Announcement for research position

Keywords: Global scenario, emissions, urban and regional carbon management, bottom-up scenario validation

We are looking for one researcher to work with us on a project which started in April 2007 as part of a larger team (about 40 researchers) that includes members from a number of key research institutions in Japan. The goal of the overall project is to conduct a synthetic study on next-generation climate change scenarios. The project is funded by the Global Environment Research Fund from the Ministry of the Environment of Japan. The successful candidate will provide input on a component of this research, entitled "spatially-explicit emission and land use change scenarios". In particular, the sub-component on which the researcher will work is entitled "Research on validating spatially-explicit scenarios and building an international network". The researcher will work under the guidance and supervision of the Leader of this sub-component Dr. Shobhakar Dhakal. The researcher will also be required to contribute to research and activities related to the Urban and Regional Carbon Management initiative (www.gcp-urcm.org) of the Global Carbon Project (www.globalcarbonproject.org).

Position

Post-doctoral researcher or Research fellow
The position is also open to people on sabbatical leave or secondment from other research institutions.

Period of Employment

The successful applicant will be offered an annual contract which will expire at the end of the Japanese fiscal year (March 31, 2008). Initial hiring will be done for one year. The contract may be renewed (to a maximum of five years) subject to performance evaluation and budgetary review.

Nature of Research

A number of global scenarios have been downscaled (top-down) for use by impact and emission communities of climate change; however, less or no efforts have yet been made to compare these downscaled scenarios to actual places (bottom-up). This research aims to compare such top-down approaches with bottom-up analyses from a number of test-sites in large cities and their surroundings. This will entail estimating greenhouse gases and aerosols at test sites and comparing them with emissions in down-scaled scenarios. These activities will also feed into Theme 2 of the research framework for the Urban and Regional Carbon Management initiative of the Global Carbon Project which aims to clarify the drivers, mechanisms, and methodologies for future scenarios of carbon emission at urban and regional levels.

Duties

Duties will primarily include (a) reviewing past research and methodologies at global and urban/regional levels (b) developing data friendly simple methodologies for estimating emissions at urban and regional levels (c) contributing towards building international networks involving test-sites and the wider community, and (d) developing a database of key data and information for test-sites.

Some of the key activities to be performed by the successful candidate will include:

- Reviewing methodologies and techniques used in (1) making global scenarios and in their downscaling and (2) estimating emissions
- Reviewing basic drivers and mechanisms that are responsible for emissions (greenhouse gases and aerosols), available methodologies for estimating emissions, and future scenarios at urban and regional levels
- Identifying specific activities at urban and regional levels that govern emissions. Based on that, developing a simple methodology for emission estimation and spatial disaggregation with due consideration to data availability
- Determining what kinds of data (such as activity data, level of aggregation, emission factors, spatial domains) and information (qualitative and quantitative) are needed at urban and regional levels
- Building a network of researchers from a few test-sites and engaging them as potential collaborators. Mobilizing the network towards collecting data and information
- Working and communicating with relevant people in the international community such as the Earth System Science Partnership (www.essp.org) family and others through the Global Carbon Project
- Contributing to syntheses and research activities related to the Urban and Regional Carbon Management initiative of the Global Carbon Project, and especially to scenarios
- Assisting in the preparation of project reports for fulfilling reporting requirements
- Other tasks as assigned by the Theme Leader

Qualifications

- Ph. D. in a relevant discipline, as this is largely a multidisciplinary endeavor
- Ability to conduct research and activities mentioned above
- Ability to carry out quick literature reviews and syntheses
- Ability to prepare research reports and other publications in English
- Familiarity with research on global greenhouse gas emissions, impact and climate scenarios, and downscaling
- A good understanding of urban/regional dynamics, energy and infrastructure, socio-economic activity data, emission factors, and basic socio-economic drivers and mechanisms that govern emissions at urban and regional levels
- Ability to handle a large quantity of data and information
- Ability to network and collect information/data
- Familiarity with GIS and remote sensing will be appreciated

- Fluency in English (working language is English) but ability to communicate in Japanese will be an advantage as many team members are Japanese
- Ability to work in a group and in a culturally diverse environment

Interested applicants are requested to submit a CV, a cover letter expressing interest/relevant experience, a list of publications, and the names and contact information of two referees (preferably by e-mail) to:

Dr. Shobhakar Dhakal
Executive Director
Global Carbon Project - Tsukuba International Office
National Institute for Environmental Studies
16-2 Onogawa, Tsukuba, Japan 305 8506
Tel: +81 29 850 2672, Fax: +81 29 850 2960
E-mail: **shobhakar.dhakal@nies.go.jp** (please cc to: **ojima.yukako@nies.go.jp**)

Applicants are encouraged to contact for any querries regarding the position. Selection process will begin on **15 June, 2007 untill position is filled.** We hope to finalize selection within two weeks after selection begings and expect the candidate to join us as soon as possible after that.