# Science Diplomacy Alert

*A fortnightly newsletter on S&T, Science Policy and Diplomacy*

**Focus**

## India - EU Strategic Partnership: Shaping the Future

President Ursula von der Leyen's visit is viewed as a landmark in India-EU relations, marking the first visit of the College of Commissioners beyond Europe since the beginning of their new mandate. Both sides recognised the importance of emerging technologies and committed to leverage their respective strengths towards human-centric and responsible digital transformation and development of advanced technologies like AI, high performance computing, 6G. India and EU also aim to expand and deepen cooperation in clean energy and climate and in the space sector. Sneha Sinha writes.

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## SCIENCE POLICY & DIPLOMACY

### International S&T Cooperation

**DAAD Calls on German Govt to Focus on Internationalisation of Universities**

"In order to attract outstandingly qualified people to science and industry in Germany in the long term, a future federal government must send a clear signal: International students and academics are welcome in Germany and enrich our country," DAAD President, Prof Dr Joybrato Mukherjee noted.

**UNESCO and ICANN Sign Agreement to Improve Online Linguistic Diversity**

As per the terms of the Agreement, the two entities would collaborate to enhance the secure use of additional scripts and languages in the Internet's Domain Name System (DNS). They aim to promote the Universal Acceptance Of all domain names and email addresses, regardless of character length, language, or script, across all Internet-enabled applications, devices, and systems.

**IIT Hyderabad and Swinburne University Establish Joint Research Institute**

Swinburne, IIT-H, Manufacturing, Materials, Energy and Communication Technologies Joint Research Institute (SIMMECT) would focus "on advancing surface coatings, material development, additive manufacturing and digital manufacturing technologies".

## Google Launches AI Co-scientist

Google's AI Co-scientist is a multi-agent AI system built with its Gemini 2.0 model as a virtual scientific collaborator. Scientists can use the tool equipped with "deep research tools" to generate hypotheses and research proposals and accelerate the pace of scientific discoveries.

## Senegal Launches Digital Economy Strategy

The strategy seeks to modernize public services in the country and entails a unique biometrics-based national digital ID. This initiative aims to create a digital government, close the digital divide by ensuring universal internet access, and support innovation and entrepreneurship.

## South Korea Bans China's Deepseek LLM

South Korea's Personal Information Protection Commission has put a stop to new downloads in the country until "improvements and remedies are made to ensure it complies with the country's personal data protection laws".

## Emerging Tech & Governance



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## Events & Meetings



### PSA Chairs Meeting on Boosting Advanced Manufacturing

The meeting convened by the Empowered Technology Group of the Technology Advisory Council discussed "the landscape, opportunities, and necessary interventions for strengthening advanced manufacturing in India". It included several expert presentations on critical dimensions of advanced manufacturing.

### Global Dialogue on Health Management Held in Jaipur

Organised by the Indian Institute of Health Management Research (IIHMR) University, Jaipur the event was attended by experts as well as institutions. Themes discussed include: digital health and telemedicine, sustainable public health management solu tions, and universal digital health and analytics.

### ITU Organises First-ever International Submarine Cable Resilience Summit

Held during 26-27 February in Abuja, Nigeria, the summit focused on yielding actionable solutions "improving the resilience of global connectivity infrastructure". The new International Advisory Body on Submarine Cable Resilience also met for the very first time during the summit.

### IPCC Holds 62nd Session in Hangzhou

Held during 24-28 February 2025, the session discussed the outlines for the methodology report on carbon dioxide removal technologies and carbon capture and storage, the reports that are to be produced by the Panel's three working groups as well as a synthesis report.

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# INDIAN SCIENCE NEWS

## NAKSHA Program Launched to Modernise Urban Land Records Management

National Geospatial Knowledge-based Land Survey of Urban Habitations (NAKSHA) has been launched by the Central Department of Land Resources. The program will integrate aerial and ground surveys with advanced Geographic Information System (GIS) technology to enhance land administration, simplify property ownership records, and streamline urban planning.

## National Science Day Celebrated

Celebrated since 1986, the National Science Day is celebrated in India to mark the discovery of the Raman effect by physicist C.V. Raman on February 28 in 1928. It is intended to promote scientific temper and build awareness on the significance of science and technology for the society.

## ISRO Develops Solid Propellant Mixer

"Solid propulsion plays a crucial role in Indian Space Transportation Systems, and the vertical mixer is one of the critical equipment in solid motor production", the agency noted in its official statement. This marks an important milestone, as producing solid propellants is a complex process requiring the careful and precise mixing of highly sensitive and hazardous ingredients.

## NIT Rourkela Researchers Develop New Innovation for Solar Energy Harvesting

The new low-cost technology can extract maximum power from solar panels under changing weather conditions. The new technology employs a voltage sensor-based MPPT method that eliminates the need for current sensors, reducing system complexity and cost.

## Zydus Develops New Vaccine for Influenza A and B

In its official statement, the company noted that VaxiFlu-4, a Quadrivalent Inactivated Influenza vaccine, would offer seasonal protection against four new virus strains. It covers strains of both influenza A and influenza B, providing broader protection while significantly reducing the risk of vaccine mismatch.

## IN-SPACe Launches 58 Million Dollars Fund for Startups

According to Pawan Goenka, Chairman, Indian National Space Promotion and Authorization Centre (IN-SPACe), "the fund will offer financial support of up to 60% of the project cost for startups and medium and small businesses, and 40 per cent for larger industries, with a maximum funding cap of 250 million rupees per project."

# ADVANCES IN S&T

## New Robot Can Efficiently Monitor Underwater Infrastructure, Marine Life
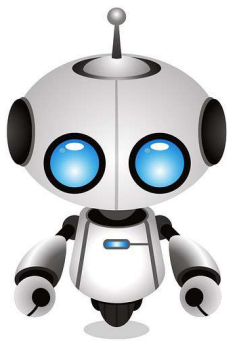


**The Problem:** Most robotic swimmers struggle in cluttered aquatic environments filled with plants, debris, and wildlife. Traditional propeller-based designs generate noise and disturbances that can interfere with delicate ecosystems, such as coral reefs or lake shores.

**The Solution:** The bioinspired mini robot developed by the EPFL's School of Engineering, in collaboration with the Max Planck Institute for Intelligent Systems uses silent, propulsive fins that emulate marine flat worms. The robot can flap the fins up to ten times faster than real fish. It also has artificial muscles and a unique locomotion system which allows it to move and swim sideways.

**Future Prospects:** The researchers' expectations for precision agriculture, pollution tracking, and ecological monitoring are some of the vast potential uses for this robot. This robot's unobtrusive, silent movements make it easy to study sensitive places without inflicting any harm or disruption to the environment.

# Nvidia's CorrDiff Can Provide Accurate Local Weather Prediction

**The Problem:** While weather forecasting has become more accurate in a macro sense, Local weather prediction is still waiting for improvement, especially in places distant from large metropolitan areas. This is due to the huge cost that would be involved in using supercomputers to make such predictions.

**Nvidia's CorrDiff:** The Corrective Diffusion system has been developed by Nvidia in collaboration with the Taiwan Central Weather Administration. The system uses AI models to downscale global weather predictions to a local level. It firstly employs a deterministic AI model which yields predictions using a given input and weather patterns it has been trained on. The second step involves fine-tuning the output from the first step using a generative diffusion model.

**Future Prospects:** The team at Nvidia suggests their system can bring accurate forecasting to the local level for people around the world, helping to better predict dangerous weather, and possibly, save lives.

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# India-EU Strategic Partnership: Shaping the Future

*Sneha Sinha,*
*Consultant, RIS*

The President of the European Commission and College of Commissioners visited India during 27-28 February 2025. President Ursula von der Leyen's visit is viewed as a landmark, marking the first visit of the College of Commissioners beyond Europe since the beginning of their new mandate and in the history of India-EU bilateral ties as well. The second meeting of the India-EU Trade and Technology Council (TTC) also took place. Science, technology and innovation continue to be an important pillar for the India-EU partnership. Though, their discussions revolved around several aspects of trade, supply chains, investments and defence cooperation, etc. science and technology remained the fulcrum, given their huge potential for India-EU collaboration.

Both sides recognised the importance of emerging technologies and committed to leverage their respective strengths towards human-centric and responsible digital transformation and development of advanced technologies like AI, high performance computing, 6G, etc. Given the growing role of India and EU in the global governance of AI, the European AI Office and India AI Mission agreed to deepen cooperation, to encourage an ecosystem of innovation and foster information exchange for developing trustworthy AI as well as developing tools and frameworks for ethical and responsible AI. Recognising the growing significance of semiconductors, the India-EU Trade and Technology Council aims to shape outcome-oriented cooperation in order to strengthen semiconductor ecosystems. In this direction, the progress in the implementation of MoU on semiconductors for boosting the semiconductor supply chains, leveraging complementary strengths, facilitating talent exchanges and fostering semiconductor skills among students and young professionals was welcomed. Additionally, a MoU between Bharat 6G alliance and the EU 6G Smart Networks and Services Industry Association was also signed for creating secured and trusted telecommunications and resilient supply chains.

India and EU also aim to expand and deepen cooperation in clean energy and climate, water, smart and sustainable urbanization, and disaster management as well as work to intensify cooperation in specific areas such as clean hydrogen, offshore wind, solar energy, and sustainable urban mobility. India and EU are members of several mega science projects and research collaborations through which they contribute to capacity building in several S&T fields, including space, energy, healthcare, and climate change. EU member states like France and Germany are deeply involved in the International Solar Alliance (ISA) and are active members of the Coalition of Disaster Resilient Infrastructure (CDRI). Thus, there is immense scope for deepening EU's cooperation in these multilateral efforts.

The EU has a strong biofuel policy framework, which aims to reduce greenhouse gas emissions. Further, deepening India-EU partnership through the Global Biofuels Alliance would also help to intensify global efforts to diversify energy sources and reduce emissions. Thus, renewable energy and climate change is a critical area of cooperation between India and the EU. In this context, the agreement on holding an India-EU Green Hydrogen Forum and the India-EU Business Summit on Offshore Wind Energy was also welcomed.

The space and geospatial sector has been identified as another area of cooperation between India and the EU. India has recently launched the National Geospatial Mission. Cooperation opportunities in this sector include joint space missions and explorations, satellite developments as well as data sharing and use of space technologies for environmental monitoring, disaster response and sustainable development. The United States withdrawal from the World Health Organisation as a key funder is likely to have major implications for global health. Additionally, absence from the international agreements on health like the Pandemic Treaty offers scope for India and the European Union to take centre stage to prioritise and jointly take up issues concerning global health to combat global health threats, sharing data and jointly develop vaccines and treatments for emerging diseases and future pandemics.

With long-term India-EU Strategic Partnership, there is immense scope for India-EU cooperation in several areas of common bilateral interests. India-EU partnership can also play a crucial role in addressing global challenges like climate change, exploring renewable energy alternatives and global health, strengthening both regions' influence on the global stage.

# INSIGHTS & RESOURCES

## Cali Fund: Financing Biodiversity Action

The Cali Fund for the Fair and Equitable Sharing of Benefits from the use of Digital Sequence Information on Genetic Resources (DSI) was launched in Rome during the resumed sessions of the CBD COP 16 in Rome.

- The Cali Fund would be supported by contributions from private sector entities which use DSI from genetic resources. DSI is a placeholder term in CBD parlance which refers to data drawn from dematerialized genetic resources.

- It shall support the three objectives of the CBD: "the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising from the use of genetic resources".

- 50 per cent of the resources of the Cali Fund will be allocated to the self-identified needs of indigenous peoples and local communities, including women and youth. It would also help implement the Kunming-Montreal Global Biodiversity Framework and support developing countries' National Biodiversity Strategies and Action Plans.

- The fund would be jointly managed by the UN Development Programme, the UN Environment Program and the Secretariat of the CBD.

# European Commission Releases New Report on Science Diplomacy

The report "A European Framework for Science Diplomacy: Recommendations of the EU Science Diplomacy Working Groups," resulted out of a collaborative process in which more than 130 experts from science and diplomacy participated.

- The report outlines the development of a European framework for science diplomacy, aimed at enhancing international cooperation and addressing global challenges through scientific collaboration.

- It emphasizes the importance of implementing the recommendations to enhance the EU's global influence and contribute to the achievement of the United Nations Sustainable Development Goals (SDGs).

- The report puts forth diplomacy in science as a new dimension of science diplomacy. It refers "to the use of diplomatic skills and tools in and by science".

- It identifies supporting multilateralism through "preserving spaces for exchange and fostering a shared responsibility for addressing common challenges and protecting global public goods" as one of the aims of Europe's science diplomacy strategy.

- It states that "European science diplomacy must become more visible and be at the core rather than at the fringes of both, foreign and security policy as well as research and innovation policy."

# AAAS and Royal Society Launch New Science Diplomacy Framework

The American Association for the Advancement of Science and the Royal Society have launched a new framework for science diplomacy. The framework builds on the previous one released in 2010. The central critique of the previous report is that it was overly optimistic about the potential of science diplomacy to solve global challenges, and assumed a commitment to multilateralism and global solidarity. The updated framework is responsive to major changes in the geopolitical and technological landscapes and asserts:

- Science diplomacy is a tool used to achieve diplomatic objectives.
- Need to address new challenges in the "era of disruption" faced by science diplomacy today.
- Challenges including economic competition, the rise of non-state actors or "tech titans" who are "using science diplomacy to conduct their own equivalent of 'statecraft' in support of their company's objective", and rapid advances such as artificial intelligence.
- Scope for use of science diplomacy as a tool by nations or non-state actors to further their own interests.
- Examines into the broader landscape of key players, including how industry uses science diplomacy to further its interests.
- Need for awareness of national security risks in scientific collaborations.
- Science diplomacy needs to move from a theoretical to a more practical framework.

*We welcome your comments and valuable suggestions. Please write to us for receiving publications, updates and notices regarding seminars, conferences, etc. Contact us at* science.diplomacy@ris.org.in.

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