

**MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY**

**Newly Proposed Scientific Initiative
Under NRDMS Division, DST**

Department of Science and Technology, Government of India is planning to develop a Major Research activity in networking mode under NRDMS programme on '**Assessment & Modeling of Organisms/ Plants Response to Environmental Variables using Spatio-Temporal Data Sets**'.

Ecological forecasting brings together modeling with observations and results from experiments and process studies to predict the impacts of natural and anthropogenic environmental changes on life-sustaining ecosystems. Many agencies are engaged in activities that include components of an ecological forecasting capability to address critical emerging questions. Progress has been made in such areas as documenting changes occurring in various ecosystems in India. This has set the stage for reducing scientific uncertainty about possible future changes in several areas such as primary production, biogeochemistry, and biodiversity. Work for the coming years builds upon earlier investigations to expand the development of models linking geophysical and ecological phenomena, to better characterize the uncertainty associated with linked models, and thus to provide more reliable ecological forecasts. The result will be an enhanced understanding of ecological response to changing climate as well as improved natural resource management and decision-making.

The main themes of the proposed activity are:

- To study the spatial and temporal variations of environmental variables with main emphasis on atmospheric gases and aerosols.
- To study the individual and interactive impacts of high greenhouse gas events and aerosols on living organisms including agricultural/horticultural crops.
- To generate spatio temporal database for the development of Networked Information System.
- To develop a decision support system for risk assessment and management options to mitigate adverse environmental impacts based on modeling techniques.

Those having expertise in the above inter-disciplinary research area as evident from publication in high-impact factor journals or product development may send pre-proposals not exceeding 5–7 pages elaborating the current problems and research approaches that could be implemented in 3–5 years in network mode.

Fifteen copies of pre-proposal in NRDMS project format available at website <http://www.nrdms.gov.in/> and <http://www.dst.gov.in> latest by **15 December 2008** to **Ms Nisha Mendiratta**, Scientist 'E'/Additional Director, NRDMS Division, Department of Science and Technology, Technology Bhawan, New Meharauli Road, New Delhi 110 016 (e-mail: nisha67@nic.in) (Ph: 011-26590497/Fax: 26519530). Pre-proposals with scientific merit, only in the desired areas of research, will be short-listed by a screening committee for discussion and development of detailed research proposals. The envelope may be superscribed '**NRDMS initiatives for spatio-temporal datasets**'.