

WEEKLY NEWS

June 01-08, 2024

Role of Nuclear Technologies in Food Safety



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Mandatory Self-declaration Certificate for Advertisements



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HIGHLIGHTS

- **NOTA in Indian Elections**
- **Nanoparticles**
- **Anti-Human Trafficking**

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Internationalisation of INR

● Why in News?

- ➔ RBI's Annual Report for 2023-24 highlights action plan for promoting internationalisation of INR.
- ➔ **Aim:** To increase the use of INR in cross-border transactions and bolster its acceptance as an international currency.

● Benefits of Internationalisation of Rupee

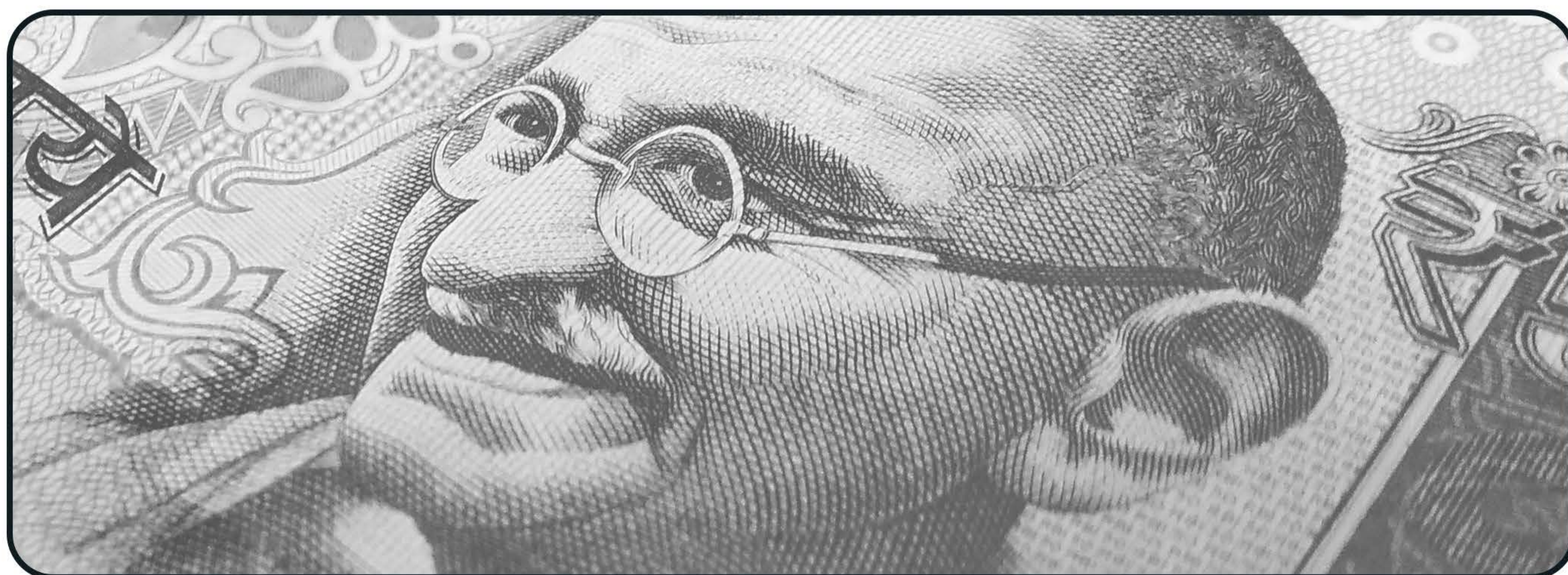
- ➔ Reduces dollar demand, **strengthening** INR.
- ➔ **Lowers cost** of doing business, enhancing competitiveness.
- ➔ **Diminishes** need for holding foreign exchange reserves.
- ➔ **Decreases vulnerability** to external shocks.

● Challenges

- ➔ INR **not** fully convertible.
- ➔ **Triffin dilemma:** Balancing global demand for INR with domestic monetary policies.
- ➔ Risk of financial market integration affecting macroeconomic stability.

● Steps Taken

- ➔ Utilization of **Indian payment infrastructure** in foreign countries (e.g., Singapore, Malaysia).
- ➔ **Bilateral Currency Swap agreements** with countries like Japan, Sri Lanka, Bhutan.
- ➔ Issuance of rupee-denominated bonds (**Masala bonds**).

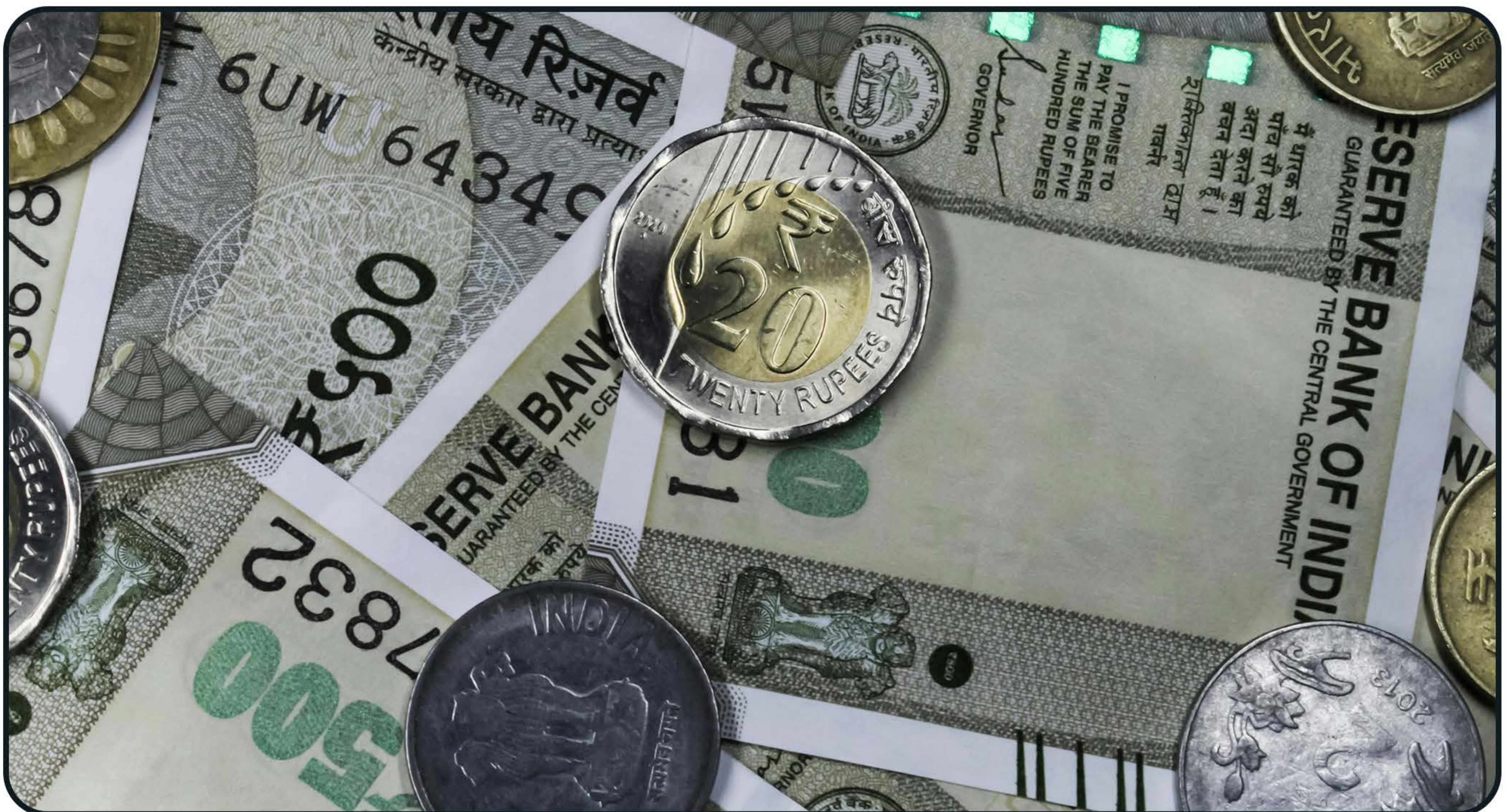


● **Special Non-Resident Rupee (SNRR) Account**

- ➔ **Purpose:** Allows residents outside India with business interests in India to conduct rupee transactions.
- ➔ **Usage:** Facilitates specified transactions in trade, foreign investments, External Commercial Borrowings, etc.

● **Special Rupee Vostro Account (SRVA) Account**

- ➔ **Definition:** Vostro account for foreign banks in rupee denomination.
- ➔ **Function:** Complementary to existing systems using freely convertible currencies.
- ➔ **Requirement:** Prior approval from RBI for opening SRVA.



Millet Production in India

● Why in News?

- ➡ India accounts for approximately **80% of Asia's** and **20% of global millet production**, yet production levels have stagnated.
- ➡ Various factors contribute to this stagnation, including **labor shortages, shifting consumer preferences, and storage issues**.

● Reasons for Stagnant Millet Production

- ➡ **Yield gap** due to labor shortages and **inadequate fertilizer application**.
- ➡ Changing **consumer preferences** and government-backed procurement schemes favoring fine cereals.
- ➡ Challenges posed by the relatively **shorter shelf life** of millet crops, leading to storage issues.

● About Millet (Shree Anna)

- ➡ Millets are **Kharif crops**, belonging to the **Poaceae** (grass) family.
- ➡ They encompass major millets (**sorghum, pearl millet**) and minor millets (**foxtail, kodo**), offering rich sources of micronutrients.
- ➡ Millets contain 7-12% protein, 2-5% fat, 65-75% carbohydrates, and 15-20% dietary fiber.
- ➡ India's millet productivity (excluding sorghum) was lower compared to China, Ethiopia, and Russia in 2022.
- ➡ **Major millet-producing states** in India include **Rajasthan, Karnataka, Maharashtra, Uttar Pradesh, and Haryana**



● **Benefits of Millet**

Health	Economic Security	Environment
<i>Good source of minerals like iron, zinc, and calcium</i>	<i>Sustainable source of income for farmers</i>	<i>Helps to reduce carbon footprint</i>
<i>Low Glycaemic Index (good to prevent diabetes)</i>	<i>Low investment needed for production</i>	<i>Less water intensive, drought resistant and sustainable</i>
<i>Gluten-free (beneficial for celiac disease patients)</i>		<i>Requires less fertilisers and pesticide for growth</i>
<i>Help to combat anaemia, cardiovascular disease and lower cholesterol level</i>		

● **Initiatives to Promote Millet**

- ➔ Observance of **National and International years of millets in 2018 and 2023**, respectively.
- ➔ Implementation of the **National Food Security Mission** aimed at boosting millet production and productivity.
- ➔ Mandates such as **Saksham Anganwadi and Poshan 2.0** ensure the supply of millets at least once a week, integrating them into hot cooked meals.



Automatic Weather Stations

● Why in News?

- ➔ AWS recorded extreme temperatures: 52.9°C at Mungeshpur station in Delhi and 56°C at Ramdaspath in Nagpur.
- ➔ Nearby stations recorded comparatively lower temperatures, raising concerns about the accuracy of these readings.

● About AWS (Automatic Weather Station)

- ➔ **Definition:** A meteorological station where observations are made and transmitted automatically.
- ➔ **Sensors Used:** Wind sensors, Temperature humidity sensors, Pressure sensors, Rainfall sensors
- ➔ **Temperature Measurement:** Uses an electrical resistance thermometer to measure air temperature in degrees Celsius.
- ➔ **Principle:** Electrical resistance varies with changes in temperature.

● Challenges with AWS

- ➔ **Accuracy Issues:** Accuracy of recordings becomes unreliable beyond a certain temperature threshold.
- ➔ **Calibration:** Improper calibration of sensors.
- ➔ **Placement:** Incorrect placement of AWS units on concrete structures.
- ➔ **Maintenance:** Lack of regular maintenance.



● **Other Heat Measuring Devices**

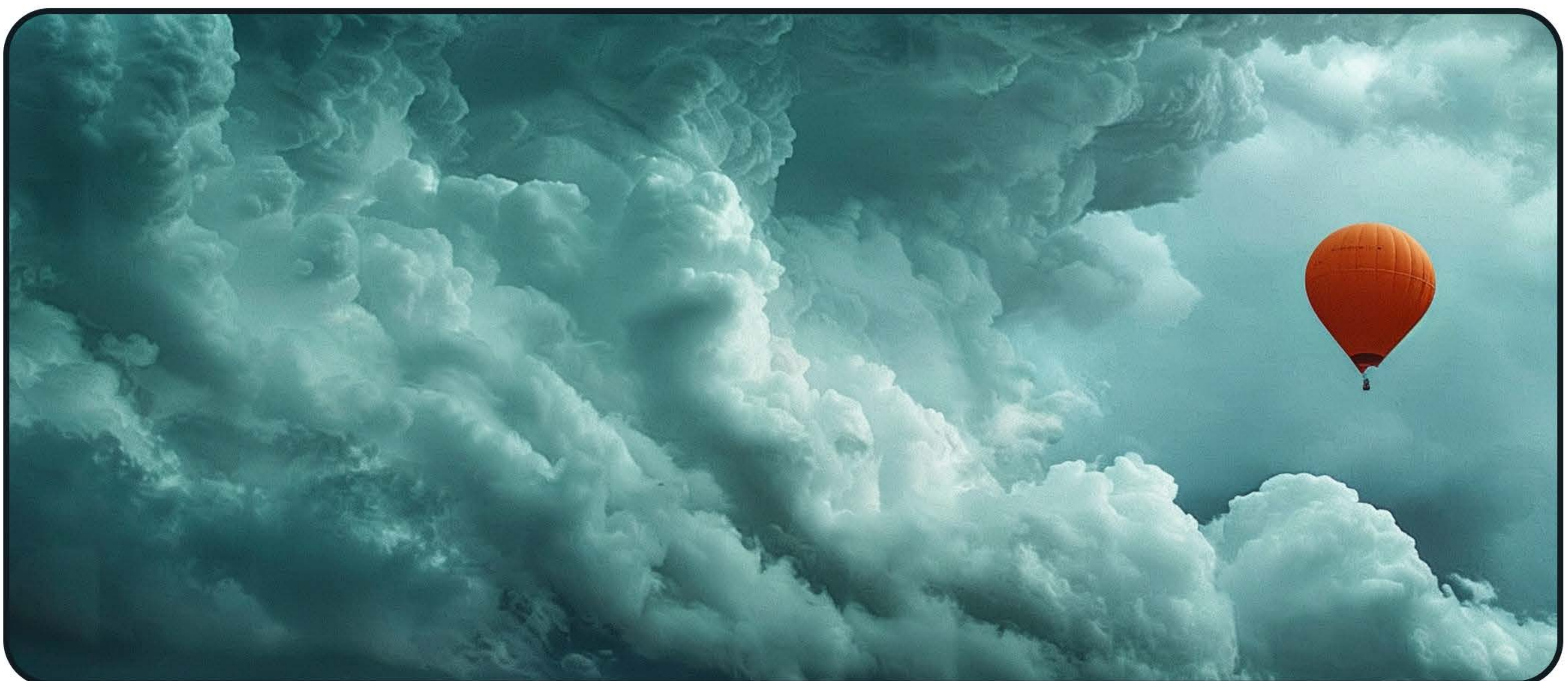
- ➔ **Stevenson Screen:** High temperatures can be measured by placing a thermometer in a Stevenson Screen.
- ➔ **Design:** A wooden enclosure that shields meteorological instruments from precipitation and direct heat radiation while allowing free air circulation.

● **About India Meteorological Department (IMD)**

- ➔ **Established:** 1875
- ➔ **Role:** Principal government agency for meteorology and related subjects.
- ➔ **Global Role:** One of the six Regional Specialized Meteorological Centres of the World Meteorological Organization.
- ➔ **Ministry:** Ministry of Earth Sciences
- ➔ **Headquarters:** New Delhi
- ➔ **Regional Centres:** Six Regional Meteorological Centres.

● **Way Forward**

- ➔ **Calibration and Maintenance:** Ensure proper calibration and regular maintenance of AWS units.
- ➔ **Placement Review:** Review and correct the placement of AWS units to avoid erroneous readings.
- ➔ **Alternative Methods:** Utilize Stevenson Screens for high-temperature measurements to cross-verify AWS readings.
- ➔ **Training and Standards:** Provide training for AWS operators and establish stringent standards for AWS installation and maintenance.
- ➔ **Monitoring and Verification:** Implement a robust monitoring and verification system to promptly address discrepancies in temperature readings.



Unified Payment Interface

● Why in News?

- ➔ The Reserve Bank of India (RBI) and NPCI International Payments Ltd. (NIPL) have set an agenda to expand the Unified Payments Interface (UPI) as part of their Annual Report for 2023-24.
- ➔ **Objective:** To explore collaboration on the Fast Payment System with groups of countries such as the European Union and SAARC, along with multilateral linkages.

● About UPI

- ➔ **Launch:** Initiated by NPCI in 2016.
- ➔ **Functionality:** Integrates multiple bank accounts into a single mobile application, merging several banking features, seamless fund routing, and merchant payments.
- ➔ **International Support:** Currently supported in countries like Bhutan, Nepal, UAE, France, Mauritius, etc.

● Significance of Internationalization of UPI

- ➔ **Global Market Expansion:** Facilitates faster and easier cross-border payments, stimulating trade between India and other countries.
- ➔ **Interoperability and Standardization:** Promotes interoperability between payment systems across countries, ensuring smoother integration with global financial technologies.
- ➔ **Digital Diplomacy:** Enhances India's influence and goodwill through technological collaboration.



● **Challenges in Internationalization of UPI**

- ➔ **Regulatory Compliance:** Navigating diverse regulatory frameworks across multiple jurisdictions is complex and time-consuming.
- ➔ **Security and Data Privacy:** Requires robust security measures, encryption protocols, and data protection mechanisms to maintain user trust.
- ➔ **Infrastructure Disparities:** Differences in infrastructure and competition from established players like China's Alipay.

● **Steps Taken for Internationalization of UPI**

- ➔ **NIPL:** A wholly-owned subsidiary of NPCI, incorporated in 2020, focused on deploying RuPay and UPI outside of India.
- ➔ **UPI One World:** A prepaid payment instrument linked to UPI provided to foreign nationals/NRIs from G20 countries.
- ➔ **India's Initiatives under G20:**
 - Global Digital Public Infrastructure (DPI) Repository.
 - Social Impact Fund to advance DPI in the Global South.

● **Way Forward**

- ➔ **Strengthen Regulatory Framework:** Collaborate with international regulatory bodies to streamline compliance processes.
- ➔ **Enhance Security:** Implement advanced security measures and data protection protocols.
- ➔ **Infrastructure Development:** Invest in infrastructure to reduce disparities and ensure seamless integration.
- ➔ **Strategic Partnerships:** Forge partnerships with key players in the global payments landscape to expand UPI's reach.



Anti-Human Trafficking (AHT) Nodal Officer

● Why in News?

- ⇒ **National Human Rights Commission (NHRC)** takes action against the selling of minor girls in Rajasthan's Kanjar community, directing states to appoint **AHT Nodal Officers**.
- ⇒ These officers, not below the **rank of a State Secretary or Inspector General of Police**, will coordinate efforts to combat human trafficking.

● Definition and Status

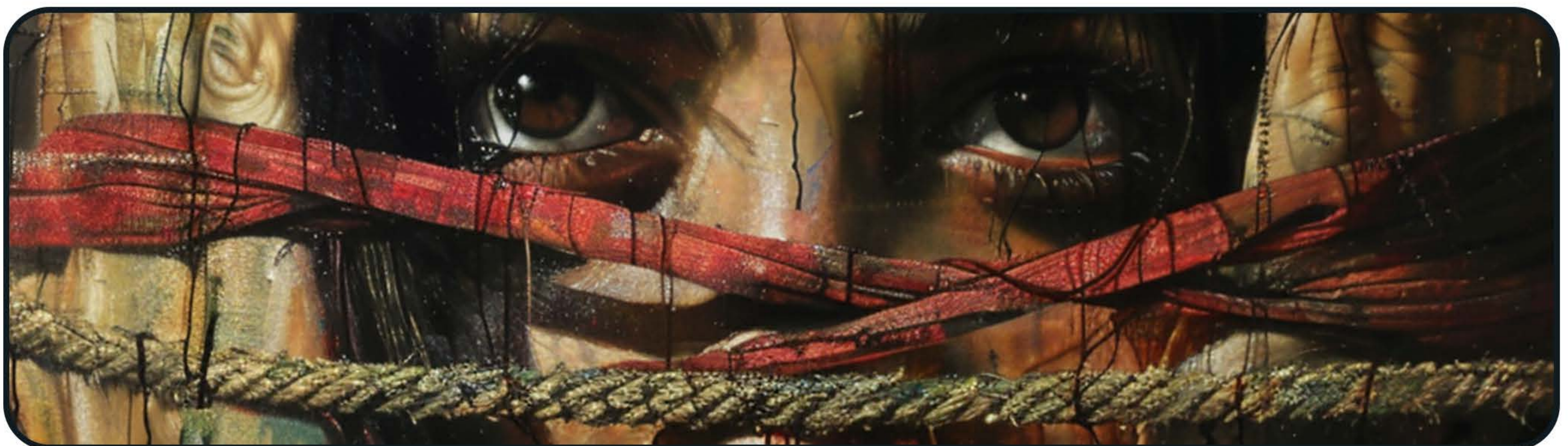
- ⇒ **Human Trafficking** defined as recruitment, transportation, transfer, harboring, or receipt of people through force, fraud, or deception for profit (UN).
- ⇒ India reported 2,250 human trafficking cases in 2022 (NCRB).

● Regulation and Constitutional Provisions

- ⇒ Police being a State subject, registration, investigation, and prevention of human trafficking are primarily the responsibility of State Governments.
- ⇒ Constitutional provisions such as Article 23 prohibit human trafficking, while Articles 39(e) and 39(f) forbid forcing individuals into unsuitable work due to economic necessity.

● Causes of Human Trafficking

- ⇒ **Economic factors:** Poverty, unemployment, migration, and lack of access to quality education.
- ⇒ **Political factors:** Instability, conflict, and natural disasters.
- ⇒ **Cultural practices:** Devaluation of women, child marriage, etc.



● **Initiatives Against Human Trafficking**

➔ **Global:** Adoption of the Protocol to Prevent, Suppress and Punish Trafficking In Persons, Especially Women and Children by the UNGA in 2000.

➔ **India:**

Legislation: Immoral Traffic Prevention Act, 1956.

Anti-Human Trafficking Units (AHTUs): Ministry of Home Affairs provides funding under the Nirbhaya Fund to set up/strengthen AHTUs in every district.

Cri-MAC: Facilitates real-time dissemination of information about significant crimes, including human trafficking cases.

Mission Shakti: Under the Ministry of Women and Child Development, Shakti Sadan subscheme provides Integrated Relief and Rehabilitation Homes for women in distress situations, including trafficking victims.



ICRIER Policy Brief on Reducing Post-Harvest Losses (PHL) in India

● Why in News?

- ➔ International Centre for Research on Integrated Economic and Social Transformation (ICRIER) Policy brief emphasizes the triple win of reducing PHL: benefiting farmers by enhancing income, enhancing food security, and ensuring sustainability in agrifood systems.

● Key Highlights

➔ Production in India:

Food Grain: Increased from 74.23 MMT in 1966-67 to 330.5 MMT in 2022-23.

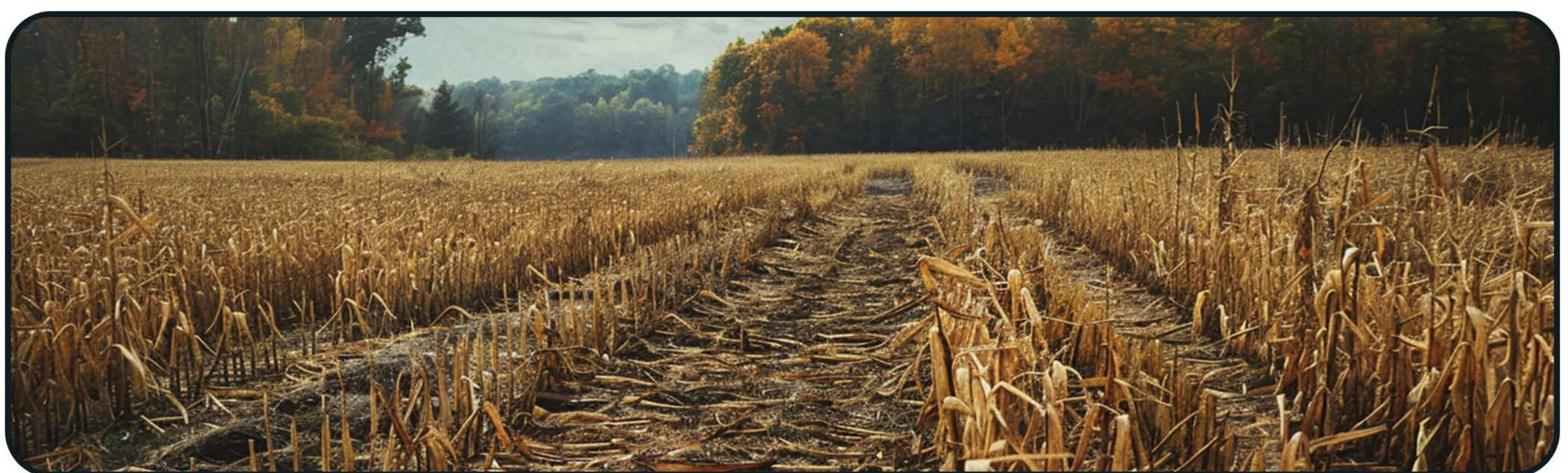
Horticulture: Increased from 96.6 MMT in 1991-92 to 355.25 MMT in 2022-23.

- ➔ **India's Storage capacity:** Expanded from 108.8 MMT in 2010 to 219.4 MMT in 2021.

- ➔ **PHL:** Globally, around 30% of food produced never reaches consumers (FAO, 2021). India faces higher PHL in cereals, pulses, and oilseeds than global levels. Annual loss of US \$18.5 billion from 2020 to 2022, despite some reduction in PHL from 2012 to 2022.

● Key Factors Behind PHL in India

- ➔ **On-Farm Operations:** Low farmer education and skill levels, weather conditions, and use of defective machinery.
- ➔ **Marketing Channels:** En-route leakages, poor quality packaging, use of iron hooks, improper storage practices.
- ➔ **Policy Issues:** Jute Packing Material Act (1987) mandating jute bags susceptible to pests and contamination.



● **Initiatives to Reduce PHL**

- ➡ **Private Entrepreneurs Guarantee (PEG) Scheme:** Augmenting food storage capacity through private participation.
- ➡ **PM Kisan Sampada Yojana:** Reducing PHL of horticulture and non-horticulture produce by creating modern infrastructure for food processing closer to production areas.
- ➡ **Agriculture Infrastructure Fund:** Mobilizing medium to long-term debt financing facility for investment in viable projects for post-harvest management infrastructure and community farming assets.
- ➡ **National Cooperative Grain Storage Project:** Launched in 2023 to expand cooperative sector storage facilities by 700 lakh tonnes.

● **Way Forward**

- ➡ **Mechanization** in agriculture can enhance efficiency and reduce losses by introducing advanced equipment and technologies.
- ➡ **Reforming the Public Distribution System (PDS)** and implementing direct cash transfers can improve food distribution effectiveness and minimize wastage.



World's Largest Grain Storage Plan

● Why in News?

- ➡ **National level Coordination Committee** reviews the implementation status of the World's Largest Grain Storage Plan initiated by the Ministry of Cooperation in 2023 across 11 states..

● World's Largest Grain Storage Plan Overview

- ➡ Initiated by **Ministry of Cooperation** as a pilot project in 2023.
- ➡ Implemented by: National Cooperative Development Corporation with support from NABARD, FCI, CWC, NABARD Consultancy Services, and National Buildings Construction Corporation.
- ➡ **Aims:** To develop agricultural infrastructures at Primary Agricultural Cooperative Societies level, including warehouses and fair price shops, through convergence of various existing schemes.
- ➡ **Schemes integrated:** Agriculture Infrastructure Fund, Agricultural Marketing Infrastructure Scheme, Sub Mission on Agricultural Mechanization, Pradhan Mantri Formalization of Micro Food Processing Enterprises Scheme, etc.

● Benefits of the Plan

- ➡ Ensures **food security**.
- ➡ **Reduces post-harvest losses**, enabling farmers to earn better prices.
- ➡ **Minimizes transportation costs** between procurement centers, warehouses, and FPS.
- ➡ **Prevents distress sale** by farmers at low rates.

● Other Steps to Improve Grain Storage Capacity

- ➡ **Private Entrepreneur Guarantee scheme:** It encourages private participation in augmenting food storage capacity.
- ➡ **Negotiable Warehouse Receipts (NWRs):** It issued by Warehousing Development and Regulatory Authority enable farmers to seek loans from banks against NWRs to avoid distress sales.

● Grain Storage System

- ➡ **FCI:** Nodal agency responsible for procurement, storage, and movement of food grains, public distribution, and maintenance of buffer stocks.
- ➡ **CWC:** Established under Warehousing Corporations Act, 1962, for warehousing agricultural produce and other commodities.



Role of Nuclear Technologies in Food Safety

● Why in News?

- ➡ Nuclear technologies' significance in food safety highlighted at the International Symposium on Food Safety and Control in **Vienna, Austria**, organized by **FAO and IAEA**.
- ➡ These technologies offer solutions to combat hunger, reduce malnutrition, and enhance environmental sustainability, aligning with the One Health approach.

● Role of Nuclear Technologies in Food System

- ➡ **Animal Health:** Polymerase Chain Reaction (PCR) tests, a molecular nuclear technique, rapidly detect diseases in animals.
- ➡ **Soil and Water Management:** Radioactive nuclides from nuclear events aid in determining soil health and erosion rates.
- ➡ **Insect Pest Management:** Nuclear-based Sterile Insect Technique (SIT) manages pest populations by mass-rearing and sterilizing insects through ionizing radiation before release.
- ➡ **Food Safety and Control:** Food irradiation improves safety and extends shelf life by reducing or eliminating microorganisms and insects.
- ➡ **Plant Breeding and Genetics:** Irradiation induces desired genetic changes in plants.

● Key Initiatives

➡ Global:

Atoms4Food Initiative by FAO and IAEA.

Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture.

➡ India:

Technology demonstration plants for irradiation:

KRUSHAK at Lasalgaon, Nashik, for low-dose radiation treatment.

Radiation Processing Plant (RPP) in Navi Mumbai for high-dose radiation treatment.

Food Safety and Standards Authority of India (FSSAI) amended regulations in 2016 to harmonize food irradiation rules with international standards.



Sundhnukagigar Volcano Eruption in Iceland

● Why in News?

- ⇒ Sundhnukagigar Volcano in southwestern Iceland erupted for the fifth time since December 2023.

● About Iceland

- ⇒ **Nickname:** Land of Fire and Ice.
- ⇒ **Location:** Situated on the Mid-Atlantic Ridge in the North Atlantic Ocean, where the Eurasian and North American plates are moving apart.
- ⇒ **Volcanic Activity:** Part of hot-spots, leading to enhanced volcanic activity in the region.

● Global Distribution of Volcanoes

- ⇒ **Hotspot:** An area of Earth's mantle from which hot plumes rise upward, forming volcanoes on the overlying crust. Example: Reunion hotspot.
- ⇒ **Circum-Pacific Belt (Ring of Fire):** Includes more than two-thirds of the world's volcanoes. Example: Mount Ruapehu, New Zealand.
- ⇒ **Divergent Plate Margins:** Areas where one tectonic plate moves away from another. Example: Mid-Atlantic Ridge (longest mountain range in the world, situated in the ocean).

● About Volcanoes

- ⇒ **Definition:** A vent in the Earth's crust through which gases, ashes, and molten lava escape to the ground.
- ⇒ **Location:** Found on both land and the ocean floor.
- ⇒ **Gases Released:** Water vapour, carbon dioxide, sulfur dioxide, hydrogen sulfide, etc.



● **Impact of Volcanoes**

⇒ Positive Impacts:

Fertile Soils: Volcanic materials upon weathering form fertile soils, e.g., Black soil.

Mineral Resources: Rich source of minerals like iron, magnesium, etc.

⇒ Negative Impacts:

Cooling Effect: Volcanic ash and gases increase Earth's albedo, leading to cooling of the Earth.

Health Issues: Eruptions can cause infectious diseases (e.g., conjunctivitis), chronic respiratory diseases, etc.

● **Types of Volcanoes**

⇒ Based on Eruption Frequency:

Active: Frequently erupt.

Dormant: Currently inactive but may erupt again.

Extinct: No longer expected to erupt.

Example: Barren Island (only active volcano in India) situated in Nicobar Islands.

⇒ Based on Type of Eruption:

Shield or Dome: Made up of basalt, not steep. **Example:** Hawaiian volcanoes.

Composite Volcanoes (Strato Volcanoes): Steeper sides than shield volcanoes.

Example: Mount Fuji, Japan.

Caldera: Most explosive volcanoes. **Example:** Yellowstone supervolcano, USA.

● **Way Forward**

⇒ **Monitoring and Research:** Enhance monitoring of volcanic activity to predict eruptions and minimize damage.

⇒ **Disaster Preparedness:** Implement robust disaster preparedness plans in regions prone to volcanic activity.

⇒ **Public Awareness:** Increase public awareness about the risks and safety measures related to volcanic eruptions.

⇒ **Sustainable Development:** Utilize volcanic materials for sustainable development, including agriculture and mineral extraction.



Mandatory Self-declaration Certificate (SDC) for Advertisements

● Why in News?

- ➔ Ministry of Information and Broadcasting mandates **Self-declaration Certificate (SDC)** for all new advertisements, as per Supreme Court directive.
- ➔ No advertisement permitted on television, print media, or the internet without a valid SDC.

● Key Requirements

- ➔ SDC signed by authorized representative of advertiser/advertising agency submitted through respective portals:
 - Broadcast Seva Portal** for TV and Radio Advertisements.
 - Press Council of India's portal** for print and digital/internet advertisements.
- ➔ SDC certifies that advertisement:
 - Does not contain misleading claims.
 - Complies with relevant regulatory guidelines, including Cable Television Networks Rules, 1994, and Norms of Journalistic Conduct of the Press Council of India.

● Significance of the Step

- ➔ **Ensure transparency and accountability** by preventing misleading advertisements without accountability from manufacturers, promoters, and advertisers.
- ➔ **Ensure consumer protection** by preventing violation of consumer rights and unfair trade practices.
- ➔ **Facilitate better implementation of legislations and rules**, such as Guidelines for Prevention of Misleading Advertisements and Endorsements of Misleading Advertisements, 2022.





Press Council of India (PCI)

- Established in 1979 as a statutory quasi-judicial autonomous authority under the Press Council Act, 1978.
- Role: Preserving press freedom and improving standards of newspapers and news agencies in India.
- Composition: Chairman and 28 members, with the Chairman traditionally a retired Supreme Court judge nominated by a Committee consisting of the Chairman of Rajya Sabha, Speaker of Lok Sabha, and a member elected by the Council's 28 members.



NOTA (None of the Above) in Indian Elections

● **Why in News?**

- ⇒ **NOTA** was introduced in **2013** following a Supreme Court directive in response to a Public Interest Litigation filed by the Peoples Union for Civil Liberties (PUCL).

● **About NOTA**

- ⇒ Provides voters an option to **reject all running candidates**, signaling disapproval of the available choices.
- ⇒ Even if NOTA receives the majority of votes, the candidate with the second-highest number of votes is declared the winner.
SC ruled that NOTA is meant **only for universal adult suffrage and direct elections**.
Practiced globally in countries such as **France, Belgium, Brazil, Finland, and Sweden**.

● **Benefits of NOTA**

- ⇒ Allows citizens to **express dissatisfaction** with candidates.
- ⇒ **Incentivizes greater participation** in the democratic voting process.
- ⇒ **Encourages high moral and ethical values** among citizens and politicians.
- ⇒ Indirectly compels political parties to **nominate better candidates**.

● **Challenges of NOTA**

- ⇒ Has **symbolic significance** without impacting the election result.
- ⇒ Usually receives a **meager number of votes**.
- ⇒ **Limited influence** on political outcomes.

● **Way Forward**

- ⇒ **Strengthen the NOTA** option as done in Maharashtra local body elections.
In Maharashtra, re-election may be conducted if the majority of votes are NOTA.

Nanoparticle Production Using Microdroplets

● Why in News?

- ⇒ IIT Madras researchers demonstrated that common minerals like river sand, ruby, and alumina can be instantly broken down into nanoparticles using charged water microdroplets.

● Key Findings

- ⇒ **Microdroplets:** Tiny water droplets around $10\mu\text{m}$ in size known to enhance chemical reactions, naturally generated by crashing ocean waves and atmospheric processes.

- ⇒ **Potential Enhancements:**

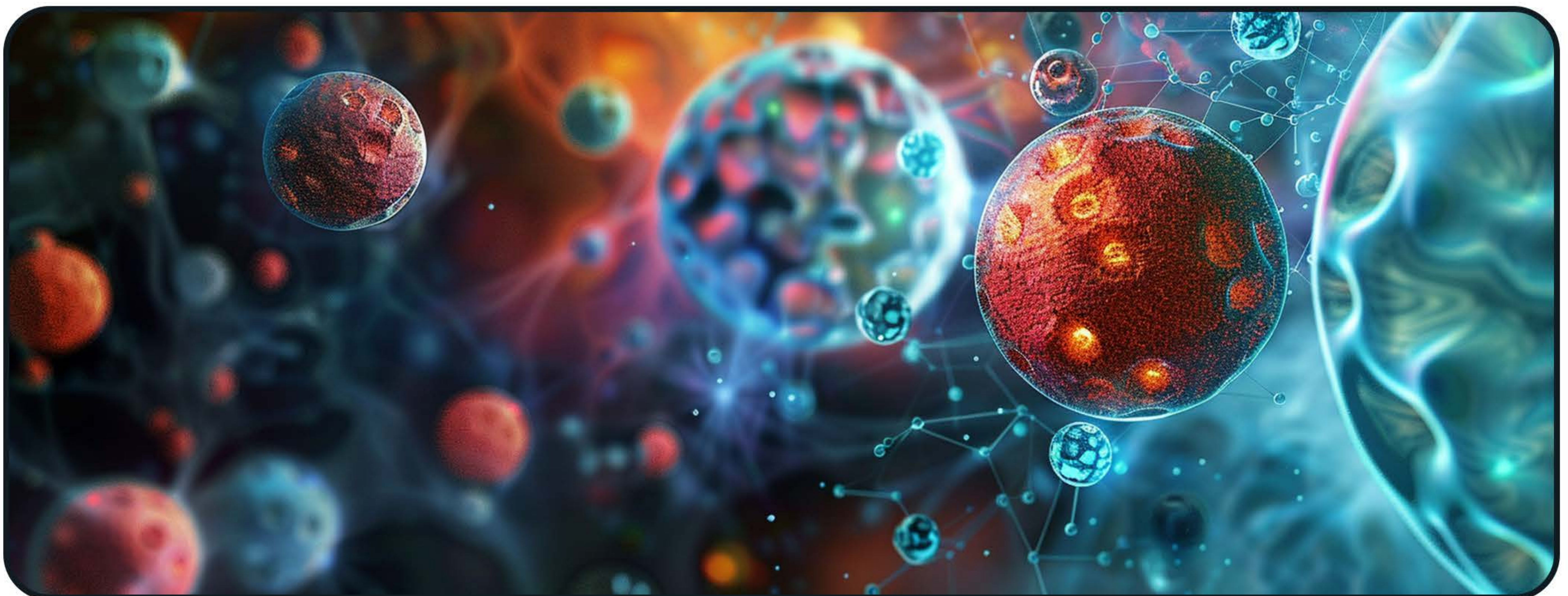
Accelerate natural weathering processes for soil formation.

Enable efficient nanoparticle production with broad industrial applications.

Enhance crop growth (e.g., rice and wheat) where mineral nanoparticles like silica are crucial.

● Nanoparticles Overview

- ⇒ **Size:** Particles ranging from 1 to 100 nanometers.
- ⇒ **Properties:** Depend on shape, size, surface characteristics, and inner structure.
- ⇒ **Forms:** Aerosols (solids or liquids in air), suspensions (solids in liquids), or emulsions (liquids in liquids).



● **Formation of Nanoparticles**

- ⇒ **Natural Formation:** Erosion or weathering.
- ⇒ **Human-Induced Formation:** Industrial and domestic activities like cooking, manufacturing, transport.
- ⇒ **Manufacturing Approaches:**
 - Top-Down:** Breaking down larger particles into nanostructures.
 - Bottom-Up:** Assembling small atoms or molecules into nanostructures.

● **Applications of Nanoparticles**

- ⇒ **Medical:** Targeted drug delivery, gene therapy, tissue engineering.
- ⇒ **Industrial:** Induce unique electrical, mechanical properties, create stronger, lighter, cleaner surfaces.
- ⇒ **Food Processing:** Use of anti-microbial agents, control gas permeability in food packaging.
- ⇒ **Environmental:** Air purification with ions, wastewater purification with nanobubbles or nanofiltration systems for heavy metals.
- ⇒ **Electronics:** Printed electronics, including Carbon Nanotubes.

● **Way Forward**

- ⇒ Further research to **optimize and scale up nanoparticle production** using charged microdroplets.
- ⇒ Explore **additional industrial, agricultural, and environmental applications** of nanoparticles produced by this method.
- ⇒ Develop **protocols to ensure safety and environmental sustainability** in nanoparticle usage and production.



Arab League

● About Arab league

- ➡ **Name:** Arab League (League of Arab States - LAS)
- ➡ **Type:** Regional organization of Arab states
- ➡ **Regions:** Middle East and parts of Africa
- ➡ **Established:** March 22, 1945
- ➡ **Headquarters:** Cairo, Egypt
- ➡ **Language:** Arabic
- ➡ **Members:** 22 states
- ➡ **Founding Members:** Egypt, Syria, Lebanon, Iraq, Jordan, Saudi Arabia, Yemen
- ➡ **Later Members:** Libya, Sudan, Tunisia, Morocco, Kuwait, Algeria, Bahrain, Oman, Qatar, UAE, Mauritania, Somalia, PLO, Djibouti, Comoros
- ➡ **Palestine:** Regarded as an independent state
- ➡ **Observers:** Brazil, Eritrea, India, Venezuela.

● Aims and Objectives

- ➡ **Charter Reasons:** Concerns about post-war colonial divisions and opposition to the emergence of a Jewish state on Palestinian territory
- ➡ **Main Goals:** Strengthen and coordinate political, cultural, economic, and social programs of members; settle disputes among members or between members and third parties
- ➡ **Military Support:** Agreed in 1950 to provide mutual defense assistance

● Council of the Arab League

- ➡ **Highest Body:** The Council
 - Composition:** Representatives of member states (usually foreign ministers, their representatives, or permanent delegates)
- ➡ **Decision-Making:** Majority basis
 - Compliance:** No mechanism to compel members to comply with resolutions
 - Voting:** Each member has one vote
 - Binding Decisions:** Only on states that voted for them



State of the Ocean Report 2024

● Why in News?

- ➡ The report, structured around the **UN Decade of Ocean Science for Sustainable Development (2021-2023)**, offers insights into ocean-related scientific activities, describing the current and future state of the ocean.

● Key Findings

➡ Warming

Increased Rate: Ocean warming has **doubled** in the past twenty years.

Temperature Rise: Average ocean temperatures have **increased by 1.45°C**, with hotspots above 2°C in the Mediterranean, Tropical Atlantic Ocean, and Southern Oceans.

➡ Rising Sea Levels

Main Causes: Accelerated **ice mass loss** from the Greenland and West Antarctica ice sheets, and to a lesser degree, accelerated ocean warming.

➡ Acidification

CO2 Absorption: Ocean absorbs around **25% of annual anthropogenic CO2**, leading to **ocean acidification**.

Future Projection: Ocean acidification is projected to **increase by more than 100%** by the end of the century.

➡ Deoxygenation

Decreasing Oxygen: Ocean oxygen content is **decreasing**, worsening **hypoxia**.

Uncertainty: It is unclear whether deoxygenation is accelerating due to increased ocean heat content.

➡ Coastal Blue Carbon Ecosystems

Role: Mangroves, seagrasses, and tidal marshes provide refuge against a warmer, more acidic ocean and are important carbon stores.

Threats: **20-35%** of these ecosystems have been lost since 1970.



● **Key Recommendations**

Key Recommendations	Details
Marine Spatial Planning	<i>Reduce pressures on marine ecosystems</i>
Knowledge of Seafloor	<i>Map the 75% of ocean floor that remains unmapped</i>
Engaging Indigenous Peoples	<i>Involve in marine policy and planning</i>
Building Global Ocean Literacy	<i>Promote universal appreciation of the ocean's role</i>



UNICEF's "Child Nutrition Report, 2024"

● Why in News?

- ➔ UNICEF released the "Child Nutrition Report, 2024," highlighting severe child food poverty (CFP) globally.

● Key Findings

- ➔ **Prevalence:** Approximately 27% of children globally live in severe CFP. In India, 40% of children suffer from severe CFP, the second highest burden in South Asia after Afghanistan.
- ➔ **Poor Diet:** Unhealthy foods are increasingly replacing nutrient-rich foods in children's diets.
- ➔ **Income and CFP:** Severe CFP affects children in both poor and non-poor households, indicating that income is not the only driving factor.
- ➔ **Causes:**
 - Growing inequities
 - Conflict and climate crises
 - Rising food prices
 - Overabundance of unhealthy foods
 - Harmful food marketing strategies
 - Poor child-feeding practices

● Recommendations

- ➔ **Strengthen Data Systems:** To assess the severity of CFP.
- ➔ **Transform Food Systems:** Make nutritious foods accessible, affordable, and desirable for feeding young children.
- ➔ **Leverage Health Systems:** Deliver essential nutrition services, including counselling on child feeding.



● **India's Initiatives**









- ➡ **Saksham Anganwadi and Poshan 2.0:** Focuses on maternal nutrition, infant and young child feeding norms.
- ➡ **Introducing Millets in Mid-Day Meal Scheme:** Renamed as 'PM Poshan' scheme.

● **Measurement of CFP**

- ➡ To meet the minimum dietary diversity for healthy growth and development, children need to consume foods from at least five out of eight defined groups.

Child food poverty is measured using the UNICEF and World Health Organization (WHO) dietary diversity score. To meet the *minimum dietary diversity* for healthy growth and development, children need to consume foods from **at least five out of the eight** defined food groups.

If children are fed:	0–2 food groups/day they are living in severe child food poverty	3–4 food groups/day they are living in moderate child food poverty	5 or more food groups/day they are not living in child food poverty
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Breastmilk	Grains, roots, tubers and plantains	Pulses, nuts and seeds	Dairy products	Flesh foods (meat, poultry and fish)	Eggs	Vitamin A-rich fruits and vegetables	Other fruits and vegetables

TRISHNA Mission: Enhancing Global Water and Energy Monitoring

● Why in News?

- ➔ TRISHNA (**Thermal Infra-Red Imaging Satellite for High-resolution Natural Resource Assessment**) is a joint mission by **ISRO** and **CNES** to monitor surface temperature and water management at a regional to global scale.

● About TRISHNA Mission

➔ Objective:

Monitor energy and water budgets of the continental biosphere.

Quantify terrestrial water stress and water use.

Observe water quality and dynamics with high resolution.

Assess urban heat islands, detect thermal anomalies related to volcanic activity, and geothermal resources.

➔ Primary Payloads:

Thermal Infra-Red (TIR) Payload: Provided by CNES, features a four-channel long-wave infrared imaging sensor.

Visible-Near Infra-Red-Short Wave Infra-Red (VNIR-SWIR) Payload: Developed by ISRO, includes seven spectral bands for detailed mapping of surface reflectance.

➔ Orbit and Lifespan:

Operates in a **Sun-synchronous (SSO)** orbit with a **5-year operational life**.

SSO ensures satellites remain in the same position relative to the Sun.



● **Significance**

- ➡ **Climate monitoring**, including droughts, permafrost changes, and evapotranspiration rates.
- ➡ **Better urban planning** with detailed maps of urban heat islands and heat alerts.
- ➡ **Enhanced monitoring of environmental changes** and natural resource management.



India's International Space Cooperation

● **India-France:**

Strategic Space Dialogues.

Letter of Intent on Defense Space Cooperation.

Space exchanges and defense space industrial cooperation.

● **India-US:**

Bilateral space situational awareness arrangement (2022).

NASA-ISRO Synthetic Aperture Radar (NISAR) Mission.

● **Others:**

Lunar Polar Exploration (LUPEX) Mission with Japan.

South Asia Satellite (SAS) to boost communication and improve disaster links among India's six neighbors.



Nagi and Nakti Bird Sanctuaries: New Additions to India's Ramsar Sites

● **Why in News?**

- ➔ **Nagi and Nakti** bird sanctuaries in **Bihar's Jamui district** are recognized under the Ramsar Convention, increasing the total **Ramsar sites in India to 82**.

● **About Nagi and Nakti Bird Sanctuaries**

- ➔ **Location:** Bihar's Jamui district.

- ➔ **Characteristics:**

Man-made reservoirs (Nagi dam and Nakti dam).

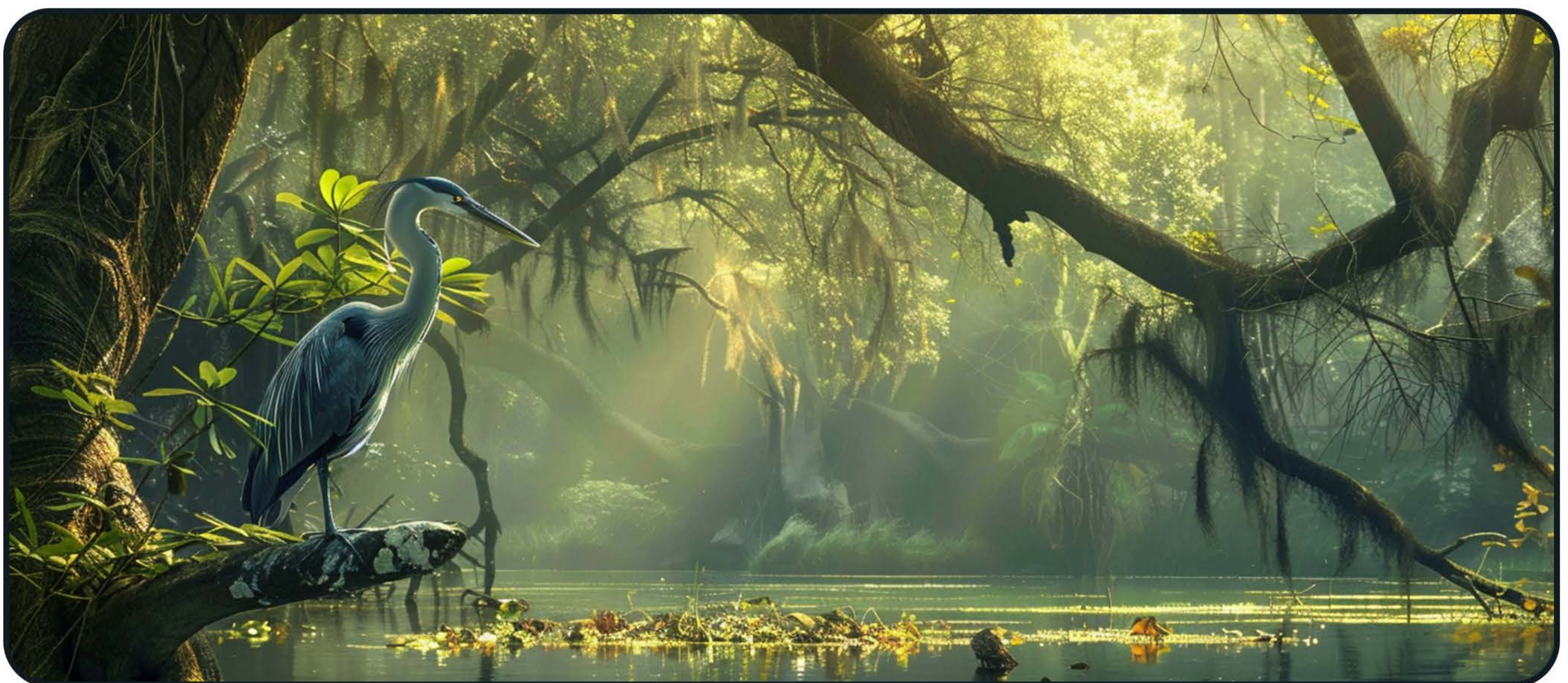
Feature dry deciduous forests surrounded by hills.

Nagi lies in the **Gangetic Plains** but has a landscape reminiscent of the Deccan Plateau.

Recognized as an **Important Bird and Biodiversity Area (IBA)** by BirdLife International.

● **Major Bird Habitats**

- ➔ **Migratory Birds:** Bar-headed Goose, Greylag Goose, Northern Pintail, Red-crested Pochard, Steppe Eagle
- ➔ **Resident Birds:** Indian Robin, Ashy-crowned Sparrow-Lark, Asian Koel, Asian Pied Starling, Bank Myna





Ramsar Convention

- **Definition:** An **intergovernmental treaty** for the conservation and wise use of wetlands and their resources.
- **Adoption:** Ramsar, Iran, in **1971**; came into force in **1975**.
- **India's Participation:** Became a party in **1982**. Maximum Ramsar sites are in **Tamil Nadu** followed by **Uttar Pradesh**.
- **Ramsar List:** Contains **wetlands of international importance** valuable for humanity as a whole.

Ramsar List Criteria

- Wetlands must meet **at least one of nine criteria**, such as supporting vulnerable, endangered, or critically endangered species or threatened ecological communities.
- Contracting parties manage Ramsar Sites to maintain their ecological character.

Montreux Record

- Includes Ramsar sites where changes in ecological character have occurred, are occurring, or are likely to occur due to technological developments, pollution, or other human interference.
- **Indian Sites on Montreux Record:**
 - Loktak (Manipur)
 - Keoladeo National Park (Rajasthan)






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