

NEWS TODAY

Vice President calls for authentic and practical research

Underlining the significance of research, he stressed on the capability of research to change the ground reality and make an **impact**.

About Research Impact

- It is the **demonstrable contribution** that a research makes to **society** and the **economy [Economic and Social Research Council (ESRC)]**.
- It can be **immediate or long-term** and is often from **accumulated knowledge** and not a specific research finding.
- It essentially includes **reach** (extent or the diversity of the beneficiaries impacted), and **significance** (how valuable is the impact to the beneficiaries).

Impact of Research

- **Academic impact:** Demonstrable contribution of a research across and within academic disciplines.
- **Non-academic or Socio- economic impact:** Contribution to society and economy, to benefit various sectors:
 - ⊕ **Cultural:** Research on **distinctiveness of tribal values and customs** help in preserving their practices.
 - ⊕ **Economic:** Research on **Inequality and growth** helped shape government's fiscal policies.
 - ⊕ **Environmental:** Research on **Hydro fluorocarbon** (used in refrigeration) helped identify its Global Warming potential.
 - ⊕ **Health: Genome India Project** studying 10,000 Genomes would help in identification of diseases.
 - ⊕ **Political:** Research on **voting behaviour** shapes the electoral policies of candidates.
 - ⊕ **Technological:** Research on **Nanotechnology and Quantum technology** have revolutionised semiconductor ecosystem.

Improving the impact of Research



Government

Ensure equitable research funding and promote innovation across institutions.



Industry

Encourage R&D spending through CSR initiatives and foster stronger ties with educational institutions.



Academia

Focus on incentivizing research, quality-focused grants, integrating interdisciplinary projects into educational programs.

Initiatives to improve Research Ecosystem in India

- **One Nation One Subscription:** Provide eligible students, faculty, researchers, and scientists with access to top international research articles and journals.
- **Vigyan Dhara:** Under Department of Science and Technology (DST).
- **Scheme for Promotion of Academic and Research Collaboration (SPARC):** Improving the research ecosystem of India's higher educational institutions.
- **Impacting research Innovation and Technology (IMPRINT):** Provides solutions to most relevant engineering challenges and translating knowledge into viable technology.

Former Union Minister for Electronics and IT advocates for 'Sovereign AI'

Former Minister made the case for **India to have its own "Sovereign AI" strategy** – to develop, control, and deploy its own AI capabilities, emphasizing its **implications for economic and national security**.

What is Sovereign AI?

- It can broadly be understood as **nation's capabilities and control over AI technologies** and associated data.
 - ⊕ This often includes **how the AI technologies are deployed and operated** as well as the policies and **personnel used to operate the AI technologies** and protect the data.
- Proposed AI Strategy for India
 - ⊕ **GovAI + Private AI = Sovereign AI**
 - ⊕ **GovAI** means the deployment of **AI in the use cases related to Governance**, such as delivery of public services.
 - ⊕ **GovAI can be built and deployed over the existing Digital Public Infrastructure (DPI)** such as digital payments, insurance, health, education, skills, etc., which has huge repositories that can be transformed into **consented personal data and/or non-personal training data for AI models**.

India's initiative for Sovereign AI

- **IndiaAI Mission:** Approved by Union Government in 2024, it aims to empower AI Startups and expand Compute Infrastructure Access.
- **Measures undertaken by Private sector**
 - ⊕ **Tata Group partnered NVIDIA** to build State-of-the-Art AI Supercomputer to provide **Infrastructure-as-a-Service and Platform for AI Services**.
 - ⊕ **Reliance Industries partnered NVIDIA** to develop a foundation LLM tailored for GenAI and trained on the diverse languages of India.

Significance of Sovereign AI for India

- **Strategic:** Building India's AI capabilities can take on a strategic goal of protecting our own economic interests from risks of AI denial or weaponisation by countries in an increasingly competitive world.
- **Economic:** To enable Indian innovators and entrepreneurs to compete with Big Tech models and platforms.

India joins the UN Committee of Experts on Big Data and Data Science for Official Statistics (UN-CEBD)

It marks a step toward **revolutionizing statistical production** and highlights India's commitment to leveraging data and technology for **informed decision-making**.

Significance of Joining for India

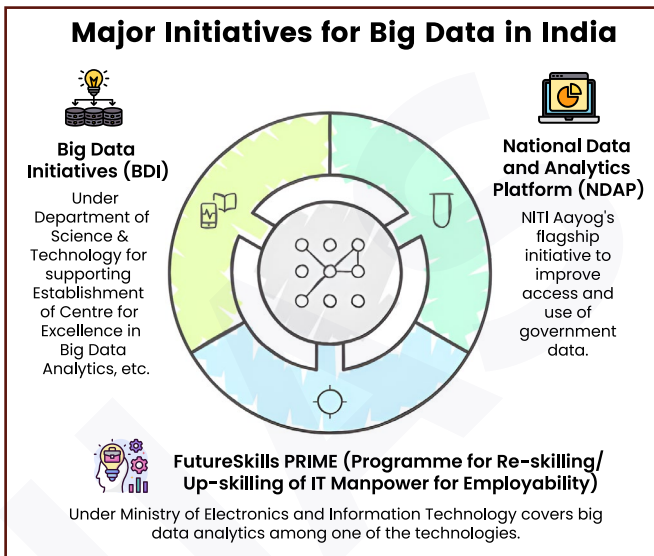
- **Strategic opportunity:** Align domestic advancements with international goals, learning from global best practices.
- **Streamline Statistical Production:** Drive innovation in data collection, processing, and analysis.
- **Improve Decision-Making:** Provide policymakers with real-time insights for evidence-based decisions, addressing key socio-economic challenges.

About Big Data

- **Definition:** Data whose scale, diversity, and complexity require new architecture, techniques, algorithms, and analytics to manage it and extract value and hidden knowledge from it.
 - ⊕ It includes **structured data** (inventory database, list of financial transactions); **unstructured data** (social posts or videos); and **mixed data sets** (used to train large language models for AI).
- **Characteristics of Big Data: Volume, Variety, Velocity** (high rate of change) and **Veracity** (uncertainty and incompleteness).

Applications of Big Data in Various Sectors

- **Healthcare:** Personalized medicine, clinical risk management, disease prediction, drug recommendations, etc.
- **Logistics and Transport:** Bolster supply chain performance by fostering proactive and reactive capabilities.
- **Marketing and Advertising:** Precise targeting, market analysis, customer insights.
- **Smart Cities:** Resource management, improved infrastructure planning, and AI-driven solutions to urban challenges.
- **Education:** Personalized learning, improving educational quality.
- **Earth Sciences:** Climate and earth studies, weather modelling, and prediction.



UN Committee of Experts on Big Data and Data Science for Official Statistics (UN-CEBD)

- **Origin:** 2014 with Australia as its first chair.
- **Aim:** Provide a strategic vision, direction and coordination for a global programme on big data for **official statistics**, including for indicators of the 2030 Agenda for Sustainable Development.
- **Membership:** Consists of **31 member states** and **16 international organizations (Including India)**.

Right to Access to Justice Not Absolute: Supreme Court (SC)

Acknowledging the **right to access to justice** as the **cornerstone of democracy**, SC recently imposed a penalty on a petitioner for filing multiple **frivolous litigations** that burden the judicial system.

- A frivolous litigation is a **lawsuit that lacks any arguable basis either in law or in fact** and intends to harass, or delay the judicial process.
- The issue was also taken up by the apex court earlier in the **Subrata Roy Sahara Vs Union of India (2014)**, **Dalip Singh v. State of Uttar Pradesh and others (2010)**, and the **K.C. Tharakan Vs State Bank of India & Ors (2023)**.

Right to Access to Justice

- **Meaning:** It is a basic principle of the **rule of law** and deals with the **ability of people** to seek and obtain a remedy through formal or informal institutions of justice for **grievances**.
 - ⊕ SC in **Anita Kushwaha v. Pushap Sudan (2016)** held **Access to Justice is a Fundamental Right** under **Article 14 (Right to Equality)** and **Article 21 (Right to Life and Personal Liberty)**.

Other Provisions related to Right to Access to Justice

- **Constitutional**
 - ⊕ **Preamble** covers **social, economic and political justice**.
 - ⊕ **Directive Principles of State Policy** under **Article 39A** (Right to free legal aid).
 - ⊕ **Article 32** (Right to Constitutional Remedies) **Article 226** (Power of High Court to Issue Writs).
- **Public Interest Litigation:** Liberalised the **rule of locus standi** (where only the aggrieved person can file a case for the enforcement of right), to allow public spirited persons or organizations for the same.

Essential Elements of Access to Justice (SC)

<p>Adjudicatory Mechanism</p> <ul style="list-style-type: none"> ▪ Court ▪ Tribunal 	<p>Affordable Adjudication</p> <ul style="list-style-type: none"> ▪ Low Cost ▪ Support for Poor 	<p>Speedy Adjudication</p> <ul style="list-style-type: none"> ▪ Quick Trials ▪ Efficient Processes 	<p>Accessibility</p> <ul style="list-style-type: none"> ▪ Hierarchy ▪ Distance
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India's G20 Sherpa highlights the need for India to be Global Champion in Sunrise Sectors

While addressing **Bharat Climate Forum 2025**, he highlighted the need for India becoming a global champion in sunrise sectors to achieve the target of becoming a developed nation by 2047 and become a USD 32 trillion economy.

What are Sunrise sectors?

- Sunrise industry is a term used for a sector that is developing and poised for rapid growth.
- Typically, such industries register high growth rates and have numerous start-ups and plenty of funding.
 - ⊕ E.g., Semiconductor, Artificial Intelligence, Clean Mobility Systems, Genomics and Pharma, etc.

Significance of Sunrise Sectors

- **Economic growth and diversification:** Sectors such as renewable energy, EVs, biotechnology, etc., diversify the economy by reducing dependency on traditional industries, making it more resilient to global economic fluctuations.
- **Technological advancements:** IT and digital technology sectors, including AI and machine learning, have cross-sectoral transforming impact on industries like healthcare, education, and manufacturing.
- **Sustainable development:** Industries like renewable energy, waste management, and green technologies support India's climate commitments such as achieving net-zero by 2070.

Challenges for Sunrise sectors in India

- **Limited access to Capital:** Sectors like renewable energy, biotechnology, EVs, etc., require substantial upfront investment.
- **Skilling gaps:** Lack of adequate Industry-Academia convergence results in skill gaps in workforce required in these sectors.
- **Technological challenges:** Critical technologies and components, such as semiconductors, are largely imported, making sectors vulnerable to global disruptions.

Measures taken to promote Sunrise Sectors in India

- **Policies:** Make in India, Atmanirbahar Bharat, Startup India, National Electric Mobility Mission Plan, etc.
- **Financial incentives:** Production-linked Incentive Schemes in sectors like Advanced Battery Manufacturing, FAME Scheme for EVs, etc.
- **Infrastructure enhancement:** Renewable Energy Parks, Bulk Drug Parks, Smart Cities Mission, etc.
- **R&D:** National Quantum Mission, National Mission on Transformative Mobility and Battery Storage, etc.

Microfinance delinquencies nearly double in a Year: Report

According a recent report by a credit information bureau **CRIF High Mark**, delinquencies in microfinance sector saw a notable rise, despite overall decline in Non-Performing Assets (NPAs) of the banking sector in India.

- **Microfinance** is provision of thrift, credit, and other financial services and products of very small amount to the poor in rural, semi-urban and urban areas for enabling them to raise their income levels and improve their living standards.
- **All collateral-free loans** to individual/s belonging to low-income households (having annual income up to ₹3,00,000) are treated as microfinance loans. (RBI)

Significance of Microfinance

- **Financial inclusion:** Caters to almost 8 crore low-income borrowers, excluded from traditional banking.
- **Rural development and poverty alleviation:** Supports local industries like handicrafts, agriculture, and small-scale manufacturing and promotes self-employment, reducing dependency on seasonal or exploitative jobs.
- **Women empowerment:** Microfinance to women Self-Help Groups (SHGs) helping them gain financial autonomy and decision-making power.

Challenges faced by Microfinance Institutions

- Facing difficulties in raising low-cost long-term funds.
- **Heightened risk** when too much of their lending portfolio is concentrated in unsecured microloans, creating vulnerability.
- **Debt-waiver campaigns** by states to waive off debts disrupts the repayment cycle.

Microfinance Schemes in India

- **SHG-Bank Linkage Programme (SHG-BLP)** (1992): Launched by NABARD to link informal SHGs with formal financial institutions.
- **MUDRA Scheme** (2015): To provide financial assistance to micro and small enterprises (MSEs) in non-farm sectors.
- **Credit Guarantee Fund Scheme for Micro and Small Enterprises:** To provide collateral-free credit to micro and small enterprises.

Also in News



Bharat Cleantech Manufacturing Platform

Recently, the Union Minister of Commerce & Industry launched the **Bharat Cleantech Manufacturing Platform** at the **Bharat Climate Forum 2025**.

About Bharat Cleantech Manufacturing Platform

- It is designed to enhance India's cleantech value chains in the solar, wind, hydrogen, and battery storage sectors.
- Provide an opportunity for the Indian firms to collaborate, to co-innovate and will help provide a platform for financing, to share ideas, technologies and resources.
 - ⊕ This will help India become an attractive business case and a global leader in the sustainability and cleantech sector.

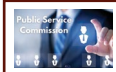


Schedule M of Drugs and Cosmetics Rules, 1945

Union Ministry of Health and Family Welfare has revised **Schedule M** which mandates pharma firms to report drug recalls and production defects, ensuring quality compliance.

About Schedule M

- It prescribes the **Good Manufacturing Practices (GMP)** for pharmaceutical products.
 - ⊕ **GMPs** are **mandatory standards** which build and bring quality into a product by way of control on materials, methods, machines, processes, etc.
 - ⊕ GMP was first incorporated in **Schedule M** in 1988.



State Public Service Commission (SPSC)

Recently, Vice President addressed the 25th National Conference of Chairpersons of SPSC.

About SPSC

- **About:** Conducts examinations for appointments to the services of the state.
- **Constitutional Body:** Article 315-323 (Part-XIV) contains provisions on Public Service Commissions for the Union and the States.
- **Appointment:** Governor of the State (Article 316).
- **Term of office:** 6 years or 62 years of age whichever is earlier.
- **Removal:** Removed by the President in the same manner as the members of the Union Public Service Commission on the grounds like:
 - ⊕ Adjudged insolvent, engages in paid employment outside his office, unfit, misbehaviour (after an enquiry by Supreme Court)



Remission of Duties and Taxes on Export Products (RoDTEP) Scheme

Recently, exporters have raised concerns with ambiguities regarding availability of duty credits under RoDTEP (Remission of Duties and Taxes on Export Products) scheme for physical exports of goods.

About RoDTEP Scheme

- **Launch:** It is being implemented since 2021 by the Union Ministry of Commerce and Industry.
 - ⊕ It replaced the Merchandise Exports from India Scheme to comply with WTO norms.
- **Objective:** It rebates/ refunds the embedded Central, State and local duties/taxes to the exporters.
- Rebate is issued as transferable electronic scrip by the Central Board of Indirect Taxes & Customs (CBIC) in an end to end IT environment.



Utricularia (Bladderworts)

Recently, Plant 'Utricularia' has been found in Rajasthan's Keoladeo National Park in large numbers.

Utricularia (Bladderworts)

- **About:** Rare and unique carnivorous plant, named for its tiny bladders or utricles.
 - ⊕ Tiny hairlike projections at the opening of the bladder are sensitive to the motion of passing organisms sucking in prey.
 - ⊕ Preys on small organisms (such as protozoa, insects, larvae, mosquitoes, and even tadpoles).
- **Habitat:** Found in lakes, streams, and waterlogged soils.
- **Significance:** Boosts biodiversity and maintains environmental balance by controlling the population of small insects.



Indo-Burmese Pangolin

Recently, scientists from the Zoological Survey of India have discovered new species of Indo-Burmese pangolin, based on genetic analyses of specimens.

About Indo-Burmese pangolin (Manis indoburmanica)

- It is a distinct phylogenetic species of the Asian pangolin and belongs to the family Manidae.
- **Colour of the scale** is dark brown and dark olive brown with the facial colour of pinkish.
- **Distribution:** Parts of Arunachal Pradesh, Assam, and possibly extends to Nepal, Bhutan, and Myanmar.



Hollongapar Gibbon Wildlife Sanctuary

Recently, the standing committee of National Board for Wildlife approved a proposal to carry out oil and gas exploration in the eco-sensitive zone of the Hollongapar Gibbon Wildlife Sanctuary.

Hollongapar Gibbon Wildlife Sanctuary

- **Location:** Located at Jorhat district of Assam.
 - ⊕ Officially extends to the Dissoi Valley Reserve Forest, Dissoi Reserve Forest, and Tiru Hill Reserve Forest.
- **Establishment:** 1997.
- **Significance:** Contains India's only gibbons - the hoolock gibbons and Northeastern India's only nocturnal primate - the Bengal slow loris.
 - ⊕ Other non-human primates found here are Capped Langur, Rhesus Macaque, Assamese Macaque, Pigtailed Macaque & Stump tailed Macaque.



Compressed Air Energy Storage (CAES) System

Recently, the world's largest CAES facility commenced full operation in China.

Compressed Air Energy Storage

- **About:** It is a technology used to store energy by compressing air into sealed locations often in underground mines or caverns created inside salt rocks.
 - ⊕ Stores electrical energy in the form of potential energy (compressed air).
 - ⊕ Energy is stored during off-peak hours and is released back to the grid when the demand is high.
- **Benefits:** Help to lower demand supply gap during peak time, uses environmental friendly process, etc.



Harvest Festivals of India

Recently, India witnessed the celebration of harvest festivals.

Harvest Festivals of India

About: Celebrated in diverse forms across the various regions, these festivals show the harmonious relationship with nature.

Major Festivals

- **Lohri (North with roots in Punjab):** Celebrated as the departure of the winter season.
- **Makar Sankranti (North India):** Marks the onset of summer and six months auspicious period for Hindus called Uttarayan, the northward movement of the sun.
- **Pongal (South India):** Four-day event dedicated to the Sun God marks the Sun's journey northward.
- **Bhogali Bihu (Assam):** Marks the end of harvesting season.



Hatti Tribe

Boda Tyohar festival (locally known as Magho ko Tyohar), the largest annual celebration for the Hatti tribes of the Trans-Giri region in Himachal Pradesh has started.

About Hatti Tribe

- Notified as Scheduled Tribe under the Constitution (Scheduled Tribe) Order (Second Amendment) Act, 2023.
- Named after their tradition of selling homegrown produce, etc at small markets known as 'Haat' (weekly markets) in towns.
- Often referred to as trans-Giri due to their location near the Giri and Tons river
- Live in states of Uttarakhand and Himachal Pradesh.



AHMEDABAD



BENGALURU



BHOPAL



CHANDIGARH



DELHI



GUWAHATI



HYDERABAD



JAIPUR



JODHPUR



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI