



MINISTRY TO GIVE RENEWED IMPETUS TO SCIENCE

New Delhi, February 4, 2010

The Ministry of Environment & Forests today announced a series of measures to strengthen the scientific base underlying the activities of the Ministry. The Ministry has introduced five specific initiatives in this direction.

1. A Global Advisory Network Group on Environmental Sciences (GANGES)
2. A National Environmental Sciences Fellows Programme
3. An Expert Committee to Enhance the Scientific Capacity of MoEF
4. An Action Plan to Enhance Forestry Science
5. An Indian Network for Climate Change Assessment (INCCA), announced in Oct 2009

Announcing these initiatives, the Minister of State (I/C), Environment & Forests, Mr. Jairam Ramesh said, “When this Ministry was conceived in the early 1980s by Smt. Indira Gandhi, it was conceived as a scientific ministry. It was recognized that in order to conserve our environment and forests, we need rigorous science-based policy making and enforcement. Over the years, this science-focus has got somewhat diluted. With these initiatives, we aim to ensure that science is brought back into the mainstream of our work and decision-making.”

[I] Global Advisory Network Group on Environmental Sciences (GANGES)

GANGES is a new forum, comprising the world’s leading environmental scientists of Indian origin, established to advise the Government of India on the country’s environmental sciences agenda. GANGES will focus on questions such as:

- What areas of Environmental Sciences should we focus on?
- How should the government engage on this agenda (identify priority areas, directly conduct research, support and fund outside research, etc.)?
- Which institutional collaborations should be undertaken in specific areas and in what way? How should academia and private sector be engaged?
- How should innovation in this space be stimulated, and how do we fast-track development, demonstration and dissemination?

The following scientists are part of the group:

1. Subra Suresh, School of Engineering, Massachusetts Institute of Technology, USA
2. Jagadish Shukla, Department of Atmospheric, Oceanic and Earth Sciences, George Mason University, USA
3. Purnendu Dasgupta, Department of Analytical and Environmental Chemistry, University of Texas, Arlington, USA
4. Veerabhadran Ramanathan, University of California, San Diego, USA
5. Asit Biswas, Third World Centre for Water Management, Queens University, Canada
6. Ashok Gadgil, Lawrence Berkeley National Laboratory, USA



7. Pratim Biswas, Washington University in St. Louis, USA
8. Kamal Bawa, University of Massachusetts, Boston
9. Tam Sridhar, Faculty of Engineering, Monash University, Australia
10. Shankar Sastry, Dean of Engineering, University of California, Berkeley, USA
11. Venkatachalam Ramaswamy, National Oceanic and Atmospheric Administration, University of Colorado, Boulder Institute, USA
12. Venky Narayanamurti, Science, Technology and Public Policy Programme, Harvard Kennedy School, USA

[II] A National Environmental Sciences Fellows Programme

This new programme will provide our most promising young scientists desirous of working in the forefront of environmental sciences, engineering and technology, the opportunity to do cutting-edge research on critical environmental issues in collaboration with leading institutes and scientists in India and the world. It will provide 10 young scientists under the age of 35¹, with a generous fellowship and institutional support to undertake this research. Each fellow would be attached to an institution which will sign an MoU with the Ministry. The selection of the fellows and thrust areas for research will be done by a Management Committee headed by Dr. K. Kasturirangan, Member, Planning Commission, and comprising of eminent scientists.

This programme will allow young Indian scientists to enhance their areas of expertise under the mentorship of the leading scientists in the world today, and will help create a cadre of top class Indian environmental scientists for the future. The knowledge emerging from the research work under this programme will help inform our environmental policy agenda, ensuring that it is based on rigorous science.

[III] An Expert Committee to Enhance the Scientific Capacity of MoEF

Scientific personnel have historically made up a large portion of the human resources of the Ministry of Environment & Forests, as it was conceived as a science-based Ministry. Over the years, a number of issues and constraints have arisen related to the scientific resources and expertise of the Ministry. These need to be urgently addressed. With this in mind, and to ensure that the scientific manpower and infrastructure in the Ministry remains cutting edge, the Ministry has set up an Expert Committee to take a fresh look at scientific manpower and infrastructure in the Ministry of Environment and Forests.

It is proposed that the Committee will comprise of the following members:

1. Dr. Kasturirangan, Member Planning Commission, Chairman
2. Dr. Chandra Venkataraman, Professor, Department of Chemical Engineering, IIT Mumbai, Member
3. Dr. Kalpana Balakrishnan, Professor, Environmental Health Engineering, Sri Ramachandra University Chennai, Member

¹ Age limit is extendable to 40 in exceptional cases



4. Shri Vishwanathan Anand, Retired Secretary, MoEF, Member
5. Dr. Deepak Pental, Vice Chancellor, Delhi University, Member
6. Ms. Swati A Piramal, Director of Piramal Healthcare Limited, Member
7. Shri M.F. Farooqui, Additional Secretary, MoEF, Convenor

[IV] An Action Plan to Enhance Forestry Science

On 10th January, 2010, a special meeting of the Minister with over 100 Indian Forest Service Officers with PhD degrees in forestry science was convened. A number of decisions related to upgrading the scientific capabilities of India's forestry establishment were taken at this meeting. These included the institution of the following:

1. **A Forestry Fellowship Programme:** To recognise outstanding contributions to forestry sciences, a forestry fellowship programme is being introduced.
2. **A National Forestry Knowledge Forum:** A platform where expert knowledge in various issues in forestry will be shared is being developed. This forum will facilitate virtual interactions of experts in forestry. It will be physically located in Delhi and will be open for national and international experts in the field of forestry science.
3. **National Forestry Information Network:** A network is being established with a robust foundation using remote sensing, GIS and MIS. All land based forestry interventions will be geo-mapped and monitored on a time scale, and will be put in the public domain. The process is being guided by a core group of forestry professionals.
4. **IT for fire monitoring:** A programme to use satellite data for early transmission of fire signals to the mobile phones/ PDA's of field officers is being undertaken. The University of Maryland has agreed to share all active fire data obtained from TERRA and AQUA satellites of NASA every six hours for this. This will not only help in quick fire detection and reducing the response time, but has also helped in identifying fire sensitive areas. This was originally conceived by the MP forest department, which a national e-Governance Award for the initiative.
5. **National Bureau for Forest Germplasm:** A Forest Genetics Resource network is being established along the lines of the Plant Genetics Resource Bureau. The objective would be to identify, characterise, preserve the valuable germplasm of a wide number of forestry species in the country. This will protect our valuable genetic resource against extinction and exploitation

In the Union Budget for 2009-10, the government has already made a special grant of Rs. 100 crore to the Indian Council for Forestry Research and Education (ICFRE) for modernisation of forestry research. This grant is being used to support some of these initiatives, among other things.

[V] Indian Network for Climate Change Assessment (INCCA)

Established by the MoEF in October 2009, INCCA is a network-based programme to make science, particularly the "3 Ms" – Measuring, Modelling and Monitoring – the essence of our policy-making in the climate change space. It brings together over 120 institutions and over 220 scientists from across the country.



The first Report of the INCCA – an updated emissions inventory of greenhouses gases of anthropogenic origin of India for 2007 – will be released on May 11 2010. A comprehensive “4x4” assessment of key sectors in India – agriculture, water, natural ecosystems & biodiversity and health – and key geographic ‘hotspots’ – the North-East, the Indian Himalayan Region, the Western Ghats, and the Coastal Areas – will be released in November 2010.

A group has also been constituted under INCCA comprising of scientists from the Indian Institute of Tropical Meteorology (IITM), ISRO and MoEF to run specific regional models for the Indian subcontinent for the monsoon in order to enable better assessment of impacts and reduction of uncertainties in monsoon projections over the South Asian region.

The “4x4” and the regional assessment will be provided to the IPCC as part of the input to the IPCC’s 5th Assessment Report (AR5). *This is the first time that India will be providing institutional inputs to the IPCC.* This has already been communicated to the Chairman, IPCC. Both these initiatives will help fill an important scientific knowledge gap in the IPCC assessment, by providing robust information at the sub-regional level.
