councils Joint Electronic Submission system (Je-S). Please select the Scheme – 'Directed' and the Call – 'Ocean Acidification'

To use this system, the applicant's Research Organisation must be registered as a Je-S user. Full details are available on the Je-S website. Further information can also be obtained by contacting the Je-S Helpdesk by email at [JeSHelp@rcuk.ac.uk](mailto:JeSHelp@rcuk.ac.uk) or by telephone on 01793 44 4164.

Applicants must ensure that their application is received by NERC by 4pm on the closing date. Applicants should leave enough time for their application to pass through their organisation's Je-S submission route before this date. Any application that is received after the closing date, is incomplete, or does not meet the eligibility criteria, will be returned to the applicant and will not be considered. Given that this is not a research proposal neither an Impact plan nor the Impact Summary need be completed. However some text will need to be provided in the Impact Summary field so please complete as 'Not Applicable'.

The Principal Investigator must submit form Je-SRP1 (NERC) detailing the financial request, together with the Case for Support and other attachments. All attachments submitted through the JeS system must be completed in single-spaced typescript of minimum font size 11 point, Arial font, with margins of at least 2cm.

The Case for Support should comprise:

**Previous Track Record** not exceeding 2 sides of A4, covering the following points:

The specific expertise available for the service at the host organisation(s) and that of any associated organisations. This may include the type of information for Principal Investigators and Co-Investigators that would normally be shown on CVs;

**Description of the Proposed Service**, not exceeding 4 sides of A4 (including all necessary tables, references and figures), addressing the proposal requirements detailed in Section 3.

**Impact Plan**, does not need to be provided, but for the purposes of the electronic system a document will need to be attached. Please detail that this as 'not applicable'.

**Justification of Resources** up to 1 side of A4 submitted as a separate attachment in the JeS system. It should include justification for all Directly Incurred Costs, Investigator effort, use of pool staff resources and any access to shared facilities and equipment being sought. No justification for Directly Allocated Estates and Indirect Costs is required. It should be noted that if resources are not fully justified, they will be subject to reduction

**Letters of support from any named Project Partners** (up to 2 sides A4 each)

For further details please refer to the NERC Research Grants Handbook and the guidelines for standard grant applications.

#### **6. Assessment**

Proposals will be assessed against the following criteria:

Excellence\*

Fit to Requirements\*\*  
Risk\*-Reward\*\*  
Cost Effectiveness\*

\* assessed under Shared Services and Facilities Funding category

\*\* assessed under Research Programmes Funding category

(Details on the funding categories can be found in the Background and Guidance Notes for Reviewers at: <http://www.nerc.ac.uk/funding/application/referee/>)

Applications will be reviewed and ranked by a panel. There will be no external review process. There will not be the opportunity for PIs to respond to comments. Feedback will be available upon request once the funding decision process has been completed.

## **7. Timeline**

Closing date for proposals: **16:00 16<sup>th</sup> December 2009**

Funding decision communicated to applicants: **February 2009**

## **8. Programme Management and Reporting Requirements**

Programme Management details can be found in Section 12 of the Implementation Plan.

All awards issued as a result of this call will have detailed terms and conditions that reflect the highly directed nature of the *UK Ocean Acidification Research Programme*.

Funded proposals will be required to:

- comply with the programme standards and guidelines for CO<sub>2</sub> experiments in ocean acidification studies (Implementation Plan, Section 5)
- comply with standard NERC and UK Government reporting requirements
- contribute to the Knowledge Exchange activities.
- comply with the programme's media policy.
- comply with the programme's data management policy.