

Editorial Article

India and United States Global Partnership through Science and Technology Cooperation

By

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The nuances, the undertones, the harmonics of the Indo-American relationships have subtly but undeniably changed and grown for the better. In the words of Prime Minister, Dr. Manmohan Singh, 'the best is yet to come'. It is one of standing tall, shoulder-to-shoulder, quiet and proud, as equal partners in the shaping of human destiny of both the countries through translating the powers of scientific partnership.

The establishment of the **Indo-US Science and Technology Forum (IUSSTF)** in the beginning of the new millennium reaffirms the conviction and belief in the rich legacy of US-India scientific and technological cooperation built over a period of five decades.

As its mandate, the IUSSTF provides an enabling platform to the scientific enterprises of the two nations by supporting an S&T program portfolio that is expected to harbor sustainable interactions with a potential to forge long-term collaborations. The IUSSTF program manifests are largely catalytic in nature that helps to create awareness through exchange and dissemination of information and opportunities in promoting bilateral scientific and technological cooperation. By charter, the IUSSTF programs have strived to bridge and embrace the interests of government, academia, and industry alike.

IUSSTF has an evolving program portfolio that is largely conceived and driven by scientific communities of both the countries through extending support for symposia, workshops, conferences on topical and thematic areas of interest; visiting professorships in academia; travel grants; training programs and advanced schools; Public-private networked centers and Knowledge R & D networked centers. IUSSTF also works towards nurturing contacts between young and mid career scientists by convening stimulating flagship events like the Frontiers of Science and Frontiers of Engineering symposium through the U.S. National Academies model. At the same time it reaches out to industries by partnering with business associations to generate high quality events on technology opportunities for business development to foster elements of innovation and enterprise through networking between academia and industry.

The Forum has utilized its definitive operational advantage, as an autonomous institution - the agility and flexibility, in being able to involve the private sector in its activity manifold. At the same time, IUSSTF has established an excellent working relationship with government institutions and technical agencies including the large academic communities in both countries. A high point during June 2004 was a flagship Forum conference on Indo-US Space Cooperation, which has proved to be a path breaking event connecting public and private sectors in charting the future road map on civilian space cooperation. The activities promoted by the Forum have also facilitated other inter-governmental initiatives such as the High Technology Cooperation Group (HTCG); U.S. led International Partnership in Hydrogen Economy (IPHE) and the DOE's Regional Blue Sky Carbon Sequestration Program.

In terms of intellectual strengths, India is emerging as a global hub for knowledge based R&D activities especially in the realms of manufacturing, design, drugs & pharmaceuticals, among others. Undeniably in this new paradigm both India and the United States need to capitalize through their synergistic and symbiotic competitiveness. The Forum has now been recognized as a major platform available to the scientific enterprises of both countries to fruition the new paradigm in bilateral S&T relationship. The Indo-US S&T Forum has a key role to play in nurturing and shaping this partnership. The benefits of our collaboration are expected to go beyond our respective national borders, hopefully to the global community at large.

The Indo-US S&T Forum has made a modest beginning – with the belief that modest beginnings can have significance far beyond the apparent.

Science & Technology Agreement

A historic Indo-US Science & Technology agreement was signed on October 17, 2005. The purpose of this umbrella agreement is to strengthen the science and technology capabilities of India and United States, through expanded relationship between scientific and technological communities of both countries in areas of mutual benefit. Under this agreement a binational Science and Technology Commission will be set up that both countries will co-fund.

This agreement, for the first time establishes intellectual property right protocols and other provisions necessary to conduct active collaborative research that will promote innovation, creativity and technology transfers through cooperation between Indian and U.S. scientists in government agencies, private sector, and academia in such areas as basic sciences, space, energy, nanotechnology, health, and information technology.

Next Steps in Strategic Partnership (NSSP)

India and United States have also reached a milestone in their strategic relationship by completing the Next Steps in Strategic Partnership (NSSP). The NSSP announced in January 2004, was designed to increase cooperation in civilian nuclear activities, civilian

space programs, high-technology trade, and missile defense. In particular, completion of the NSSP will enable to expand the scope of bilateral commercial satellite cooperation, remove U.S. export license requirements for unilaterally controlled nuclear items to most end users, and to revise export license requirements.

Initiative to Enhance Civilian Nuclear Cooperation

It opens new doorways for a cleaner and more secure global energy future through civilian nuclear cooperation. The agreement strengthens energy security and promotes the development of stable and efficient energy markets in India to ensure adequate, affordable nuclear energy supplies.

Initiative to Enhance Joint Activities in Space Cooperation

The effort will include in-space navigation and cooperation in the commercial space arena, through working group on Civil Space Cooperation. Immediate benefits will include launching two U.S. payloads on the Indian moon mission, and to include Indian astronaut in the U.S. astronaut-training program. The two nations have also expressed the readiness to expand cooperation on the Global Positioning System (GPS) and space exploration activities.

Strengthening Information and Communication Technology Cooperation

A key underpinning of the deepening bilateral partnership has been the demand for enhanced electronic connectivity between our two countries. India has become a key market for many information communication technology products made in the U.S., while the U.S. is an important consumer of Indian IT-enabled services. The cooperation will complement the work of the existing Indo-US cyber security Forum towards capacity building in protecting electronic transactions, strengthening e-commerce and preventing cyber crimes.

Energy Dialogue to Strengthen Energy Security

The dialogue will aim to ensure adequate energy and affordable supplies while addressing relevant environmental concerns. It will include five working groups to discuss common action on oil and gas, coal, energy efficiency, new and renewable technologies including civil nuclear energy. This includes India's participation in the FutureGen, an international public-private partnership to develop new technologies for a clean coal near zero emission power projects.

Disaster Response Initiative

This effort will build on the successful coordination undertaken by the Tsunami Core Group, which the U.S. and India were founding members of during relief efforts. The initiative will establish an ongoing effort to prepare for and conduct disaster prediction, response and mitigation operations in the Indian Ocean region and beyond. Enhanced

counter terrorism cooperation through scientific and technological tools is also planned as a part of this initiative.

HIV/AIDS Partnership

Both countries have agreed to expand bilateral efforts in the area of medical research and drug development including disease control and regional communication strategies. Coordinated alliances between U.S. and Indian companies and their governments will mobilize large resources from the private sector to support prevention, care, and treatment for people living with HIV/AIDS.

Knowledge Initiative in Agricultural Alliance

U.S. and India have agreed to invest money, manpower and expertise to work over the next three years to usher in the second green revolution. This joint effort will focus on promoting teaching, research, service, and commercial linkages that lead to developing and using innovations to achieve economic, social, and environmental benefits from the agricultural sector. The knowledge initiative in agriculture will conduct academic, research, outreach, and partnership programs needed to revitalize this historic partnership which was once the north star of the US-India S&T cooperation during the 1950's.