

NEWS TODAY

Atmospheric rivers are partly responsible for devastating floods in India

Scientists warn that intensification and increased frequency of atmospheric rivers due to global warming is worsening extreme rainfall events and weather patterns.

Atmospheric rivers (AR)

- AR, also called as 'flying rivers', are relatively long, narrow regions in the atmosphere that transport most of the water vapour outside of tropics.
 - ⊕ An average AR is about 2,000 km long, 500 km wide and nearly 3 km deep.
- ARs are a part of larger system of extratropical cyclones that transport heat and moisture from tropics toward the poles.
 - ⊕ ARs are typically located within low-level jet, an area of strong winds in lower atmosphere.
- They are largest transport mechanisms of freshwater on Earth, responsible for 90% of moisture transfer from tropics to poles.
- While many ARs are weak systems, some larger and strong ARs can create extreme rainfall and floods, causing mudslides and catastrophic damage.

Climate Change and Atmospheric Rivers

- With temperature increase, intensity of rain events rises because of increase in atmosphere's moisture retention capacity.
- By 2100, ARs are predicted to become more intense globally and will be much broader and longer.
- Intensified ARs can produce drought like conditions by removing rainfall from rainfall-dependent regions.

Impact of ARs on India

- Seven of India's 10 most severe floods in monsoon seasons between 1985 and 2020 were associated with ARs.
- Increase in extent of fog and haze in Indo-Gangetic plains (IGP) has been linked to rising pollution and water vapour (due to intrusion of ARs).
- Declining snow albedo in Hindukush-Karakoram-Himalayan Mountain Range as increased rainfall speeds up snow melting.

Quality Council of India (QCI) introduces QCI Surajya Recognition & Ranking Framework

About Framework

- It aims at recognising and rewarding states and organizations that excel in quality and innovation to achieve the aim of a Developed (Viksit) India.
- It is categorized under four pillars:
 - ⊕ Shiksha (Education),
 - ⊕ Swasthya (Health),
 - ⊕ Samridhhi (Prosperity), and
 - ⊕ Sushasan (Governance).

About QCI

- It was established as the national body of accreditation in 1996 and is an autonomous non-profit organization under the Societies Registration Act, 1860.
 - ⊕ Based on the recommendation of the Expert Mission of European Union.
- It was jointly set up by the Government of India and the Indian Industry (ASSOCHAM, FICCI, CII).
- **Nodal Department:** Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry.
- **Governing Council:**
 - ⊕ 39 members including the Chairperson and Secretary General with equal representation of Government, Industry and other Stakeholders.
 - ⊕ Chairperson is nominated by the Prime Minister.
- **Role of QCI**
 - ⊕ **National Accreditation Body (NAB):** To promote quality through the National Quality Campaign in line with global standards.
 - ⊕ Create a mechanism for third-party assessment of products, services and processes.
 - ⊕ Improve the quality of life and wellbeing of the citizens of India.

Achievements

- **Healthcare**
 - ⊕ Worked with ICMR to expand COVID-19 related testing labs across India.
 - ⊕ ABPMJAY quality certification programme with NHA, Kayakalp Certification for cleanliness of healthcare facilities.
- **Sanitation:** Certification of ULBs as ODF, ODF+, ODF++.
- **Education:** Launched eQuest: E-Quality Platform for Employability through Skill and Training
- **Agriculture:** Development of Standards and Scheme for Good Agriculture Practice (GAP) Implementation and Certification in countries of SAARC (project with FAO).

Ground-level Ozone (Tropospheric Ozone) pollution is on the rise across India's major cities: Report

Key findings on Ground-level Ozone (GLO)

- India's 10 metropolitan areas have exceeded the national ozone standard, with Delhi being the most affected.
- **GLO hotspots:** Located in areas with low levels of NO₂ and PM2.5 as unavailability of NO₂ hampers its dissipation.
- **Night-time GLO** continues to persist in all metropolitan areas.

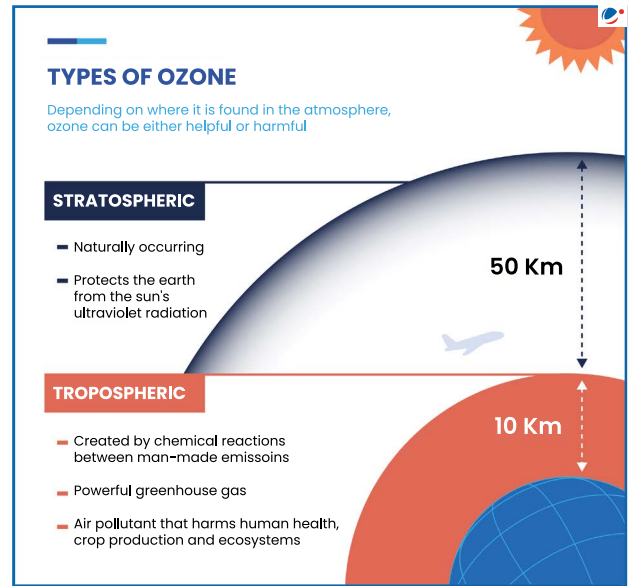
Ground-level Ozone (GLO)

- Ozone (O₃) is a variant of oxygen composed of three oxygen atoms.
 - ⊕ It occurs both in the Earth's upper atmosphere and at ground level/ Tropospheric Ozone (See Image).
- GLO is a secondary, short-lived pollutant formed in the atmosphere by reaction between oxides of nitrogen and volatile organic compounds (VOCs) in the presence of sunlight.
 - ⊕ Peak O₃ levels occur in summers.
- **Source:** Pollution from cars, power plants, industries; electronic equipment, e.g., photocopiers.

Impact of Ground-level Ozone (GLO)

- **Health:** Worsen bronchitis, trigger asthma, and permanently damage lung tissue.
- **Climate:** Absorbs radiation and consequently acts as a strong greenhouse gas.
- **Agriculture and Ecosystem Impacts:** Interferes with photosynthesis and stunts overall growth of some plant species.

Strategies to prevent Ozone pollution: Methane reductions and cutting the levels of atmospheric pollution arising from cars, power plants and other sources.



Ministry of Health and Family Welfare released "Standard Operating Procedure (SOP) for Organ Transport"

SOPs outline the essential guidelines and protocols for seamless transport of organs in India.

Key Features of SOP

- **Green corridor: One Trigger System** i.e. a request from organ allocation authority to initiate organ transport by green corridor, may be considered.
- **Applicability:** Organs will be transported only within Indian territory and no organ shall be transported outside India or brought from outside India.
- **Mean of Transport:** It allows transport through air, roads, trains, metros, ports and waterways etc.

Organ Transplantation

- **Organ transplantation** is the life-saving therapy for end-stage organ failure.
- Transplantation replaces damaged organs or tissues with healthy ones from donors.

Status of Organ Transplantation in India (As per NOTTO data)

- 2023 saw highest ever organ transplantation at 18,378, increasing consistently since 2020.
- 63% of living donors were women while among the recipients, 30% were women.
- India ranks third in world in terms of Organ Transplantation.

Issues in Organ Transplantation

- **Wide gap** in patients who need transplants and organ donors.
- Involvement of commercial transaction fuelling **illegal organ trade**.
- **Poor rate of Brain Stem Death certification** by hospitals.
- **Ethical Concerns:** Legitimacy of surrogate decision making for critically ill patients and Conflict between providing optimal end-of-life care and procuring organs.

Transplantation of Human Organs and Tissues Act (THOTA), 1994:

- Act regulates **removal, storage and transplantation** of human organs for **therapeutic purpose** and for **prevention of commercial dealing** of human organs.
- **Three tier regulatory structure:** National Organ and Tissue Transplant Organization (NOTTO) at National level (NOTTO) and similar organizations at regional and state levels.
- **National Human Organ and Tissue Removal and Storage Network** at one or more places.

India's Renewable Energy (RE) capacity increased by 165% over the last decade

As per Ministry of New and Renewable Energy, India's installed renewable energy capacity increased from 76.38 Gigawatts (GW) in 2014 to 203.1 GW in 2024.

Current Status of India

- Ranks **fourth globally** in renewable energy capacity.
- **4th in Wind Power (46.65 GW)** capacity and **5th in solar photovoltaic power (85.47 GW)**.
- **First time** crossed 200 GW capacity from non-fossil fuel sources.

Steps taken to achieve this growth

- **Foreign Direct Investment:** Permitted up to **100% under the automatic route**.
- **Waiver Inter State Transmission System charges:** of Solar/wind projects, green hydrogen, offshore wind projects.
- **Dedicated programmes:** PM-KUSUM, PM Surya Ghar Muft Bijli Yojana, etc.
- **Others:** Offshore Wind Energy Lease Rules, 2023; Green Energy Open Access Rules 2022;etc.

Challenges in growth of RE

- **Legacy infrastructure costs and high transmission and distribution losses** trap discoms in coal dependence, hindering renewable investments.
- **Grid Reliability and high Cost of Transition** as per Central Electricity Authority's draft plan.
- **Low access to low-cost financing**
- **Energy Storage capacity is low and expensive** for RE which is an intermittent sources of power supply.

Way Forward: Promote Hybrid wind and solar plants, focusing on new Energy-Storage Systems like Pumped Storage Hydropower, Battery, etc.



Google has illegal monopoly over internet search and advertising market: US Court

A US District Court ruled that Google has violated Sherman Act (US' anti-trust law) by maintaining its monopoly in two product markets – General Search Services (GSS) and General Text Advertising.

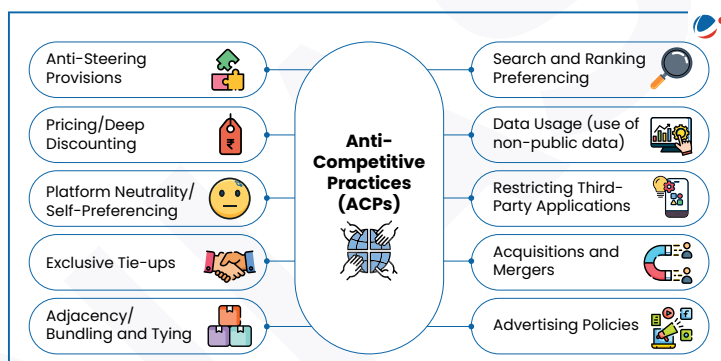
- **Anti-trust laws prohibit Anti-Competitive Practices and monopolizing conduct** to protect consumers from predatory business practices.
- **Google's Monopoly (as highlighted by Judgement)**
- Google enjoys an **89.2% market share** for GSS, which increases to **94.9% on mobile devices**.
 - ⌚ Google also controlled **88% of text advertising market in 2020**.
- Google maintained its monopoly and stifled competition through:
 - ⌚ **Near-complete control of key distribution channels**, posing a major entry barrier for other search companies.
 - ⌚ **Striking deals** with Apple, Samsung and Verizon to be default search engine on their respective devices.

Issues with Monopolistic Tendencies of Big Tech Companies

- **Abuse of dominant position:** Access to large datasets provides information control which may be misused for profit maximization or controlling the market.
- **Winner-take-most:** Nature of digital market is conducive for quick scaling and domination, restricting democratic competition, discouraging new market participants and impacting local economies.
- **Anti-Competitive Practices (ACPs):** India's Parliamentary Standing Committee Report identified **ten predominant ACPs** undertaken by large digital enterprises (see infographic).

Regulation of Big Tech Companies in India

- **Competition Act, 2002 (as amended in 2023)** prohibits anticompetitive agreements and abuse of dominance.
 - ⌚ It establishes **Competition Commission of India (CCI)** to eliminate ACPs, promote competition, protect consumers' interest and ensure freedom of trade.
- **Draft Digital Competition Bill, 2024:** It aims at predictive regulation based on potential anti-trust issues and identifying **Systematically Significant Digital Enterprise (SSDE)**.
- **Consumer Protection Act, 2019:** Aims to address unfair trade practices.



Also in News



National Handloom Day

10th National Handloom Day is being celebrated on 7th August, 2024.

About National Handloom Day

- It seeks to **honour the handloom weavers** and provide motivation to handloom industry.
- **History:** The day was chosen, to commemorate the 'Swadeshi Movement', which was launched on 7th August 1905.
 - ⌚ It aimed to boycott British goods in **favour of Indian-made products, including handloom textiles**.
 - ⌚ First National Handloom Day was celebrated in 2015.
- **Significance:**
 - ⌚ Handloom is India's **largest cottage industry** and rural region's **second largest employment provider**.
 - ⌚ **70% of weavers and allied workers are women**.



Infrastructure Investment Trust (InvIT)

- Recently, NHAH made a successful pre-payment of a Rs. 15,700 crore loan from InvIT proceeds.
 - ⌚ InvIT monetization proceeds are **exclusively used for NHAH debt repayment**.
- **About InvIT**
 - ⌚ Collective Investment Scheme like mutual funds, enabling direct investment of money from individual and institutional investors in infrastructure projects to earn a portion of the income as return.
 - ⌚ Regulated by the **SEBI (Infrastructure Investment Trusts) Regulations, 2014**.
 - ⌚ Dividend and Interest income from InvITs is **completely taxable as per the slab rate of the investor**.
 - ⌚ InvITs are classified as **borrowers under the SARFAESI Act**.



Kasturi Cotton Bharat

Ministry of Textiles empowered all ginners (who operate cotton gins which separate cotton fibre from seeds) in India to produce Kasturi Cotton Bharat brand.

- Kasturi Cotton is **premium quality Cotton from India with 100% traceability & certification**, utilizing blockchain technology for traceability.

About Kasturi Cotton Bharat

- Joint initiative by the **Ministry of Textiles, Cotton Corporation of India, Trade Bodies & Industry**.
- **Aim:** To work on **principle of self-regulation** by owning complete responsibility of **Branding, Traceability and Certification** of Indian Cotton to enhance its global competitiveness and create a sustainable ecosystem.
- **Implementing Agency:** Cotton Textiles Export Promotion Council (TEXPROCIL).



De-influencers

A recent study revealed that **de-influencing trends drive 66.17% more engagement** than content from regular influencers.

About De-influencers (Reverse influencers)

- They are unique **content creators** who engage in **critiquing products** they perceive as **overhyped, harmful or environmentally wasteful**.
- They also **advocate for more sustainable and ethical alternatives** to their audience.
- They promote **transparency in marketing and counter the sole profitability approach** of the influencer ecosystem.



Copper (Cu)

Various mining bodies applied for **copper** from **Democratic Republic of Congo (DRC)** to be registered for delivery against **London Metal Exchange** contracts.

About Copper

- **Properties:** High malleability and ductility, excellent conductor of heat and electricity, corrosion resistant and antimicrobial.
- **Top countries in Copper Production:**
 - ⊕ Chile is the largest producer (23% of global production) as well has the highest reserves in the world.
 - ⊕ Others: Peru, DRC, Australia, Russia.
- **Copper in India:**
 - ⊕ **Deposits:** Singhbhum (Jharkhand), Balaghat (Madhya Pradesh), and Jhunjhunu and Alwar (Rajasthan)
 - ⊕ **Production:** Khetri (Rajasthan), Ghatsila (Jharkhand), Jhagadia and Dahej (Gujarat), Tuticorin (Tamil Nadu)



Granules and Supergranules

Researchers discovered that **width of supergranular cells** on solar surface during solar minimum is **related to number of sunspots** seen during subsequent solar cycle maximum.

- This can be helpful in forecasting space weather.

Granules and Supergranules

- Energy generated in Sun's core is **transported by convective fluid flows through convection zone** (Sun's outermost 30%).
- These convection motions are visible at surface as **granules** (about 1000 km across) and **supergranules** (about 35,000 km across) **cellular features**.
 - ⊕ These features are the **tops of convection cells** where hot fluid rises up from interior, spreads out across the surface, cools and then sinks inward.



Mpox

'Deadliest' Mpox Virus has spread across **African countries**

About Mpox

- Mpox (formerly known as monkeypox) is a disease caused by **infection with a virus**, known as **Monkeypox virus (MPXV)**.
 - ⊕ MPXV is an enveloped double-stranded DNA virus of the Orthopoxvirus genus.
- Mpox is a zoonotic disease, meaning it can be spread **between animals and people**.
- It is **endemic**, or found regularly, in parts of **Central and West Africa**.
 - ⊕ The virus that causes Mpox has been found in **small rodents, monkeys, and other mammals that live in these areas**.
- **Symptoms:** Skin rashes, headaches



River Godavari

Recently, a **century old Indian Iris tree**, on the bank of River Akhanda Godavari, collapsed.

Godavari River (Dakshin Ganga)

- **Largest river** of peninsular India.
- **Origin:** Trimbakeshwar in Nashik district, Maharashtra.
- It falls into **Bay of Bengal** forming a **delta**.
 - ⊕ It is known as **Akhanda Godavari** at **Rajahmundry (Andhra Pradesh)** before splitting into distributaries.
- **Basin states:** Maharashtra, Andhra Pradesh, Chhattisgarh, Odisha, Madhya Pradesh, Karnataka and Puducherry.
- **Major Tributaries:** Pravara, Dharna, Indravati, Pranahita, Dudhna, Manjira, Sabari.
- Bounded by **Satmala Hills (North)**, **Ajanta Range** and **Mahadeo Hills (South)**, **Eastern Ghats (East)** and **Western Ghats (West)**.
- **Hydropower projects:** Nizam Sagar, Pochampad, Polavaram etc.



Anemia Mukh Bharat (AMB)

Ministry of Health and Family Welfare recently released details of Anemia Mukh Bharat.

About AMB

- Aims to reduce anaemia in **vulnerable sections of society, including women and children**.
- Launched to achieve target under POSHAN Abhiyaan (2018).
- **Uses 6X6X6 strategy:** Six target beneficiaries, six interventions and six institutional mechanisms.
- **Interventions**
 - ⊕ **Prophylactic Iron and Folic Acid** supplementation.
 - ⊕ **Ensuring delayed cord clamping** after delivery (by 3 minutes) in health facilities.
 - ⊕ **Addresses non-nutritional causes of anaemia in endemic pockets**, special focus on **malaria, haemoglobinopathies, fluorosis**.
 - ⊕ **Biannual mass deworming** for age group 1-19 years



Seahorse

Directorate of Revenue Intelligence busted smuggling racket engaged in the illegal trade of **dried seahorses in Bengaluru**.

- Demand is primarily driven by their use in **traditional medicine, gourmet cuisine, etc.**

About Seahorse

- Seahorses are **tiny fish with horse-shaped heads**, not mammals.
- Coastal ecosystems of India are home to **9 out of the 12 species found in the Indo-Pacific**.
- They are **secondary consumers**, not detritivores.
- **Conservations Status:**
 - ⊕ Schedule I of the Wildlife (Protection) Act, 1972.
 - ⊕ CITES Appendix II

