

Nippon Foundation Nereus Fellowship:

“Improving species range map methodologies for marine biodiversity”

The University of Cambridge and UNEP-WCMC have secured funding to provide full support to a PhD student for 3 years (subject to satisfactory progress) from 1 October 2012 under the Nereus Programme, a co-operation between The Nippon Foundation and The University of British Columbia, Canada. Nereus is a new programme designed to develop scientific capability for predicting future seafood production. The programme builds on international networking of scientists to communicate and bring about change to how we exploit the oceans in order for our children and grandchildren to enjoy seafood and experience a healthy ocean.

The goal to develop future ocean simulations is fundamentally dependent on the availability of reliable, spatially explicit databases of relevant data, which are global in extent and of appropriate spatial and temporal resolution to the policies and management decisions that they inform.

SECTION A

The Nippon Foundation Nereus Fellowship provides funding to enable PhD level research into a) exploring the transferability of methodological developments from the terrestrial to the marine environment and b) investigating how best to bring modelling and expert-based approaches together to improve species distributions. As such, this research proposes to:

1. Develop range maps using a number of algorithms, including adapting one or more from recent terrestrial science; and including expert-derived maps, and exploring the feasibility of using a Bayesian approach to the development of distribution maps using expert input as priors. This work will be highly collaborative with relevant partners.
2. Carry out blind reviews by experts of all of these distribution maps to explore the relative performance and limitations of the different algorithms, and use these reviews to rank algorithms and develop an improved approach;

3. Explore the relative reliability of expert judgment and modelling approaches to data poor problems, at a range of scales.

SECTION B

Consideration will normally be restricted to those who have obtained, or who have a strong prospect of obtaining, a first-class Honours degree (or its equivalent) and evidence of subsequent intellectual development – such as a Masters degree in a relevant field - will be taken into account. The prospective student should have extremely good computational and quantitative skills, preferably with experience in ecological niche modelling at large scales. An understanding of patterns and processes in marine ecology will be seen as advantageous. This will be a highly collaborative project and evidence of collaborative and interpersonal skills will be looked for in the successful applicant.

Candidates must have graduated at a University before October 2012 and be eligible to pay University fees at the 'Home' (UK/EU) rate. Applicants from overseas must, therefore, be able to demonstrate that they have the necessary funds to meet the shortfall between 'Home' and 'Overseas' funding. Prospective applicants from overseas should consult the Cambridge Trusts' search facility:

<http://www.cambridgetrusts.org/index.html>

In seeking additional funding it is important to keep to the deadlines for applications; they vary between the different schemes (in particular, applicants to the Gates Cambridge Trust from the USA should note that the closing date was 15 October 2011). Please note that these dates are for completed applications (i.e. ALL parts of an application (including references, certificates etc.) must arrive by the deadline).

<http://www.admin.cam.ac.uk/offices/gradstud/prospec/apply/deadlines.html#funding>

Suitably qualified candidates wishing to be considered for the Nereus Fellowship must apply to the Board of Graduate Studies, 4 Mill Lane, Cambridge, CB2 1RZ, for admission to the University as a Graduate Student using the usual GRADSAF form. This is obtainable online, or in hard copy from the Board:

<http://www.admin.cam.ac.uk/offices/gradstud/prospec/apply/applynow/>

The GRADSAF form asks for a 2,000 word research proposal. For this part of the application, please copy and append Section A from this information sheet.

In addition to the application to the Board of Graduate Studies, candidates must submit to the Department of Geography, University of Cambridge: i) a covering letter stating why they are suitable for the project; ii) a CV; iii) a brief statement of research in relation to the Nereus project; and iv) the names of two academic referees who can be contacted by email. Incomplete applications will not be considered and it is important that referees supply a

reference by the closing date. Departmental application documents should be sent to Ms. Gae Matthews, Graduate Administrator, Department of Geography, Downing Place, Cambridge CB2 3EN or via email to: gae.matthews@geog.cam.ac.uk, no later than 1200 noon UK time on Tuesday, 31st January 2012. Late applications will not be accepted.

It is expected that interviews will take place in Cambridge in February/March 2012. The successful candidate will commence their PhD studies on 1 October 2012.