

## Announcement of Opportunity

### NERC Arctic Research Programme

#### Programme Advisory Group

1. NERC invites applications from individuals interested in joining the Programme Advisory Group (PAG) for the NERC Arctic Research Programme. This document defines the recruitment process and the role of the Advisory Group. Applications expressing interest in joining the group are invited in the format outlined in this document and must be received by NERC by 16.00 on **15 February 2010**.

#### A. Programme Background

2. The Arctic is a region of higher than average climate change and is predicted to remain so. The most iconic evidence of this rapid climate change is the loss of summer sea ice, with recent loss rates exceeding most model projections. The loss of sea ice and degradation of permafrost represent potential “tipping points” in the Earth System leading to major physical and biogeochemical feedbacks with global impacts. These changes may also initiate widespread destabilization of gas hydrates, causing major methane release and potentially marine landslides and tsunamis, which could impact not only on the Arctic, but also the NE Atlantic and the UK.

3. The Arctic therefore represents a critical region for global environmental change where the UK has significant strategic interests. Understanding the drivers and feedbacks of this change and predicting its scale and rate on timescales from months to 100 years represents a major and urgent global scientific challenge of great societal importance. A community event in May 2009<sup>1</sup> demonstrated the breadth and quality of the UK scientific community already involved in Arctic research, but more and better coordinated research is urgently needed. The Arctic research programme aims to harness and coordinate world-leading UK scientific expertise and facilities, link these to other international efforts and hence address scientific questions of global importance.

4. The NERC Arctic Research Programme has been developed as part of the Earth System Science, Climate System, Natural Hazards and Biodiversity Themes<sup>2</sup>, and it will address a range of NERC strategy challenges. The budget allocated by NERC is £15 million over the period 2010-2015. It is anticipated that the Arctic Programme will contribute to Living With Environmental Change (LWEC).

5. Several opportunities make this programme timely, including the development of NERC Polar Strategy<sup>3</sup>, the opening of the NERC Arctic Office<sup>4</sup>, the NERC/Canadian MOU (providing access and research collaboration opportunities)<sup>5</sup>, new satellites and the legacies of the International Polar Year (IPY)<sup>6</sup> partnerships.

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<sup>1</sup> <http://www.nerc.ac.uk/research/themes/news/090513/report.asp>

<sup>2</sup> <http://www.nerc.ac.uk/research/themes/>

<sup>3</sup> <http://www.nerc.ac.uk/research/areas/polar/resources.asp>

<sup>4</sup> [http://www.antarctica.ac.uk/about\\_bas/our\\_organisation/arctic.php](http://www.antarctica.ac.uk/about_bas/our_organisation/arctic.php)

<sup>5</sup> <http://planetearth.nerc.ac.uk/news/story.aspx?id=367>

<sup>6</sup> <http://www.ipy.org/>

## B. Programme Objectives

6. The overarching programme objective is to *improve our capability to predict changes in the Arctic, particularly over the next 50-100 years, including regional impacts and the potential for feedbacks on the global Earth System*. This will be achieved via improving understanding of key Arctic processes, integrating process-based understanding and data with models and application of these models to understand potential Arctic climate change impacts over a range of scales. Integrated and innovative research, across all science areas and process studies, palaeo work and modelling, will be needed to achieve the programmes objectives. The programme aims to address scientific uncertainties within the Arctic region that are strategically important, associated with rapid change and where the UK can make a significant contribution.

7. The programme will focus on four linked scientific objectives:

- understand the current rapid changes in the Arctic and their attribution to specific drivers,
- quantify Arctic processes leading to methane and carbon dioxide release,
- reduce uncertainty in Arctic climate and associated regional biogeochemistry predictions, and
- assess the likely risks of submarine hazards associated with rapid Arctic climate change

8. NERC hopes to work with a number of UK organisations to deliver the Arctic Programme such as the Met Office, DECC and FCO. The programme will need to be developed in an international context and the NERC Arctic Office will play a key role in facilitating this.

9. A workshop, supported by the Science & Innovation Network of the Foreign & Commonwealth Office (FCO-SIN), to explore UK-US-Canada links will be held on 15 March 2010 in Miami, USA, prior to the State of the Arctic Conference<sup>7</sup>.

10. The programme will involve Arctic fieldwork in various seasons and will therefore be dependent on a wide range of NERC and international facilities and logistics. Programme-wide co-ordination of logistics is essential. Fieldwork is expected to be highly interdisciplinary, often addressing several programme objectives and may involve campaigns on land and ice stations, from ships, aircraft and satellites, depending on the scientific needs.

11. A suite of Knowledge Exchange, Data Management, Communication and Public Engagement activities will also form part of the programme. Anticipated outputs from the Arctic Programme include:

- new high resolution models for process studies,
- improved parameterization of Arctic processes,
- improved capabilities for predicting changes in the Arctic, and
- interpretation of current Arctic climate change and its implications for policy makers.

## C. Programme Advisory Group

12. The role of the Programme Advisory Group is to advise the Programme Executive Board on the strategic direction of the programme, integration of the programme science and

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<sup>7</sup> <http://soa.arcus.org/>

programme outputs. The Programme Executive Board will retain responsibility for how such advice is used.

In particular, the Advisory group is required to carry out the following tasks:

- advise on the development of the programme plans (Science & Implementation, Knowledge Exchange, Data Management etc) and their execution;
- advise on the strategic direction of the programme, including scientific content of programme announcements of opportunity;
- advise on effective ways to achieve programme integration;
- advise on the development of international collaborative activities and UK partnerships, including emerging and future opportunities;
- advise on user engagement and programme impact;
- advise on appropriate ways to monitor and evaluate the progress of the programme towards its purpose and goals.

13. The essential elements of the programme agreed by NERC Council are presented in the Theme Action Plan and the PAG will operate within that context. It is expected that the PAG will build on and refine previous consultations and strategies relevant to the Arctic to design a coherent integrated programme including: outcome of the Arctic Programme Meeting (May 09)<sup>8</sup>, Polar Sciences Working Group Report<sup>9</sup>, SOFI Workshop Report-Priorities for future UK marine Arctic research<sup>10</sup>.

14. We hope to invite selected Advisory Group members to attend the FCO-SIN workshop in Miami on 15 March 2010 to develop the programme's international links. PAG applicants should indicate if they would be available to attend this event on their application.

15. Applicants interested in acting as Chair should indicate this on their application. Nominations for the role of Chair may also be made by completing a nomination form and submitting this by the 8 February 2010 deadline. The Programme Advisory Group chair will also sit on the Programme Executive Board, providing the link between the two bodies. The PAG Chair will not be eligible to apply to Arctic Programme funding opportunities, but PAG members eligible to receive funding from NERC will be able to submit applications.

16. The Advisory Group membership will include representatives from the academic community, relevant stakeholders and user groups. The PAG may include representation from, but not be limited to, the following groups: the UK and international academic community (covering major aspects of the programme's remit), relevant government departments and agencies, NERC research and collaborative centres, relevant industry, independent consultants.

17. The final decision on the composition of the Advisory group lies with the Programme Executive Board (PEB), which reserves the right to appoint members to the group to achieve the balance of representation required. Membership will be on an individual rather than an institutional basis unless otherwise advised.

18. Members of the Advisory Group will be required to:

- represent the broader research community and perspective, rather than their own personal interests;
- keep discussions and documentation relating to the research programme confidential;
- comply with the NERC policy on vested interests;

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<sup>8</sup> <http://www.nerc.ac.uk/research/themes/news/090513/report.asp>

<sup>9</sup> [http://www.nerc.ac.uk/research/areas/polar/documents/polar\\_science\\_working\\_group\\_report.pdf](http://www.nerc.ac.uk/research/areas/polar/documents/polar_science_working_group_report.pdf)

<sup>10</sup> [http://www.oceans2025.org/PDFs/SOFI%20Workshop%20Reports/SOFI\\_Workshop\\_Report\\_7\\_Marine\\_Arctic\\_09.pdf](http://www.oceans2025.org/PDFs/SOFI%20Workshop%20Reports/SOFI_Workshop_Report_7_Marine_Arctic_09.pdf)

- seek to ensure that their actions and communications can not be misconstrued by the scientific community as taking advantage of their role in the Advisory Group should they apply to any programme Announcement of Opportunity;
- attend all PAG meetings;
- contribute to PAG activities as required by correspondence between meetings.

19. Key Initial Milestones:

- First Meeting of the Advisory Group: 5 March 2010 (London, UK)
- FCO-SIN International Workshop : 15 March 2010 (Miami, USA)

Applicants are requested to plan to be available to participate on these dates as far as they are able. One or two further PAG Meetings will be held in 2010. It is anticipated that the Advisory Group will meet twice a year in 2011 and 2012 and once a year in 2013, 2014 and 2015. The Programme Executive Board will determine the Advisory Group's mode of working, its detailed role, reporting mechanisms, lifespan, etc. Members may be asked to contribute to programme activities virtually between PAG meetings.

20. NERC will cover all reasonable travel and subsistence costs incurred through Advisory Group membership responsibilities.

## D. How to Apply

### Eligibility

21. Applications from individuals, in both the academic, public and private sectors, with relevant expertise and who are able to make the necessary commitment to the Arctic Research Programme are welcome. International applicants/nominations are also possible, bearing in mind the need to travel to the UK to undertake a significant proportion of the Advisory Group's activities.

### Assessment criteria

22. The final choice of Advisory Group membership will be made by the Programme Executive Board and will be based on the following criteria (not in priority order):

- balance of representation across academic, stakeholder, international and co-funder communities;
- relevant expertise;
- cross-community knowledge,
- contacts and links;
- track record.

23. Feedback on applications will not be available.

24. NERC reserve the right to appoint members to the Group to achieve the balance of representation required.

### Assessment Timetable

25. The timetable is as follows:

- Closing date 15 February 2010
- Advisory Group members will be invited by 24 February 2010

### Application Format

26. Applicants must submit a completed application pro-forma (available from the NERC website) in 12 point Times New Roman or Arial. The completed form should not exceed

three sides of A4. The PAG application pro-forma includes sections on expertise, relevance and relationship to the Arctic Research Programme aims, current and past membership of professional bodies, experience of NERC operations, recent publications and qualities and values applicants would bring to the group.

27. Applicants may also attach a brief CV (no more than two sides A4) in support of their application.

28. A separate nomination pro-forma should be completed and submitted if nominating an individual as Advisory Group Chair.

### **How to Submit**

29. Applications must be submitted as an email attachment to [arctic-pag@nerc.ac.uk](mailto:arctic-pag@nerc.ac.uk) by 4pm on 15 February 2010.

### **Contacts**

30. Queries should be directed to:

Sarah Collinge ([saco@nerc.ac.uk](mailto:saco@nerc.ac.uk) , Tel: 01793 411936) or Louisa Watts ([lw@nerc.ac.uk](mailto:lw@nerc.ac.uk) , Tel: 01793 411609) or Ned Garnett ([nedg@nerc.ac.uk](mailto:nedg@nerc.ac.uk) , Tel: 01793 411605)