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# NATIONAL ENVIRONMENTAL SCIENCES FELLOWS PROGRAMME



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वहाँ है खुशहाली

Ministry of Environment & Forests, Government of India  
February 2010





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# Foreword



I am delighted to announce the launch of the “**National Environmental Sciences Fellows Programme**”. This programme will allow our most promising young scientists to do

cutting-edge research on critical issues related to the environment in collaboration with leading institutes and scientists in India and the world. This programme is very close to my heart as I believe that we need to invest in our brightest and best young scientists. They must get an opportunity to enhance their areas of expertise under the mentorship of the leading scientists in the world today. This is how we will build a cadre of top class Indian 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.

Strengthening the scientific foundations of our nation’s environmental agenda has been one of my key priorities over the last 6-8 months. A number of new initiatives have been announced. One such initiative was the setting up of the Indian Network of Climate Change Assessment (INCCA), a network-based programme to be coordinated by our Ministry, which will undertake an ambitious programme of climate change assessment. Institution of the National Environmental Sciences Fellows Programme is another such initiative. Other science-based

initiatives are also on the anvil. As I have stated earlier, we must make the “3 M’s” – Measure, Model and Monitor – the essence of sound policy making. Capacity building of our scientific personnel will be at the heart of these initiatives.

I know that our Prime Minister gives this programme the utmost importance. As he stated while addressing the Indian Science Congress on January 3, 2010: “*The best science is done by young people. Our institutions, therefore, must be receptive to the needs of young people. They must promote younger talent and allow youth to lead*”. We will continue to be guided by the Prime Minister’s inspiring leadership on this.

I am particularly excited by this new initiative, and look forward to personally engaging with the first batch of young scientists of this programme, who will be selected by a Management Committee comprising of eminent scientists. I sincerely hope that this new initiative will enthuse, encourage and motivate our young scientists to come forward to undertake research on the important environmental challenges facing the country today.

A handwritten signature in black ink, reading "Jairam Ramesh".

**Jairam Ramesh**

Minister of State for Environment & Forests  
(Independent Charge)

# Introduction

The Ministry of Environment and Forests (MoEF) institutes a Fellowship Programme known as the “**National Environmental Sciences Fellows Programme**” for Indian scientists desirous of working at the forefront of environmental sciences, engineering and technology, with a focus on problem solving environmental research in collaboration with selected, prestigious environmental schools/institutions in India who will sign a MOU with the MoEF. The areas of research to be undertaken under this fellowship programme shall be decided by the Management Committee constituted for the purpose.

The indicative list of environmental schools/institutions which will act as host institutions to begin with, is given below:

1. School of Environmental Sciences, Jawahar Lal Nehru University (JNU), New Delhi
2. School of Environmental Studies, Delhi University, Delhi
3. Indian Institute of Technology (IIT), Delhi
4. Indian Institute of Technology (IIT), Kanpur
5. Banaras Hindu University (BHU), Varanasi
6. School of Environmental Studies, Jadavpur University, Kolkatta
7. Indian Institute of Technology (IIT), Mumbai
8. School of Environmental Sciences, Andhra University, Visakhapatnam.
9. M.S. University, Baroda
10. M.S. Swaminathan Research Foundation, Chennai
11. School of Environmental Sciences, Anna University, Chennai
12. Indian Institute of Sciences (IISc), Bangalore
13. Department of Plant Sciences, University of Hyderabad, Hyderabad.
14. Jawahar Lal Nehru Technological University (JNTU), Hyderabad
15. North Eastern Hill University (NEHU), Shillong
16. School of Environmental Sciences, Pondicherry University, Pondicherry
17. Wildlife Institute of India (WII), Dehradun.
18. National Centre for Biological Sciences (NCBS), Bangalore.
19. Ashoka Trust for Research in Environment and Ecology (ATREE), Bangalore.
20. University of Jammu, Jammu, J & K.

The list of Institutions may be amended by the Management Committee from time to time.

The Committee may also consider applications for Institutions outside of this list including leading International Institutions / Faculties / Schools in the field of Environmental Sciences, Engineering and Technology subject to their willingness to sign the MOU with the Ministry.

The MoEF proposes to institute, initially upto ten National Environmental Sciences Fellows during the financial year 2010-11. However, the total number of fellowships in operation at any point of time will not exceed ten. The National Environmental Sciences Fellows will form a community of researchers with diverse backgrounds united by intellectual curiosity, top quality scholarship and drive to understand and find solutions to some of the most important environmental challenges facing the country today. By this program they will be benefiting from all that the Government has to offer, and in turn benefit the Government in finding solutions to the practical problems of environment and their application on to the field leading to visible environmental improvement.

The details of the proposal are given in succeeding paragraphs:

## Purpose

The aim of the National Environmental Sciences Fellows Programme is to provide a platform to top quality scientists and engineers in the area of environmental research, to use and expand the resources available at the identified environmental schools/institutions in the country and abroad to address the complex environmental problems. The Environmental Sciences Fellows will work for a period of one to two years at their chosen host institution to undertake research in the identified thrust areas identified by the Management Committee while also strengthening connections across the participating environmental schools/institutions.

## Targeted Scientists

The programme is open to all Scientists working in the field of environmental sciences, engineering and technology including those currently employed in Government of India / State Government / Public Institutions and those who are not currently associated with any public institution but are working in the area and eager to pursue a specific research that is beneficial to the Government of India.

# Eligibility Criteria for Selection

1. The applicant should be Indian or of Indian origin and should possess a doctorate or equivalent in any field of science/ engineering/ medicine/ environmental sciences /environmental engineering, with outstanding track record and proven leadership qualities in the area of environmental research with experience of atleast five to eight years including the period spent while undertaking research work for Ph.D.
2. The applicant should have an appropriate background in academics and experience in R&D in the area of environment protection, conservation and sustainable development including climate change, multilateral agreements, international negotiations, and conservation of biological diversity and associated traditional knowledge, environmental bio-technology, bio-safety, genetically modified organisms or other related areas that are directly or indirectly involved in environmental sciences, engineering and technology.
3. The upper age limit is 35 years. However, in exceptional cases a relaxation upto five years may be considered by the Management Committee.

## Selection Procedure

1. Applications from talented scientists having proven record in any field of science / engineering / medicine / environmental sciences / environmental engineering / environmental technology will be invited through open advertisement. The applicants shall submit their applications in the prescribed proforma.
2. The applicant will attach a R&D proposal with his/her application in the R&D thrust areas identified by the Management Committee of the MoEF with emphasis on potential impact of proposed research project on solving environmental problems. The application should be as per the instructions for filling up the proforma given in the Guidelines.
3. The Management Committee headed by an eminent scientist will scrutinize the applications including the research project and select upto ten National Environmental Sciences Fellows taking into account the Guidelines and as per prescribed procedure.
4. The Committee will be approved by the Ministry of Environment & Forests and have a tenure of three years. Every selected Fellow will be attached to one of the selected environmental schools/institutions and will have a tenure ranging from 1-2 years depending upon the project chosen.

# Fellowship Details

Each selected Fellow will receive a total annual grant of upto Rs. 30.00 lakhs comprising (i) emolument of upto Rs. 10.00 lakhs (ii) contingencies of upto Rs. 5.00 lakhs & (iii) research grant of upto Rs. 15.00 lakhs. This will be pro-rated for the duration of the tenure of the particular Fellow. This grant will be released to the host institution for being granted to the Fellow.

The Fellow may also raise additional resources from other sources such as the host Institution, grant providers, grant-in-aid Institutions etc. for the purpose of carrying out his/her research.

## Others

1. On selection, the Fellow will be attached to one of the selected environmental schools/ institutions in consultation with the Fellow as well as the host institution.
2. Selected Fellows shall commit to work at the host institution for the full tenure of the fellowship and shall submit a bond in this regard to the host institution.
3. The host institution will enter into a MOU with the MoEF especially with regard to provision of office space, laboratory facilities, access to publications, basic administrative support etc. In this regard all the guidelines prescribed by the Government of India for release of grants to Government/Non-Governmental institutions including furnishing of Utilization Certificates, Expenditure Statement, periodic progress reports etc. would also be applicable, over and above the provisions of the MOU given in these Guidelines.
4. The Fellow must submit six-monthly progress reports and a final technical report to the Management Committee. The Management Committee may from time to time, seek updates from the Fellow and provide inputs and guidance to the project of the Fellows so that the project remains relevant to the Government of India agenda and can be successfully completed on time.
5. An annual conference of the Fellows will be held, where the Fellows will be expected to present their findings to the Management Committee and other invitees and share knowledge and learning and discuss areas for further collaboration and practical application of their research.



# Deliverables/Outcomes of the Programme

1. A pool of top quality and motivated Scientists would be available to undertake need based research in emerging fields of Environment.
2. There would be a visible improvement in the quality of the environment of the country through application of innovative solutions / technologies on the field arising out of the research under the programme.
3. The resources in terms of manpower and infrastructural facilities available at various environmental schools/institutions of the country would be enhanced/ strengthened.
4. Interaction among the Scientists working in different institutions of the country would be promoted and enhanced. This would enable multi and inter disciplinary approach to address complex environmental issues.
5. Innovative and practicable strategies for environmental management and conservation in the country would be developed based on knowledge / data emerging from the research work under the programme.



# Proforma

for submission of application under the  
**National Environmental Sciences Fellows Programme**

1. Name of the applicant:
2. Date of Birth:
3. If employed in GOI/State Govt./Public Institution, name and address of the current employer and salary drawn:
4. In case not employed at present, address for communication:
5. Academic Background: (details from undergraduate level onwards may be provided including name of Institutions/Universities, special achievements/distinctions obtained etc).
6. Area(s) of specialization: (please link it up with the R&D thrust areas identified by the Management Committee).
7. Details of Scientific/technical papers published in the relevant subject area: (Only list to be provided. Abstracts/full copies of papers need not be enclosed at this stage).
8. Details of books published, if any: (only list to be provided).
9. Details of films/audio-visuals produced, if any:
10. Details of original, innovative and pioneering research work carried out in the area mentioned at S.No. 6. (Up to one page):
11. Details of research scholars successfully guided and those currently pursuing M.Phil/Ph.D under your supervision:
12. Details of any awards/recognition received in the subject area at the national /international level:

13. Please describe in your own words why you should be selected as a National Environmental Sciences Fellow and how the proposed research project will benefit the GOI in finding solutions to the practical problems of environment and their application at the field level: (up to one page)
14. Are you willing to give a commitment to work at the selected host institution(s) for the full tenure of the fellowship granted and submit a bond in this regard to the host institution?
15. References : Please provide upto three (3) references with complete contact details.
16. Please indicate the proposed institution, group, professor with whom the project is to be undertaken along with proposed time line, methodology and outputs.

(Signature)

Full Name and Contact details.

Place:

Date:

Details of enclosures attached.



# Instructions for Filling up the Proforma

1. Please read the instructions carefully before filling up the proforma.
2. Please note that only list of publications/papers etc are to be provided in respect of S.Nos 7-9. All short listed candidates shall be given an opportunity to present their achievements/ experience in detail before the Management Committee.
3. Please adhere to the page limit specified in respect of S.Nos 10 & 13.
4. The research project proposed to be carried out under this programme will have to be submitted separately indicating objectives, methodology, time line, break-up of the research grant being provided under the programme and outputs.
5. All financial grants under the National Environmental Sciences Fellows Programme shall be governed by the guidelines prescribed by the Government of India for release of grants to Govt/ Non-Govt. institutions including furnishing of Utilization Certificates, Audited Statement of Expenditure, Periodic Progress Reports etc.

# Memorandum of Understanding

between the Host Institution and MoEF in respect of the National Environmental Sciences Fellows Programme.

**I A MOU has been reached this \_\_\_\_\_ day of \_\_\_\_\_ two thousand \_\_\_\_\_ between the Ministry of Environment and Forests, GOI (hereinafter referred to as MoEF) and \_\_\_\_\_ (Name of Institution/Organisation), (hereinafter referred to as the Host Institution) with respect to hosting \_\_\_\_\_ (the name of the Fellow), selected as the National Environmental Sciences Fellow vide Ministry's letter \_\_\_\_\_ dated \_\_\_\_\_.**

It is clarified that all the terms & conditions contained in MoEF's publication "Guidelines for Support to Environmental Research" August, 2006 shall apply to the National Environmental Sciences Fellows Programme and the Research Project to be implemented by the selected National Environmental Sciences Fellow at the Host Institution.

This MOU is over and above the terms and conditions mentioned above and deals mainly with delineating the responsibilities of MoEF, the Host Institution and the selected National Environmental Sciences Fellow, the fulfillment of which is essential for achieving the objectives of the Programme.

## **II The objectives of the National Environmental Sciences Fellows Programme.**

1. To provide a platform to top quality scientists & engineers of India or of Indian origin desirous of working at the forefront of environmental sciences, engineering and technology with a focus on problem solving environmental research.
2. To develop a community of researchers with diverse backgrounds, united by intellectual curiosity, top quality scholarship and drive to undertake research on important environmental challenges facing the country today.
3. To find solutions, through scientific research, to the practical problems of environment and their application in field, leading to visible improvement in the environment of the country.
4. To utilize and expand the resources available in the identified environmental schools/institutions of the country, to address complex environmental problems.

5. To undertake research in the thrust area(s) identified by the Management Committee in the host institution, while also strengthening connections across the other participating environmental schools.
6. To motivate, enthuse and nurture scientists with potential and proven talents to work in emerging fields of environment.
7. To utilize the knowledge/data emerging from such research work to devise strategies/solutions for environmental conservation & management in the country.

### **III Responsibilities of MoEF**

1. To constitute a Management Committee headed by an eminent scientist.
2. To select appropriate National Environmental Sciences Fellows after following the prescribed procedure.
3. To facilitate in the identification and designation of a suitable Host Institution in respect of each selected Fellow, in consultation with the Host Institution and the Fellow. It shall be ensured that the Host Institution/Fellow are mutually acceptable to each other, before commencing the research project.
4. To issue the sanction order and release the fellowship grant earmarked to the Fellow, to the Host Institution for further transmission to the Fellow. It shall be ensured that the money is released to the Host Institution well in time, so that the Host Institution and the Fellow are not inconvenienced due to lack of funds.
5. To help, assist and support the Host Institution and the Fellow in every way to ensure that the objectives of the National Environmental Sciences Fellows Programme are achieved.

### **IV Responsibilities of the Host Institution**

1. To accept and allow the selected National Environmental Sciences Fellow to work for the full tenure of the Fellowship at their Institution.
2. To provide adequate and suitable office space and support staff, if any, in the premises of the Institute, required laboratory facilities, access to the library, other publications and computerized data base of the Institution relevant to the project etc. to the Fellow to carry out the research work.
3. While it is not mandatory, the host institution may, if so desired by the Fellow, assist him/her in the work and evaluate/assess the progress of the project as per mutually agreed terms.
4. To help, assist and support the Fellow in every way to ensure that the objectives of the National Environmental Sciences Fellows Programme are achieved.

## **V. Responsibilities of the National Environmental Sciences Fellow.**

1. To give a commitment to work at the selected Host Institution for the full tenure of the Fellowship and submit a Bond in this regard to the Host Institution.
2. To abide by the Rules/Regulations of the Host Institution, as well as the terms & conditions of the National Environmental Sciences Fellows programme, this agreement and other relevant documents referred to in this MOU.
3. To conduct/carry out the Research Project – duly approved by the Management Committee, sincerely, with dedication and to the best of his/her abilities.
4. To share with MoEF all the outcomes of the Research Project including, but not limited to, information/data/findings/new technology/publications etc.
5. To be willing to modify or restructure the project during the course of its implementation if so advised by the MoEF based on the mandatory periodic assessment /evaluation of the work by the Management Committee.
6. To ensure that the research project is completed within the prescribed tenure and that the expenditure in connection with the project is kept within the approved outlay.

## **VI Other Terms & Conditions**

1. The grant amount shall be released in installments. While the first installment shall be released on selection of the fellow, subsequent releases will depend on the submission of the requisite Utilization Certificate, Expenditure Statement & Progress Reports etc. by the Fellow/Host Institution, and their acceptance by MoEF.
2. In the event of the Management Committee recommending closure of the Project, this MOU shall be terminated, after giving a clear notice of one month-both to the Host Institution and to the Fellow.
3. In case of termination of the MOU, all unutilized funds up to the date of termination of the agreement will have to be returned to MoEF by the Host Institution.
4. Due caution would be exercised – both by the Host Institution and the National Environmental Sciences Fellow – in dissemination/publication of any information/data/findings of a sensitive/ classified nature, emanating out of the project. Responsibility of ensuring discretion and secrecy of data/findings in such cases, will rest entirely with the Fellow and the Host Institution.
5. All disputes, disagreements etc. if any, arising out of the National Environmental Sciences Fellows Programme, shall be resolved by the Management Committee.
6. MoEF reserves the right to add, delete or modify from time to time, any part of this MOU. However, the decision to add, delete or modify the provisions of the MOU shall invariably be approved by the Competent Authority of MoEF.



7. On all aspects where this MOU is silent, or for special cases of deviation from the provisions of this MOU or the National Environmental Sciences Fellows Programme, the decision of MoEF based on the recommendation of the Management Committee shall be final.

The above MOU has been entered into and signed on behalf of MoEF and the Host Institution on the day, month and year first above written.

Head of the Host Institution

Adviser, RE Division, MoEF

(Seal of office)

(Seal of office)

Witness

1. \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

2. \_\_\_\_\_