

104th Indian Science Congress

3-7 Jan 2017

**Focal Theme : Science and Technology for National
Development**

With rapid advances in Science and Technology, the societal expectations from S&T are increasing. These expectations impose upon the scientific community the responsibility of fulfilling multifarious societal needs: providing the basic infrastructure of assured water and electricity supply, sanitation, efficient transportation, IT connectivity and e-governance, safety and security of citizens as well as finding solutions for alleviating malnutrition, offering adequate health care, providing proper shelter, and so on.

We need to make Indian science and technology much more noticeable by carrying out research in frontier areas. Institutions of higher education need to be involved in motivating young minds to contribute to challenging areas requiring advanced research.

There is a dire need to building high quality capacity in key disciplines at national institutions so that a greater number of Indian students can obtain excellent training at home. This means significant investment in carefully chosen topics which demand priority attention. Since it is practically not possible for every one of the several hundreds of universities to be totally involved, there is a need to establish centres of excellence in various universities for research funding.

Premier institutions of the country could contribute to nation – building with user friendly innovations. They can become a source for meeting the technology needs of the country as the country has necessary

talent. In addition to making in India, we need to focus on discovering, inventing in India since discovery and inventions lead to products that can be made indigenously. The discoveries and inventions must be strongly encouraged in the Universities. We need to put in efforts to make it easier to doing science and carrying out research in the country. It is also important for scientists to pick up problems that provide them with scope to coming up with break-through research in a way as to be applauded and utilized within and outside India.

Innovation in approach is not just the obligation of the Government, but also the responsibility of the private sector. In several fields public-private support to R &D is absolutely called for because the country is faced with enormous challenges as stated previously. High risk, high gain research will encourage scientists to take up work in areas of significant interest to either Government or to Industry; and both the stake holders need to jointly invest significantly in order to mitigate the consequences of any set-backs that are at times associated with risky technology development programs..

India has its own unique success stories that have enabled better lives for every citizen and thus made the country a better place for everyone. For instance, by the 1960s, Indian young republic invested in the “Green Revolution”, which transformed the *ship to mouth economy* into a *silo to ship” economy* today. There are other notable accomplishments as well.

India is designing, developing and launching world class communication and remote sensing satellites. These communication satellites changed the communication scenario in the country. One of the recent defining moments in India has been the soaring successful launch of India’s

Mars Orbiter Mission. The Mars Orbiter Mission has paved a new global pathway for inter-planetary travel.

Indian bio-tech companies captured the vaccine field and, within a decade, India has become the vaccine makers for the world. According to the estimates by the World Health Organization (WHO), every third child in the globe, who is vaccinated through its programme, is protected through a vaccine manufactured in India and thus India has been rendered a *global pharmacy of the world*.

However, this is not to say that all is right with the Indian Science and Technology system. Chronic under-funding and under-staffing for a country of this size is an issue of great concern.

Global challenges of climate change, water, healthcare, food security, energy, and environment security faced by our people are creating opportunities as well as challenges for determining solutions through Science and Technology.

It may be necessary to redefine the role of scientific community in terms of their contributions towards national development in the current context of globalization and contemporary societal needs. The priorities for investments in Science & Technology should be directed towards national development plans in sync with the aspirations and expectations of the people at large. Technological self-reliance for poverty reduction, health, and income of rural communities and overall development of farmers and farming systems could be the target for future scientific projects. The focal theme of the 104th Indian Science Congress, **“Science and Technology for National Development”** has been chosen in this context. The 104th Indian Science Congress aims to address several thrust areas through plenary sessions, symposia, panel

discussions and round-table deliberations on Science and Technology for National Development. We look forward to the deliberations at the Congress for drawing up an action plan.