

# NEWS TODAY

## TRAI RELEASES CONSULTATION PAPER ON ENCOURAGING R&D IN TELECOM, BROADCASTING, AND IT (ICT) SECTORS

● Objective is to **review existing R&D ecosystem, identify bottlenecks** in promoting R&D and **recommend interventions** to improve R&D in ICT sector.

➤ **As per TRAI Act 1997**, TRAI has been mandated to make recommendations for development of telecommunication technology.

### ● Significance of R&D in ICT Sector

- **For national security:** Development of new technologies to protect critical national infrastructure.
- **Supporting Industry 4.0:** By innovations that enable autonomous systems, predictive analytics, and real-time decision-making.
- **Improve consumers' experience** and to protect them from cyberattacks.
- **Economic:** To achieve objectives of Digital India Program and impetus for becoming a \$5 trillion economy.

### ● Challenges:

- **Less number of organisations** involved in R&D in telecom and broadcasting sectors.
- **Limited commercialization of research** due to weak interlinkages.
- **No centralized governance body** overseeing R&D activities in ICT Sector.
- **MNCs focus on software instead of hardware**, leading to lack of product development.
- **Dormant Telecom Centres of Excellence (TCOEs)**.

### ● Initiatives taken

- **Indigenous 4G and 5G core technologies** developed by C-DoT.
- **National Digital Communications Policy, 2018.**
- **Telecom PLI Scheme.**
- **Centre of Excellence in Wireless Technology (CEWiT)**, an autonomous research society of IIT Madras.

### SNAPSHOT OF INDIA'S R&D ECOSYSTEM

**R&D Expenditure as % GDP**  
0.7%  
Average of top 10 economies 1.5-3%

**Public Sector Investment**  
63%  
US: 24% | China: 23% | Japan: 21%

**Global Innovation Index 2022 Ranking**  
40<sup>th</sup>  
Up by 6 places, 46<sup>th</sup> in 2021  
#1: Switzerland | #2: US | #3: Sweden

**Allowed FDI in R&D**  
100%  
via Automatic Route

**Patents Filing & Grants**  
1.5x & 5x  
respectively in 7 years  
(2014-21)

## PARLIAMENTARY STANDING COMMITTEE ON TRANSPORT TOURISM AND CULTURE PRESENTED "FUNCTIONING OF ARCHAEOLOGICAL SURVEY OF INDIA (ASI)" REPORT

● Report incorporates the **challenges associated with ASI** and Committee's recommendations for **improving working of ASI**.


### ● Challenges with working of ASI

- **Centrally Protected Monuments** list includes a large number of **minor monuments** with **no national significance**.
  - For instance, list includes 75 graves of colonial era soldiers or officials of no notable importance.
- Provision of **100-meter prohibited area and 300-meter regulated area** around all ASI-protected monuments invites **criticism from local community** as they find it difficult to carry out necessary repair work of their residential houses.
  - This provision was **introduced in 2010** through an **amendment in Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958.**

➤ Restoration is being done **without taking cognizance of original design/beauty of Monument**.


### ● Recommendations

- List of monuments with ASI should be **rationalised and categorised on basis of their national significance**, unique architectural value and specific heritage content.
- ASI should be divided into **two wings** namely **ASI** (look after **core mandate**, i.e. exploration, excavation and conservation aspects) and **India Heritage Development Corporation (IHDC)** to deal with ASI's entire revenue.
- **Advanced technologies** like LiDAR, ground-penetrating radar, and 3D scanning should be used for enhanced accuracy and efficiency of excavations.



### Archaeological Survey of India (ASI)

New Delhi



**Genesis:** Founded in 1861 by Alexander Cunningham, the first Director-General of ASI.

**Ministry:** Ministry of Culture

**Role:** Archaeological research and protection of cultural heritage of nation.

**Function:** Regulates all archaeological activities in country as per the provisions of Ancient Monuments and Archaeological Sites and Remains Act, 1958.

● It also regulates Antiquities and Art Treasure Act 1972.

# PATHWAYS TO CIRCULAR ECONOMY IN INDIAN ELECTRONICS SECTOR REPORT RELEASED BY INDIAN CELLULAR AND ELECTRONICS ASSOCIATION (ICEA)

• Circular model for electronics **refers to the closing of a loop** through actions across upstream, mid-stream and downstream of value chain, including designing for product lifetime extension, promoting repair and refurbishment and improving recycling.

## • Key highlights

- **Six circular business models** namely, Circular Design, Product-as-a-Service, Resell, Repair, Refurbishment and Recycle can **unlock revenue potential of \$7 billion by 2035**.
- Circular business models are projected to contribute to a **market size of \$13 billion by 2035**.
- 90% of collection and 70% of recycling are managed by informal sector.

• **Significance of Circular model:** Reducing greenhouse emissions; Fosters the development of competitive industrial model and resulting in **more employment**; Reusing local resources can **reduce reliance on imported raw materials**.

## • Policy interventions

- **Downstream pathways:** Develop **government led aggregation and dismantling zones**; **Incentivize** high capacity high yield advanced **recycling facilities etc.**
- **Use-phase pathways:** **Scale-up multi-brand formal services** through strengthened spares supply chain etc.
- **Upstream pathways:** Prioritise **development of secondary materials market**; **Develop a product as a service** framework etc.

## CHALLENGES

- **Dominance of informal sector** resulted in **leakage of toxic substances** lead, mercury etc. in nature.
- Methods like acid leaching, open-air cable burning, etc. result in **soil and water contamination, and emission of harmful gases in air**.
- **Human rights risk** like negligence of waste worker safety and health, child labor and unfair wages.

# PARLIAMENTARY PANEL SUBMIT REPORT ON DEVELOPMENT AND EXPANSION OF EXISTING AND NEW NATIONAL INLAND WATERWAYS

• Currently, there are **111 National waterways (NW)** declared in India of which **only 23 NWs are operational** for shipping and navigation.

## • Significance of Inland Waterways Transport (IWT)

- **Most environment-friendly** mode of transport with **optimal fuel efficiency** and **lower emission levels**.
- Offers natural navigation channels **connecting the entire North-Eastern Region**.
- **Enormous potential to develop tourism**, including river tourism (Ex: Kochi Water Metro, Ganga Vilas).

• However, **waterways have a share of a meagre 2% in India's modal mix** whereas it is **more than 10% in most developed countries**.

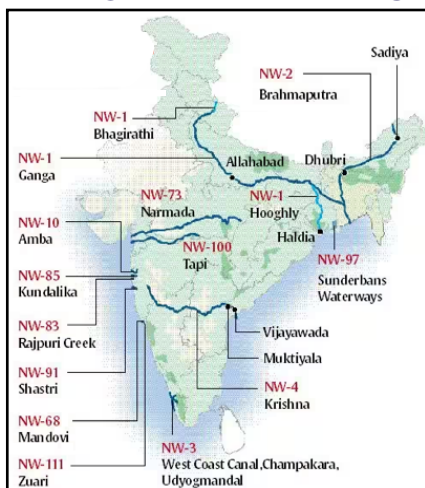
## • Challenges faced w.r.t IWT

- **Diversion of water** for irrigation, industrial and other needs.
- **Excessive silt deposition** due to bad catchment management and deforestation.
- Inadequate manpower, **poor hinterland connectivity, high investment costs** of vessels and equipment etc.

## • Recommendations

- Provide **financial incentives** to facilitate inflow of more cargos to IWT.
- **Prioritise on development of loading/unloading facilities** at Terminals, increase of staff strength, improve connectivity to rail and road networks.
- **Regulate speeds and dredging, create buffer zones** without damaging the aquatic life and its biodiversity
- **Prioritise the process in waterways** which have a naturally available depth of two meters or more.

## NATIONAL WATERWAYS



# DEVELOPMENT OF NICHE TOURISM (INCLUDING SPIRITUAL TOURISM), THEME-BASED TOURIST CIRCUITS AND POTENTIAL TOURIST SPOTS REPORT PRESENTED BY PARLIAMENTARY PANEL

• **Niche tourism is a specialized segment** of tourism market that is **defined by its heterogeneous nature** with **unique products/services** meant for **small market segments**.

➤ It **covers specialised tourism products** like cultural, medical, rural, adventure, wildlife, historical, MICE (Meetings, Incentives, Conferences & Exhibitions), gastronomic tourism, etc.

• **India's potential for niche tourism:** Diverse geography, rich tangible and intangible culture, rich traditions of music and dance, yoga and Ayurveda, world class medical facilities etc.

## • Challenges identified

- **Lack of information about unique villages** like **Mattur** (residents only speak Sanskrit).
- **Lack of focussed approach on MICE tourism**, absence of system for capturing information about various MICE event.
- **Lack of regulation on quality of service** is a major concern for medical and wellness tourism.
- **Sluggish promotion of sustainability** in tourism due to lack of feedback from stakeholders like hoteliers.

## • Recommendations

- **Certification Scheme for tour operators and other service providers** for ecotourism and adventure tourism.
- **Develop Model Rural Cluster in Uttarakhand** that has a number of border villages with rich traditions and local culture.
- Rural Tourism website **should have all the details of rural homestays, travel connectivity** etc.
- **Identified cities of MICE destinations** should be well **connected for international flights**.



# PARLIAMENTARY STANDING COMMITTEE ON EDUCATION, WOMEN, CHILDREN, YOUTH AND SPORTS PRESENTED "IMPLEMENTATION OF NATIONAL EDUCATION POLICY (NEP), 2020 IN HIGHER EDUCATION" REPORT

• Built on foundational pillars of **Access, Equity, Quality, Affordability and Accountability**, NEP aims to transform India into a vibrant knowledge society by making school and college education more multidisciplinary.

## • Salient Features of NEP 2020 in Higher Education Sector

- **Increase Gross Enrolment Ratio** in higher education including vocational education to **50% by 2035**.
- Institutions will have **option to run Open Distance Learning and online programmes**, provided they are accredited to do so.
- Undergraduate degree will be of either **3 or 4-year duration**, with **multiple exit options** within this period, with appropriate certifications.
- Model public universities for **holistic and multidisciplinary education**, at par with IITs, IIMs, etc., called **MERUs (Multidisciplinary Education and Research Universities)** will be set up.
- By 2025, at least **50% of learners through school and higher education system** shall have exposure to vocational education.

## • Recommendations

- Introduction of "**Design Your Degree**" programme (adopted in Jammu University) in Higher Education Institutions for Personalized, Interdisciplinary Learning.
- Develop and **distribute educational content tailored to local needs** and languages.
- **Encourage research and innovation** in the field of education for marginalized communities.

## ALSO IN NEWS



### Personality Rights (PRs)

- Delhi High Court granted an ex-parte, omnibus injunction restraining entities from using a celebrity's PRs.
  - **Ex-parte injunction** is when relief is **granted to a party without hearing other side**.
  - Omnibus injunction refers to an **order granted against any unauthorised use**- even those that are not mentioned in plea.
- PRs refer to the **name, voice, signature, images or any other feature easily identified** by public is markers of a celebrity's personality.
  - Only the owner or creator of these distinct features has the right to derive any commercial benefit from it.
  - PRs or their protection are **not expressly mentioned in a statute in India** but can be **traced under right to privacy and right to property**.



### Electronic voting machine (EVM)

- Supreme Court declined a **plea for independent audit of source code** governing EVM system.
  - A source code is a **set of written instructions to a machine's hardware**.
  - Petitioner wanted **audit using IEEE 1028 standard**, a **standard for software reviews and audits** fixed by Institute of Electrical and Electronics Engineers (IEEE).
- EVM is a **microcontroller-based portable instrument** and **does not require electricity** and run on an ordinary battery.
  - EVMs were **first used in general election in Kerala** in 1982.
  - **In 1989, Parliament** amended Representation of the People Act, 1951 to **create a provision for use of EVMs** in the elections.



### Emerging-Market Bond Index (EMBI)

- **JPMorgan** to **add Indian government bonds** to its **benchmark EMBI** from June 2024.
- EMBI is a **benchmark index for measuring total return performance** of international **government and corporate bonds** that meet specific liquidity and structural requirements.
- **Inclusion in EMBI could potentially:**
  - **Lower** the country's **sovereign borrowing costs**.
  - Help **finance the current account deficit**.
  - **Free up liquidity for domestic financiers** to deploy in more productive assets.
  - **Increase demand for the rupee** and support its value.



### Artificial Reef (AR)

- Department of Fisheries is promoting AR under Pradhan Mantri Matsya Sampada Yojana for rejuvenating coastal fisheries.
- **ARs are technology interventions used to rehabilitate or improve natural habitats**, increase productivity and manage aquatic resources including habitat enhancement.
- **Advantages**
  - **Reduce wave damage on coasts**, helps regeneration of marine ecosystem and act as a **carbon sink**.
  - **Enhance recreational fisheries**, eco-tourism, creating suitable areas for diving and reducing conflicts.
  - **Restricts bottom trawling** in the near shore areas.



 <p><b>Pterygotrigla intermedica</b></p>	<ul style="list-style-type: none"> <li>Scientists of Zoological Survey of India have discovered a new species of marine fish from West Bengal.</li> <li>New species, <b>commonly known as gurnards or sea-robins</b>, belongs to <b>family Triglidae</b> and there are a total <b>178 species</b> of the family worldwide. <ul style="list-style-type: none"> <li>They have a very <b>long and slender opercular spine</b> and a <b>short cleithral spine</b>.</li> <li>Its distinct characteristics include a <b>distinct pectoral-fin with black membranes</b> on the inner surface, a <b>white posterior margin</b>, and <b>three small white spots</b> basally in the fin.</li> </ul> </li> </ul>
 <p><b>Perovskite</b></p>	<ul style="list-style-type: none"> <li>Scientists discovered that a <b>nanoscale ink coating could improve stability</b> enough to make <b>next-generation perovskite solar cells</b> suitable for mass production.</li> <li>Perovskite is a <b>naturally occurring mineral of calcium titanate</b>.</li> <li><b>Properties of Perovskite:</b> Lightweight, high optical conductivity and absorption, high efficiency, cheaper to produce compared to traditional silicon-based cells.</li> <li><b>Applications:</b> Solar Panels industry, Space technology etc.</li> <li><b>Limitations:</b> can decompose when they react with moisture and oxygen, suffers from a drop in efficiency and energy output during the manufacturing process etc.</li> </ul>
 <p><b>Norman Borlaug Field Award for Field Research and Application</b></p>	<ul style="list-style-type: none"> <li><b>Dr. Swati Nayak</b>, an Indian <b>scientist at International Rice Research Institute (IRRI)</b>, was named the recipient of prestigious award in 2023. <ul style="list-style-type: none"> <li>She is recognized for her <b>innovative approach to engaging smallholder farmers in demand-driven rice seed systems</b> and adoption of <b>climate-resilient and nutritious rice varieties</b>.</li> </ul> </li> <li>\$10,000 award <b>recognizes exceptional, science-based achievement</b> in international agriculture and food production <b>by an individual under the age of 40</b>. <ul style="list-style-type: none"> <li><b>Endowed by:</b> Rockefeller Foundation.</li> </ul> </li> </ul>
 <p><b>Esports (Electronic sports) in Asian games</b></p>	<ul style="list-style-type: none"> <li><b>Esports debuted as a medal sport</b> at the 19th Asian Games in Hangzhou. <ul style="list-style-type: none"> <li>Esports is a competitive sport where <b>gamers use their physical and mental abilities to compete</b> in certain genres of video games in a virtual, electronic environment.</li> <li><b>Ex:</b> League of Legends, Honor of Kings etc.</li> </ul> </li> <li><b>Asian Games</b> <ul style="list-style-type: none"> <li>It is a <b>multi-disciplinary sports event held once in every four years</b>.</li> <li>It is <b>recognised by International Olympic Committee</b> and is <b>second largest multi-sport event after Olympics</b>.</li> <li><b>India is one of the founder member of Asian Games Federation</b> and also the <b>host of the first Asian Games in 1951</b>.</li> </ul> </li> </ul>



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