

THE NATIONAL ACADEMY OF SCIENCES (NASI), ALLAHABAD

A. Organization Particulars

1. Name of the Institute : **THE NATIONAL ACADEMY OF SCIENCES, INDIA**
2. Established in the year : **1930**
3. Number of scientists/faculty : **25 NASI-SENIOR SCIENTISTS**
(on an Hon. Of Rs 30,000/month to each for five years); and
05 NASI-Chair Professors (on an Hon. Of Rs 80,000/month, for five years).
4. Total number of regular employees : **17 only** (total sanctioned posts are 18)

B. Report on Activities during 2011-12

1. Areas of Focus : **Promotion & Popularisation of Science & Technology; to aid & advise in Policy Making**
2. Major Accomplishments : **The major accomplishments were the following-**

An Establishment of a Magnificent Ganga-gallery

The river Ganga occupies a unique position in the cultural ethos of India. Legend says that the river has descended from Heaven to the earth as a result of the long and arduous prayers of King Bhagirath for the salvation of his deceased ancestors. From times immemorial, the Ganga has been India's river of faith, devotion and worship. But the holy river Ganga's existence is under threat, due to an enormously increasing load of pollution year by year. Therefore, the Council of the Academy decided to adopt ways to make the people aware for the conservation and restoration of the holy river Ganga by establishing a Ganga Gallery with well defined objectives in order to highlight the religious, cultural, socio-economic and scientific aspects of the holy river. The gallery was inaugurated by **Hon'ble Sri Pawan Kumar Bansal**, Science & Tech. Minister, Govt. of India on April 15, 2011. The highlights are given on the web page of NASI (www.nasi.org.in).

Publications

- Apart from regular publications, the Academy published a vast data on the **Nematode Infestations** (in two parts), a voluminous work and treasure for the researchers of India & abroad.
- The **reviews** published in the Proceedings and Science Letters of the Academy covered the most discussed areas of research from **Nanotechnology to Biotechnology; and Material Science to Transformational Technologies**.
- A book on **Malaria (in Hindi)** of about **600 pages** is also ready for publication : A first of its kind in India.

Science Communication Activities

- The highlights of activities were **Children Science Meet, Summer & Winter Schools, Vacation Training Programmes, Workshops, Seminars, National Technology Day, National Science Day and World Environment Day** etc. The Academy also encouraged the teachers for out of the class science activities by recognizing their talent and giving away awards to them.
- Not only that, a **first of its kind activity** was started by the Academy for the young researchers, when a series of **workshops on Scientific Paper Writing** was organized by the Academy to train them for expressing their views and research findings in an appropriate manner.

Science Education Programmes in joint collaboration of other National Science Academies

The NASI together with other two Science Academies - Indian National Science Academy, New Delhi and Indian Academy of Sciences, Bangalore is jointly sponsoring the Summer Research Fellowship under the joint Science Education Panel to provide opportunities to bright under- and post-graduate students and teachers to usefully spend their summer/winter vacations, at a research

laboratory for a period of two months. It is worth mentioning that a large number of Fellows of NASI have opted to mentor students and teachers under this programme.

Annual Session/Symposia/Seminars & Scientific Discussions

During the Annual Session, every year a Symposium is also organized on some recent topic of interest, directly related to science & society. The year **2010** was the **International Year of Biodiversity**; and this year (**i.e. 2011**) has been declared by the UNO as **the International Year of Forests**. In view of this, the Academy decided to organize several programmes. In the year 2010 a National Symposium on “**Climate Change**” was organized with Prof. M.S. Swaminathan as its Chief Guest and Prof. (Mrs.) Manju Sharma as the Convener. The major topics of this symposium were decided in a meeting headed by Prof. M.G.K. Menon to give an emphasis on the adverse impact of the climate change on the planet earth in general, and the biodiversity, in particular. The recommendations of this symposium have been sent to concerned governmental and non-governmental departments; and are also on the website of NASI. Therefore, in consonance with the plan, this year, the Academy organized a National Symposium on “**Sustainable Management of Biodiversity using Science & Technology**” on **Nov. 24-26, 2011 at Trivandrum**; with an aim to propagate the message and take concrete steps for conserving the biodiversity for Sustainable Development.

Fellowship / Membership

The ICMR, New Delhi, posing full faith in the scientific capability of the Fellows of the Academy, has instituted the **ICMR Fellowship in the area of Public Health Research** to be given to a distinguished Fellow of this Academy. This is the first such joint endeavor of the Academy and ICMR.

Singhania Library

Library services were enriched through digitization of the library, subscribing more books and by providing facilities of storage, reading room, microfilming, citation index etc. Internet facility for educational purpose is also being provided to the students free-of-cost. **This year the library has been connected to National Knowledge Network (NKN).**

Recognition and Awards

Following Fellowships and Awards were given during the year:

- Award in the field of Biodiversity to Professor J S Singh, BHU, Varanasi
- NASI-Reliance Industries Platinum Jubilee Awards (2011) for the Application Oriented Innovations covering both Physical and Biological Sciences.
- NASI-Young Scientist Platinum Jubilee Awards (2011) in the fields of Biological/Physical/Chemical Sciences.
- NASI-Senior Scientist Platinum Jubilee Fellowships (2012)- Announced.
- NASI – Swarna Jayanti Puruskars (2011) for Best Paper Presentation in the Annual Session
- NASI Scopus Awards (2010)
- NASI – Science and Maths Teacher Awards (2011) by NASI HQ and some of its Chapters in their respective region

Local Chapters

The 15 Chapters of the Academy have undertaken **a hundreds of activities** for the furtherance of the Academy's objectives. Detailed reports of the Chapters have included in the Annual Session's Report (published in Nov.2011; a copy of which is being sent separately) of the Academy.

3. Important Highlights of 5 Major Programmes: **The highlights are –**

a) The Council of the Academy decided to adopt ways to make the people aware for the conservation and restoration of the holy river Ganga by **establishing a Ganga Gallery** with well defined objectives in order to highlight the religious, cultural, socio-economic and scientific aspects of the holy river. The gallery was inaugurated by **Hon'ble Sri Pawan Kumar Bansal**, Science & Tech. Minister, Govt. of India on April 15, 2011

b) The **reviews** published in the Proceedings and Science Letters of the Academy covered the most discussed areas of research from **Nanotechnology to Biotechnology; and Material Science to Transformational Technologies.**

A book on **Malaria (in Hindi)** of about **600 pages** is also ready for publication, a first of its kind in India

c) **Science Communication Activities** : The highlights of activities were **Children Science Meet, Summer & Winter Schools, Vacation Training Programmes, Workshops, Seminars, National Technology Day, National Science Day and World Environment Day** etc. The Academy also encouraged the teachers for out of the class science activities by recognizing their talent and giving away awards to them. Not only that, a **first of its kind activity** was started by the Academy for the young researchers, when a series of **workshops on Scientific Paper Writing** was organized by the Academy to train them for expressing their views and research findings in an appropriate manner.

d) The Academy organized a National Symposium on **“Sustainable Management of Biodiversity using Science & Technology” on Nov. 24-26, 2011 at Trivandrum;** with an aim to propagate the message and take concrete steps for conserving the biodiversity for Sustainable Development. The programme was attended by Hon'ble Prof M G K Menon, Prof K Kasturirangan, Prof M S Swaminathan, Prof Manju Sharma, Prof H Y Mohan Ram; and about 600 distinguished scientists, teachers and students.

e) **Apart from conferring Fellowship/Membership of the Academy, Several awards were also given in recognition of the significant scientific contributions of the young and senior scientists, such as –**

NASI-Reliance Industries Platinum Jubilee Awards (2011) for the Application Oriented Innovations covering both Physical and Biological Sciences.

NASI-Young Scientist Platinum Jubilee Awards (2011) in the fields of Biological/Physical/Chemical Sciences.

NASI-Senior Scientist Platinum Jubilee Fellowships (2012).

NASI – Swarna Jayanti Puruskars (2011) for Best Paper Presentation in the Annual Session; and the NASI Scopus Awards (2010)

4. Major and Unique National Facilities created : **The Ganga-gallery** (IGNOU, New Delhi has included the gallery in its syllabus/project to make the students learn the aspects of conservation of a river)
5. Important collaborations (national and global) established:
 - a) **The NASI together with other two Science Academies - Indian National Science Academy, New Delhi and Indian Academy of Sciences, Bangalore** is jointly sponsoring the Summer Research Fellowship under the joint Science Education Panel to provide opportunities to bright under-and post-graduate students and teachers to usefully spend their summer/winter vacations, at a research laboratory for a period of two months. It is worth mentioning that a large number of Fellows of NASI have opted to mentor students and teachers under this programme.
 - b) **Also continuing its established collaboration with the Reliance Industries** for recognizing the scientific research.
 - c) **The Academy has established collaboration with the SCOPUS** for recognizing the scientific talents.
 - d) **It has also established an association with the Springer** for publishing its journals.
 - e) **Also organized many science communication activities in collaboration with the Indian Universities/Institutes/CSIR Laboratories/ NCSM and other prestigious institutions.**

C. Important Output Indicators for 2011-12 : *As per report of the NASI Chair Professors, NASI-Senior Scientists & NASI-Reliance Awardees, many papers were published/patents filed/ technologies transferred; and manpower trained (please see the brief report published in the Annual Session's Report of NASI-Nov.2011).*