

# NEWSLETTER



Tracking Policy,  
Innovation and Their  
Business Impact

## SCIENCE AND TECHNOLOGY PULSE



### **Editor's Note**

*Dear Readers,*

*Welcome to the Fifth edition of our Science and Technology Pulse Newsletter, May 2026.*

*This edition highlights India's continued efforts to strengthen science-led industrial growth, healthcare innovation and global technology partnerships through targeted policy initiatives and international collaboration. Developments such as India's expanding engagement with Vietnam and Japan in artificial intelligence, deep-tech and digital health, along with the India–New Zealand Free Trade Agreement and new partnerships to strengthen research and development, reflect the country's growing focus on innovation-driven economic growth and strategic technology cooperation.*

*At the same time, advances in smart energy materials, pharmaceutical research, biodiversity governance and sustainable infrastructure demonstrate the increasing role of science and technology in addressing industrial, environmental and healthcare priorities. Initiatives ranging from smart oxide-based energy storage and accessible design standards to cotton productivity enhancement and circular approaches in road infrastructure highlight how research, sustainability and industrial development are becoming increasingly interconnected.*

*I invite readers to explore the updates, sectoral developments and upcoming Indian and global conferences featured in this edition, and to reflect on how these shifts may influence investment priorities, industrial competitiveness and India's evolving contribution to global innovation agendas.*

*Warm regards,  
Abhilasha Nayal*



## India–Vietnam Strengthen Cooperation in AI and Deep-Tech

**Business Impact:** *The engagement is expected to support the AI, semiconductor, biotechnology, and deep-tech sectors through joint research, startup exchanges, and technology partnerships between India and Vietnam.*

The National Institute of Pharmaceutical Education and Research (NIPER), Raebareli, signed a Memorandum of Understanding with Roche Pharma India in the presence of Manoj Joshi, Secretary, Department of Pharmaceuticals, to strengthen pharmaceutical education and industry-linked research in India. The collaboration aims to bridge the gap between academic learning and industry requirements by introducing certificate programmes in regulatory affairs for students and professionals. It will also include guest lectures and training sessions by industry experts on areas such as AI-driven pharmaceutical research, drug development and healthcare innovation. The initiative supports India’s efforts to enhance capabilities in regulatory sciences, biologics and advanced pharmaceutical technologies, aligned with the government’s Biopharma Shakti mission and the broader goal of transitioning from volume-based to value-driven pharmaceutical growth.

**In this newsletter  
you can expect  
updates from:**

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Government Initiatives

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Emerging Technologies

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Health and Medicine

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Environmental Science

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Food and Agriculture

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Space Exploration

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## India–New Zealand Sign Free Trade Agreement to Expand Trade and Investment

**Business Impact:** *The agreement is expected to support manufacturing, pharmaceuticals, agriculture, MSMEs and services sectors through improved market access, investment flows and skilled mobility opportunities.*

India and New Zealand signed the India–New Zealand Free Trade Agreement (FTA) in New Delhi, covering trade, investment, services, agriculture, pharmaceuticals and skilled mobility. The agreement provides 100% duty-free access for Indian exports to New Zealand, while India has opened around 70% tariff lines covering 95% of the bilateral trade value, excluding sensitive sectors such as dairy and key agricultural products. The pact includes a USD 20 billion investment commitment across manufacturing, infrastructure and emerging technologies. It also expands access in 118 service sectors and introduces pathways for student mobility, temporary employment and cooperation in AYUSH, semiconductors and digital trade.



## NIScPR–RIS MoU to Strengthen Science Policy and Diplomacy

**Business Impact:** *The initiative is expected to support science policy, semiconductor and sustainability sectors through greater research engagement and knowledge-sharing activities.*

The CSIR–National Institute of Science Communication and Policy Research (NIScPR) signed a Memorandum of Understanding with the Research and Information System for Developing Countries (RIS) on 6 May 2026 to strengthen cooperation in science, technology and innovation (STI) policy and diplomacy. The engagement covers research, policy analysis, capacity building and knowledge sharing in areas such as science communication, traditional knowledge and science diplomacy. It will also include publications, workshops, policy dialogues and outreach activities aimed at supporting inclusive and sustainable development. During the event, experts highlighted the importance of science diplomacy and South-South cooperation in addressing challenges related to climate change, healthcare and technology access. Three publications related to India–Korea S&T cooperation, semiconductor ecosystem development and particulate pollution from road transport were also released.

## Office of PSA and FICCI Sign MoU to Strengthen R&D Ecosystem

**Business Impact:** The initiative is expected to support deep-tech, clean energy, biotechnology and industrial R&D sectors through stronger industry-academia collaboration and innovation-focused partnerships.

The Office of the Principal Scientific Adviser (PSA) to the Government of India signed a Memorandum of Understanding with the Federation of Indian Chambers of Commerce and Industry (FICCI) on 6 May 2026 to strengthen India's research and development ecosystem. The partnership aims to improve collaboration between industry, academia and research institutions, while supporting research translation, commercialisation, strategic partnerships and policy dialogue. Discussions during the event highlighted the role of initiatives such as the Anusandhan National Research Foundation (ANRF), the Research, Development and Innovation (RDI) Fund, and deep-tech R&D in areas including solar energy, green batteries, pharmaceuticals and agricultural biotechnology. The collaboration also aims to increase industry participation in R&D and support scalable innovation across sectors.



## India-Japan Expand Cooperation in Healthcare and Digital Health

**Business Impact:** The engagement is expected to support the digital health, pharmaceutical, medical devices and healthcare technology sectors through greater collaboration in research, innovation and healthcare infrastructure.

India and Japan held the 3rd Joint Committee Meeting (JCM) on Healthcare at Bharat Mandapam, New Delhi, co-chaired by Union Health Minister Jagat Prakash Nadda and Japan's Minister in charge of Healthcare Policy Kimi Onoda. The discussions focused on strengthening cooperation in areas such as non-communicable diseases (NCDs), digital health, medical supply chains and healthcare workforce development under the India-Japan Memorandum of Cooperation in Healthcare and Wellness. India highlighted initiatives under the Ayushman Bharat Digital Mission, pharmaceutical manufacturing and medical devices, while Japan shared expertise in AI-enabled medical technologies, cancer screening and system integration. Both countries also discussed collaboration in joint research, training programmes, personnel exchanges and resilient healthcare systems.



## Smart Oxide Developed for Energy Storage and Charge Indication

**Business Impact:** The development is expected to support the energy storage, smart electronics and advanced materials sectors through multifunctional battery and supercapacitor technologies.

Scientists at the Centre for Nano and Soft Matter Sciences (CeNS), Bengaluru, under the Department of Science and Technology, have developed an oxygen-deficient bimetallic oxide ( $\text{Mo}_{0.11}\text{W}_{0.89}\text{O}_{3-x}$ ) that can both store energy and visually indicate charge levels through colour changes. The material changes from blue in the charged state to transparent when discharged, enabling real-time charge indication. Researchers used a solvothermal synthesis method to create oxygen-deficient structures that improve ion movement and energy storage performance. The material demonstrated a specific capacitance of  $234 \text{ F g}^{-1}$ , maintained stability over 10,000 charge-discharge cycles, and successfully powered an LCD timer and LED. The findings were published in the journal *Materials Chemistry A*.



## Mission for Cotton Productivity Approved to Strengthen Cotton Sector

**Business Impact:** The initiative is expected to support the textile, agri-biotechnology and cotton processing sectors through improved productivity, traceability and sustainable fibre development.

The Union Cabinet, chaired by Prime Minister Narendra Modi, approved the Mission for Cotton Productivity, with an outlay of ₹5,659.22 crore for the period 2026–27 to 2030–31, to improve cotton productivity, quality, and global competitiveness. The mission aims to increase cotton production to 498 lakh bales and raise lint productivity from 440 kg/ha to 755 kg/ha by 2031, benefiting around 32 lakh farmers across 140 districts in 14 states. Key focus areas include the development of high-yielding, climate-resilient, and pest-resistant seeds, the promotion of technologies such as the High Density Planting System (HDPS) and Integrated Cotton Management, the modernisation of 2,000 ginning and processing factories, and the strengthening of cotton testing and traceability under Kasturi Cotton Bharat. The mission also promotes cotton waste recycling, circular economy practices and diversification into natural fibres such as bamboo, flax and banana fibre.

## Government Approves Additional Wheat Exports to Support Farmers

**Business Impact:** The decision is expected to support the agriculture, grain trading and food processing sectors through higher export opportunities and improved market liquidity.

The Government of India has approved the export of an additional 25 lakh metric tonnes (LMT) of wheat following a review of production, stock availability and domestic price trends. Wheat acreage during the Rabi 2026 season increased to around 334.17 lakh hectares, compared to 328.04 lakh hectares last year, while wheat production for 2025–26 is estimated at 1,202 LMT as per the Second Advance Estimates released on 10 March 2026. Earlier approvals in January and February 2026 had already permitted exports of 25 LMT wheat and 10 LMT wheat products, taking the total approved exports to 50 LMT of wheat and 10 LMT of wheat products. The government stated that the measure aims to improve market liquidity, support farmer incomes and maintain domestic food security.



## NIPER Hajipur Expands Pharma Research and Regulatory Collaborations

**Business Impact:** The collaborations are expected to support pharmaceutical R&D, regulatory science and biotechnology sectors through stronger industry–academia engagement and advanced research capabilities.

The National Institute of Pharmaceutical Education and Research (NIPER), Hajipur signed two Memorandums of Understanding (MoUs) with Boehringer Ingelheim India Pvt. Ltd. and the Indian Pharmacopoeia Commission (IPC) to strengthen pharmaceutical research and regulatory science in India. The collaboration with Boehringer Ingelheim provides researchers access to the company's opnMe® open science platform to support scientific exchange, translational research and student training. The MoU with IPC focuses on pharmaceutical standards, patient safety, and regulatory research, including analytical method validation and the development of standards for biologics, biosimilars, and cell and gene therapies. The partnerships also include specialised training and capacity-building programmes.



## BIS Publishes New Standards for Assistive Products and Accessible Design

**Business Impact:** The initiative is expected to support the medical devices, assistive technology and rehabilitation equipment sectors through standardisation, quality improvement and export readiness.

The Bureau of Indian Standards (BIS) has published six new standards for assistive products and accessible design under the National List of Essential Assistive Products (NLEAP) initiative led by the Indian Council of Medical Research (ICMR). The standards cover products such as elbow crutches, walking sticks, multi-leg walking sticks and portable ramps, along with accessible design standards for tactile guide maps and Braille-based signage systems. The standards prescribe requirements related to safety, ergonomics, performance, labelling and accessibility, and were developed with participation from industry, academia, AIIMS, ALIMCO and disability support organisations. BIS stated that the initiative supports the Accessible India Campaign (Sugamya Bharat Abhiyaan) and aims to strengthen the quality, accessibility and export readiness of assistive technologies manufactured in India.



## MoEFCC Launches Biodiversity Governance Project in Tamil Nadu and Meghalaya

**Business Impact:** The project is expected to support the biodiversity conservation, sustainable agriculture and green enterprise sectors through community-led environmental management and nature-based livelihood opportunities.

The Ministry of Environment, Forest and Climate Change (MoEFCC) and the National Biodiversity Authority (NBA) have launched a five-year project (2025–2030) titled “Strengthening Institutional Capacities for Securing Biodiversity Conservation Commitments” with support from the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP). Backed by a USD 4.88 million grant, the project aims to strengthen biodiversity governance in Tamil Nadu and Meghalaya by integrating conservation into Gram Panchayat Development Plans (GPDs). Key focus areas include strengthening local institutions, promoting Access and Benefit Sharing (ABS) mechanisms, supporting green micro-enterprises and enhancing community-led conservation and capacity building initiatives.



Image Source: Google

## CSIR-CRRI and BPCL Develop Road Infrastructure Using End-of-Life Plastic

**Business Impact:** *The initiative is expected to support sustainable infrastructure, waste management and road construction sectors through greater adoption of recycled materials in engineering applications.*

The CSIR–Central Road Research Institute (CSIR-CRRI), in collaboration with Bharat Petroleum Corporation Limited (BPCL), has received recognition from the India Book of Records and Asia Book of Records for developing the first roadblock section constructed using technical textile geocells made from end-of-life plastic. The technology uses processed plastic waste to manufacture technical textile geocells for road infrastructure applications, providing a sustainable solution for plastic waste utilisation. The project involved extensive material characterisation, performance evaluation and validation studies to assess structural integrity, durability and field applicability. Developed as part of BPCL’s sustainability initiatives, the technology supports circular economy objectives and resource-efficient infrastructure development while addressing challenges related to plastic waste disposal.



## Skyroot Aerospace Becomes India’s First Space-Tech Unicorn

**Business Impact:** *The development is expected to support the private space, aerospace manufacturing and satellite launch sectors through increased investment, technology development and commercial space activities in India.*

Skyroot Aerospace has become India’s first space-tech unicorn after raising around USD 60 million in a funding round led by Sherpalo Ventures and GIC, taking the company’s valuation to approximately USD 1.1 billion. The Hyderabad-based startup, founded in 2018 by former ISRO scientists, is preparing for the launch of Vikram-1, India’s first privately developed orbital rocket. The funding round also saw participation from investors, including BlackRock, with the company planning to expand manufacturing capacity, increase launch frequency and advance development of the Vikram-2 rocket. The milestone reflects growing investor confidence in India’s private space sector and expanding commercial opportunities in launch services and satellite deployment.

## Upcoming National Events 20 May – 20 June 2026

1–2 June 2026

**EVENT:** International Big Cat Alliance (IBCA) Summit 2026

**LOCATION:** New Delhi

**FOCUS/ THEME:** Global cooperation on big cat conservation, biodiversity protection and ecosystem sustainability.

**INDUSTRY RELEVANCE:** Supports biodiversity conservation, eco-tourism, wildlife technology, environmental research and sustainability sectors through international collaboration, conservation financing and knowledge-sharing initiatives.

8–18 June 2026

**EVENT:** 64th Sessions of the UNFCCC Subsidiary Bodies (SB64)

**LOCATION:** Bonn, Germany

**FOCUS/ THEME:** Global climate negotiations and Paris Agreement implementation.

**INDUSTRY RELEVANCE:** Influences renewable energy, climate-tech, carbon trading and sustainable infrastructure sectors through evolving climate policy and low-carbon investment frameworks.

16–18 June  
2026

**EVENT:** Our Ocean Conference 2026

**LOCATION:** Kenya

**FOCUS/ THEME:** Ocean sustainability and blue economy cooperation.

**INDUSTRY RELEVANCE:** Supports marine biotechnology, sustainable fisheries, ocean conservation and offshore renewable energy sectors through global partnerships, investment discussions and sustainable ocean governance initiatives.

VeK is a policy advisory and research firm, distinguished by data-driven approach to analyse policy and regulatory developments in India and globally.

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