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WEEKLY



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- ❑ NABARD Launches Agri Fund, 'Agri-SURE'
- ❑ Bihar seeks MSP for Makhana

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- ❑ Sukhoi Su-30 fighter jets
- ❑ Chandipura Virus

ENVIRONMENT

- ❑ Saline Lakes
- ❑ Sustainable Rosewood Trade
- ❑ Sarus Crane (*Grus antigone*)
- ❑ Python (*Pythonidae*)
- ❑ New species of Dogfish Shark (*Squalus hima*)

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DISCLAIMER

The 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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AISHWARYAM PRAJAPATI (AIR-10, CSE 2023)



I am truly grateful to GS SCORE for their guidance. They offered genuine mentorship.

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SECTION -A

MAINS ISSUES

ISSUE OF RESERVATION FOR LOCALS

CONTEXT

The Karnataka government temporarily halted a Bill mandating reservation for locals in the private sector due to strong opposition from industry leaders and trade bodies.

Key Highlights of the Bill

- **Reservation Mandate:** Proposed 50% reservation in management and 70% in non-management positions for local candidates in industries and factories.
- **Industry Opposition:** Industry leaders, including Kiran Mazumdar-Shaw and bodies like NASSCOM, opposed the Bill citing the need for skilled talent.
- **Government Response:** Decision deferred for further consultation; industries assured no immediate implementation.

Reasons Behind the Situation

- **Local Employment:** Aimed at providing job opportunities for local candidates to address unemployment.
- **Industry Concerns:** Fear of losing competitive edge due to restricted hiring pool.
- **Legal and Constitutional Issues:** Challenges in balancing state policies with the constitutional right to work across India.

Impact of Such Policies

- **Economic Growth:** Potential hindrance to economic growth due to limited talent pool.
- **Social Equity:** Risk of increasing social and economic inequalities by favoring locals over merit.

- **Federal Structure:** Possibility of creating regional barriers, affecting national integration.

Required Measures

- **Skill Development:** Invest in education and vocational training to enhance local employability.
- **Incentives for Compliance:** Offer incentives to industries for hiring locals voluntarily rather than mandating quotas.
- **Holistic Policies:** Develop comprehensive policies addressing root causes of unemployment without compromising competitiveness.

Case Study: Punjab and Haryana High Court Ruling

- **Law Quashed:** The Haryana State Employment of Local Candidates Act, 2020, which mandated 75% reservation for locals in private sector jobs, was quashed by the Punjab and Haryana High Court.
- **Constitutional Morality:** The court ruled it unconstitutional, emphasizing the need to uphold citizens' fundamental rights to work anywhere in India.
- **Impact on Federal Structure:** Highlighted risks of creating artificial regional barriers and disrupting the national labor market.

UPSC PYQ

- Q: "The implementation of local reservation policies in private sector jobs can lead to significant governance and equity issues. Discuss with examples."

PRIME MINISTER MODI'S AUSTRIA VISIT

CONTEXT

India's Prime Minister Narendra Modi's recent visit to Vienna marked the first trip by an Indian Prime Minister to Austria since 1983, when Indira Gandhi visited. This visit came immediately after Modi's meeting with Russian President Vladimir Putin in Moscow, highlighting its strategic timing amidst global geopolitical developments.

Historical Background:

- Vienna's significance dates back to **World War II**, when it was occupied by **Nazi Germany** and later divided into sectors by the **Allies**.
- In 1955, **Austria gained independence** with the signing of the **Austrian State Treaty**, committing to neutrality amidst the **Cold War tensions** between **Western Europe and the Soviet bloc**.
 - India's Role in Austrian Independence:** In the 1950s, India, under **Prime Minister Jawaharlal Nehru**, played a pivotal role in Austria's quest for sovereignty. Nehru's diplomatic efforts helped Austria secure the **State Treaty**, which ended the **Allied occupation** and affirmed its **status as a neutral nation**, akin to Switzerland.
 - Evolution of Bilateral Relations:** Diplomatic ties between India and Austria were established in 1949.

Modern Partnership and Economic Opportunities:

- Today, Austria and India seek to elevate their partnership with a focus on **sustainable economic collaborations**.
- Both countries have shown balanced stances on global issues like the **Russia-Ukraine conflict**, while also exploring new avenues in **infrastructure, renewable energy, e-commerce, and technology**.

IVORY COAST JOINS UN WATER CONVENTION

CONTEXT

Ivory Coast has joined the United Nations Water Convention, becoming the 10th African nation to do so. This move is aimed at enhancing cooperative water management across borders in response to growing water stress and the effects of climate change on shared water resources.

Significance for Africa

- Economic Growth and Poverty Alleviation:** Africa's water resources have the potential to stimulate economic growth, secure livelihoods, and alleviate poverty. Transboundary water resources are especially important in Africa, covering about 62% of the region's land area.
- Climate Change Adaptation:** The Niger basin, one of Africa's most vulnerable regions to climate change, is

likely to experience significant decreases in river flows, making transboundary cooperation essential.

- Water Security:** Ivory Coast's accession helps in managing water resources sustainably, which is crucial given the country's high vulnerability to climate change and water insecurity.

Challenges and Impact

- Water Stress and Population Growth:** Meeting the water needs of Ivory Coast's 30 million residents, amidst urbanization, climate change effects, and pollution, presents significant challenges.
- Uneven Water Distribution:** The north and northeast of Ivory Coast experience greater water stress, highlighting the need for effective water management strategies.

Legal and Institutional Frameworks

- Transboundary Cooperation:** The UN Water Convention requires parties to cooperate for the sustainable management of shared waters, ensuring equitable use and preventing conflicts.
- Operational Arrangements:** Only 25% of Ivory Coast's transboundary basin area is currently covered by operational arrangements, indicating a need for enhanced legal and institutional frameworks.

Required Measures

- Strengthening Legal Frameworks:** There is an urgent need for investment in enforcement measures to stem illegal profit flows and hold perpetrators accountable.
- Training and Coordination:** Providing training for enforcement officials, extending labour inspection into high-risk sectors, and better coordination between labour and criminal law enforcement are essential.
- Comprehensive Approach:** Enforcement actions must be part of a comprehensive approach that prioritizes addressing root causes and safeguarding victims.
- Sustainable Management:** Parties are required to use shared waters in a reasonable and equitable way and ensure their sustainable management through cooperation.

Expansion of the Water Convention

- Upcoming Accessions:** At least three more African nations, including Sierra Leone, Zambia, and Zimbabwe, are in the final stages of accession to the convention.
- Global Cooperation:** The accession of these countries offers new prospects for enhanced transboundary cooperation globally, particularly in Sub-Saharan Africa, the Middle East, and Latin America.

UN Convention on the Law of the Sea (UNCLOS):

- UNCLOS was adopted in 1982 and laid the foundation of ocean governance, with the first single set of rules for oceans and seas.
- There are two more instruments under the Convention:
 - ▶ The 1994 agreement on the implementation of Part XI of UNCLOS
 - ▶ The 1995 UN Fish Stocks Agreement
 - ▶ The treaty on BBNJ will be the third legal instrument under the convention.

UN Water Convention

- The Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) was adopted in Helsinki in 1992 and entered into force in 1996.
- The Convention is a unique legally binding instrument promoting the sustainable management of shared water resources, the implementation of the Sustainable Development Goals, the prevention of conflicts, and the promotion of peace and regional integration.
- The Water Convention requires Parties to prevent, control and reduce transboundary impact, use transboundary waters in a reasonable and equitable way and ensure their sustainable management.
- Parties bordering the same transboundary waters have to cooperate by entering into specific agreements and establishing joint bodies.
- As a framework agreement, the Convention does not replace bilateral and multilateral agreements for specific basins or aquifers; instead, it fosters their establishment and implementation, as well as further development.

MAINS PRACTICE QUESTION

Q: “Transboundary water cooperation is crucial for sustainable development and climate resilience in Africa.” Discuss

ED POWERS UNDER SUPREME COURT LENSE

CONTEXT

The Supreme Court’s recent decision to grant interim bail to Arvind Kejriwal in the **Delhi excise policy case** has brought attention to the legal scope of the **Prevention of Money Laundering Act (PMLA)** and the powers of the **Enforcement Directorate (ED)**.

ED’s Powers and Issues:

- Under **Section 19(1) of PMLA**, ED officers have **discretionary power** to arrest individuals without requiring a warrant.
 - ▶ **Issue:** The SC questioned whether this power should be subjected to **more stringent judicial scrutiny**, considering factors like “need and necessity” for arrest.
- ED’s statistics reveal a **disparity** between ECIRs recorded (5,906), searches conducted (531), persons arrested (513), and prosecution complaints filed (1,142).
 - ▶ **Issue:** This raises questions about ED’s policy on when to arrest individuals involved in offences under PMLA.

Other Important Judgments on PMLA

- **Vijay Madanlal Choudhary v. Union of India**
 - ▶ The Supreme Court upheld various provisions of PMLA, including those related to arrest, attachment, search, and seizure by the ED.
 - ▶ The court held that these provisions have a reasonable connection with the Act’s objective to prevent money laundering effectively.
- **P. Chidambaram v. Directorate of Enforcement (2019)**
 - ▶ The Supreme Court rejected a plea for anticipatory bail in a money laundering case and granted custody to the ED.
 - ▶ The court reasoned that money laundering cases involve complex stages of fund placement and layering, requiring a systematic and thorough investigation.
 - ▶ Granting pre-arrest bail would hinder this process and potentially compromise the investigation.



FACT BOX

About Enforcement Directorate (ED)

- It is a multi-disciplinary organization responsible for enforcing two special laws:
 - ▶ Foreign Exchange Management Act, 1999 (FEMA)
 - ▶ Prevention of Money Laundering Act, 2002 (PMLA)
- It steps in when a local police station registers an offence with proceeds of crime over Rs 1 crore
- It has powers to investigate under PMLA Sections 48 and 49.
- ED carries out search (property) and seizure (money/ documents) under Section 16 and Section 17 of the PMLA.

About Prevention of Money Laundering Act (PMLA), 2002

- The Act was enacted to combat money laundering (converting illegally earned money into legitimate money)
- It enables government or public authority to confiscate property earned from illegally gained proceeds

Other key authorities to investigate anti-money laundering offences

- Financial Intelligence Unit – India (FIU-IND)
- Economic Offences Wing, Central Bureau of Investigation (CBI)
- Income Tax Department
- Registrar of Companies (RoC)
- Regulators like the Reserve Bank of India (RBI), Securities & Exchange Board of India (SEBI), and Insurance Regulatory & Development Authority of India (IRDAI)

SDG INDIA INDEX 2023-24

CONTEXT

The **NITI Aayog's SDG India Index 2023-24** has been released, highlighting the performance of Indian states in achieving the **United Nations' Sustainable Development Goals (SDGs)**. The report shows significant progress in India's overall SDG score, indicating improvements in areas such as poverty reduction, economic growth, and climate action.

Key Findings

- **Top Performers:** Kerala and Uttarakhand emerged as the best-performing states, each scoring 79 points.
- **Lowest Performer:** Bihar scored the lowest with 57 points, followed by Jharkhand at 62 points.
- **Overall Improvement:** India's SDG score improved to 71 points in 2023-24 from 66 points in 2020-21.
- **Biggest Improvements:** Punjab, Manipur, West Bengal, and Assam saw the highest increases, with Punjab jumping 8 points to 76, Manipur to 72, West Bengal to 70, and Assam to 65.
- **Goals with Highest Increases:** "No Poverty", "Decent Work and Economic Growth", and "Life on Land" saw the highest increases in points across states.
- **Goals with Lowest Increases:** "Gender Equality" and "Peace, Justice, and Strong Institutions" had the smallest increases.
- **Reduction in Points:** The goal "Reduced Inequalities" saw a decrease from 67 points in 2020-21 to 65 points in 2022-23.

Detailed Insights

- ▶ **Zero Poverty:** The score for this goal increased by 8 points to 72, indicating that extreme poverty is being addressed effectively.
- ▶ **Zero Hunger:** Improved by 5 points to 52, but focus is needed on providing nutritious food to combat malnutrition.
- ▶ **Quality Education:** Increased by 4 points to 61. While access to education has improved, the focus is now on enhancing the quality of education and ensuring better employment opportunities.
- ▶ **Gender Equality:** The gender equality goal scored the lowest among all goals at 49 points, with only a 1-point increase from 2020-21. Issues such as sex ratio at birth, women owning land and assets, and women's labor force participation are areas of concern.



FACT BOX

About SDG India Index

- **Launched in:** 2018
- The SDG India Index evaluates states on 16 goals set by the United Nations, scoring them on a scale of 1 to 100.
- This fourth edition of the index uses 113 indicators to assess performance. The SDGs are global goals established to be achieved by 2030, addressing various social, economic, and environmental issues.

SCOPE OF ARTICLE 131

CONTEXT

The Supreme Court recently addressed the **maintainability of an original suit** filed by the State of West Bengal against the Union of India concerning the CBI's registration of cases within the state without its consent. The Supreme Court's stance on the **maintainability of such suits under Article 131** has sparked debate. The central issue revolves around whether these suits raise questions crucial to the existence or extent of legal rights, as required by Article 131.

Role of Article 131:

- Article 131 ensures that disputes involving the **Union and States** are resolved within the framework of the Constitution, particularly concerning their respective powers and functions.
- It is **not meant for routine disputes** but for those that impact the **constitutional relationship** between the Union and the States.
- **Interpretation of "Legal Rights" under Article 131:** Courts interpret "legal rights" under Article 131 broadly

to encompass **rights, liberties, powers, or immunities** that affect the Union-State relationship.

- ▶ **For instance**, the Madras High Court upheld Tamil Nadu’s challenge to certain provisions of the **Prevention of Terrorism Act, 2003**, stating it involved constitutional principles rather than a routine dispute.

RIGHT OF PERSONS WITH DISABILITIES

CONTEXT

The Supreme Court recently delivered a significant ruling on the portrayal of **persons with disabilities** in visual media, emphasizing that **filmmakers’ creative freedom does not extend to mocking, stereotyping, or misrepresenting marginalized groups**. This decision stemmed from a plea concerning the film *“Aankh Micholi,”* which allegedly misrepresented disabilities and violated the rights protected under the **Constitution and disability laws**.

Key-highlights of the Supreme Court’s Ruling

- The court outlined a framework that aligns with anti-discrimination principles and the **Rights for Persons with Disabilities Act, 2016**. It stated that if a film’s overall message **infringes on the rights of persons with disabilities**, it cannot be protected as **free speech**. Even if stereotypes or disparaging portrayals are deemed necessary for a film’s message, they **must be balanced against the fundamental rights of those portrayed**.
- **Societal discrimination**: The court criticized the use of derogatory terms like “cripple” and “spastic,” noting that such language perpetuates societal discrimination. It emphasized the importance of accurate representation of medical conditions to avoid reinforcing stereotypes and misinformation.

Significance of the Ruling

- This ruling underscores the judiciary’s role in ensuring that media representation respects the dignity of persons with disabilities and does not contribute to their marginalization. It reflects a broader societal shift towards promoting inclusive and respectful portrayals in media, aligning with constitutional values and legal protections against discrimination.
- In essence, the case highlights the intersection of artistic freedom and social responsibility, emphasizing the need for media to portray disability in a manner that promotes understanding and inclusivity rather than reinforcing harmful stereotypes.



FACT BOX

Programmes and Initiatives for Persons with Disabilities (PwD) in India:

- **Unique Disability ID (UDID)**: Initiated by the Department of Empowerment of Persons with Disabilities, UDID aims to issue Universal IDs and Disability Certificates containing identification and disability details.
- **Accessible India Campaign**: It is a nationwide initiative to create an accessible environment for PwDs. Focus areas include enhancing accessibility in built environments, transportation systems, and information & communication technology.
- **National Fellowship for Students with Disabilities (RGMF)**: It is designed to increase opportunities for PwD students pursuing higher education.
- **Deen Dayal Disabled Rehabilitation Scheme**: It provides financial assistance to NGOs for various services like special schools, vocational training, community-based rehabilitation, and early intervention for PwDs.

Legal Framework:

- **Rights of Persons with Disabilities (RPwD) Act, 2016**: The Act replaced the Persons with Disability Act, 1995. It aims to promote inclusion and expand opportunities for persons with disabilities in India.
- It is in line with the **United National Convention on the Rights of Persons with Disabilities (UNCRPD)**, to which **India is a signatory**.
- It defines 21 types of disabilities including: **Blindness, Low-vision, Leprosy Cured persons, Hearing Impairment (deaf and hard of hearing), Locomotor Disability, Dwarfism, Intellectual Disability, Mental Illness, Autism Spectrum Disorder, Cerebral Palsy, Muscular Dystrophy, Chronic Neurological conditions, Specific Learning Disabilities, Multiple Sclerosis, Speech and Language disability, Thalassemia, Hemophilia, Sickle Cell disease, Multiple Disabilities including deafblindness, Acid Attack victim, Parkinson’s disease.**

ROLE OF THE FINANCE COMMISSION

CONTEXT

The sixteenth Finance Commission, chaired by former Niti Aayog Vice-Chairman Arvind Panagariya, has begun its work. The Commission is inviting suggestions from the public on its mandate, set by the Centre.

Finance Commission's Role

- **Constitutional Body:** The Finance Commission is a constitutional body tasked with recommending how tax revenues collected by the Central government should be distributed between the Centre and various States.
- **Vertical and Horizontal Devolution:** It decides the proportion of the Centre's net tax revenue that goes to the States overall (vertical devolution) and how this share is distributed among various States (horizontal devolution).
- **Local Bodies Revenue:** The 16th Finance Commission is also expected to recommend ways to augment the revenues of local bodies such as panchayats and municipalities.

Decision-Making Process

- **Vertical Devolution:** This refers to the share of funds from the divisible pool that the Centre allocates to the States. The last few Finance Commissions recommended an increasing share: 32% by the 13th, 42% by the 14th, and 41% by the 15th Finance Commissions.
- **Horizontal Devolution:** This involves distributing the States' share based on a formula considering factors like population, fertility level, income level, and geography.
- **Additional Grants:** The Centre may also provide additional grants to States for certain jointly funded schemes.

Friction Between Centre and States

- **Revenue Sharing Disputes:** The Centre collects major taxes, while States rely on taxes from goods like liquor and fuel. States argue they need more funds to fulfill their responsibilities, which include providing education, healthcare, and police services.
- **Unmet Recommendations:** States often receive less than the recommended share from the Finance Commission. For example, under the 15th Finance Commission, States received an average of only 38% of funds from the divisible pool, against the recommendation of 41%.

Disagreements and Criticisms

- **Divisible Pool Calculation:** There is contention over what portion of the Centre's overall tax revenues should be part of the divisible pool. Cesses and surcharges, not shared with the States, can constitute up to 28% of the Centre's tax revenues, reducing the effective share for States.
- **Perceived Inequities:** More developed States like Karnataka and Tamil Nadu argue they receive less in proportion to their contributions, whereas States like Bihar receive significantly more than their contributions.
- **Independence Concerns:** Some critics believe the Finance Commission, appointed by the Centre, may not be fully independent and could be influenced politically.

Impact on Governance

- **Fiscal Federalism:** The Finance Commission's recommendations impact the fiscal federalism in India, influencing how resources are shared and utilized at different levels of government.
- **Economic Disparities:** Disputes over revenue sharing can exacerbate economic disparities between States, affecting regional development and governance quality.

Required Measures

- **Transparent Calculations:** Ensure transparent and fair calculation methods for the divisible pool and distribution of funds.
- **Addressing Root Causes:** Strengthen mechanisms to address the root causes of revenue-sharing disputes and foster cooperative federalism.
- **Enhanced Autonomy:** Grant more financial autonomy to States to manage their resources and responsibilities effectively.

Background

- Finance Commission is constitutional bodies set up under **Article 280 of the Constitution** every five years to make recommendations on the distribution of financial resources between the Union and the states.
- It is a quasi-judicial body.
- It is constituted by the **President every fifth year or even earlier.**
- It is required to make **recommendations to the President** on the following matters:
 - ▶ The **distribution of the net proceeds of taxes to be shared between the Centre and the states**, and the allocation between the states, the respective shares of such proceeds. The principles which should govern the grants-in-aid to the states by the Centre (i.e., out of the Consolidated Fund of India).
 - ▶ The **measures needed to augment the consolidated fund of a state to supplement the resources of the panchayats and the municipalities in the state on the basis of the recommendations made by the State Finance Commission.**
 - ▶ Any other matter referred to it by the President in the interests of sound finance.

MAINS PRACTICE QUESTION

- Q:** "Discuss the role of the Finance Commission in ensuring equitable distribution of resources between the Centre and States, highlighting the challenges faced in this process."

INFORMAL SECTOR EMPLOYMENT TRENDS IN INDIA

CONTEXT

The latest **Annual Survey of Unincorporated Enterprises (ASUSE) for 2021-22 and 2022-23**, released by the **Ministry of Statistics and Programme Implementation**, provides key insights into employment trends in India's informal sector.

Key Findings:

The findings reflect the impact of **three major shocks** (demonetisation, GST implementation, and the Covid-19 pandemic) on unincorporated enterprises and their workforce.

Employment Figures:

- ▶ The number of workers in the informal sector decreased by 16.45 lakh (1.5%) from 11.13 crore in 2015-16 to 10.96 crore in 2022-23.

	2022-23		2015-16	2015-16
	Number of entities	Number of workers	Number of entities	Number of workers
Uttar Pradesh	89.94 lakh	1.57 crore	89.99 lakh	1.65 crore
West Bengal	78.31 lakh	1.05 crore	88.68 lakh	1.36 crore
West Bengal	60.97 lakh	1.16 crore	47.79 lakh	0.91 crore
West Bengal	42.29 lakh	0.85 crore	49.48 lakh	0.97 crore
West Bengal	37.01 lakh	0.59 crore	34.46 lakh	0.53 crore
All-India	6.50 crore	10.56 crore	6.34 crore	11.13 crore

- ▶ Bihar experienced a decline in informal sector workers till 2021-22 but saw a sharp increase to 58.95 lakh in 2022-23, surpassing pre-pandemic levels.

Economic Indicators:

- ▶ The real **Gross Value Added (GVA)** of unincorporated sector enterprises grew by 6.9% in 2022-23, yet remained 1.6% lower than the 2015-16 levels.
- ▶ The sector's compounded annual growth rate (CAGR) contracted by 0.2% between 2015-16 and 2022-23, reflecting the prolonged impact of economic shocks.

Sectoral Contribution:

- ▶ The unorganised sector contributes over 44% to India's Gross Value Added (GVA) and employs nearly 75% of the non-agricultural workforce, highlighting its pivotal role in the economy.

Why the unorganized sector is struggling?

- **Cost Burden:** The unorganized sector struggles with any changes that increase its costs. Unlike the organized

- ▶ The number of unincorporated enterprises increased by 16.56 lakh, rising from 6.33 crore in 2015-16 to 6.50 crore in 2022-23.

Impact of Shocks:

- ▶ The informal sector bore the brunt of demonetisation, GST compliance, and the Covid-19 lockdown, which disrupted economic activities and affected employment stability.
- ▶ Maharashtra, Bihar, Gujarat, Madhya Pradesh, and Odisha witnessed an increase in informal sector employment, while Uttar Pradesh, West Bengal, Tamil Nadu, Karnataka, and Andhra Pradesh recorded a decline.

State-wise Trends:

- ▶ Maharashtra saw a consistent rise in informal sector workers, reaching 1.15 crore in 2022-23 from 91.23 lakh in 2015-16.

sector, which is largely digitized and formalized, the unorganized sector finds it difficult to adapt.

- **Shift in Demand:** Demand has shifted from smaller unorganized units to larger organized ones, leading to the rapid growth of organized sector enterprises.
- **Market Capture:** Despite the intent of GST to formalize the economy, the organized sector often dominates markets that were traditionally held by the unorganized sector.
- **Unpreparedness:** GST, digitization, and formalization policies disproportionately benefit the organized sector, disadvantaging the unorganized sector.
- **Market Capture:** As production in the unorganized sector declines, the organized sector expands into new markets, further marginalizing the unorganized sector.

Why unorganised sector matters?

- **Dominant Workforce:** The sector accounts for approximately 90% of India's workforce.
- **Employment Generation:** It provides income-earning opportunities to a large number of people who might otherwise struggle to find formal employment.

- **Driving Growth:** It plays a leading role in India's electric vehicle (EV) growth, particularly through sectors like e-rickshaws.
- **Economic Contribution:** It plays crucial role in the economy by contributing to:
 - ▶ **National Domestic Product (GDP):** Contributes through its output and economic activity.
 - ▶ **Savings:** Helps in household savings which contribute to national savings.
 - ▶ **Capital Formation:** Supports investment and economic growth by contributing to capital formation.

Government measures to protect interests of unorganised labour

- **Life and Disability Cover:** Provided through Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and Pradhan Mantri Suraksha Bima Yojana (PMSBY).
- **Health and Maternity Benefits:** Insured under Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), targeting those in deprived occupations.
- **Old Age Protection:** Pradhan Mantri Shram Yogi Maandhan Yojana (PM-SYM) launched in 2019. It offers a monthly pension of Rs. 3,000 upon reaching 60 years for unorganized sector workers.
- **Other Welfare Schemes:**
 - ▶ **Public Distribution System**, enhanced through **One Nation One Ration Card scheme** under **National Food Security Act**.
 - ▶ **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** for rural employment.
 - ▶ **Deen Dayal Upadhyay Gramin Kaushal Yojana** for rural skill development.
 - ▶ **Pradhan Mantri Awas Yojana** for affordable housing.
 - ▶ **Pradhan Mantri Gareeb Kalyan Rojgar Yojana** for employment generation in rural areas.
 - ▶ **Mahatma Gandhi Bunkar Bima Yojana** for weavers.
 - ▶ **Deen Dayal Antyodaya Yojana** for urban and rural poor.
 - ▶ **PM Street Vendor's AtmaNirbhar Nidhi (PMSVANidhi)** for street vendors.



FACT BOX

About Annual Survey of Unincorporated Enterprises (ASUSE)

- **Conducted by:** National Statistical Office (NSO)
- **Objective:** to gain comprehensive and reliable data on the unincorporated sector firms.

The unincorporated sector, also known as the informal sector, comprises a large number of organisations and establishments that generate a significant portion of employment in the country. It covers both rural and urban areas of India and works to fill in gaps in national account reporting. This allows the government to have a complete picture of the unincorporated sector and its contributions to the national gross domestic product (GDP).

Gross Value Added (GVA)

- **GVA** measures the total value of goods and services produced by a sector or area within an economy.
 - ▶ It represents the output's total worth, excluding the costs of materials and services used in the production process.
 - ▶ Essentially, it quantifies the economic contribution of a specific industry or region by focusing solely on the final value of its output.

INDIA'S FERTILIZER SECTOR

CONTEXT

Recent discussions have focused on reforms in India's fertiliser sector, which plays a critical role in agriculture. The government is considering changes to how fertilisers are priced and regulated to improve efficiency and accessibility for farmers.

Current Situation:

- **Price Control and Subsidy:** Currently, the government regulates the prices of some fertilisers like **urea** to ensure affordability for farmers. Other fertilisers under the **Nutrient-Based Subsidy (NBS)** scheme have their prices set by companies but receive subsidies based on their nutrient content.
- **Recent Changes:** Starting April 2023, the government has imposed **informal price controls on NBS fertilisers** by setting maximum profit margins. Fertiliser companies cannot receive subsidies if they charge prices exceeding these margins.
- **Impact on Farmers:** This move aims to stabilize fertiliser prices and ensure they remain reasonable for farmers.
 - ▶ **For instance**, the maximum retail prices (MRPs) for popular fertilisers like DAP and MOP have been set to Rs 27,000 and Rs 30,000-31,000 per tonne, respectively.

Why fertilizer is 'crucial' for Indian economy?

- **Food Security:** India's ability to feed its large population depends heavily on the availability and efficient use of fertilisers to boost crop yields.
- **Global Standing in Agriculture:** As the world's second-largest producer of fruits and vegetables after China, India's agricultural success relies on effective fertiliser usage.

Current Challenges:

- **Pricing Issues:** There are disparities in how fertilisers are priced and subsidised. Farmers pay less than 20% of urea’s production cost due to heavy subsidies, leading to overuse of nitrogen compared to other essential nutrients like phosphate, potash, sulphur, and micro-nutrients.
- **Production Gap:** Despite increasing domestic production capacity to 31 million tonnes, there remains a shortfall of approximately 4 million tonnes annually to meet national demand.
- **Import:** India currently imports a significant amount fertilizers, including urea. However, the country has decided to **end urea import by 2025**.
- **Climate Change:** Global climate change poses a significant threat to food and nutritional security worldwide, affecting agricultural productivity.
- **Environmental Impact:** Fertiliser production is energy-intensive and heavily reliant on fossil fuels, contributing to environmental concerns.



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)

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.

SC HIGHLIGHTS NEED FOR BALANCE IN JIM CORBETT NATIONAL PARK DISPUTE

CONTEXT

The Supreme Court’s recent hearing on a plea against the **Jim Corbett National Park’s decision** to allow private operator’s buses to ply within the **core area of the tiger reserve** in Uttarakhand has brought to the forefront the delicate **balance between conservation and development**.

Importance of Balance:

- The Supreme Court’s emphasis on balancing rights highlights the need for a nuanced approach towards conservation.

- On one hand, there is a need to protect India's rich biodiversity and preserve natural habitats for future generations.
- On the other hand, there are legitimate concerns about livelihoods and economic development.

How can balance between conservation and development be achieved?

Achieving a balance between conservation and development in the case of Jim Corbett National Park requires a multi-faceted approach.

- **Sustainable Tourism:** Implement responsible and regulated tourism practices that prioritize wildlife viewing and minimize human impact on the ecosystem. This can include:
 - ▶ Limiting the number of tourists and vehicles entering the park.
 - ▶ Implementing eco-friendly transportation options, such as electric or solar-powered vehicles.
 - ▶ Providing education and awareness programs for tourists on responsible wildlife viewing and park rules.
- **Alternative Livelihoods:** Support alternative livelihood options for local communities that reduce their dependence on forest resources and promote coexistence with wildlife. This can include:
 - ▶ Promoting ecotourism-related jobs, such as guides, hospitality staff, and nature interpreters.
 - ▶ Encouraging sustainable agriculture practices, such as organic farming and permaculture.
 - ▶ Supporting local entrepreneurship in crafts, handicrafts, and other non-forest-based industries.
- **Compensation Mechanisms:** Establish fair compensation mechanisms for local communities affected by conservation efforts. This can include:
 - ▶ Providing financial compensation for crop damage or livestock loss due to wildlife conflict.
 - ▶ Offering alternative land use options or relocation packages for communities living within the park's boundaries.
- **Community Engagement:** Foster active community engagement in conservation efforts through participatory decision-making processes. This can include:
 - ▶ Establishing village-level conservation committees to monitor human-wildlife conflict and develop mitigation strategies.
 - ▶ Conducting regular community outreach programs to educate locals about conservation goals and benefits.
- **Infrastructure Development:** Develop infrastructure that supports both conservation and development goals



FACT BOX

About Jim Corbett National Park:

- Located in the Nainital district of Uttarakhand, Jim Corbett National Park is India's oldest national park, established in 1936.
- It is named after the legendary hunter-turned-conservationist, Jim Corbett.
- The park is part of Project Tiger, a conservation program launched in 1973 to protect Bengal tigers.
- The core area of Jim Corbett National Park spans around 312 square kilometers.
- The park is renowned for its rich biodiversity and is home to over 500 species of plants, 600 species of birds, and a wide range of fauna, including the majestic Bengal tiger.
- It is one of the most popular tourist destinations in India, attracting millions of visitors every year.
- **Core Area:** The core area of a national park or wildlife sanctuary refers to the most sensitive and protected zone within the reserve.
 - ▶ This area is designated as a habitat for endangered species and is strictly protected from human interference.
 - ▶ The core area is typically free from human settlements, agriculture, and other anthropogenic activities that could harm the ecosystem.

EU'S CARBON BORDER TAX MECHANISM

CONTEXT

A new report by the Delhi-based think tank Centre for Science and Environment (CSE) criticizes the European Union's Carbon Border Adjustment Mechanism (CBAM) as an unfair burden on developing countries. The CSE report highlights how policies like CBAM shift the responsibility of decarbonizing heavy industrial sectors onto the Global South, creating obstacles to development.

Key Highlights of the Report

- **Report Title:** "Carbon Border Adjustment Mechanism: An Unfair Burden"
- **Introduction of CBAM:** The CBAM, announced in 2022, taxes imports like iron, steel, cement, aluminum, and fertilizers based on the carbon emissions used in their production. This aims to level the playing field for European companies facing stricter environmental regulations.

- **Criticism by CSE:** Developing countries, with less developed economies and reliance on heavy industries, will be disproportionately impacted by CBAM.
- **Climate Justice:** Sunita Narain, Director General of CSE, emphasizes the need for climate justice in trade policies, pointing out that developed nations are placing the financial burden of transitioning to cleaner technologies on developing countries.

Reason Behind the Situation

- **Historical Emissions:** Developed nations have historically emitted more greenhouse gases, yet are now imposing financial burdens on developing countries for decarbonization.
- **Economic Challenges:** Developing nations, already struggling with economic growth and development, face additional challenges due to the CBAM.
- **Lack of Support:** There is insufficient financial and technical support from developed countries to help developing nations transition to low-carbon technologies.

Impact of CBAM on Developing Countries

- **Economic Burden:** Developing countries may face increased production costs and reduced competitiveness in global markets due to CBAM.

- **Obstacles to Development:** The financial and technical challenges imposed by CBAM may hinder the economic development and industrial growth of developing nations.
- **Violation of Principles:** The CBAM is seen as a violation of the principle of common but differentiated responsibilities (CBDR) enshrined in international climate agreements.

Required Measures

- **Revenue Allocation:** The EU should allocate revenue from CBAM to support developing countries in shifting to low-carbon manufacturing.
- **Increased Climate Finance:** There is a need for increased climate finance for developing nations to facilitate their transition to cleaner technologies.
- **Exemptions for Vulnerable Countries:** The most vulnerable countries should be exempted from the CBAM tax to prevent further economic hardship.
- **Sectoral Mitigation Plans:** Developing countries should implement sectoral mitigation plans that outline emissions reduction targets.
- **Domestic Carbon Tax:** Consideration of a domestic carbon tax on exports to create a decarbonization fund.
- **Greener Production Methods:** Diversifying production processes for different markets, prioritizing greener methods for regions with CBAMs.

Voluntary Markets	Compliance Markets
◦ Here, the Emitters— corporations, private individuals, and others— buy carbon credits to offset the emission.	◦ Compliance markets are set up by policies at the national, regional, and/or international levels— that is <i>officially regulated</i> .
◦ In voluntary markets, credits are verified by private firms as per popular standards.	◦ Most of these markets operate under a principle called ‘ <i>cap-and-trade</i> ’.
◦ Here the participants purchase emissions reductions for public relations or <i>personal reasons</i> .	◦ Here the carbon offsets are created by the need to comply with a regulatory act
◦ There are traders and online registries where climate projects are listed and certified credits can be bought.	◦ Examples of compliance carbon markets are the: <ul style="list-style-type: none"> ▶ Kyoto Protocol ▶ European Union emissions trading system ▶ California emissions trading system (ETS) ▶ Australia ETS ▶ British Columbia ETS ▶ New Zealand ETS ▶ China launched the world’s largest ETS in 2021.

MAINS PRACTICE QUESTION

Q: “The EU’s Carbon Border Adjustment Mechanism (CBAM) poses significant challenges to developing countries. Discuss the fairness of such mechanisms and suggest measures to ensure a just transition for developing economies.”

ARMED CONFLICT AND CLIMATE RISKS

CONTEXT

The International Committee of the Red Cross (ICRC) has highlighted the compounded impact of armed conflict and climate risks, which significantly weakens people's ability to cope with disasters.

Key Highlights of the Report

- Report Title:** 'When Rain Turns to Dust'
- Study Focus:** The report is based on research conducted in 2019 and 2020, focusing on the Central African Republic (CAR), southern Iraq, and northern Mali.
- Double Threat:** Countries affected by conflict are disproportionately impacted by climate change, exacerbating issues such as displacement, food production disruption, and weakened healthcare services.

Reasons Behind the Situation

- Geographical Vulnerability:** The geographical location of CAR, Iraq, and Mali makes them particularly susceptible to climate change.
- Impact of Conflicts:** The lasting consequences of conflicts in these regions exacerbate their vulnerability, disrupting communities, systems, and institutions.
- Human Movement Patterns:** In CAR, changing human movement patterns due to conflict have increased tensions between farmers and herders.
- Resource Scarcity:** In Mali, the fear of attacks forces pastoralists to congregate near water sources, increasing tensions with farmers and fishermen over scarce resources.
- Historical Impact:** In Iraq, the destruction of date palms for military purposes during the Iran-Iraq war has had long-term effects on water and farming.



FIGURE: 01

Impact on Societies

- **Displacement and Migration:** Armed conflicts and climate change force people out of their homes, leading to temporary settlements and further displacement due to natural disasters.
- **Health and Livelihoods:** Conflicts disrupt food production and healthcare services, leading to amplified diseases and weakened health systems.
- **Tensions Over Resources:** Increased competition for limited resources like water exacerbates tensions and conflicts within communities.

Required Measures

- **Institutional Support:** There is a need for strong institutional support to help communities adapt to the consequences of climate and environmental crises.
- **Diversification of Livelihoods:** Communities need to adapt by changing or diversifying their livelihoods to cope with changing environmental conditions.
- **Mobilization for Climate Action:** The ICRC calls for mobilization from both within and beyond the humanitarian sector to ensure climate action and finance reach conflict zones.
- **Support for Hardest-Hit Communities:** It is crucial to ensure that communities most affected by the combined impacts of conflict and climate change receive the necessary support to adapt.

Sahel

- It stretches across northern Africa, from Senegal to Sudan.
- **Key countries:** Senegal, Mauritania, Mali, Burkina Faso, Niger, Nigeria, Chad, Sudan
- It is a Transitional zone between the Sahara and savanna regions, characterized by hot, dry conditions.
- It is warming 1.5 times faster than global average.
- It is the epicentre of **The Green Wall project** which aims to 100 million hectares of degraded land by 2030

UPSC MAINS QUESTION

Q: "Discuss the compounded effects of armed conflict and climate risks on vulnerable societies"

UNEP FORESIGHT REPORT

CONTEXT

Privatised micro-environmentalism may exacerbate social and economic inequalities and deepen polarisation, according to the United Nations Environment Programme (UNEP) in its 2024 report titled "Navigating New Horizons: A Global Foresight Report on Planetary Health and Human Wellbeing."

Key Highlights of the Report

- **Commoditisation of Nature:** The report predicts increasing commoditisation of nature and ecosystem services, leading to wealth concentration among the wealthy.
- **Private Access and Enclosures:** Privatised environmentalism involves creating private access to enclosed and sometimes artificial habitats, providing stable ecosystems to high-paying members.
- **Human Rights Impact:** This trend threatens the concept of environmental justice, limiting fair and equal access to nature-based quality of life and disrupting shared responsibility for conservation efforts.

Socio-economic Inequalities

- **Wealth Concentration:** Privatised micro-environmentalism may lead to further concentration of wealth among the affluent, as access to exclusive natural environments becomes a status symbol.
- **Access to Nature:** Lower-income groups may find themselves increasingly excluded from natural spaces, exacerbating existing socio-economic divides.
- **Increased Polarisation:** The disparity in access to natural resources can deepen social and economic polarisation, leading to increased tension and reduced social cohesion.

Environmental Impact

- **Resource Burden:** The creation and maintenance of private, exclusive ecosystems require substantial resources and energy, contributing to resource depletion and increased pollution.
- **Neglect of Natural Ecosystems:** Focus on artificial and enclosed environments can divert efforts and resources away from conserving and restoring natural ecosystems, leading to further environmental degradation.
- **Pollution Increase:** High resource demands for maintaining these private ecosystems can lead to more pollution, exacerbating the overall environmental crisis.

Measures to Address Issues

- **Inclusive Conservation Efforts:** Ensuring that conservation benefits are accessible to all socio-economic groups is crucial for equitable environmental stewardship.
- **Sustainable Resource Management:** Implementing sustainable resource management practices can prevent resource depletion and reduce pollution associated with private ecosystems.
- **Public Awareness:** Raising awareness about the importance of collective responsibility in environmental stewardship can foster a sense of shared duty towards conservation and sustainable living.

PYQ

Q: With reference to Indian laws about wildlife protection, consider the following statements: (2022)

- 1: Wild animals are the sole property of the government.
- 2: When a wild animal is declared protected, such animal is entitled for equal protection whether it is found in protected areas or outside.
- 3: Apprehension of a protected wild animal becoming a danger to human life is sufficient ground for its capture or killing.

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 only
- (c) 1 and 3
- (d) 3 only

Solution: (b)

Q: Consider the following statements in respect of Trade Related Analysis of Fauna and Flora in Commerce (TRAFFIC): (2017)

- 1: TRAFFIC is a bureau under United Nations Environment Programme (UNEP).
- 2: The mission of TRAFFIC is to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Solution: (b)

UPSC MAINS QUESTION

Q: "Discuss the socio-economic implications of unequal access to natural resources in India."

URBAN NAXALISM

CONTEXT

To prevent unlawful activities by individuals and organizations and to curb the threat of Naxalism and its supporters in urban areas, the Maharashtra government presented a bill named the "**Maharashtra Special Public Safety Act 2024**," the legal provisions of this bill are intended to curb the threat of Naxalism and its supporters in urban areas.

About

- The **Maharashtra Special Public Safety Act 2024** aims to combat unlawful activities linked to Naxalism and its supporters in urban areas.

- It categorizes involvement in violence, promoting fear among the public, and encouraging disobedience to established laws as unlawful.
- The Act makes all offenses cognizable and non-bailable, with penalties including imprisonment ranging from three to seven years and fines between Rs 3 to 5 lakh for joining unlawful organizations.
- **Need behind the bill:** The menace of Naxalism is not only limited to remote areas of the Naxal-affected states, but its presence is increasing in the urban areas also through the Naxal frontal organisations. The spread of active frontal organisations of Naxal groups gives constant and effective support in terms of logistics and safe refuge to their armed cadres.

The states of **Chhattisgarh, Telangana, Andhra Pradesh and Odisha** have enacted the **Public Security Acts** for more effective prevention of unlawful activities of such organisations and banned 48 frontal organisations.

Urban Naxalism in India

- Urban Naxalism has emerged as a contentious issue in India, blending socio-political ideology with security concerns. Originating from the Maoist insurgency in rural India, particularly the Naxalite movement, Urban Naxalism represents a shift towards urban centers where sympathizers and ideologues support or facilitate Maoist activities.
- Unlike their rural counterparts engaged in armed struggle, Urban Naxals operate covertly, using **intellectual and cultural platforms to propagate their ideology, recruit followers, and mobilize support**.
- They often exploit **democratic freedoms** such as **free speech and association** to further their cause, posing a challenge to law enforcement agencies.

Factors Driving Urban Naxalism:

- **Socio-Economic Disparities:** Economic inequalities and marginalized communities feeling neglected by mainstream development policies can fuel discontent and sympathy towards radical ideologies.
- **Perceived Injustice:** Issues like land acquisition, displacement of tribal populations, and alleged state repression in conflict zones contribute to grievances that Urban Naxals exploit.
- **Intellectual and Ideological Influence:** Intellectual circles, universities, and cultural spaces provide platforms for articulating dissent and critiquing the state, sometimes aligning with or providing cover for Naxalite activities.

Challenges:

- **National Security Concerns:** Urban Naxalism is viewed by authorities as a threat to national security due to its potential to incite violence, undermine state authority, and destabilize governance.

- ▶ **Freedom of Expression vs. Sedition:** The thin line between legitimate dissent and sedition is often debated, with arrests of activists and intellectuals accused of supporting Naxalism raising concerns about freedom of expression.
- ▶ **Legal and Ethical Dilemmas:** Law enforcement faces challenges in balancing preventive actions with civil liberties, leading to criticism over the arbitrary use of anti-terror laws against dissenters.



FACT BOX

About Naxalism

- Naxalism originated in 1967 in Naxalbari, West Bengal, led by Charu Majumdar and Kanu Sanyal. Over time, it evolved into an armed Maoist movement aimed at overthrowing India's parliamentary system.
- The CPI (Maoist), formed in 2004, amalgamated several groups and operates primarily in central Indian states like **Jharkhand, Chhattisgarh, and Maharashtra.**

- **Spread in India:** Naxalism has spread widely, affecting states such as Jharkhand, West Bengal, Odisha, Bihar, Chhattisgarh, and Andhra Pradesh.
- **Causes:** Economic grievances and alleged governmental neglect contribute to local support for Naxal groups. Issues like lack of development, denial of tribal rights, and exploitation often fuel resentment and recruitment into these movements.
- **Impact:** Naxal activities include obstructing development projects, extorting locals, and running parallel judicial systems in areas inaccessible to regular governance.

PYQ

- Q: "Naxalism is a social, economic and development issues manifesting as a violent internal security threat. In this context, discuss the emerging issues and suggest a multilayered strategy to tackle the menace of Naxalism. (2022)"**



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SECTION - B

QUICK BYTES

HEAT DOME

CONTEXT

In June 2024, the Northeastern United States experienced an unusually early and prolonged heat wave caused by a weather phenomenon known as a **heat dome**. This heat dome, linked to a stagnant high-pressure system in the atmosphere, trapped warm air beneath it, preventing weather systems from moving through and resulting in extreme heat conditions.

What is a Heat Dome?

- A heat dome forms when warm air becomes trapped under a stationary **high-pressure area** in the atmosphere.
- This phenomenon blocks the movement of weather patterns, allowing more sunlight to reach the Earth's surface.
- Consequently, this intensifies warming and drying of the soil, reduces evaporation, and inhibits the formation of rain clouds.

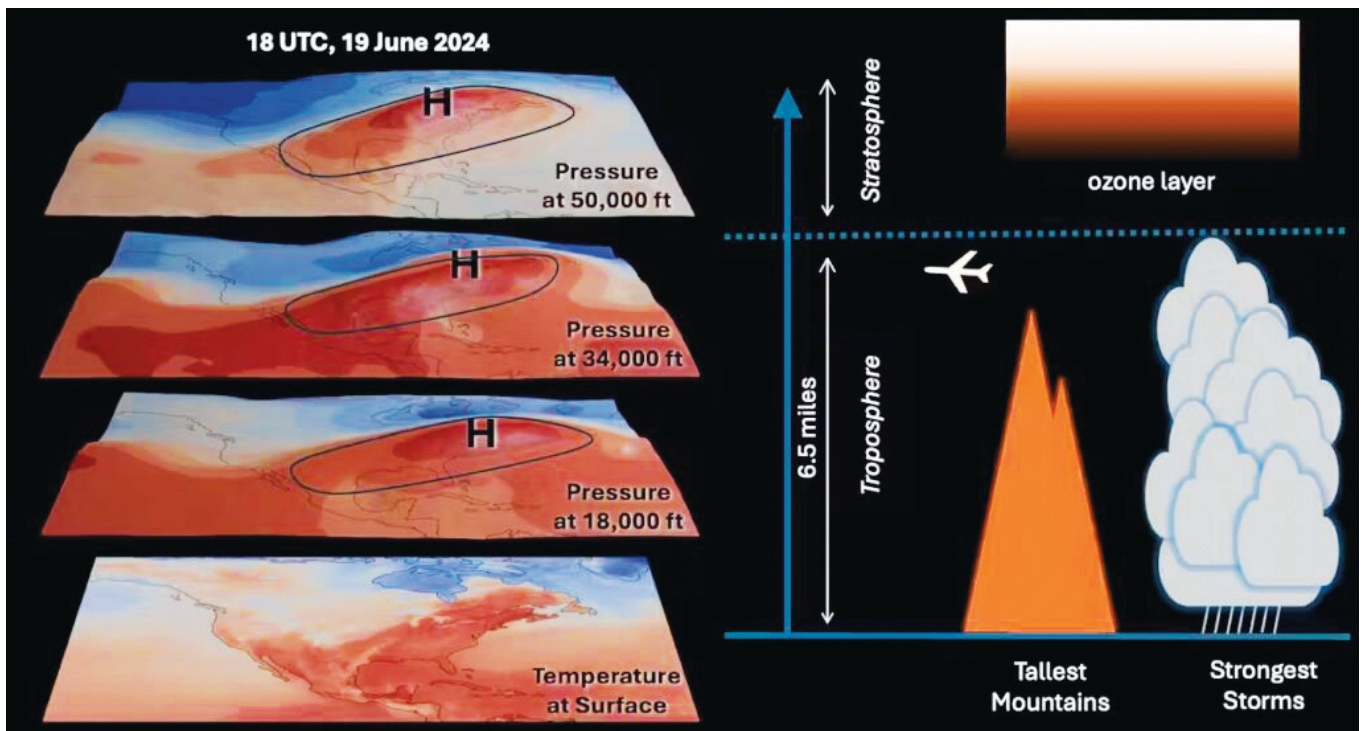


Figure No. 1

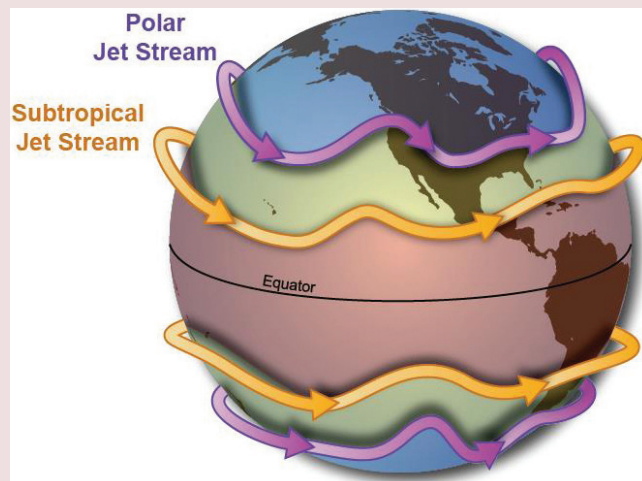
- The **longer a heat dome persists in one location, the hotter conditions** become each passing day.
- Heat domes typically last from several days to a few weeks and are influenced by the behavior of the **jet stream**.



FACT BOX

Jet Stream

- A jet stream is a **fast-moving, narrow air current flowing west to east** around the globe in the **upper atmosphere**.
- It follows a **wave-like pattern** that oscillates north and south. When these waves elongate and slow down, they can become stationary, causing high-pressure systems like heat domes to become stuck in place.
- Jet streams typically travel at speeds ranging from 129 to over 443 kilometers per hour (80 to 275 miles per hour), with greater speeds during winter due to temperature differences between air currents.



MASHCO PIRO

CONTEXT

INDIGENOUS RIGHTS NGO Survival International has released rare pictures of the Mashco Piro tribespeople in south-eastern Peru, one of the world's 100-odd uncontacted tribes.

About:

- Largest uncontacted tribe with an estimated population of over 750.
- Located in the Amazon rainforest of southeastern Peru.
- Madre de Dios Territorial Reserve was created in 2002 for their protection.
- **Threats:**
 - ▶ Logging concessions encroaching on traditional territories
 - ▶ Increased sightings due to pressure from outsiders

Uncontacted Tribes

- Groups with no peaceful contact with mainstream society, who avoid interactions with outside world
- **Notable Uncontacted Tribes:**
 - ▶ Sentinelese (Andaman Islands, India)
 - ▶ Kawahiva (Brazil)
 - ▶ Ayoreo (Paraguay-Bolivia border)
- **Challenges**
 - ▶ **Encroachment:** Deforestation and resource extraction in traditional territories
 - ▶ **Health Risks:** Lack of immunity to common diseases, potential for devastating epidemic.
- Brazil has the largest number of uncontacted tribes, with at least 77 confirmed groups

SUTLEJ RIVER

CONTEXT

Supreme Court Judge raises concerns about Sutlej being reduced to a rivulet due to constructions.

About:

- The Sutlej River originates from Lake **Rakshastal** in Tibet, near Mount Kailash. It traverses through the Himalayas, entering India through the **Shipki La** pass in Himachal Pradesh, and finally merges with the Chenab River in Pakistan to form the Panjnad River, which eventually joins the Indus River.
- It is also known as **Satadru**.
- Sutlej is an **antecedent** river, which existed before the Himalayas and entrenched itself while they were rising.
- The main tributary in India are Ravi and Beas.
- **Irrigation:** Supports extensive irrigation systems in Punjab, including the Sutlej-Yamuna Link Canal, Sirhind Canal, Bhakra Main Line and the Rajasthan canal.

NATIONAL DAY OF FRANCE (BASTILLE DAY)

CONTEXT:

July 14 is celebrated as Bastille Day in France, marking the storming of the **Bastille prison in 1789**.

About Bastille Day:

- Bastille Day (also known as *Le 14 juillet* or *Fête nationale française*) commemorates the beginning of the **French Revolution** when revolutionaries seized the Bastille fortress in Paris.
- **Antecedents:** The old regime in France faced economic crises and inequality, prompting calls for reform and inspired by Enlightenment ideas of democracy and equality.

- **Revolution Begins:** In 1789, King Louis XVI convened the Estates-General, leading to the formation of the National Assembly by the Third Estate on June 17. Tensions escalated, culminating in the storming of the Bastille on July 14.
- **Storming of the Bastille:** A mob, disillusioned with monarchy and seeking arms, attacked the Bastille, a

symbol of royal tyranny. After fierce fighting, the fortress fell, symbolizing the start of the French Revolution.

The Bastille's fall represented the end of feudalism and the monarchy's oppression. Annual celebrations since 1790 have marked Bastille Day, emphasizing liberty, equality, and fraternity. It symbolizes French patriotism and national identity, reflecting the motto of *'liberty, equality, and fraternity.'*

Indus-Sutlej River Basin

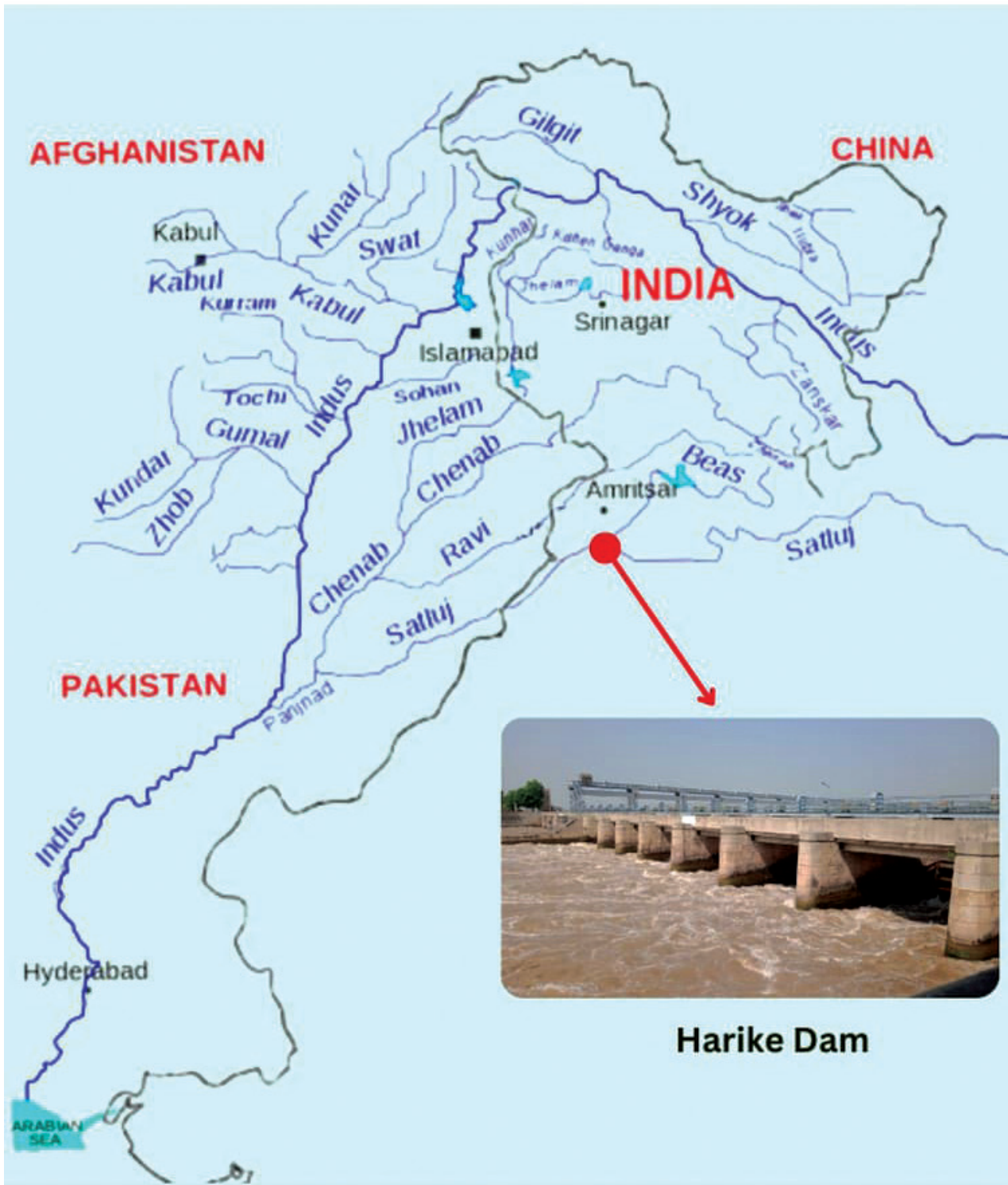


Figure No. 2

GLOBAL BIOFUELS ALLIANCE

CONTEXT

The Global Biofuels Alliance (GBA), launched by key G20 members including India, the US and Brazil in September 2023, is all set to get its diplomatic status, with New Delhi likely to sign a headquarters agreement with the agency soon.

About:

- GBA is an **India-led Initiative** to develop an alliance of Governments, International organizations and Industry to facilitate adoption of biofuels.
- **Objective:** Bringing together the **biggest consumers and producers of biofuels** to drive biofuels development and deployment, the initiative aims to position biofuels as a key to energy transition and contribute to jobs and economic growth.
- **Joining Members:** 19 countries and 12 international organisations have already agreed to join.
 - **G20 countries (07) supporting GBA:** Argentina, Brazil, Canada, India, Italy, South Africa, USA
 - **G20 Invitee Countries (04) supporting GBA:** Bangladesh, Singapore, Mauritius, UAE
 - **Non G20 (08) supporting GBA:** Iceland, Kenya, Guyana, Paraguay, Seychelles, Sri Lanka, and Uganda

have agreed to be initiating members of GBA, and Finland.

- **International organizations:** World Bank, Asian Development Bank, World Economic Forum, World LPG Organization, UN Energy for All, UNIDO, Biofutures Platform, International Civil Aviation Organization, International Energy Agency, International Energy Forum, International Renewable Energy Agency, World Biogas Association.



FACT BOX

National Biofuel Policy

- The policy is aimed at taking forward the indicative target of achieving 20% blending of biofuels with fossil-based fuels by 2030.
- The policy intends to ensure the adequate and sustained availability of domestic feedstock for biofuel production, increasing farmers' income, import reduction, employment generation and waste to wealth creation.
- This policy clearly exhibits the Centre's push towards **strengthening the energy infrastructure** of the country while promoting the agenda of sustainability.

National Policy on Biofuels 2018

Salient features

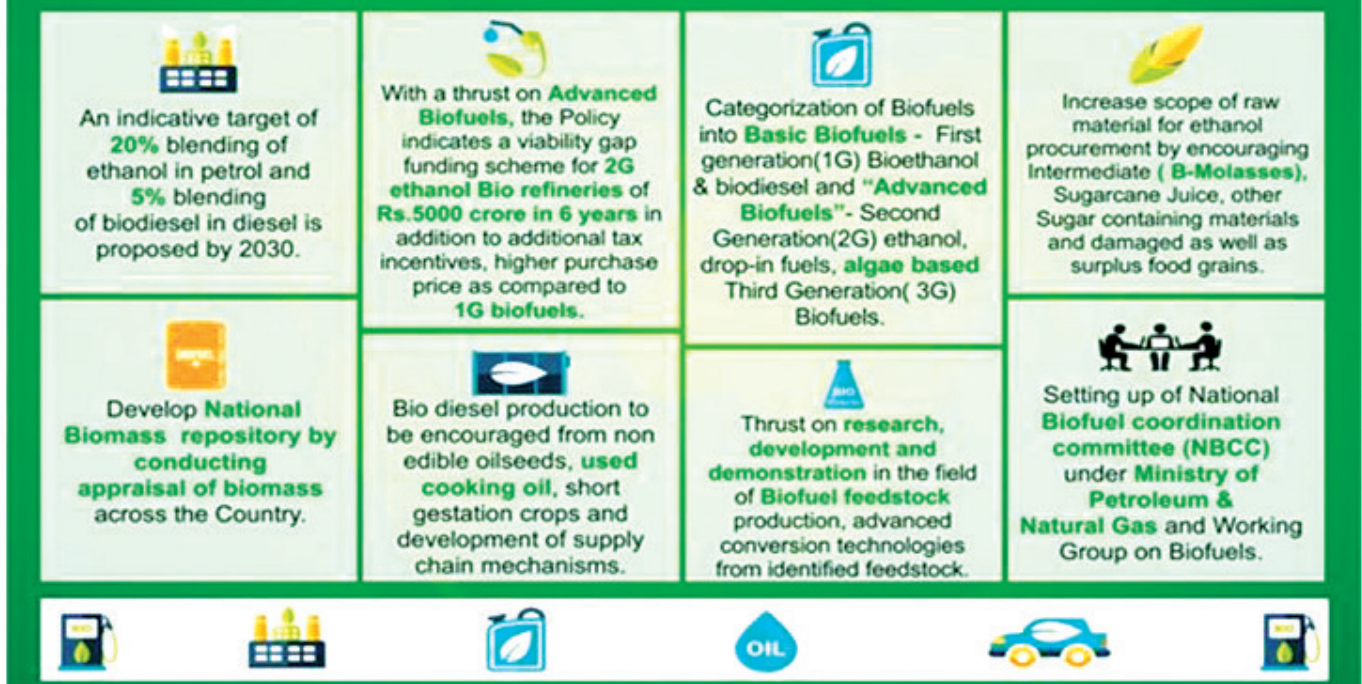


Figure No. 3



FACT BOX

Biofuels

- Biofuels are liquid fuels produced from renewable biological sources, including plants and algae.
- Biofuels offer a solution to one of the challenges of solar, wind, and other alternative energy sources.

Advantages of Biofuels

- **Availability:** since biofuels only require biomass for their production, which is ubiquitous, biofuels are easy to produce.
- **Reduction in waste:** biofuels can also be produced using waste materials such as municipal sewage waste, inedible parts of the crops. This effectively aids in the reduction of waste.
- Reduce dependency on crude oil and non-renewable sources of fuels.
- **Economic development:** the production of biofuels can be a labour-intensive process thus resulting in the creation of jobs. This can provide a source of employment. It can aid in the development of rural areas when the second generation biofuel production units are set up there.

Disadvantages of Biofuels

- **Low Efficiency:** The efficiency of biofuels is much lesser compared to fossil fuels, as fossil fuels produce more energy on burning.
- **Loss of biodiversity:** the genetically modified crops used for the production of fourth-generation biofuels could result in a loss of biodiversity.
- **Less availability of space:** production of biofuels requires land, and in the case of second-generation biofuels, the crops used are mostly non-food crops, thus the production of biofuels requires a lot of space.
- **Food shortage:** The first generation biofuels make use of food sources and there is an imminent threat of facing food shortage if the production of biofuels is carried out extensively.
- **Water usage:** Massive quantities of water are required for proper irrigation of biofuel crops as well as to manufacture the fuel, which could strain local and regional water resources. This is, however, not the problem in case of the third generation biofuel.

OPERATION NANHE FARISHTEY

CONTEXT

Operation Nanhe Farishtey, launched by the Railway Protection Force (RPF), aims to rescue children in distress found on railway premises across India. This initiative has gained significant attention for its impact on child safety and welfare.

About:

- The Railway Protection Force (RPF) launched Operation Nanhe Farishtey to rescue children found in distress on railway premises.
- The operation covers railway stations and trains across India, emphasizing prompt identification and rescue of vulnerable children.
- Hundreds of children are rescued monthly under this operation, with a focus on immediate safety and long-term welfare.

Other Initiatives of RPF

- **Human Trafficking & Operation AAHT-** In order to have an effective counter to evil plans of Human traffickers, Anti Human Trafficking Units of RPF are operational at the Post level (Thana level) over the Indian Railways. These AHTUs are in regular touch with agencies and NGOs involved in preventing human trafficking and have assisted them in rescue of children being trafficked.
- **Operation "Jeevan Raksha":** - Due to alertness and swift action by RPF, lives of 265 passengers were saved by Team RPF, who had come close to getting run over by trains, at platforms and railway tracks in the month of September 2023 under operation 'Jeevan Raksha'.
- **Women Security :-** Safety and security of women passengers has been an important concern of Indian Railways. In this regard, an initiative "Meri Saheli" has been launched to provide security to lady passengers in long distance trains, particularly those travelling alone or those who are vulnerable to crime.

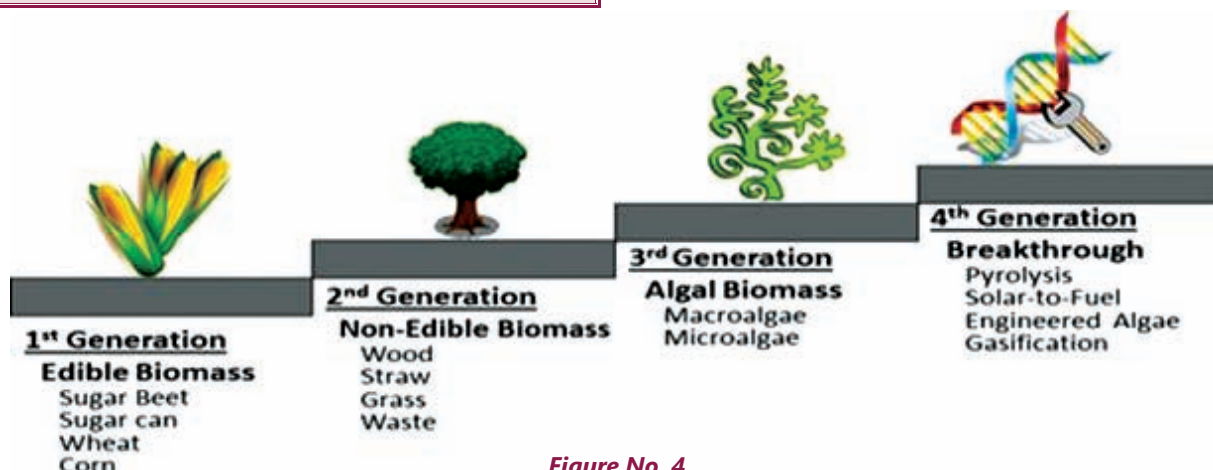


Figure No. 4

BHARAT BILL PAYMENT SYSTEM

CONTEXT

In order to centralize and streamline the bill payment process across India, the Reserve Bank of India (RBI) has mandated that all banks process **credit card bill payments** through the **Bharat Bill Payment System (BBPS)**.

What is Bharat Bill Payment System?

- **Developed by:** National Payments Corporation of India (NPCI)
- The Bharat Bill Payment System (BBPS) is a unified platform to streamline and centralize the process of paying bills across India.
- BBPS facilitates bill payments through a wide network that includes bank branches, online portals, mobile apps, and other digital channels.
- This system is designed to make bill payments convenient and efficient for both businesses and customers by offering various payment methods and ensuring prompt settlements.
- **Significance:**
 - ▶ Unified Platform for All Payments
 - ▶ Convenient and User-Friendly
 - ▶ Timely Reminders
 - ▶ Enhanced Security
 - ▶ Multiple Payment Modes



FACT BOX

National Payments Corporation of India (NPCI)

- It is an umbrella organisation for operating retail payments and settlement systems in India
- NPCI is an initiative of **Reserve Bank of India (RBI) and Indian Banks' Association (IBA)** under the provisions of the **Payment and Settlement Systems Act, 2007**, for creating a robust Payment & Settlement Infrastructure in India.
- It is a **"Not for Profit" Company** under the provisions of **Section 25 of Companies Act 1956 (now Section 8 of Companies Act 2013)**.
- **Important introduction:** RuPay, Immediate Payment Service (IMPS), National Automated Clearing House (NACH), Aadhaar Payment Bridge (APB) System, Aadhaar enabled Payment System (AePS), National Financial Switch (NFS), Unified Payments Interface (UPI), National Electronic Toll Collection (NETC)

NABARD LAUNCHES AGRI FUND, 'AGRI-SURE'

CONTEXT

The **National Bank for Agriculture and Rural Development (NABARD)** has announced the launch of a Rs 750-crore **agri fund**, dubbed **'Agri-SURE'**, to promote investment in innovative and technology-driven initiatives in agriculture and allied areas. The fund aims to support startups and rural enterprises, driving sustainable growth and development in the agricultural sector.

About Agri-SURE

- Agri-SURE is a fund launched by **NABVENTURES**, a subsidiary of NABARD, with an initial corpus of Rs 750 crore.
 - ▶ The fund has received contributions of Rs 250 crore each from NABARD and the Ministry of Agriculture, as well as Rs 250 crore from other institutions.
- **Objectives:** The primary objective of Agri-SURE is to promote investment in high-risk, high-impact activities in agriculture and allied areas.
- **Investment Strategy:** Agri-SURE will provide support through investments in sector-specific, sector-agnostic, and debt Alternative Investment Funds (AIFs), as well as direct equity support to startups. The fund aims to support approximately 85 agri startups with investment sizes of up to Rs 25 crore each by the end of its term.
- **Focus Areas:** The fund's focus areas include:
 - ▶ Promoting innovative, technology-driven initiatives in agriculture
 - ▶ Enhancing the farm produce value chain
 - ▶ Creating new rural ecosystem linkages and infrastructure
 - ▶ Generating employment
 - ▶ Supporting Farmers Producer Organizations (FPOs)
 - ▶ Encouraging entrepreneurship through IT-based solutions
 - ▶ Machinery rental services for farmers

BIHAR SEEKS MSP FOR MAKHANA

CONTEXT

The Bihar government has urged the Centre to declare **Minimum Support Price (MSP)** for **makhana**, an aquatic crop cultivated across 10 districts in the state.

About Makhana:

- Makhana (***Euryale ferox***) is an aquatic crop grown for its edible seeds.
- This cash crop belongs to the family **Nymphaeaceae** and is native to India and Southeast Asia.
- Makhana seeds develop within the flower of the plant, which grows underwater in stagnant or slow-moving water bodies like ponds, lakes, and shallow marshes.

- **Climatic Conditions:** Makhana cultivation requires warm temperatures for optimal growth. It thrives in regions with a tropical climate, characterized by hot summers and adequate rainfall.
- **Soil Requirements:** Makhana plants prefer loamy or clayey soils that are rich in organic matter.
- **Nutritional Value:** Makhana seeds are nutritious and low in calories. They are rich in protein, carbohydrates, fiber, calcium, potassium, magnesium, and phosphorus.
- Bihar is the leading producer of makhana in India, with about **85% of India's production originating from the state.**
- Makhana cultivation is difficult and intense.

Government's Demands:

- **Minimum Support Price (MSP):** Bihar seeks MSP recognition for makhana to ensure fair prices for farmers and sustainable cultivation.
- **Improving ICAR-NRC for Makhana:** The ICAR-National Research Centre (NRC) for Makhana in Darbhanga requires urgent attention. It currently faces challenges such as inadequate staffing (only 10 employees against a sanctioned 42) and administrative deficiencies.

FALCON 9 ROCKET GROUNDED AFTER SATELLITE MISHAP

CONTEXT

The US Federal Aviation Administration (FAA) has grounded **SpaceX's Falcon 9 rocket** following a recent failure (first since 2015). The incident involved the **rocket's upper stage engine malfunction**, which left 20 Starlink internet satellites in an unusable low orbit.

What is Falcon 9?

- Falcon 9 is a **reusable rocket** developed by SpaceX, powered by **liquid oxygen and rocket grade kerosene (RP- 1)**.
- **It consists of two stages:**
 - the reusable first stage with nine Merlin engines
 - the second stage with a single Merlin engine
- The rocket's first stage is powered by nine Merlin engines, while the second stage uses a single Merlin Vacuum engine optimized for use in the vacuum of space.
- It is capable of transporting payloads and crew to low Earth orbit and beyond. Falcon 9 is the only U.S. rocket capable of sending NASA crews to the **International Space Station.**
- **Payload Capacity:** Falcon 9 can transport payloads weighing up to 22,800 kilograms (50,300 pounds) to **low Earth orbit (LEO)** and up to 8,300 kilograms (18,300 pounds) to **geostationary transfer orbit (GTO).**
- **Versatility:** It is used for a variety of missions including satellite deployment, cargo resupply to the International Space Station (ISS), and crewed missions under **NASA's Commercial Crew Program.**

- The workhorse rocket has launched more than 350 times since its debut in June 2010.

SUKHOI SU-30 FIGHTER JETS

CONTEXT

India's HAL is in talks to produce and export **Sukhoi Su-30 fighter jets**, marking a significant advancement in India's defense manufacturing capabilities.

About SU-30 Fighter Jets?

- The **Su-30 (Flanker-C) Russian Multirole Fighter Aircraft** is a **twin-engine, two-seat supermaneuverable fighter aircraft** developed in the Soviet Union by Russia's Sukhoi Aviation Corporation.
- It is a multirole fighter for **all-weather, air-to-air, and air-to-surface** deep interdiction missions.
- The Su-30 started out as an internal development project in the Sukhoi Su-27 family by Sukhoi.
- The design plan was revamped and the name was made official by the Russian Defense Ministry in 1996.
- Of the Flanker family, the Su-27, Su-30, Su-33, Su-34, and Su-35 have been ordered into limited or serial production by the Defense Ministry.

CHANDIPURA VIRUS

CONTEXT

The National Institute of Virology (NIV) in Pune confirmed the first fatality of a four-year-old girl due to Chandipura virus in Gujarat. The virus has led to 15 suspected deaths across nearly a dozen districts in the state.

About:

- **Virus Characteristics:** Chandipura virus (CHPV) is an arbovirus transmitted primarily through sandfly bites. It causes acute encephalitic illness, mainly affecting children.
- **Symptoms and Diagnosis:** Symptoms include high fever, seizures, vomiting, and altered sensorium. Diagnosis is typically confirmed through PCR testing and viral culture.
- **Treatment and Prevention:** There is no specific antiviral treatment; management is supportive. Prevention focuses on controlling sandfly populations and avoiding bites through insect repellent and protective clothing.

SALINE LAKES

CONTEXT

Recently, many saline lakes have been shrinking and experiencing declining water quality. This trend is exacerbated by human activities such as **pollution, water diversions, and climate change** impacts like **reduced precipitation and increased temperatures.**

What are Saline Lakes?

- Saline lakes make up 44% of all lakes around the world.
- They differ from freshwater lakes because they lack a consistent outlet for water, causing dissolved salts to accumulate from inflows.
- Their water levels fluctuate naturally and are sensitive to disturbances, whether natural or human-induced.
- Changes in Saline Lakes (Examples)**
 - Lake Urmia, Iran:** Once one of the largest saline lakes, Lake Urmia has drastically shrunk due to unsustainable human practices. This has led to environmental problems, reduced tourism, agricultural challenges, and biodiversity loss.
 - Aral Sea:** Once the fourth-largest inland water body, the Aral Sea has significantly diminished due to poorly planned irrigation projects. Efforts to restore it have faced immense challenges with lasting environmental and socio-economic consequences.



FACT BOX

Saline Lakes in India

- In India, Saline lakes are typically found in **arid and semi-arid regions** where evaporation rates exceed precipitation, leading to the accumulation of salts in water bodies.
- Some notable saline lakes in India include:**
 - Sambhar Lake:** Located in Rajasthan, it is India's largest saline lake and an important source of salt production.
 - Chilika Lake:** Located in Odisha, it is the largest coastal lagoon in India and includes areas with saline and brackish water.
 - Pulicat Lake:** Located in Andhra Pradesh and Tamil Nadu, it is the second largest brackish water lake in India and has saline components.
 - Great Rann of Kutch:** While not a lake in the traditional sense, this salt marsh in Gujarat experiences seasonal flooding and drying, resulting in saline conditions.
 - Wular Lake:** Located in Jammu and Kashmir, it is the largest freshwater lake in India but experiences seasonal variations in salinity.

UPSC PYQ

Q: With reference to India, Didwana Kuchaman, Sargol and Khatu are the names of- (2021)

- glaciers
- mangrove areas
- ramsar sites
- saline lakes

Solution: (d)

SUSTAINABLE ROSEWOOD TRADE

CONTEXT

In a bid to ensure the sustainable harvest and trade of rosewood species, the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** has rolled out new guidelines for its member countries.

Key-highlights of the Guidelines:

- The guidelines emphasize capacity-building efforts for managing CITES-listed rosewood species.
- In particular, the focus is on 13 high-priority and 14 medium-priority species identified in the Report on the Conservation and Trade of CITES-Listed Rosewood Tree Species [*Leguminosae (Fabaceae)*].
- Pterocarpus erinaceus*:** A significant portion of the discussions centered around ***Pterocarpus erinaceus***, commonly known as African rosewood.
 - Native to West Africa, this species is among the most threatened due to over-exploitation and illegal trade.
 - CITES has recommended trade suspensions for range states of ***Pterocarpus erinaceus*** to address these concerns.
- Non-Detriment Findings (NDFs):** The guidelines called for strengthening of **Non-Detriment Findings (NDFs)** for tree species.
 - NDFs are essential for ensuring that international trade in CITES-listed species does not harm their populations in the wild.
 - They support sustainable global trade, benefiting both the countries where these species originate and the industries in the production and destination countries.



FACT BOX

About Rosewood (*Dalbergia latifolia*)

- Rosewood (*Dalbergia latifolia*) refers to several dark-red hardwood tree species native to tropical areas.
- The Rosewood is a tropical hardwood with a tight, even grain.
- Rosewood's native range:** India, Brazil, Honduras, Jamaica and Africa.
- CITES oversees the international trade of several rosewood species, including those in the genera *Dalbergia*, *Azelia*, *Khaya*, and *Pterocarpus*.
- These species are listed in Appendix II of CITES, meaning they are not currently threatened with extinction but could become so if their trade is not strictly regulated.
- D. latifolia* logs is banned from export under the Indian Forest Act.
- IUCN Red List:** Vulnerable
- CITES Status:** Appendix II

SARUS CRANE (GRUS ANTIGONE)

CONTEXT

The latest summer census taken up for sarus crane sightings shows that their count has risen across Uttar Pradesh (UP). However, the bird could not be sighted in Ghaziabad district.

About

- The Sarus Crane (*Grus antigone*) is the world’s tallest flying bird, known for its striking appearance and graceful behavior.
- The sarus crane is easily distinguished from other cranes in the region by its overall grey colour and the contrasting red head and upper neck.
- **Diet:** Sarus Cranes are omnivores, feeding on a variety of plants, grains, insects, and small vertebrates. They forage in shallow water and wetland areas.
- **Breeding:** They are monogamous, forming lifelong pairs. Breeding occurs during the monsoon season in India, with nests built in shallow water using plant material.
 - **IUCN Status:** Vulnerable

PYTHON (PYTHONIDAE)

CONTEXT

In a bid to address global food insecurity, scientists are exploring the potential of python farming as a sustainable and efficient source of protein.

About:

- It is among the world’s largest snake species which can live up to 30 years in wild.
- It is found in tropical and subtropical regions of Africa, Asia, and Australia.
- Reticulated python is the world’s longest snake, capable of reaching over 9 meters in length.
- It is Adaptable to various environments including forests, grasslands, and wetlands which makes it invasive species for e.g. Burmese pythons in Florida Everglades causing ecological disruption.
- It is an important indicator species which contributes to ecosystem balance by controlling population of small to medium-sized mammals.

- **IUCN Status:** Varies by species, some listed as **Vulnerable or Near Threatened**.
- **Economic Value:** Skin used in luxury leather goods industry

NEW SPECIES OF DOGFISH SHARK (SQUALUS HIMA)

CONTEXT

In a significant discovery, scientists from the Zoological Survey of India (ZSI) have identified a new species of **dogfish shark**, named *Squalus hima*, off the coast of Kerala.

Characteristics of Squalus hima

- *Squalus hima* belongs to the genus *Squalus*, commonly known as **spurdogs**.
- These dogfish sharks are characterized by smooth dorsal fin spines, angular short snouts, small mouths almost as wide as their snouts, and bodies without spots.
- They are exploited for their liver oil, which contains high levels of squalene, a highly sought-after ingredient in the pharmaceutical industry for making high-end cosmetic and anti-cancerous products.



FACT BOX

About Dogfish Sharks

- Dogfish sharks are small with slender bodies and pointed snouts.
- They are bottom-dwelling sharks that can be found near coasts around the world and are known to migrate long distances.
- With over 130 different species, they form the second-largest order of sharks, Squaliformes.

Zoological Survey of India (ZSI)

- **Established in:** 1916
- **Objective:** to promote survey, exploration, and research leading to advancements in our knowledge of various aspects of India’s rich biodiversity.
- The survey has its roots in the establishment of the Zoological Section of the Indian Museum at Calcutta in 1875.





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