CURRENT AFFAIRS WEEKLY

WEEK **5** OCTOBER, 2024

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DISCLAIMER

*T*he current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

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SECTION -A

MAINS ISSUES

INDIA-SRI LANKA FISHERMEN ISSUE

CONTEXT

India has reiterated its concerns over the **increasing detention of Indian fishermen** by Sri Lankan authorities at the recent **India-Sri Lanka Joint Working Group (JWG) on Fisheries meeting**.

What are the issues between India and Sri Lanka?

- The ongoing issue revolves around the detention of Indian fishermen, predominantly from Tamil Nadu, accused of crossing the **International Maritime Boundary Line (IMBL)** into Sri Lankan waters.
- Majorly, the problem has three interrelated facets:
  - ➤ disagreements over Kachchatheevu (islet)
  - ➤ poaching by Indian fishers in Sri Lankan waters
  - ➤ practices like **bottom trawling** (which deplete marine resources)
- The disagreement between both parties arose after signing two agreements in 1974 and 1976 on the maritime boundaries.
- According to the **1974 Indo-Lanka Maritime Agreement**, the Indian Government ceded **Kachchatheevu Island to Sri Lanka**.
- However, Indian fishermen have been crossing the International Maritime Boundary Line (IMBL) unintentionally and have sometimes been apprehended or faced unfortunate consequences from the Sri Lankan authorities.
- **UNCLOS**: India and Sri Lanka have both signed the **United Nations Convention Law of the Sea (UNCLOS),**

and it is crucial to consider Sri Lanka's claim that Indian fishermen engage in illegal fishing activities after crossing the IMBL.

- ➤ According to **Article 19 of UNCLOS**, vessels that engage in such activities in foreign territorial seas are considered a threat to the "peace, good order, or security of the coastal state."

⊘ FACT BOX

Palk Strait and the Gulf of Mannar

- The Palk Strait is a narrow strip of water that separates the **state of Tamil Nadu in India from the northern regions of Sri Lanka.**
- Both Indian and Sri Lankan fishermen have been fishing in the Palk Bay Straits for several years but the maritime agreements signed between the two sides in 1974 and 1976 led to the demarcation of the **International Maritime Boundary Line (IMBL).**
- The two treaties between the two countries led to the **Palk Bay Strait** connecting India and Sri Lanka being declared a **"two-nation pond"** under the **United Nations Convention on the Law of the Sea rules.**
- This led to the ban on fishing in international waters of the two countries.

Kachchatheevu (islet)

- The prolonged dispute over fishing rights around Kachchatheevu Island in Palk Bay has been a source of tension between India and Sri Lanka for many years.

Kachchatheevu (islet)

- The prolonged dispute over fishing rights around Kachchatheevu Island in Palk Bay has been a source of tension between India and Sri Lanka for many years.
  - ➤ The **Palk Bay region**, through which the IMBL runs, is a 15,000 sq km biodiverse region. It hosts more than 580 species of fish, 300 species of marine algae, 11 species of seagrass, five species of turtles, and a rich variety of mangroves.
- The 285-acre land, strategically important for fishing activities, was owned by the **Raja of Ramnad (Ramanathapuram)** and later became part of the **Madras Presidency** after the delimitation of **Gulf of Mannar** and **Palk Strait** during British rule between the then governments of Madras and Ceylon.
- Kachatheevu is important for Indian fishers mainly for two reasons: a) thousands attend the annual St. Antony's church festival; b) Indian fishermen make a halt on the islet for rest and to dry their fishing nets.
- However, the bilateral pact does not allow them to fish around it. It is situated just 32 km north of Dhanushkodi and spreads over 285 acres.

Economic reality of Tamil Nadu's Fishermen

- India is the **third largest producer of fish in the world** and occupies the second position in aquaculture production.
- Tamil Nadu, with its 13 coastal districts, with 422 fishing villages, 375 landing centres, and 75,721 households with over a million fishers, ranked third in total marine fish production in the country during 2017-18.
- In spite of the fact that the contribution of fisheries to the **GDP is 1 per cent** and the share of fisheries in agricultural **GDP is 5 per cent**, most people in the fishing community live in poverty.

(See Figure No. 01 below)

AADHAAR CANNOT BE USED AS PROOF OF DATE OF BIRTH: SC

CONTEXT:

The Supreme Court's recent ruling on Aadhaar cards not being valid proof of age has garnered significant attention,
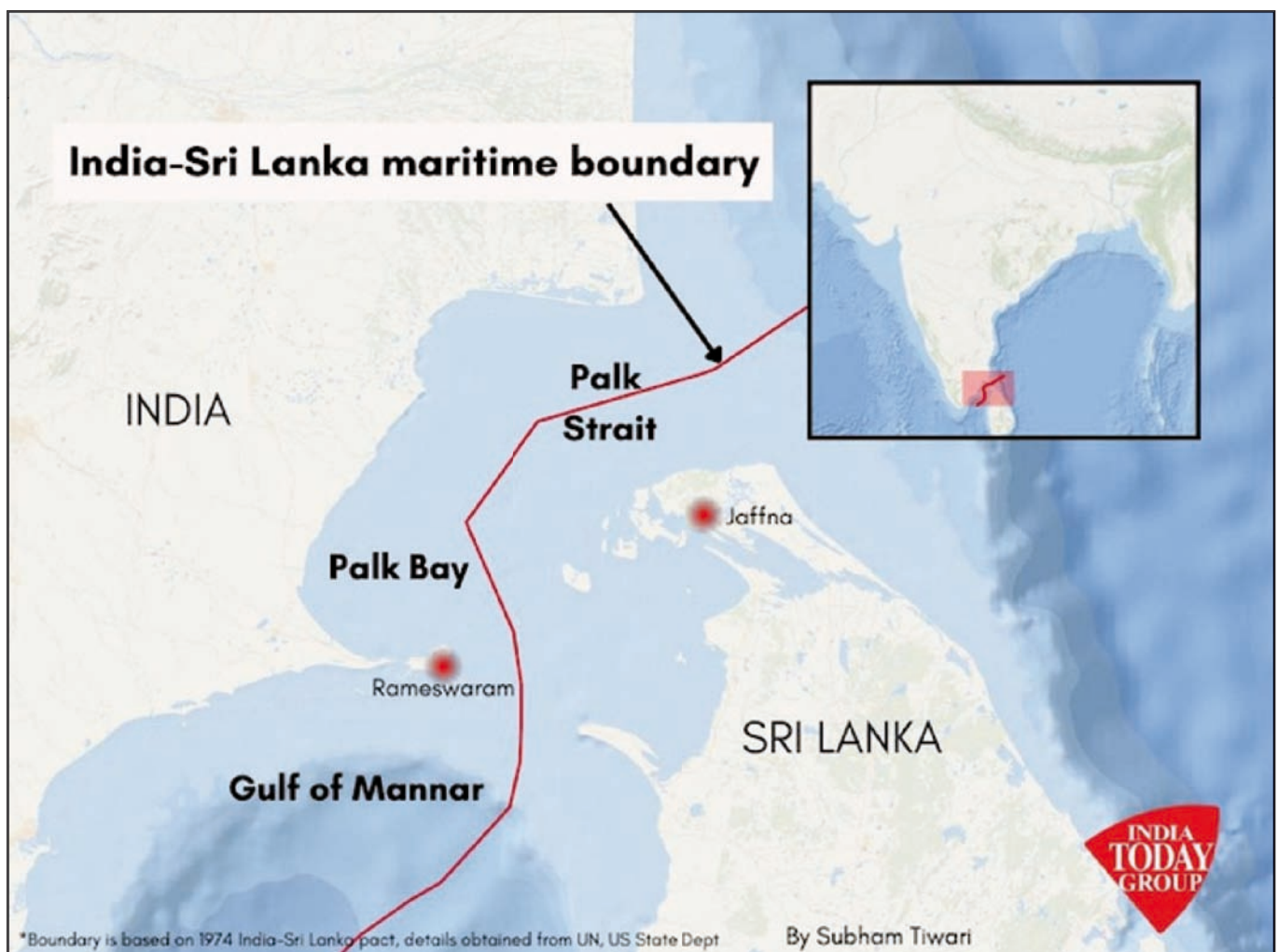

Figure No. 01

particularly in relation to compensation claims for motor vehicle accidents. The case involved the family of a man who died in an accident, with the compensation amount hinging on his age as listed on various documents, including his Aadhaar card and School Leaving Certificate.

Why Did the Court Issue This Ruling? (Background)

- The ruling was prompted by a compensation dispute involving the deceased's age.
  - Initially, the Punjab & Haryana High Court used the age listed on the Aadhaar card to calculate compensation, applying a specific multiplier based on that age.
  - However, the family contended that the School Leaving Certificate indicated a different age, warranting a higher compensation amount.
  - The Supreme Court criticized the lower court's reliance on the Aadhaar card, referencing established legal precedents and provisions that designate specific documents (like the School Leaving Certificate) as valid proof of age.
  - The court emphasized the importance of using verified educational documents rather than Aadhaar, which was primarily intended as proof of identity.

What Did the SC Say Now?

The Supreme Court, in its judgement, reiterated that Aadhaar should not be considered proof of age. It cited:

- **Section 94 of the Juvenile Justice (Care and Protection of Children) Act, 2015:** This section specifies that matriculation or equivalent certificates are acceptable for determining age.
- **Previous Supreme Court Rulings:** The court referred to a 2018 ruling that characterized Aadhaar as proof of identity, explicitly stating it does not serve as proof of date of birth.
- The court overturned the Punjab & Haryana High Court's decision, establishing that the School Leaving Certificate should be used to determine the age for calculating compensation, ultimately awarding the family Rs 15 lakh based on the correct multiplier.

Impact

- The ruling has significant implications for how Aadhaar is utilized in legal and administrative contexts.
  - Aadhaar was mooted first as a "unique ID (UID) for below-poverty-line families" to access government schemes, and then as a national exercise to register and issue unique IDs to every resident in India.
- It reinforces the notion that while Aadhaar serves as a crucial tool for identity verification, it is not a comprehensive solution for all identification needs, particularly those requiring age verification.
- This decision may lead to a reevaluation of Aadhaar's role in various administrative processes and bolster the reliance on more traditional forms of documentation for specific legal purposes.

- Additionally, it underscores the ongoing dialogue regarding privacy and the appropriate use of personal data in India's legal framework.

CHILD MALNUTRITION ALONG CASTE LINES

CONTEXT

A recent research study highlights the **paradox of higher child stunting rates in India** compared to sub-Saharan Africa, revealing that this discrepancy largely disappears when **chronic malnutrition is analyzed along caste lines**. This study challenges previous assumptions about India's nutrition status and underscores the significant disparities within the country.

Key Findings of the Report

- **Stunting Rates**: The study found that children from historically marginalized communities, such as Scheduled Castes (SCs) and Scheduled Tribes (STs), are 50% more likely to experience stunting than those from forward castes. The overall stunting rate in India is 36%, compared to an average of 34% in 19 sub-Saharan African countries.
- **Comparative Analysis**: Children from forward castes have a stunting rate of 27%, which is lower than both the average in sub-Saharan Africa and the overall rate in India. This suggests that when analyzing stunting, the intra-country disparities are more pronounced than the international comparison.
- **Hidden Divide**: The research indicates a "hidden divide" in nutrition outcomes within India, which is often overlooked in broader comparisons. The gaps in child malnutrition are primarily borne by stigmatised caste groups, revealing the need for a more nuanced understanding of malnutrition in the country.

FACT BOX

- **Wasting** is defined as low weight-for-height. It often indicates recent and severe weight loss, although it can also persist for a long time. It usually occurs when a person has not had food of adequate quality and quantity and/or they have had frequent or prolonged illnesses.
- **Stunting** refers to a child who is too short for his or her age and is the result of chronic or recurrent malnutrition.
- **Malnutrition** refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients. The term malnutrition covers two broad groups of conditions.
  - **'Undernutrition'**—which includes stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies or insufficiencies (a lack of important vitamins and minerals).

➤ **Overweight**, obesity and diet-related non-communicable diseases (such as heart disease, stroke, diabetes and cancer).

Indian Government Initiatives for Related Issues

◉ **National Nutrition Mission (POSHAN Abhiyaan)**: Launched in 2018, this program aims to reduce stunting, under-nutrition, and low birth weight through a multi-sectoral approach. It focuses on improving the nutritional status of children, pregnant women, and lactating mothers.

◉ **Integrated Child Development Services (ICDS)**: This program provides food, preschool education, and primary healthcare to children under 6 years of age and their mothers. It aims to combat child malnutrition and promote health.

◉ **Mid-Day Meal Scheme**: This initiative provides free lunches to school children, aiming to improve nutritional levels and encourage school attendance, particularly in marginalized communities.

◉ **Pradhan Mantri Matru Vandana Yojana (PMMVY)**: This maternity benefit scheme supports pregnant women and lactating mothers by providing cash incentives, encouraging better nutritional practices and healthcare during pregnancy and early infancy.

POPULATION CENSUS

CONTEXT:

The Centre plans to initiate the next census, an official survey of the nation's population, in 2025 after a four-year delay and the process is expected to continue till 2026.

What is Census?

◉ Population Census is the total process of collecting, compiling, analyzing and disseminating demographic, economic and social data pertaining, at a specific time, of all persons in a country or a well-defined part of a country.

◉ It also provides the trends in population characteristics.

◉ **Nodal Ministry:** The decennial Census is conducted by the Office of the Registrar General and Census Commissioner of India, **Ministry of Home Affairs**.

➤ Until 1951, the **Census Organisation** was set up on an ad-hoc basis for each Census.

Constitutional Provision:

➤ Census is conducted under the provisions of the **Census Act, 1948.**

➤ The bill for this Act was piloted by **Sardar Vallabhbhai Patel**, the then **Home Minister of India**.

➤ The population census is a **Union subject** under **Article 246 of India Constitution**.

➤ It is listed at serial number 69 of the **Seventh Schedule of the Constitution.**

Background

➤ The history of the Census began with 1800 when England had begun its Census.

➤ In its continuation, a census was conducted in Allahabad (1824) and in Banaras (1827-28) by James Prinsep.

➤ The first complete census of an Indian city was conducted in 1830 by **Henry Walter in Dacca (now Dhaka).**

➤ The **Second Census** was conducted in 1836-37 by Fort St. George.

➤ In 1849, the Government of India ordered the local governments to conduct quinquennial (five-yearly) returns of population.

➤ **First Non-synchronous Census**: It was conducted in India in 1872 during the reign of Governor-General Lord Mayo.

➤ **First Synchronous Census**: The first synchronous census was taken under British rule on February 17, 1881, by W.C. Plowden (Census Commissioner of India).

➤ Since then, censuses have been undertaken uninterruptedly once every ten years.

What is the need of Census?

◉ **Source of Information:** Researchers and Demographers use census data to analyze growth and trends of population and make projections.

◉ **Good Governance:** The data collected through the census is used for administration, planning and policy making as well as management and evaluation of various programmes by the Government.

◉ **Demarcation:** Census data is also used for demarcation of constituencies and allocation of representation to Parliament, State legislative assemblies and the local bodies.

◉ **Better Access for Businesses:** The census data is also important for business houses and industries for strengthening and planning their business for penetration into areas, which had hitherto remained, uncovered.

◉ **Giving Grants:** Finance Commission provides grants to the states on the basis of population figures available from the Census data.

◉ **Urbanization and Migration Patterns**: Data on migration trends, both domestic and international helps governments plan urban development and infrastructure effectively, especially in rapidly growing cities.

◉ **Disaster Preparedness and Response**: It helps governments allocate resources effectively and ensures aid reaches those most in need during emergencies.

CURRENT STATE OF INDIA'S FERTILIZER SECTOR

CONTEXT

The ongoing crises in Ukraine and Gaza have raised concerns about the **stability of global fertilizer markets**, directly impacting India, one of the world's largest agricultural producers.

Current State of India's Fertilizer Sector

- India's fertilizer sector is grappling with a significant supply-demand imbalance.
- Despite being one of the **largest consumers of fertilizers globally**, the country relies heavily on imports to meet its agricultural needs.
- The recent report by the **Standing Committee of Parliament on Chemicals and Fertilizers** indicated that domestic production is insufficient to meet the demand for fertilizers, particularly for **Di-Ammonium Phosphate (DAP) and Muriate of Potassium (MOP).**
- **Current Import Fertilizer Scenario:** The Standing Committee's August 2023 report shed light on the dependency on imports. It noted that:
  ➤ Approximately 20% of India's urea requirement is met through imports.
  ➤ About 50-60% of DAP and 100% of MOP needs are satisfied through foreign sources.
- The dependence on imports is especially concerning given the geopolitical tensions in regions like Eastern Europe and West Asia, which could disrupt supply chains and inflate prices.

How Has India's Fertilizer Production Changed?

- In the 2021-22 agricultural year, India consumed around 579.67 lakh metric tonnes (LMT) of major chemical fertilizers, compared to 629.83 LMT in 2020-21. Production figures reveal a persistent shortfall:
  ➤ **Urea**: Produced 250.72 LMT; consumed 341.73 LMT.
  ➤ **DAP**: Produced 42.22 LMT; consumed 92.64 LMT.
  ➤ **MOP**: Entirely imported; no domestic production.
- The production of chemical fertilizers has seen only marginal growth over the past seven years, with an increase of about 50 LMT from 2014-15 to 2021-22. Despite the establishment of new urea plants under the 2012 investment policy, India's production capacity still falls short of its requirements.

Challenges Facing the Sector

- **Dependence on Imports**: The significant reliance on imports for key fertilizers like DAP and MOP exposes India to global market fluctuations and geopolitical instability.
- **Production Capacity Constraints**: Existing fertilizer manufacturing facilities are not sufficient to meet domestic demand, leading to shortfalls and increased reliance on imports.

- **Rising Prices**: The ongoing crises in Ukraine and Gaza are causing oil prices to rise, directly affecting the cost of fertilizers and impacting farmers' operational costs.

Required Measures

Experts and policymakers recommend several strategic measures to enhance India's fertilizer sector:

- **Increase Domestic Production**: There is an urgent need to expand the production capacity of indigenous fertilizer plants. Investments should be encouraged in both public and private sectors.
- **Policy Initiatives**: The government must create a conducive environment for investments in fertilizer manufacturing, including incentives for private players.
- **Adoption of Sustainable Practices**: Encouraging the use of alternatives like nano urea and promoting natural farming methods can help reduce dependence on chemical fertilizers.
- **Improving Supply Chain Resilience**: Developing robust supply chains for raw materials and fostering partnerships with other nations can mitigate the risks associated with global supply disruptions.
- **Investment in Research and Development**: Innovating new fertilizer technologies and enhancing the efficiency of existing fertilizers can significantly improve agricultural productivity.

FACT BOX

About Fertilisers

- Fertilisers are basically food for crops, containing nutrients necessary for plant growth and grain yields.
- Balanced fertilisation means supplying these following nutrients in the right proportion, based on soil type and the crop's own requirement at different growth stages.
  ➤ **Primary** (N, phosphorus-P and potassium-K)
  ➤ **Secondary** (sulphur-S, calcium, magnesium)
  ➤ **Micro** (iron, zinc, copper, manganese, boron, molybdenum)
- India is among the **world's largest buyers of fertiliser**, besides **China, Brazil, and the US.**
- **India imports four types of fertilisers:**
  ➤ Urea
  ➤ Diammonium phosphate (DAP)
  ➤ Muriate of potash (MOP)
  ➤ Nitrogen-phosphorous-potassium (NPK)

Fertilizer Consumption

- Overall fertilizer consumption in the country rose 2.6% to 60 million tonne in 2023-24,

- DAP consumption increased to 105.31 lakh MT from 92.64 lakh MT in 2021-22.

- However, NPK consumption in the country exhibited a declining trend, falling to 107.31 lakh MT from 125.82 lakh MT in 2020-21.

- Total urea consumption during 2022-23 year was nearly 35.7 million tonne.

- In 2023-24, India's consumption of conventional urea is estimated to decline by 2.5 million tonne due to

  ➤ increase in the demand of nano urea (liquid form of the farm chemical)

  ➤ government's efforts to curb use of agricultural chemicals through natural farming

  ➤ **Integrated Nutrient Management (INM):** This approach advocates for soil test-based balanced and integrated utilization of chemical fertilisers along with organic sources like Farm Yard Manure (FYM), city compost, vermi-compost and bio-fertilisers.

  ➤ Paramparagat Krishi Vikas Yojana (PKVY): Cluster formation, training, certification and marketing are supported under the scheme to a farmer towards organic inputs.

What is Nutrient-Based Subsidy (NBS) scheme?

- The NBS (Nutrient-Based Subsidy) scheme, introduced in 2010, is designed for fertilisers other than urea.

  ➤ Urea, being the most widely used fertiliser, is **not covered under the NBS scheme**. Its pricing and subsidy are handled separately by the government.

- **Market-determined MRPs**: Unlike urea, NBS fertilisers have **market-determined MRPs**. Companies selling these fertilisers set their prices.

- **Fixed per-tonne subsidy:** Under NBS, the government provides a subsidy based on the nutrient content of the fertiliser. It fixes a subsidy per kilogram for nitrogen (N), phosphorous (P), potassium (K), and sulphur (S) components in the fertilisers.

  ➤ However, in the last two years, non-urea fertilisers under the NBS scheme have been informally regulated.

  ➤ Starting April 2023, the **Department of Fertilisers** has set **maximum profit margins** over costs to decide if the maximum retail prices (MRPs) are fair. Companies charging higher prices won't receive subsidies from the government under the NBS scheme if their prices exceed these set margins.

INDIA'S CYCLICAL GROWTH SLOWDOWN

CONTEXT

India's economy is facing a significant shift as it appears to have entered a **cyclical growth slowdown**. Recent analyses by economists from **Nomura** have indicated that India's

GDP growth may dip below 6.7% amid emerging economic challenges. This slowdown has implications for urban demand, wage growth, and overall economic health.

Key Findings

- **Current Growth Projections:** Nomura has projected India's GDP growth at 6.7% for the current year and 6.8% for the next, citing rising risks that could further dampen these forecasts.

  ➤ The Reserve Bank of India (RBI) anticipates a more optimistic growth rate of 7.2% for 2024-25, which Nomura considers overly optimistic.

- **Weak Urban Demand:** Urban consumption is showing signs of weakening due to high interest rates and diminishing wage growth. The economists note that urban demand may remain sluggish in the foreseeable future.

  ➤ Factors contributing to this trend include lower real salary hikes and the fading impact of pent-up demand following the pandemic.

- **Salary Trends:** Real salary growth for listed non-financial corporations has decreased significantly, with a decline from 10.8% in FY23 to just 0.8% in Q2 FY25 when adjusted for inflation.

- **Tight Credit Conditions:** The RBI's tightening of monetary policy has led to reduced lending growth, particularly among non-banking finance companies, further stifling personal consumption.

What is Cyclical Growth Slowdown?

- A cyclical growth slowdown occurs when an economy experiences a decline in growth due to various external and internal factors.

- This term refers to a period when economic growth decelerates due to various factors, often related to the business cycle.

- This can happen during different phases of the economic cycle, often characterized by reduced consumer spending, lower business investment, and tightening financial conditions.

Factors Responsible for the Slowdown

  ➤ **High Interest Rates:** Increased borrowing costs have deterred consumer spending and investment.

  ➤ **Moderating Wage Growth:** Slower growth in real wages has limited purchasing power, impacting overall consumption.

  ➤ **Decreased Pent-Up Demand:** The surge in consumer spending observed post-pandemic is waning, leading to a reduction in economic activity.

  ➤ **Tight Credit Conditions:** Stricter lending norms and reduced availability of credit have constrained personal and corporate borrowing.

Impact of the Cyclical Slowdown

  ➤ **Economic Growth:** A slowdown can lead to lower GDP growth, impacting the overall economic stability of the country.

- ➤ **Employment:** Companies may scale back on hiring or reduce wages, leading to higher unemployment and less disposable income for households.

- ➤ **Consumer Confidence:** Persistent weak demand can diminish consumer confidence, further impacting spending and investment decisions.

- ➤ **Investment Landscape:** A declining growth outlook may make investors more cautious, impacting both domestic and foreign investments in India.

INDIA'S DEFENCE REVOLUTION

CONTEXT

The recent inauguration of the **TATA Aircraft Complex in Vadodara, Gujarat**, marks a significant milestone in India's pursuit of self-reliance, or *Atmanirbharta*, in the defence sector. This facility will manufacture **C-295 military transport aircraft**, representing the first private sector Final Assembly Line (FAL) for military aircraft in India. The initiative highlights the government's commitment to enhancing indigenous production capabilities and reducing dependency on foreign imports.

Key Achievements in Defence Production

- ◎ **Record Production Growth:** India's defence production reached an all-time high of Rs 1.27 lakh crore in FY 2023-24, a remarkable increase of approximately 174% from Rs 46,429 crore in 2014-15.

  - ➤ This shift from being a major arms importer to a burgeoning centre for indigenous production demonstrates the effectiveness of strategic government policies.

- ◎ **Transition to Indigenous Manufacturing**: Historically, India relied heavily on imports for its defence needs, with about 65-70% of equipment sourced from abroad. Currently, around 65% of defence equipment is manufactured domestically, underscoring a robust defence industrial base comprising **16 Defence Public Sector Units (DPSUs),** over 430 licensed companies, and approximately **16,000 Micro, Small, and Medium Enterprises (MSMEs).** Notably, the private sector contributes 21% of this production.

- ◎ **Major Defence Platforms Developed**: Under the *Make in India* initiative, key defence platforms such as the **Dhanush Artillery Gun System, Advanced Towed Artillery Gun System (ATAGS), Main Battle Tank (MBT) Arjun, and Light Combat Aircraft (LCA) Tejas** have been developed, showcasing India's growing capabilities in defence manufacturing.

- ◎ **Defence Exports Surge:** India's defence exports have surged from Rs 686 crore in FY 2013-14 to Rs 1,083 crore in FY 2023-24, reflecting a growth of over 30 times in a decade.

  - ➤ This growth is supported by effective policy reforms and a commitment to self-reliance in defence. Defence exports experienced a 32.5% increase over the previous fiscal year, demonstrating India's expanding international footprint.

- ◎ **Export Highlights**: India's export portfolio includes a diverse range of advanced defence equipment such as **bulletproof jackets, Dornier aircraft, and lightweight torpedoes**. The inclusion of 'Made in Bihar' boots in the Russian Army's equipment highlights India's high manufacturing standards and commitment to quality.

- ◎ **Future Export Goals:** India aims to increase defence exports to Rs 50,000 crore by 2029, with major markets including the **USA, France, and Armenia.** This ambition reflects India's intention to establish itself as a reliable global defence partner.

Key Government Initiatives

The Indian government has undertaken several initiatives to bolster defence production and achieve self-reliance:

- ◎ **Liberalized FDI Policy**: Increased foreign direct investment limits to **74% through the Automatic Route**, and up to **100% for access to modern technology.**

- ◎ **Budget Allocation**: A budget of Rs 6,21,940.85 crore for the **Ministry of Defence** in FY 2024-25 supports domestic manufacturing.

- ◎ **Priority for Domestic Procurement**: Emphasis on procuring capital items from domestic sources under the Defence Acquisition Procedure (DAP)-2020.

- ◎ **Positive Indigenization Lists**: Identification of 509 items for indigenization, with an embargo on imports beyond specified timelines.

- ◎ **Streamlined Licensing Process**: Simplified industrial licensing with a longer validity period.

- ◎ **iDEX Scheme**: The scheme was launched to engage startups and MSMEs in defence innovation.

- ◎ **Defence Industrial Corridors**: Establishment of corridors in Uttar Pradesh and Tamil Nadu to promote manufacturing.

- ◎ **Public Procurement Preference**: Implementation of the Public Procurement (Preference to Make in India) Order 2017 to support domestic manufacturers.

HASDEO ARAND FOREST AND ONGOING PROTESTS

CONTEXT

The Hasdeo forest in Chhattisgarh, often referred to as the **"lungs of Chhattisgarh**," has recently become a flashpoint for conflict between local villagers, environmental activists, and government authorities. The resumption of tree-felling for coal mining in this ecologically rich region has sparked protests, leading to clashes with police and raising significant concerns about biodiversity, tribal rights, and environmental degradation.

What is the Hasdeo Arand Forest?

- ◎ The Hasdeo Arand forest is one of the **largest un-fragmented forest ecosystems** in Central India, spanning approximately 1,879.6 square kilometers across the districts of **Sarguja, Korba, and Surajpur**. It is characterized by its diverse flora and fauna, including:

- **Biodiversity**: The forest is home to numerous species, including nine that are specially protected under the Wildlife Protection Act, 1972, such as elephants, leopards, and sloth bears. It also hosts 640 floral species, 128 medicinal plants, and various timber-yielding species.

- **Ecological Importance**: The Hasdeo Arand serves as a crucial habitat and migration corridor for wildlife, particularly elephants and tigers.

Significance of Mining in Hasdeo

- The Hasdeo-Arand Coalfield (HAC) is significant for coal mining, with 23 coal blocks identified, covering about 437.72 square kilometers. Notably, several blocks, such as **Parsa and Kente Extension**, have been auctioned to companies, including Adani Enterprises.

- Mining activities are considered essential for meeting energy demands; however, they pose a substantial threat to the forest ecosystem and local communities, whose livelihoods depend on agriculture and forest resources.

Reasons for Opposition to Mining

- **Environmental Concerns**: Villagers argue that mining will devastate their villages, destroy forest cover, and impact their livelihoods, leading to long-term ecological damage.

- **Compensation and Resettlement Issues**: Many locals are dissatisfied with government compensation and resettlement offers, claiming they are being moved to smaller houses and losing their land.

- **Allegations of Improper Procedures**: Activists allege that fake gram sabha resolutions were used to secure environmental clearances for mining projects, undermining local governance and consent.

- **Demand for Protection**: Activists are calling for the cancellation of specific coal blocks and for the protection of the Lemru Reserve Forest, emphasizing the need to respect legislative resolutions aimed at preserving the environment.

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SECTION -B

QUICK BYTES

BRAZIL'S DECISION ON CHINA'S BELT AND ROAD INITIATIVE

CONTEXT

Brazil has recently opted not to join **China's Belt and Road Initiative (BRI),** becoming the second country, after India, within the **BRICS bloc** to take this stance.

What is the Belt and Road Initiative?

⊙ The Belt and Road Initiative, launched in 2013, is a global development strategy aimed at enhancing regional connectivity and economic cooperation through infrastructure development.

⊙ It involves investments in roads, railways, ports, and other infrastructure projects across Asia, Europe, and Africa, with the goal of expanding China's influence and facilitating trade.

⊙ **Routes of BRI:**

➤ **Silk Road Economic Belt:** This segment of the BRI is dedicated to improving connectivity, infrastructure, and trade links across Eurasia through a network of overland transportation routes.

➤ **Maritime Silk Road:** This component emphasizes maritime connections and cooperation in the form of ports, shipping routes, and maritime infrastructure projects.

♦ It begins via the South China Sea going towards Indo-China, South-East Asia and then around the Indian Ocean thus reaching Africa and Europe.

⊙ **Comparison with India**: India has been a vocal opponent of the BRI, primarily due to concerns about sovereignty, particularly regarding the China-Pakistan

Economic Corridor (CPEC) passing through Pakistan-occupied Kashmir.

➤ India insists that BRI projects should adhere to international norms, governance standards, and transparency.

What is BRICS?

⊙ BRICS stands for **Brazil, Russia, India, China and South Africa.**

⊙ The group started in 2006, and **Brazil, Russia, India and China** convened for the first BRIC summit in 2009. **South Africa** joined a year later (2010).

⊙ In August 2023, it was expanded to welcome five new members: **Egypt, Ethiopia, Iran, Saudi Arabia, and the UAE.**

⊙ The aim of the alliance is to challenge the economic and political monopoly of the West. The group sets priorities and has discussions once every year during the summit, which members take turns hosting.

⊙ **Rising economic influence of BRICS nations:** BRICS member states now represent **45% of the world's population**. The BRICS countries account for **35% of global GDP**. The bloc is responsible for about 25% of the world's exports.

LAC & LOC

CONTEXT

The border dispute between India and China has seen recent developments, particularly regarding military disengagement along the Line of Actual Control (LAC).

What is LAC?

- The **Line of Actual Control (LAC)** is the *de facto* border between India and China, extending approximately 4,057 km. It separates the Indian-controlled territories in Jammu and Kashmir from the Chinese-occupied region of Aksai Chin.

- The LAC runs through several regions, including **Ladakh, Kashmir, Uttarakhand, Himachal Pradesh, Sikkim, and Arunachal Pradesh.**

- Historically, the LAC emerged from the 1962 India-China war, when both nations' troops were positioned at this line.

- Over time, it has become a recognized boundary through agreements made in 1993 and 1996, emphasizing that neither side should advance beyond it.

- However, due to the lack of a clear demarcation, encounters between Indian and Chinese troops frequently occur.

What is LOC?

- In contrast, the **Line of Control (LOC)** is a military control line between India and Pakistan, spanning about 740 km.

- It divides Jammu and Kashmir into parts controlled by India and Pakistan, and it was established after the first Indo-Pakistani war in 1947.

- Unlike the LAC, the LOC is well-defined, with Indian and Pakistani forces stationed face-to-face along the line, leading to frequent skirmishes.

Key Differences

- **Buffer Zone**: The LAC typically has a buffer zone where both sides patrol without direct contact, while the LOC is characterized by constant military presence and confrontation.

- **Nature of Control**: The LAC results from historical conflict and lacks clear demarcation, while the LOC is a clearly defined boundary established after wars and agreements.

ISRAEL BANS UN AGENCY FOR PALESTINIAN REFUGEES

CONTEXT

Israel's parliament has banned the **United Nations Relief and Works Agency for Palestine Refugees (UNRWA)** from operating in the country, effective in 90 days.

What is UNRWA?

- **Established in:** 1949

- The UNRWA was established in 1949 by UN General Assembly to provide aid to about 700,000 Palestinians who were forced to leave their homes during the 1948 **Arab-Israeli war.**

- UNRWA has been active for decades in the **Gaza Strip** and for the past year has sought to aid civilians caught up in Israel's war against Hamas militants in the enclave, where many of the 2.3 million people are suffering from a lack of shelter, food and medical care.

- It operates in Gaza and the Israeli-occupied West Bank, as well as in **Lebanon, Syria, and Jordan** — where Palestinian refugees took shelter after their expulsion.

- The **UN agency** is funded mostly by voluntary contributions from donor states such as the **United States, Germany, the European Union, etc.**

- It also gets a limited subsidy from the UN, which is used only for administrative costs.

- The UN views Gaza as Israeli-occupied territory, and international law requires an occupying power to agree to relief programs for people in need and to facilitate them "by all the means at its disposal."

AYUSHMAN BHARAT PRADHAN MANTRI JAN AROGYA YOJANA (AB PM-JAY)

CONTEXT

Prime Minister Narendra Modi launched **health insurance coverage** for all senior citizens aged 70 years and above, regardless of income, under his government's flagship initiative **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY).**

About Ayushman Bharat Scheme

- Ayushman Bharat is a flagship health initiative of the Government of India, launched to achieve **Universal Health Coverage (UHC)** as per the recommendations of the **National Health Policy 2017**.

- This program aims to provide accessible, affordable, and quality healthcare to all, particularly targeting vulnerable populations and aligning with the **Sustainable Development Goals (SDGs).**

- Components of Ayushman Bharat

  ➤ **Health and Wellness Centres (HWCs)**: HWCs aim to deliver Comprehensive Primary Health Care (CPHC) by transforming existing health facilities, bringing services closer to communities.

  ➤ **Pradhan Mantri Jan Arogya Yojana (PM-JAY):** PM-JAY was inaugurated on September 23, 2018, and is the world's largest health assurance scheme.

Key Features of PM-JAY

  ➤ **Comprehensive Coverage**: Covers up to ₹5 lakhs annually per family for secondary and tertiary care.

  ➤ **No Cap on Family Size**: There are no restrictions based on age, gender, or family size.

  ➤ **Portability**: Benefits can be availed at any empanelled hospital across India.

➤ **Inclusive Treatment**: Encompasses a wide range of services, including diagnostics, medicines, and post-hospitalization care.

Government Initiatives Addressing Related Issues

➤ **National Health Mission (NHM)**: Aims to strengthen healthcare delivery in rural areas and improve health indicators across the country.

➤ **Ayushman Bharat Digital Mission (ABDM)**: Focuses on digitizing health records to improve accessibility and efficiency in healthcare delivery.

➤ **Mission Indradhanush**: Aims to improve immunization coverage among children and pregnant women, reducing preventable diseases.

➤ **Nutrition Schemes**: Various initiatives such as the Integrated Child Development Services (ICDS) and the Mid-Day Meal Scheme focus on improving nutrition among vulnerable populations, which complements the health goals of Ayushman Bharat.

21ST LIVESTOCK CENSUS IN INDIA

CONTEXT

The Union Government launched the 21st Livestock Census in New Delhi.

What is the Livestock Census?

◉ Conducted every five years, the Livestock Census is a nationwide headcount of domesticated animals, poultry, and stray animals.

◉ It aims to gather detailed information about the species, breed, age, sex, and ownership status of these animals.

◉ Since its inception in 1919, a total of 20 censuses have been carried out, with the most recent one conducted in 2019.

◉ The enumeration for the 21st census is scheduled to take place from October 2024 to February 2025.

◉ **Which Animals Will Be Counted?** The census will encompass a diverse range of animals, with data collected on 16 species, including: Cattle, Buffalo, Mithun, Yak, Sheep, Goat, Pig, Camel, Horse, Ponies, Mule, Donkey, Dog, Rabbit, Elephant

➤ In total, the census will account for 219 indigenous breeds recognized by the ICAR-National Bureau of Animal Genetic Resources (NBAGR). Additionally, it will also include a headcount of various poultry birds such as chickens, ducks, turkeys, geese, quails, ostriches, and emus.

◉ **Objectives of the Livestock Census:** The livestock sector plays a pivotal role in the Indian economy, providing employment opportunities in rural areas and contributing significantly to the Gross Value Added (GVA) of the agricultural sector. It accounts for about 30% of the GVA in agriculture and around 4.7% of the overall economy.

◉ **Findings from the 2019 Livestock Census:** The last census revealed a total livestock population of approximately 535.78 million in India, broken down as follows:

➤ Cattle: 192.9 million

➤ Goats: 148.88 million

➤ Buffaloes: 109.85 million

➤ Sheep: 74.26 million

➤ Pigs: 9.06 million

◉ Together, other animals constituted just 0.23% of the total livestock population.

AIRBUS C295 AIRCRAFT PROJECT

CONTEXT

Prime Minister Narendra Modi and his Spanish counterpart, President Pedro Sanchez recently inaugurated **India's first private military transport aircraft production plant** in Gujarat's Vadodra. It is India's first final assembly line in the private aviation industry.

About the Plant

◉ The facility is set to manufacture the **Airbus C295 aircraft**, a crucial addition to the Indian Air Force's tactical airlift capabilities.

◉ The plant, located on the Tata Advanced Systems Limited (TASL) campus in Vadodara, is the first final assembly line in India's private aviation industry.

◉ **Key details include:**

➤ **Production Capacity**: A total of 56 C295 aircraft are planned, with the first 16 delivered in fly-away condition from Spain. The remaining 40 will be assembled locally.

➤ **Job Creation**: The project is expected to create over 3,000 direct jobs and support more than 15,000 indirect jobs across the supply chain.

➤ **Infrastructure Development**: The establishment includes training and maintenance facilities, enhancing India's aerospace infrastructure.

◉ **Airbus C295 aircraft** can perform various missions including troop transport, cargo airlift, and maritime patrol.

🔍 FACT BOX

About Airbus C295 aircraft

◉ C295 aircraft was initially manufactured by Spanish aerospace company CASA. It is now part of the **European multinational Airbus Defence and Space division.**

◉ The C-295 is a transport aircraft which has the capacity to carry up to 71 troops or 50 paratroopers.

- The aircraft has a load capacity of around 5-10 tonne and boasts of contemporary technology which will replace the Indian Air Force's Avro-748 planes.
- **Maximum cruise speed:** 260 knots
- The C-295 is fitted with a retractable landing gear and features an unobstructed 12.69-meter-long pressurised cabin.
- It can cruise up to an altitude of 30,000 ft while retaining excellent low-level flight characteristics.
- **Usage:**
  - ➤ Known to be a superior aircraft, it can also be used for logistic operations to locations that are not accessible to current heavier aircraft.
  - ➤ The aircraft can airdrop paratroops and loads, and also be used for casualty or medical evacuation.
  - ➤ The C-295 can perform special missions as well as disaster response and maritime patrol duties.

INDIA'S EXPANDING SPACE PROGRAM

CONTEXT

The Indian government has recently taken significant strides in advancing its space program, approving a series of ambitious projects that signal a new era of exploration. With plans for new missions to the Moon and Venus, along with a strong emphasis on collaboration with the private sector, India is poised to enhance its position in the global space arena.

Key Approvals and Missions

- The Union Cabinet approved several critical missions under **the Gaganyaan human spaceflight program,** including four missions aimed at testing technologies for India's first space station, the **Bharatiya Antariksh Station** 1, expected to be operational by 2028. The Indian Space Research Organisation (ISRO) will conduct one uncrewed Gaganyaan flight in addition to two planned missions. This initiative is supported by an additional funding of ₹11,170 crore.
- **Next Generation Launch Vehicle (NGLV):** The Cabinet also greenlit the development of the Next Generation Launch Vehicle (NGLV), with an allocation of ₹8,240 crore. This vehicle will be developed in collaboration with private industry to ensure a smooth transition to operational flights once testing is complete. The NGLV is expected to support a variety of future missions, including launching satellites into orbit.

Upcoming Space Missions

- ➤ **Venus Orbiter Mission:** Scheduled for launch in March 2028, this mission will cost Rs 1,236 crore and aims to study the planet's harsh atmosphere and surface conditions.
- ➤ **Chandrayaan-4:** Planned as a sample-return mission, this project will involve launching components using two LVM-3 rockets. It is designed to gather lunar soil and rock samples and return them to Earth by 2027 at a cost of ₹2,104 crore.
- ➤ **Lunar Polar Exploration Mission (LUPEX):** A joint effort with Japan, this mission will utilize a new lander distinct from those used in previous Chandrayaan missions, facilitating future crewed lunar explorations.

Infrastructure Expansion

- ➤ The Space Commission has also approved the development of a third launch pad at Sriharikota, essential for testing and launching the NGLV, reflecting ISRO's commitment to expanding its infrastructure to meet growing demands.

Enhanced Surveillance and Training

- ➤ The Cabinet Committee on Security approved the Space Based Surveillance (SBS) project, which involves constructing 21 satellites by ISRO and 31 by private companies, totaling ₹26,968 crore. This marks a substantial increase from earlier phases of the project.
- ➤ In preparation for international missions, Indian astronaut Sudhanshu Shukla has begun training at SpaceX's headquarters, getting ready for the Axiom-4 mission to the International Space Station.
- **Satellite Collaborations (NISAR and Proba-3):** India is gearing up for the launch of two important satellites:
  - ➤ **NISAR:** A collaboration with NASA, this Earth-observation satellite recently received its radar antenna in India and is set to launch in early 2025 using a Geosynchronous Satellite Launch Vehicle.
  - ➤ **Proba-3:** From the European Space Agency, this mission will study the Sun's corona and is scheduled for a launch aboard a PSLV-XL vehicle.

INDIA LAUNCHES $25 MILLION G20 PANDEMIC FUND

CONTEXT

In a significant move towards enhancing public health preparedness, the Indian government has announced the implementation of a USD 25 million **G20 Pandemic Fund**.

About G20 Pandemic Fund

- The G20 Pandemic Fund focuses on developing comprehensive health coverage for livestock, particularly in the CONTEXT of zoonotic diseases—those that can be transmitted from animals to humans, such as COVID-19.
- The Fund aims to bolster India's animal health security through a multifaceted approach:
  - ➤ **Enhancing Disease Surveillance:** The fund will support the enhancement of disease surveillance systems, including genomic and environmental monitoring, which are crucial for early detection and response to potential outbreaks.

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➤ **Upgrading Laboratory Infrastructure:** Significant investments will be directed towards upgrading and expanding animal health laboratories, thereby improving the country's capacity to diagnose and manage animal diseases effectively.

➤ **Facilitating Cross-Border Collaboration:** By promoting international cooperation, the initiative seeks to establish an integrated system for monitoring and managing zoonotic diseases, which often cross borders.

➤ **Building Institutional Capacity:** The project aims to strengthen institutional frameworks at national and regional levels, including the development of disaster management strategies specifically for the livestock sector.

➤ **Developing Human Capacity**: Training programs will be established to enhance the skills and capabilities of professionals in the animal health field, fostering a more robust response to health crises.

◉ The fund will be implemented in partnership with esteemed organizations, including the Asian Development Bank (ADB), the World Bank, and the Food and Agriculture Organization (FAO).

Zoonotic Disease

◉ Zoonotic disease is a disease that has passed into the human population from an animal source directly or through an intermediary species.

◉ Zoonotic infections can be bacterial, viral, or parasitic in nature, with animals playing a vital role in maintaining such infections.

◉ Examples of zoonoses include **HIV-AIDS, Ebola, Lyme disease, malaria, rabies, West Nile feve**r, and the current novel coronavirus disease (COVID-19) disease.

HEMATOPOIETIC STEM CELL TRANSPLANTS

CONTEXT

A recent study has provided crucial insights into the **behavior of transplanted hematopoietic stem cells** over extended periods. This research focuses on some of the longest-living survivors of **hematopoietic stem cell transplants (HSCT),** which are life-saving procedures primarily used for patients with blood cancers.

Key Findings

◉ **Mutation Rates:** The study found that the rate of mutations and clonal expansion remained low and consistent, with mutation rates averaging 2% per year in donors and 2.6% in recipients. This suggests minimal widespread clonal expansion of stem cells even decades after transplantation.

◉ **Clonal Hematopoiesis (CH):** All donors exhibited some degree of clonal hematopoiesis variants, present even in early blood samples. However, the overall mutation rates did not indicate significant adverse effects on the transplanted cells.

◉ **Hematopoietic Stem Cell Transplants:** These procedures are critical for treating various blood cancers and involve replacing a patient's damaged or dysfunctional blood-forming cells with healthy stem cells from a donor.

What is HSCT?

◉ Hematopoietic stem cell transplantation (HSCT) is a critical medical procedure used to **restore blood cell production** in patients with damaged or defective bone marrow or immune systems. This technique has seen significant growth over the past 50 years, becoming a standard treatment for various malignant and nonmalignant diseases.

Types of HSCT

➤ **Autologous Transplant:** Cells are sourced from the patient's own body. It is commonly used for conditions such as multiple myeloma and non-Hodgkin lymphoma.

➤ **Allogeneic Transplant:** Cells are sourced from a donor.

➤ Sy**ngeneic Transplant:** Stem cells are obtained from an identical twin.

◉ **Cell Sources:** The primary sources of stem cells for HSCT include:

➤ **Bone Marrow:** Traditionally the most common source.

➤ **Peripheral Blood:** Stem cells are collected from circulating blood after stimulation.

➤ **Umbilical Cord Blood**: Collected at birth; has unique advantages, particularly in matching.

➤ **Fetal Liver:** Rarely used due to ethical and practical concerns.

➤ Each source has its advantages and disadvantages, impacting the clinical applications and outcomes of the transplant.

DIGITAL ARREST SCAMS

CONTEXT

During an episode of his radio programme Mann Ki Baat, Prime Minister Narendra Modi drew attention to "digital arrests", warning people against the scam.

What are Digital Arrest Scams?

◉ Digital arrest scams involve fraudulent individuals posing as government officials who contact victims via phone or video calls through platforms like WhatsApp and Skype.

◉ The scammers typically accuse the victims of involvement in illegal activities, such as drug trafficking or handling suspicious packages.

◉ To make their deception convincing, these scammers often use elaborate setups that mimic police stations and wear costumes that include official badges.

◉ They employ intimidation tactics, making victims believe they are under "digital arrest."

◎ The pressure builds during lengthy calls where the scammers outline dire consequences for non-compliance, culminating in demands for money as a means to secure the victim's release or to stop the supposed legal proceedings.

Government Response to Counter Digital Arrest Scams

➤ **Establishment of I4C: The** Indian Cybercrime Coordination Centre was created under the Ministry of Home Affairs to address the growing menace of cybercrime, including digital arrest scams.

➤ **Blocking of Scammer IDs:** In collaboration with tech companies like Microsoft, I4C has successfully blocked over 1,000 Skype IDs associated with these fraudulent activities.

➤ **Awareness Campaigns:** The government has launched initiatives to educate the public about the risks of such scams. Prime Minister Narendra Modi emphasized the role of educational institutions in spreading awareness.

➤ **Inter-Ministerial Committee:** In response to a spike in transnational organized cybercrime, particularly from Southeast Asian countries like Cambodia, the government has formed a committee comprising various law enforcement and intelligence agencies to tackle these threats.

➤ **Reporting Mechanisms:** Citizens are encouraged to report suspicious calls immediately by using the cybercrime helpline (1930) or by filing complaints on the official cybercrime website (http://www.cybercrime.gov.in). Local police should also be informed to aid in investigations.

SLEEP APNOEA & STROKE

CONTEXT

Recent research from the **National Institute of Mental Health and Neurosciences (NIMHANS)** has brought new insights into the **relationship between sleep apnoea and stroke**. As stroke is a leading cause of mortality and disability globally, this study highlights the importance of evaluating sleep disorders in stroke patients, especially as October 29 marks **World Stroke Day**.

Key Findings from the Study

◎ **Prevalence of Sleep Apnoea**: The study examined 105 stroke patients aged over 50. It found that 88% had sleep apnoea, with 38% experiencing severe cases at the initial assessment.

◎ **Improvement Over Time**: Follow-up evaluations showed that 26% of patients had sleep apnoea three months after the stroke, and only 12% had severe sleep apnoea. This indicates that a portion of sleep apnoea cases may improve on their own post-stroke.

◎ **Laterality Effects**: The study identified a novel aspect of sleep efficiency related to the side of the brain affected by the stroke. Patients with damage to the right side

experienced difficulties in initiating sleep and felt drowsy in the morning, suggesting a specific impact on sleep quality based on the stroke's location.

◎ **Need for Further Research**: The researchers emphasized the need for long-term studies to determine if the observed improvements in sleep apnoea persist. Currently, many stroke patients are not evaluated for this disorder, despite its potential implications for recovery and future stroke risk.

◎ **Snoring as a Risk Factor**: The study also highlighted snoring as a vital risk factor for stroke, although not all individuals who snore have sleep apnoea. **Sleep apnoea**, characterized by **breathing pauses during sleep,** can lead to reduced oxygen levels in the blood, increasing the **risk of stroke.**

About World Stroke Day

◎ World Stroke Day is observed on October 29 each year, aimed at raising awareness about stroke prevention, treatment, and recovery.

◎ The day encourages individuals to understand stroke symptoms, risk factors, and the importance of immediate medical attention.

◎ Stroke:

➤ Stroke is a **cerebrovascular disease.**

➤ A stroke occurs when a **blockage or bleed of the blood vessels** either interrupts or reduces the supply of blood to the brain. When this happens, the brain does not receive enough oxygen or nutrients, and brain cells start to die.

➤ This means that it affects the blood vessels that feed the brain oxygen. If the brain does not receive enough oxygen, damage may start to occur.

➤ Type:

♦ **Ischemic stroke:** Ischemic stroke occurs due to blocked or narrowed arteries. Treatment tends to focus on restoring an adequate flow of blood to the brain.

♦ **Hemorrhagic stroke:** Blood leaking into the brain can cause a hemorrhagic stroke. Treatment focuses on controlling the bleeding and reducing the pressure on the brain.

NATURE CONSERVATION INDEX

CONTEXT

India's environmental performance has come under scrutiny following the release of the **Nature Conservation Index**, which ranked the country 176 out of 180 countries in terms of natural environment protection. With a score of 45.5 out of 100, this ranking reflects significant challenges in managing biodiversity and conservation efforts.

Key Highlights of the Index

- ◉ **Overall Ranking:** India ranked 176th out of 180 countries.
- ◉ **Score:** India received a score of 45.5 out of 100.
- ◉ **Top Performers:** Luxembourg, Estonia, and Denmark topped the list, while Kiribati was the lowest-ranked.
- ◉ **Marine Conservation**: India scored 0 out of 100 in managing marine protected areas and species protection within marine ecosystems.
- ◉ **Terrestrial Protection:** India scored 73 out of 100 for terrestrial species protection but faces challenges with illegal wildlife trade, ranking fourth globally in this area.
- ◉ **Protected Areas:** While 7.5% of India's terrestrial area is protected, only 0.2% of marine waters are under protection.
- ◉ **Regional Comparison:** Other South Asian nations such as Bangladesh, Pakistan, and Myanmar ranked above India, with Bhutan being the highest in the region at a commendable position.

About the Index

- ◉ The Nature Conservation Index is a new assessment tool that ranks countries based on their efforts in natural environment protection across four key pillars:
  - ➤ **Managing Protected Areas:** Evaluating the extent and effectiveness of designated conservation zones.
  - ➤ **Addressing Threats Against Biodiversity:** Assessing actions taken to mitigate risks posed to various species and ecosystems.
  - ➤ **Nature and Conservation Governance:** Analyzing policies, regulations, and institutional frameworks supporting conservation efforts.
  - ➤ **Future Trends in Natural Resource Management:** Looking at the sustainability and long-term strategies for managing natural resources.
- ◉ The index uses 25 parameters within these pillars to gauge each country's performance.
- ◉ It draws upon publicly available data from reputable sources such as the **International Union for Conservation of Nature (IUCN), World Bank, and Yale's Environmental Performance Index (EPI).**

TAMIL NADU NOTIFIES HEATWAVES AS 'STATE DISASTER'

CONTEXT

The Tamil Nadu government has gazette notified heat waves as a state-specific disaster, which will allow it to provide relief for the affected population under the **State Disaster Response Fund (SDRF).** With the declaration, families of heat wave victims would get Rs 4 lakh relief.

About Heat Wave

- ◉ Heat wave is a condition of air temperature which becomes fatal to human body when exposed.
- ◉ **Quantitatively**, it is defined based on the temperature thresholds over a region in terms of actual temperature or its departure from normal.
  - ➤ For declaring a heat wave, the temperature should be 4.5 °C above normal for that time in a region.
  - ➤ The criteria for the coastal station maximum temperature should be greater than or equal to 37 °C.

Impact of Heat Waves over different sectors

- ➤ **Health effects**: Hyperthermia, also known as heat stroke, becomes common during periods of sustained high temperature and humidity.
- ➤ **Mortality:** Heatwaves have killed more than 17,000 people in 50 years in India, according to a research study by IMD scientists.
- ➤ **Crop losses**: heat waves and excessive heating impact the standing crops of the regions, as they are not immune to more heat at that time of the year.
- ➤ **Psychological and sociological effects**: In addition to physical stress, excessive heat causes psychological stress, to a degree which affects performance, and is also associated with an increase in violent crime.
- ➤ **Increase in surface ozone**: ozone pollution in urban areas is especially concerning with increasing temperatures, raising heat-related mortality during heat waves. During heat waves in urban areas, ground-level ozone pollution can be 20% higher than usual.
- ➤ **Lead to wildfires:** If a heat wave occurs during a drought, which dries out vegetation, it can contribute to bushfires and wildfires.
- ➤ **Power outages**: Heat waves often lead to electricity spikes due to increased air conditioning use, which can create power outages, exacerbating the problem.

🔍 FACT BOX

'Notified Disasters'

- ◉ Notified disasters, as per the **Disaster Management Act, 2005**, are catastrophic events beyond the coping capacity of communities, leading to substantial loss of life, property, or damage to the environment.
- ◉ These include **cold waves, cyclones, earthquakes, floods**, and others. States can access funds like the NDRF and SDRF for relief and recovery efforts.
- ◉ States like **Haryana, Uttar Pradesh, Odisha, and Kerala** have designated heatwaves as local disasters, allowing them to access funds for relief efforts.

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