A Brief Report (2018-19) on the Activities of The National Academy of Sciences, India, Prayagraj

The National Academy of Sciences, India (NASI) which was established in 1930, is oldest Science Academy of India. The idea of establishing a forum for Indian scientists, which would help them in publishing their researches and bringing them on one platform to discuss and find possible scientific solutions to the problems of the country, was mooted by Prof. Meghnad Saha, a great scientist, visionary and the then Professor of Physics at the University of Allahabad. The mandate of the Academy is ‘Science and Society’. The Past Presidents of the academy, namely Prof M S Swaminathan, Prof (Mrs.) Manju Sharma, Prof S K Joshi, Prof Ashok Misra, Prof Asis Datta, Dr V P Kamboj, Dr K Kasturirangan, Prof. Jai Pal Mittal and Prof. Akhilesh K. Tyagi have been taking keen interest in the development of Science in general and the Academy, in particular. The Academy was also nurtured by Late Prof M G K Menon, Prof A K Sharma and Dr V P Sharma- Past Presidents, NASI. The academy has a Council; and during the year (2018-19) of the report, Prof Anil Kakodkar, Former Chairman, Atomic Energy Commission and Prof. G. Padmanaban, Former Director, Indian Institute of Science, Bangalore, steered the activities of NASI as its Presidents. The Academy is striving hard to promote Science & Technology by regularly organizing several activities with the help and support of its Fellows and Members, and the major (financial) support of the DST, Govt, New Delhi. During the year of the report, the following activities were undertaken -

Publications
a) NASI published the Proceedings of NASI, Sec. A & B, each in IV parts and National Academy Science Letters in VI parts, in collaboration with the Springer India Pvt. Ltd.
   • National Academy Science Letters received Impact Factor (IF) as 0.519 in 2017 from Thomson Reuters; about 250 papers were received from twenty five countries.
   • PNASI, Sec. A received Impact Factor (IF) as 0.754 in 2017 from Thomson Reuters; about 200 papers were received from thirteen countries.
   • The PNASI, Sec. B received Cite Score as 0.62 in 2017 from Scopus; about 400 papers were received from nineteen countries.
   • Special Issue of PNASI, Sec. A on “Lasers for biomedical and material processing applications” was published in 2018.

b) Indian Science, its Competitive Strength and its Relevance to National Needs (a report by the NASI Study Group), was published and sent to different agencies.

c) ‘Proceedings of the Mega-event including significant recommendations’ was also published; and being sent to all concerned.

d) The 9 volumes on the History of Science in India were distributed to the concerned government and non-government agencies for dissemination of knowledge; the ‘Vision Document’ on Women in Science was also distributed.

e) Three reports on Nutritional Survey & Analysis (in collaboration with ICMR-NIN, Hyderabad) on the rural/semi-urban population of Allahabad, Hyderabad and Vadodara, were published after extensive work in these regions in last three years.

Science Communication Activities
- The highlights of these activities were Children Science Meet, Summer & Winter Schools, Vocational Training Programmes, Teachers’ Training Workshops, Scientific Writing Contest, Vigyan, Jal & Health Chaupals, Seminars, and celebration of the National Technology Day, the National
Science Day, the National Mathematics Day and the World Environment Day etc. The Academy also encouraged the teachers for out-of-the-class science activities by recognizing their talent and giving away NASI-Science Teacher’s Awards to them.

- **NASI’s 20 Chapters** spread across India, organized hundreds of science communication activities in and around their respective regions throughout the year. **More than 20,000 students and teachers benefitted from these activities.**
- One **Science Awareness Programmes** (relating to health issues) was organized for the Army personnel at Guwahati.

**Activities under Scheduled Tribe Sub-Plan Programmes**

An innovative programme launched under this head during the year 2017-18 for improving the socio-economic status of the Scheduled Tribes, has now spread in 20 regions of our country, under Prof. Manju Sharma, Chairperson, NASI-New Initiatives. This is aimed towards -

- **Bioeconomy for the Scheduled Tribes**: Emphasis has been given on Bioresources and biodiversity development, conservation and utilization, as well as on Value addition.
- **S&T Interventions**: For ensuring Safe Water and Sanitation, eradicating Malnutrition, Malaria and other communicable diseases, etc.
- **Data accumulation, analysis and utilization**: Specially on the vast knowledge bank of ethnic medical practices and ethos, as well as the wide spread biodiversity of the tribal areas.

**S&T Entrepreneurship development**

- **Training programs for entrepreneurs** - To inculcate the spirit of entrepreneurship in the youth and in line with the National Mission Programmes of Skill Development and Start Up India, NASI organised several programmes; young, potential candidates interested in entrepreneurship benefited from these programmes.
- **Awareness and Training** - on Nutrition, Safe drinking water, Health & hygiene etc. A mixed participation of rural and urban population was ensured. This was included in the spirit of “Swasth Bharat Mission”.
- **Safe drinking water and pollution abatement** - especially for the rural areas and municipal workers; it was included in the spirit of “Swachh Bharat Mission”.

**Sensitization Programmes for Women Researchers/Scientists**

After organising 25 workshops on Technological Empowerment of Women in different parts of the country during the last 5 years, the Academy organised a Mega Event under the leadership of Prof. Manju Sharma, Past President, NASI, on **March 8-9, 2018** with Dr Harsh Vardhan, Hon’ble Minister for Science & Technology, Govt. of India, as the Chief Guest, and about 1000 women scientists as participants; the ‘Proceedings of the Mega-event including significant recommendations’ has also been published and sent to all concerned. Recently, other workshops with more than 350 women scientists were organized at AIIMS, Rishikesh and NASI, Prayagraj, respectively on May 25-26, 2018 and **March 8-9, 2019**. Prof. G. Padmanaban, Prof. Satya Deo, Prof. Rakesh Bhatnagar, Prof. Sneh Bhargava, Prof. Kasturi Datta, Prof. Paramjit Khurana, Prof. Smita Mahale, Prof. Veena Tandon, Prof. Bina Ravi, Prof. Suchitra Banerjee and several other distinguished scientists/speakers graced the occasion on March 8-9, 2019.

**Annual Session/Symposia/Seminars & Scientific Discussions**

The 88th Annual Session of NASI and a Symposium on ‘Science, Technology and Ecosystem for Sustainable Rural Development’, were jointly organized by Mahatma Gandhi Chitrakoot Gramodaya Vishwavidyalaya (MGCGV) & Deendayal Research Institute (DRI), Chitrakoot, Satna, M. P. on Dec. 6-8, 2018, as a part of the
celebration of 150th Birth Anniversary of ‘Ba & Bapu’ and 125th Birth Anniversary of Prof. Meghnad Saha. More than 600 researchers and scientists participated in each of these events.

Other seminars/symposia were also organised by NASI and its several Chapters, especially to celebrate the 150th Birth Anniversary of ‘Ba & Bapu’ and 125th Birth Anniversary of Prof. Meghnad Saha.

**Fellowship / Membership**

To recognize the outstanding scientific contributions of the scientists, the Academy awards every year the prestigious Fellowship/Membership to some of them. More than 100 scientists working in different areas of Science & Technology were selected from all across the country in the year 2018. It also awarded a few Foreign Fellowships to scientists who are working in different countries and have collaborated with scientists from India.

**Recognition and Awards**

- **NASI-Reliance Industries Platinum Jubilee Awards** for the Application Oriented Innovations covering both Physical and Biological Sciences to six distinguished scientists;
- **NASI-Young Scientist Platinum Jubilee Awards** to about dozen young scientists/researchers in the fields of Biological/Physical/Chemical Sciences;
- **12th NASI Scopus Awards** to 9 young scientists/researchers;
- **NASI-Senior Scientist Platinum Jubilee Fellowships**;
- **Professor M. G. K. Menon Memorial Award**;
- **NASI - Swarna Jayanti Puruskars** for Best Paper Presentation to about half a dozen young scientists/researchers, in the 88th Annual Session;
- **NASI - Springer Awards** for Best Paper Presentation to about half a dozen young scientists/researchers, in the Annual Session (started in 2015 in collaboration with the Springer India Pvt. Ltd.);
- **Memorial Lecture Awards** to about 15 eminent scientists;
- **NASI - Science and Maths Teacher Awards** by NASI HQ & Chapters to many teachers.

**Singhania Library**

- Library services were enriched through digitization of the library and subscribing more books. The library is connected to National Knowledge Network (NKN); Internet facility is being provided to the students and research scholars free of cost.

**Handing-over of Brahmaputra Gallery to the Govt. of Assam at Guwahati, Assam; and establishment of Cauvery Gallery at Mysuru**

- Following the establishment of Ganga Gallery in the year 2011 at NASI Headquarters, Allahabad, the Academy established another river gallery on Brahmaputra River in Guwahati, Assam in 2015; which is now being handed over to the Govt. of Assam; but it will remain as the joint property of NASI and Assam Govt.
- The work on the third gallery on River Cauvery has also been completed at Mysuru, Karnataka with the major support from the Government of Karnataka.
- Recently, a prototype of the ‘Ganga-gallery’ was created at ‘Pravasi Bharatiya Divas’, held on Jan. 21-23, 2019 at Varanasi; appreciated by several NRIs.

**NASI-Chapters**

The year 2018-19 witnessed the reorganization/revitalization of NASI Local Chapters, now spread all across the country, representing almost all major regions of our nation. These Chapters also carrying the mandate of the
Academy organized several science-society programmes around their respective regions in collaboration with the local bodies/institutions/ agencies.

Sensitization Programmes for Women Researchers/Scientists, being held at a) AIIMS, Rishikesh on May 25-26, 2018; and b, c & d) NASI, Prayagraj on March 8-9, 2019

A view of the Summer School 2018 organized from June 11-20, 2018 by NASI
a) Prof. H. C. Verma during NSD 2019 celebration on theme- Science for the people and the people for Science; and b) Prof. Satya Deo and others during the National Mathematics Day 2018, at NASI

A view of the participants of the Winter School at RSC, Lucknow Dec. 30, 2018

A view of the dais during the Inaugural Session of 88TH Annual Session of NASI
October 6-7, 2018, a view of 2-day seminar on Celebrating 125th Birth Anniversary of Professor Meghnad Saha at Prayagraj

February 25, 2019, NASI Delhi Chapter, in collaboration with Indian Council of Medical Research (ICMR), New Delhi organized the 2018 Dr. V P Sharma Memorial Lecture on MALARIA ELIMINATION: Walking the last mile? by Dr Neena Valecha, Regional Adviser, WHO SEARO at the ICMR Auditorium. Dr. Balram Bhargava presided over the function and Dr. P N Tandon was the Guest of Honour.

NASI NER Chapter commemorated the 150th Anniversary of ‘Ba & Bapu’ by organizing a programme on 24th November 2018 in collaboration with St. Edmund’s College, Shillong. About 250 students participated in the event held at the Auditorium of St. Edmund’s College.
Prototype of the ‘Ganga-gallery’ on ‘Parvasi Bharatya Divas’ at Varanasi on Jan. 21-23, 2019

Comments of the visitors

Very educative and enlightening.

Knowledgeable effort to preserve socio-economic, bio and mythological glory of mother Ganges is highly appreciated. Hope that in future the efforts of prototype of Ganga gallery team will bring fame to reaffirm our mother Ganges & our motherland.

21/1/19
4th fl.

Excellently informative especially for the next generation & future generations. Holy Ganga is and shall remain sacred to humanity.