

## **General Studies – 2; Topic: *Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests***

### **India - US Cooperation in S&T**

#### **1) Introduction**

- India and the United States are the world's two largest democracies with distinguished scientific traditions and experts in a wide range of scientific fields.
- S&T cooperation between scientific communities of two countries is a pillar of vibrant India-US relationship.

#### **2) Why US cooperation is important?**

- American cooperation in science, technology and innovation will help India's start-up ecosystem
- Collaborative engagements in information technology, nanotechnology, and gene-editing technology will have positive impact on education, economy and trade.
- Learning the best practices in science administration from American agencies such as the National Institutes of Health, the Department of Energy, and NASA etc.
- Learning from U.S. institutions - ideation to prototyping and business-friendly incubation; fostering legal and investor-friendly milieu.
- Integrating American technologies with products of Indian grassroots innovations will enhance the value of the latter and make them scalable, affordable and marketable.
- Joint incubators to enable Indian start-ups to introduce products in the U.S. market
- Advancement of vaccines for TB, Dengue, and Chickungunya under bilateral Vaccine Development Programme.
- India-US Cooperation on S&T for Countering Terrorism
- To harness 175 GW clean energy by 2022, joint research on solar thermal equipments, PV cells etc are essential.

#### **3) Bilateral Partnerships**

- The Indo-US Science and Technology Forum (IUSSTF) to promote bilateral collaborations in science, technology, engineering and biomedical research through interaction among government, academia and industry.
- Bilateral agreement - "Partnership to Advance Clean Energy" for energy cooperation and address climate change.
- Joint participation in the High Intensity Superconducting Proton Accelerator, the Thirty Meter Telescope and the Laser Interferometer Gravitational Observatory
- Promoting innovation and entrepreneurship through U.S.-India Science and Technology Endowment Fund
- The NASA-ISRO Synthetic Aperture Radar (NISAR) mission - Earth monitoring satellite scheduled for launching in 2021.

#### **4) Way Forward**

- Science and technology, a key driver for innovation and job creation in both countries, needs to take centre stage.
- Knowledge generated through science and technology needs to be capitalised to fuel innovation and to create an entrepreneurial class.

- Model India's institutional system to enable successful journey from the laboratory to the marketplace.
- Enhance the efficiency and productivity of our emerging innovation system.
- A database of U.S.-based inventors, their inventions and technologies relevant to India needs to be created.
- The existing partnerships and student exchange programmes between research institutions and universities need to be strengthened
- Facilitate U.S.-based start-ups to enter India with inflow of technologies, mentors and best business practices
- The knowledge and skills of the successful Indian diaspora and Indophiles in the American administration should be leveraged
- Raise funds for programmes that will help India achieve inclusive development.
- Collaborations in areas of Arctic and Antarctic science and climate change.
- India and the US should collaborate more on space research programmes.
- India should push the USAID, American private philanthropies and corporate CSR efforts to focus on capacity building in key sectors of India.

### 5) **Conclusion**

- India's pledge to manufacture locally and create more jobs can be redeemed by marrying the Indian skills with the American expertise in science and technology.
- The shared values and interests of both the countries provide the essential underpinning for future collaboration.

