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Women Empowerment in Panchayati Raj

» SPECIAL FEATURES

Power Packed News
UPSC Prelims based MCQs

**WOMEN RESERVATION
VS
PROXY RULE**



Message



An officer with a right mindset is an officer that a nation aspires for. A right mindset doesn't necessarily comprise unlimited jargon of knowledge rather a right amount of knowledge and its appropriate execution. Especially, when it comes to UPSC and State PSCs preparation, the crux is not to accumulate the knowledge but its effective implementation and utilization in tackling any situation. The situation here can be anything from UPSC CSE Prelims to the major issues that need to be addressed. The journey is hard but it is worth.

Perfect 7 has been part of many UPSC and State PSCs aspirants in their journey of becoming well reputed officers serving nationally and internationally. The magazine itself had gone through constant ebb and flows of change and improvements. Now, that the magazine is in its monthly era, I hope it becomes your perfect preparation partner and guides you through this ever learning endeavor of Civil Services Preparation.

With Best wishes.

Vinay Singh
Founder
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Indian Society & Art and Culture

From Proxy to Power: Eliminating the 'Sarpanch Pati' Practice in Rural Governance

Introduction

The empowerment of women in governance is a critical aspect of achieving inclusive development and strengthening democracy at the grassroots level. The Panchayati Raj system, established with 33-50% reservation for women, aimed to bring marginalized voices into local governance. However, the "Sarpanch Pati" phenomenon—where male relatives, particularly husbands, wield authority in place of elected women representatives—has undermined the intended impact of these reservations.

- ❖ Recognizing the urgency of addressing this issue, the Union Ministry of Panchayati Raj has launched several initiatives to curb proxy leadership and enhance the capacities of women leaders in Panchayati Raj Institutions (PRIs). Among these efforts, the Sashakt Panchayat-Netri Abhiyan, a first-of-its-kind training and capacity-building program, and the use of community radio and digital platforms for awareness stand out as significant steps toward strengthening women's leadership.

The "Sarpanch Pati" Phenomenon: A Barrier to Women's Leadership:

- ❖ The "Sarpanch Pati" system refers to the practice where the husband of an elected woman sarpanch assumes power and makes decisions on her behalf. This issue arises due to deep-rooted patriarchal structures, lack of education among elected women representatives, and insufficient

institutional support.

- ❖ Many women elected to panchayats lack prior experience in governance and decision-making. In the absence of proper training, they often become dependent on male relatives for administrative tasks, financial management, and infrastructure projects. While some men claim to assist their wives with good intentions, this undermines the very purpose of political reservations—which is to enable women to exercise independent leadership.

Government's Initiatives to Address Proxy Leadership

- ❖ **Sashakt Panchayat-Netri Abhiyan: Capacity Building for Women Leaders:** To empower women leaders in local governance, the Ministry of Panchayati Raj has launched the Sashakt Panchayat-Netri Abhiyan. This initiative aims to:
 - » Enhance leadership skills and decision-making abilities of elected women representatives.
 - » Provide structured training on governance, budgeting, conflict management, and digital literacy.
 - » Equip women leaders with legal knowledge on issues like gender-based violence, domestic abuse, and workplace harassment.
- ❖ A key component of this initiative is the legal training manual, which includes laws and reporting mechanisms for:

- » Domestic violence and child abuse
- » Gender-biased sex selection and child marriage
- » Workplace harassment and human trafficking
- » Cyberstalking, online sexual harassment, and digital abuse
- ❖ By strengthening women representatives' legal and governance awareness, this initiative ensures they are better equipped to serve their communities effectively.
- ❖ **Awareness Campaigns Through Community Radio and Media Engagement:**
 - » Alongside training programs, the government has launched widespread awareness campaigns using community radio, public service films, media outreach, and educational seminars to challenge the Sarpanch Pati system.
 - » Union Minister of State for Panchayati Raj, SP Singh Baghel, informed the Rajya Sabha that initiatives such as "Jan Jan Tak Jankari" are being broadcast on 15 community radio stations in Bihar, Karnataka, and Maharashtra on a pilot basis.
- ❖ **These programs aim to:**
 - » Educate rural communities about the importance of independent female leadership.
 - » Raise awareness about the legal and administrative consequences of proxy leadership.
 - » Promote government schemes and digital governance initiatives, such as:
 - SVAMITVA (Survey of Villages and Mapping with Improved Technology for digital mapping of villages).
 - e-GramSwaraj, Meri Panchayat, and Panchayat Nirnay (online portals for transparent decision-making).
 - AuditOnline, a digital platform for financial accountability in local governance.
- ❖ These communication strategies play a crucial role in changing public perceptions,

ensuring greater respect for women leaders, and encouraging communities to reject proxy leadership.

Timeline of the Women's Reservation Bill

1971

First committee for women (Status of Women in India) was formed

1989

Rajiv Gandhi first introduced Constitution Amendment Bill (women's reservation) in panchayats, municipal corporations - It failed in Rajya Sabha

1992

72nd Constitutional Amendment Act was passed

1993

73rd Constitutional Amendment Act was passed

1996

81st Amendment Bill was introduced in Lok Sabha by HD Deve Gowda - failed to get passed

1998

Atal Bihari Vajpayee-led NDA government introduced the Bill in 12th Lok Sabha - did not receive support

1999, 2002, 2003

It was reintroduced by the Vajpayee government but failed again

2008

Bill was introduced in Rajya Sabha by Manmohan Singh-led UPA government; it was sent to the Parliamentary Standing Committee

2009

Standing committee presented its report

2010

Women Reservation's Bill received the Union Cabinet's approval

Though the Bill passed in the Rajya Sabha in 2010, it was never taken up for consideration in the Lok Sabha. It is still active

Policy Recommendations and Institutional Strengthening

- ❖ To further strengthen women's leadership in PRIs, the government advisory committee has proposed several key reforms:
- ❖ **Strict Legal and Administrative Measures Against Proxy Leadership**
 - » Enforcing penalties for proven cases of proxy governance.
 - » Strengthening monitoring mechanisms to prevent male relatives from unlawfully exercising authority.
- ❖ **Continuous Capacity-Building and Training**
 - » Quarterly governance training programs for at least two years after elections.
 - » Introduction of AI tools and digital literacy modules to modernize local governance.
- ❖ **Minimum Education Qualification for Elected Representatives**
 - » Mandating a minimum of 12th-grade education to ensure independent

decision-making by women leaders.

❖ **Financial and Technological Empowerment**

- » Increasing honorarium for sarpanches (e.g., Rajasthan currently pays only ₹4,500 per month).
- » Providing smartphones and official transport facilities for independent governance activities.

❖ **Institutional Support and Whistleblowing Mechanisms**

- » Inclusion of government officials in women sarpanches' WhatsApp groups for real-time guidance.
- » Establishing robust whistleblowing mechanisms to report proxy leadership while preventing political misuse.

❖ **Encouraging Family and Community Support**

- » Sensitizing local officials and communities to support independent decision-making by women leaders.
- » Ensuring that male relatives are excluded from official panchayat meetings so that women can exercise their authority.

Conclusion:

The Sashakt Panchayat-Netri Abhiyan, community radio awareness campaigns, and digital governance initiatives are crucial steps in dismantling the Sarpanch Pati system and ensuring true female leadership in Panchayati Raj Institutions. However, their success depends on long-term policy commitment, continuous capacity-building and strong institutional safeguards. By addressing the structural barriers, societal biases, and institutional gaps that hinder women's leadership, India can move toward a more inclusive, participatory, and gender-equal democracy. When women leaders are given the right support and independence, governance improves, and issues concerning women, children, and marginalized communities receive the attention they deserve. The fight against proxy leadership is not just about ensuring women hold power in name—it is about creating a governance system where women lead with authority, confidence, and effectiveness.

UNESCO World Heritage Sites: Significance, Selection and India's Contribution

Heritage is an integral part of human civilization, representing the cultural, historical, and natural legacy that shapes societies. Recognizing the need to protect these invaluable assets, UNESCO, through its World Heritage Program, identifies and preserves sites of outstanding universal value that hold significance beyond national borders.

In 2025, six new properties from India were added to UNESCO's Tentative List of World Heritage Sites, further strengthening the country's presence on the global heritage map. These sites include the Mudumal Menhirs of Telangana, Kanger Valley National Park in Chhattisgarh, Ashokan Edict Sites across multiple states, Chausath Yogini Temples in Madhya Pradesh and Odisha, Gupta Temples in multiple locations, and the Palace-Fortresses

of the Bundelas in Madhya Pradesh and Uttar Pradesh. Their inclusion highlights India's ongoing efforts to safeguard its rich and diverse heritage while also emphasizing the importance of UNESCO's role in global conservation.

About UNESCO World Heritage Site:

- ❖ A World Heritage Site is a place of outstanding universal value, meaning that its cultural, historical, or natural significance extends beyond national borders and is important to all of humanity. UNESCO identifies and protects these sites under the 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage, ensuring that they are preserved for future generations.
- ❖ **Heritage sites are classified into three categories:**
 - » **Cultural Heritage:** Monuments,

archaeological sites, and landscapes that showcase human civilization (e.g., Taj Mahal, Stonehenge, Machu Picchu).

- » **Natural Heritage:** Areas of exceptional natural beauty, geological significance, or ecological importance (e.g., Sundarbans National Park, Grand Canyon, Victoria Falls).
- » **Mixed Heritage:** Sites that hold both cultural and natural significance (e.g., Machu Picchu, Khangchendzonga National Park).
- ❖ As of 2024, the UNESCO World Heritage List includes 1,223 sites across 168 countries, consisting of:
 - » 952 cultural sites.
 - » 231 natural sites.
 - » 40 mixed sites.
- ❖ These numbers continue to grow as more locations meet UNESCO's strict criteria for selection.



Criteria for Sites Selection:

- ❖ The World Heritage Committee, consisting of 21 member states elected from the 196

countries that have ratified the convention, meets annually to review nominations and assess the condition of existing sites. To be recognized as a World Heritage Site, a location must demonstrate outstanding universal value and meet at least one of ten selection criteria. These criteria, which were initially categorized separately into six cultural and four natural aspects, were merged into a single set in 2004 to provide a more unified evaluation process

❖ For cultural criteria, a site may qualify if it:

- » Showcases a masterpiece of human creative genius (e.g., Ajanta Caves).
- » Reflects an interchange of human values in architecture, art, or urban planning (e.g., Jaipur City).
- » Bears unique testimony to a cultural tradition or civilization, whether living or extinct (e.g., Mohenjo-Daro).
- » Represents a significant architectural or technological achievement that illustrates key stages in human history (e.g., Fatehpur Sikri).
- » Is an exceptional example of traditional human settlement or land use, particularly in response to environmental challenges (e.g., Chola Temples).
- » Is directly associated with historical events, traditions, artistic movements, or literary works of outstanding significance (e.g., Ellora Caves).

❖ For natural criteria, a site may qualify if it:

- » Possesses extraordinary natural beauty and aesthetic significance (e.g., Western Ghats).
- » Illustrates major stages of Earth's geological history, including landform evolution (e.g., Grand Canyon).
- » Represents important ecological and biological processes shaping land and marine ecosystems (e.g., Amazon Rainforest).
- » Contains critical habitats for biodiversity, including endangered species of outstanding universal value

(e.g., Kaziranga National Park).

India's Contribution to the World Heritage List:

- ❖ India has been an active participant in global heritage conservation since it ratified the World Heritage Convention in 1977. Over the years, the country has earned a significant place on the World Heritage List, with 43 recognized sites that reflect its diverse cultural and natural legacy. These include 35 cultural sites, 7 natural sites, and 1 mixed site, each showcasing India's rich history, architectural marvels, and ecological wonders.
- ❖ In addition to these recognized sites, 62 locations are currently on UNESCO's Tentative List, awaiting full recognition. Some of India's most iconic UNESCO World Heritage Sites include:
 - » **Cultural Sites:** The Taj Mahal, the historic city of Jaipur, the Red Fort, the Khajuraho Temples, and Rani-ki-Vav, each reflecting the country's rich artistic and architectural heritage.
 - » **Natural Sites:** The Sundarbans National Park, home to the Royal Bengal Tiger; Kaziranga National Park, known for its one-horned rhinoceroses; and Nanda Devi & Valley of Flowers, famous for their stunning landscapes and biodiversity.
 - » **Mixed Site:** Khangchendzonga National Park, recognized for its cultural significance and breathtaking natural beauty, making it one of the few sites globally to be classified as both cultural and natural heritage.

Significance of UNESCO World Heritage Status:

- ❖ **Enhanced Protection and Conservation:** A UNESCO designation increases awareness and funding for heritage protection. Governments and local communities become more invested in preserving their sites, leading to stricter conservation policies.
- ❖ **Financial Assistance and Expert Guidance:** The World Heritage Fund provides financial aid

and technical expertise to help countries maintain and restore their heritage sites. Nations facing urgent conservation challenges can apply for emergency assistance.

- ❖ **Increased Tourism and Economic Growth:** World Heritage status significantly boosts global tourism, leading to economic benefits for local communities. Increased tourist activity creates employment opportunities, infrastructure development, and greater international recognition.
- ❖ **International Prestige and Diplomatic Influence:** A UNESCO listing enhances a country's cultural and environmental reputation on the global stage. It also strengthens international partnerships for heritage conservation and environmental sustainability.

Challenges and Responsibilities in Heritage Conservation

- ❖ While the benefits of being a World Heritage Site are substantial, they also come with responsibilities and challenges. Governments must ensure that heritage sites are well-maintained and protected from threats such as:
 - » Urbanization and infrastructure expansion
 - » Climate change and environmental degradation
 - » Unregulated tourism and overcrowding
 - » Neglect, pollution, and lack of conservation efforts
- ❖ UNESCO regularly monitors and audits sites to ensure they are properly maintained. If a site faces serious threats, it may be placed on the List of World Heritage in Danger. In extreme cases, if a site's Outstanding Universal Value is lost, UNESCO has the authority to delist it entirely.

Maternal Mortality in India: Progress, Challenges, and Policy Interventions

Introduction

Maternal mortality remains a pressing public health concern in India, reflecting the overall efficiency and accessibility of maternal healthcare services. It serves as a key indicator of the country's healthcare quality and highlights gaps in reproductive health infrastructure. A maternal death is defined as the death of a woman during pregnancy or within 42 days of the termination of pregnancy, from causes linked to pregnancy or its management, excluding accidental or incidental factors. Addressing maternal mortality is essential not only for the well-being of women and newborns but also for achieving long-term global health goals.

Understanding Maternal Mortality and MMR Trends in India

- ❖ The Maternal Mortality Ratio (MMR) is a crucial parameter used to measure maternal deaths per 100,000 live births during a specific period. India has shown remarkable progress in reducing maternal mortality over the years, with MMR declining from 130 in 2014-16 to 97 in 2018-20. This improvement has been largely driven by government interventions, better healthcare access, and increased institutional deliveries.
- ❖ India was recognized by the World Health Organization (WHO) in 2015 for eliminating maternal and neonatal tetanus, a significant milestone in maternal and child healthcare. However, despite an overall downward trend, disparities persist across states. While states such as Kerala, Maharashtra, Telangana, Andhra Pradesh, Tamil Nadu, Jharkhand, Gujarat, and Karnataka have already met the Sustainable Development Goal (SDG) target of reducing MMR below 70 per 100,000 live births, several other states still face challenges in achieving this benchmark.

Maternal Health Trends Based on NFHS-5 (2019-21)

- ❖ The National Family Health Survey-5 (NFHS-5) provides a comprehensive overview of maternal healthcare advancements in India:
 - » Antenatal Care (ANC) in the first trimester increased from 59% in NFHS-4 (2015-16) to 70% in NFHS-5 (2019-21), ensuring early maternal health monitoring.
 - » The proportion of pregnant women receiving four or more ANC visits grew from 51% to 59%, indicating improved access to essential maternal health services.
 - » Institutional deliveries witnessed a significant rise from 79% to 89% at the national level, with states like Kerala, Goa, Lakshadweep, Puducherry, and Tamil Nadu achieving 100% institutional births.
 - » In rural India, 87% of deliveries now take place in healthcare facilities, while in urban areas, this figure stands at 94%, showing increased reliance on medical support.
 - » A large proportion of maternal deaths occur in the 20-29 years age group, emphasizing the need for stronger maternal healthcare policies targeted toward young mothers.

Policy Interventions to Reduce Maternal Mortality:

- ❖ India is actively working toward the Sustainable Development Goal (SDG) target of reducing MMR below 70 per 100,000 live births by 2030. The country has already met the National Health Policy (NHP) 2017 goal of reducing MMR below 100 by 2020. Several flagship programs and initiatives have been implemented to achieve these

objectives.

National Health Mission (NHM) and RMNCAH+N Strategy:

- ❖ The National Health Mission (NHM) plays a pivotal role in maternal healthcare, particularly through the Reproductive, Maternal, Newborn, Child, and Adolescent Health and Nutrition (RMNCAH+N) strategy. This framework is designed to provide holistic maternal and child health services across states.

Key Government Schemes for Maternal Healthcare:

- ❖ **Janani Suraksha Yojana (JSY) (2005)**
 - » Encourages institutional deliveries among socio-economically disadvantaged women.
 - » Focuses on reducing maternal and neonatal mortality by offering financial incentives for safe childbirth.
- ❖ **Pradhan Mantri Matru Vandana Yojana (PMMVY) (2017, Revised as PMMVY 2.0 in 2022)**
 - » Provides financial assistance of ₹5000 for the first live birth.
 - » PMMVY 2.0 encourages gender equity by offering additional incentives if the second child is a girl.
- ❖ **Janani Shishu Suraksha Karyakaram (JSSK) (2011)**
 - » Ensures free medical services for pregnant women and sick newborns.
 - » Covers transport, medicines, diagnostics, and blood transfusions at no cost.
- ❖ **Surakshit Matritva Aashwasan (SUMAN) (2019)**
 - » Guarantees quality maternal and newborn healthcare with zero denial of services.
 - » Aims to eliminate preventable maternal and newborn deaths.
- ❖ **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) (2016)**
 - » Provides free Antenatal Care (ANC) services on the 9th of every month.

- » Extended PMSMA (e-PMSMA) focuses on high-risk pregnancies, offering incentives for expectant mothers and ASHA workers.

❖ **LaQshya (2017)**

- » Enhances the quality of maternity care in labour rooms and operation theatres.
- » Focuses on ensuring dignified and safe childbirth experiences.

Key Steps by Strengthen Maternal Healthcare Infrastructure:

- ❖ **Expanding Medical Training and Human Resources**
 - » Training doctors in Anesthesia and Obstetric Care to bridge the shortage of specialists.
- ❖ **Improving Hospital Infrastructure**
 - » Upgrading First Referral Units (FRUs) with better staff, blood storage, and emergency care services.
 - » Developing Maternal and Child Health (MCH) Wings in high-burden districts.
 - » Setting up Obstetric ICUs and High-Dependency Units (HDU) to handle complicated pregnancies.
- ❖ **Awareness and Outreach Programs**
 - » Maternal Death Surveillance Review (MDSR) helps identify gaps in healthcare delivery.
 - » Village Health, Sanitation, and Nutrition Days (VHSND) provide community-level maternal health services.
 - » Anaemia Mukta Bharat (AMB) under POSHAN Abhiyan tackles nutritional deficiencies in pregnant women.

Lessons from State-Level Innovations:

- ❖ Several states have implemented unique healthcare models that have significantly contributed to reducing maternal mortality:
 - » **Madhya Pradesh's 'Dastak Abhiyan':** A community-based approach for early detection of maternal health risks.
 - » **Tamil Nadu's Emergency Obstetric Care Model:** A referral-based healthcare network that ensures timely intervention

for maternal complications.

Conclusion:

India has made substantial progress in reducing maternal mortality, successfully achieving the NHP target of an MMR below 100 by 2020. However, achieving the SDG target of MMR below 70 by 2030 remains a challenge

that requires continued policy focus, enhanced healthcare infrastructure, and improved access to maternal health services. By strengthening existing initiatives and adopting innovative approaches, India can further reduce maternal mortality and ensure safer pregnancies and childbirth for all women.

Short Issues

Southern states have the highest share of women borrowers

Context:

According to the report "From Borrowers to Builders: The Role of Women in India's Financial Growth Story" released recently by NITI Aayog. Tamil Nadu has the highest share of women borrowers in the country at 44%. The Report has been published by TransUnion CIBIL, NITI Aayog's Women Entrepreneurship Platform (WEP) and Microsave Consulting (MSC).

Southern states have higher share of women borrowers:

- Southern states have higher share of women borrowers. As of December 2024, 44% of women in Tamil Nadu had active loans, while the figure was 41% in Andhra Pradesh, 35% in Telangana and 34% in Karnataka. The national average is 31%.
- The number of women active borrowers in Tamil Nadu has grown at a 10% compound annual growth rate (CAGR) over the last five years.

Situation in other states:

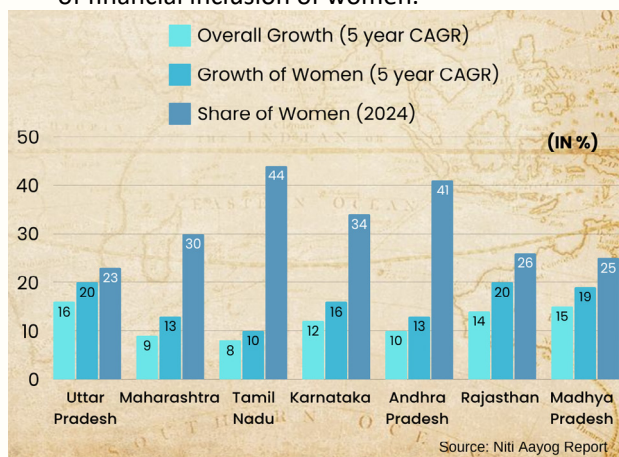
- Compared to other states, Maharashtra recorded a share of women in loans at 30%, Rajasthan at 26%, Madhya Pradesh at 25% and Uttar Pradesh at 23%.
- Although the number of active women borrowers in Rajasthan, Uttar Pradesh and Madhya Pradesh has grown rapidly in the last five years, the share of these states still remains low at the national level.

Increase in women's credit monitoring:

- As of December 2024, 2.7 crore women monitored their credit score and report with CIBIL, an increase of 42% over the previous year. Maharashtra, Tamil Nadu, Karnataka, Uttar Pradesh and Telangana contributed 49% of total female self-monitoring in 2024, with Tamil Nadu alone accounting for 11%.
- The number of self-monitoring women was highest in the southern region, which reached 1.016 crores with a 46% increase from December 2023 to December 2024.

NITI Aayog's initiative to promote financial inclusion:

- The CEO of NITI Aayog said that financial institutions need to create inclusive financial products according to the needs of women.
- For this, the Financing Women Collaborative (FWC) initiative is being run, so that more and more financial institutions can be added to this mission of financial inclusion of women.



Why is credit score monitoring important for

women?

- **Better financial independence:** Women are becoming able to take their own financial decisions.
- **Ease of getting loans:** Having a good credit score can easily get them a personal loan, business loan or home loan.
- **Financial stability:** With increased financial understanding, women can save and invest better.
- **Promoting women entrepreneurship:** The loan process can become simpler for women who take up entrepreneurship.

Conclusion:

The Government of India and the Reserve Bank of India (RBI) have directed banks to provide more credit to women and ensure that their share in bank credit is 5% or more. According to the State Level Bankers Committee, Tamil Nadu, 21.12% of total bank advances in Tamil Nadu have been provided to women. This report is a positive sign for women playing a vital role in financial inclusion and increasing credit flow.

ILO Report on Gender Parity

Context:

A recent report from the International Labour Organization (ILO), Women and the Economy: 30 Years after the Beijing Declaration, reveals that gender parity in global employment will take over 190 years at the current pace. Released to coincide with International Women's Day 2025, the report highlights persistent gender gaps in employment, wages, and working conditions.

Key findings of the report:

- **Current Gender Parity Status:**
 - » As of 2023, women hold just 30% of managerial positions globally. While this shows a modest improvement over the past two decades, significant disparities remain. In 2024, 46.4% of working-age women were employed, compared to 69.5% of men.
 - » The gender employment gap has narrowed by only 4 percentage points over the past 30 years, with progress concentrated in high- and lower-middle-income countries.
 - » The ILO cautions that at this pace, it will take more than 190 years to achieve gender parity globally.

- **Women in Low-Paid Sectors:**

- » Women remain overrepresented in low-paid sectors such as nursing, childcare, and education, while men dominate fields like transport and mechanics. This pattern results in women earning less and holding fewer high-status jobs. Additionally, women are more likely to be employed informally, especially in low- and lower-middle-income countries, leaving them vulnerable to job insecurity and lack of social protection.

- **Gender Pay Gap and Unpaid Care Work:**

- » Despite some progress in reducing the gender wage gap, employed women still earn significantly less than men globally.
- » Women work, on average, 6 hours and 25 minutes fewer per week than men in paid employment.
- » However, they spend 3.2 times more hours on unpaid care work, such as childcare and household chores, which prevents 708 million women from entering the labor force.

- **Barriers to Equality:**

- » Sexual violence and harassment in the workplace continue to affect women disproportionately. Women are 1.6 times more likely than men to experience such violence, with young and migrant women at even greater risk.
- » Unequal care responsibilities also remain a major obstacle, limiting women's opportunities to participate fully in the workforce.

Suggestion by ILO:

- The ILO calls for urgent reforms to address these disparities, including tackling the unequal distribution of care work, closing the wage gap, and eliminating workplace harassment. Addressing these issues is essential for achieving gender equality and ensuring women's full participation in the global economy.

Conclusion:

The ILO report highlights the slow pace of gender parity progress in employment. While some positive changes have been made, such as increased female representation in management, the journey toward global equality remains long and challenging. Urgent action is required to accelerate this progress.

Demand for Scheduled Tribe Status

Context:

The Koch-Rajbongshi community recently raised its demand for Scheduled Tribe (ST) status following the recent visit of Home Minister Amit Shah to Assam. This demand, which has been a longstanding issue, is now at the forefront as the community seeks recognition and the benefits that come with it, including greater reservations in education, employment, and political representation. Currently, Koch-Rajbongshi community in Assam is considered as a OBC community.

About Key Demands of the community:

- The Koch-Rajbongshi Sanmilita Joutha Mancha, a collective of 12 community organizations, has submitted a 15-point memorandum highlighting their key demands.
- Among the most pressing are the granting of Scheduled Tribe (ST) status, the re-establishment of the historic Kamatapur State, and the creation of a Chilarai Regiment in the armed forces to honor their legendary warrior.
- These demands underscore the community's aspiration for social upliftment, as well as recognition of their rich historical and cultural heritage.

Issues with demand:

- However, the push for ST status has not been without controversy. Several existing ST communities in Assam, such as the Bodos, Karbis, and Mishing, have opposed the proposal.
- Their primary concern is that granting ST status to communities like the Koch-Rajbongshis, who are seen as more economically and educationally advanced, could diminish the opportunities available to the current ST groups.
- They argue that the increased competition for reserved seats in education and government jobs would disadvantage the existing tribal communities.

About Koch-Rajbongshis community:

- The Koch-Rajbongshis, also known as Rajbanshi or Rajvanshi, are an ancient indigenous tribe originating from the Koch kingdom, an old kingdom in South Asia. They are recognized as a distinct ethnic group with a rich cultural and historical

heritage.

- The Koch-Rajbongshi tribe is spread across several regions in South Asia. They are primarily found in lower Nepal, Northern Bengal, North Bihar, Northern Bangladesh, Assam, parts of Meghalaya, and Bhutan. These regions were once part of the Kamata kingdom, which was ruled by the Koches for many centuries.
- Depending on the region, the Koch-Rajbongshi community is classified differently:
 - » OBC (Other Backward Class) in Assam
 - » SC (Scheduled Caste) in Bengal
 - » ST (Scheduled Tribe) in Meghalaya

Conclusion:

The demand for ST status by the Koch-Rajbongshi community and other ethnic groups in Assam is a sensitive and contentious issue. While the community seeks greater rights and recognition, existing ST groups in the state raise concerns about their rights being undermined. Government should make arrangement of all community meeting and with coordination and consensus with all communalities in Assam, the matter should be resolved.

PM-YUVA 3.0

Context:

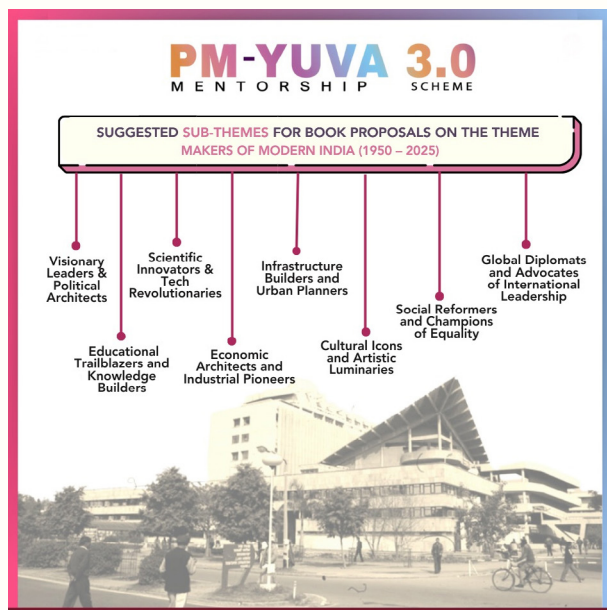
Recently, the Ministry of Education, Department of Higher Education, has launched PM-YUVA 3.0, a transformative initiative designed to support young authors under the age of 30. This program aims to foster a culture of reading and writing while promoting India's rich cultural heritage and contemporary advancements on a global stage.

Key Objectives of PM-YUVA 3.0

The PM-YUVA 3.0 initiative is driven by several core objectives:

- **Empowering Young Authors:** The program aims to provide young, aspiring authors with the training and resources needed to write about India from diverse perspectives, capturing its past, present, and future.
- **Global Representation of Indian Literature:** By cultivating a pool of skilled writers, the program seeks to project India and its literary works globally, introducing international audiences to India's unique narratives.

- **Platform for Expression:** The initiative offers a platform for young people to articulate their voices and present a well-rounded outlook on India's contributions across various sectors like culture, science, politics, and history.



Thematic Pillars of PM-YUVA 3.0:

- The program will focus on three major thematic pillars that reflect the essence of India's heritage and future aspirations:
 - » **Contribution of the Indian Diaspora in Nation Building:** This theme explores the significant role the Indian diaspora has played in shaping India's development, both within the country and abroad.
 - » **Indian Knowledge System:** This pillar encourages young writers to delve into India's vast repository of ancient knowledge across disciplines like mathematics, philosophy, arts, and culture, highlighting the nation's intellectual contributions to the world.
 - » **Makers of Modern India (1950-2025):** This theme focuses on the visionary leaders and change-makers that have shaped India's journey from independence to becoming a global player in the 21st century.

Features of the scheme:

- To help authors realize their potential, PM-YUVA 3.0 offers valuable mentorship and financial support:

- » **Mentorship:** Selected authors will have the opportunity to engage with renowned writers and literary experts, gaining insights and guidance to refine their craft.
- » **Scholarship:** A total of 50 authors will be selected to receive a monthly scholarship of Rs. 50,000 for six months, supporting them while they work on their manuscripts.
- » **Royalties:** Authors will receive a 10% royalty on the successful publication of their books, ensuring that their hard work is financially rewarded.
- » **Eligibility:** Applicants who have previously participated in PM-YUVA Scheme 1.0 or 2.0 are not eligible for this edition.

Conclusion:

PM-YUVA 3.0 is more than just a literary initiative; it is a platform that nurtures the next generation of Indian authors, empowering them to express their perspectives on India's past, present, and future. By offering scholarships, mentorship, and a chance to engage with established writers, this program ensures that India's literary landscape remains vibrant and inclusive.

UNESCO's new report on Mother Tongue

Context:

The 25th anniversary of International Mother Language Day was recently celebrated at UNESCO Headquarters in Paris. In honor of this important anniversary, UNESCO released a new report titled "Languages matter: Global guidance on multilingual education," which underscores the critical need to integrate multilingualism into global education systems.

Key findings of the report:

- The findings of the report are both enlightening and alarming. According to UNESCO, 40% of people worldwide do not have access to education in the language they speak and understand fluently.
- This gap is even more pronounced in low- and middle-income countries, where up to 90% of individuals lack this access, impacting over a quarter of a billion learners globally. The report brings attention to the language barrier many children and young people face when trying to

receive an education, which can greatly hinder their academic success and overall development.

- As global migration continues to rise, linguistic diversity is becoming an increasingly common reality. Classrooms across the world are now home to learners from a wide variety of language backgrounds, making it imperative that education systems adapt to accommodate these linguistic differences. Furthermore, over 31 million displaced youth are facing significant language barriers in their educational journey, further exacerbating the issue.

Recommendations for Multilingual Education:

- The report provides practical recommendations for countries to overcome these challenges and develop educational systems that are truly inclusive. Key recommendations include:
 - » **Context-specific language policies:** Nations should develop educational language policies tailored to their unique linguistic contexts, ensuring that language transition processes are supported by curriculum adjustments and appropriate teaching materials.
 - » **Teacher training:** Training should equip teachers with the skills necessary to support multilingual classrooms, ensuring proficiency in both the home language and a second language. Teacher deployment should match the teacher's language fluency with the language of instruction, especially in diverse linguistic settings.
 - » **Support systems beyond schools:** It is essential to create strong support systems outside the classroom to ensure the success of multilingual education policies. This includes fostering collaboration between school leaders, parents, and communities to build bridges between different linguistic groups.
 - » **Focus on school leadership:** The recruitment and training of school leaders should emphasize inclusive leadership, ensuring that educators and school administrators can effectively support multilingual students and foster inclusive environments that cater to diverse linguistic needs.

Way forward:

With the release of the "Languages matter" report, UNESCO has provided a roadmap for nations to follow in

their efforts to create inclusive and equitable education systems. As we celebrate the 25th anniversary of International Mother Language Day, we are reminded that linguistic diversity is a strength, and by promoting and protecting mother languages, we are investing in a more inclusive, understanding, and culturally rich world for future generations.

The Dramatic Performances Act, 1876

Context:

Prime Minister Narendra Modi's recent remarks on the continued existence of colonial-era laws, including the Dramatic Performances Act, 1876, have sparked discussions on their relevance in contemporary India.

Background and Purpose of the Act:

- The Dramatic Performances Act, 1876, was introduced by the British colonial government to control public expression, particularly performances that could potentially encourage anti-colonial sentiments.
- The law allowed the government to ban any play, pantomime, or drama performed in a public place if deemed scandalous, defamatory, or likely to incite disaffection towards the government.
- It was enacted after the visit of Prince Albert Edward, the Prince of Wales, to India in 1875-76, a time when the British feared growing nationalist movements. The Act was among several others, including the Vernacular Press Act (1878) and the Sedition Law (1870), aimed at curbing free expression.

Key Provisions of the act:

- Under the Dramatic Performances Act, the government had the power to prohibit any performance that was considered "scandalous", "defamatory", or "likely to excite feelings of disaffection" toward the British government.
- The law provided the government with wide discretion, with no requirement for concrete evidence or public consultation. Violators faced imprisonment, fines, or both.
- The Act was part of a larger British strategy to control public discourse and suppress the rise of nationalist fervor in India, curbing the ability of the people to express dissent through cultural and

artistic performances.

Legal Challenges and Repeal:

- Although the Dramatic Performances Act was technically in force after India's independence, it was not a valid law since 1956 due to a judicial ruling by the Allahabad High Court.
- The court declared the law unconstitutional, citing that it violated the fundamental right to free speech and expression guaranteed by the Indian Constitution.
- Despite this, the law remained formally in the books until the government repealed it in 2018 as part of a broader initiative to remove obsolete and outdated laws.

Why colonial law exist in India till date?

- The continued existence of colonial-era laws in India can be traced back to Article 372 of the Indian Constitution, which allowed laws in force at the time of Independence to remain operative unless explicitly repealed or amended.
- However, colonial laws like the Dramatic Performances Act did not enjoy the presumption of constitutionality, meaning the government had to justify their validity when challenged in court.
- Over time, many of these laws were either repealed or found to be unconstitutional, reflecting India's ongoing legal reforms. In contrast, laws passed by independent India's Parliament are presumed constitutional unless challenged.

Conclusion:

The legacy of colonial-era laws, their gradual repeal, and ongoing legal reforms reflect the challenges India faces in moving away from its colonial past while striving for a more just and progressive legal framework.

Jahan-e-Khusrau

Context:

Prime Minister Shri Narendra Modi recently attended the Jahan-e-Khusrau Sufi music festival, an international event celebrating Sufi music, poetry, and dance. The festival honors Amir Khusrau (1253–1325 CE), a towering figure in Hindustani music and poetry, whose influence continues to shape the cultural and musical landscape of South Asia.

About Amir Khusrau:

- Known as Tuti-i-Hind (the Parrot of India), Amir

Khusrau was a poet, musician, and scholar who played a pivotal role in shaping the Indo-Persian cultural tradition. A court poet under multiple Delhi Sultans, he was also a devoted disciple of Hazrat Nizamuddin Auliya. His contributions in literature, music, and linguistics transcended religious and linguistic boundaries, making him a symbol of cultural syncretism.

Literary Contributions-

- **Amir Khusrau's Literary Contributions:** Amir Khusrau's poetry seamlessly blended Persian traditions with Indian themes, earning international recognition, including praise from Persian poet Sa'di.
- **Early Works and Recognition:** His second collection, *Wast-ul-Hayat*, brought him widespread fame, while *Ghurrat-ul-Kamal* (1293 CE) explored poetic principles, distinguishing a poet, mystic, and moralist.
- **Rise as a Court Poet:** At 36, Khusrau wrote *Qiran-us-Sa'dain*, a mathnavi (narrative poem) in just six months, securing his title as poet-laureate under Sultan Kaiqubad. Also known as *Mathnavi dar Sifat-i-Delhi*, it paints Delhi as his Garden of Eden with rich imagery.
- **Flourishing Under the Khiljis:** During the Khilji reign, his *Nuh Sipahr* (1318 CE) celebrated India's landscapes, languages, and culture. Influenced by Sufi thought, he promoted religious harmony, notably in *Hasht-Bihisht*, where a Muslim Haji and a Brahmin pilgrim discuss faith.
- **Later Works and Final Days:** His *Majnun-o-Leyla* retold the legendary romance in Persian. After Nizamuddin Auliya's death, Khusrau mourned intensely, blackening his face and tearing his clothes. He passed away in 1325 CE and was buried near his master. Their tombs remain a revered pilgrimage site.

Contributions to Hindustani Music:

- Khusrau is credited with revolutionizing Indian classical music. His contributions include:
 - » The invention of the sitar and several other instruments.
 - » The development of musical forms such as tarana, qawwali, and khayal.
 - » The synthesis of Persian and Indian melodic structures, which deeply influenced Hindustani classical music.

- **Qawwali:** Among his most enduring contributions is qawwali, a form of Sufi devotional music associated with sama (spiritual listening). His compositions, such as “Chhap tilak sab chheen” and “Man kunto maula”, remain central to the qawwali tradition. Generations of hereditary qawwals, particularly from the Qawwal Bache Gharana, have preserved his works, ensuring their continued relevance.
- **Khayal and Its Evolution:** Khayal, a dominant genre in Hindustani classical music, evolved from earlier styles like dhrupad and qawwali. The Delhi Gharana, tracing its lineage to Khusrau, played a vital role in refining this form. Later musicians, such as Niamat Khan (Sadarang) and Bade Mohammad Khan, further developed khayal, solidifying its place in classical music traditions.
- **Interest-Free Loans for Women Farmers:** Women engaged in agricultural activities such as dairy farming, horticulture, animal husbandry, and fisheries will benefit from interest-free loans up to Rs 1 lakh. This initiative aims to bolster women's participation in agriculture, a sector pivotal to Haryana's economy.
- **Eligibility Criteria:** Although the full eligibility framework is still under development, the scheme is expected to target women above the age of 18, ensuring the benefits reach a wide demographic. The government is also ensuring that the criteria are carefully structured to assist those in need.
- **Implementation Mechanism:** To ensure smooth and efficient delivery of funds, the Direct Benefit Transfer (DBT) system will be used for disbursing the financial aid directly to the beneficiaries.

Conclusion:

Amir Khusrau's impact transcends time, religion, and geography. His contributions to qawwali, khayal, and Hindustani music highlight the deep interconnection between devotional and classical traditions. His artistic genius lies in his ability to merge diverse cultural influences into a lasting heritage. Today, his work remains a cornerstone of Sufi and Hindustani classical music, continuing to inspire musicians, poets, and scholars across the world.

Lado Lakshmi Yojana

Context:

Recently, Haryana government has announced the launch of the Lado Lakshmi Yojana in the 2025-26 state budget. With an allocation of Rs 5,000 crore, this initiative is designed to provide monthly financial assistance to eligible women across the state, promoting their social security and economic well-being.

Key Features of the Scheme

The Lado Lakshmi Yojana brings several features that focus on financial empowerment and promoting gender equality:

- **Monthly Financial Assistance:** The scheme promises a monthly financial aid of Rs 2,100 to eligible women. This direct support aims to alleviate economic burdens and enhance women's financial independence.

Objectives and Benefits:

- The Lado Lakshmi Yojana is a major step in aligning Haryana's policies with its goal of fostering a supportive environment for women's growth. Key objectives and anticipated benefits of the scheme include:
 - » **Financial Empowerment:** By offering a regular source of income, the scheme seeks to empower women to take control of their financial destinies, enhancing their economic participation.
 - » **Enhancing Financial Autonomy:** Providing women with Rs 2,100 monthly assistance is aimed at improving their overall financial stability and reducing dependency.
 - » **Supporting Agricultural Participation:** The scheme encourages women to take a more active role in agriculture and allied sectors, thus ensuring their financial independence while contributing to the state's agrarian economy.
 - » **Economic Independence and Well-being:** This initiative will contribute not only to women's financial independence but also to their overall well-being, as it promotes social security and supports women in various sectors, including agriculture and animal husbandry.

Conclusion:

The Lado Lakshmi Yojana reflects Haryana's

commitment to women's welfare and empowerment, making strides towards ensuring that women have the financial autonomy and security they need to thrive. With its blend of financial assistance and agricultural support, the scheme is poised to make a lasting impact on women's lives in Haryana, contributing to both their personal well-being and the state's economy.

Sub-Classification of Scheduled Castes

Context:

Recently, the Andhra Pradesh Legislative Assembly has approved the sub-classification of Scheduled Castes (SCs), a move aimed at ensuring a more equitable distribution of benefits among the various sub-groups within the SC community.

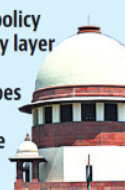
Key Points of the Sub-Classification:

- The new sub-categorisation will be implemented with a focus on fair distribution based on data from the 2011 Census. The state government has devised a system that categorizes SCs into three distinct groups, each with different levels of reservation to address the varying socio-economic conditions within the community.
 - » **Group 1: Most Backward Sub-Castes:** This group includes the Relli sub-group, which comprises 12 castes making up approximately 2.25% of the total SC population in Andhra Pradesh. They will be allocated 1% reservation in government jobs.
 - » **Group 2: Backward Sub-Castes:** The Madiga sub-group includes 18 castes, representing 41.56% of the SC population. This group will receive 6.5% reservation.
 - » **Group 3: Comparatively Less Backward Sub-Castes:** The Mala sub-group, consisting of 29 castes, makes up the largest portion, about 53.97% of the total SC population. They will be granted 7.5% reservation.
- The new sub-classification aims to ensure a fair and just distribution of government benefits across the SC sub-groups. The system will take effect in 2026 and be applied at the district level.

EXCLUSION FROM QUOTA

- Justice BR Gavai, in a judgment supported by CJI DY Chandrachud and 4 other judges, called for excluding creamy layer from SC/ST quota.
- Creamy layer currently only applies to OBCs. The concurring judgment called upon govt to extend the concept to SC/STs.

The State must evolve a policy for identifying the creamy layer even from the Scheduled Castes and Scheduled Tribes so as to exclude them from the benefit of affirmative action."



LIMITING BENEFITS

Justice Pankaj Mithal held in his judgment that reservation benefits should be extended to only one generation in a category.

"Reservation should be meant for only the first generation among a category and if the second generation has come up then benefits of reservation shall not be given."

Background and Legal Journey:

- The demand for sub-categorisation of SCs has been a long-standing issue in Andhra Pradesh. Activist Manda Krishna Madiga has been at the forefront of the 'Madiga Dandora' movement, advocating for the sub-categorisation for years.
- The idea was first recommended by the Justice Ramachandra Rao Commission in 1996, which recommended the division of SCs into different categories to ensure that the benefits reached the most deserving sub-castes.
- The Andhra Pradesh government first implemented this sub-categorisation recommendation in 1997, but the move faced legal challenges. In 2004, the Supreme Court of India ruled that only Parliament had the authority to decide on such classifications.
- Despite the legal hurdles, the Supreme Court finally upheld the sub-categorisation of SCs in August 2023, clearing the way for the state's implementation of this policy.

Arguments for sub-classification:

- Sub-classification of SCs ensures equitable distribution of reservations, prioritizing the most marginalized and improving governance. However, critics argue it may weaken unity, dilute historical justice, and face data limitations. While legally viable under Articles 341 and 246, concerns persist about caste discrimination, political misuse, and lack of credible census data.

Conclusion:

The sub-classification of Scheduled Castes in Andhra Pradesh marks a significant step towards achieving greater social equity and justice for the SC community.

By addressing the disparities within the SC sub-groups, this initiative aims to ensure that benefits and opportunities are equitably distributed, giving a voice to historically marginalized communities. The implementation of this decision in 2026 will be a critical moment for the state, as it works toward more inclusive governance and social justice.

World Happiness Report 2025

Context:

The World Happiness Report 2025 was recently released by the Wellbeing Research Centre, University of Oxford, in collaboration with Gallup, the UN Sustainable Development Solutions Network, and an independent editorial board. In this report, India was ranked 118 out of 147 countries, reflecting various factors that influence happiness and well-being.

Key findings of the report globally:

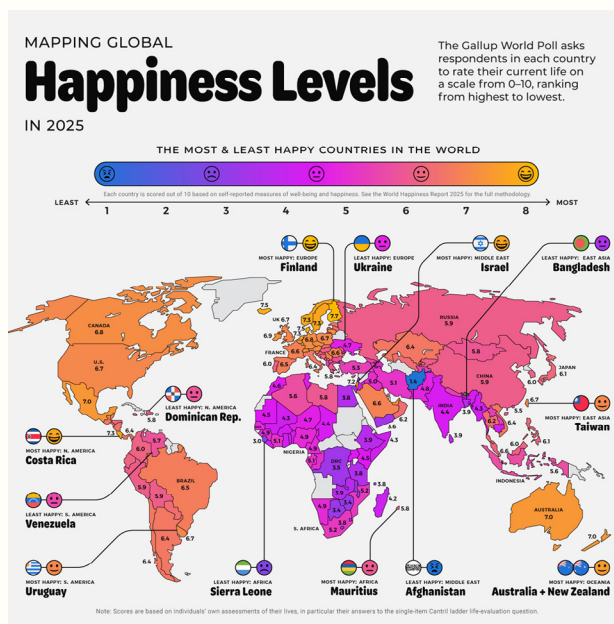
- For the seventh consecutive year, Finland has been named the happiest country in the world, followed by Denmark and Iceland. On the other hand, Afghanistan ranked the lowest, mainly due to hardships faced by its people, especially women. Sierra Leone and Lebanon were also among the least happy nations.
- The United States dropped to 24th place, its lowest ranking ever, mainly because of increasing loneliness and declining life satisfaction. Similarly, the United Kingdom ranked 23rd, its lowest position since 2017.
- Among India's neighboring countries, China (68), Pakistan (109) and Nepal (92) ranked higher than India, while, Sri Lanka (133), and Bangladesh (134) ranked lower.
- A notable change this year was the entry of Costa Rica (6) and Mexico (10) into the top 10, showing that happiness is not just about economic wealth but also about social and cultural well-being.

India's Performance in the 2025 Report:

- India's happiness ranking has changed over the years. It was at its best in 2022 (94th place) and at its lowest in 2012 (144th place). In 2025, India performed differently across the six key factors:
 - » India ranked high in social support, as family bonds and community culture remain strong.
 - » Economic growth (GDP per capita) contributed

positively, but India still lags behind wealthier nations.

- » Healthy life expectancy has improved, though healthcare access remains a challenge.
- » India scored the lowest in perceived freedom, meaning many people feel they have limited choices or control over their lives.
- » Generosity and acts of kindness were a strong point for India.
- » Corruption remains a major concern, lowering public trust in governance and institutions.



About World Happiness Report:

- The World Happiness Report is based on a global survey where people rate their lives on a scale of 0-10, using a method called the Cantril Ladder. A score of 10 represents the best possible life, while 0 represents the worst possible life.
- The rankings for 2025 are based on data collected from 2022 to 2024, using a three-year average to ensure consistency. The report does not rank countries based on a single number but instead considers six key factors that influence happiness:
 - » GDP per Capita
 - » Healthy Life Expectancy
 - » Social Support
 - » Perceived Freedom to Make Life Choices
 - » Generosity
 - » Perception of Corruption

Conclusion:

The 2025 report focused on "caring and sharing", meaning that people who help others and receive support tend to feel happier. While India's happiness ranking has improved, the report's methodology raises some concerns. It does not fully reflect economic strength, healthcare quality, or governance effectiveness. The study found that happiness is not just about money or economic growth, but also about trust, social connections, and a sense of security.

India's Expanding Social Security Coverage

Context:

As per the International Labour Organization (ILO) India has significantly improved its social security coverage, doubling from 24.4% in 2021 to 48.8% in 2024. This reflects the government's efforts in expanding benefits across the workforce and ensuring economic security.

Government Initiatives and Achievements:

- Union Minister for Labour and Employment Mansukh Mandaviya, citing the ILO World Social Security Report 2024-26, emphasized the government's commitment to social security, skill development, and employment generation.
- He highlighted that 17.1 crore jobs were created between 2014 and 2024, with 4.6 crore added in the past year.
- The unemployment rate fell from 6% in 2017-18 to 3.2% in 2023-24, and female workforce participation rose from 22% to 40.3%. These improvements are attributed to progressive government policies fostering economic growth and social security.

Significance of Social Protection:

- Social protection ensures economic stability and inclusivity by:
 - » **Supporting Vulnerable Groups:** Securing children, women, elderly, and divyang individuals.
 - » **Addressing Climate Adaptation:** Reducing poverty, inequality, and social exclusion.
- **Facilitating Economic Transition:** Promoting greener jobs and sustainable economic practices.

Challenges in Social Protection:

- **Limited Coverage:** Only 26% of women and 39% of men are covered by at least one social protection measure.
- **Inadequate Financing:** India spends just 5% of GDP on social protection (excluding healthcare), far below the global average of 13%.
- **Automation Impact:** AI could disrupt 12 million jobs in India by 2030 (McKinsey).

Key Legislations for Social Security:

- **Employees' Provident Fund Organisation (EPFO):** Established under the 1952 Act, it administers EPF, EPS (1995), and EDLI (1976).
- **Code on Social Security, 2020:** Extends social security to gig workers, informal sector employees, and the rural and urban poor, covering insurance, maternity benefits, and healthcare.
- **National Pension System (NPS):** A voluntary retirement scheme for employees across sectors, excluding the armed forces.

Major Social Security Schemes:

- **National Social Assistance Programme (NSAP):** Welfare support for elderly, disabled, and widows in BPL households.
- **e-Shram Platform:** A national database for unorganized workers, including gig and migrant laborers.
- **Pradhan Mantri Shram Yogi Maandhan (PM-SYM):** A pension scheme for unorganized workers.
- **Atal Pension Yojana (APY):** A retirement savings scheme for low-income individuals aged 18-40.

Conclusion

India's expanding social security coverage is a major step toward economic stability and social inclusion. However, challenges like limited informal sector coverage, low financial investment, and job displacement due to automation need attention. Strengthening funding and expanding coverage will be crucial for sustainable economic growth and welfare.

Polity & Governance

Delimitation in India: A Constitutional Debate on Representation and

Delimitation, the process of redrawing constituency boundaries, is a constitutional mandate aimed at ensuring equal representation in Parliament and state Assemblies. However, it has become a contentious issue due to demographic shifts between North and South India. The upcoming delimitation exercise, initially set for 2026 but delayed due to the Census, has sparked debates on federal balance, political representation, and national unity.

Southern states, which have experienced slower population growth due to better socio-economic conditions and family planning policies, fear that a population-based reallocation of parliamentary seats will weaken their political influence. Conversely, northern states, which have had higher population growth, stand to gain a significant number of seats. This disparity raises fundamental questions about democratic representation and the long-term integrity of India's federal structure.

Need for Delimitation:

- ❖ Delimitation is carried out to ensure fair representation by maintaining similar population sizes across constituencies. It is governed by:
 - » **Article 82:** Mandates that after every Census, Parliament must readjust the allocation of Lok Sabha seats among states based on population changes.
 - » **Article 81:** Limits the total number of Lok Sabha members to 550 (530 from

states and 20 from Union Territories) and ensures that the ratio of seats to the population is as uniform as possible across states.

- ❖ The primary objective is to uphold the democratic principle of "one person, one vote, one value." However, due to regional disparities in population growth, delimitation has become a politically sensitive issue.

History of Delimitation in India:

- ❖ **Pre-1976:** Delimitation was conducted after the Censuses of 1951, 1961, and 1971, leading to the redistribution of seats in Parliament and state Assemblies.
- ❖ **42nd Amendment (1976):** During the Emergency, Parliament froze the total number of seats until after the 2001 Census. This was done to protect states with lower population growth—mainly in the South—from losing representation while implementing family planning measures.
- ❖ **2001 Delimitation:** Although constituency boundaries were redrawn, the total number of seats remained unchanged due to opposition from southern states, which feared a reduction in their parliamentary strength.

Impact of Delimitation on Representation

- ❖ **Population-Based Reallocation of Seats**
 - » If the 2026 delimitation is based on the latest Census data, northern states with higher population growth will see a significant increase in their parliamentary representation, while

southern states, which have successfully controlled their population, will lose seats.

❖ **Projected Changes in Lok Sabha Seats Based on 2025 Population Estimates**

❖ Uttar Pradesh (including Uttarakhand): Increase from 85 to 250 seats

- » Bihar (including Jharkhand): Increase from 25 to 82 seats
- » Madhya Pradesh: Significant increase in seats
- » Rajasthan: Substantial seat gain
- » Tamil Nadu: Increase from 39 to 76 seats (comparatively lower)
- » Kerala: Increase from 20 to 36 seats

❖ Currently, over 32 lakh people elect one MP in some states, while in states like Kerala, the figure is only 18 lakh per MP, creating an imbalance in voting power. While redistribution is necessary to correct this anomaly, the concern is that it will disproportionately benefit northern states.

❖ **Potential Increase in Lok Sabha Strength**

- » If the existing formula (where each MP represents 10.11 lakh people) is used, Lok Sabha strength could rise to nearly 1,400 members based on 2025 population projections.
- » However, since the newly built Parliament accommodates only 888 seats, a proportional increase is unlikely. Instead, an alternative method of seat allocation will likely be used, but southern states will still gain fewer seats relative to the North, reinforcing concerns over their diminishing political influence.

Political and Federal Concerns Over Delimitation

❖ **Threat to Federal Balance and Representation**

- » Southern states, particularly Tamil Nadu, Kerala, and Karnataka, argue that delimitation based on population growth will reduce their representation in Parliament, despite their economic contributions and governance efficiency.
- » This has led to growing demands for postponing delimitation to maintain

federal balance.

- » Tamil Nadu Chief Minister M.K. Stalin has called delimitation a "looming threat".

❖ **Regional Political Impact**

- » Delimitation could shift political power towards North India, benefiting parties with a strong base in the region, while weakening regional parties in the South.
- » This would create an imbalance in national policymaking, where northern states could dominate parliamentary decisions, potentially marginalizing issues concerning southern states.

❖ **The Cultural, Economic, and Political Divide:** Delimitation could reinforce existing regional divisions along three major fault lines:

- » **Cultural Fault Line:** The linguistic divide between Hindi-speaking North India and non-Hindi-speaking South, East, and West has existed since independence. The demand for linguistic states and the non-imposition of Hindi as the sole official language helped mitigate this divide, but delimitation could reignite tensions.
- » **Economic Fault Line:** Over the last three decades, economic development has favoured South and West India, while North and East India lag. Southern states argue that economic contributions should be a factor in resource allocation and political representation, rather than just population.
- » **Political Fault Line:** The rise of the single party has created a North-South political divide. The party dominates North India but remains a marginal player in many South Indian states like Tamil Nadu and Kerala. Delimitation could further strengthen the single-party dominance by increasing the number of seats in its stronghold regions.

❖ These fault lines do not fully coincide but often place the Hindi heartland and South India on opposite sides of economic, political, and cultural debates.

Concerns of Southern States and Demand for a Freeze on Delimitation

- ❖ The all-party resolution in Tamil Nadu proposes postponing delimitation by another 30 years to protect national unity and federalism.
- ❖ Some argue for a permanent freeze on seat reallocation, similar to the special provisions for smaller states like Goa and Arunachal Pradesh.
- ❖ The concept of an implicit federal contract is emerging in the debate. This suggests that India's federal structure was built on an understanding that representation would not be solely determined by population, but also by regional equity.
- ❖ Accepting this federal contract would mean permanently closing debates on:
 - » Population-based seat allocation.
 - » Tax contribution-based resource distribution.
 - » A balance where northern states get more seats, while southern states retain fiscal advantages.

Conclusion:

- ❖ The debate on delimitation highlights the

tension between democratic representation and federal stability. While the principle of "one person, one vote, one value" suggests that seat reallocation is necessary, the commitment to equitable regional representation and national unity calls for caution.

- ❖ Policymakers must strike a balance between these competing interests:
 - » Ensuring that no region is politically marginalized due to its success in population control.
 - » Preventing a North-dominated Parliament that weakens the influence of southern states.
 - » Upholding India's unity in diversity, where regional voices are adequately represented in national policymaking.
- ❖ As the 2026 delimitation approaches, India faces a defining moment in its federal evolution, where the decisions made today will shape the political landscape for decades to come.

Short Issues

Oilfields Amendment Bill

Context:

The Lok Sabha recently passed the Oilfields (Regulation and Development) Amendment Bill, marking a significant reform in India's oil and gas sector. The Bill amends the Oilfields (Regulation and Development) Act, 1948.

Key Objectives of the Bill:

- The primary objective of the Oilfields Amendment Bill is to modernize the exploration and production of oil and gas in India. The Bill aims to:
 - » Modernize the legal framework for oil and gas exploration and production.
 - » Attract more investment into the sector by making it more business-friendly and

accessible.

- » Ensure energy availability, affordability, and security, aligning with the government's vision of a "Viksit Bharat" by 2047.

Key Reforms Introduced by the Bill:

- **Simplification of Licensing:** The Bill removes the requirement for multiple licenses for different hydrocarbons. Instead, it introduces a single permit system known as "petroleum leases" for all hydrocarbons.
- **Separation of Mining and Petroleum Operations:** The Bill terminates the old practice of treating mining and petroleum exploration under the same regulatory framework. This allows for better regulation of the oil and gas sector.
- **Encouraging Investment and Ease of Doing**

Business: The Bill provides a stable and predictable legal framework to encourage investment in the sector. A faster dispute resolution system is introduced to handle conflicts efficiently, thereby reducing regulatory burdens and promoting collaboration between government and contractors.

- **Technology and Energy Innovation:** The Bill supports the adoption of new technologies such as Carbon Capture Utilization and Sequestration (CCUS) and green hydrogen projects, promoting energy transition and sustainability.
- **Support for Small Oil Operators:** The Bill allows resource-sharing between operators, particularly in areas with underutilized fields, to improve project viability. This complements earlier policies, such as the Discovered Small Fields Policy of 2015, which empowered small operators to manage unutilized fields.
- **Stronger Penalties and Enforcement:** The Bill introduces stronger penalties, with fines of up to ₹25 lakh for violations, and ₹10 lakh per day for ongoing violations. It also introduces a new adjudication authority and appellate mechanism to handle penalties efficiently.
- **No Impact on States' Rights:** The Bill maintains the cooperative federalism framework by ensuring that states continue to grant petroleum leases and collect royalties as before.

Comparison: Oilfields Act 1948 vs. Oilfields Amendment Bill

Aspect	Oilfields (Regulation and Development) Act, 1948	Oilfields (Regulation and Development) Amendment Bill
Purpose	Regulates the exploration and extraction of natural gas and petroleum	Updates the framework to align with modern energy needs
Lease Terms	Provides for a mining lease	Replaces mining lease with a petroleum lease

Mineral Oils	Limited to petroleum and natural gas	Expands to include naturally occurring hydrocarbons, coal bed methane, and shale gas/oil
	Provision of a fine of ₹1,000 or both for rule violations	Penalty of ₹25 lakh for violations; ₹10 lakh per day for ongoing violations
Penalties	Limited penalties for violations	Stronger penalties, including daily fines for ongoing violations

Conclusion:

The Oilfields (Regulation and Development) Amendment Bill represents a step forward in modernizing India's oil and gas sector by streamlining regulations, encouraging investment, and supporting technological innovation. The Bill's emphasis on a business-friendly environment and its regulatory adjustments are promising but require further strengthening to meet India's energy needs in the coming decades.

New Immigration Bill

Context:

The Union Home Ministry has introduced the Immigration and Foreigners Bill, 2025, which proposes stricter penalties for using forged passports and visas in India. The bill aims to streamline the country's immigration system while ensuring better control over foreign nationals' entry, movement, and stay within the country. Here's a breakdown of key aspects of the bill.

Key features of the bill:

- **Stricter Penalties for Forged Passport Use:** The most notable provision in the proposed Immigration Bill is the imposition of severe penalties for anyone caught using a forged passport or visa. Offenders could face up to seven years in prison and a fine of up to ₹10 lakh.
 - » The bill also stipulates a minimum sentence of two years for those caught using fraudulent travel documents for entering, staying, or exiting India. This measure is expected to

curb illegal immigration and fraud in the immigration process.

- » Empowering the Government to Regulate Foreigners' Movement
- » The bill introduces significant powers for the Union government to control and regulate the movement of foreigners within India.
- Key provisions include mandatory reporting of foreign nationals' details by hotels, educational institutions, hospitals, and other establishments. This would help authorities track foreigners who overstay their visas or engage in illegal activities.
- The bill also mandates that international airlines and ships submit detailed passenger and crew manifests, enhancing the government's ability to monitor foreign nationals arriving in the country.

Modernizing Immigration Laws:

- The new bill seeks to simplify and modernize the legal framework governing foreign nationals in India. It will replace four outdated laws: the Passport (Entry into India) Act, 1920, the Registration of Foreigners Act, 1939, the Foreigners Act, 1946, and the Immigration (Carriers' Liability) Act, 2000.
- The Immigration and Foreigners Bill, 2025, brings together provisions from these laws while updating them to meet contemporary needs. It also introduces new provisions for enhanced tracking of overstaying foreigners and illegal migration, which have become pressing concerns for the government.

Promoting National Security and Economic Growth:

- The bill strikes a balance between national security and economic growth. On one hand, it strengthens regulations to combat illegal immigration and track foreigners more effectively. On the other, it promotes ease of business and tourism.

Streamlining Foreigners' Stay and Exit Process

- The new legislation introduces comprehensive guidelines for the stay and exit of foreigners in India. It mandates the registration of foreigners who stay for more than 180 days under specific visa categories (student, medical, employment, etc.) within 14 days of arrival.
- The bill also simplifies the process for visa-on-arrival and electronic visas and ensures better

coordination between State governments, Union Territories, and the Bureau of Immigration (BoI).

- Foreigners in specific protected areas, such as the Northeastern States, Andaman and Nicobar Islands, and parts of Jammu & Kashmir, will still need special permits to travel, ensuring the country's strategic areas are safeguarded.

Conclusion:

The Immigration and Foreigners Bill, 2025, represents a significant overhaul of India's immigration framework. By addressing the growing challenges of illegal migration, forged travel documents, and overstaying foreigners, the bill is designed to ensure both national security and economic benefits. While it provides stronger penalties, it also streamlines processes to make India more accessible for legitimate foreign visitors, aligning with the government's broader policy goals.

Bills of Lading Bill, 2025

Context:

Lok Sabha has passed the Bills of Lading Bill, 2025, signaling a significant shift in India's maritime legal landscape. This new legislation replaces the Indian Bills of Lading Act, 1856, which had been a colonial-era law for over 169 years. The Bill aims to modernize and simplify the legal framework surrounding the issuance of bills of lading, aligning India's laws with international standards.

Key Features of the Bills of Lading Bill, 2025:

- The Bills of Lading Bill, 2025 introduces several key features aimed at streamlining India's shipping practices:
 - » **Simplification of Language:** The Bill simplifies the legal language of the existing Bills of Lading Act, reorganizing its provisions to make them more understandable and accessible for businesses, reducing complexity.
 - » **Alignment with International Standards:** The Bill ensures that India's maritime laws are in sync with global norms, promoting smoother shipping processes and enhancing the country's role in global trade.
 - » **Empowerment of the Central Government:** The Bill empowers the Central Government to issue directions to ensure the effective

implementation of the law, enabling more responsive and adaptive legal governance.

- » **Elimination of Colonial Legacy:** The Bill eliminates outdated colonial-era provisions, making India's shipping laws more modern, relevant, and suited for current global trade dynamics.

Why is the Bills of Lading Bill necessary?

- The current law, the Indian Bills of Lading Act, 1856, is outdated and limited in scope, with only three sections mainly covering the transfer of rights and confirming the loading of goods.
- With the evolving shipping industry and global trade, there is a need for a more comprehensive, understandable law that aligns with international standards. The Bills of Lading Bill will streamline and simplify these provisions, making the law more accessible and relevant for modern maritime trade.

BILLS OF LADING BILL 2025

Passes in Lok Sabha

KEY BENEFITS:

- Will streamline shipping processes
- Will reduce legal disputes
- Will ensure greater ease of doing business
- Will strengthen India's role in global trade



Benefits of the Bills of Lading Bill, 2025:

This new legislation brings a range of benefits to India's shipping sector and broader economy:

- **Streamlined Business Processes:** The simplified provisions are expected to reduce legal complexities, making it easier for businesses to navigate shipping logistics and reducing the risk of disputes.
- **Improved Efficiency and Reliability:** The updates to the law are designed to foster a more efficient

shipping environment, with clearer guidelines that will improve the reliability of shipping practices.

- **Enhanced Competitiveness:** By modernizing its legal framework, India can enhance its competitiveness in global maritime trade, making the country a more attractive destination for international shipping and trade partnerships.

Conclusion:

The passage of the Bills of Lading Bill, 2025 marks a historic step in modernizing India's maritime laws. By replacing a 169-year-old colonial law with a more contemporary and user-friendly legal framework, India is taking significant strides towards becoming a global leader in maritime commerce. This transformation not only aligns India with international standards but also simplifies shipping processes, reduces disputes, and boosts India's competitiveness on the world stage.

Debate on Delimitation in India

Context:

The issue of delimitation has recently sparked significant discussion in India, particularly after Tamil Nadu's Chief Minister expressed concerns about the process.

Issues around Delimitation:

- The last delimitation exercise was conducted based on the 1971 Census, after which the number of Lok Sabha seats was frozen to encourage population control. However, India's population growth has been uneven, with states like Uttar Pradesh, Bihar, Madhya Pradesh, and Rajasthan witnessing rapid increases compared to states like Kerala, Tamil Nadu, Karnataka, and Andhra Pradesh. This population disparity has raised concerns over the fairness of representation in the Lok Sabha.

What is Delimitation?

- Delimitation is the process of redrawing the boundaries of electoral constituencies in India, undertaken after each Census to adjust the number of seats in Parliament and state Assemblies based on population changes.
- The objective is to ensure equal representation, so that constituencies across the country have roughly the same population size, making the

electoral system more balanced and fair.

Constitutional Provisions:

- Delimitation is mandated by the Constitution under Article 82 and Article 81:
 - » Article 82 requires the allocation of Lok Sabha seats to be readjusted after each Census based on population changes.
 - » Article 81 sets a cap of 550 members in the Lok Sabha, with 530 members representing states and 20 representing Union Territories. It also aims to maintain uniformity in the ratio of seats to population across states.
- The goal of delimitation is to ensure that representation in Parliament and state Assemblies is equitable, so that each voter's vote carries equal weight.

constituency boundaries.

- **42nd Amendment (1976):** During the Emergency (1975-77), the 42nd Amendment froze the total number of seats in the Lok Sabha and state Assemblies until after the 2001 Census. This was done to prevent states with higher population growth—mostly in northern India—from gaining disproportionate representation while encouraging family planning measures.
- **2001 Delimitation:** In 2001, a Delimitation Commission was set up to redraw constituency boundaries based on the 2001 Census. However, the total number of seats remained unchanged due to opposition from southern states, which feared a loss of representation due to their lower population growth.

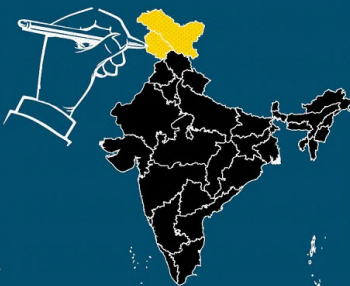
Way Forward:

One potential solution to the delimitation debate is to cap the number of Lok Sabha seats at 543. This would preserve the current balance of representation across states, ensuring that those that have successfully controlled their population growth do not lose political influence. Another approach could be to increase the number of MLAs in each state in proportion to their projected population growth. This could enhance democratic representation while maintaining the federal structure of the country.

What is delimitation

The process of redrawing boundaries of Lok Sabha and state Assembly seats to represent changes in the population.

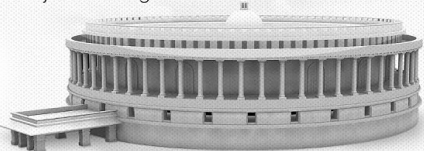
The main task of the Delimitation Commission is redrawing the boundaries of the various assembly and Lok Sabha constituencies based on a recent census.



In the process, the **number of seats allocated** to states in Lok Sabha or in the Legislative Assembly may also change



It also **reserves Assembly seats** for Scheduled Castes (SCs) and Scheduled Tribes (STs) in accordance with the Constitution



Visually-Impaired person in Judicial Services

Context:

In a landmark judgment, the Supreme Court of India has recently ruled that visually-impaired and low-vision candidates can no longer be excluded from judicial services. This decision marks a significant milestone in the pursuit of equality and inclusivity for persons with disabilities (PwDs) in India.

About the issue:

- The issue reached the Supreme Court through a challenge to the legality of Rule 6A of the Madhya Pradesh Judicial Service Examination Rules 1994.
- This rule excluded visually-impaired and low-vision candidates from appointment to the judicial service. The court took cognizance of the matter in March last year, following a letter petition from

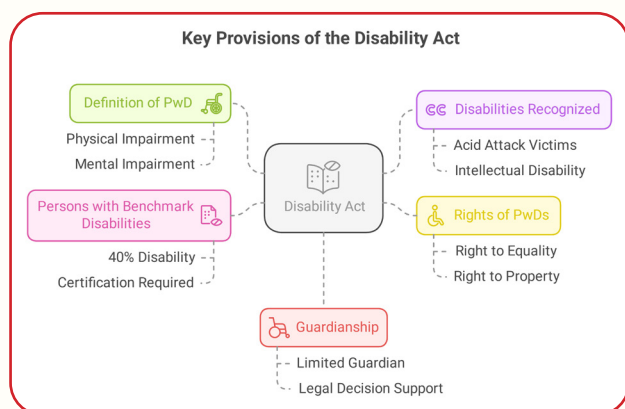
History of Delimitation in India:

- **Pre-1976:** Before the 42nd Amendment, delimitation exercises took place after the 1951, 1961, and 1971 Censuses. During this period, the redistribution of seats in the Lok Sabha, Rajya Sabha, and state Assemblies was carried out based on population growth, leading to changes in

the mother of a visually-impaired judicial aspirant, Alok Singh.

About the decision:

- The Supreme Court struck down Rule 6A, declaring that visually-impaired candidates are eligible to participate in the selection process for judicial services.
- The court emphasized that the principle of reasonable accommodation, as enshrined in the Rights of Persons with Disabilities Act, 2016, mandates that accommodations should be provided to PwDs as a prerequisite to assessing their eligibility.
- The court also partially struck down Rule 7 of the MP Judicial Service Exam Rules, which prescribed additional requirements for candidates with disabilities.



About The Rights of Persons with Disabilities (RPwD) Act, 2016:

- The Rights of Persons with Disabilities (RPwD) Act, 2016, is a landmark legislation that aims to promote the rights and well-being of persons with disabilities (PwDs) in India.
- Enacted to give effect to the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) of 2007, this Act is a significant step towards creating an inclusive and equitable society for PwDs.

Key Provisions of the Act

- **Definition of PwD:** The Act defines a PwD as a person with a long-term physical, mental, intellectual, or sensory impairment that hinders their full and effective participation in society.
- **Disabilities Recognized:** The Act recognizes 21

types of disabilities, including acid attack victims, intellectual disability, mental illness, and others.

- **Rights of PwDs:** The Act enumerates the rights of PwDs, including the right to equality, life with dignity and respect, protection from abuse and exploitation, and the right to home and family, reproductive rights, accessibility in voting, and the right to own or inherit property.
- **Persons with Benchmark Disabilities:** The Act defines persons with benchmark disabilities as those with at least 40% of a specified disability, as certified by the relevant authority.
- **Guardianship:** The Act provides for the appointment of a limited guardian for PwDs who cannot make legally binding decisions, even with support.

Conclusion:

The Supreme Court's decision marks a significant step towards creating a more inclusive and equitable society for persons with disabilities. As the court stated, "Now, it is high time that we view the right against disability-based discrimination, as recognised in the RPwD Act 2016, of the same stature as a fundamental right, thereby ensuring that no candidate is denied consideration solely on account of their disability."

SC Rules against Arbitrary Arrests by Customs and GST Officers

Context:

The Supreme Court, in a landmark judgment recently, ruled that Customs officers and Goods and Services Tax (GST) officers cannot make arrests arbitrarily. The judgment mandates that these officers must adhere to pre-conditions set out under Section 104 of the Customs Act and Section 69 of the GST Acts before making any arrests, similar to the procedures followed by Enforcement Directorate (ED) officials under the Prevention of Money Laundering Act (PMLA).

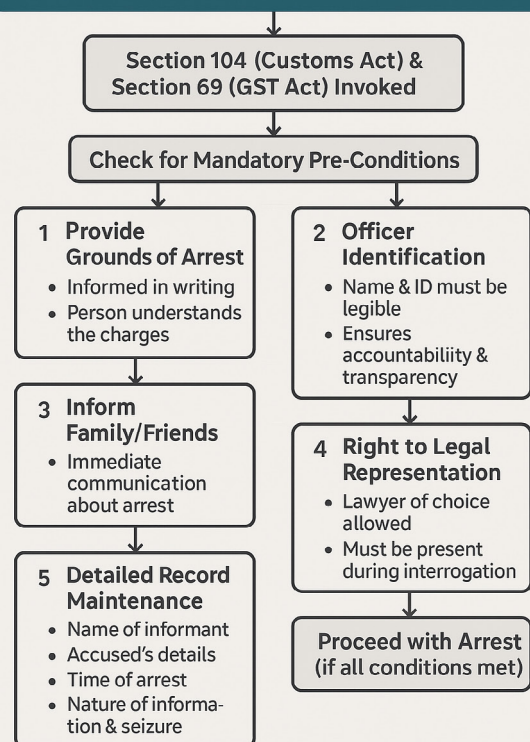
Mandatory Pre-Conditions for Arrests under Customs and GST Laws

- In its detailed judgment, the Court reaffirmed the procedural safeguards that must be followed by Customs and GST officers before making an arrest. Section 104 of the Customs Act and Section 69

of the GST Act mandate that officers must meet specific requirements. These pre-conditions include:

- » **Providing Grounds of Arrest:** The arrested individual must be informed of the reasons for their arrest in writing. This ensures that the individual is aware of the charges against them and has the opportunity to challenge them.
- » **Identification of Arresting Officers:** Officers who make the arrest must provide accurate and legible identification. This requirement ensures accountability and transparency in the process.

MANDATORY PRE-CONDITIONS FOR ARRESTS UNDER CUSTOM AND GST LAWS



- » **Communication to Kin or Friends:** The arrested individual's family or friends must be notified about the arrest.
- » **Right to Legal Representation:** The arrested person must be allowed access to a legal representative of their choice, who must be

present during the interrogation.

- » **Recording of Details:** The Court emphasized that Customs officers must maintain detailed records of their actions. These records must include the name of the informant, the individual accused of violating the law, the nature of the information received, the time of the arrest, seizure details, and statements recorded during the detection of the offense.

Court's Authority to Grant Anticipatory Bail:

- While the Supreme Court upheld the statutory power of Customs and GST officers to make arrests, it also emphasized the critical role of courts in safeguarding individual rights.
- The Court highlighted that courts possess the power to grant anticipatory bail, which protects individuals from unnecessary arrest and detention. The Court stressed that this judicial power is vital in ensuring the right to life and liberty under Article 21 of the Constitution.

Way forward:

The Supreme Court's ruling is a significant step in ensuring that Customs and GST officers operate within the bounds of the law and do not violate the fundamental rights of individuals. The Court's judgment underlines the importance of adhering to due process, particularly when exercising powers as extreme as arrest. The ruling also upheld the statutory power of Customs and GST officers to make arrests

Livestock Health and Disease Control Programme

Context:

The Union Cabinet has approved the revision of the Livestock Health and Disease Control Programme (LHDCP) for the period 2024-26, with an allocated outlay of ₹3,880 crore. This revision is aimed at significantly enhancing livestock disease control, thereby improving the health of animals across the country.

What is LHDCP?

- The Livestock Health and Disease Control Programme (LHDCP) is a centrally sponsored scheme that focuses on improving the health of livestock in India. The programme is designed to

control and prevent major animal diseases through targeted vaccinations, disease surveillance, and the enhancement of veterinary services. It also aims to support the infrastructure necessary for effective disease control, such as mobile veterinary units and improved veterinary healthcare facilities.

Key Components of LHDCP:

- The revised LHDCP comprises three main components, each designed to address different aspects of livestock health:
- **National Animal Disease Control Programme (NADCP):** The primary focus of NADCP is to control and prevent major animal diseases, especially those that significantly impact livestock productivity. The program aims to reduce the burden of diseases like Foot and Mouth Disease (FMD) and Brucellosis.
- **Livestock Health and Disease Control (LH&DC):** This component has three sub-components:
 - » **Critical Animal Disease Control Programme (CADCP):** CADCP targets critical diseases that pose significant risks to livestock health and productivity. Its aim is to control these diseases at an early stage to prevent their spread.
 - » **Establishment and Strengthening of Veterinary Hospitals and Mobile Veterinary Units (ESVHD-MVU):** This sub-component focuses on improving the infrastructure for veterinary services. It involves the establishment of new veterinary hospitals and the strengthening of existing ones. Additionally, Mobile Veterinary Units (MVUs) will be deployed to provide door-to-door veterinary services, ensuring that even remote rural areas have access to quality animal healthcare.
 - » **Assistance to States for Control of Animal Diseases (ASCAD):** This sub-component provides financial support to state governments to help them control and manage animal diseases effectively. It enhances coordination between the central and state governments for better disease control.
- **Pashu Aushadhi:** A new addition to the program, Pashu Aushadhi aims to make veterinary medicines

more affordable and accessible to farmers. With a budget allocation of Rs. 75 crore, this component focuses on providing high-quality, generic veterinary medicines to reduce the cost burden on livestock owners.

Stronger Livestock, Stronger Farmers!

Livestock Health and Disease Control Programme Approved

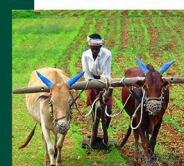
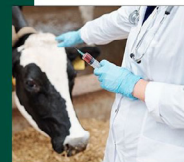
Total outlay of ₹3,880 crore for 2024-26

Prevention & Control of livestock diseases through vaccination & surveillance

Doorstep veterinary care via Mobile Units

Improve livestock productivity & reduced economic losses for farmers

Employment & entrepreneurship boost in rural areas



Benefits of LHDCP:

- The revised Livestock Health and Disease Control Programme (LHDCP) offer several key benefits:
 - » **Disease Prevention and Immunization:** Prevents major livestock diseases through immunization, improving animal health and productivity.
 - » **Mobile Veterinary Services:** Mobile Veterinary Units (MVUs) provide timely care, especially in remote areas.
 - » **Affordable Veterinary Medicines:** Pashu Aushadhi ensures access to quality generic medicines, reducing costs for livestock owners.
 - » **Boosting Productivity and Employment:** Enhances livestock productivity and creates employment opportunities in rural areas.
 - » **Economic Relief for Farmers:** Prevents financial losses from diseases, supporting the sustainability of livestock businesses.

Conclusion:

The revised LHDCP is a comprehensive initiative that aims to revolutionize the animal health sector in India. With its focus on disease control, veterinary

infrastructure, and affordable medicines, the program will significantly improve the productivity and well-being of livestock, benefiting both farmers and the rural economy.

AI Kosha

Context:

Indian government has recently launched AI Kosha, a pioneering platform designed to provide researchers, entrepreneurs, and startups with access to crucial datasets, computing resources, and tools to develop advanced Artificial Intelligence (AI) applications. This initiative is part of the broader IndiaAI Mission, which aims to strengthen the country's AI ecosystem by facilitating innovation and fostering AI-driven solutions.

Key Features of AI Kosha:

- AI Kosha offers several key features that will benefit AI researchers and innovators across India:
 - » **Datasets:** At launch, AI Kosha contains 316 datasets, the majority of which are focused on developing and validating language translation tools for Indian languages. These datasets will serve as valuable resources for AI developers working on creating solutions that cater to the country's diverse linguistic landscape.
 - » **Compute Capacity:** The platform offers access to over 14,000 Graphics Processing Units (GPUs) for shared use, with plans to add more GPUs quarterly. GPUs are critical for training AI models, and this resource will enable startups and researchers to accelerate their AI projects.
 - » **Cost-Effective:** One of the most appealing features of AI Kosha is the cost-effectiveness of using these GPUs. The price of accessing the GPUs is set at a low Rs 67 per hour, making it an affordable option for startups and academic institutions looking to build and test their AI models.

About IndiaAI Mission:

- AI Kosha is a key part of the IndiaAI Mission, the government's flagship initiative aimed at advancing AI research and deployment across multiple sectors. With a financial outlay of ₹10,370 crore, the mission is designed to create a robust AI ecosystem in India. It includes seven pillars, and

the IndiaAI Datasets Platform, which AI Kosha is a part of, is integral to ensuring that the necessary data and resources are available for innovation in AI.

Government's Push for AI Research

- The Indian government has been proactive in promoting AI research and innovation. In 2018, a committee was set up to explore the possibility of providing startups and government agencies access to non-personal data, such as traffic data from ride-sharing apps, to encourage AI development. Despite facing resistance from the tech industry, the government has continued its efforts to foster AI research, further solidifying its commitment to positioning India as a leader in AI.

Way forward:

The launch of AI Kosha signals a new era for AI research in India. With access to critical datasets and advanced computational infrastructure, Indian researchers and startups are now empowered to develop AI solutions that address the country's unique challenges. This platform positions India as a hub for AI innovation, and as the government continues to support AI research, the country is poised to become a global leader in AI technology and development.

'Preparation' vs. 'Attempt' in Indian criminal system

Context:

The recent stay on a ruling by the Allahabad High Court by the Supreme Court has brought 'Preparation' vs. 'Attempt' issue to the forefront once again, particularly in relation to what constitutes an "attempt" to commit rape and how it should be treated in law.

The Legal Significance of 'Preparation' vs. 'Attempt'

- The distinction between "preparation" and "attempt" is crucial in criminal law, especially when it comes to sexual offenses.
- Preparation refers to actions that an accused might undertake to ready themselves for committing a crime but stop short of committing the crime itself.
- Attempt, however, occurs when an individual takes significant steps toward completing the crime, although they may be unsuccessful. While

preparation is often not punishable under most legal frameworks, an attempt to commit a crime is a criminal offense in itself and punishable by law.



Defining an 'Attempt' to Commit Rape or crime:

- In *Abhayanand Mishra v. State of Bihar*, the Supreme Court of India established key criteria for proving an attempt to commit an offense. To secure a conviction for attempt, the prosecution must demonstrate the following essential elements:
 - » **Intention:** The accused must have had the intention to commit the offense.
 - » **Preparation:** The accused must have taken preparatory actions to commit the crime.
 - » **Action toward the commission of the offense:** This step goes beyond mere preparation and must involve an act that moves the defendant closer to completing the crime. Crucially, it does not need to be the final act before the crime but must be a step that signals the intent to commit the offense.
 - » **Proximity:** The "penultimate act"—the act that is just one step away from completing the crime—must occur for an attempt to be made. This step is critical in defining when an attempt actually happens. The proximity of this act to the completion of the crime is key.
- As clarified in *State of Maharashtra v. Mohd. Yakub (1980)*, an attempt begins where preparation ends. Essentially, preparation is simply getting ready to

commit a crime, whereas an attempt is when the actions start encroaching on the commission of the crime itself.

The Allahabad High Court's Controversial Ruling:

- The Allahabad High Court's ruling on March 17, 2024, exemplified the complexity in drawing a line between preparation and attempt. The court ruled that the actions of the accused—grabbing a minor's breasts and attempting to break her pyjama string—did not rise to the level of an attempt to rape.
- Instead, it reduced the charges to a lesser offense of assault under Section 354B of the Indian Penal Code (IPC), which addresses the use of criminal force with the intent to disrobe a woman or compel her to be naked.

Conclusion:

The distinction between preparation and attempt has significant implications for how courts define and punish attempted rape. The Supreme Court's reconsideration of the legal standard for attempted rape may lead to changes in how such cases are prosecuted and punished in the future.

Disaster Management (Amendment) Bill, 2024

Context:

The Parliament has recently passed the Disaster Management (Amendment) Bill 2024, aiming to enhance the efficiency of the National and State Disaster Management Authorities (NDMA and SDMA). The Bill seeks to amend the Disaster Management Act, 2005, introducing new authorities, strengthening disaster response mechanisms, and centralizing disaster management powers under the Union government.

Key Provisions of the bill:

- **Disaster Management Plans:** The National Disaster Management Authority (NDMA) and State Disaster Management Authority (SDMA) will now be responsible for preparing disaster management plans, replacing the earlier role of the National and State Executive Committees.
- **Expanded Functions of NDMA & SDMA:** Their

responsibilities now include assessing disaster risks periodically, providing technical assistance, setting minimum relief standards, and maintaining disaster databases at the national and state levels.

- **Urban Disaster Management Authorities:** States can establish dedicated Urban Disaster Management Authorities for state capitals and cities with municipal corporations.
- **State Disaster Response Force (SDRF):** States can constitute SDRFs, defining their functions, roles, and service conditions to improve response mechanisms.
- **Statutory Status to Committees:** The National Crisis Management Committee (NCMC) and High-Level Committee (HLC) will now have statutory recognition, strengthening decision-making during disasters.
 - » Creating national and state disaster databases for better coordination.
 - » Fixing accountability and penalties for negligence in disaster response.

Significance of the Bill:

- The Bill marks a significant step toward disaster resilience by promoting better coordination, risk assessment, and response mechanisms.
- It aims to reduce disaster risks, enhance preparedness, and ensure effective relief measures.
- Effective implementation however requires adequate funding, skilled personnel, and seamless coordination among various stakeholders. Ensuring timely resource allocation and inter-agency collaboration will be critical.

Challenges & Concerns:

- Centralizing power and reducing the role of states.
- Removing financial assistance provisions, replacing "compensation" with "relief."
- Lack of scrutiny, as the bill was passed without being referred to a Joint Parliamentary Committee.

About Disaster Management Act, 2005

- Enacted after the 2004 tsunami to establish a structured disaster management framework.
- Three-tier authority structure for disaster management:
 - » **NDMA (National):** Headed by the Prime Minister, responsible for policies and guidelines.
 - » **SDMAs (State):** Headed by Chief Ministers,

responsible for state-level disaster management.

- » **DDMAs (District):** Led by District Magistrates, responsible for implementation at the district level.
- National Disaster Response Force (NDRF) for specialized disaster response operations.
- Funding mechanisms through the National Disaster Response Fund (NDRF) and State Disaster Response Funds (SDRF) for disaster relief.
- National Institute of Disaster Management (NIDM) established for research, training, and capacity building in disaster management.

Conclusion:

The Disaster Management (Amendment) Bill, 2024 is a crucial reform to strengthen India's disaster preparedness. However, its success will depend on effective implementation, resource mobilization, and stakeholder cooperation.

Parliament passed Boilers Bill, 2024

Context:

The Lok Sabha recently passed the Boilers Bill, 2024, aiming to regulate boilers, ensure safety from steam-boiler explosions, and standardize registration processes. This legislation replaces the Boilers Act of 1923 and had previously been approved by the Rajya Sabha in December of the previous year.

- The Boilers Act of 1923 was established to regulate the manufacturing, installation, operation, alterations, and repair of steam boilers, ensuring their safe operation across India.

Salient Features of the Boilers Bill, 2024:

- **Regulation of Boilers:** The Bill mandates the registration of boilers before they commence operation, with the registration requiring annual renewal.
- **Exemptions:** Boilers with a capacity below 25 liters, operating at pressures under 1 kg/cm², or used for water heating below 100 degrees Celsius are exempt from the Bill's provisions. Additionally, boilers used by the armed forces are also exempted.
- **Offenses and Penalties:** The Bill outlines penalties for offenses such as unauthorized alterations to

boilers or tampering with safety valves, aiming to deter unsafe practices.

- **Safety and Uniformity:** The legislation seeks to prevent boiler explosions and ensure the safety of life and property by promoting uniform standards across the country.
- **Decriminalization Provisions:** Incorporating measures from the Jan Vishwas (Amendment of Provisions) Act, 2023, the Bill decriminalize certain offenses, converting them into civil penalties to ease compliance burdens.

Importance of the Bill:

- The Boilers Bill, 2024, aims to enhance safety in industries utilizing boilers by standardizing regulations nationwide. By focusing on preventing boiler explosions, it seeks to protect both life and property, thereby fostering a safer industrial environment.

Key Issues:

- **Exemption from Provisions:** The Bill empowers state governments to exempt certain areas from its provisions, which could lead to inconsistencies and potential safety compromises.
- **Lack of Appeal Mechanism:** There is an absence of a formal appeal process for decisions made by the central government or inspectors, raising concerns about administrative fairness.
- **Entry Powers for Inspectors:** Inspectors are granted authority to enter premises for inspections; however, the Bill does not specify safeguards or guidelines for these powers, potentially affecting privacy and operational autonomy.

Conclusion:

The Boilers Bill, 2024, represents a significant advancement in modernizing India's boiler regulations. Its successful implementation will require addressing the highlighted issues to ensure that safety standards are upheld without compromising environmental considerations, judicial fairness, or consistent enforcement across regions.

Judicial Accountability

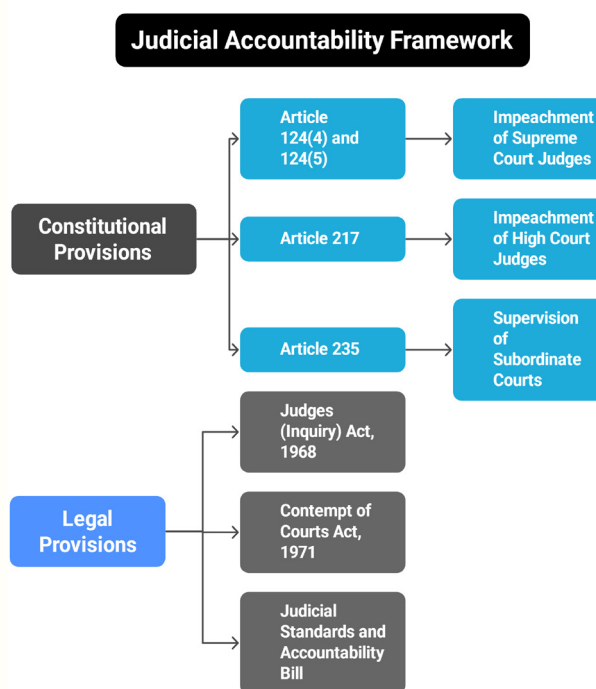
Context:

Recently, Rajya Sabha Chairman Jagdeep Dhankhar discussed judicial accountability in the Rajya Sabha.

This discussion took place in the context of growing concerns about transparency following allegations of cash being recovered from the residence of a High Court judge.

What is Judicial Accountability?

- Judicial accountability refers to the principle that judges must be answerable for their decisions and actions. It ensures that the judiciary operates transparently, maintaining fairness and upholding the rule of law. Judges are required to act in accordance with legal principles, as they are entrusted with the power to deliver justice on behalf of society.



Provisions for Judicial Accountability

- **Constitutional Provisions:**
 - » **Article 124(4) and 124(5):** Provide grounds for impeachment of Supreme Court judges for proven misbehaviour or incapacity.
 - » **Article 217:** Similar provisions for impeaching High Court judges.
 - » **Article 235:** Empowers High Courts to supervise and control subordinate courts.
- **Legal Provisions:**
 - » **Judges (Inquiry) Act, 1968:** Establishes

a mechanism for investigating judicial misconduct through a three-member panel.

- » **Contempt of Courts Act, 1971:** Protects the judiciary from undue influence, ensuring its independence.
- » **Judicial Standards and Accountability Bill (pending):** Aims to improve transparency and oversight mechanisms in the judiciary.

Need for Judicial Accountability

- **Ensuring Public Trust:** Maintaining the credibility of the judiciary, which is vital for the public's confidence in the legal system.
- **Preventing Misconduct:** Encouraging judges to adhere to ethical standards and constitutional principles.
- **Enhancing Transparency:** Judicial decisions should be open to scrutiny to foster fairness.
- **Balancing Independence and Responsibility:** Ensures that judicial independence is not misused for personal or political gain.
- **Promoting Rule of Law:** Ensures that decisions are unbiased, fair, and consistent with constitutional mandates.

National Judicial Appointments Commission (NJAC) Act:

- Reflecting on the long-standing debate on judicial appointments, Dhankhar highlighted the now-defunct NJAC Act, which was struck down by the Supreme Court in 2015.
- The Act, aimed at reforming judicial appointments, has been a subject of contention. Dhankhar suggested that a structured discussion with Rajya Sabha floor leaders would be organized soon to address the legacy of the NJAC Act and explore reforms in judicial appointments.

Way Forward:

- **Legislative Reforms:** Urgently passing the Judicial Standards and Accountability Bill to strengthen judicial oversight mechanisms.
- **Strengthening Internal Mechanisms:** Creating independent judicial review bodies to ensure proper conduct within the judiciary.
- **Codifying Ethical Guidelines:** Expanding and enforcing the Restatement of Judicial Values for a clearer code of conduct.
- **Public Scrutiny:** Encouraging transparency through the publication of judicial decisions and

activities.

- **Training and Awareness:** Conducting regular training for judges on ethical principles and constitutional values to uphold accountability.

Supreme Court ruling on Publicly Acquired Land

Context:

In a landmark ruling, the Supreme Court of India has made a significant decision regarding the transfer of land acquired by the government for public purposes. The court ruled that land acquired through the power of eminent domain for public use cannot be transferred back to the original owner through private agreements made with the beneficiary.

Background of the Case:

- The case arose from an agreement made by the Delhi Agricultural Marketing Board, which had acquired 33 acres of land in Narela, Delhi, for the purpose of establishing a grain market.
- The Board, under the Land Acquisition Act, 1894, had taken possession of the land, but later agreed to transfer half of the acquired land back to the original owner through a private arrangement. This raised questions about the legality and ethics of such private deals involving public land.

Key Points of the Judgment:

- **Eminent Domain:** The court emphasized that the government's power of eminent domain — the authority to acquire land for public purposes — cannot be bypassed through private agreements. Such agreements would undermine the state's sovereign authority over land acquisition.
- **Misuse of Power:** The court held that permitting such private arrangements would amount to fraud on the state's power, effectively reversing the purpose for which the land was acquired and used.
- **Public Purpose:** The decision reinforced the principle that land acquired for public purposes must remain in the control of the state and be used for the intended public benefit, preventing any arbitrary transfer of acquired land.

Implications of the Judgment

- This ruling has important implications for land acquisition and public policy in India. It underscores

the need for transparency and accountability in land acquisition processes.

- The judgment also safeguards the integrity of government land acquisition powers, ensuring that land acquired for public welfare cannot be misused through private deals.

Related Provisions and Cases:

- The Land Acquisition Act, 2013 provides a mechanism for the return of unutilized land to the original owner or their legal heirs, but such return is subject to specific conditions and procedures. Additionally, the court has ruled in related cases that the government's decision not to return acquired land to the original owner must be justified and not arbitrary.
- The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation, and Resettlement RFLT-LARR Act, 2013 ensures fair compensation for landowners and rehabilitation for those affected. It requires 70% consent for PPP projects and 80% for private projects, along with a Social Impact Assessment (SIA). Compensation is 4 times the market rate in rural areas and 2 times in urban areas.

Conclusion:

The Supreme Court's judgment serves as a strong reminder about the sanctity of land acquired for public purposes. It prevents the misuse of the power of eminent domain through private agreements, ensuring that land remains under the control of the state for its intended purpose. This decision reinforces the need for accountability and transparency in land acquisition practices, crucial for maintaining public trust in government actions.

APAAR ID and Its Controversies in India's Education System

Context:

The implementation of the Automated Permanent Academic Account Registry (APAAR) under NEP 2020 has raised concerns among parents, activists, and educators regarding its impact and data security. Designed as a digital tool to manage students' academic records, APAAR has sparked debates on its

potential risks and benefits.

What is the APAAR ID?

- The APAAR ID is an initiative designed to give every student a unique digital identity, intended to facilitate smoother transitions between educational institutions.
- According to the government, this ID will store students' academic records, such as marksheets, school affiliations, and more, in a standardized format.
- The APAAR ID is also linked to Aadhaar and stored in DigiLocker, making it easily accessible for both students and educational authorities.

Is the APAAR ID Mandatory?

- Despite the government promoting the APAAR ID as a beneficial and voluntary system, many schools and state authorities are pushing for students to enrol, leaving parents unclear about its optional status.
- According to official documents, the APAAR ID is not mandatory, but circulars from educational bodies, such as the CBSE and certain states like Uttar Pradesh, have been pressuring schools to ensure 100% saturation in registrations.

Major Concerns:

- One of the biggest concerns about APAAR is data security. Critics, including the Internet Freedom Foundation (IFF), highlight the lack of transparency in its creation and implementation. While the system collects personal and academic data, there is no clear legal framework to protect it, raising fears of potential misuse.
- Privacy risks are also a major issue, as the data may be shared across educational platforms or third-party entities. The Digital Personal Data Protection Act (2023) prohibits tracking, behavioral monitoring, and targeted advertising for children under Section 9(3), yet the IFF warns of insufficient safeguards to prevent such risks under APAAR.
- Additionally, there are concerns about cybersecurity, as weak data protection could expose student records to cyber threats. Another issue is data duplication, since much of the information already exists in the Unified District Information System for Education Plus (UDISE+), leading teachers to question the necessity and efficiency of APAAR.

The Way Forward:

While the APAAR ID may streamline administrative processes and benefit students in terms of academic records management, the lack of clarity around its mandatory status and the privacy risks it poses must be addressed. Transparency, clear communication, and robust data protection mechanisms are essential to ensure that the benefits of the system outweigh the potential risks.

Supreme Court on Right to Development

Context:

In a landmark judgment, the Supreme Court of India has underscored the need for a balanced approach between the right to development through industrialization and the right to a clean environment. The court set aside two separate orders—one from the National Green Tribunal (NGT) and another from the Madras High Court—that had halted development activities at Auroville, a township project, due to the lack of environmental clearance.

Key Takeaways from the Judgment:

- **Balancing Fundamental Rights:** The Supreme Court affirmed that while the right to a clean environment is a fundamental right under Articles 14 and 21 of the Constitution, the right to development through industrialization also claims priority under the fundamental rights framework, especially under Articles 14, 19, and 21. This ruling highlights the importance of considering both development and environmental concerns as equally valid rights.
- **Sustainable Development:** The court emphasized the need for sustainable development that strikes a "golden balance" between promoting industrialization and protecting the environment. The judgment recognizes that economic growth cannot come at the expense of environmental degradation, and the two should coexist harmoniously through careful planning and responsible development.
- **Judicial Review:** The judgment also stressed the importance of judicial restraint, warning against judicial overreach. The court stated that the judiciary should not interfere with

the implementation of approved development plans—such as the Master Plan for Auroville—unless there are extraordinary circumstances that justify such intervention. This reinforces the need for the judicial system to respect established plans and processes unless a clear legal issue is at stake.

Background of the Case:

- The case centred around the development activities at Auroville, a township project in Tamil Nadu. In 2022, the NGT had directed the Auroville Foundation to halt construction activities due to the lack of environmental clearance. Similarly, the Madras High Court had annulled a notification issued by the Foundation regarding the reconstitution of the Auroville Town Development Council. These judicial actions led to appeals by the Auroville Foundation, resulting in the Supreme Court's intervention.

Implications of the Judgment:

- The Supreme Court's ruling has far-reaching implications for the future of development and environmental protection in India.
- By reaffirming that both the right to development and the right to a clean environment are fundamental rights, the Court has set a clear precedent for striking a balance between economic progress and ecological sustainability.
- As India continues its pursuit of industrialization and economic growth, this decision serves as a crucial reminder that development must be pursued with care, responsibility, and a commitment to sustainability. It also reaffirms the country's constitutional commitment to both economic development and environmental protection, offering a model for future governance and judicial decision-making.
- This judgment offers a critical step towards achieving a harmonious balance between the two essential pillars of India's growth—development and environment—under the larger framework of fundamental rights.



International Relations

India's Maritime Strategy: From SAGAR to MAHASAGAR and the Global South

India has reaffirmed its commitment to the Global South through a series of diplomatic and strategic initiatives, most recently with the unveiling of the MAHASAGAR vision by Prime Minister Narendra Modi during his visit to Mauritius. This initiative builds upon the 2015 SAGAR (Security and Growth for All in the Region) vision, which was also introduced in Mauritius, marking a decade of India's maritime strategy. As global geopolitical dynamics shift, India aims to strengthen its maritime presence, support regional stability, and foster economic growth in the Indian Ocean Region (IOR).

India and Mauritius: A Special Partnership

- ❖ Mauritius holds a pivotal place in India's diplomatic and strategic landscape. Located in the western Indian Ocean, about 2,000 km from the southeastern coast of East Africa, Mauritius is one of the most successful democracies in the developing world. With a population of 1.2 million (predominantly of Indian origin) and a GDP exceeding \$14 billion—expected to reach \$29 billion by 2029—the island nation is both an economic and strategic asset. Its per capita income of \$11,600 further highlights its economic stability.
- ❖ Since gaining independence from Britain in 1968, Mauritius has shared a strong bond with India, built on historical, cultural, and economic ties. Prime Minister Modi emphasized this relationship by declaring, "For us, Mauritius is family." This sentiment is reflected in India's continuous support

to Mauritius, from economic assistance to disaster relief efforts.

SAGAR and the Expansion to MAHASAGAR:

- ❖ In 2015, Modi introduced the SAGAR vision in Port Louis, focusing on regional security, economic collaboration, and maritime stability. The primary objectives of SAGAR were to:
 - » Ensure maritime security by addressing piracy, illegal fishing, and trafficking.
 - » Promote sustainable economic growth through trade and investment.
 - » Strengthen disaster response and humanitarian assistance.
 - » Enhance maritime domain awareness (MDA) for smaller island nations.
- ❖ India has been proactive in realizing SAGAR through tangible actions. In April 2020, when a major oil spill near Mauritius posed an environmental threat, India swiftly deployed technical equipment and personnel for containment efforts. Similarly, during the COVID-19 pandemic, India provided life-saving vaccines and medical aid. More recently, in December 2024, following Cyclone Chido's devastation, India quickly dispatched humanitarian assistance and disaster relief teams.
- ❖ Building on SAGAR, the MAHASAGAR vision expands India's strategic approach by incorporating broader geopolitical and security considerations. The initiative seeks to enhance India's role as a regional leader, strengthen partnerships with smaller island

nations, and counter growing Chinese influence in the IOR.



Strategic Significance of Island Nations in Global Geopolitics

- ❖ Historically, island nations have played a crucial role in maritime geopolitics. During the colonial era, Britain and France consolidated their naval dominance by acquiring strategic islands, while Germany struggled to expand its maritime influence. This trend continues today, with major powers focusing on island states for strategic positioning.
- ❖ In the IOR, both France and the United States maintain military outposts in Réunion and Diego Garcia, respectively. Meanwhile, China has been aggressively expanding its influence through the Belt and Road Initiative (BRI), with significant investments in Sri Lanka, the Maldives, and Djibouti. These efforts blend economic, trade, and military strategies, often leading to debt dependency among smaller nations.
- ❖ India's MAHASAGAR vision is a strategic response to this evolving geopolitical landscape. By positioning Mauritius as a bridge to the broader Global South, India can enhance maritime security cooperation, promote sustainable investments, and counterbalance China's expansionist policies. Key areas of focus include:
 - » Maritime domain awareness (MDA) to improve surveillance and security.
 - » Combatting illegal activities at sea, such

as piracy and illegal fishing.

- » Infrastructure development to support regional trade and economic growth.

The Quad, officially the Quadrilateral Security Dialogue (QSD), is not a formal alliance. It is an informal strategic forum comprising four maritime democracies:

India, Japan, Australia and the United States



PRIMARY OBJECTIVES

Maritime security, addressing climate change, combating Covid-19 pandemic, among others.

The Quad is also seen as an attempt to counter the growing might of China

India's Role in the Indo-Pacific and the Quad Framework:

- ❖ India's maritime vision aligns with the broader Indo-Pacific strategy, particularly within the Quadrilateral Security Dialogue (Quad), which includes the United States, Australia, and Japan. The Quad seeks to ensure a free, open, and inclusive Indo-Pacific, countering coercive tactics employed by China.
- ❖ India distinguishes itself as a benign and trustworthy partner in the region, unlike China, whose lending practices under the BRI have been criticized as exploitative. Countries like Sri Lanka and Pakistan have struggled with debt distress due to unsustainable Chinese loans. Similarly, the United States under Donald Trump has adopted a more transactional approach to foreign policy, which some critics have labeled as "extortionist."
- ❖ Against this backdrop, India's MAHASAGAR vision offers an alternative based on:
 - » Long-term capacity-building rather than debt-driven investments.
 - » Sustainable economic partnerships that prioritize mutual growth.

- » Regional security cooperation with Quad partners to ensure stability.
- ❖ By integrating MAHASAGAR with the Quad's objectives, India can strengthen its maritime influence while providing smaller nations with sustainable, non-exploitative development opportunities.

Challenges in Implementation: Lessons from SAGAR:

While the MAHASAGAR vision is commendable, its success depends on effective implementation. The SAGAR initiative, despite its ambitious goals, has faced several challenges over the past decade:

- ❖ **Lack of Doctrinal Clarity:** Unlike China's BRI, which follows a structured expansion model, India's maritime policies have often lacked a coherent doctrine, leading to inconsistencies in execution.
- ❖ **Insufficient Institutional Capacity:** India's maritime efforts have been hindered by limited bench strength, affecting its ability to respond swiftly to regional developments.
- ❖ **Inadequate Monitoring Mechanisms:** Many SAGAR initiatives have suffered from weak oversight, leading to delays and inefficiencies.
- ❖ To ensure the success of MAHASAGAR, India must focus on:
 - » Strengthening maritime infrastructure to support regional cooperation.
 - » Enhancing inter-agency coordination

between defense, diplomacy, and trade bodies.

- » Developing a structured roadmap with clear policy guidelines and execution timelines.
- ❖ An objective review of SAGAR's progress could provide valuable insights into overcoming these challenges and ensuring that MAHASAGAR achieves its intended objectives.

Conclusion:

India's maritime strategy, from SAGAR to MAHASAGAR, represents a significant step toward strengthening its regional leadership. Mauritius, with its historical and strategic ties to India, plays a key role in this vision. As geopolitical dynamics shift in the Indo-Pacific, India's emphasis on maritime security, sustainable partnerships, and regional cooperation differentiates it from coercive economic powers like China. However, the success of MAHASAGAR will depend on efficient execution. Addressing institutional weaknesses, enhancing maritime capabilities, and aligning with broader Indo-Pacific strategies will be crucial. If implemented effectively, MAHASAGAR can reinforce India's position as a responsible maritime power, offering a sustainable alternative to predatory economic practices in the region.

India's Strategic Engagement in the Arctic: Geopolitics, Resources, and Future Prospects

The Arctic, long perceived as a frozen wilderness, is rapidly transforming into a crucial geopolitical and economic frontier. Melting ice due to climate change is unlocking new shipping routes and exposing vast reserves of hydrocarbons and minerals, making the region a focal point of global strategic competition. While traditionally dominated by Arctic states such as Russia, Canada, and the United States, non-Arctic nations, including China and India,

are increasingly engaging with the region.

- ❖ India, despite its geographical distance, has recognized the Arctic's significance, primarily due to its impact on climate patterns, resource security, and strategic positioning. With the unveiling of India's Arctic Policy in 2022, the country has taken a structured approach to enhancing its presence in the region. However, as global powers compete for influence, India must

transition from a passive research-driven approach to a more strategic and geopolitical role to safeguard its long-term interests.



The Geopolitical and Economic Significance of the Arctic

- ❖ The Arctic region holds immense economic and strategic value due to its vast untapped resources. According to estimates, the region contains nearly 13% of the world's undiscovered oil and 30% of its unexploited natural gas reserves. These resources are increasingly accessible due to the retreating ice cover, making Arctic exploration and extraction commercially viable.
- ❖ Moreover, the Arctic is a crucial transit route. The Northern Sea Route (NSR)—which runs along Russia's Arctic coast—reduces maritime travel time between Europe and Asia by nearly 40% compared to the Suez Canal route. This has significant implications for global trade, energy transportation, and supply chains.
- ❖ The governance of the Arctic is largely dictated by the Arctic Council, an intergovernmental forum comprising Arctic states (Russia, the US, Canada, Norway, Sweden, Finland, Denmark, and Iceland). While non-Arctic states like India and China have observer status, their influence

remains limited. However, with increasing geopolitical competition and climate-driven changes, the role of non-Arctic states is expanding.

India's Arctic Policy and Strategic Interests:

- ❖ India's Arctic engagement began with the signing of the Svalbard Treaty in 1920, which granted it access to the Arctic for scientific research and economic activities. In 2007, India established the Himadri Research Station in Svalbard, Norway, marking its first permanent Arctic presence.
- ❖ In 2022, India formalized its Arctic ambitions by unveiling a comprehensive Arctic Policy, structured around six key pillars:
 - » **Scientific Research and Climate Studies:** Enhancing India's participation in climate research, Arctic weather modeling, and environmental studies.
 - » **Economic and Resource Development:** Exploring energy and mineral resource opportunities while promoting sustainable practices.
 - » **Shipping and Connectivity:** Evaluating Arctic shipping routes like the NSR for trade and logistics benefits.
 - » **International Cooperation & Governance:** Strengthening diplomatic engagement with Arctic states and institutions.
 - » **Capacity Building and Human Resources:** Developing technological expertise and indigenous capabilities for Arctic exploration.
 - » **Environmental Protection & Sustainability:** Balancing economic ambitions with responsible environmental stewardship.
- ❖ While India's Arctic engagement has been largely scientific and environmental, recent developments indicate a shift towards economic and strategic objectives, particularly in collaboration with Russia.

India-Russia Relations and Arctic Cooperation:

- ❖ India's growing interest in the Arctic's hydrocarbon and mineral reserves is closely tied to its strategic partnership with Russia. The Russian Federation borders nearly 50-55% of the Arctic, placing a significant portion of Arctic resources under its

jurisdiction.

- ❖ India has already invested \$15 billion in Russian oil and gas projects, demonstrating its commitment to securing energy resources from the region. At the 22nd Indo-Russia Summit, both nations emphasized deepening trade and investment cooperation, particularly in Russia's Far East and Arctic zones.
- ❖ **Energy Security and Hydrocarbon Exploration**
 - » India has increased imports of Russian crude oil, including Arctic grades like ARCO and Novy Port.
 - » Joint ventures between Indian and Russian energy firms could enhance India's access to Arctic oil and gas reserves.
- ❖ **Northern Sea Route (NSR) Development**
 - » India and Russia have established a joint working group within the India-Russia Intergovernmental Commission on Trade, Economic, Scientific, Technological, and Cultural Cooperation (IRIGC-TEC) to collaborate on NSR trade routes.
 - » Mazagon Dock Shipbuilders, an Indian government entity, signed an agreement with Russia's Zvezda Shipyard to strengthen Arctic commercial shipping.
- ❖ **Multilateral Arctic Engagement**
 - » Despite Western opposition following the Ukraine conflict, Russia continues Arctic cooperation with India, particularly in renewable energy initiatives like the Snezhinka Arctic Station in the Yamal-Nenets region.
 - » India's engagement in Arctic governance through Russian platforms provides it with a strategic presence in the region.

Balancing Russia and China in the Arctic:

- ❖ While India collaborates with Russia, China has also expanded its Arctic ambitions under its "Polar Silk Road" initiative. However, China's growing assertiveness in the Russian Far East has led to tensions in the Russia-China Arctic relationship.
- ❖ India's neutral and time-tested relationship with Russia provides Moscow with a

counterbalance to China's influence. By deepening Arctic cooperation, India can enhance its geostrategic significance for Russia while securing long-term energy and trade interests.

Challenges in India's Arctic Engagement:

- ❖ **Technological and Logistical Constraints**
 - » India lacks icebreaker fleets and polar infrastructure, limiting its ability to conduct extensive Arctic operations.
 - » Unlike China, which has invested in Arctic logistics, India's technological footprint remains minimal.
- ❖ **Limited Influence in Arctic Governance**
 - » As an observer state in the Arctic Council, India has no voting rights, restricting its policymaking influence.
 - » Western-led geopolitical tensions (e.g., NATO-Russia conflicts) could impact India's partnerships.
- ❖ **Environmental and Sustainability Concerns**
 - » India advocates sustainable Arctic resource development, but balancing economic and ecological priorities remains complex.
 - » Climate change mitigation strategies must align with India's increasing energy demands.

The Need for a Strategic Shift in India's Arctic Policy

- ❖ India's Arctic engagement has so far been scientifically driven, but the global competition over Arctic resources requires a more comprehensive geopolitical approach.
- ❖ A critical institutional recalibration is needed:
 - » Currently, India's Arctic policy is overseen by the Ministry of Earth Sciences (MoES), while Arctic diplomacy is managed by the Ministry of External Affairs (MEA).
 - » The MEA must play a central role in integrating strategic and economic dimensions into Arctic policymaking.
- ❖ India must also focus on infrastructure development:
 - » Expanding scientific research stations and logistics capabilities will ensure a

sustained Arctic presence.

- » Collaborations with Arctic states beyond Russia (e.g., Norway and Canada) will diversify India's strategic options.

Conclusion:

As the Arctic transforms into a geopolitical battleground, India must move beyond scientific research and position itself as a trusted Arctic stakeholder. While collaborations with Russia offer economic and strategic advantages, India must ensure a balanced engagement strategy

to avoid over-reliance on a single partner. A decisive shift toward institutional reforms, infrastructure expansion, and multilateral Arctic diplomacy will be crucial. If India remains passive, it risks marginalization in Arctic governance. However, by proactively strengthening its Arctic strategy, India can secure long-term resource access, trade opportunities, and global strategic influence in this evolving geopolitical landscape.

Five Eyes Crisis and Implications for India

Introduction

The "Five Eyes" alliance, formed during World War II and one of the world's most powerful intelligence partnerships, is currently facing an unprecedented internal crisis. This alliance of the US, UK, Canada, Australia and New Zealand is in serious turmoil due to sweeping changes in US foreign policy. In particular, the policies adopted during Donald Trump's second term have challenged the stability of this alliance. This crisis is not limited to the Five Eyes but is also affecting the collective security structure of Western countries. In such a situation, it becomes necessary for India to assess this situation and adapt its intelligence diplomacy to the new global scenario.

Five Eyes: Historical Background and Evolution

- ❖ The Five Eyes alliance began as an agreement signed between the US and Britain during World War II, aimed at intercepting and decoding enemy communications. The bilateral agreement was formalised in 1946, and later included Canada in 1948 and Australia and New Zealand in 1956. During the Cold War, the alliance played a key role in monitoring the activities of the Soviet Union and countries under the Warsaw Pact. After 9/11, its scope expanded to terrorism and cybersecurity. In recent years the Five Eyes alliance has focused on China, particularly as cybersecurity concerns have been raised through companies such as Huawei.

Recent Developments and Challenges:

Under the leadership of Donald Trump, there have been shifts in the way the U.S. engages with its international partners. It is because of these changes the alliance is faced with challenges. Some key developments include:

- ❖ **US-Canada trade dispute:** The aggressive trade policies of the Trump administration have shocked Canada. The dispute was further escalated when us talked of making Canada the "51st state of America".
- ❖ **Greenland dispute:** Trump's attempt to merge Greenland from Denmark with the US was unacceptable to European allies.
- ❖ **Bitter attitude towards Britain:** Trump supporters have criticized Britain's "woke politics" and the policies of the Labor government. In a meeting held in Washington, US Senator J.D. Vance created a new controversy by calling Britain the "first Islamic nuclear power".
- ❖ **The newly appointed officials of the Trump administration:** Tulsi Gabbard as the Director of National Intelligence and Kash Patel as the FBI Director - have raised concerns among traditional allies. They believe that Trump's uncertain approach to intelligence sharing can affect the stability of Five Eyes.
- ❖ **Changes in U.S. Foreign Policy:** The U.S. government has taken a new approach to its relationships with countries like Russia and Ukraine. There have also been discussions about the role of alliances such as NATO

and the European Union. These changes have led to differences in opinions among Five Eyes members.

- ❖ **Trade and Economic Relations:** Trade policies have become a source of tension. The U.S. and Canada, long-standing trade partners, have faced disagreements over trade regulations. Discussions about border security and trade policies have led to speculation about Canada's role in the alliance, although officials have denied any major changes.
- ❖ **Cooperation in the Indo-Pacific Region:** Despite challenges, the Five Eyes nations continue to expand their security presence in the Indo-Pacific region. AUKUS, a new security partnership between Australia, the U.K., and the U.S., is an example of this. This agreement focuses on military cooperation, particularly in developing nuclear-powered submarines. Japan has also increased its intelligence cooperation with Five Eyes nations in recent years.



Future of Five Eyes and possible split

- ❖ The US role in Five Eyes has always been crucial, but in the current scenario, this alliance is heading towards a deeper split. Speculations by Trump's advisers about removing Canada from Five Eyes, a tough stance towards Britain, and criticism of the liberal components of Five Eyes by the American right wing are raising questions about the future of this alliance. If the Trump administration moves towards reorganizing Five Eyes, it is possible that the EU and NATO take advantage of this situation to

develop a separate intelligence network.

Strategic opportunities for India

The crisis in Five Eyes presents several possibilities for India:

- ❖ **Expansion of intelligence partnership:** Instability within Five Eyes can provide India with opportunities to strengthen its intelligence capabilities and deeper cooperation with other friendly countries.
- ❖ **Role in Indo-Pacific:** India can improve its strategic position amid discussions of expanding AUKUS (military alliance between the US, UK and Australia).
- ❖ **Technological security:** Amid security concerns like Huawei and 5G, India should strengthen cybersecurity and technical intelligence partnerships with Western countries.
- ❖ **Possibility of new alliances:** If divisions in the Five Eyes deepen, India can play an important role in building new multilateral intelligence partnerships.
- ❖ **Digital and artificial intelligence cooperation:** India should leverage its technological prowess to work closely with the Five Eyes and other friendly countries in the field of digital surveillance and artificial intelligence (AI)-based intelligence analysis.
- ❖ **Cybersecurity cooperation:** Amid rising cyber-attacks and digital wars, India should take the initiative to share cybersecurity measures with Five Eyes countries.

Conclusion:

The current crisis in the Five Eyes alliance is a result of the changing policies of the US. If this crisis deepens further, it can bring about sweeping changes in the global security architecture. This is an opportunity for India to take advantage of this situation and reorganise its intelligence diplomacy. India should increase cooperation with its traditional partners and evaluate the possibilities of new strategic alliances. This is a crucial time to strengthen India's position amid the rapid changes in global geopolitics.

Short Issues

3rd Joint Trade Committee Meeting between India-Uganda

Context:

The third session of the India-Uganda Joint Trade Committee (JTC) was held in New Delhi on March 25-26, 2025, marking a pivotal moment in the two nations' efforts to enhance economic collaboration after a 23-year hiatus. This meeting served as a platform for both countries to explore new avenues for cooperation, signifying their renewed commitment to strengthening trade relations.

Focus of the 3rd Session

- The primary focus of the 3rd Session of the India-Uganda Joint Trade Committee (JTC) was to strengthen bilateral trade relations and explore new areas of economic collaboration.
- Both nations discussed various sectors, including public works, agriculture, traditional medicine, telemedicine, and critical minerals, to boost cooperation and trade between India and Uganda.

Significance of the session:

- This session was significant because it marked the first meeting in 23 years between the two countries at such a formal level. The discussions focused on enhancing, diversifying, and deepening bilateral trade and economic relations. Both countries recognized that the existing trade volume did not reflect their potential for economic cooperation.



**INDIA-
UGANDA**

3rd Session of the India-Uganda Joint Trade Committee (JTC)

The 3rd Session of the India-Uganda Joint Trade Committee (JTC) Meeting is being held on 25th-26th March, 2025, at Vanijya Bhawan, New Delhi.

Key areas identified for expanding bilateral trade

During the session, both sides identified the following key sectors for enhancing cooperation:

- Agriculture (including coffee, pulses, and spices)
- Minerals, including Rare Earth Elements (REE)
- Dairy products
- Cocoa products
- Essential oils and plastic raw materials
- Health and pharmaceuticals
- Electric vehicles
- Digital infrastructure and banking
- Mining and petrochemicals

Key outcomes of the session:

- Some of the main outcomes of the 3rd JTC session included:
 - » A commitment to increase bilateral trade by focusing on key sectors like agriculture, mining, and healthcare.
 - » An agreement to form an India-Uganda Joint Business Forum to encourage collaboration between businesses from both countries.
 - » The proposal of multiple MoUs in sectors such as infrastructure development, agriculture, and healthcare, aimed at fostering long-term cooperation.

About India- Uganda relationship:

- India and Uganda established diplomatic relations in 1965. Both countries maintain a High Commission in each other's capitals, with India's High Commission in Kampala also accredited to Burundi.
- **Key sectors for India-Uganda cooperation:**
 - » **Trade & Commerce:** Uganda exports minerals, coffee, spices, and other products, while India provides pharmaceuticals, machinery, and technology.
 - » **Education & Technical Cooperation:** India has been a destination for higher education for Ugandan students and offers training to Ugandan professionals.
 - » **Health:** Through initiatives like telemedicine and tele-education, India has supported Uganda's health sector, particularly in remote areas.
 - » **Infrastructure:** India is involved in setting up key institutions such as the India-Africa Institute of Foreign Trade and the Food

Processing Business Incubation Centre in Uganda.

Future Opportunities:

- India and Uganda have identified numerous potential areas for collaboration, such as:
 - » Expanding trade in minerals, coffee, pulses, and dairy products.
 - » Strengthening collaboration in public works, infrastructure, and telemedicine.
 - » Exploring opportunities in agriculture, solar energy, and electric vehicles.

Conclusion:

The meeting set the stage for a diversified and robust partnership, with clear goals in infrastructure, agriculture, digital technology, and sustainable energy. The strengthened India-Uganda collaboration will foster mutual growth and deepen their diplomatic and cultural ties.

Expansion of Squad Group

Context:

The Philippines is working to expand its informal group, the Squad, by including India and South Korea to strengthen maritime security in the Indo-Pacific and counter China's influence in the South China Sea.

About Squad Grouping:

- The Squad is an informal security coalition comprising the United States, Japan, Australia, and the Philippines. Since its formation, the group has been conducting joint maritime operations and exercises within the Philippines' exclusive economic zone in the South China Sea.
- These activities are aimed at strengthening defense capabilities and enhancing regional stability amid growing tensions in the region due to China's assertive policies.
- The expansion will enhance the group's deterrence capabilities and provide a more robust response to China's growing influence in the Indo-Pacific region. The inclusion of these two nations is seen as vital for fostering closer defense cooperation and securing critical maritime routes.

Why India and South Korea?

- India and South Korea have both shown increasing concern over China's growing assertiveness, particularly in the South China Sea. India's long-

standing tensions with China over border disputes, coupled with the shared maritime interests in the Indo-Pacific, make it a strategic partner for the Squad.

- Furthermore, India's expanding defense and military ties with the Philippines create a strong foundation for deeper collaboration within the group.
- South Korea, similarly, has growing concerns about China's military presence and territorial ambitions in the region. By joining the Squad, South Korea would gain a strategic platform for strengthening its maritime security while contributing to regional stability.

China's Response:

- China has voiced its objections to the Philippines' actions, particularly in the South China Sea. China has consistently asserted territorial claims over nearly all of the South China Sea, disregarding the sovereignty claims of several Southeast Asian countries, including the Philippines, Malaysia, Vietnam, and Indonesia.
- The Philippines, however, has resisted these claims, particularly after a 2016 ruling by an international tribunal that invalidated China's expansive territorial claims.
- Despite this, Beijing continues to assert control over the area, leading to escalating confrontations between Chinese and Philippine vessels in the contested waters.

Implications for Regional Security:

- The expansion of the Squad to include India and South Korea could significantly shift the balance of power in the Indo-Pacific. A stronger alliance between these countries would provide a powerful counterbalance to China's growing influence in the region, particularly in critical maritime routes that are vital for global trade.
- By deepening defense cooperation and intelligence-sharing, the expanded Squad could play a crucial role in securing the South China Sea and deterring further Chinese aggression.

Conclusion:

The Philippines' move to expand the Squad grouping reflects its growing concerns about China's regional assertiveness. With India and South Korea likely to play key roles in countering China's influence, the expanded Squad could become a pivotal force in the Indo-Pacific's security dynamics. However, it remains to be seen how

China will respond and how the member countries will navigate the increasingly complex geopolitical landscape in the region.

Defence Cooperation Pact between India and New Zealand

Context:

India and New Zealand have recently signed a historic defence cooperation agreement, marking a significant milestone in their growing bilateral relationship. This agreement aims to bolster defence and security ties, with a particular emphasis on enhancing maritime safety and security in the Indo-Pacific region. This development underscores the shared strategic interests of both nations in ensuring regional stability and upholding international security norms.

Key Aspects of the Agreement:

The defence cooperation pact between India and New Zealand covers a range of critical areas that are designed to enhance both countries' defence capabilities and mutual security interests:

- **Regular Bilateral Defence Engagement:** Both nations have agreed to establish regular bilateral defence engagements. This will include high-level visits, staff talks, joint military exercises, and enhanced coordination on defence-related matters.
- **Cooperation in the Defence Industry Sector:** The pact also includes provisions for cooperation in the defence industry sector, which involves joint research and development, production, and procurement. This collaboration will help in leveraging each country's capabilities to enhance technological and operational readiness.
- **Enhancing Maritime Safety and Security:** The two nations have pledged to step up their cooperation on maritime safety and security. The Indo-Pacific region, with its vital sea lanes of communication, is crucial for global trade and security. By focusing on enhancing maritime safety, India and New Zealand aim to contribute to regional stability and ensure safe navigation for all maritime stakeholders.

About India and New Zealand relationship:

- India and New Zealand have shared warm

diplomatic relations since 1952. Their cooperation has been rooted in shared values, including democratic governance and membership in the Commonwealth.

- India and New Zealand have several shared aspects, such as:
 - » Membership in the Commonwealth.
 - » Similar legal systems based on common law.
 - » Both countries practice democratic governance, with respect for human rights
- In 2011, New Zealand identified India as a priority country through its "Opening Doors to India" policy and launched the NZ Inc. India Strategy, aimed at strengthening economic, trade, and political ties.
- The 2020 strategy paper, "India-NZ 2025 – Investing in the Relationship," aims to build a long-term strategic relationship with India by enhancing economic and trade relations, fostering defense cooperation, and increasing people-to-people exchanges.
- In 2023-24, New Zealand exported goods/services worth US\$ 0.84 billion to India and imported US\$ 0.91 billion. The total trade value between the two countries was US\$ 1.75 billion.

India and New Zealand cooperate in defense sector:

- India and New Zealand share friendly defense ties, demonstrated by several high-profile visits of Indian naval vessels, such as INSV Tarini's port call in New Zealand (Dec 2024-Jan 2025) and the visit of INS Sahyadri and INS Kolkata (Aug-Sept 2023).
- India contributes staff to the Combined Task Force 150, a multinational force led by the Royal New Zealand Navy (RNZN) starting in January 2025.
- India's defence ties with New Zealand are also significant in the context of the Five Eyes intelligence alliance, of which New Zealand is a member. This pact serves as a testament to India's growing global strategic footprint and its commitment to enhancing defence and security partnerships with like-minded democracies around the world.

Conclusion:

The signing of the India-New Zealand defence cooperation pact is a major development in the diplomatic and strategic relations between the two countries. It reflects their shared vision for a secure, stable, and prosperous Indo-Pacific region. By focusing on enhancing maritime safety, fostering defence cooperation, and negotiating a free-trade agreement,

the pact aims to strengthen the bilateral ties between the two nations and contribute to regional security.

SIPRI Report on arms import

Context:

India has been ranked as the second-largest arms importer globally, according to the Stockholm International Peace Research Institute (SIPRI) report for 2020–2024.

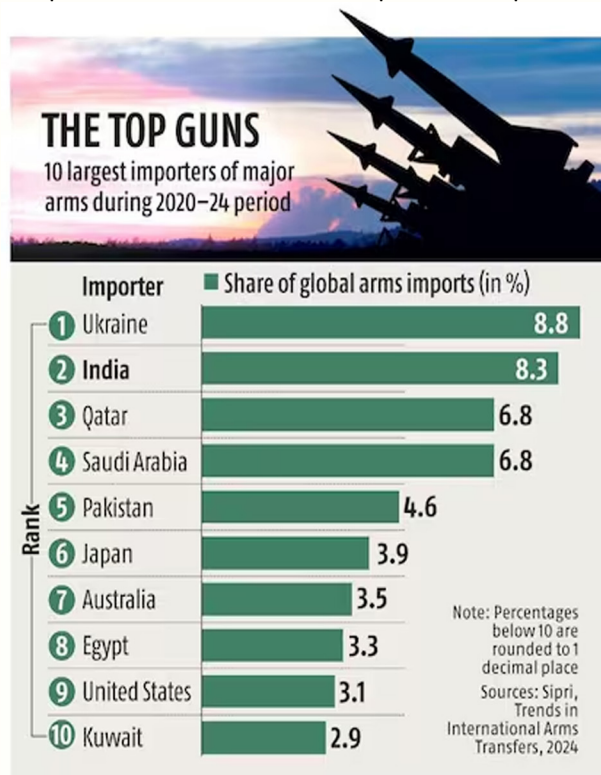
Key findings of the SIPRI report:

- **India's Arms Imports Decline:** India's share in global arms imports fell to 8.3%, with a 9.3% decrease in imports compared to 2015–2019.
- **Russia's Decrease in Supply:** Russia, which was traditionally India's largest arms supplier, saw its share drop significantly from 72% in 2010–2014 to 36% in 2020–2024.
- **France's Increased Role:** France emerged as India's second-largest arms supplier, providing 28% of India's arms imports, including high-profile purchases like Rafale jets and Scorpene submarines.
- **China's Decline:** China, which was once a significant player, dropped out of the top 10 arms importers due to a stronger domestic defense industry and a 64% decrease in arms imports.
- **Regional Trends:** Pakistan's arms imports grew by 61%, with China supplying 81% of its total arms. Conversely, European imports surged due to increased defense spending following Russia's invasion of Ukraine.

India's efforts to reduce dependency on foreign arms imports:

- **Budgetary Allocations:** The Indian government has allocated Rs 6.21 lakh crore for defense in the 2024–25 budgets, with 75% of capital procurement reserved for domestic manufacturers.
- **SRIJAN Portal:** Aimed at promoting self-reliance, the SRIJAN portal facilitates defense procurement from Indian vendors.
- **Positive Indigenization Lists:** These lists restrict the import of certain defense items, ensuring they are produced within India.
- **Defense Acquisition Procedure (DAP) 2020:** DAP prioritizes domestic procurement with categories like "Buy (Indian-IDD)" for indigenously designed, developed, and manufactured equipment.

- **Private Sector Participation:** Encouraging private sector involvement, 21% of India's total defense production now comes from private companies.



India initiatives related to domestic defense manufacturing:

- **Defense Industrial Corridors:** Two corridors in Uttar Pradesh and Tamil Nadu have been established to enhance manufacturing capabilities.
- **Public Sector Units (DPSUs):** India's DPSUs, like HAL and BEL, are leading major indigenization projects like INS Vikrant (aircraft carrier) and LCA Tejas (fighter jet).
- **Foreign Direct Investment (FDI):** The government has opened up defense manufacturing to 74% FDI via the automatic route and 100% via the government route, encouraging foreign investments in the sector.

India's future goals :

- **Production Targets:** India targets Rs 1.75 lakh crore worth of defense production by 2025, with a goal of Rs 3 lakh crore by 2029.
- **R&D & Innovation:** Initiatives like iDEX (Innovations for Defence Excellence) are encouraging startups and MSMEs to innovate in military technology. These efforts are crucial

for reducing dependency on foreign arms and strengthening India's defense capabilities.

Conclusion:

India's position as the second-largest arms importer highlights its significant defense needs. However, with ongoing initiatives focused on indigenization, private-sector involvement, and strategic investments, India is poised to reduce its reliance on foreign imports while enhancing its domestic defense production. The SIPRI report reflects both the current challenges and the progressive steps India is taking toward self-reliance in defense.

Joint River Commission (JRC) Meeting

Context:

India and Bangladesh Joint River Commission (JRC) recently met in Kolkata for a two-day session to discuss the Ganges Water Treaty, a pivotal agreement that has governed water sharing between the two nations since 1996. With the treaty set to expire in 2026, the March 6-7, 2025 meeting aimed to address its renewal and other related water-sharing concerns.

About the Ganges Water Treaty:

- Signed in 1996, the Ganges Water Treaty ensures equitable water distribution from the Ganges River, preventing one country from diverting water during dry seasons. This agreement holds significant economic, environmental, and cultural importance for both countries. The Joint River Commission (JRC), established in 1972, manages 54 trans-boundary rivers between India and Bangladesh and has played a key role in overseeing the treaty.

Key Issues Discussed:

- **Renewal of the Ganges Water Treaty:** With the treaty's expiration in 2026, both countries focused on renewing the agreement. Discussions centered on improving the existing framework while addressing new challenges related to water-sharing.
- **Water Sharing Beyond the Ganges:** Another major topic was the sharing of water from other rivers flowing from India into Bangladesh. A technical committee was formed to recommend fair water distribution from these additional rivers,

which has become a prominent issue in recent years.

- **Measurement of Water Flows:** Accurate water flow measurement is essential for maintaining transparency and ensuring fair water distribution. The technical committee also worked on resolving challenges related to measuring water flows.
- **Ensuring Equitable Distribution:** The treaty's core principle remains the equitable distribution of water. Both countries emphasized preventing unilateral actions, especially during dry seasons, to preserve fairness.



Importance of the Meeting:

- The meeting marked the first significant water-sharing discussions after the change of government in Bangladesh in August 2024. It was a crucial step in strengthening bilateral relations and reaffirming the commitment to cooperation on shared water resources.

Way Forward:

As the treaty's expiration approaches, continued

dialogue is essential for renewing the agreement. Both nations are committed to resolving challenges cooperatively. With climate change and water scarcity becoming pressing global issues, the renewal of the Ganges Water Treaty, along with progress on other trans-boundary rivers, will play a vital role in shaping future India-Bangladesh relations and may serve as a model for international water-sharing agreements.

India and Bhutan Relationship

Context:

India and Bhutan recently discussed boundary-related field matters and explored opportunities for technological and capacity-building collaboration. The two-day meeting, held in New Delhi, brought together officials from the Government of India and Bhutan's Office of International Boundaries to review matters relating to boundary-related fieldwork.

Key highlights of the Meeting

- **Boundary-Related Field Matters:** Both sides expressed satisfaction with the work completed by their respective field survey teams and other stakeholders involved in boundary-related fieldwork.
- **Technological and Capacity-Building Collaboration:** The two sides discussed the potential for technological and capacity-building collaboration related to survey and boundary-related work, aligned with the priorities of both governments.
- **Work Plan for the Next Three Field Seasons:** A work plan was finalized for the next three field seasons, ensuring a clear roadmap for future collaboration between the two countries.

About India-Bhutan Bilateral Relations:

- India and Bhutan share a strong and multifaceted relationship, underpinned by political, economic, and cultural ties. This relationship has been built over several decades, with numerous agreements and collaborations that benefit both nations.
- **Political relationship:**
 - » The foundation of India-Bhutan relations is the Treaty of Friendship, first signed in 1949 and renegotiated in 2007. This treaty underscores their deep political and security cooperation, ensuring mutual respect and understanding. Diplomatic relations were formally established

in 1968, and since then, both countries have cooperated on multiple fronts, particularly in defense and security.

- **Hydro-Power Cooperation:**

- » One of the most prominent areas of cooperation is hydropower. In 2006, India and Bhutan signed a bilateral agreement on hydropower cooperation, supplemented by a protocol in 2009. For Bhutan, India provides access to Indian financing and energy markets, which is crucial for the country's socio-economic development.
- » For example, Bhutan's Basochhu and Nikachhu hydropower plants are connected to India's power exchanges, allowing Bhutan to trade electricity. For India, Bhutan's clean energy helps meet power demands sustainably, especially in the northeastern regions.



Support from India to Bhutan:

India provides substantial support to Bhutan in various forms:

- **Free Trade Regime:** The India-Bhutan Agreement on Trade, Commerce, and Transit (1972), revised in 2016, ensures duty-free access for Bhutanese exports to third countries.
- **Development Assistance:** India is a key partner in Bhutan's 13th Five-Year Plan (2024-2029) and supports the Economic Stimulus Programme, funding infrastructure projects to boost Bhutan's development.
- **Security Assistance:** India has played a crucial role as a net security provider. This was evident during the Doklam standoff in 2017, when India intervened to protect Bhutanese territory from

Chinese encroachment.

- **Infrastructure:** Through Project DANTAK, India's Border Roads Organisation (BRO) has built critical infrastructure in Bhutan, enhancing connectivity.
- **Other Support:** India offers scholarships for Bhutanese students and contributes around 50% of Bhutan's foreign direct investment (FDI). India is also helping Bhutan implement the Digital Drukyl project for better digital connectivity.

Growing Concerns in India-Bhutan Relations:

While relations have been positive, several emerging concerns need addressing:

- **Increasing Proximity with China:** Bhutan has increased interactions with China, exemplified by the 2023 visit of Bhutan's Foreign Minister. China is Bhutan's second-largest trade partner, accounting for over 25% of its trade, raising concerns in India.
- **China's Territorial Assertiveness:** China's "five-finger policy" considers Bhutan part of its territorial claims, especially regarding the Doklam Plateau. India fears Chinese territorial expansion in the region.
- **Militant Groups:** Bhutanese territory has been used by militant groups from India's northeast, such as the United Liberation Front of Assam (ULFA), posing security risks.
- **Stalled Projects:** The BBIN Motor Vehicle Agreement has been delayed due to environmental concerns in Bhutan, hindering regional connectivity.

Joint Economic Commission between India and Ireland

Context:

Recently, India and Ireland have agreed to establish a Joint Economic Commission (JEC) for boosting bilateral trade, investment, and technology ties. This decision follows a meeting between External Affairs Minister S. Jaishankar and Irish Minister for Foreign Affairs Simon Harris in Dublin.

About JEC:

- The Joint Economic Commission (JEC) will serve as a strategic platform to enhance internal cooperation, strengthen trade, and foster collaboration across various sectors between India and Ireland.

Purpose:

- The Joint Economic Commission (JEC) aims to boost bilateral trade, investment, and technology ties between India and Ireland.
- It provides a platform for collaboration in several sectors, including trade, technology, and economic growth.

Focus Areas

- **Trade Relations:** The JEC will explore new opportunities for mutual growth and collaboration in trade between the two nations. This includes increasing exports and imports in various sectors, such as pharmaceuticals, organic chemicals, and machinery.
- **Investment:** The JEC will focus on fostering investment between both countries, with particular emphasis on key sectors such as technology, agriculture, and clean energy. Both countries will look for opportunities to increase mutual investment flows, thereby creating jobs and promoting innovation.
- **Technology Exchange:** Enhancing cooperation in information technology (ICT), fin-tech, and smart cities initiatives will be a key objective. Both countries are looking to leverage their technological strengths to drive progress in critical sectors.

About India-Ireland Relations:

- Formal diplomatic relations between India and Ireland were established in 1947. India opened its Embassy in Dublin in 1951, while Ireland opened its Embassy in New Delhi in 1964. Honorary Consulates in Mumbai and Bengaluru were set up in 1976 and 2000, respectively, and further expanded in Chennai and Kolkata in 2010 and 2017.
- **Bilateral Trade:**
 - » For 2023-2024, the total trade between India and Ireland stands at USD 6.37 billion.
 - » Key exports from India include organic chemicals, pharmaceuticals, and aircraft parts.
 - » Key imports to India from Ireland include electrical machinery, plastic articles, and aircraft parts.
- **Education:**
 - » Around 6,000 Indian students are currently studying in Irish universities.
 - » Notable collaborations include joint degree programs between Trinity College Dublin and Thapar University.

▪ **Indian Community in Ireland:**

- » There are approximately 80,000 people of Indian origin in Ireland, with around 40,000 being Non-Resident Indians (NRIs).
- » The Indian community is particularly prominent in healthcare, IT, engineering, and management sectors.
- » Leo Varadkar, former Irish PM, has Indian ancestry, symbolizing the integration of the Indian community into Irish society.

Conclusion:

The establishment of the Joint Economic Commission is an important milestone in the evolving partnership between India and Ireland. By increasing trade, investment, and technology collaborations, this initiative is set to foster closer ties and a stronger, more dynamic relationship between the two nations. With a shared commitment to global cooperation and regional stability, both countries are poised to explore new areas of collaboration, ensuring a brighter future for their bilateral ties.

Extradition of 26/11 Accused in India from US

Context:

Recently, United States Supreme Court has rejected Tahawwur Hussain Rana's plea against his extradition to India. Rana, who is accused in the 2008 Mumbai terror attack, had filed an "Emergency Application for Stay" after President Donald Trump approved his extradition.

- Rana's extradition is set to occur under the India-US Extradition Treaty, signed by both countries in 1997. The treaty provides a legal framework for the extradition of individuals charged or convicted of serious crimes in either nation.

Rana's Involvement in the 26/11 Attacks:

- Tahawwur Rana is accused of aiding in the reconnaissance for the 26/11 attacks carried out by David Coleman Headley, his schoolmate in Pakistan. He is also accused of participating in the terror conspiracy.

About extradition:

- Extradition is the legal process by which one state requests the return of a person who is accused or convicted of a crime that is punishable under the laws of the requesting state, and the crime was

committed outside the state of refuge. In other words, it is the transfer of an individual from one country to another to face trial or serve a sentence.

- Extraditable persons include:
 - » Individuals charged with a crime but not yet tried.
 - » Individuals who have been tried and convicted but have escaped custody.
 - » Individuals convicted in absentia (without being present during the trial).



2008 - Pakistani-origin Canadian businessman Tahawwur Rana wanted by NIA for his role in Mumbai attacks that killed 166, including six Americans.

2009 - FBI arrests Rana in the US for plotting terror attacks; linked to key 26/11 conspirator David Headley.



2011 - US court convicts Rana, sentences him to 14 years for supporting LeT & Danish newspaper attack plot.

2019 - India formally requests Rana's extradition, follows up for six years.

2023 - US court approves extradition; Rana files a review petition.

2024 - US Supreme Court denies his plea, clearing the way for extradition to India.

2025 - Trump announces extradition of 26/11 attack accused Tahawwur Rana

Legal framework for extradition in India:

- Extradition in India is governed by the Indian

Extradition Act, 1962. This Act provides the legal process for extraditing individuals to and from India, both for crimes committed within India and in foreign countries. The process is typically based on bilateral treaties between India and other countries.

About Extradition Treaty:

- An extradition treaty is an agreement between India and another country that facilitates the return of individuals who are fugitives from justice. The treaty outlines the conditions under which extradition can take place and is binding on both countries involved. Extradition treaties are usually bilateral, meaning both countries agree on the terms.

key principles followed in the extradition process:

The extradition process follows several important principles:

- **Dual Criminality:** The crime for which extradition is requested must be an offence under the laws of both the requesting and requested countries.
- **Prima Facie Case:** The requesting country must present sufficient evidence that supports the accusation against the individual.
- **Specific Offence:** Extradition should only be granted for the offence mentioned in the request, and not for any other charge.
- **Fair Trial:** The individual must be provided with a fair trial upon their extradition to the requesting country.

Conclusion:

As Rana prepares to face trial in India, law enforcement agencies in the country are ramping up efforts to ensure that he is held accountable for his role in the 26/11 attacks. His extradition represents a major victory for India's relentless fight against terrorism and its determination to bring the perpetrators of the 2008 Mumbai attacks to justice.

Future of Greenland

Context:

Greenland, the world's largest island, has been at the center of global attention following U.S. President Donald Trump's recent comments about acquiring the territory. In a speech to Congress, Trump expressed the U.S. administration's support for Greenland's right

to self-determination, while also stating his intention to acquire the island. However, Greenland's Prime Minister, Múte Bourup Egede, strongly rejected Trump's claims, affirming that Greenland belongs to its people, not the United States.

About Greenland's Autonomy and Self-Determination

- Greenland has enjoyed significant autonomy since 1979, when it was granted self-rule by Denmark. This autonomy has continued to grow, with further powers being transferred to Greenland in 2009.
- Despite being a semi-autonomous territory of Denmark, Greenland has a government and legislative body that handles its internal affairs, while Denmark manages defense, foreign policy, and monetary matters.
- However, there is a growing sentiment among Greenlanders for even greater self-determination and potential full independence from Denmark.
- While Trump has suggested that the U.S. would support Greenland's integration, many in the island nation view this as an infringement on their sovereignty.
- Prime Minister Egede emphasized in his response that Greenland's future should be decided by its own people, underscoring the island's desire to maintain control over its destiny.



Greenland's Geopolitical Significance:

- Greenland's geopolitical importance has surged in recent years due to its vast size, rich natural resources, and strategic location in the Arctic region. With global warming opening up new shipping routes and exposing previously unreachable reserves of oil, gas, and minerals, the island has become a key point of interest for many

countries, including the United States.

- For the U.S., Greenland represents a significant asset in its efforts to strengthen its presence in the Arctic, a region increasingly critical to international trade, security, and resource extraction. The Arctic has become a geopolitical hotspot, with countries like Russia, China, and the U.S. vying for influence and control over the region's resources and trade routes.

Way ahead:

As discussions around Greenland's future continue, the island's citizens will play a central role in determining their own destiny. Whether Greenland moves toward full independence or continues its relationship with Denmark, the island's rich resources and strategic location will undoubtedly continue to shape global geopolitical dynamics in the years to come. The debate over Greenland's sovereignty underscores the complexities of modern international relations and the growing importance of the Arctic region in the global stage.

India and EU: The importance of partnership in a multipolar world

Context:

The relationship between India and the European Union (EU) has reached a crucial juncture, particularly following the recent visit of European Commission President Ursula von der Leyen to India.

- This visit highlights the growing recognition on both sides of the need to strengthen their partnership in response to shifting global dynamics. The evolving nature of this collaboration signals a more robust engagement across key sectors such as trade, security, and technology.

Importance of the Visit:

- The changing global power landscape, particularly the strain on the US-Europe alliance during the Trump administration, has prompted both India and the EU to reassess their international positioning.
- Recognizing the urgency of closer cooperation, Prime Minister Narendra Modi and von der Leyen have prioritized strategic engagement in areas such as the economy, security, technology, and connectivity. Given the increasing geopolitical

challenges, both sides acknowledge the necessity of deepening their partnership to navigate the complexities of global affairs effectively.



INDIA-EU RELATIONS: A TIMELINE

1962	Diplomatic ties established between India and the European Economic Community (EEC)
1981	India and EEC sign Cooperation Agreement
1994	India-EU Partnership and Development Agreement adopted
2000	First India-EU Summit held
2004	Relations elevated to 'Strategic Partnership'
2005	India-EU Joint Action Plan (JAP) issued
2007	India-EU Free Trade Agreement (FTA) talks launched
2012	Last regular India-EU Summit (11th) held
2016	Revised India-EU Joint Action Plan adopted
2020	COVID-19 era virtual 15th India-EU Summit
2024-2025	FTA negotiations resume India-EU Trade and Technology Council (TTC) cooperation

Free Trade Agreement:

- A key focus of the renewed India-EU relationship is the long-pending Free Trade Agreement (FTA). Negotiations for this agreement began in 2007 but have repeatedly stalled due to bureaucratic hurdles and unresolved issues. Now, with a renewed commitment from both leaderships, there is a strong push to finalize the FTA within the year.
- This agreement holds particular significance against the backdrop of global trade imbalances, concerns over China's economic influence, and the unpredictability of US trade policies. Successfully concluding the FTA would not only enhance economic cooperation but also strengthen the geopolitical positioning of both India and the EU in

an increasingly multipolar world.

Historical Context of India-EU Relations:

- India was among the first countries to establish diplomatic ties with the European Economic Community (EEC), the EU's predecessor, in 1963. However, for decades, the relationship remained largely dormant.
- During the Cold War, India's close ties with the Soviet Union and its inward-looking economic policies limited deeper engagement with Europe. The collapse of the Soviet Union in the early 1990s, coupled with India's economic liberalization, created new opportunities for stronger cooperation.
- By 2004, India and the EU formally established a strategic partnership, and in 2007, they launched negotiations for an FTA. However, despite efforts to strengthen trade and economic collaboration, these negotiations faced multiple roadblocks, rendering the strategic partnership more symbolic than substantial.

Conclusion:

The India-EU relationship is now poised for a transformative phase, driven by a shared commitment to overcoming past challenges and capitalizing on emerging opportunities. The push to finalize the FTA, along with deeper cooperation in other strategic areas, sets the stage for a more comprehensive and influential partnership in the years ahead.

Thailand-China Deportation Case

Context:

A group of at least 40 Uyghur men who had been detained in Thailand for more than a decade was deported to China recently despite international protests. Thai and Chinese officials confirmed the deportation, sparking an outcry from human rights organizations, lawmakers, and activists who warned that the men would face grave consequences upon their return to China, including imprisonment and possible death.

About the Uyghurs:

- The Uyghurs are a Turkic-speaking Muslim ethnic group native to Xinjiang, a vast region in western China.

- Over the past few decades, the Chinese government has been engaged in a brutal campaign of repression against the Uyghurs, with allegations of forced labor, forced sterilizations, arbitrary detention, and cultural suppression.
- Estimates suggest that over one million Uyghurs have been detained in so-called "reeducation camps," where they are subjected to abuse and indoctrination.

Why Thailand deported Uyghurs?

- For over a decade, Thailand has navigated a complex diplomatic situation regarding the Uyghur detainees, balancing its relations with China, its largest trading partner, and the United States, its longstanding military ally.
- China has classified the Uyghurs as terrorists but has not presented evidence linking the deported individuals to terrorism. Meanwhile, Uyghur activists and Western governments argue that the men are innocent and could face persecution if returned.
- Discussions on the deportation of Uyghur detainees gained momentum following a meeting between Thai Prime Minister Paetongtarn Shinawatra and Chinese President Xi Jinping in December 2024.
- Thailand's decision to proceed with deportations has been viewed as a diplomatic move in strengthening ties with China. However, the decision has also drawn criticism from the US and other Western nations, which have raised concerns about potential human rights implications.

Future Implications:

- As the deported individuals arrive in China, uncertainty remains regarding their treatment. Chinese authorities have not disclosed specific details about their conditions or status. Given past reports of human rights concerns involving Uyghurs, there are apprehensions about potential imprisonment or forced labor.
- International human rights organizations have urged China to ensure the safety and fair treatment of the deported individuals in accordance with international law. Additionally, there have been calls for Thailand to be held accountable for its role in the deportation and for future cases to be handled with greater consideration for human rights and international standards.



Environment & Ecology



Expanding Tiger Reserves in India: Implications for Ecology and Society

Introduction

Madhav National Park, located in Shivpuri district of Madhya Pradesh, was recently designated as India's 58th tiger reserve. This decision is expected to strengthen the conservation efforts in the Ranthambore-Kuno-Madhav National Park corridor, which is recognized as a vital habitat for sustaining and expanding the tiger population. The newly declared reserve spans an area of 1,651 square kilometers and currently hosts six tigers, including a cub. This addition aligns with India's broader conservation strategy under Project Tiger, which has been instrumental in the protection and management of tiger populations across the country.

Historical Context of Project Tiger:

- ❖ While hunting big game was an ancient practice in India, it was during British rule that the scale of hunting significantly increased. Even after India's independence, hunting remained widespread among Indian elites and tourists, leading to a drastic decline in the tiger population. The alarming depletion of tigers, exacerbated by rapid deforestation for agricultural expansion, became evident in the 1960s.
- ❖ Recognizing the crisis, the Indian government, led by Prime Minister Indira Gandhi, took a decisive step by banning the export of tiger skins in 1969. The same year, the 10th assembly of the International Union for Conservation of Nature (IUCN)

in Delhi classified tigers as an endangered species. A resolution was adopted to impose a moratorium on their hunting. Subsequently, a governmental task force was established under the leadership of Karan Singh, chairman of the Indian Board for Wildlife, to devise conservation strategies.

- ❖ The recommendations of this task force culminated in the launch of Project Tiger in April 1973, shortly after the enactment of the Wildlife Protection Act in 1972. Initially conceived as a six-year initiative, Project Tiger has since evolved into a long-term conservation program aimed at maintaining a viable tiger population and preserving their natural habitats.

Establishment and Purpose of Tiger Reserves:

- ❖ Project Tiger commenced with the establishment of nine tiger reserves: Manas (Assam), Jim Corbett (Uttarakhand), Kanha (Madhya Pradesh), Palamau (Jharkhand), Ranthambore (Rajasthan), Simlipal (Odisha), Melghat (Maharashtra), Bandipur (Karnataka), and the Sundarbans (West Bengal). These reserves were designated in areas where national parks already existed and received financial support through a centrally sponsored scheme.
- ❖ Tiger reserves were designed with a dual-zone structure:
 - » **Core Areas:** These zones are strictly protected, prohibiting activities such as tree felling, livestock grazing, and human

movement (except for conservation personnel).

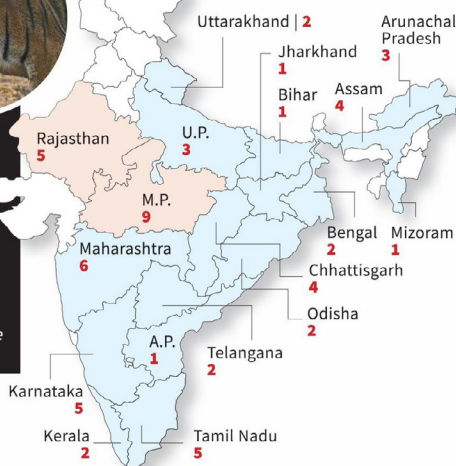
- » **Buffer Zones:** These regions allow limited human activities and are intended to reduce human-wildlife conflict while supporting conservation efforts.
- ❖ In 2005-06, amendments to the Wildlife Protection Act led to the formation of the National Tiger Conservation Authority (NTCA), a statutory body overseeing the implementation of Project Tiger and strengthening conservation policies.

Homes for the big cat



Tiger reserves are spread across the length and breadth of India, with Madhya Pradesh having the highest number of nine reserves

As of the 2023 tiger census, India is estimated to have 3,682 tigers. About 30% of them are considered to be living outside tiger reserves



Tiger Distribution in India:

- ❖ According to the latest population estimation (2022-23), India is home to approximately 3,681 tigers (ranging between 3,167 and 3,925 individuals). These tigers occupy an estimated 89,000 square kilometers of forested land, an area comparable to the size of Jordan and larger than Austria. The distribution of tigers in India is categorized into several landscapes:
 - » Shivalik Hills and Gangetic Plains
 - » Central Indian Highlands and Eastern Ghats
 - » Western Ghats
 - » North Eastern Hills and Brahmaputra Floodplains
 - » Sundarbans

- ❖ Among the notable tiger reserves, Corbett National Park has the highest tiger population (260), followed by Bandipur (150), Nagarhole (141), Bandhavgarh (135), Dudhwa (135), Mudumalai (113), Kanha (105), Kaziranga (104), Sundarbans (100), Tadoba-Andhari (97), Sathyamangalam (85), and Pench (77).
- ❖ At the state level, Madhya Pradesh leads with 785 tigers, followed by Karnataka (563), Uttarakhand (560), and Maharashtra (444).

Challenges in Tiger Conservation:

- ❖ Despite the success of Project Tiger, conservation efforts face multiple challenges. While 26 reserves have stable tiger populations exceeding 50 individuals, the remaining 27 reserves struggle with low tiger densities. The 2022 report indicated that 16 reserves had either no tigers, only male populations, or fewer than five individuals. These reserves are primarily located in:
 - » Arunachal Pradesh
 - » Chhattisgarh
 - » Jharkhand
 - » Maharashtra
 - » Telangana
 - » Odisha
- ❖ A particularly concerning trend is observed in Telangana, Odisha, Jharkhand, and Chhattisgarh, where tiger populations have remained static, declined, or even become locally extinct, as seen in the case of Satkosia Tiger Reserve in Odisha.
- ❖ A study published in Science (2006-2018) highlights several factors contributing to conservation challenges:
 - » **Poor socio-economic conditions:** Many tiger reserves are located in economically disadvantaged regions, where human communities depend on forests for sustenance.
 - » **Political instability and insurgency:** Conflict-ridden areas pose difficulties in implementing conservation policies effectively.
 - » **Mining and developmental pressures:**

Infrastructure projects, deforestation, and industrial expansion threaten natural tiger habitats.

- » **Human-wildlife conflict:** The expansion of human settlements into forested areas increases encounters between tigers and local communities.
- » **Limited core habitat availability:** The study found that only 25% of tiger habitats are in core areas, while buffer zones constitute 20%, indicating a need for better habitat connectivity.

Global Efforts and India's Role:

- ❖ **Global Tiger Forum (GTF):** Established in 1994, the Global Tiger Forum (GTF) is the only inter-governmental organization working exclusively for tiger conservation. Headquartered in New Delhi, GTF coordinates conservation policies among 14 tiger range countries to:
 - » Strengthen legal frameworks for tiger protection.
 - » Expand and improve protected areas.
 - » Develop transboundary conservation initiatives.
- ❖ **Global Tiger Initiative (GTI) and Tx2 Program:**
 - » The Global Tiger Initiative (GTI) was

launched in 2008 by the World Bank in collaboration with conservation groups and governments. In 2010, leaders of 13 tiger range countries gathered in St. Petersburg, Russia, to adopt the Tx2 goal, which aimed to double the global tiger population by 2022 (base year: 2006). India achieved this target ahead of schedule, reinforcing its role as a leader in tiger conservation.

Conclusion:

The addition of Madhav National Park as India's 58th tiger reserve marks another step in the country's ongoing conservation efforts. However, challenges such as habitat fragmentation, human encroachment, and ecological degradation must be addressed to ensure the long-term survival of tigers. Strengthening conservation policies, expanding core habitats, and improving socio-economic conditions in buffer zones are crucial to sustaining India's tiger population and preserving biodiversity for future generations.

India's Integrated Vision for Forests, Food, and Sustainability

Introduction

Forests are an essential part of Earth's ecosystem, providing oxygen, food, medicine, and livelihoods to millions of people worldwide. They act as natural carbon sinks, help regulate the climate, and support biodiversity. Beyond their ecological significance, forests play a critical role in global food security, offering essential resources such as fruits, seeds, roots, and wild meat that support indigenous and rural communities.

- ❖ Recognizing the importance of forests, the United Nations declared March 21 as the International Day of Forests (IDF) in 2012

to promote awareness and action towards forest conservation. Each year, a unique theme is selected by the Collaborative Partnership on Forests, with "Forests and Food" as the theme for 2025. This theme highlights the deep connection between forests and food security, emphasizing their role in providing nutrition, sustaining livelihoods, and supporting ecosystems.

- ❖ India, with its vast forest cover and rich biodiversity, is deeply connected to forests in terms of culture, economy, and environmental sustainability. The Government of India has undertaken

various initiatives to ensure sustainable forest management and conservation, linking forests to food security, climate resilience, and economic development.

Forestry in India: Status and Key Insights

- ❖ India has a rich and diverse forest ecosystem, covering 21.71% of its total land area, according to the India State of Forest Report (ISFR) 2023. These forests are classified into tropical rainforests, deciduous forests, mangroves, alpine forests, and thorn forests, reflecting the country's varied geography and climate.



Forest and Tree Cover in India

- ❖ **Total Forest and Tree Cover:** 8,27,357 sq km (25.17% of India's total geographical area).
- ❖ **Tree Cover:** 1,12,014 sq km.
- ❖ **Increase in Forest Cover:** The forest cover has increased by 156 sq km compared to 2021.
- ❖ **States with Highest Forest Cover:** Madhya Pradesh, Arunachal Pradesh, Chhattisgarh, Odisha, and Maharashtra.
- ❖ **States with the Most Growth in Forest Cover (since 2021):** Chhattisgarh, Uttar Pradesh, Odisha, and Rajasthan.

Carbon Stock and Environmental Impact:

- ❖ India's forests store 7,285.5 million tonnes of carbon, contributing significantly to the

2.29 billion tonnes of carbon sink. This is crucial for mitigating climate change by absorbing greenhouse gases.

Economic Contribution of Forests:

- ❖ Forests support India's economy through:
 - » Timber and Non-Timber Forest Products (NTFPs) such as bamboo, honey, resin, and medicinal plants.
 - » Ecotourism that generates revenue and employment in forested regions.
 - » Livelihoods for Tribal and Rural Communities who depend on forest produce for sustenance and income.

Conservation Efforts in India:

- ❖ To ensure sustainable forest management, India has implemented several government initiatives, including:
 - » **National Afforestation Programme (NAP):** Encourages afforestation and reforestation projects.
 - » **Green India Mission (GIM):** Aims to restore and expand forest cover while enhancing ecosystem services.
 - » **Joint Forest Management (JFM):** Involves local communities in forest conservation and management.

Key Government Initiatives for Forest Conservation

- ❖ **National Agroforestry Policy (2014):** Agroforestry is a sustainable land-use system that integrates trees and crops to improve soil fertility, agricultural productivity, and farmers' income. Recognizing its potential, India launched the National Agroforestry Policy to promote tree plantation on farmland.
- ❖ **Objectives of the Scheme:**
 - » Encourage climate-resilient and environmentally sustainable farming.
 - » Enhance agricultural productivity through tree-crop integration.
 - » Support farmers' income by providing market and economic incentives.
- ❖ **Implementation Strategy:**
 - » Production and distribution of Quality Planting Material (QPM) through nurseries and tissue culture.

- » ICAR-Central Agroforestry Research Institute (CAFRI) provides technical support, certification, and training.
- » Collaboration with ICFRE, CSIR, ICRAF, and state agricultural universities for research and implementation.
- ❖ **Market and Economic Support:**
 - » Farmers receive price guarantees and buy-back options for farm-grown trees.
 - » Encourages private sector participation in agroforestry marketing.
 - » Supports India's strategy to promote millets, which thrive in tree-based farming systems.
- ❖ **Green India Mission (GIM):** The Green India Mission (GIM), part of India's National Action Plan on Climate Change (NAPCC), was launched to protect, restore, and enhance forest cover while tackling climate change.
- ❖ **Mission Goals:**
 - » Expand forest/tree cover by 5 million hectares and improve another 5 million hectares.
 - » Boost carbon storage, water management, and biodiversity.
 - » Improve livelihoods for 3 million households through forest-based income.
- ❖ **Sub-Missions:**
 - » **Enhancing Forest Cover:** Improving quality and ecosystem services.
 - » **Ecosystem Restoration:** Reforesting degraded lands.
 - » **Urban Greening:** Adding trees in cities and urban areas.
 - » **Agroforestry & Social Forestry:** Creating carbon sinks.
 - » **Wetland Restoration:** Reviving critical wetlands.
- ❖ **Funding and Expenditure:**
 - » As of July 2024, Rs. 909.82 crores has been allocated for plantations across 17 states and 1 Union Territory, covering 155,130 hectares.
- ❖ **Forest Fire Prevention & Management Scheme:** This Centrally Sponsored Scheme supports states and UTs in preventing and controlling forest fires.
- ❖ **Objectives:**
 - » Reduce forest fire incidents and restore affected areas.
 - » Involve local communities in forest protection.
 - » Use modern technology like Remote Sensing, GPS, and GIS for fire monitoring.
- ❖ **Implementation:**
 - » The Forest Survey of India (FSI) developed a satellite-based Forest Fire Monitoring and Alert System for real-time detection.
 - » Fire alerts are sent via SMS and email to authorities for quick response.
- ❖ **Pradhan Mantri Van Dhan Yojana (PMVDY):** Launched in 2018 by the Ministry of Tribal Affairs and TRIFED, this scheme aims to boost the livelihoods of tribal communities by enhancing the value of Minor Forest Produce (MFPs).
- ❖ **Formation of Van Dhan Vikas Kendras (VDVKs):**
 - » Each Kendra has 300 members from 15 Self-Help Groups (SHGs).
 - » These serve as processing hubs for value addition and marketing of forest produce.
- ❖ **Financial Support:**
 - » Rs.15 lakh per Kendra is provided by the government.
 - » Tribal members contribute ₹1,000 to ensure ownership.
 - » Supports branding, packaging, and global market access for tribal products.
- ❖ **Implementation Stages:**
 - » **Stage I:** Establishing 6,000 Kendras with basic facilities.
 - » **Stage II:** Scaling up with better infrastructure like storage and processing units.
- ❖ **Impact and Benefits:**
 - » Sustainable livelihoods for tribal communities.
 - » Forest conservation and reduced deforestation.
 - » Stronger tribal economy and reduced migration.

Conclusion:

India's commitment to forest conservation and sustainability is evident through various policies and initiatives like the National Agroforestry Policy, Green India Mission, Forest Fire Prevention Scheme, and Van Dhan Yojana. These programs restore and protect forest ecosystems, enhance livelihoods, and

strengthen food security. On International Day of Forests 2025, it is crucial to recognize forests as vital resources and reaffirm our dedication to sustainable development. By integrating community participation, policy reforms, and conservation efforts, India continues to move towards a greener, healthier, and more prosperous future.

Short Issues

First-Ever Estimate of Gangetic Dolphins

Context:

The first-ever detailed dolphin population survey in India has estimated a total of 6,327 riverine dolphins across the country's major river basins. Conducted between 2021 and 2023, the survey identified 6,324 Gangetic dolphins in the Ganga and Brahmaputra river basins, along with three Indus river dolphins in the Beas river basin in Punjab.

- The study was carried out by the Wildlife Institute of India in collaboration with state forest departments of Punjab, Uttar Pradesh, Bihar, Assam, Jharkhand, and Rajasthan, along with Aaranyak, the World Wildlife Fund, Turtle Survival Alliance, and the Wildlife Trust of India.

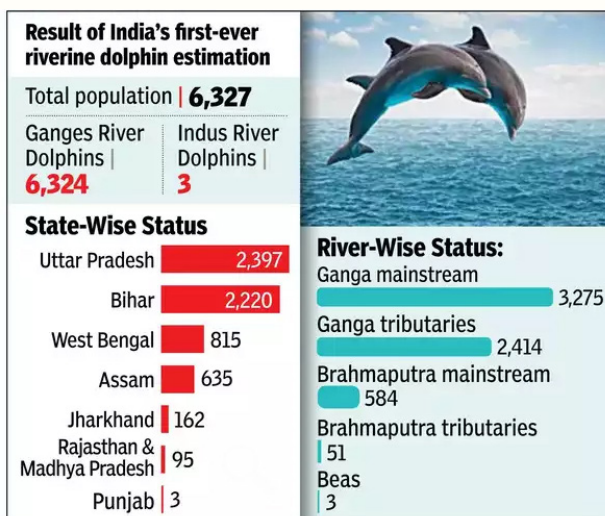
Key Findings:

- The study revealed that the highest number of dolphins were reported in Uttar Pradesh, followed by Bihar, West Bengal, and Assam. Specifically, there was an average of 3,275 dolphins in the main stem of the Ganga, 2,414 in the Ganga tributaries, 584 in the Brahmaputra mainstream, 412 in the Brahmaputra tributaries, and 101 in the river Beas.

Methodology of Counting:

- Counting dolphins is a challenging task due to their underwater habitat. The research team used hydrophones—underwater microphones—to detect dolphin sounds, relying on the dolphins' echolocation to locate them.
- Additionally, two sets of observers on the boat ensured that each dolphin was only counted once. This method of triangulating the presence of the

dolphins, along with constant boat speed, made the counting process more accurate.



About Ganga River Dolphin:

- The Ganga River Dolphin (*Platanista gangetica*), also known as the Susu or Tiger of the Ganga, is a unique and endangered species endemic to the Indian sub-continent.
- It has a distinctive long thin snout and large flippers that aid in its unique swimming behavior.
- Further it has a slit-like nostril on top of its head, which acts as a blowhole.
- It uses ultrasonic waves for hunting and navigation. Its unique swimming pattern helps in locating food, and it emits a distinctive "Susu" sound while surfacing to breathe.
- Female Ganga River Dolphins are larger than males. They give birth to one calf every two to three years.

Conservation Status

- » IUCN: Endangered
- » Wildlife (Protection) Act: Schedule-I
- » CITES: Appendix I
- » It faces significant threats from unintentional killing, overexploitation of prey, poaching for dolphin oil, habitat destruction, pollution, and population fragmentation due to dams.
- » For conservation, the Vikramshila Gangetic Dolphin Wildlife Sanctuary in Bihar remains India's only dedicated dolphin sanctuary. Additionally, Project Dolphin, modeled after Project Tiger, aims to implement special conservation measures for the species.
- » The Ganga River Dolphin was declared India's national aquatic animal on October 5, 2009, a date now observed as National Ganga River Dolphin Day.

Conclusion:

This first-ever estimates provides valuable insight into the population of Gangetic dolphins and highlights the need for on-going conservation efforts. The survey's success marks a significant step forward in understanding and preserving these endangered riverine species.

Madhav National Park Declared India's 58th Tiger Reserve

Context:

Madhav National Park, located in the Shivpuri district of Madhya Pradesh, has officially been declared as India's 58th tiger reserve, marking a major milestone in the country's ongoing efforts to protect its tiger population.

About Madhav National Park:

- Spanning an area of 375.233 square kilometers, Madhav National Park is home to a diverse range of ecosystems, including dry deciduous forests, grasslands, and water bodies.
- This varied terrain supports an array of wildlife species such as tigers, leopards, sloth bears, and numerous bird species, making it a critical area for conservation.
- The park's ecological diversity plays a vital role in maintaining the region's overall environmental

health.

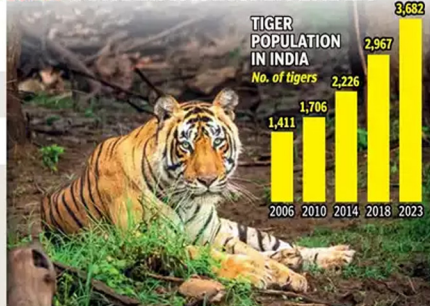
Significance of the Tiger Reserve:

- One of the main objectives of declaring Madhav National Park as a tiger reserve is to strengthen wildlife corridors in the region.
- These corridors are vital for connecting fragmented tiger populations and allowing for genetic exchange, which is essential for the survival of the species.
- This move also aims to improve the overall ecological balance of the area, benefiting a wide range of flora and fauna.

JOURNEY OF TIGER CONSERVATION IN INDIA

LANDMARK YEARS

- 1969** | Ban on the export of all wild cat skins
- 1972** | Wildlife Protection Act enacted
- 1973** | Project Tiger launched
- 2006** | Amendment in the Wildlife (Protection) Act, resulting in establishment of the National Tiger Conservation Authority (NTCA) and the Wildlife Crime Control Bureau (WCCB)
- 2010** | Global Tiger Reserve Day celebrated to bolster international efforts for tiger conservation
- 2023** | International Big Cats Alliance (IBCA) launched



STATE-WISE LIST OF TIGER RESERVES

	No. of TR
Madhya Pradesh	9
Maharashtra	6
Karnataka, Rajasthan and TN	5 each
Assam and Chhattisgarh	4 each
Arunachal Pradesh and UP	3 each
Kerala, Odisha, Telangana, U'khand & WB	2 each
Andhra Pradesh, Bihar, Jharkhand & Mizoram	1 each

About Tiger Reserves in India:

- Tiger Reserves in India are protected areas specifically designated for the conservation of tigers and their habitats. These reserves are created under Project Tiger, which was launched in 1973 by the Indian government to safeguard the endangered Bengal tiger population.
- Tiger reserves can also function as national parks or wildlife sanctuaries, offering legal protection and ecological safety to tigers.
- As of 2025, India has 58 tiger reserves spread across various states. These reserves collectively cover around 82,000 square kilometers, representing more than 2.3% of India's total land area. The most recent addition is the Madhav National Park Tiger Reserve in Madhya Pradesh, which was designated as the 58th Tiger Reserve in 2025.
- The National Tiger Conservation Authority (NTCA) is a statutory body under the Ministry of

Environment, Forest, and Climate Change. It is responsible for overseeing the implementation of Project Tiger and ensuring the effective management of tiger reserves.

- The NTCA provides financial aid to state governments, enforces legal protection, and monitors tiger populations to ensure their sustainable growth.

Initiatives to protect tiger in India:

India's tiger conservation efforts are bolstered by several initiatives:

- **Project Tiger:** Launched in 1973, it provides financial and technical assistance to state governments for tiger conservation.
- **Tiger Census:** A periodic survey conducted to estimate the tiger population in India.
- **M-STrIPES:** A monitoring system to track and improve patrolling activities in Tiger Reserves.
- **St. Petersburg Declaration on Tiger Conservation:** A commitment by India and other tiger-range countries to double the global tiger population by 2022 (TX2 initiative).

Conclusion:

India is home to over 70% of the world's wild tiger population, with 3,682 tigers. The country's tiger conservation efforts have evolved significantly over the years, from initial bans on hunting and trade to multifaceted conservation strategies involving legal frameworks, international cooperation, and community engagement. The declaration of Madhav National Park as a tiger reserve is a testament to India's commitment to environmental protection and wildlife conservation.

World Air Quality Report 2024

Context:

The World Air Quality Report 2024, was recently released by Swiss air quality technology company IQAir, highlights alarming levels of air pollution across the globe. It reveals that India continues to face severe pollution, with 13 of the world's 20 most polluted cities located in the country.

Key Highlights of the report:

- India remains at the forefront of the global air pollution crisis, with several cities experiencing

extremely high levels of harmful pollutants. The report reveals the continuing impact of rapid industrialization, agricultural practices, and vehicular emissions, which have led to deteriorating air quality across the nation.

- Delhi is the World's Most Polluted Capital for Six Consecutive Years:
 - » Delhi has earned the distinction of being the world's most polluted capital for the sixth consecutive year, surpassing even other cities in the National Capital Region (NCR). The city's annual PM2.5 concentration of 91.6 µg/m³ remains dangerously high, contributing significantly to the nation's pollution levels.

Decline in Average PM2.5 Levels:

- India showed a slight improvement in air quality in 2024, with an average PM2.5 concentration of 50.6 µg/m³, reflecting a 7% decrease from 2023 when it stood at 54.4 µg/m³. While this marks progress, the levels are still far above the WHO-recommended limit, indicating a continued need for robust measures to combat pollution.

Most Polluted Cities in India:

- Bynrihat, a city in Meghalaya, emerged as the most polluted city globally in 2024, with an annual PM2.5 concentration of 128.2 µg/m³, more than 25 times higher than the WHO recommended limit. India accounted for six of the world's ten most polluted cities, further solidifying the country's air quality crisis.

Most Polluted Cities in the World in 2024

1. Bynrihat, India		11. Peshawar, Pakistan	
2. Delhi, India		12. Sialkot, Pakistan	
3. Karaganda, Kazakhstan		13. Gurugram, India	
4. Mullanpur, India		14. Ganganagar, India	
5. Lahore, Pakistan		15. Hotan, China	
6. Faridabad, India		16. Greater Noida, India	
7. N'Djamena, Chad		17. Bhiwadi, India	
8. Loni, India		18. Muzaffarnagar, India	
9. New Delhi, India		19. Hanumangarh, India	
10. Multan, Pakistan		20. Noida, India	

Major Pollution Sources:

- Key contributors to pollution include crop stubble burning, which accounted for approximately 60% of the PM2.5 pollution during peak periods. Other significant sources include vehicular emissions,

industrial discharges, and dust from ongoing construction projects. These sources continue to make it difficult for cities to achieve clean air standards.

Widespread Exposure to Dirty Air:

- The report shows that only 12 countries, regions, and territories—primarily in Latin America, the Caribbean, and Oceania—met the WHO’s annual PM2.5 guidelines.
- Only 17% of the 8,954 cities globally met WHO’s PM2.5 guidelines in 2024, demonstrating the widespread violations of air quality standards. The 20 most polluted cities, located primarily in India, Kazakhstan, Chad, Pakistan, and China, exceeded WHO limits by more than 10 times, highlighting a global air pollution crisis.

Most Polluted Countries:

- The five most polluted countries in 2024, based on annual average PM2.5 concentrations, are as follows:
 - » Chad: 91.8 $\mu\text{g}/\text{m}^3$
 - » Bangladesh: 78 $\mu\text{g}/\text{m}^3$
 - » Pakistan: 73.7 $\mu\text{g}/\text{m}^3$
 - » Congo: 58.2 $\mu\text{g}/\text{m}^3$
 - » India: 50.6 $\mu\text{g}/\text{m}^3$

Conclusion:

Air pollution is not just a problem for India; it is a widespread issue affecting the entire planet. The 2024 report highlights that a significant portion of the global population is exposed to unsafe levels of air pollution, with many countries failing to meet the World Health Organization’s (WHO) recommended PM2.5 limit of 5 $\mu\text{g}/\text{m}^3$. While some progress has been made in reducing PM2.5 levels, more urgent and comprehensive actions are required to address the root causes of pollution. Strengthening policies, improving enforcement, and investing in clean technologies will be key to mitigating the impact of air pollution on public health and the environment.

Heliconia Species on the Brink of Extinction

Context:

A recent study has revealed that nearly half of the Heliconia species, a tropical plant group known for its

bright flowers, are now on the brink of extinction. This research, conducted by scientists from the Smithsonian National Museum of Natural History, highlighted that many of these endangered plants are no longer found in protected areas or botanical gardens, indicating an urgent need for additional conservation efforts to protect these charismatic and ecologically significant plants.

About Heliconia species:

- Heliconia is a tropical plant genus comprising 187 species. While some species are native to the Pacific Islands, most are found in rainforests of Central and South America.
- These plants are crucial ecological resources, supporting many creatures such as bats and hummingbirds, which are vital pollinators for several Heliconia species. The plants produce nectar to attract these birds, which then transfer the pollen to other flowers.
- Heliconia plants are perennial herbs with stout, reed-like stems. The leaves resemble those of bananas and may exhibit a coppery sheen. The midrib of the leaves is often ivory or pink.
- The plants produce large, waxy bracts that alternate in a single plane and support numerous small flowers. These inflorescences can be hanging or erect, with flowers in various colors, such as red, orange, yellow, and green.



Key findings of the Study:

- In this study, researchers compiled a list of 45 Heliconia species that they believe should be given the highest priority for additional protection.
- The research found that 87 species of Heliconia (47% of the genus) are on the verge of extinction, representing almost half of the entire genus. The alarming aspect of this discovery is that, with one

exception, all of these endangered species are only found in a few protected areas in the wild.

- Furthermore, most of the Heliconia specimens growing in botanical gardens are among the least concern species on the IUCN Red List, which makes their conservation status even more concerning.
- Heliconia plants face significant threats from habitat loss, invasive species, and climate change. Until now, there has been little information about the population of these plants in the wild.
- Only a few species of Heliconia have been evaluated for conservation, and currently, only 21 species of Heliconia are listed in the International Union for Conservation of Nature (IUCN) Red List of Threatened Species.

Conclusion:

This research confirms that immediate action is required to protect species like Heliconia, which are not only ecologically significant but also charismatic plants that contribute to biodiversity. The IUCN Red List currently includes only 21 species of Heliconia, but more focus on the conservation of these plants is needed. Based on the findings, the researchers emphasize the importance of creating a coherent and effective conservation plan to protect the species, particularly those outside of protected areas and botanical gardens.

Second National Gene Bank

Context:

The Prime Minister Narendra Modi has announced the establishment of a second National Gene Bank. This initiative aims to safeguard India's agricultural biodiversity, support sustainable farming systems, and strengthen the country's position as a leader in global biodiversity conservation.

- The Ministry of Finance has announced the establishment of the second National Gene Bank in the 2025-26 budget. This new facility will be capable of housing 10 lakh (1 million) germplasm lines, significantly enhancing India's ability to conserve a vast array of plant genetic resources.

What is a Gene Bank?

- A Gene Bank is a facility designed to store genetic material, such as seeds, pollen, or tissue samples, collected from various plant species. The

primary objective of a Gene Bank is to protect these species from potential extinction and to preserve vital varieties for future use. This stored genetic material plays a crucial role in research, conservation, and the breeding of crops suited to changing environmental conditions.

About India's First Gene Bank:

- India's first Gene Bank was established in 1996 by the Indian Council of Agricultural Research-National Bureau of Plant Genetic Resources (ICAR-NBPGR) in New Delhi.
- It has 12 regional stations across the country to collect and store vital crop germplasms, which are the genetic material necessary for agricultural innovation and biodiversity conservation.
- As of January 2025, this Gene Bank stores around 0.47 million accessions, which include key crops such as cereals, millets, legumes, oilseeds, and vegetables.

Significance of the Second Gene Bank:

- The creation of a second Gene Bank is a pivotal step in reinforcing India's leadership in global biodiversity conservation. This new facility will not only help preserve India's invaluable plant genetic resources but also bolster international biodiversity initiatives.
- By collaborating with countries in the SAARC and BRICS regions, the second Gene Bank will support biodiversity conservation efforts worldwide, assisting nations that may lack established plant genetic resource networks.

Challenges and Opportunities:

- India's agricultural biodiversity faces increasing threats from climate change, natural disasters, and geopolitical uncertainties. The creation of a second Gene Bank addresses these challenges by providing a redundancy structure for the preservation of India's irreplaceable germplasm.
- This facility will act as a fail-safe, ensuring the long-term security of critical plant genetic resources. By safeguarding these resources, the second Gene Bank plays a crucial role in sustaining global food security and addressing the challenges posed by a rapidly changing environment.

Conclusion:

The establishment of the second National Gene Bank is a monumental step towards preserving agricultural

biodiversity and securing the future of food in India. It underscores India's commitment to sustainable farming systems, agricultural innovation, and global biodiversity conservation. This initiative will not only ensure food security for future generations but also contribute to the global effort to preserve genetic resources and combat the threats to biodiversity.

The Alarming Decline of Butterfly Populations in the US

Context:

A recent study has revealed a disturbing trend in the United States: the country's butterfly population has dropped by 22% over the past two decades. This alarming decline is largely attributed to insecticides, climate change, and habitat loss. The findings underscore the importance of addressing environmental challenges and their broader impacts on ecosystems and human societies.

Key Findings of the Study:

- The study, published in *Science*, examined 76,957 surveys conducted by 35 monitoring programs and counted over 12.6 million butterflies across the Lower 48 states (excluding Alaska and Hawaii). The results revealed a steady decline in butterfly numbers, with an average annual decrease of 1.3% since 2000. Some species saw declines of 40% or more, with the Southwest region experiencing a shocking drop of more than 50% in butterfly populations.

Primary Causes of the Decline:

- The authors of the study identified three key factors contributing to the declining butterfly populations:
 - » **Insecticides:** The study suggests that insecticides, which have become more widely used over the years, are the leading cause of the decline. These chemicals are detrimental to butterfly larvae and adult butterflies, disrupting their life cycles.
 - » **Climate Change:** Rising temperatures and changing weather patterns have made environments less hospitable to butterflies, especially in warmer regions where the

species is already struggling.

- » **Habitat Loss:** Urbanization, deforestation, and agricultural expansion have destroyed the natural habitats where butterflies thrive, contributing to the loss of key resources such as food and nesting sites.

Primary Causes of the Decline



The authors of the study identified three key factors contributing to the declining butterfly populations:

Insecticides

Most significant cause identified by researchers.

- Harmful to both larvae and adult butterflies
- Disrupt the reproductive and developmental cycle
- Widely used in agriculture, leading to long-term population damage

Rising temperatures affect butterfly migration and breeding patterns

Climate Change

- Unpredictable weather (droughts, heavy rains) disrupts their life cycle
- Tropical and warmer regions show a faster rate of decline

Habitat Loss

Driven by urbanization, deforestation, and agriculture

- Leads to the destruction of nectar sources, host plants, and nesting grounds
- Shrinking natural ecosystems reduce butterfly diversity and abundance

Implications of Butterfly Decline:

- The decline in butterfly populations has profound consequences, both for the environment and human societies:
 - » **Pollination:** Butterflies play a crucial role as pollinators, helping to fertilize many plants, including crops like cotton. Their loss could affect agricultural productivity, leading to challenges in food security.
 - » **Ecosystem Health:** The disappearance of butterflies is a sign of broader environmental issues.

Suggestion:

- The study emphasizes that habitats can be

restored, and with the right actions, butterfly populations can recover:

- » **Restoring habitats:** Efforts to create and protect butterfly-friendly habitats, such as planting native plants in gardens and reducing lawn areas, can help provide food and shelter for butterflies.
- » **Reducing pesticide use:** By limiting or eliminating harmful pesticide use, individuals and communities can directly contribute to the well-being of butterfly populations.

Limit Global Warming to 1.5°C

Context:

In a stark warning, Jim Skea, chairperson of the United Nations Intergovernmental Panel on Climate Change (IPCC), stated that the world's aspiration to limit global warming to 1.5°C is "hanging by a slender thread." This cautionary message follows the world's breach of the 1.5°C threshold in 2024, marking a critical juncture where the risks of climate change become even more severe and undeniable.

About The Paris Climate Accords:

- The Paris Agreement is a legally binding international treaty on climate change, adopted by 196 Parties at the UN Climate Change Conference (COP21) in Paris, France, on December 12, 2015. It entered into force on November 4, 2016. The agreement's primary goal is to limit global warming to well below 2°C above pre-industrial levels, with efforts to limit it to 1.5°C.
- The Paris Agreement operates on a five-year cycle of increasing ambition. Countries submit their Nationally Determined Contributions (NDCs) every five years, outlining their actions to reduce greenhouse gas emissions and adapt to climate impacts. Each NDC is intended to be more ambitious than the last.

The IPCC's Role in Climate Action:

- The IPCC plays a pivotal role in climate action by producing comprehensive scientific reports on the state of the climate. These reports inform governmental policies and shape international climate negotiations.
- The IPCC's upcoming synthesis report—a culmination of inputs from its three working

groups—will provide further insights into the urgency of addressing the climate crisis and be released in the second half of 2029. This report will play a crucial role in guiding global efforts to mitigate climate change and inform future policy decisions.



Limiting Global Warming: Benefits and Challenges:

- Limiting global warming to 1.5°C, as opposed to 2°C, would significantly reduce the impacts on terrestrial, freshwater, and coastal ecosystems, preserving their essential services to humanity. However, achieving this goal presents formidable challenges.
- It requires immediate and deep emissions reductions across all sectors, including energy, transportation, industry, and agriculture. The transition to renewable energy sources and sustainable practices must happen at an accelerated pace to avoid crossing irreversible climate thresholds.

Way Forward:

To prevent the catastrophic consequences of climate change, urgent action is needed. The IPCC stresses the need for collective global efforts to drastically reduce greenhouse gas emissions, transition to renewable energy, and implement policies that align with the 1.5°C target. Governments, industries, and individuals

must collaborate to accelerate this transition and mitigate the worst effects of climate change.

New Species of Jumping Spiders

Context:

Researchers have recently discovered two new species of jumping spiders in the Shendurney Wildlife Sanctuary, located in the Kollam district of Kerala in western ghat. The new species have been named *Epidelaxia falciformis* sp. nov. and *Epidelaxia palustris* sp. nov., marking an exciting addition to the biodiversity of India.

About *Epidelaxia falciformis* and *Epidelaxia palustris*:

- Both species belong to the genus *Epidelaxia*, which was previously considered endemic to Sri Lanka. This discovery marks the first time the *Epidelaxia* genus has been recorded in India, expanding its known range from Sri Lanka to the Indian subcontinent.
- These species were identified during field expeditions in the Shendurney Wildlife Sanctuary, a vital area within the Western Ghats, known for its rich biodiversity.



Physical Features:

- Both species share some striking and unique physical features, making them easily identifiable:
- **Yellow Triangular Mark:** The females of both species have a prominent yellow triangular-

shaped mark on the prosoma (the front part of their body).

- **Males of *Epidelaxia falciformis*:** Males have a brown carapace with a yellow-brown stripe, giving them a distinct look.
- **Males of *Epidelaxia palustris*:** These males feature a pale brown band along the side of their bodies.

About Western Ghats:

The Western Ghats are a mountain range in India that runs along the western coast of the peninsula.

- **Geographical Significance:** The Western Ghats block monsoon winds from the Arabian Sea, causing heavy rainfall on the west and creating a rain shadow on the east. They stretch across Maharashtra, Goa, Karnataka, Kerala, and Tamil Nadu.
 - » **Biodiversity Hotspot:** A UNESCO World Heritage Site, the Western Ghats are a biodiversity hotspot with many endemic species, including plants, animals, and insects found only in this region.
 - » **Endemic Species:** The region is home to unique species like the Nilgiri Tahr, Lion-tailed Macaque, and Malabar Large-spotted Frog, along with several species of orchids.
 - » **Threats to Ecosystem:** Human activities such as deforestation, mining, and agriculture are damaging the region's ecosystem, leading to habitat loss and declining biodiversity.
 - » **Conservation Efforts:** National parks and wildlife sanctuaries like Periyar, Bandipur, and Wayanad protect the region's biodiversity. The Western Ghats are recognized as a biodiversity hotspot globally.
 - » **Important Passes:** The Palakkad Gap is a key mountain pass that connects the western coast with the eastern plains of India.
 - » **Highest Peak:** Anamudi, the highest peak in the Western Ghats, stands at 2,695 meters and is part of the Eravikulam National Park.

Conclusion:

The discovery of these two new species of jumping spiders is a significant addition to the biodiversity of India and the Western Ghats. As researchers continue to explore the unique species of this region, it is clear that the Western Ghats remains one of the most biodiverse and ecologically significant areas

in the world. The discovery not only enriches our understanding of the local fauna but also underscores the importance of protecting such habitats to preserve these unique species for future generations.

Okjökull Glacier

Context:

Satellite images taken over three decades apart reveal the shocking disappearance of Iceland's Okjökull glacier, officially declared dead in 2014 due to human-caused climate change.

About Okjökull glacier

- Located on the Ok volcano in Iceland, Okjökull was a dome-shaped glacier that covered approximately 15 square miles in 1901. By 1986, the ice had dwindled to less than 1 square mile. The final blow came in 2019, when the glacier's ice covered a mere 0.4 square miles. The glacier became the first to be officially declared dead due to human-caused climate change in 2014.

What are Glaciers?

- Glaciers are large, perennial accumulations of snow and ice that slowly flow over land due to gravity and their own weight.
- **Formation Conditions:** They form in regions where the annual mean temperature is near freezing, and where snowfall during the winter is substantial enough to create significant snow accumulation.

Importance of Glaciers

- **Water Reservoirs:** Glaciers hold about 75% of the Earth's freshwater, acting as crucial long-term water sources for many regions.
- **Food Systems:** They provide water for irrigation, especially in regions where other water sources may be limited, and their meltwater helps fertilize the land, supporting agriculture.
- **Biodiversity:** Glacial meltwaters contribute nutrients to lakes, rivers, and oceans, supporting vital ecosystems, particularly by driving phytoplankton blooms, which are fundamental to aquatic food chains.

Iceland loses first glacier to climate change



Impact of Glacier Melting Due to Climate Change

- **Disrupted Water Cycles:** As glaciers melt, the availability of freshwater becomes more uncertain, affecting ecosystems, agriculture, and the overall water supply.
- **Natural Disasters:** Melting glaciers can lead to the risk of Glacial Lake Outburst Floods (GLOFs) and avalanches, which can cause widespread damage to surrounding areas.
- **Sea Level Rise:** The melting of glaciers contributes to rising sea levels, which leads to coastal erosion, habitat loss, and a decline in biodiversity.
- **Climate Feedback Loop:** As glaciers melt, the Earth's reflectivity (albedo) decreases, absorbing more heat and accelerating global warming, creating a vicious cycle.

Initiatives to Protect Glaciers

- **Global Initiatives:**
 - » The United Nations has designated 2025 as the International Year of Glaciers' Preservation to raise awareness.
 - » UNESCO's Intergovernmental Hydrological Programme and other global organizations are also working on solutions to mitigate glacier loss.
- **India's Efforts:**
 - » India is focusing on the Himalayan Cryosphere through research programs such as the Network Programme on the Himalayan Cryosphere, the Centre for Cryosphere & Climate Change Studies, and the HIMANSH research station.

Conclusion:

As the concentration of carbon dioxide in the atmosphere continues to rise, reaching over 428 parts per million in March 2025, the need for urgent action

becomes increasingly clear. The story of Okjökull serves as a visual testament to the devastating consequences of climate change, emphasizing the importance of collective efforts to mitigate its effects.

Thawing Permafrost in the Kashmir Himalayas

Context:

A recent study has uncovered alarming findings regarding the thawing of permafrost in the Kashmir Himalayas, highlighting its potential to disrupt not only the region's infrastructure but also its ecosystems and local communities. Permafrost, defined as ground that has been frozen for at least two years, covers a staggering 64.8% of the total geographic area of Jammu and Kashmir and Ladakh.

Key Findings of the Study

The study, which utilized weekly satellite data on surface temperatures from 2002 to 2023, reveals the profound implications of permafrost degradation for the region.

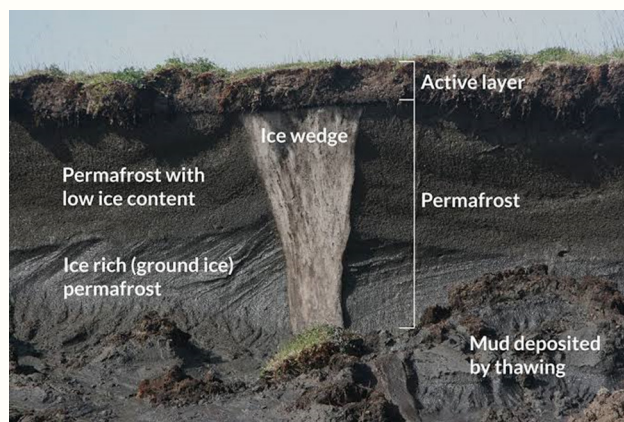
- **Infrastructure Risks:** Over 193 km of roads, critical for connectivity in these remote areas, could be compromised. With the thawing permafrost, roads could become unstable, leading to disruption in transportation and access. Additionally, 2,415 households and essential hydropower projects are at risk due to the destabilization of the ground on which they are built.
- **Environmental and Water System Impacts:** The degradation of permafrost is likely to affect 903 alpine lakes, many of which are already at risk of glacial lake outburst floods (GLOFs). These floods, caused by the sudden release of water from a glacial lake, pose a severe threat to communities and infrastructure downstream. Furthermore, the study highlights the potential impact on rivers that flow from glaciers, which may be altered due to permafrost degradation.

What causes Permafrost Degradation?

- While the primary driver of permafrost thawing is the rise in surface temperatures, human activities also play a significant role in accelerating the process. Factors such as deforestation, land-use changes, and wildfires disturb the natural insulation of permafrost, causing it to thaw at

a faster rate than would occur through natural warming alone.

- These activities, often spurred by development and population growth, further exacerbate the vulnerability of the region's delicate permafrost ecosystems, which have remained stable for millennia.



Potential Impacts of Thawing Permafrost

- **Release of Greenhouse Gases:** One of the most concerning effects is the release of organic carbon stored in permafrost. As it thaws, this carbon, including potent greenhouse gases like methane, is released into the atmosphere, further accelerating global warming and contributing to climate change.
- **Increased Risk of GLOFs:** Thawing permafrost destabilizes glaciers, increasing the risk of GLOFs. These floods can cause catastrophic damage to downstream communities, infrastructure, and agricultural areas, with a ripple effect on the local economy and livelihood.
- **Water Availability:** Permafrost degradation can disrupt the natural regulation of groundwater and river systems, potentially reducing water availability for both drinking and agricultural use. As glaciers melt and permafrost erodes, it can affect the flow of rivers and reduce their ability to maintain stable water levels throughout the year.

Conclusion:

The thawing of permafrost in the Kashmir Himalayas presents a multifaceted challenge that requires urgent attention. However, with targeted action—ranging from better monitoring to more informed infrastructure planning—there is hope that the worst impacts can

be mitigated. As the region faces the dual threat of environmental change and human development, safeguarding the stability of its permafrost will be essential in ensuring the future resilience of Kashmir's communities and ecosystems.

Study on Indian Monsoon

Context:

A groundbreaking study by the Indian Institute of Science (IISc) has made a significant discovery about the Indian monsoon, a phenomenon crucial for the country's agriculture and water supply. The research, published in *npj Climate and Atmospheric Science*, highlights the critical role of cloud band strength in determining the movement and density of monsoon rain.

Key Findings:

- **Cloud Band Strength:** The study reveals that the strength of equatorial cloud bands is crucial for their northward movement toward the Indian subcontinent. A robust cloud band enhances atmospheric moisture through intensified winds, facilitating successful northward propagation.
- **Impact on Rainfall:** Stronger cloud bands contribute to increased rainfall density during monsoon wet spells. This finding challenges previous theories that suggested cloud bands would propagate northward regardless of their initial strength.
- **Future Projections:** The research indicates that as global temperatures rise, background atmospheric moisture is expected to increase. This change is projected to result in stronger wet spells, with rainfall during these periods expected to escalate by 42% to 63% over India and its adjoining seas.

About Monsoons:

- Monsoons are seasonal winds that reverse their direction with the change of seasons. These rhythmic winds are periodic in nature, flowing from the sea to the land during the summer and from land to sea during the winter. The term "monsoon" is derived from the Arabic word *mausin* or the Malayan word *monsun*, both meaning 'season'.
- Monsoons are a significant climatic feature in the Indian subcontinent. They are more pronounced in this region compared to any other part of the

world. The Indian monsoon is a double system of seasonal winds:

- » **South-West Monsoons:** These winds blow from the sea to land during the summer, bringing intense rainfall to most of India.
- » **North-East Monsoons:** These winds blow from land to sea during the winter, bringing rainfall mainly to the southeastern coast of India, such as the southern coast of Andhra Pradesh and Tamil Nadu.
- **Factors Influencing the Onset of South-West Monsoons:**
 - » Heating of the Tibetan Plateau and the high-pressure systems over the Indian Ocean.
 - » Influence of atmospheric jet streams like the Subtropical Jet Stream (STJ) and the Tropical Easterly Jet (African Easterly Jet).
 - » The location of the Inter-Tropical Convergence Zone (ITCZ).
- **Factors Influencing the Intensity of South-West Monsoons:**
 - » Strength of the low-pressure system over Tibet and the high-pressure system over the southern Indian Ocean.
 - » Somali Jet (also known as Findlater Jet) and Somali Current (Findlater Current).
 - » The Indian Ocean branch of the Walker Cell and the Indian Ocean Dipole.

Conclusion:

The findings of this study will help improve the efficiency of current climate models used to forecast seasonal and sub-seasonal rainfall. Understanding the role of cloud band strength in monsoon rains will enable more accurate predictions, benefiting agriculture, water management, and disaster preparedness.



Science & Technology



Quantum Computing and National Security: India's Strategic Roadmap

The rapid evolution of quantum computing is reshaping technological landscapes, presenting both unparalleled opportunities and significant security challenges for nations. Unlike classical computing, quantum computing leverages the principles of quantum mechanics, such as superposition and entanglement, to perform complex calculations at unprecedented speeds. This has profound implications across various sectors, including cryptography, defense, artificial intelligence, finance, and healthcare. Recognizing these high stakes, NITI Aayog's NITI Frontier Tech Hub (NITI-FTH), in collaboration with the Data Security Council of India, recently published a research paper on the strategic implications of quantum computing for national security. The study highlights the urgent need for robust policy frameworks, increased investment, and strategic partnerships to ensure India remains competitive in this rapidly advancing field.

Quantum Computing and Its Strategic Importance:

- Quantum computing's ability to solve complex problems exponentially faster than traditional computers makes it a double-edged sword. While it has the potential to revolutionize industries, it also threatens to break conventional encryption, disrupt cybersecurity, and provide an intelligence advantage to countries leading in quantum technology.
- Unlike classical computers that rely on

binary bits (0s and 1s), quantum computers use qubits, which can exist in multiple states at once due to superposition. This allows them to process vast amounts of data simultaneously. Moreover, entanglement—a phenomenon where qubits remain interconnected regardless of distance—enables quantum computers to perform highly complex computations more efficiently.

- Countries that achieve quantum supremacy—the ability to perform tasks beyond the reach of classical computers—will gain significant strategic and military advantages. Governments worldwide are, therefore, investing heavily in quantum research to secure encrypted data, enhance surveillance, optimize logistics, and develop next-generation defense systems.

India's Response: The National Quantum Mission (NQM)

- To ensure India remains at the forefront of this technological revolution, the government launched the National Quantum Mission (NQM) in April 2023, with an allocation of Rs.6,003 crore (~\$750 million). The mission aims to:
 - » Develop quantum computers with 50–1000 physical qubits over the next eight years.
 - » Establish secure satellite-based quantum communication networks to safeguard national security and

sensitive data.

- » Advance quantum sensing and metrology for high-precision navigation, communication, and defense applications.
- » Set up four Thematic Hubs (T-Hubs) at premier research institutions to focus on:
 - Quantum Computing
 - Quantum Communication
 - Quantum Sensing & Metrology
 - Quantum Materials & Devices

- Despite this ambitious roadmap, India's funding remains significantly lower than that of global competitors such as China (\$15 billion), the US (\$5 billion), and the European Union (\$1.2 billion). This financial disparity underscores the urgent need for increased investment, private-sector participation, and strategic international collaborations.

Challenges to India's Quantum Ambitions:

- **Limited Funding Compared to Global Competitors:** India's Rs.6,003 crore (\$750 million) budget is one of the lowest among major quantum research nations. Limited funding restricts:
 - Large-scale commercialization
 - Advanced infrastructure development
 - Talent retention in the field of quantum computing
- Without substantial investment, India risks falling behind in this critical domain.
- **Weak Domestic Supply Chain:** Quantum computing requires specialized hardware components, including:
 - » Cryogenic cooling systems (to maintain qubit stability)
 - » High-purity materials for quantum chips
 - » Precision lasers for quantum communication
- Currently, India lacks indigenous production of these components, leading to dependence on foreign suppliers. This not only makes the supply chain vulnerable but also poses national security risks in case of

trade restrictions or geopolitical conflicts.

- **Lack of Private-Sector and Industry Participation:**

- » Unlike countries like the US and China, where tech giants such as Google, IBM, Microsoft, and Alibaba drive quantum innovation, India's quantum ecosystem is largely academia-driven.
- » Limited venture capital investment in quantum startups
- » Minimal industry participation in research collaborations
- » Slow commercialization of quantum technology
- » To bridge this gap, private-sector involvement must be significantly enhanced.

- **Cybersecurity and Encryption Risks:**

- » One of the biggest threats posed by quantum computing is its potential to break existing encryption algorithms.
- » Sensitive government, military, and financial data stored using classical encryption would become vulnerable.
- » Public-key cryptography, which secures online transactions and communications, would be rendered obsolete.
- » Cyberattacks by quantum-equipped adversaries could disrupt critical infrastructure such as banking systems, defense networks, and national databases.
- » India must urgently develop Post-Quantum Cryptography (PQC) to counter these emerging threats.

- **Strategic Vulnerabilities in Intelligence and Defense:** Quantum computing will revolutionize Signals Intelligence (SIGINT) and Electronic Warfare (EW) by enabling nations to:

- » Decrypt intercepted communications at an unprecedented scale
- » Break enemy codes in real time
- » Develop unbreakable quantum-secured networks
- If India lags in quantum intelligence capabilities, it risks being outpaced by

adversaries, jeopardizing national security and defense preparedness.

NITI Aayog's Recommendations for a Secure Quantum Future:

To strengthen India's quantum ecosystem, the NITI Aayog report outlines the following recommendations:

- **Strengthening National Security Policy:**
 - » Establish a Quantum Security Task Force to monitor global advancements and assess potential threats.
 - » Develop an Early Warning System to identify vulnerabilities in India's encryption frameworks.
 - » Implement a Post-Quantum Cryptography Transition Plan to secure national digital assets.
- **Boosting Research and Development (R&D):**
 - » Increase government funding for quantum startups and indigenous hardware development.
 - » Encourage greater private-sector collaboration to fast-track commercialization.
- **Building a Robust Domestic Supply Chain:**
 - » Invest in domestic manufacturing of key quantum components such as quantum processors, cryogenic systems, and high-purity materials.
 - » Reduce dependency on foreign suppliers through technology transfers and local

production incentives.

- **Expanding Global Partnerships:**

- » Forge bilateral collaborations with quantum leaders such as the US, EU, and Japan to access advanced research and technology.
- » Advocate for relaxed export controls on quantum components to facilitate technological access.

Conclusion:

- Quantum computing is a transformative technology that will reshape global security dynamics, defense strategies, and economic structures. While India has taken significant steps through the National Quantum Mission, challenges such as limited funding, weak supply chains, cybersecurity threats, and lack of industry participation remain serious concerns.
- To navigate this evolving landscape, India must adopt a multi-pronged approach that includes:
 - » Enhanced investment in R&D
 - » Robust cybersecurity frameworks
 - » Strengthened domestic manufacturing
 - » Strategic international collaborations
- By doing so, India can not only safeguard its national security but also position itself as a global leader in quantum technology, ensuring it is not left behind in the race for technological supremacy.

Short Issues

CAR T-Cell Therapy

Context:

In a groundbreaking development, India's first CAR T-cell therapy has shown remarkable efficacy in treating specific types of blood cancer. The clinical trial results, published in the esteemed medical journal *The Lancet*, reveal that the therapy was successful in nearly 73% of patients.

What is CAR T-Cell Therapy?

- CAR T-cell therapy, also known as chimeric antigen receptor T-cell therapy, is a pioneering approach

that harnesses the power of the immune system to combat cancer.

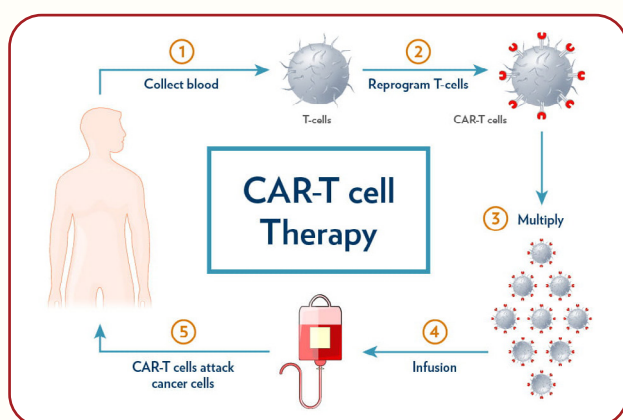
- This treatment involves training the body's immune cells, known as T-cells, to identify and destroy cancer cells.
- Specifically designed for certain types of blood cancer, CAR T-cell therapy is administered to patients whose cancer has either relapsed or not responded to initial treatment.

How does the Therapy Work?

- The process begins with the collection of a patient's immune T-cells through blood filtration.

These cells are then genetically engineered in a laboratory to add receptors that can bind with cancer cells.

- The modified cells are subsequently multiplied and infused back into the patient. This innovative approach enables the T-cells to recognize and target cancer cells, which would otherwise evade the immune system.
- This personalized treatment has shown significant promise, particularly in treating cancers like acute lymphoblastic leukaemia (ALL) and large B-cell lymphoma.



India's CAR T-Cell Therapy Breakthrough:

- India's first clinical trial using CAR T-cell therapy has focused on patients with two types of blood cancers that affect B cells—acute lymphoblastic leukaemia (ALL) and large B-cell lymphoma.
- The results have been promising, with nearly 73% of participants showing a positive response to the treatment. This success highlights not only the potential of CAR T-cell therapy in treating blood cancers but also marks a significant step in advancing cancer care in India.

Side Effects observed:

- **Hyperinflammation and Organ Damage:** A serious immune overreaction, known as cytokine release syndrome (CRS), was observed in 12% of participants. This severe reaction can lead to organ damage and, in some cases, can be fatal.
- **Low Red Blood Cell Count:** 61% of participants experienced fatigue and weakness due to a low red blood cell count.
- **Thrombocytopenia:** 65% of patients reported a low platelet count, increasing the risk of bleeding.

- **Neutropenia:** 96% of participants experienced a low neutrophil count, raising their vulnerability to infections.

Conclusion:

The success of CAR T-cell therapy in India holds the potential to make CAR T-cell therapy more accessible and affordable, contributing to the global fight against cancer. As research continues to advance, it is essential to address the challenges associated with CAR T-cell therapy and make this innovative treatment available to those in need.

New Security Ink to Combat Counterfeiting

Context:

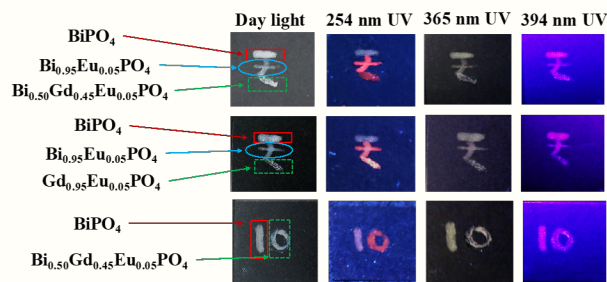
In a major development, Indian scientists from the Institute of Nano Science and Technology (INST) and the Bhabha Atomic Research Centre (BARC) have unveiled a new security ink aimed at combating counterfeiting. The innovative ink utilizes nanoparticles and is designed to provide an advanced level of security for sensitive documents, such as currency notes and passports, by making them more difficult to replicate.

Composition and Synthesis Process:

- The new security ink is based on a unique composition of strontium bismuth fluoride (Sr_2BiF_7), which is doped with lanthanide ions. The ink's nanoparticles are synthesized using a simple coprecipitation technique, offering a scalable and efficient method for production. The ink is then mixed with polyvinyl chloride (PVC) ink and printed using a screen printing technique, making it adaptable for mass production.

Features of new ink:

- One of the most remarkable features of this new ink is its dual fluorescence ability. The ink emits a blue glow under ultraviolet (UV) light at 365 nm, and a magenta hue under UV light at 395 nm.
- Furthermore, it also fluoresces with an orange-red color when exposed to near-infrared (NIR) light at 980 nm.
- This combination of fluorescence under different types of light makes it incredibly difficult for counterfeiters to replicate the ink, enhancing the security of documents printed with it.



What is Counterfeiting?

- Counterfeiting refers to the act of creating a false or fraudulent copy of something with the intent to deceive others into believing it is the original. This can apply to a variety of goods, documents, and currencies, and is done with the goal of defrauding people or organizations.
- Some Common Examples of Counterfeiting:
 - » **Counterfeit Money:** This is one of the most common forms of counterfeiting, involving the creation of fake currency notes or coins that are passed off as legal tender.
 - » **Counterfeit Documents:** This includes the forging of official documents like passports, visas, certificates, and other legal or identification papers.
 - » **Counterfeit Products:** This encompasses the production of fake versions of branded items, such as luxury goods, medicines, electronics, and consumer products.

Threats Posed by Counterfeiting:

- **Economic Terrorism:** Counterfeit money can be used as a tool to destabilize the nation's economy by flooding the market with fake currency.
- **Inflation:** The circulation of counterfeit currency can increase the overall money supply, potentially leading to inflation by devaluing legitimate currency.
- **Loss of Public Confidence:** Widespread counterfeiting erodes public trust in the financial system and economy, leading to a lack of faith in money, goods, and services.
- **Funding of Criminal Activities:** Profits made from counterfeiting can fund illegal operations, such as organized crime, terrorism, or human trafficking, creating further social instability.

Conclusion:

The development of this new security ink is a significant

step forward in the fight against counterfeiting. With its unique properties and ease of production, it has the potential to provide an additional layer of security for sensitive documents and currency notes.

NASA's PUNCH Mission

Context:

NASA has recently launched its latest solar mission, the Polarimeter to Unify the Corona and Heliosphere (PUNCH). This marks the third major solar initiative in the last 18 months, following India's Aditya L1 mission (launched in September 2023) and the European Space Agency's Proba-3 mission (launched in December 2024).

Why many Countries are Launching Solar Missions?

- The timing of these missions is closely linked to the solar cycle, an 11-year periodic change in the Sun's magnetic field. During this cycle, the Sun's north and south magnetic poles flip, leading to increased solar activity, a phase known as the solar maximum. This results in heightened solar radiation and particle bursts, making it an ideal period for studying the Sun.
- Understanding the solar cycle is crucial because it influences space weather, which affects satellite operations, communications, and power grids on Earth. The current solar maximum presents a rare opportunity for scientists to observe the Sun in its most active state. Missing this window would mean waiting until 2035-2036 for the next peak.
- Several recent solar missions have been strategically launched to capitalize on this period of heightened solar activity:
 - » **Aditya L1 (India):** Launched in September 2023, aims to study solar flares, solar winds, and the Sun's magnetic fields.
 - » **Proba-3 (European Space Agency):** Launched in December 2024, focuses on solar winds and solar storms.
 - » **PUNCH (NASA):** Set to launch in March 2025, will study the solar corona, providing valuable data on solar flares.

About the PUNCH Mission:

- PUNCH is unique in its design, employing four identical, suitcase-sized satellites that will work

together to continuously image the Sun's inner corona. The solar corona, the Sun's outermost layer, is challenging to study because it is much hotter than the Sun's surface and emits very little light.

- By using a fleet of small satellites, PUNCH aims to provide comprehensive data on the corona's structure and behavior, offering insights into the mechanisms behind solar flares and solar wind.
- This mission will help answer critical questions about how the solar corona influences space weather, which is essential for understanding the impact of solar storms on Earth's magnetosphere and communication systems. Such knowledge can aid in mitigating risks to satellite technology and infrastructure.

Conclusion:

NASA's PUNCH mission is part of a broader global effort to enhance our understanding of solar dynamics during the current solar cycle. By launching this mission, NASA joins international space agencies in studying the Sun's behavior at a time of heightened solar activity. With its innovative approach and advanced technology, PUNCH will play a key role in unraveling the mysteries of the solar corona, shedding light on the Sun's influence on space weather and its impact on Earth.

Breakthrough in Fatigue-Resistant Alloys Unveiled

Context:

Recently, Researchers at the Indian Institute of Science (IISc) Bangalore have made remarkable advancements in the development of fatigue-resistant multi-principal element alloys (MPEAs). This breakthrough challenges conventional beliefs about alloy composition and fatigue life, offering new potential for their use in structural applications that demand exceptional strength and durability.

About Multi-Principle Element Alloys:

- MPEAs are a new class of materials composed of multiple principal elements, unlike traditional alloys that rely on one or two. Traditionally, it was believed that enhancing the strength of alloys through compositional changes or adding brittle phases would negatively affect their fatigue life.

- However, the IISc research team challenged this notion by exploring how specific microstructural features could enhance fatigue resistance. Their work opens up new possibilities for using MPEAs in high-performance applications, where both durability and strength are critical.

About Innovative Research Methodology:

- The research team focused on the Cr-Mn-Fe-Co-Ni alloy system, experimenting with variations in the chromium to nickel (Cr/Ni) ratio. They successfully synthesized two distinct single-phase face-centered cubic (FCC) MPEAs, each with different stacking fault energies (SFEs).
- The low-SFE alloy demonstrated a 10–20% improvement in cyclic strength compared to the high-SFE alloy, while both alloys maintained comparable fatigue lives. This improvement was attributed to the delayed formation of dislocation substructures and a slower crack propagation rate in the low-SFE alloy, indicating that specific microstructural control can significantly enhance fatigue resistance.
- In addition to the single-phase alloys, the team developed a dual-phase alloy that showed an impressive 50–65% increase in cyclic strength compared to the single-phase low-SFE alloy. This improvement did not come at the cost of fatigue life.
- The key to this enhancement lies in finer dislocation structures, increased back stresses from smaller grain sizes, and the presence of brittle σ -precipitates that help deflect cracks. Furthermore, extensive deformation twinning around fatigue cracks complements slip activity, further slowing crack propagation. These findings represent a major leap forward in understanding how to design MPEAs for optimal performance.

Implications for Future Research and Applications:

- This research provides valuable insights into the deformation and damage mechanisms of MPEAs, especially how stacking fault energy and secondary brittle phases affect their mechanical properties. The work lays the groundwork for future studies into complex alloy systems, with significant implications for industries that require high-performance materials. Supported by the

Anusandhan National Research Foundation under the Government of India, the research highlights the importance of continued government support in advancing materials science.

- This breakthrough could revolutionize the way materials are designed for demanding applications, offering solutions for industries that rely on stronger, more resilient materials.

Exotic Bose Metal

Context:

A team of researchers from China and Japan has made a significant breakthrough in the study of an exotic state of matter known as a Bose metal. This anomalous metallic state has been predicted to exist in certain materials but has yet to be conclusively observed until now.

What is a Bose Metal?

- A Bose metal is an unusual state of matter that occurs when certain metals are cooled to very low temperatures.
- Unlike traditional metals, which become superconductors at low temperatures, a Bose metal exists in a state where electrons pair up, forming Cooper pairs, but do not condense into a superconducting state.
- This state challenges conventional theories about metallic behavior and superconductivity, offering an intriguing subject for further research.

About the Research:

- The study, led by Professor Xiaoxiang Xi of Nanjing University, focused on a material called niobium diselenide (NbSe₂).
- This material, when cooled to very low temperatures and exposed to a magnetic field, displayed behavior consistent with the existence of a Bose metal.
- The research team employed Raman spectroscopy, a powerful technique for studying molecular vibrations, to probe the material's properties.

The key findings of the study include:

- **Cooper pairs without superconductivity:** The team observed the formation of Cooper pairs in NbSe₂ at low temperatures. While Cooper pairs are typically associated with superconductivity,

NbSe₂ did not transition into a superconducting state, which is a hallmark of Bose metals.

- **Vanishing Hall resistance:** The Hall resistance of NbSe₂, which measures the voltage created when a current is passed through the material in a magnetic field, disappeared as the material's thickness was reduced. This is a sign that the charge carriers in the material are Cooper pairs rather than individual electrons, further supporting the Bose metal theory.

Implications:

- The discovery of a potential Bose metal has significant implications for our understanding of the quantum behaviour of materials at ultra-low temperatures.
- This finding challenges traditional models of disordered metals and could lead to advancements in quantum computing, superconductivity, and other areas of materials science.
- By shedding light on the mechanisms behind Bose metals, scientists could pave the way for new technologies based on these exotic materials.

Conclusion:

The research team's findings provide strong evidence for the existence of a Bose metal in niobium diselenide. While further studies are needed to confirm the presence of this anomalous state of matter, the discovery opens up new avenues for scientific exploration and may lead to significant advances in the understanding and application of quantum materials.

Aditya-L1's SUIT Instrument Captures Powerful Solar Flare

Context:

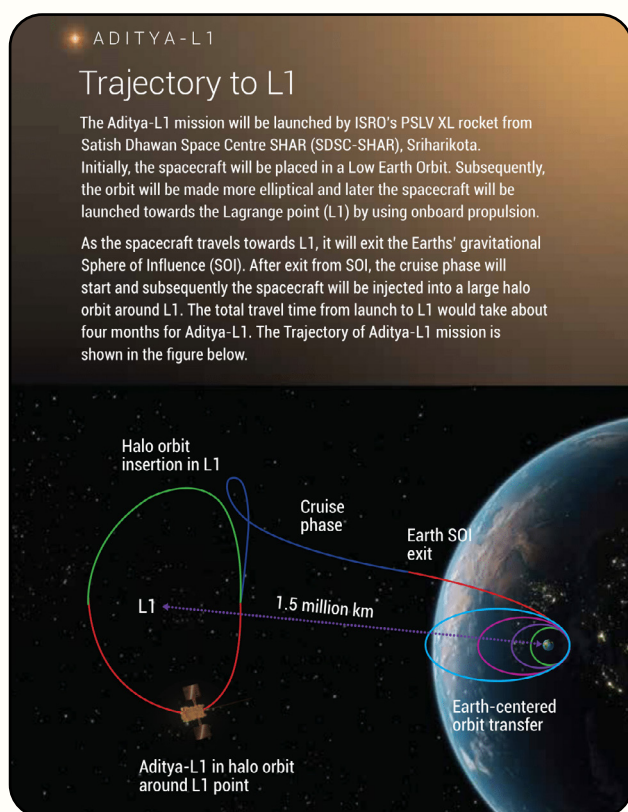
India's first solar mission, Aditya-L1, has achieved a significant breakthrough in solar research. The Solar Ultraviolet Imaging Telescope (SUIT) onboard the spacecraft has captured the core of a solar flare, known as a 'kernel', in the photosphere and chromosphere, the lower layers of the Sun's atmosphere. This unprecedented observation offers valuable insights into solar activity and its impact on space weather.

About Aditya-L1:

- Launched by ISRO on September 2, 2023, Aditya-L1 is India's first space mission dedicated to

studying the Sun. Its objectives include examining solar flares, coronal heating, solar wind, and space weather, all of which influence Earth's technological infrastructure.

- The spacecraft is positioned at Lagrange Point 1 (L1), about 1.5 million kilometers from Earth. This location is strategically important as it provides an uninterrupted view of the Sun, free from atmospheric interference. Additionally, real-time solar observations from L1 help improve early warning systems for solar storms, which can disrupt satellites, power grids, and communication networks.



How Aditya-L1 Studies Solar Flares?

- Solar flares are intense bursts of energy caused by the sudden release of magnetic energy stored in the Sun's atmosphere. These eruptions can affect Earth by disrupting satellite communications, GPS systems, and power grids, while also posing risks to astronauts and high-altitude aviation.
- To study these flares, Aditya-L1 is equipped with advanced instruments:
 - » **SUIT:** Captures high-resolution images of the

photosphere and chromosphere in the near-ultraviolet (NUV) spectrum, helping scientists understand flare origins.

- » **SoLEXS and HELIOS:** Monitor solar X-ray emissions, essential for tracking the energy released during a flare.

Observing a Powerful Solar Flare:

- SUIT observed an X6.3-class solar flare, one of the most intense categories of solar eruptions. This event was detected in the near-ultraviolet (200-400 nm) spectrum, a wavelength range never imaged with such clarity before. These observations provide a direct link between the flare's energy release and plasma heating in the Sun's corona, the outermost layer of its atmosphere.

Understanding Solar Flares and Their Impact

- Solar flares are classified into A, B, C, M, and X classes, with X-class flares being the most powerful. These events can:
 - » Cause radio blackouts, affecting communication networks.
 - » Damage satellites by exposing them to intense radiation.
 - » Disrupt power grids and GPS systems on Earth.
 - » Pose radiation risks to astronauts and high-altitude flights.
- Studying these flares allows scientists to improve space weather forecasting, minimizing potential disruptions to Earth's infrastructure and technology.

Conclusion:

The detection of an X6.3-class solar flare by SUIT marks a major advancement in India's space research. With Aditya-L1's instruments fully operational, this mission is set to transform solar physics by providing critical data on the Sun's behavior. These insights will enhance our understanding of solar activity and strengthen protective measures against solar storms. As India takes a leading role in global solar research, Aditya-L1 represents a significant milestone in unraveling the mysteries of the Sun and safeguarding Earth from its powerful forces.

Health Risks of Martian Dust

Context:

A recent GeoHealth study highlights the dangers of

Martian dust, emphasizing its toxic composition and health risks for astronauts. Conducted by researchers from the Keck School of Medicine at USC, UCLA Space Medicine Center, and NASA's Johnson Space Center, the study underscores the need for robust mitigation strategies to ensure astronaut safety on Mars missions.

Composition and Toxicity of Martian Dust:

- Martian dust consists of ultrafine, electrostatically charged particles that adhere to surfaces. Unlike Earth's dust, it remains jagged and abrasive due to the lack of atmospheric weathering.
- It contains hazardous compounds such as silica, perchlorates, gypsum, and nanophase iron oxide, along with heavy metals like chromium, beryllium, arsenic, and cadmium, all of which pose severe health risks.

Health Hazards for Astronauts:

- **Silicosis:** Silica in the dust can cause lung fibrosis, similar to coal miners' "black lung disease."
- **Thyroid Dysfunction:** Perchlorates may disrupt thyroid function, leading to metabolic disorders and aplastic anemia, a life-threatening condition affecting blood cell production.
- **Pulmonary Diseases:** Iron oxide and other reactive minerals can cause lung inflammation, fibrosis, and respiratory failure, exacerbated by prolonged exposure to microgravity and cosmic radiation.

Engineering Challenges and Technical Risks:

- Martian dust also threatens spacecraft and equipment. Its fine particles can accumulate on solar panels, landers, and scientific instruments, reducing efficiency and leading to mission failures. Previous missions have already faced these issues:
 - » **NASA's Opportunity Rover (2018):** Lost functionality after dust storms blocked its solar panels.
 - » **InSight Lander (2022):** Ceased operations due to dust buildup, leading to power failure.
- For crewed missions, dust infiltration into habitats could cause long-term exposure risks, making air purification and dust mitigation essential.

Proposed Mitigation Strategies:

- **Air Filtration Systems:** Preventing dust circulation inside habitats.
- **Self-Cleaning Spacesuits:** Using electrostatic repulsion to reduce dust adhesion.

- **Protective Coatings & Sprays:** Preventing dust accumulation on equipment.
- **Dietary Interventions:**
 - » Vitamin C to counteract chromium toxicity.
 - » Iodine to mitigate thyroid damage from perchlorates.
- However, excessive supplementation could increase kidney stone risks, already a concern due to microgravity-induced bone loss.

Conclusion:

With upcoming Mars missions, tackling Martian dust hazards is crucial. A combination of medical, engineering, and operational solutions will be key to astronaut safety and mission success. Ongoing research into dust behavior and mitigation technologies will shape the future of space exploration.

Gaia Mission

Context:

The European Space Agency's (ESA) Gaia mission officially concluded on March 27, 2025, after more than a decade of groundbreaking astronomical research. Launched in December 2013, Gaia provided an unparalleled three-dimensional map of the Milky Way, transforming our understanding of the galaxy's structure, composition, and evolution.

About Gaia Mission:

- Gaia, originally known as the Global Astrometric Interferometer for Astrophysics, was designed to precisely measure the positions, distances, and motions of celestial objects.
- Operating from Lagrange Point 2 (L2), approximately 1.5 million kilometers from Earth, it observed the universe free from atmospheric distortion. Over its mission, Gaia tracked billions of stars, offering critical insights into the Milky Way's past and future.

Technological Innovations:

- Gaia's success was driven by its state-of-the-art instruments:
 - » Twin Telescopes captured an extensive field of view for continuous monitoring.
 - » Astrometer measured stellar positions with unmatched precision.
 - » Photometer analyzed light to determine temperature and composition.

- » Spectrometer measured radial velocities and chemical properties.
- Gaia's digital camera, with nearly a billion pixels, was the most powerful ever flown in space, allowing for highly detailed celestial imaging.

Significance of Gaia:

- During its mission, Gaia recorded 3 trillion observations, cataloging data on approximately 2 billion celestial objects. This led to significant discoveries:
 - » **Galactic Structure and Evolution:** Gaia mapped the warped disc and central bulge of the Milky Way, revealing how gravitational interactions shape the galaxy.
 - » **Stellar Motion Studies:** The spacecraft tracked how stars move over time, providing a dynamic view of galactic evolution.
 - » **Black Hole Discovery:** Gaia identified a new type of black hole, detected solely through its gravitational influence rather than light emissions.
 - » **Asteroid Tracking:** Over 150,000 asteroids were studied, improving understanding of their orbits, some of which pose potential risks to Earth.

Mission Retirement and Future Research:

- Following its final observations, Gaia was deactivated and placed in a retirement orbit around the Sun, ensuring it does not interfere with future missions. Although the spacecraft is no longer operational, much of its collected data is still being processed, with upcoming releases expected to drive new discoveries.

Way Forward:

Despite mapping only 2% of the Milky Way's estimated 100 billion stars, Gaia has revolutionized astronomy. Its vast dataset will continue to shape research on stellar evolution, galactic dynamics, and planetary systems, solidifying its status as one of the most significant space missions in history.

BbLDH and Lyme Disease

Context:

Recent research published in mBio by the American Society for Microbiology has identified BbLDH

(lactate dehydrogenase) as a crucial enzyme for *Borrelia burgdorferi*, the bacterium responsible for Lyme disease. This discovery paves the way for new therapeutics, potentially benefiting treatments for other tick-borne illnesses.

Understanding Lyme Disease:

- Lyme disease, or Lyme borreliosis, is a bacterial infection transmitted through bites from infected blacklegged ticks. It is prevalent in the northeastern and midwestern United States, Europe, and parts of Asia.

Symptoms and Complications

- » **Early signs:** Fever, fatigue, headaches, and a bull's-eye rash (erythema migrans).
- » **Advanced stages:** If untreated, it can spread to the joints, heart, and nervous system, causing arthritis, neurological disorders, and cardiac issues.
- While antibiotics are the primary treatment, persistent symptoms in some patients highlight the need for novel therapeutics.

About BbLDH:

- Unlike most bacteria that rely on thiamin (vitamin B1) for metabolism, *B. burgdorferi* depends on BbLDH to convert pyruvate into lactate, maintaining its NADH/NAD⁺ balance—essential for growth and infectivity.
- Since BbLDH is fundamental for *B. burgdorferi*, inhibiting it could disrupt the bacterium's metabolism without harming human cells, making it an ideal drug target.
- **Research and Findings:** Using genetic, biochemical, and structural analyses, including X-ray crystallography, researchers found that:
 - » BbLDH is essential for *B. burgdorferi*'s survival in both laboratory cultures and living organisms.
 - » Loss-of-function experiments confirmed that disrupting BbLDH impairs the bacterium's growth and infectivity.

Developing BbLDH Inhibitors:

- Through high-throughput screening, researchers identified BbLDH inhibitors as potential foundational molecules for targeted Lyme disease treatments.
- The study's lead author, Chunhao Li, emphasized BbLDH's distinct biochemical features, making it

an optimal target for genus-specific inhibitors.

- This research offers insights into LDH enzymes in other tick-borne pathogens, aiding global public health responses.

Conclusion:

Identifying BbLDH as a key metabolic enzyme in *B. burgdorferi* marks a major step in Lyme disease research. Targeting this enzyme could lead to effective treatments, reducing long-term impacts and advancing therapies for other tick-borne infections.

Vikram and Kalpana Microprocessors

Context:

The Indian Space Research Organisation (ISRO) has made a significant leap forward in its space technology capabilities. The Vikram Sarabhai Space Centre (VSSC) and the Semiconductor Laboratory (SCL) in Chandigarh have successfully developed two advanced 32-bit microprocessors, namely the Vikram 3201 and Kalpana 3201. These microprocessors are designed specifically for space applications, marking a crucial milestone in India's journey towards self-reliance in high-reliability microprocessors for space missions.

About Vikram 3201 Microprocessor:

- India's first fully indigenous microprocessor, the Vikram 3201, is a major achievement in the country's space technology. Designed to withstand the extreme conditions encountered by launch vehicles, the Vikram 3201 is fabricated using a 180nm CMOS technology at the Semiconductor Laboratory (SCL) in Chandigarh.
- The Vikram 3201 is an advanced iteration of the 16-bit Vikram 1601, which had been in use since 2009. The new microprocessor has been rigorously tested and validated for use in space missions, including its successful integration into the PSLV Orbital Experimental Module during the PSLV-C60 mission.

Kalpana 3201 Microprocessor:

- The Kalpana 3201 is another pioneering 32-bit microprocessor developed by ISRO. Built on the IEEE 1754 Instruction Set Architecture (ISA), the Kalpana 3201 is a SPARC V8 RISC processor. It is compatible with open-source software toolsets

and has been thoroughly tested with flight software.

- The Kalpana 3201 is specifically designed to support high-level programming languages, especially Ada, and includes floating-point computation capabilities. This makes it particularly useful for complex space missions that require advanced computational power and high reliability.

Indigenous Development and 'Atmanirbharata' Initiative:

- The development of the Vikram 3201 and Kalpana 3201 aligns with India's 'Atmanirbharata' (self-reliance) initiative. This initiative aims to reduce India's dependency on foreign technologies and bolster indigenous capabilities in the development of space systems and technologies.
- Both microprocessors are equipped with a custom Instruction Set Architecture (ISA), a testament to ISRO's capability to develop tailored solutions for space applications. In addition, ISRO has developed all the necessary software tools for the microprocessors in-house. These tools include an Ada compiler, assembler, linker, and simulator, with a C language compiler currently under development to offer greater flexibility to users. This comprehensive approach to development further underscores India's growing self-reliance in space technology.

Conclusion:

- The successful development and validation of the Vikram 3201 and Kalpana 3201 microprocessors will significantly enhance ISRO's capabilities in space exploration and satellite launches. These advancements are expected to improve the reliability, flexibility, and efficiency of space missions, further contributing to India's growing stature in global space exploration.
- This shift towards indigenization will undoubtedly strengthen India's position as a global player in space technology, ensuring its long-term growth and sustainability in the competitive field of space exploration.

Empowering India's MSME Sector: Growth, Budgetary Reforms, and Future Prospects

- The Micro, Small, and Medium Enterprises (MSME) sector is a key driver of India's economic growth, contributing significantly to employment, manufacturing, and exports. With 5.93 crore registered MSMEs employing over 25 crore people, these enterprises play a crucial role in shaping India's industrial landscape. In 2023-24, MSMEs accounted for 45.73% of India's total exports, reinforcing their position as the backbone of India's global trade ambitions.
- Recognizing the sector's immense potential, the Union Budget 2025-26 has introduced a series of reforms aimed at enhancing credit access, fostering innovation, and strengthening sector-specific industries. These measures seek to equip MSMEs with better financial tools, promote entrepreneurship, and boost India's manufacturing and export capabilities.
- » **Exports:** MSME exports have witnessed remarkable growth, increasing from ₹3.95 lakh crore in 2020-21 to ₹12.39 lakh crore in 2024-25. The sector's contribution to total exports has risen to 45.79% in 2024-25 (as of May 2024), showcasing its deepening integration into global trade.
- These trends underscore the resilience of MSMEs and their crucial role in positioning India as a global manufacturing and export hub.

Key Measures for MSMEs in Union Budget 2025-26

MSMEs and Their Role in India's Economic Growth

- MSMEs serve as a foundation for India's industrial and economic expansion, contributing to:
 - » **Employment Generation:** As the second-largest employment provider after agriculture, MSMEs support millions of livelihoods across urban and rural areas.
 - » **Manufacturing Output:** The sector's share in India's Gross Value Added (GVA) has steadily increased from 27.3% in 2020-21 to 30.1% in 2022-23, reflecting its growing influence in economic output.
- **Revised Classification Criteria**
 - » To enable MSMEs to scale operations and access better financial resources, the investment and turnover limits for MSME classification have been raised by 2.5 times and 2 times, respectively.
 - » This adjustment is expected to facilitate greater efficiency, adoption of advanced technology, and increased employment generation.
- **Enhanced Credit Availability:** The budget

introduces strong financial support measures to improve credit flow:

- » The credit guarantee cover for micro and small enterprises has been increased from Rs. 5 crore to Rs.10 crore, enabling additional credit of Rs.1.5 lakh crore over five years.
- » Startups will benefit from an increase in guarantee cover from Rs.10 crore to Rs.20 crore, with a 1% reduced loan fee for 27 priority sectors.
- » Exporter MSMEs will have access to term loans up to Rs.20 crore with enhanced guarantee coverage, ensuring their competitiveness in international markets.

■ **Credit Cards for Micro Enterprises**

- » A customized Credit Card scheme will provide Rs.5 lakh in credit to micro enterprises registered on the Udyam portal.
- » In the first year, 10 lakh credit cards will be issued to facilitate working capital access for small businesses.
- » Support for Startups and First-Time Entrepreneurs

- A Rs.10,000 crore Fund of Funds will be established to support and expand startups.
- A new scheme will provide term loans up to Rs. 2 crore for 5 lakh first-time entrepreneurs from Scheduled Castes, Scheduled Tribes, and women entrepreneurs over the next five years.
- These initiatives aim to promote inclusive entrepreneurship, ensuring better financial access for disadvantaged groups.

➤ *During her budget speech, Union Finance Minister Nirmala Sitharaman had announced new classification criteria for MSMEs, with investment and turnover limits for the classifications proposed to be increased to 2.5 times and two times, respectively. The government has notified significant revisions to turnover and investment criteria for classifying MSMEs that will take effect from April 1.*

➤ *Micro, small and medium enterprises (MSMEs)*

with investments up to 2.5 crore rupees will now be classified as micro-enterprises, from the previous threshold of 1 crore rupees. The turnover limit has been revised from 5 crore rupees to 10 crore rupees.

➤ *Units with investments up to 25 crore rupees will be classified as small enterprises, from the earlier 10 crore rupees. The turnover limit for such enterprises has been doubled from 50 crore rupees to 100 crore rupees.*

➤ *MSMEs with investments up to 125 crore rupees will now be classified as medium enterprises, from the earlier limit of 50 crore rupees. For medium enterprises, the turnover limit has been doubled to 500 crore rupees.*

Sector-Specific Support for MSMEs

- **Focus on Labour-Intensive Sectors:** Recognizing the potential of labour-intensive industries, the government is implementing:

- » A Focus Product Scheme for the footwear and leather sector to enhance design, component manufacturing, and non-leather footwear production. This initiative is expected to:

- Generate Rs.4 lakh crore in turnover.
- Create 22 lakh new jobs.

- » A new scheme for the toy industry, promoting cluster development and skill-building to establish India as a global leader in toy manufacturing.

- **Strengthening Manufacturing and Clean Tech Initiatives:**

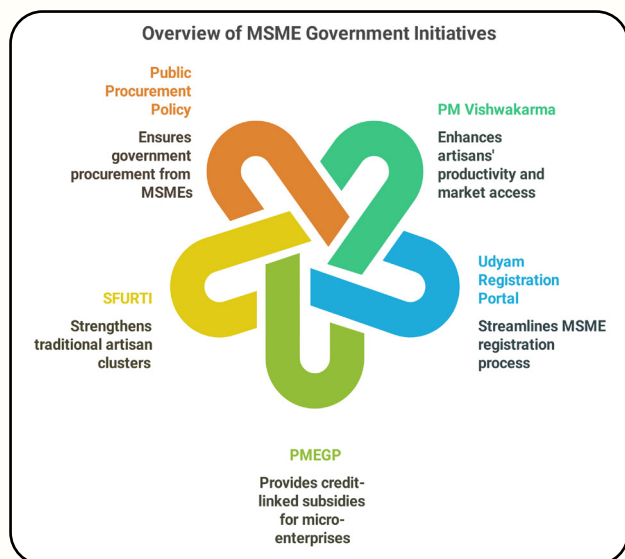
- » A National Manufacturing Mission will provide a comprehensive policy roadmap to support small, medium, and large industries under the Make in India initiative.

- » A major focus will be on clean technology manufacturing, with targeted support for:

- Solar PV cells.
- Electric vehicle (EV) batteries.
- Wind turbines.
- High-voltage transmission equipment.

- » These initiatives align with India's vision of sustainable industrial growth and energy security, reducing dependence on imports while strengthening domestic

manufacturing capabilities.



Government Initiatives for MSMEs:

To promote formalization and competitiveness, the government has introduced several initiatives:

- **PM Vishwakarma**
 - » Focuses on enhancing artisans' and craftspeople's productivity and market access.
 - » Rs.13,000 crore allocated for 2023-24 to 2027-28.
 - » Over 2.65 crore applications received, with 27.13 lakh successfully registered.
- **Udyam Registration Portal**
 - » Launched in 2020, streamlining MSME registration.
 - » Over 5.93 crore MSMEs registered, generating employment for over 25.18

crore people.

- **Prime Minister's Employment Generation Programme (PMEGP)**
 - » Supports credit-linked subsidies for micro-enterprises.
 - » In 2023-24, PMEGP:
 - Facilitated 89,118 enterprises.
 - Disbursed Rs. 3,093.87 crore in subsidies.
 - Generated 7,12,944 jobs nationwide.
- **Scheme of Fund for Regeneration of Traditional Industries (SFURTI)**
- Strengthens traditional artisan clusters.
- 513 clusters approved, generating 2,20,800 jobs.
- **Public Procurement Policy for MSEs**
 - » Ensures 25% of Central Government procurement is sourced from MSMEs.
 - » In 2023-24, Rs.74,717 crore worth of goods were procured from 2,58,413 MSMEs.

Conclusion:

The Union Budget 2025-26 presents a strategic roadmap for MSMEs, prioritizing credit access, entrepreneurship, and sector-specific initiatives. By enhancing financial support, promoting manufacturing, and encouraging global trade participation, the government is ensuring that MSMEs remain key players in India's economic transformation. With continued policy support and targeted initiatives, MSMEs will not only strengthen domestic industries but also bolster India's position as a global manufacturing and export hub, contributing significantly to the vision of Viksit Bharat.

Farmer Producer Organizations (FPOs): A Transformative Initiative in Indian Agriculture

India's agricultural landscape has long been shaped by the resilience of small and marginal farmers who form the backbone of the nation's food security. However, fragmented land holdings, limited access to resources, and market vulnerabilities have often constrained their growth. Recognizing the need for a structured approach to empower farmers, the

government has introduced several initiatives over the years to enhance their economic stability and bargaining power.

- In this pursuit, the Central Sector Scheme for the Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs) emerges as a landmark effort to organize farmers into collective entities, fostering

economies of scale, institutional support, and enhanced market access. Launched on February 29, 2020, under the leadership of Prime Minister Narendra Modi, this initiative signifies a paradigm shift in Indian agriculture, bridging the gap between small-scale producers and competitive markets.

- With a substantial budget outlay of Rs. 6,865 crore till 2027-28, the scheme envisions financial empowerment, resource optimization, and collective growth. By leveraging cooperative strength and digital integration, it aims to transform traditional farming into a sustainable, market-driven, and income-oriented enterprise. The establishment of 10,000 FPOs across India, including the recently launched 10,000th FPO in Khagaria, Bihar, is a testament to the government's commitment to revolutionizing agriculture and uplifting rural livelihoods.



Understanding Farmer Producer Organizations (FPOs)

- A Farmer Producer Organization (FPO) is a legally registered collective entity formed by farmers to leverage economies of scale in production and marketing. These

organizations are incorporated under either Part IXA of the Companies Act or the Co-operative Societies Act of respective states. The Small Farmers' Agribusiness Consortium (SFAC), under the Ministry of Agriculture and Farmers' Welfare, is the nodal agency responsible for promoting and supporting FPOs.

- The key objective of FPOs is to address the challenges faced by small and marginal farmers, such as limited access to quality inputs, credit, and profitable markets. By forming FPOs, farmers gain collective strength, enabling them to procure agricultural inputs at wholesale rates, access institutional credit, and secure better prices for their produce. This leads to lower production costs, improved productivity, and increased income.

Objectives and Need for FPOs:

- **Creating a Supportive Ecosystem:** Establishing 10,000 FPOs to promote sustainable, income-oriented farming and ensure the socio-economic well-being of farmers.
- **Enhancing Productivity:** Encouraging efficient and cost-effective resource use to maximize farm output and returns.
- **Ensuring Financial and Institutional Support:** Providing handholding assistance for five years, covering aspects such as management, input procurement, processing, market linkages, and technology adoption.
- **Building Agricultural Entrepreneurship:** Offering capacity-building programs to develop farmers' skills, ensuring long-term economic viability and self-sufficiency of FPOs.

Challenges Faced by Small Farmers

- Small, marginal, and landless farmers struggle with:
 - » Limited access to technology, quality seeds, fertilizers, and pesticides
 - » Inadequate institutional credit and high dependence on informal lenders
 - » Low market bargaining power due to small-scale production
 - » Lack of infrastructure for storage, processing, and transportation

- By organizing farmers into FPOs, the scheme helps overcome these challenges, ensuring better market access, financial stability, and technological support.

Financial and Institutional Support under the Scheme:

- To ensure the sustainability of FPOs, the government provides financial and credit assistance, including:
 - Rs.18 lakh per FPO as management cost support for three years.
 - Matching equity grant of Rs.2,000 per farmer-member, with a maximum limit of Rs. 15 lakh per FPO.
 - Credit guarantee facility of up to Rs. 2 crore per FPO, ensuring easier access to institutional loans.



Multi-Ministerial Convergence for FPO Support

Several ministries and agencies collaborate to strengthen FPOs:

- Ministry of Agriculture & Farmers Welfare:** Assists FPOs in obtaining licenses for seeds, fertilizers, and pesticides and facilitates linkages with institutional buyers through e-NAM, ONDC, and Agri Input Companies.
- Ministry of Food Processing:** Offers credit-linked capital subsidy (35% of project cost) and financial grants (50%) for branding and marketing.
- Ministry of Micro, Small & Medium Enterprises (MSME):** Provides funding, equity grants,

credit guarantees, capacity-building training, and market linkages.

- Ministry of Fisheries, Animal Husbandry, and Dairying:** Implements schemes like Supporting Dairy Cooperatives and Farmer Producer Organizations, with an allocation of Rs. 500 crore (2021-26). It also supports the formation of 100 Fodder Plus FPOs through NDDB.
- APEDA (Agricultural & Processed Food Products Export Development Authority):** Assists APEDA-registered FPOs in export promotion and financial support under the SFURTI scheme.
- Spices Board:** Implements the SPICED scheme to promote the production and export of quality spices, enhance post-harvest improvements, and build farmer capacities.

Services and Activities Undertaken by FPOs:

FPOs play a crucial role in reducing costs and increasing farmers' income by offering:

- Supply of Quality Inputs:** Seeds, fertilizers, pesticides, and other inputs at lower wholesale rates.
- Custom Hiring Services:** Rental services for tractors, irrigation systems, and other agricultural machinery.
- Value Addition and Processing:** Cleaning, sorting, grading, and packaging to enhance product value.
- Storage and Transportation:** Reducing post-harvest losses through affordable storage and logistics.
- Income-Generating Activities:** Engaging in beekeeping, mushroom cultivation, and seed production.
- Market Aggregation:** Bulk selling of farm produce to ensure better price realization.
- Market Information and Logistics Support:** Enabling farmers to make informed decisions about market trends, pricing, and transportation.

Key Initiatives under the FPO Scheme:

- Credit Guarantee Fund (CGF):** A dedicated Credit Guarantee Fund (CGF) has been established to help FPOs access institutional credit without excessive collateral

requirements. This fund enables FPOs to secure loans for working capital, marketing, and infrastructure development.

- **ONDC Platform for Digital Market Access:** More than 5,000 FPOs have been onboarded onto the Open Network for Digital Commerce (ONDC), allowing them to sell produce directly to consumers across the country, ensuring fair pricing and eliminating middlemen.
- **Conversion of 10,000 FPOs into Common Service Centres (CSCs):** An MoU between CSC SPV and the Ministry of Agriculture & Farmers Welfare has been signed to convert FPOs into CSCs, enabling them to offer digital services, financial transactions, and employment opportunities in rural areas.

Conclusion:

The formation of 10,000 FPOs is a transformative step toward Atmanirbhar Krishi (self-reliant agriculture). By enhancing market access, improving income security, and reducing dependence on middlemen, FPOs have empowered millions of small and marginal farmers, including women and weaker sections. The success of the FPO scheme highlights the importance of collective farming and institutional support in driving agricultural growth. With continued investments in financial aid, digital platforms, and infrastructure, FPOs will play a crucial role in shaping a self-sufficient, market-driven, and prosperous agricultural ecosystem in India.

India's Textile Industry: Growth, Challenges, and the Road Ahead

Introduction:

- India's textile industry is one of the largest in the world, covering everything from raw fibre production to high-end apparel. It plays a key role in the economy, contributing significantly to GDP, employment, and exports. However, despite its strengths, India lags behind competitors like China, Vietnam, and Bangladesh, which benefit from lower costs, integrated supply chains, and simpler regulations.
- At the same time, rising domestic demand, shifting global trade patterns, and a growing focus on sustainability present new opportunities for India to expand its market share.

The India's Textile Industry:

- India is a global leader in cotton production, accounting for 24% of global output and employing 60 lakh farmers, mainly in Gujarat, Maharashtra, and Telangana. The textile value chain—including spinning, weaving, dyeing, and garment production—provides jobs for over 4.5 crore people, including 35.22 lakh handloom workers.

- Beyond cotton, India is the second-largest producer of man-made fibres (MMF), with major companies like Reliance Industries Ltd dominating polyester production and Aditya Birla Group's Grasim Industries Ltd leading in viscose fibre. However, per capita MMF consumption in India remains low at 3.1 kg, compared to 12 kg in China and 22.5 kg in North America.
- The industry is concentrated in MSME clusters, each specializing in different products:
 - » **Bhiwandi, Maharashtra:** Fabric production
 - » **Tiruppur, Tamil Nadu:** T-shirts and undergarments
 - » **Surat, Gujarat:** Polyester and nylon fabrics
 - » **Ludhiana, Punjab:** Woolen garments
- These hubs form the backbone of India's textile ecosystem, supporting millions of jobs and businesses.

Market Growth and Future Projections:

- **Domestic Market Expansion:**
 - » India's textile and apparel sector is on a

steady growth path, driven by increasing domestic demand, urbanization, and government support.

- » The textile and apparel market is projected to grow at 10% CAGR, reaching US\$ 350 billion by 2030.
- » The home textile industry is expected to expand at 8.9% CAGR, reaching US\$ 23.32 billion by 2032.
- » The technical textiles market, which includes fabrics used in defense, healthcare, and sports, has a 10% CAGR.
- » The medical textiles market for drapes and gowns is set to grow at 15% CAGR, reaching US\$ 22.45 million by 2027.
- » The composites market, used in industries like aerospace and automotive, is expected to hit US\$ 1.9 billion by 2026, growing at 16.3% CAGR.

■ **Global Market Trends:**

- » The global apparel market is projected to grow at 8% CAGR, reaching US\$ 2.37 trillion by 2030.
- » The global textile and apparel trade is expected to reach US\$ 1.2 trillion by 2030, growing at 4% CAGR.
- » India's potential to capture a larger share of this expanding market depends on its ability to boost competitiveness, streamline supply chains, and adopt sustainable practices.

India's Position in Global Exports:

- India is the third-largest textile and apparel exporter, yet its exports have remained relatively flat compared to its fast-growing competitors.
- **Export Trends**
 - » Total textile exports in FY24 stood at US\$ 35.9 billion.
 - » Apparel exports reached US\$ 14.23 billion, while cotton textiles (including home textiles) totaled US\$ 12.3 billion.
 - » The US and EU account for nearly 50% of India's textile exports.
 - » In FY25 (April-June), total textile exports were US\$ 9.17 billion, while apparel exports stood at US\$ 2.24 billion.

■ **Competition from Other Nations**

- » Vietnam exported apparel worth US\$ 40 billion in 2023, far exceeding India's exports.
- » Bangladesh and China have cost advantages due to vertically integrated supply chains, whereas India's fragmented production system increases costs.
- If India aims to close this gap, addressing inefficiencies and improving global trade competitiveness will be essential.

Challenges Facing the Textile Industry

- **Slowing Manufacturing Growth:** While India's textile sector is vast, its manufacturing growth has been sluggish in recent years.
 - » Between FY15 and FY19, textile manufacturing grew at a slow 0.4% CAGR, while the apparel sector expanded at 7.7% CAGR.
 - » From FY20 to FY24, the textile sector contracted by 1.8% annually, while apparel manufacturing shrank by 8.2%.
 - » The post-COVID slowdown, along with global economic uncertainty, has hit MSMEs, particularly in Tamil Nadu, the hardest.
- **High Production Costs and Raw Material Prices:**
 - » Polyester fibre in India is 33-36% costlier than in China.
 - » Viscose fibre is 14-16% more expensive than in China.
 - » Quality Control Orders (QCOs) have restricted the import of cheaper alternatives, making production more expensive.
- **Complex Regulations and Export Barriers:**
 - » Complicated customs procedures make exports cumbersome, while competitors like China and Vietnam benefit from streamlined regulations.
 - » Lack of Free Trade Agreements (FTAs) with key markets puts Indian exporters at a disadvantage compared to Bangladesh and Vietnam.
- **Sustainability and Environmental Compliance:**
 - » With sustainability becoming a priority

in global fashion, India faces increasing compliance requirements.

- » The EU has introduced 16 sustainability regulations affecting sourcing, energy use, and recycling.
- » Major brands now demand greater traceability, water conservation, and reduced carbon footprints from suppliers.
- » The textile recycling market in India is projected to reach US\$ 400 million, while globally, it is expected to hit US\$ 7.5 billion.
- Shifting towards greener practices will not only help India maintain access to key export markets but also create new growth opportunities.

The Road Ahead:

- **Strengthening Domestic Production and Export Competitiveness:**
 - » Investing in technology and automation to enhance efficiency and reduce costs.
 - » Encouraging vertical integration to streamline production and improve cost efficiency.
 - » Simplifying export procedures to make Indian textiles more competitive globally.
- **Embracing Sustainability and Circular Economy:**
 - » Promoting circular fashion to tackle

growing textile waste, which is expected to reach 148 million tonnes by 2030.

- » Expanding textile recycling initiatives to reduce environmental impact and align with global standards.
- **Policy Support and Government Initiatives:**
 - » Strengthening Production-Linked Incentive (PLI) schemes for MMF and technical textiles.
 - » Negotiating trade agreements with key global markets to expand export opportunities.
 - » Investing in R&D and skill development to drive innovation and product differentiation.

Conclusion:

India's textile industry remains a cornerstone of its economy, employing millions and contributing significantly to exports. However, to stay competitive, the sector must address rising production costs, fragmented supply chains, and stringent sustainability regulations. By investing in innovation, streamlining processes, and embracing sustainability, India can strengthen its position in the global textile trade. With the right policies and industry collaboration, the sector is poised for significant growth in the coming decade, securing its place as a global leader in textiles and apparel.

Short Issues

Scheme to Boost Low-Value BHIM-UPI Transactions

Context:

Recently, the Union Cabinet has approved a Rs 1,500 crore incentive scheme for low-value BHIM-UPI transactions for the financial year 2024-25. This scheme aims to encourage digital payments and further the government's vision of a less-cash economy.

Key Highlights of the Scheme

- **Incentive Rate:** The Centre has set an incentive

rate of 0.15 per cent for transactions up to Rs 2,000 made to small merchants.

- **Eligibility:** Only small merchants are eligible for incentives, while large merchants will not receive any incentives for transactions up to Rs 2,000.
- **Zero MDR:** There will be zero Merchant Discount Rate (MDR) for transactions across all categories, ensuring cost-free digital transactions.
- **Disbursement:** 80 per cent of the admitted claims by acquiring banks will be disbursed unconditionally, while the remaining 20 per cent will depend on meeting conditions such as

technical decline and system uptime.

Objectives of the Scheme:

- **Promoting BHIM-UPI:** The scheme aims to promote the BHIM-UPI platform and achieve a target volume of Rs 20,000 crore in FY25.
- **Supporting Payment Ecosystem:** The scheme supports payment system participants in building a robust and secure digital payments infrastructure.
- **Encouraging Digital Payments:** The scheme encourages small merchants to adopt digital payments, promoting a less-cash economy.

About BHIM UPI

- *BHIM is designed to facilitate simple, quick, and secure transactions using the Unified Payments Interface (UPI), allowing users to transfer money directly to others by either using their UPI ID or scanning their QR code.*
- *It was launched by Prime Minister Narendra Modi on December 30, 2016, with the goal of promoting financial inclusion and creating a digitally empowered society.*

Core Features:

- **Direct Bank Payments:** Send money directly to others using their UPI ID.
- **Money Requests:** Users can request money through their UPI ID.
- **QR Code Scanning:** Facilitates easy payments by scanning QR codes, which is convenient for merchants.

National Payments Corporation of India (NPCI):

- NPCI is a key organization that operates various payment and settlement systems in India. It was set up by the Reserve Bank of India (RBI) and the Indian Banks' Association (IBA) to ensure the development of a robust and efficient payment infrastructure for both physical and electronic transactions across the country.
- NPCI is incorporated as a "Not for Profit" company under Section 8 of the Companies Act, 2013 (formerly Section 25 of Companies Act 1956).
 - » **Key Objective:** To provide essential infrastructure for India's entire banking system, ensuring smoother, more secure, and efficient retail payment and settlement systems.
 - » **Innovation:** NPCI focuses on bringing

innovative solutions to the retail payment sector, leveraging technology to make payments more accessible and streamlined.

Conclusion:

This initiative could be a game-changer in driving more digital payments, especially for small-scale vendors who may have previously been hesitant due to transaction fees or the perceived complexity of adopting digital systems. By eliminating MDR and offering incentives, the government is making it more feasible for small businesses to make the transition to a fully digital payment environment.

Rs 16.35 Lakh Crore Bad Loans Written Off by Banks in Past 10 Years

Context:

In a surprising revelation, the Union government has disclosed that scheduled commercial banks (SCBs) in India have written off bad loans worth an eye-watering Rs 16.35 lakh crore over the past decade.

- The information was shared in the Lok Sabha by Finance Minister Nirmala Sitharaman in response to a question raised by Member of Parliament Amra Ram.

What are Non-Performing Assets (NPAs)?

- Non-Performing Assets (NPAs) refer to loans or advances for which the principal or interest payment has remained overdue for a period of 90 days or more.
- When customers, whether retail or corporate, fail to repay the loan as agreed, it stops generating income for the bank, making it an NPA. NPAs represent a financial burden on banks, as they cease to earn interest.
- The Reserve Bank of India (RBI) guidelines classify NPAs into three categories based on their duration and recoverability:
 - » **Substandard Assets:** Loans that have been non-performing for 12 months or less.
 - » **Doubtful Assets:** Loans that have been in the substandard category for over 12 months.
 - » **Loss Assets:** These are considered uncollectible, having little to no recoverable value, although some recovery may still be

possible.

About Write-Offs bad loan:

- When a loan is written off, the lender declares the loan as a loss due to non-repayment, and it's removed from their books as an asset, but the lender may still pursue recovery through legal means.
- According to the data presented in Parliament, the bulk of the loans written off were concentrated in large industries and services. These sectors alone accounted for about Rs 9.26 lakh crore of the total bad loans written off during this period.
- The write-offs span across a decade, showing a consistent pattern of significant amounts being written off year after year. Industrial and services sectors have consistently been the main contributors to the rising NPAs.

Implication of written off:

- Writing off bad loans does not mean waiving the borrower's liabilities; it acknowledged that the process is a necessary step when loans undergo full provisioning as mandated by the Reserve Bank of India (RBI).
- The RBI guidelines suggest that loans that have been non-performing for a considerable time (usually four years) and have been fully provisioned can be written off.
- Recovery efforts are still ongoing, with banks continuing to pursue dues through legal mechanisms such as civil courts, debt recovery tribunals (DRTs), and the National Company Law Tribunal (NCLT) under the Insolvency and Bankruptcy Code (IBC). These efforts aim to recover as much of the written-off amount as possible, though critics argue the actual recovery has been minimal.

Criticism and Concerns of written off:

- The massive sum of Rs 16.35 lakh crore in written-off bad loans has raised concerns among opposition leaders and experts. Many have criticized the Union government, arguing that the size of these write-offs reflects poor governance, inefficiency, and a lack of accountability in holding corporate defaulters responsible.
- Meanwhile, financial experts point out that writing off such large sums without effective recovery mechanisms may inadvertently encourage

financial indiscipline among borrowers, especially large corporations.

Way Forward:

The huge pile of written-off loans raises serious concerns about the stability of India's banking sector and its future financial health. Experts argue that in order to prevent such colossal NPAs from recurring, strengthening corporate governance and imposing stricter due diligence in the lending process are critical.

Stagnation of Income in Salaried Classes

Context:

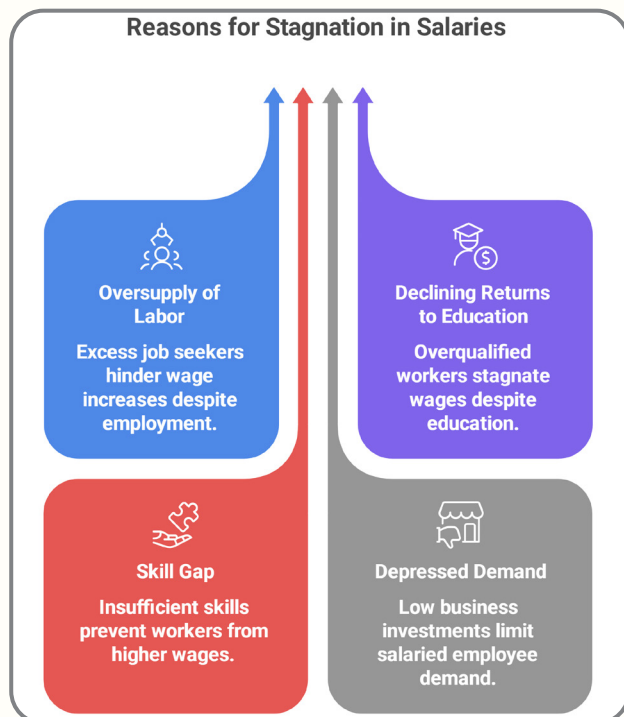
A concerning trend has emerged in India's employment landscape, with income levels of the salaried class stagnating in recent years. According to recent data, real wages for salaried jobs were 1.7% lower in the June quarter of 2024 compared to the June quarter of 2019. After showing a modest increase in 2020, wages fell by 6% in 2021 and by 1% in 2022, illustrating a trend of wage stagnation over the years.

What is meant by real wages?

- Real wages refer to the income earned by workers adjusted for inflation. This metric reflects the actual purchasing power of an individual's earnings, showing how much they can buy with their salary over time, accounting for inflationary pressures. It helps to understand if income growth is keeping pace with the rising cost of living.

Reason behind wages for salaried jobs stagnation:

- **Oversupply of labor:** There are more job seekers than available high-paying jobs, making it harder for workers to see wage growth despite an increase in employment numbers.
- **Declining returns to higher education:** Many educated workers are overqualified for the jobs they hold, leading to wage stagnation.
- **Skill gap:** A lack of adequate skill development across various sectors means workers are unable to demand higher wages.
- **Depressed demand:** The slowdown in business investments has limited the demand for salaried employees, affecting wage growth.



Effects on casual labor and self employed workers:

- **Casual Labor:** In contrast to salaried workers, wages for casual laborers have increased significantly in real terms. In June 2024, real wages for casual labor were 12.3% higher than in 2019, with rural areas seeing larger increases. However, casual labor is highly irregular and insecure, and its increase is not necessarily a net positive for the economy.
- **Self-Employed Workers:** Wages for self-employed workers have also improved since the pandemic, but real wages were still 1.5% lower in June 2024 compared to 2019. A rise in the share of self-employed individuals, particularly in unpaid roles, reflects distress in the labor market, suggesting low earnings for a significant portion of the workforce.

Suggestions:

Experts recommend several measures:

- **Skill development:** There is a need for better skill training at all educational levels to ensure workers are equipped to meet the demands of the modern job market.
- **Investment in the economy:** Increased investment by businesses could drive demand for salaried

employees and foster job creation.

- **Policy support:** Government interventions, such as changes in tax policies, can help boost consumption and demand, potentially spurring economic growth and improved wages.

Assured Pension Scheme for Government Employees

Context:

The Pension Fund Regulatory and Development Authority (PFRDA) has recently announced the operationalization of the Unified Pension Scheme (UPS), which will offer an assured pension to government employees. The scheme is set to come into effect from April 1, 2025, with a clear framework for the enrolment of both new recruits and existing employees under the National Pension System (NPS).

Key Features of the Unified Pension Scheme (UPS):

- The Unified Pension Scheme (UPS) ensures an assured pension of 50% of the average basic pay drawn over the last 12 months before superannuation, subject to a minimum qualifying service of 25 years.
- This follows the government's notification on January 24, 2025, for the implementation of UPS for Central government employees already covered under the NPS.
- The scheme will apply to:
 - » Existing Central government employees covered under NPS as of April 1, 2025.
 - » New recruits joining Central government services on or after April 1, 2025.

Assured Pension vs. Market Returns Linked Payout:

- The UPS offers a fixed pension based on 50% of the average basic pay from the last 12 months before retirement, unlike the market returns linked payouts under the NPS.
- This fixed pension provides stability and assurance for employees nearing retirement, especially those with 25 years of service.
- However, the benefits will not apply in cases of removal, dismissal, or resignation, as outlined in the PFRDA notification.

A Shift from the Old Pension Scheme (OPS):

- The Unified Pension Scheme (UPS) is an alternative to the National Pension System (NPS), which was introduced on January 1, 2004. Unlike the old pension scheme (OPS), which offered a fixed 50% of the last drawn basic pay as a pension, the new UPS is contributory.
- Employees will contribute 10% of their basic salary and dearness allowance, while the Central government will contribute 18.5%.
- The payout will depend on returns from the corpus, primarily invested in government debt and stable securities.

Impact on Government Employees:

- With 23 lakh government employees now eligible to choose between UPS and NPS, the new scheme provides flexibility, especially for those nearing retirement or those already enrolled in NPS.
- The UPS offers more financial security with a fixed pension compared to the uncertain market-based returns under NPS.

Conclusion:

The introduction of the Unified Pension Scheme (UPS) marks a significant step toward securing the post-retirement financial well-being of government employees. By combining the stability of a fixed pension with some elements of market-linked growth through NPS contributions, the UPS offers a balanced solution.

SBI Study on Labour Migration

Context:

A recent study by the State Bank of India (SBI) highlights the growing impact of labour migration on inflation rates in southern states, particularly Kerala and Tamil Nadu. According to the study, migration from low-income states to high-income states is contributing to a rise in the cost of essential goods, exacerbating inflation in these regions.

Key Findings of the Study:

- **Regional Inflation Trends:** The study reveals that southern states, especially Kerala and Tamil Nadu, have experienced higher inflation rates compared to other regions of India. In contrast, northeastern

and western states have witnessed relatively lower inflation.

- **Impact of Labour Migration:** One of the primary drivers behind this inflationary trend is the migration of labour from low-income states to the economically prosperous southern states. The influx of migrants increases the demand for essential goods and services, pushing up prices.
- **Higher Purchasing Power:** The study notes that the increased purchasing power of residents in southern states, driven by economic growth and migration, has anchored higher inflation rates. As the local economy grows and wages rise, demand for goods increases, contributing to price hikes.
- **Taxation and Policy:** The study also identifies taxation as a contributing factor. Higher taxes on items such as petrol, diesel, liquor, and registration charges for automobiles and flats are compounding inflation in these states, making everyday goods more expensive for consumers.

State-Wise Inflation Rates

- **Kerala:** Kerala recorded the highest inflation rate of 7.3% in February, marking a significant rise in the cost of living in the state. The state's heavy reliance on migrant labour has further exacerbated the inflationary pressures.
- **Tamil Nadu:** Tamil Nadu, like Kerala, has faced inflation rates higher than the national average for 9 out of the last 13 years. This ongoing trend points to structural economic factors, including the influx of labour, which have contributed to persistent inflationary pressures in the state.

What is Inflation?

- Inflation refers to the gradual loss of purchasing power, which results in a significant increase in the prices of goods and services over time. This decline in purchasing power means that each unit of currency buys fewer goods and services.
- The inflation rate is calculated by averaging the price increases of a selected basket of goods and services over a year. The rate helps measure how much prices have risen compared to the previous year.
 - » **High Inflation:** When prices rise rapidly over time, leading to a decrease in the value of money.
 - » **Low Inflation:** When prices rise more slowly, reflecting a less significant impact on

purchasing power.

Conclusion:

The SBI study underscores the complex relationship between labour migration and inflation in southern states. While migration has contributed to economic growth in Kerala and Tamil Nadu, it has also led to higher inflation due to increased demand and higher taxation. Policymakers will need to address these issues to ensure balanced economic growth and control inflation in these regions.

Cities Coalition for Circularity

Context:

India has recently launched the Cities Coalition for Circularity (C-3), a multi-nation alliance for city-to-city collaboration, knowledge-sharing, and private sector partnerships.

About Cities Coalition for Circularity (C-3):

- Cities Coalition for Circularity (C-3) aims to provide a critical platform for policymakers, industry leaders, researchers, and development partners to discuss and implement sustainable solutions for waste management and resource efficiency in the Asia-Pacific region.
- The launch of C-3 was announced by Union Minister of Housing and Urban Affairs Manohar Lal at the 12th Regional 3R and Circular Economy Forum in Jaipur.

Key Objectives of C-3:

- **City-to-City Collaboration:** Foster collaboration among cities to share best practices, knowledge, and expertise in sustainable urban development.
- **Knowledge-Sharing:** Provide a platform for policymakers, industry leaders, researchers, and development partners to share knowledge and expertise in waste management and resource efficiency.
- **Private Sector Partnerships:** Encourage private sector partnerships to support sustainable urban development and resource efficiency initiatives.

Significance of C-3:

- The launch of C-3 marks a significant milestone in India's efforts to promote sustainable development and address environmental challenges. By providing a platform for city-to-city

collaboration, knowledge-sharing, and private sector partnerships, C-3 aims to support the development of sustainable and resource-efficient cities in the Asia-Pacific region.

What is the Regional 3R and Circular Economy Forum?

- The Regional 3R and Circular Economy Forum, launched in 2009, is a platform to promote sustainable waste management, resource efficiency, and circular economy principles in the Asia-Pacific region.
- It aims to address environmental challenges posed by rapid economic growth, resource depletion, and increasing waste generation.
- The Hanoi 3R Declaration (2013-2023) was a significant milestone adopted by the forum, outlining 33 voluntary goals to shift towards a more resource-efficient and circular economy in the region. These goals serve as a guideline for nations to enhance sustainability efforts.

Conclusion:

The launch of C-3 is a significant step towards promoting sustainable development and addressing environmental challenges in the Asia-Pacific region. By providing a platform for city-to-city collaboration, knowledge-sharing, and private sector partnerships, C-3 aims to support the development of sustainable and resource-efficient cities. As India continues to play a key role in promoting sustainable development, the success of C-3 will be crucial in achieving a more sustainable future.

India's Digital Economy

Context:

A recent report by the Indian Council for Research on International Economic Relations (ICRIER) and its Prosus Centre for Internet and Digital Economy (CIDE) has revealed a striking contrast in India's digital landscape. While India is the third-largest economy in the world, its "user" economy—which measures individual digital adoption and spending—ranks only 28th globally. This highlights a significant gap between the country's overall digital infrastructure and its accessibility to the average citizen.

Key Findings of the Report

- **Disparity in Digitalization**
 - » India has achieved high levels of digitalization at the aggregate level, but digital adoption among individuals remains relatively modest.
 - » While the density of internet connectivity in India is comparable to other nations, consumer spending on digital services is significantly lower.
- **Growth of the Digital Economy:**
 - » India's digital economy is growing at twice the rate of its overall economy.
 - » By 2029, the digital sector is projected to contribute one-fifth of India's GDP.
 - » These findings align with a previous ICRIER study conducted with the Ministry of Electronics and Information Technology, reinforcing the rapid expansion of India's digital sector.
- **CHIPS Framework and India's Ranking:**
 - » To assess India's position, the report uses the CHIPS framework, which evaluates factors such as access quality, affordability, data intensity, fintech development, AI readiness, and green energy investments. Based on these metrics, India ranks:
 - Third in overall economic size
 - 28th in the user economy
 - Eighth in a combined ranking of these indicators
- **Digital Harnessing and Regional Disparities:** India has made significant strides in utilizing digital technology, driven by:
 - » A strong Information and Communications Technology (ICT) services export sector, which is among the world's top performers.
 - » A robust IT sector, with the third-highest market capitalization globally, after the United States and China.
- However, digitalization is uneven across regions.
 - » Southern and Western states are far ahead in digital adoption.
 - » Eastern and Northern states lag behind, highlighting regional disparities in digital access and usage.

Challenges and Future Prospects:

- India's innovation ecosystem is a strong asset, driven by a thriving start-up culture, decentralized finance landscape, and high-valued unicorn companies. However, certain areas still require

significant improvement.

- The country falls behind in consumer adoption of the Internet of Things (IoT) and metaverse applications, and its AI infrastructure and research output remain below the median for G32 nations.

The Road Ahead:

- By 2030, India's digital economy is expected to contribute nearly one-fifth of the country's GDP, growing faster than traditional sectors. Over the past decade, digital-enabling industries have expanded at 17.3%, outpacing the economy's overall 11.8% growth rate. Digital platforms are set to grow even faster, with an expected 30% increase in the coming years.
- India must focus on enhancing AI capabilities, increasing digital accessibility, and addressing regional imbalances. With the right investments and policy measures, the country can ensure that digital transformation is not just an economic force but also a tool for inclusive growth. Strengthening these aspects will be key to cementing India's position as a global digital leader in the years to come.

Advantage Assam 2.0 Summit

Context:

The Advantage Assam 2.0 Summit, recently held in Guwahati, marked a significant step in Assam's economic growth, securing investment commitments worth over ₹5.18 lakh crore. These investments span various sectors, including hydrocarbons, digital technology, infrastructure, and manufacturing, reflecting growing investor confidence in the state's potential.

Key Infrastructure Announcements:

The government also unveiled major infrastructure projects aimed at strengthening connectivity and economic development:

- **Railway Projects:**
 - » A world-class railway station in Guwahati.
 - » Modernization of 50 railway stations under the Amrit Bharat Station Scheme.
 - » Development of new Gati Shakti Cargo Terminals to enhance freight movement.
- **Telecom Sector:** ₹1,800 crore investment in telecom connectivity, including a 5G Lab at Gauhati

University.

- **Hydrocarbon Sector:** ₹85,000 crore investment for oil exploration and development.

Strategic Importance of the Summit:

- Advantage Assam 2.0 was not solely about securing investments but also about positioning Assam as a business-friendly hub in the Northeast. By bringing together government representatives, private enterprises, and international delegations, the summit facilitated discussions on sustainable growth and job creation.
- Additionally, the summit underscored Assam's strategic importance in key sectors such as hydrocarbons, infrastructure, technology, and tourism, while reinforcing its role as a gateway to Southeast Asia.

Why Assam is an Attractive Investment Destination?

Assam's growing appeal to investors is driven by several factors:

- **Strategic Location:** As the gateway to Northeast India and Southeast Asia, Assam holds significant trade and connectivity advantages.
- **Rich Natural Resources:** The state is renowned for its tea plantations and petroleum reserves, which play a key role in its economic development.
- **Economic Diversification:** Assam is expanding its economic base by promoting agriculture, food processing, handicrafts, tourism, and IT.
- **Strong Economic Growth:** In FY 2023, Assam's Gross State Domestic Product (GSDP) grew by 19.5% year-on-year, reflecting robust economic transformation.
- **High-Value Investments:** Major projects like the \$3.3 billion Outsourced Semiconductor Assembly and Test (OSAT) project by Tata in Jagiroad highlight the state's ability to attract large-scale investments.

Conclusion:

The Advantage Assam 2.0 Summit has set the stage for Assam's rapid industrialization, supported by substantial investments and large-scale infrastructure projects. With the collaborative efforts of the state government and industry leaders, the state is well-positioned for sustained economic growth, increased employment opportunities, and improved living standards.

Maritime infrastructure in India

Context:

Union Minister of Ports, Shipping, and Waterways, Shri Sarbananda Sonowal, recently launched a series of groundbreaking initiatives aimed at transforming India's maritime sector. These initiatives, unveiled at a stakeholder meeting in Mumbai, are designed to modernize the country's maritime infrastructure, boost India's global trade presence, and promote sustainability in the sector.

Key initiatives launched:

- **'One Nation-One Port Process' (ONOP) initiative:**
 - » One of the major announcements was the launch of the 'One Nation-One Port Process (ONOP)'. This initiative aims to standardize and streamline the operations across all of India's major ports.
 - » The ONOP process is designed to eliminate inconsistencies in documentation and processes that have traditionally led to inefficiencies, higher operational costs, and delays.
 - » By harmonizing port procedures, this initiative will not only cut down logistical costs but also improve the overall competitiveness of Indian ports on the global stage.
- **Sagar Ankalan: Logistics Port Performance Index (LPPI):**
 - » Another key initiative launched by Shri Sonowal was the Sagar Ankalan – the Logistics Port Performance Index (LPPI) for FY 2023-24. This index is a crucial step in enhancing the efficiency and global competitiveness of Indian ports.
 - » It aims to benchmark port performance by assessing key performance indicators (KPIs) such as cargo handling efficiency, turnaround times, berth idle times, and container dwell times.
 - » Through the LPPI, India will be able to track and compare the performance of major and non-major ports in both bulk (dry and liquid) and container categories. The results will be used to identify areas for improvement and promote operational excellence.

- **Bharat Ports Global Consortium:**
 - » In line with India's focus on strengthening its global trade connections, the Bharat Global Ports Consortium was also launched. This initiative is designed to enhance India's maritime reach and global trade resilience by focusing on port expansion, operations, and financing.
 - » By collaborating with key stakeholders, such as the Indian Port Global Limited (IPGL), SDCL (finance), and the Indian Port Rail Corporation Limited (IPRCL), the consortium aims to drive improvements in port infrastructure, enabling India to better support the 'Make in India' initiative and boost exports.
- **MAITRI Initiative:**
 - » Another notable development is the launch of the MAITRI (Master Application for International Trade and Regulatory Interface) logo.
 - » This initiative is set to streamline international trade processes through digital integration, leveraging cutting-edge technologies like Artificial Intelligence (AI) and Blockchain.
 - » MAITRI will facilitate the creation of a 'Virtual Trade Corridor' (VTC) between India and the UAE as part of the India-Middle East-Europe Economic Corridor (IMEEC), with plans to extend the network to other regions, including ASEAN and BIMSTEC countries.

Conclusion:

India's maritime sector is set for a major transformation with these initiatives. Standardized port operations, improved performance tracking, global trade collaborations, and digital integration will enhance efficiency and competitiveness. To maximize the impact, strong coordination, continued investment, and supportive policies are essential. These steps will strengthen India's role in global trade and drive economic growth.

Digital Crop Survey (DCS) System

Context:

The Ministry of Agriculture and Farmers Welfare has launched the Digital Crop Survey (DCS) System, a

groundbreaking initiative aimed at gathering real-time crop-sown details directly from the field through a mobile interface. This innovative system ensures precise and up-to-date information on crop areas for every agricultural plot, crucial for accurate production estimations.

Key Features of the DCS System

- **Real-time Data Collection:** The Digital Crop Survey (DCS) System enables the direct collection of data from agricultural fields, reducing the potential for errors and significantly enhancing the efficiency of data gathering.
- **Agri Stack:** A digital platform built in compliance with the Digital Personal Data Protection Act, 2023, the Agri Stack ensures complete privacy and security of farmers' data by adhering to stringent data protection standards.
- **Farmer-centric Approach:** The system places control in the hands of farmers, allowing them to manage how their data is shared. Data is only shared with authorized entities and for clearly defined purposes, ensuring transparency and trust.
- **Federal Structure:** The DCS System's federal framework allows states to retain full control over their data, enhancing privacy and governance at the state level while maintaining central oversight.
- **Robust Cybersecurity Measures:** In line with best practices, the Government of India follows the Ministry of Electronics and Information Technology (MeitY) and Indian Computer Emergency Response Team (CERT-In) guidelines to secure data through encryption, secure APIs, and token-based authentication.

Benefits of the DCS System:

- **Improved Crop Area Estimation:** The real-time and accurate data collected by the system supports better crop area estimations, which is vital for making informed decisions regarding agricultural policies and support.
- **Enhanced Farmer Support:** The system helps streamline services like Minimum Support Price (MSP)-based procurement, crop insurance, and credit card-linked crop loans, ensuring that farmers receive more timely and relevant assistance.
- **Increased Efficiency:** By automating and digitizing data collection, the system minimizes manual errors, leading to greater efficiency and

effectiveness in the agricultural sector.

Challenges and Limitations:

- **Uniformity in Reach:** The success of the system hinges on its ability to provide consistent coverage across all states. Currently, a few states are fully covered, while others may lag behind in their adoption and implementation.
- **Technical Issues:** Challenges such as network connectivity issues in rural areas and inconsistencies in satellite imaging precision may hinder the accurate collection of data, potentially affecting the quality and reliability of the information gathered.
- **Farmer Familiarity:** A significant number of farmers and field officers may have limited digital literacy, which could lead to inaccuracies or errors in data entry. Ensuring that farmers are well-versed in using the system is essential for achieving accurate and effective data collection.

Conclusion:

The Digital Crop Survey (DCS) System is a game-changer for India's agricultural sector, bringing real-time, accurate data to the forefront of agricultural policy-making and support programs. By ensuring data privacy, enhancing farmer support, and promoting digital inclusion, the system promises to usher in a new era of efficiency and transparency in agriculture.

Gold Monetisation Scheme

Context:

The Indian government has announced the discontinuation of the Medium-Term (5-7 years) and Long-Term (12-15 years) Government Deposits under the Gold Monetisation Scheme (GMS). This decision follows a comprehensive review of the scheme's performance and evolving market conditions.

Background of the Gold Monetisation Scheme:

- Launched in November 2015, the GMS aimed to mobilize idle gold held by households and institutions, integrating it into the formal economy to reduce reliance on gold imports and address the current account deficit.
- The scheme allowed individuals and entities to deposit gold with banks, earning interest over specified durations.

Structure of the Scheme:

- The GMS offered three deposit tenures:
 - » Short-Term Bank Deposits (STBD): 1-3 years
 - » Medium-Term Government Deposits (MTGD): 5-7 years
 - » Long-Term Government Deposits (LTGD): 12-15 years
- While banks determined interest rates for STBDs based on prevailing market conditions, the government set fixed interest rates for MTGD and LTGD at 2.25% and 2.5% per annum, respectively.

Reasons for Discontinuation:

- The Ministry of Finance cited the scheme's performance and changing market dynamics as primary reasons for discontinuing the medium and long-term deposit components. Notably, gold prices have surged by over 15% this year, influenced by geopolitical tensions and economic uncertainties, impacting the scheme's viability.

Implications for Depositors:

- Deposits made under the MTGD and LTGD categories before March 26, 2025, will continue until their respective maturities. However, no new deposits will be accepted under these categories from the effective date. The Reserve Bank of India (RBI) is expected to release detailed guidelines to address operational aspects and ensure a smooth transition for existing depositors.

Continuation of Short-Term Deposits

- Short-Term Bank Deposits will remain available at the discretion of individual banks, which will assess their commercial viability. This continuation allows depositors to earn interest on their gold holdings over shorter durations, with interest rates determined by the banks based on current market conditions.

Conclusion:

The discontinuation of the medium and long-term components of the Gold Monetisation Scheme reflects the government's adaptive approach to prevailing economic conditions and market trends. While this move aims to mitigate risks associated with fluctuating gold prices and reduce future governmental obligations, it underscores the importance of continually evaluating financial schemes to ensure their effectiveness and alignment with national economic objectives.

India's Economy Doubles in a Decade

Context:

According to data from the International Monetary Fund (IMF), India has achieved an extraordinary economic milestone by doubling its Gross Domestic Product (GDP) over the past decade with a staggering 105% growth.

Key Highlights of India's Economic Growth:

- **GDP Growth:** India's GDP has surged from \$2.1 trillion in 2015 to a projected \$4.3 trillion in 2025, marking a 105% growth. This rapid expansion has outpaced all major global economies in terms of percentage growth.
- **Global Ranking:** As of now, India stands as the fifth-largest economy globally, behind only the United States (\$30.3 trillion), China (\$19.5 trillion), Germany (\$4.9 trillion), and Japan (\$4.4 trillion).
- **Comparison with Other Economies:** In the past decade, other major economies have seen comparatively slower growth:
 - » United States: 66% growth.
 - » China: 44% growth.
 - » United Kingdom: 28% growth.
 - » France: 38% growth.
 - » Russia: 57% growth.
 - » Australia: 58% growth.
 - » Spain: 50% growth.
- India's economic rise has been significantly faster than many of these economies, highlighting the country's dynamic economic transformation.

Factors Contributing to India's Economic Growth:

- Several factors have played a crucial role in driving India's remarkable economic growth:
 - » **Bold Economic Reforms:** India's government has focused heavily on reforming various sectors of the economy. Key reforms such as the implementation of the Goods and Services Tax (GST), corporate tax cuts, and the push for ease of doing business have made India an attractive destination for both domestic and foreign investments.
 - » **Structural Reforms and Investments:** India has undertaken significant structural reforms in areas such as infrastructure and technology.

The government has made substantial investments in digital infrastructure, highways, and railways, which have boosted industrial output, logistics, and trade.

- » **Manufacturing and Innovation:** Policies like Make in India and Atmanirbhar Bharat (Self-reliant India) have focused on encouraging domestic manufacturing, which has further contributed to economic growth.



Future Prospects:

- **Global Economic Influence:** India's growth is expected to continue being driven by its commitment to reforms, increasing industrial productivity, and continuous advancements in technology and innovation.
- **Surpassing Japan:** As Japan's economy remains stagnant, India is set to surpass Japan in the near future. Projections suggest that India could become the world's third-largest economy by 2027, further solidifying its role as a global economic leader.

Conclusion:

The country's ascent to the position of the fifth-largest economy is not just a statistical achievement but a reflection of a changing global economic landscape. As India continues its upward trajectory, it stands poised to play an even more influential role in the global

economy, offering significant opportunities for growth, innovation, and investment.

Anti-Dumping Duties on 5 Chinese Imports

Context:

In a bid to protect domestic industries from the adverse effects of unfair trade practices, India has recently imposed anti-dumping duties on five Chinese products. The trade action was based on the recommendation from the Directorate General of Trade Remedies (DGTR), which is the investigation arm of India's commerce ministry.

What are Anti-Dumping Duties?

- Anti-dumping duties are trade remedies designed to protect domestic industries from unfair competition resulting from dumping. Dumping occurs when a product is exported to another country at a price lower than its normal market value or below the cost of production.
- This can harm local industries by undercutting their prices and making it difficult for them to compete.
- The World Trade Organization (WTO) regulates anti-dumping actions, allowing member countries to take measures like imposing additional tariffs on the dumped products to ensure that domestic producers have a level playing field.

Anti-Dumping Duties on Chinese Imports:

The five Chinese imports subject to anti-dumping duties are:

- **Aluminium Foil:** A provisional duty of up to USD 873 per tonne has been imposed for six months.
- **Soft Ferrite Cores:** Used in electric vehicles, chargers, and telecom devices, these cores will attract a duty of up to 35% of their CIF (cost, insurance, and freight) value.
- **Vacuum Insulated Flasks:** A duty of USD 1,732 per tonne has been levied on these imports.
- **Trichloro Isocyanuric Acid:** Used to treat water, this chemical will attract a duty ranging from USD 276 per tonne to USD 986 per tonne.
- **Poly Vinyl Chloride Paste Resin:** Imports from China, Korea RP, Malaysia, Norway, Taiwan, and Thailand will be subject to a duty of USD 89 to USD 707 per tonne.

Why did India impose these Duties?

- The imposition of these duties is part of India's broader efforts to protect its domestic industries from the negative effects of dumping.
- According to India's Directorate General of Trade Remedies (DGTR), investigations revealed that the Chinese products were being sold at below-normal prices, causing significant damage to domestic manufacturers.
- Anti-dumping measures are therefore essential to maintain fair competition and ensure the long-term viability of local industries.

How Do Anti-Dumping Duties Work?

- The imposition of anti-dumping duties is backed by the General Agreement on Tariffs and Trade (GATT), which allows countries to take action against dumping under certain conditions.
- The Anti-Dumping Agreement clarifies these provisions and outlines the procedure for investigating and implementing such duties.

Do Anti-Dumping Duties Violate WTO Rules?

- No, anti-dumping duties do not violate WTO rules. In fact, they are explicitly allowed under the WTO's framework. The purpose of these duties is to correct the imbalance caused by unfair pricing and restore a level playing field for domestic producers.
- However, the duties must be implemented in accordance with the Anti-Dumping Agreement and only after a thorough investigation proves that domestic industries have been harmed by the dumped goods.

Conclusion:

The imposition of anti-dumping duties on Chinese imports is a significant step by India to ensure fair competition in its markets and protect its domestic industries. By imposing such duties, India is sending a clear message that it is committed to maintaining a balanced and fair trade relationship with China, while simultaneously protecting its domestic economic interests.

India's Bio-Economy

Context:

India's bio-economy has recently seen tremendous growth over the past decade, increasing 16 times from

\$10 billion in 2014 to \$165.7 billion in 2024. Union Minister Dr. Jitendra Singh shared these figures at the BIRAC Foundation Day event while releasing the "India Bioeconomy Report 2025" (IBER 2025). This growth highlights India's rising position as a global biotechnology leader, with the sector now contributing 4.25% to the country's GDP.

Launch of BioSaarthi:

- During the event also an innovative global mentorship initiative called BioSaarthi was launched, which is an innovative global mentorship initiative designed to support biotech startups.
- This initiative seeks to connect emerging entrepreneurs with experienced mentors from around the world, providing valuable guidance and resources to help these startups scale.

About bioeconomy:

- The bioeconomy refers to economic activities that involve the use of biotechnology and biomass to produce goods, services, and energy. It is closely linked to scientific research and technological advancements, particularly in the fields of genetics and biotechnology.
- This includes industries such as agriculture, health, chemicals, and energy, where biological resources like crops, forests, fish, animals, and microorganisms are harnessed for production.

Drivers of bioeconomy:

- India's commitment to biotechnology as a central pillar of its economic strategy has been crucial in driving this transformation. The sector has achieved an impressive compound annual growth rate (CAGR) of 17.9% over the past four years, positioning India as a rising leader in the global biotech space.
- The government's proactive policies, infrastructure investment, and emphasis on research and development have paved the way for this rapid expansion.

The Bio-E3 Policy

- Biotechnology for Economy, Employment, and Environment—aims to accelerate research, innovation, and entrepreneurship in the biotech sector.
- Under this policy, initiatives such as Bio-AI Hubs, Bio foundries, and bio-enabler hubs will be established to integrate advanced technologies

with biomanufacturing.

- Assam has become the first state to adopt the BioE3 framework, setting a precedent for other states.

What is biotechnology?

- Biotechnology, or biotech, is the use of biology and technology to develop new products, methods, and organisms. It aims to improve human health and society. Biotechnology is sub part of bio economy.
- Biotechnology in India has led to groundbreaking innovations such as the development of Nafithromycin, India's first indigenous antibiotic for respiratory diseases, and successful gene therapy trials for hemophilia.
- Additionally, collaborations between the Department of Biotechnology and ISRO are laying the foundation for space biology and space medicine, ensuring astronaut health and advancing medical solutions for future space missions.

About BIRAC:

- BIRAC, the Biotechnology Industry Research Assistance Council, is a Section 25 'Not-for-Profit Company' of the Government of India, registered under the Indian Companies Act of 1956.
- Set up by the Department of Biotechnology (DBT), BIRAC serves as an interface agency, providing support to the emerging biotech industry in India.
- It acts as a single-window facility to promote strategic research, innovation, and affordable product development in biotechnology.

Conclusion:

As India continues to make strides in the biotechnology sector, it is poised to become a powerhouse in the global biotech arena, leading the way in innovation, research, and economic growth.



Internal Security

India's Defence Growth Under 'Make in India' Initiative

From a nation once reliant on foreign arms imports to one carving its own path in defence manufacturing, India's journey under the 'Make in India' initiative marks a significant turning point in its military and economic landscape. The push for self-reliance has reshaped the country's defence sector, steering it toward unprecedented growth and global competitiveness. The financial year 2023-24 stands as a testament to this transformation, with India's defence production reaching an all-time high of Rs.1.27 lakh crore, reflecting a remarkable 174% growth since 2014-15. This surge is not merely a statistic but a statement of intent—an assertion of India's evolving strategic autonomy, bolstered by visionary policies, robust private sector engagement, and cutting-edge technological advancements.

- The growing defence budget, from Rs. 2.53 lakh crore in 2013-14 to Rs.6.81 lakh crore in 2025-26, underscores the country's unwavering commitment to military modernization. As India fortifies its national security through indigenous capabilities, it simultaneously emerges as a formidable force in the global arms market. The coming decade holds the promise of an India that not only secures itself but also contributes to shaping the future of global defence.

Major Defence Acquisitions and Contracts:

- India has intensified its focus on indigenous defence production, reflected in the 193 contracts worth over Rs.2,09,050 crore signed in 2024-25, with 92% allocated to domestic industries. Some key acquisitions include:

- » **Light Combat Helicopter (LCH) Prachand:** Hindustan Aeronautics Limited (HAL) secured a contract worth Rs.62,700 crore for 156 helicopters, with 66 for the Air Force and 90 for the Army. Designed for high-altitude warfare, these helicopters incorporate 65% indigenous content.
- » **KC-135 Flight Refuelling Aircraft (FRA):** India's first wet lease contract for air-to-air refueling training.
- » **Advanced Towed Artillery Gun System (ATAGS) and High Mobility Gun Towing Vehicles:** The acquisition of 307 ATAGS and 327 gun towing vehicles under the IDDM category, developed by DRDO, Bharat Forge, and Tata Advanced Systems, with an investment of Rs.7,000 crore. These systems have a firing range exceeding 40 km.

Surge in Indigenous Defence Production:

- India has significantly reduced its dependency on imported military hardware, with over 65% of defence equipment now produced domestically. The SRIJAN initiative has facilitated the indigenization of over 14,000 components, while the Positive Indigenisation Lists have helped eliminate dependence on over 3,000 imported items.
- The indigenous defence industry is rapidly expanding and consists of:
 - » 16 Defence Public Sector Undertakings (DPSUs)
 - » 430+ licensed private companies
 - » 16,000+ Micro, Small, and Medium Enterprises (MSMEs)
- **Key indigenous defence systems include:**

- » **Land-based systems:** Dhanush Artillery Gun, ATAGS, MBT Arjun, Pinaka Rocket System, Light Combat Vehicles
- » **Air-based systems:** LCA Tejas, ALH Dhruv, LUH, Akash Missile System
- » **Naval assets:** Aircraft carriers, destroyers, frigates, submarines, and fast attack crafts

Unprecedented Growth in Defence Exports:

- India has emerged as a significant defence exporter, with defence exports growing 30 times in the past decade. The total export value reached Rs.21,083 crore in FY 2023-24, with defence products supplied to over 100 countries, including the USA, France, and Armenia.
- **Major exports include:**
 - » Bulletproof jackets
 - » Dornier Do-228 aircraft
 - » Chetak helicopters
 - » Lightweight torpedoes
 - » Fast interceptor boats
 - » Combat boots (exported to the Russian Army)
- India has set ambitious targets for Rs.50,000 crore in defence exports and Rs.3 lakh crore in total production by 2029.

Defence Industrial Corridors and Investment Surge:

- To accelerate indigenous manufacturing, two Defence Industrial Corridors (DICs) have been established in Uttar Pradesh and Tamil Nadu. These corridors are attracting substantial investments, with Rs.8,658 crore already invested.
- **Uttar Pradesh DIC:** Six nodes including Lucknow, Kanpur, Aligarh, Agra, Jhansi, Chitrakoot
- **Tamil Nadu DIC:** Five nodes including Chennai, Coimbatore, Hosur, Salem, Tiruchirappalli
- 253 MoUs signed with a projected investment of Rs.53,439 crore
- These corridors aim to boost manufacturing, research, and innovation in defence technology.

Innovation and Technology Development in

Defence:

- The government has launched several initiatives to foster defence innovation and technological advancements.
- **Innovations for Defence Excellence (iDEX):** Provides grants of up to Rs.1.5 crore for startups and MSMEs, with 430 contracts signed under this initiative.
- **ADITI Scheme:** Supports AI, quantum computing, and underwater surveillance with grants up to Rs.25 crore.
- **SAMARTHYA initiative at Aero India 2025:** Showcased 33 new indigenized defence products, including the RudraM II missile, Naval Anti-Ship Missile, and advanced communication technologies.

Policy Reforms for Defence Growth:

- To further strengthen indigenous defence production, the government has introduced several key policy reforms:
 - » **Foreign Direct Investment (FDI) limit:** Raised to 74% under the automatic route and up to 100% with government approval.
 - » **Ease of doing business:** 700+ industrial licenses issued to 436 companies under a streamlined Defence Product List.

MAKE-I and MAKE-II projects:

- **MAKE-I:** Government funds up to 70% of R&D costs.
- **MAKE-II:** Industry-funded projects focused on import substitution.
- **MAKE-III:** Manufacturing in India through Technology Transfer (ToT) agreements.
- 145 projects launched, engaging 171 companies.
- **Defence Testing Infrastructure Scheme (DTIS):** Eight advanced testing and certification centers established.
 - » To boost domestic procurement, Rs.1,11,544 crore (75% of the modernization budget for FY 2025-26) has been allocated to domestic defence purchases.

Conclusion:

India's defence sector is undergoing rapid transformation, driven by strategic policies,

technological innovation, and enhanced industry participation. The country is not only reducing its dependency on imports but also establishing itself as a global defence exporter. With ambitious targets set for 2029, India is poised to become a leading player in the international arms industry. The 'Make in India' initiative has

emerged as a game-changer, ensuring long-term security, economic growth, and technological self-sufficiency in defence production. As India continues to advance in military modernization, it strengthens its position as a self-reliant and globally competitive defence power.

Short Issues

Chhattisgarh Unveils New Surrender Policy for Maoists

Context:

Chhattisgarh Home Minister Vijay Sharma has recently announced a new 'Surrender and Rehabilitation Policy' to tackle the Maoist insurgency in Chhattisgarh. This policy encourages Maoists to surrender by offering them free food, shelter, cash, skills, land, and homes. The announcement followed a major security operation in the Bastar region, where 30 Maoists were killed in two separate encounters.

Key Provisions of the New Policy

- Under the new policy, Maoists willing to surrender will be offered free food and shelter for three years, a monthly allowance of Rs 10,000, skill development programs, and land and housing under the Prime Minister Housing Scheme.
- Surrendered Maoists who bring weapons will also receive extra incentives, including the bounty amount for their arrest. For mass surrenders, the rewards will be doubled, and areas declared Maoist-free will immediately receive development projects worth Rs 1 crore.
- This will include infrastructure such as mobile networks, electric lines, and solar lights to support the development of these areas.

Special Provisions for Families and Education:

- The policy also makes provisions for married couples and their children. Additionally, the government will sponsor the education of children who have lost parents due to Maoist violence.
- Displaced individuals will also receive financial aid and land to help them rebuild their lives, signaling a comprehensive approach to addressing the social

and economic impact of the ongoing insurgency.

What is Maoism?

- Maoism is a form of communism developed by Mao Tse Tung, emphasizing the use of armed insurgency, mass mobilization, and strategic alliances to overthrow the state. The ideology's central theme is violence and military action to capture state power, with the slogan "bearing of arms is non-negotiable."
- The CPI (Maoist), formed in 2004, is the largest Maoist group in India, and it has been banned under the Unlawful Activities (Prevention) Act, 1967.
- Three-Pronged Strategy to Eliminate Maoist Insurgency
- **The strategy to counter Maoist insurgency in India focuses on three key pillars:**
 - » **Security Measures:** Increasing the presence of security forces in Maoist-affected areas, conducting joint operations between state and central forces, and enhancing the capacity of forces with advanced technology. Operation SAMADHAN targets intelligence gathering and operational efficiency.
 - » **Development Initiatives:** Key projects like improving rural connectivity (PMGSY), building houses under the Aspirational Districts Programme, and promoting infrastructure development aim to address socio-economic factors contributing to insurgency.
 - » **Empowerment (Winning Hearts and Minds):** Engaging with local tribal communities, offering rehabilitation programs for Maoist cadres, and addressing issues like land acquisition and tribal rights to reduce alienation and build trust.

Conclusion:

Chhattisgarh's new Surrender and Rehabilitation Policy is an ambitious attempt to reduce Maoist insurgency by offering incentives for surrender, while simultaneously ensuring the welfare of surrendered individuals and their families. The government's comprehensive approach aims to weaken Maoist forces through both military action and social rehabilitation. With the backing of development initiatives and education support, this policy could play a key role in promoting peace and stability in the state.

Indigenous Defence Development

Context:

Recently, India's Defence Acquisition Council (DAC) has granted preliminary approvals for military hardware procurements worth ₹54,000 crore. This decision comes shortly after the Cabinet Committee on Security (CCS) finalized the procurement of 307 artillery guns worth ₹7,000 crore, marking a significant boost to the country's defence infrastructure.

Key Approvals and Acquisitions:

- Several critical acquisitions have received the Acceptance of Necessity (AoN) from the DAC, including:
 - » **Upgradation of T-90 Tanks:** The Indian Army's T-90 tanks, a key component of its armoured corps, will be upgraded with 1350 HP engines replacing the current 1000 HP engines. This enhancement will significantly improve the tanks' mobility on the battlefield.
 - » **Airborne Early Warning & Control (AEW&C) Aircraft Systems:** To enhance surveillance and combat readiness, AoN has been granted for the procurement of AEW&C aircraft systems for the Indian Air Force. These systems will improve early warning capabilities and airspace management during operations.
 - » **Varunastra Torpedoes:** The Varunastra torpedoes, which are crucial for the Navy's anti-submarine warfare capabilities, will be procured, strengthening the Navy's ability to counter underwater threats posed by adversaries.

ATAGS (Advanced Towed Artillery Gun

System):

- A key highlight of this acquisition spree is the indigenous development of military hardware. The 307 ATAGS (Advanced Towed Artillery Gun System), a 155mm, 52 calibre heavy artillery gun, has been approved for procurement.
- These guns are indigenously designed and developed by Armament Research and Development Establishment (ARDE) in collaboration with Bharat Forge and Tata Group. This not only reduces India's dependence on foreign suppliers but also promotes Make in India initiatives, with over 65% of the gun's components sourced domestically.

Reducing Procurement Timelines:

- In a bid to further enhance the efficiency of defence procurements, the DAC has also approved new guidelines aimed at shortening procurement timelines. These revised timelines are expected to reduce procurement processing by 10-15%, ensuring that military needs are addressed in a faster and more streamlined manner.

Conclusion:

India's recent military hardware procurement approvals underscore the nation's commitment to strengthening its defence capabilities. With significant upgrades to its tanks, artillery systems, and naval assets, alongside the promotion of indigenous defence development, India is poised to enhance its strategic position on the global stage. Additionally, the reforms in procurement timelines will improve the efficiency and responsiveness of the military acquisition process, ensuring that the armed forces remain well-equipped to face emerging threats.

Capability Enhancement of the Indian Air Force

Context:

The Empowered Committee for Capability Enhancement of the Indian Air Force (IAF), chaired by Defence Secretary Rajesh Kumar Singh, has submitted its report to Defence Minister Rajnath Singh. This report outlines key measures to address the IAF's fighter jet shortfall, enhance self-reliance in defence manufacturing, and modernize India's air combat capabilities. Initially scheduled for submission in

January, the report was delayed but is now set to guide policy decisions on national air defence.

Fighter Jet Shortage and Operational Challenges

- **Current Strength and Requirements:**
 - » The IAF currently operates 31 fighter squadrons, significantly below the sanctioned strength of 42.5 squadrons.
 - » Several existing aircraft, including the Jaguar, MIG-29UPG, and Mirage-2000, are set to be phased out by the end of the decade.
 - » The IAF must acquire 35-40 fighter jets annually to maintain combat readiness, according to Air Chief Marshal A.P. Singh.
- **Planned Inductions and Delays:**
 - » **Light Combat Aircraft (LCA) Mk-1A:** HAL has committed to delivering 12 aircraft in 2025 and increasing production to 24 units in 2026.
 - » **LCA-Mk2:** Currently under development, expected to replace older fighter jets.
 - » **Advanced Medium Combat Aircraft (AMCA):** India's fifth-generation fighter jet, anticipated to be operational within a decade.

Indigenisation and Private Sector Involvement:

- **Aatmanirbharta in Defence Manufacturing**
 - » The report highlights the need to strengthen domestic aerospace capabilities under the Aatmanirbhar Bharat initiative.
 - » Greater involvement of private sector firms is recommended to support the efforts of Defence Public Sector Undertakings (DPSUs) and the Defence Research and Development Organisation (DRDO).
- **Strategic Objectives:**
 - » Enhance efficiency in aircraft production.
 - » Reduce dependency on foreign suppliers.
 - » Expedite the delivery of critical defence equipment.

Government's Response and Policy Direction:

- **Formation of the Empowered Committee:** The committee was constituted on the direction of the Defence Minister to holistically assess the challenges faced by the IAF and develop a comprehensive action plan. It includes:
 - » **Chairperson:** Defence Secretary Rajesh Kumar Singh
 - » **Members:**
 - Vice Chief of Air Staff
 - Secretary, Defence Production
 - Secretary, Department of Defence R&D &

Chairman, DRDO

- Director-General, Acquisition
- Deputy Chief of the Air Staff (Member Secretary)

Implementation Strategy:

- The Defence Minister has endorsed the recommendations and instructed that they be followed up in a time-bound manner.
- Immediate steps will focus on accelerating fighter jet production and addressing short-term capability gaps.
- Long-term measures will be directed toward developing advanced indigenous aircraft and strengthening defence manufacturing.

Conclusion:

The Empowered Committee's report provides a clear roadmap for modernizing the IAF, addressing its fighter jet shortfall, and strengthening indigenous defence capabilities. The timely implementation of these recommendations will be critical in ensuring India's air superiority and national security amid evolving regional security challenges.

Vertically-Launched Surface-to-Air Missile (VLSRSAM)

Context:

On March 26, 2025, the Defence Research & Development Organisation (DRDO) and the Indian Navy conducted a successful flight test of the Vertically-Launched Short-Range Surface-to-Air Missile (VLSRSAM). The test was carried out at the Integrated Test Range (ITR) in Chandipur, Odisha, marking a significant advancement in India's defence capabilities.

About VLSRSAM:

- The VLSRSAM is an indigenously developed missile designed specifically for short-range air defence. It is capable of countering various aerial threats at low altitudes, making it highly effective against missiles, drones, and other airborne targets.
- The missile integrates advanced technologies, including an indigenous Radio Frequency seeker, which significantly enhances its target acquisition and engagement capabilities, ensuring high precision in combat situations.

Flight Test Details:

- The flight test of the VLSRSAM was conducted

from a land-based vertical launcher, simulating real combat conditions. The missile was targeted at a high-speed aerial threat at a close range.

- During the test, the VLSRSAM successfully demonstrated its Near-Boundary-Low Altitude capability, showcasing its agility and accuracy. The missile executed a high turn rate, which enabled it to engage and destroy the target effectively.

System Components:

- The test involved several critical components deployed in a combat configuration:
 - » **VLSRSAM Missile:** The main weapon tested.
 - » **Multi-Function Radar (MFR):** Used for detecting and tracking targets.
 - » **Weapon Control System (WCS):** Responsible for managing the missile's flight and engagement.
- All components functioned as expected during the test, with real-time data captured using advanced range instruments developed at ITR Chandipur. The integration and coordination of these systems validated their effectiveness in operational conditions, confirming the missile's readiness for

deployment.

Significance of the Test:

- VLSRSAM will act as a force multiplier for the Indian Navy, significantly enhancing its air defence capabilities.
- This achievement is also a reflection of India's increasing capabilities in indigenous defence manufacturing, setting the stage for future advancements in air defence technology, and reinforcing the country's strategic position in the region.

Conclusion: The successful test of the VLSRSAM marks a crucial step forward in India's pursuit of self-reliance in defence manufacturing. The missile's cutting-edge technology will provide a technological edge to the Indian Armed Forces, enhancing their ability to counter air threats more effectively. As part of India's broader commitment to strengthening national security, this missile is expected to bolster India's air defence systems, making them more resilient to a wide range of aerial threats.



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Power Packed News

India's first indigenous MRI machine

- India has developed its first indigenous Magnetic Resonance Imaging (MRI) machine, which will be installed at AIIMS, New Delhi by October 2025. This 1.5 Tesla MRI machine will help make the country self-reliant in medical technology.
- Currently, 80-85% of India's medical equipment requirements are met through imports. The project is being run in partnership with the Society for Applied Microwave Electronic Engineering and Research (SAMEER).
- The initiative aims to reduce the cost of MRI by 50% and reduce foreign dependency. It will motivate various companies and institutions to invest in innovative technologies. This indigenous development will not only empower the medical sector but will also be helpful in providing more affordable healthcare facilities.

Disaster Management (Amendment) Bill 2024

- On 25 March 2025, the Rajya Sabha passed the Disaster Management (Amendment) Bill 2024, which was approved by the Lok Sabha in December 2024.
- The bill amends the Disaster Management Act of 2005. It aims to strengthen the functionality of the National Disaster Management Authority (NDMA) and State Disaster Management Authorities (SDMA).
- The bill empowers state governments to create urban disaster management authorities and allows setting up disaster databases at the national and state levels.
- The bill emphasizes on adopting a multi-pronged approach to disaster management, which will also ensure the participation of private and non-governmental organizations along with government agencies. This will make the disaster response system more effective and streamlined.

Sikkim Budget 2025-26

- Sikkim Chief Minister Prem Singh Tamang presented an annual budget of Rs 16,196 crore for 2025-26. The main objective of the budget is to empower the youth, encourage the development of farmers, invest in infrastructure and ensure financial discipline.
- It includes revenue expenditure of Rs 11,028 crore and capital expenditure of Rs 5,168 crore. The central government will provide assistance of Rs 2,600 crore, while Rs 5,519 crore will come as tax transfer.
- The state government will borrow Rs 2,651 crore and earn Rs 2,076 crore from tax revenue and Rs 1,007 crore from non-tax revenue.
- The budget focuses on implementing various schemes to maintain the economic stability of the state and promote social development.

Banking Laws (Amendment) Bill 2024

- On 26 March 2025, the Rajya Sabha approved the Banking Laws (Amendment) Bill 2024, which was earlier passed by the Lok Sabha. The bill amends the Reserve Bank of India Act 1934, the Banking Regulation Act 1949, the State Bank of India Act 1955, and other related laws.
- It proposes to increase the nomination options for bank accounts from one to four. The financial limit required for director posts has been increased from Rs 5 lakh to Rs 2 crore.
- The bill also gives banks the freedom to determine the remuneration of their auditors. In 2024, public sector banks reported a record net profit of Rs 1.41 lakh crore. The bill will make the banking system more robust and effective.

Changes in Gold Monetisation Scheme

- The government announced the discontinuation of the medium and long-term government deposit (MLTGD) components of the Gold Monetisation Scheme (GMS) on March 25, 2025. The change was effective from March 26, 2025, after which no new gold will be accepted under these schemes.
- The GMS was launched in 2015, consisting of short-term bank deposit (1-3 years), medium-term (5-7 years), and long-term (12-15 years) deposit schemes.
- The scheme aimed to use domestic and institutional gold for productive purposes and reduce import dependence. As of November 2024, 31,164 kg of gold had been deposited under the scheme.

Prachand Prahar Exercise

- The Indian Armed Forces conducted a tri-services integrated multi-domain exercise "Prachand Prahar" from 25-27 March 2025.
- The exercise focused on joint operations of the Army, Air Force and Navy. It involved the deployment of advanced surveillance systems, space-based resources and special forces.
- It was reviewed by Eastern Army Commander Lieutenant General Ram Chandra Tiwari, Eastern Air Commander Air Marshal Surat Singh and Navy Commodore Ajay Yadav.
- The exercise was an extension of the "Eastern Prahar" exercise held in November 2024. It tested the mutual coordination and operational capability of the three forces.

Roshni Nadar among top 10 richest women

- Roshni Nadar has become the first Indian woman to be included in the top 10 richest women in the world in the Hurun Global Rich List 2025. She is ranked fifth with a net worth of US\$40 billion (Rs 3.5 lakh crore).
- She is the chairperson of HCL Technologies and is the third richest person in India in 2025. She received the Schaffner Prize in 2023 and France's Chevalier de la Légion d'Honneur in 2024.
- There are a total of 561 women on the Hurun list, including 224 self-made billionaires.

Khelo India Para Games 2025

- The Khelo India Para Games 2025 concluded at the JLN Stadium in New Delhi. More than 1,300 para-athletes participated in the competition.
- Haryana topped the medal tally with 34 gold, 39 silver and 31 bronze medals.
- Tamil Nadu finished second with 28 gold, 19 silver and 27 bronze medals, while Uttar Pradesh finished third with 23 gold, 21 silver and 20 bronze medals.

Sea Carriage of Goods Bill, 2024

- The Lok Sabha passed the Sea Carriage of Goods Bill, 2024, which will replace the old Act of 1925. It aims to modernise cargo transportation by sea and clarify the responsibilities, rights and liabilities of carriers involved.
- The Bill will strengthen port laws and promote integrated port development. It will simplify trade and ensure optimal utilisation of India's maritime resources by setting up state maritime boards.
- Also, structured development of the port sector will be promoted by setting up a Maritime State Development Council.
- The Bill empowers the Central Government to make changes in the rules relating to Bill of Lading. The Act will

regulate sea freight movement from Indian ports to foreign ports and within India.

India becomes world's largest milk producer

India has achieved the top position globally in milk production, reaching 239 million metric tons (MMT), with a target of 300 MMT in the next five years. The country has around 10 crore people involved in milk production, and per capita milk consumption stands at 471 grams per day.

Rashtriya Gokul Mission:

- The Department of Animal Husbandry and Dairying is running the Rashtriya Gokul Mission, launched in 2014, to conserve and develop indigenous breeds. This initiative focuses on improving the genetic quality of bovine animals and boosting milk production.
- Additionally, the mission promotes artificial insemination to enhance productivity. As India's dairy sector plays a crucial role in the rural economy, this growth is expected to significantly increase farmers' incomes.

Masaaki Kashiwara receives Abel Prize

- Japanese mathematician Masaaki Kashiwara has been awarded the prestigious Abel Prize for 2025. He has been honored for his fundamental contributions to algebraic analysis and representation theory.
- He is the first Japanese mathematician to win this award. He developed algebraic techniques to solve complex mathematical problems such as differential equations.
- Kashiwara has also collaborated with French mathematician Pierre Shapira in the field of microlocal analysis.
- The Abel Prize, established by the Norwegian government in 2001, is given in honor of Norwegian mathematician Niels Henrik Abel (1802-1829). Its prize money is 7.5 million Norwegian kroner (about \$714,000). This award is given to scientists who have made outstanding contributions in the field of mathematics.

India's Bioeconomy to be \$165 Billion in 2024

- Union Minister Dr Jitendra Singh announced that India's bioeconomy will reach \$165.7 billion in 2024 from a mere \$10 billion in 2014. He gave this information while releasing the "India Bioeconomy Report 2025" (IBER 2025).
- The sector has grown at a CAGR rate of 17.9% and is contributing 4.25% to India's Gross Domestic Product (GDP). BioSaarthi, a global mentorship initiative promoting biotech startups was also launched. This six-month program will provide personalized guidance to emerging bioentrepreneurs.
- The India Bioeconomy Report, published by the Department of Biotechnology and BIRAC, helps in the development, structure and policy decisions of the sector.

India's traditional Goli Soda in the global market

- APEDA relaunched the traditional Indian Goli Soda in the global market as Goli Pop Soda. The drink has already become popular in the US, UK, Europe and Gulf countries.
- In partnership with Fair Exports India, it was introduced in Lulu Hypermarkets, where it received an overwhelming response. The drink is presented with a mix of modern packaging and nostalgia.
- Also, Goli Pop Soda was showcased at the International Food & Beverage (IFE) event held in London from 17-19 March 2025. This initiative is an attempt to get global recognition for India's traditional drink.

Delhi government's Rs 1 lakh crore budget

- Delhi Chief Minister Rekha Gupta presented a Rs 1 lakh crore budget for the financial year 2025-26, an increase of 31.5% from the previous year. The budget focuses on power, road, water supply and infrastructure development.
- The major allocations include Rs 5,100 crore for Mahila Samridhi Yojana, Rs 2,144 crore for Ayushman Bharat and Rs 500 crore for Yamuna cleaning project.
- The government has also set aside Rs 100 crore for 100 Atal canteens and plans to install 50,000 CCTV cameras. Rs 1,000 crore has been allocated for connectivity improvements in Delhi-NCR.
- The budget also earmarks Rs 9,000 crore for clean drinking water and sanitation.

24% hike in salary, allowances and pension of MPs

- According to the gazette notification issued by the Ministry of Parliamentary Affairs, the salary, allowances and pension of MPs have been increased by 24%, which will be effective from April 1, 2023.
- The salary of Lok Sabha and Rajya Sabha MPs has been increased from Rs 1 lakh to Rs 1.24 lakh per month. The daily allowance has been increased from Rs 2,000 to Rs 2,500 and the pension of former MPs has been increased from Rs 25,000 to Rs 31,000.
- Former MPs who have served for more than five years will get an additional pension of Rs 2,500 per year. The last salary revision took place in 2018.
- This revision has been done under the 'Salary, Allowances and Pension of Members of Parliament Act' and is based on the inflation index of the Income Tax Act, 1961.

India won the Men's and Women's Kabaddi World Cup 2025

- India won the 2025 Men's and Women's Kabaddi World Cup held in Wolverhampton, England. The men's team defeated England 44-41 in the final, while the women's team won by an impressive score of 57-34.
- The tournament was held outside Asia for the first time, with matches played in Birmingham, Coventry, Walsall and Wolverhampton. India had also won both titles in the first edition held in Malaysia in 2019.
- The win re-establishes India's position as the leader in Kabaddi and also reflects the global popularity of the sport.

Sculptor Ram Sutar awarded Maharashtra Bhushan Award

- Renowned sculptor Ram Sutar will be awarded the Maharashtra Bhushan Award, the highest civilian honour of the Maharashtra government.
- Ram Sutar has designed the Statue of Unity and the 251-metre-high statue of Lord Ram in Ayodhya. He also created the statue of Mahatma Gandhi in a sitting posture in the Parliament House.
- Currently, he is working on the statue of Dr. Babasaheb Ambedkar at Indu Mills in Dadar. His sculpture art has been appreciated globally.
- The Government of India awarded him the Padma Shri in 1999 and the Padma Bhushan in 2016. His works have become the identity of Indian history and culture.

Christie Coventry becomes the first female president of the IOC

- Zimbabwe's Sports Minister and Olympic swimmer Christie Coventry became the first woman and the first African to become the President of the International Olympic Committee (IOC).
- She won the election with a decisive victory with 49 votes. There were seven candidates against her, in which she defeated Spain's Juan Antonio Samaranch Jr., while Britain's Sebastian Coe finished third.

- Coventry is a two-time Olympic gold medalist. She will now replace Thomas Bach. Her victory is considered an important step to promote women leadership in the sports world.

India-France naval exercise 'Varuna 2025' concluded

- The 23rd edition of the bilateral naval exercise 'Varuna 2025' between the navies of India and France was conducted from 19 to 22 March 2025. The exercise involved surface, air and underwater operations to enhance maritime combat capabilities.
- Indian aircraft carriers INS Vikrant and France's Charles de Gaulle along with several destroyers, frigates and an Indian Scorpene class submarine participated in it.
- The exercise also included aerial maneuvers between the French Rafale-M and Indian MiG-29K. The anti-submarine warfare exercise focused on enhancing underwater situational awareness.
- Advanced air defense exercises, complex maneuvers and strategic coordination were carried out under Varuna 2025. It was aimed at strengthening maritime security cooperation between the two countries in the Indian Ocean Region.
- This exercise not only deepens military cooperation but also provides an opportunity for the navies of India and France to gain proficiency in coordinated operations.

NASA astronauts return to Earth after nine months

- On March 18, 2025, NASA astronauts Sunita Williams and Butch Wilmore returned to Earth after staying in the International Space Station (ISS) for nine months. They managed to make a safe landing with the help of parachutes in the Gulf of Mexico via the SpaceX Crew Dragon capsule.
- The two astronauts spent 286 days in space, which was 278 days more than their scheduled mission. They orbited the Earth 4,576 times and traveled a total of 195 million kilometers. Sunita Williams set the record for the most spacewalks among female astronauts by spending 62 hours in nine spacewalks.
- Williams and Wilmore were originally scheduled to return on the Boeing Starliner spacecraft, but their return was delayed due to technical problems.
- After staying in space for so long, they will now have to undergo a rehabilitation process. This mission will make an important contribution to the study of human survival for extended periods in space.

Stuart Young becomes the new PM of Trinidad and Tobago

- Stuart Young was sworn in as the new Prime Minister of the country at a ceremony held at the Presidential Palace of Trinidad and Tobago. He was currently serving as the Minister of Energy and Energy Industries and will now replace outgoing Prime Minister Dr. Keith Rowley.
- In January 2025, Dr. Rowley announced his resignation before the end of his term, starting the process of transfer of power. Stuart Young was chosen for the post due to his administrative experience as well as special knowledge in the field of energy and economic development.
- Trinidad and Tobago is the southernmost island country in the Caribbean region. Its capital is Port of Spain and its largest city is Chaguanas. The country is known for natural gas and petroleum production.
- Under the leadership of Young, the focus of the government will be on economic stability, development of the energy sector and social welfare.

National Gokul Mission gets additional budget

- The Government of India has approved the Revised National Gokul Mission (RGM) for 2024-25 and 2025-26 to promote development in the livestock sector. An additional budget of 1,000 crore has been allocated under this scheme.
- Two new activities have been added to the revised scheme, which will provide space for a total of 15,000 heifers in 30 residential facilities. The mission aims to strengthen semen stations, promote artificial insemination, improve bull production and accelerate breed improvement programmes.
- Rashtriya Gokul Mission has led to a 63.55% increase in milk production in the last decade. Farmers have been introduced to advanced breeding technologies under this scheme.
- Apart from this, genomic chips like 'Gau Chip' and 'Mahish Chip' developed by NDDDB and ICAR-NBAGR are also being used.
- The aim of this mission is to preserve native cattle breeds and increase milk production capacity, thereby strengthening the dairy industry.

Haryana presents Rs 2.05 lakh crore budget for 2025-26

- Haryana Chief Minister Nayab Singh Saini on March 17 presented a state budget of Rs 2.05 lakh crore for 2025-26. This was his first budget, in which he emphasized on the economic progress and development plans of the state.
- The Chief Minister said that in the last 10 years, Haryana's GDP has grown at an average rate of 10.8%, while the per capita income reached Rs 3.53 lakh in 2024-25 with an average growth of 9.1%.
- Several schemes were announced in the budget to promote agriculture and dairy industry. The subsidy on direct sowing of paddy was increased from 4,000 to 4,500 per acre. Under the 'Mera Pani Meri Virasat' scheme, a subsidy of 8,000 per acre will be given for leaving paddy. Women farmers will be given interest-free loans up to Rs.1 lakh for dairy, horticulture and animal husbandry.
- The budget announced a provision of Rs 474 crore for the Haryana Artificial Intelligence Mission and the formation of a special authority for the de-addiction campaign. Also, a proposal was made to set up a cow sanctuary in every district and provide a grant of 5 crore for cow shelters.

Indian government approves Chandrayaan-5 mission

- The Indian government has approved the Chandrayaan-5 mission, a significant step towards India's goal of a human mission to the Moon by 2040. This mission, in collaboration with Japan, will include a 350 kg rover and lay the groundwork for future manned lunar missions.
- Following the successful soft landing of Chandrayaan-3 on the Moon's south pole in 2023, Chandrayaan-4 will focus on collecting samples from the Moon to bring back to Earth. Chandrayaan-5 will test more advanced technologies for lunar exploration.
- Additionally, India aims to establish an independent space station by 2035, and ISRO has already launched 433 satellites, including 393 foreign satellites.
- Construction of the Kulasekarapattinam spaceport, set to begin in March 2025, will enhance small satellite launch capabilities. India's success in the Chandrayaan missions has solidified its position as a leading player in global space exploration.

Intel appoints Lip-Boo Tan as new CEO

- Chip maker Intel has appointed industry veteran Lip-Boo Tan as its new CEO. Tan, who was previously a board member of Intel, will now take charge of rescuing the company from its difficult phase and strengthening its position globally.

- Intel was lagging behind the competition for the last few years, due to which the company has decided to change its chip manufacturing strategies. Tan's appointment comes at a time when Intel is investing in artificial intelligence and advanced chip manufacturing technologies.
- Intel Corporation is an American multinational tech company headquartered in Santa Clara, California. It is one of the world's largest semiconductor manufacturing companies.

Harmanpreet Singh and Savita Punia won Hockey India Player of the Year Award

- Indian hockey's leading players, Harmanpreet Singh and Savita Punia, were awarded the prestigious Hockey India Player of the Year Award.
- Harmanpreet, captain of the Indian men's hockey team, played a key role in leading the team to a bronze medal at the 2024 Paris Olympics, while Savita Punia, the star goalkeeper of the Indian women's hockey team, brought them close to a bronze medal at the Tokyo 2021 Olympics.
- Additionally, the Indian team that won the Men's Hockey World Cup in 1975 was honored with the Hockey India Major Dhyan Chand Lifetime Achievement Award.
- Other individual awards included Abhishek for Forward of the Year, Hardik Singh for Midfielder of the Year, and Amit Rohidas as Best Defender of the Year. In the Under-21 category, Arajit Singh Hundal and Deepika were named Player of the Year in the men's and women's categories, respectively.
- The Hockey India Awards, held annually, recognize exceptional performances in Indian hockey.

Deb Mukherjee passed away

- Renowned actor and filmmaker Deb Mukherjee died in Mumbai on March 14 at the age of 83. He was an important figure in Bollywood and was actively involved in the North Bombay Durga Puja celebrations. Deb Mukherjee was also the father of famous director Ayan Mukherjee.
- He started his career with the film Sambandh and acted in films like Adhikar, Ek Baar Muskura Do, Do Aankhen Barah Haath, Main Tulsi Tere Aangan Ki, Baton Baton Mein and Jo Jeeta Wohi Sikandar. His films made cultural and artistic contributions to Hindi cinema

India-Bangladesh Naval Exercise Bongosagar 2025

- The navies of India and Bangladesh conducted the Bongosagar 2025 joint naval exercise in the Bay of Bengal. The aim of this exercise was to strengthen maritime security and strategic cooperation between the two countries.
- INS Ranvir from the Indian Navy and BNS Abu Ubaida from the Bangladesh Navy participated in it. During this, important operations like surface firing, tactical maneuvers and replenishment were carried out.
- The exercise started in 2019 and its fourth edition was held in 2023. This exercise helped to improve the strategic planning and operational coordination of the two navies.
- The Bongosagar exercise is an important step towards strengthening the maritime security of both the countries.

Mumbai Indians win Women's Premier League 2025

- Mumbai Indians won their second title by defeating Delhi Capitals by 8 runs in the final of Women's Premier League (WPL) 2025. The match was played at the Brabourne Stadium, Mumbai.
- This was the third consecutive final loss for Delhi Capitals. The WPL was started in 2023 and five teams participate in it.

- **Award winners:**
 - » Winners: Mumbai Indians
 - » Runners-up: Delhi Capitals
 - » MVP: Nat Sciver-Brown
 - » Orange Cap: Nat Sciver-Brown
 - » Purple Cap: Amelia Kerr
 - » Emerging Player: Amanjot Kaur
 - » Fair Play Award: Gujarat Giants
- This edition of the WPL was instrumental in making women's cricket more popular.

India wins 33 medals at Special Olympics World Winter Games 2025

- India won a total of 33 medals including 8 gold, 18 silver and 7 bronze at the Special Olympics World Winter Games 2025 held in Turin, Italy.
- India won 10 medals each in snowshoeing and alpine skiing, six in snowboarding, four in short track speed skating, two in cross-country skiing and one in floorball.
- This was the 12th edition of the Special Olympics Winter Games and saw participation of 1,500 athletes from over 100 countries. This was the first time Italy hosted the event.
- This was the first Winter Games since 2017 and now the 2027 edition will be held in Santiago, Chile.

UN announces 'UN 80 Initiative'

- UN Secretary-General Antonio Guterres announced the UN 80 Initiative, which aims to improve the functioning of the United Nations.
- Under this initiative, the reforms required to make the functioning of the United Nations more efficient will be identified. It will also review all the mandates that member countries have given to the United Nations.
- The United Nations General Assembly has approved a budget of \$3.72 billion for 2025. The US is the largest financial contributor, while India has paid \$37.64 million for 2025.
- A budget of \$5.6 billion has also been approved for UN peacekeeping operations.

Six properties from India added to UNESCO's tentative list

- The UNESCO World Heritage Centre added six new properties to India's tentative list on 7 March 2025.
- The newly added properties:
 - » Kanger Valley National Park (Chhattisgarh)
 - » Mudumal Megalithic Menhir (Telangana)
 - » Ashokan Inscription Sites (multiple states)
 - » Chausath Yogini Temples (Madhya Pradesh, Odisha)
 - » Gupta Temples (multiple states)
 - » Palaces-Forts of the Bundelas (Madhya Pradesh, Uttar Pradesh)
- Before any property is nominated to the UNESCO World Heritage List, it is included in the tentative list. India now has a total of 62 sites on the tentative list.
- Currently, 43 Indian sites are included in the UNESCO World Heritage List, of which 35 fall in the cultural, 7 natural and 1 mixed category.
- India hosted the World Heritage Committee meeting for the first time in 2024.

India's unorganized sector grows by 12.84%

- India's unorganized non-agricultural sector has recorded a remarkable growth of 12.84%. According to the Annual Survey of Unorganized Sector Enterprises (ASUSE) 2023-24, the number of unorganized enterprises in the country has increased from 6.50 crores to 7.34 crores. This survey was conducted by the National Statistical Office (NSO).
- Between October 2023 and September 2024, employment in this sector exceeded 12 crores, indicating the strength of small businesses. Manufacturing, trade and service sectors have played a major role in this growth.
- The number of unorganized enterprises has increased in states like West Bengal, Maharashtra, Uttar Pradesh, Gujarat and Tamil Nadu. Government initiatives like Mudra Yojana and Startup India have helped expand this sector. This report shows that the unorganized sector is playing an important role in providing livelihood.

Tejas successfully test fired Astra missile

- Light Combat Aircraft (LCA) Tejas successfully test fired Beyond Visual Range Air-to-Air Missile (BVRAAM) Astra. The test was conducted off the Chandipur coast of Odisha, where the missile hit a flying target with pinpoint accuracy.
- The Astra missile is designed to hit targets at a distance of over 100 km. Its advanced guidance and navigation system makes it extremely effective. The Indian Air Force (IAF) has already inducted this missile into its fleet.
- The test was made successful by the collective efforts of scientists and engineers of the Aeronautical Development Agency (ADA), DRDO and Hindustan Aeronautics Limited (HAL). This achievement further strengthens India's indigenous defense capabilities.

Maharashtra's 2025-26 Budget

- Maharashtra Finance Minister Ajit Pawar presented the state budget for 2025-26. The state's economy is projected to grow at a rate of 7.3%, higher than the national average of 6.5%.
- The budget proposed Mumbai's third airport, which will be operational by 2030 near the Vadhvan port. Under the metro expansion, Mumbai (41.2 km), Pune (23.2 km) and 237.5 km of new routes will be added. 1,500 km of new roads and 7,000 km of cement roads will be built in the state.
- The Industrial Policy 2025 has set a target of Rs 20 lakh crore investment and 50 lakh jobs. Under the logistics policy, infrastructure will be developed in 10,000 acres. A pilot project will be started in 1 lakh acres for the use of artificial intelligence (AI) in agriculture.
- A special provision has been made for 19,300 crore for Tapi river valley irrigation, 8,000 crore for waste water recycling and Marathi Language Samman Diwas.

Two new schemes for girls in Tripura

- Union Health Minister Jagat Prakash Nadda announced two schemes for the girls of Tripura – Mukhyamantri Balika Samridhi Yojana and Mukhyamantri Kanya Atmanirbhar Yojana.
- Under the Mukhyamantri Balika Samridhi Yojana, the government will deposit a bond of 50,000 for girls born in BPL families. On turning 18, this amount can go up to Rs 8-10 lakh.
- Under the Mukhyamantri Kanya Atmanirbhar Yojana, the top 140 meritorious girl students in the higher secondary examination will be provided scooties. Earlier this number was 100, which has now been increased.
- The announcement was made on the occasion of completion of two years of Tripura Government 2.0. These schemes aim to empower girls economically and educationally.

Madhya Pradesh 2025-26 Budget

- Madhya Pradesh Finance Minister Jagdish Deora presented a budget of 4.21 trillion, 15% higher than last year. No new taxes have been imposed in it.
- The budget estimates a fiscal deficit of 78,902 crore, which is equal to 4.66% of the state's gross state domestic product (GSDP). The industrial sector will get a boost of 30,000 crore over the next 5 years.
- 2 lakh crore has been allocated for social schemes, 26,797 crore for women and child development, and 23,535 crore for the health sector.
- 1,610 crore for tourism and culture, 2,005 crore for Simhastha-2028, and mining corridor network will be developed in Gadchiroli.
- Madhya Pradesh's economy is the fastest growing in the country with a growth rate of 11%. The government aims to increase the state's GDP to 250 trillion by 2047.

PM Modi awarded Mauritius' highest civilian honour

- Prime Minister Narendra Modi has become the first Indian to be awarded Mauritius' highest civilian honour "Grand Commander of the Order of the Star and Key of the Indian Ocean". Mauritius Prime Minister Dr. Navinchandra Ramgoolam announced this honour during an event in Port Louis.
- With this honour, the number of international honours received by Modi has gone up to 21. In his address, PM Modi expressed his gratitude to the people and government of Mauritius.
- In addition, he announced that Mauritius Prime Minister Navin Ramgoolam and his wife Veena Ramgoolam will be issued Overseas Citizen of India (OCI) cards. Prime Minister Ramgoolam thanked the Government of India for granting OCI cards to seventh-generation people of Indian origin.
- This honour will further strengthen the deep historical and cultural ties between India and Mauritius.

India to become a global hub of Web3 by 2028

- According to the 'India Web3 Landscape' report, India is poised to become the world's largest Web3 developer hub by 2028. Over 4.7 million Indian developers joined GitHub in 2024, making India the second-largest base for crypto developers globally.
- The report states that 45.3% of developers are active in coding, 29.7% in bug fixing and 22.4% in documentation.
- The key areas of Web3 technology in India are gaming, non-fungible tokens (NFTs), decentralized finance (DeFi) and real-world assets (RWA). The number of Web3 startups is growing rapidly, with over 1,200 startups active.
- In addition, partnerships with universities and hackathons are becoming a popular way to enter the sector. India has reached the third position globally in terms of the number of Web3 startup founders.

Jayashree Venkatesan awarded Ramsar Award for 'Wetland Wise Use'

- Jayashree Venkatesan was awarded the prestigious Ramsar Award in the 'Wetland Wise Use' category, making her the first Indian to receive the honour.
- She is one of the 12 women changemakers who have contributed to wetland conservation globally. Jayashree is particularly known for conserving the Pallikaralai Marsh in Chennai.
- The award recognises her contribution to the sustainable use and conservation of wetlands. Jayashree not only protected wetlands but also inspired a new generation of women conservationists. Her work has become an example for biodiversity conservation in India.

'Laapata Ladies' wins Best Film Award at IIFA 2025

- Kiran Rao's film 'Laapata Ladies' won the Best Film award at IIFA 2025 held in Jaipur. Kartik Aaryan won the Best Actor award for 'Bhool Bhulaiyaa 3' and Nitanshi Goyal won the Best Actress award for 'Laapata Ladies'.
- Ravi Kishan won the Best Supporting Actor award, Janaki Bodiwala won the Best Supporting Actress award and Raghav Juyal won the Best Negative Role award. Kunal Khemu won the Best Directorial Debut award for 'Madgaon Express'.
- In the music category, Shreya Ghoshal and Jubin Nautiyal won the Best Playback Singer award, while Ram Sampath was named Best Music Director for 'Laapata Ladies'.

Justice Joymalya Bagchi appointed as Supreme Court Judge

- The Government of India appointed Justice Joymalya Bagchi, a judge of the Calcutta High Court, as a judge of the Supreme Court after the President's approval. On March 6, the Supreme Court Collegium had recommended his name to the government.
- Justice Bagchi will have a tenure of over six years, and based on seniority, he can take over as the Chief Justice of India (CJI) in May 2031. He was appointed a judge of the Calcutta High Court on 27 June 2011.
- The Supreme Court of India operates under Article 124 of the Constitution, with a maximum of 34 judges, including the Chief Justice of India. They are appointed by the President. The retirement age of Supreme Court judges is 65 years.
- The appointment of Justice Bagchi will further strengthen the judicial capacity and impartiality in the Supreme Court

Assam government to launch its own satellite

- The Assam government announced the launch of its own satellite called 'AssamSat', becoming the first state in the country to take this step. Assam will develop this satellite in collaboration with the Indian National Space Promotion and Authorization Center (IN-SPACe).
- The main objective of this project is to provide easy access to data for the socio-economic schemes of the state and strengthen border surveillance.
- 'AssamSat' will be important for agriculture, disaster management, and infrastructure development and security purposes. This will help the Assam government to predict natural disasters such as floods and landslides. Apart from this, the security of the border areas will also be strengthened with the help of this satellite.
- The students of the state will also benefit from this project, as they will be able to get involved in the construction of experimental satellites under the guidance of IN-SPACe and ISRO.

Parliament passes Railway (Amendment) Bill 2024

- The Railway (Amendment) Bill 2024 has been passed in Parliament, making necessary amendments in the Railway Act 1989. The main objective of this bill is to strengthen the powers of the Indian Railway Board and make the railway administration more independent.
- Through this bill, all the provisions of the Indian Railway Board Act 1905 and the Railway Act 1989 have been incorporated in a single legal framework, thereby simplifying the legal process.
- This will speed up the decision-making process in matters related to railways and the railway management will be able to work more effectively.
- The passage of this bill will not have any adverse effect on the functioning of the Railway Board, but its functioning

will be made more streamlined. This bill is an important step towards improving the infrastructure, operational efficiency and service quality of the railways.

- The Railway (Amendment) Bill 2024 will help the Indian Railways to deal with future challenges and provide better services to rail passengers. This law will make the railway administration in India more transparent, accountable and efficient, thereby strengthening the national transport system.

PM Modi launches Surat Food Security Saturation Campaign

- Prime Minister Narendra Modi launched the Surat Food Security Saturation Campaign, which aims to provide food security to poor and deprived communities. Under this campaign, the government will identify beneficiaries who are still deprived of government food schemes.
- Under this initiative, special attention will be given to Ganga Swaroopa (widow) women, elderly, Divyaang and helpless daily laborers. The Prime Minister also distributed food grains to about 2 lakh eligible beneficiaries under the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY).
- The Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) was launched in 2020, which aims to provide free and quality food grains to poor families. This initiative will benefit millions of needy people and strengthen the government's resolve to make 'hunger free India'.
- The Surat Food Security Saturation Campaign will make the food distribution system more transparent and effective strengthening India's food security mission.

Delhi government's 'Mahila Samridhi Yojana' approved

- The Delhi government has launched the 'Mahila Samridhi Yojana' for the economic empowerment of women. This direct cash transfer scheme will provide 2,500 per month to non-government women beneficiaries.
- For this, the government has allocated a budget of 5,100 crore. Only those women will be eligible under the scheme who are not government employees and are not availing the benefits of any other government financial assistance scheme.
- A registration portal will be launched soon, and a committee will finalize the terms and conditions of the scheme. The scheme aims to make women financially independent.
- Advanced technologies will be used to ensure transparency and efficiency in the implementation of the scheme. This initiative will help in strengthening the social and economic status of women.

Madhav National Park becomes India's 58th tiger reserve

- Environment Minister Bhupendra Yadav announced that Madhav National Park located in Shivpuri district of Madhya Pradesh has been given the status of India's 58th tiger reserve. It has become the 9th tiger reserve of the state.
- India has a total of 3,682 tigers, representing 70% of the world's wild tiger population. Madhav National Park is currently home to five tigers and may soon add two more. Three tigers were released here in 2023.
- The government is strengthening tiger conservation through the core/buffer zone model. The sanctuary is located in the Chambal region and will play an important role in biodiversity conservation.

Mark Carney becomes 24th Prime Minister of Canada

- Mark Carney was sworn in as the 24th Prime Minister of Canada. He replaced Justin Trudeau, who was the Prime Minister since 2015.
- Carney is an experienced banking expert and has played an important role in stabilizing the country's economy as

the Governor of the Bank of Canada during the 2008 global economic crisis.

- In 2013, he became the first non-British Governor of the Bank of England and contributed to controlling the economic effects of Brexit. His main focus will be to improve US-Canada relations, which have become strained after Trump's return to power. Carney's appointment is expected to bring economic and diplomatic stability to Canada.

India beat New Zealand to win 2025 Champions Trophy

- On 9 March 2025, India defeated New Zealand at the Dubai International Cricket Stadium to win the ICC Champions Trophy for the third time.
- India chased a target of 252 runs in 49 overs and won by four wickets. India had previously won the trophy in 2002 and 2013.
- Rohit Sharma was named Player of the Match, while New Zealand's Rachin Ravindra was Player of the Tournament.
- With this win, India became the most successful team in Champions Trophy history, surpassing Australia. This is India's seventh ICC title, reinforcing its dominance in cricket

India-Kyrgyzstan Joint Military Exercise "Khanjar-XII" held

- The 12th edition of the Joint Special Forces Exercise "Khanjar-XII" between India and Kyrgyzstan was held in Kyrgyzstan from 10-23 March 2025.
- The exercise was attended by the Parachute Regiment (Special Forces) of the Indian Army and the Scorpion Brigade of Kyrgyzstan. It was aimed at sharing experiences and best practices in counter-terrorism operations in urban and mountainous terrain.
- Sniping, complex building intervention, mountain warfare and special counter-terrorism exercises were conducted during this exercise.
- The exercise took place in India in January 2024, while its first edition was held in India in 2011. This exercise strengthens India-Kyrgyzstan defense relations and promotes regional security and stability.

Punjab launches 'Project Hifazat'

- On March 6, the Punjab government launched 'Project Hifazat' to help women and children suffering from violence. The initiative, unveiled by Social Security, Women and Child Development Minister Baljit Kaur, will ensure quick response against domestic violence and harassment.
- A 24x7 women and child helpline (181) will be operated under the project. Calls will be classified into emergency, non-emergency and informational categories.
- Emergency cases will be forwarded to ERSS-112, while other cases will be directed to One Stop Centres (OSC) and district child protection units.
- Project Hifazat will provide legal and psychological support to women in collaboration with Punjab Police, Health and Family Welfare Department.

India won the Asian Women's Kabaddi Championship 2025

- India retained the title by defeating Iran 32-25 in the final of the Asian Women's Kabaddi Championship 2025. The tournament was held from 6 to 8 March 2025.
- India has won five out of six editions so far. Tehran became the first city to host the tournament twice. The competition featured seven teams divided into two groups.

Global Terrorism Index (GTI) 2025 released

- The Institute for Economics and Peace (IEP) released the Global Terrorism Index (GTI) 2025, in which Burkina Faso ranked first on the basis of the impact of terrorism. Pakistan came second, Syria third and Mali fourth, while India ranked 14th.
- Pakistan recorded 1,000 terrorist attacks in a single year for the first time, leading to a 45% increase in terrorist activities there. The Tehreek-e-Taliban Pakistan (TTP) has become the fastest growing terrorist organization in the country.
- According to the report, the Islamic State (IS) and its affiliates became the deadliest terrorist group in 2024, responsible for 1,805 deaths in 22 countries.
- The GTI evaluates terrorism based on indicators such as attacks, deaths, injuries and overall impact on the country. This report presents an analysis of the major trends and patterns of global terrorism. The growing incidence of terrorism remains a serious concern for global security.

Mobile World Congress 2025 held in Barcelona

- The Mobile World Congress (MWC) 2025 was held in Barcelona, Spain from March 3 to 6. It was organized by the GSM Association (GSMA) at the Fira Gran Via Exhibition Center.
- The theme this year was "Converge, Connect, Create", which emphasized the fusion of mobile and AI-powered technologies. The event saw discussions on 5G, artificial intelligence (AI) and advanced connectivity.
- The Pixel 9 Pro was awarded the "Smartphone of the Year" and Gemini the "Breakthrough Device Innovation" award. MWC is an annual trade show dedicated to the mobile communications industry.
- It was attended by several major companies including Samsung, Google, Qualcomm, LG, Sony, AMD, Meta, Nvidia and Lenovo. Union Communications Minister Jyotiraditya M. Scindia represented India.

Table tennis legend Achanta Sharath Kamal announces retirement

- India's legendary table tennis player Achanta Sharath Kamal announced his retirement in March 2025, bringing an end to his illustrious 22-year career. He will play his last tournament at the WTT Star Contender event in Chennai, which will be held from March 25 to 30.
- Sharath won seven Commonwealth gold medals, two Asian Games bronze medals and represented India at five Olympics. He was also the joint flag-bearer for India at the 2024 Paris Olympics.
- His contributions are not just limited to sports; he is also the vice-chairman of the Athletes Commission of the Indian Olympic Association. His legacy will continue to be an inspiration for generations to come.

Central government approves 'Project Lion'

- The Government of India approved 'Project Lion' for the conservation of Asiatic lions with a budget of Rs 2,927.71 crore. According to the 2020 census, there are 674 Asiatic lions in India, mainly found in the Gir forest and surrounding areas of Gujarat.
- The project focuses on lion habitat and population management, wildlife health monitoring, human-wildlife conflict mitigation, ecotourism and biodiversity conservation. 237 beat guards were recruited under this effort in 2024.
- Asiatic lions are one of the most endangered carnivorous species in the world, and this project is an important effort to conserve them. This initiative will establish an effective model of wildlife conservation keeping in mind

sustainable development and ecological balance.

Uttarakhand Cabinet approves Integrated Pension Scheme and Excise Policy

- The Uttarakhand government approved the implementation of the Center's Integrated Pension Scheme for state officials and employees, which will come into effect from April 1, 2025.
- The scheme has been brought as an optional provision under the National Pension System (NPS). Apart from this, the Cabinet also approved the New Excise Policy 2025.
- Under this, liquor licenses near religious places will be canceled and the license can be revoked for charging more than the MRP.
- Sub-shops and metro liquor sales system have been abolished. The government has also stepped up in the literature field and announced financial assistance to 45 writers, Uttarakhand Sahitya Bhushan Samman and 21 new literature awards.

China's Liu Jiakun wins 2025 Pritzker Prize

- Chinese architect Liu Jiakun received the 2025 Pritzker Prize, known as the 'Nobel of Architecture'. Liu devoted his career to designing academic buildings, museums and public spaces. His architecture focuses on creating beautiful, just and dignified living environments.
- His firm, Jiakun Architects, has completed more than 30 projects in China. They are famous for creating public realm in limited spaces in densely populated cities.
- The Pritzker Prize is awarded to a living architect whose work makes a significant contribution to humanity. The award is funded by the Pritzker family and sponsored by the Hyatt Foundation.
- Liu's work reflects a balance between modernity and social needs. His works show sensitivity to the environment and culture. The honor underscores his global influence and innovation in architecture.

Steve Smith retired from ODI cricket

- On 4 March 2025, Australian batsman Steve Smith announced his retirement from ODI cricket after the Champions Trophy 2025 semi-final loss to India. Smith, who was the top scorer with 73 runs, immediately told his teammates that this was his last ODI.
- However, the 35-year-old Smith will continue to play for Australia in Tests and T20s. He scored 5,800 runs in 170 ODIs, including 12 centuries. Smith was part of the World Cup-winning team in 2015 and 2023.
- Smith, who debuted as a leg-spinning allrounder against the West Indies in 2010, later mastered batting. He was named the Australian ODI Player of the Year in 2015 and 2021 and in the ICC ODI Team of the Year in 2015.
- His retirement marks the end of his illustrious career in ODI cricket, but his legacy in Tests will continue.

Vantara inaugurated by PM Modi

- On March 4, 2025, Prime Minister Narendra Modi inaugurated Vantara in Jamnagar, Gujarat. Vantara is a unique wildlife conservation, rescue and rehabilitation initiative, a sanctuary spread over 3,000 acres.
- It has been jointly established by Reliance Industries and Reliance Foundation. It provides safe haven for animals and promotes ecological sustainability. During his visit, PM Modi saw an elephant, which was a victim of an acid attack.
- He appreciated the efforts of industrialist Anant Ambani, who made the project possible. Vantara aims to rescue

and care for injured and endangered wildlife. The initiative reflects India's commitment to environmental conservation and wildlife welfare.

- Modi described it as a symbol of balance between nature and humanity. This sanctuary can also become a center for environmental education in the future.

Christian Stocker becomes new Chancellor of Austria

- On March 3, 2025, Christian Stocker was sworn in as the new Chancellor of Austria. He is leading a three-party coalition government formed five months after last year's election.
- Stocker's center-right People's Party (ÖVP), the center-left Social Democrats (SPÖ) and the liberal Neos reached an agreement after a failed attempt in January. Stocker took over the ÖVP leadership from former Chancellor Karl Nehammer, who resigned when initial talks failed.
- SPÖ leader Andreas Babler became the vice-chancellor. Stocker, a former lawyer, has been a member of parliament since 2019 and was the party general secretary since September 2022. India and Austria have strong diplomatic ties since 1949, which completed 70 years in 2019.
- Stocker's government will have to deal with issues such as economic reform and climate change. This coalition is a step towards strengthening Austria's political stability.

10,000 FPOs: Initiative to empower farmers

- The Government of India has launched 10,000 Farmer Producer Organizations (FPOs) to empower small farmers. The scheme, launched by PM Narendra Modi on February 29, 2020, has a budget of Rs 6,865 crore, which will run till 2027-28.
- The 10,000th FPO in Khagaria, Bihar focuses on maize, banana and paddy cultivation. So far, 4,761 FPOs have received equity grants of Rs 254.4 crore and 1,900 have received credit guarantee cover of Rs 453 crore.
- About 30 lakh farmers are associated with it, of which 40% are women. Each FPO is given assistance of up to Rs 18 lakh in three years, equity grants of Rs 2,000 per member and credit guarantee of up to Rs 2 crore.
- 5,000 FPOs are registered on ONDC, increasing online market access. This initiative is strengthening farmers' income and collective bargaining power.

Vidarbha's third Ranji Trophy title

- Vidarbha won their third Ranji Trophy title by defeating Kerala in the final in Nagpur. Vidarbha scored 379 in the first innings while Kerala were bowled out for 342, giving Vidarbha a decisive lead.
- In the league stage, Vidarbha won six out of seven matches to score 40 points and top all four groups. In the semi-final, they defeated Mumbai by 80 runs.
- Vidarbha won the first title in 2017-18. The Ranji Trophy, which began in 1934-35, is India's premier domestic cricket championship.
- The win proved Vidarbha's cricketing talent and consistency yet again. The title is a proud moment for the region and a source of inspiration for young players.

Five Spiritual Corridors of Uttar Pradesh

- The Uttar Pradesh government has developed five major spiritual corridors for devotees. These are:
 - » Prayag-Vindhyachal-Kashi,
 - » Prayagraj-Ayodhya-Gorakhpur,
 - » Prayagraj-Lucknow-Naimisharanya,

- » Prayagraj-Rajapur-Chitrakoot and
- » Prayagraj-Mathura-Vrindavan-Shukrtirtha.
- The first corridor is associated with the worship of Shakti and Shiva, the second with Lord Rama and the Gorakhnath tradition, the third leads to Naimisharanya Dham (one of the 88 Mahatirthas), the fourth deals with Rama's exile, and the fifth facilitates the journey to Mathura-Vrindavan.
- These corridors have been built to promote religious tourism and facilitate devotees. It will also help preserve the cultural heritage of the state and accelerate economic development.

Andhra Pradesh 2025-26 Budget

- The Andhra Pradesh government presented a budget of Rs 3.22 lakh crore for 2025-26. It has a revenue expenditure of Rs 2.51 lakh crore and capital expenditure of Rs 40,635 crore.
- The revenue deficit is estimated at Rs 33,185 crore (1.82% of GSDP) and fiscal deficit at Rs 79,926 crore (4.38% of GSDP). Rs 31,805 crore has been allocated for education, Rs 47,456 crore for backward classes, Rs 20,281 crore for scheduled castes and Rs 5,434 crore for minorities.
- Rs 19,264 crore has been proposed for health and Rs 13,862 crore for municipal administration. The government plans to introduce insurance-based health coverage of Rs 25 lakh per family. This budget focuses on development and welfare.

Trump declares English as official language of US

- President Donald Trump signed an executive order to make English the official language of the United States. The move aims to streamline communication and strengthen national values. Now agencies receiving federal funding can decide whether they will provide services or documents in languages other than English.
- This is the first time the US has designated an official language at the federal level. Around 68 million people in the US speak languages other than English, including more than 160 Native American languages.
- Spanish, Chinese and Arabic are the most widely spoken languages after English. 180 countries in the world have official languages, and more than 30 US states have already declared English as an official language. The decision is believed to be a move towards promoting unity in a multilingual society.

India to induct Tamal into Navy by June 2025

- Tamal, a stealth guided missile frigate, may join the Indian Navy by June 2025. Built at Russia's Yantar Shipyard, the ship is capable of launching the BrahMos anti-ship missile.
- It is part of the 2016 India-Russia deal that included four Talwar class frigates—two to be built in Russia and two in India. The first Russian ship, INS Tushil, joined the Navy on 9 December 2024.
- Tamal is undergoing trials in Russia. The 3,900-tonne ship has a speed of 30 knots and a range of 3,000 kilometres. It has the capability to carry anti-submarine rockets, torpedoes and helicopters.
- It is also capable of evading enemy radars. Tamal will be the Navy's last imported warship, which will enhance India's maritime power.

Himmat Shah dies at 92

- Famous Indian artist Himmat Shah died at the age of 92. He was a prominent member of the modernist artists' group 'Group 1890'. Known for works such as terracotta, ceramics, slip-casting technique and bronze heads, his silver paintings used plaster, sand and silver leaf.
- Born in Lothal, Gujarat, Shah learned art from Rasiklal Parikh in Ahmedabad.

- He was awarded the Lalit Kala Academy Award (1956, 1962), Bombay Art Society Award (1962), Jammu and Kashmir University Gold Medal (1961), Sahitya Kala Parishad Award (1988) and Kalidas Samman (2003). His art gave a new direction to Indian modern art and his works are still a source of inspiration.

Navratna status to IRCTC and IRFC

- On March 3, 2025, the Central Government granted Navratna status to IRCTC and IRFC. These are Central Public Sector Enterprises (CPSEs) under the Ministry of Railways and have now become the 25th and 26th Navratna companies of the country.
- In the financial year 2023-24, IRCTC recorded a turnover of Rs 4,270.18 crore and a profit of Rs 1,111.26 crore, while IRFC achieved a turnover of Rs 26,644 crore and a profit of Rs 6,412 crore.
- Navratna status gives companies the freedom to invest up to Rs 1,000 crore without the approval of the Center, form joint ventures and set up subsidiaries abroad. All of the seven listed CPSEs of the Railways have now got this status, which reflects their financial strength.

Jharkhand's budget of Rs 1.45 lakh crore for 2025-26

- On March 3, 2025, the Jharkhand government presented a budget of Rs 1.45 lakh crore for the financial year 2025-26. Last year it was Rs 1.28 lakh crore.
- Finance Minister Radhakrishna Kishore presented it. This includes Rs 13,363.35 crore for the Chief Minister Maiya Samman Yojana, which will give Rs 2,500 monthly to women aged 18-50.
- The state's economy is estimated to grow at 7.5% and the fiscal deficit to be Rs 11,253 crore. Rs 62,844 crore was allocated for the social sector. The GSDP is targeted to reach Rs 10 trillion by 2029-30. The budget also includes plans to set up seven medical colleges, three universities and recover Rs 1.36 lakh crore from the Centre.

PM Modi releases river dolphin assessment report

- Prime Minister Narendra Modi released the first assessment report of river dolphins at a meeting of the National Wildlife Board at Sasan Gir in Junagadh. It estimates 6,327 dolphins in India.
- A survey of 8,500 km was conducted in 28 rivers of eight states. Uttar Pradesh has the highest number of dolphins, followed by Bihar, West Bengal and Assam.
- The Ganges river dolphin, the national aquatic animal of India, is almost blind and depends on echolocation.
- 90% of its population is found in the Ganga-Brahmaputra-Meghna and Karnaphuli river systems in India. The report will help strengthen conservation efforts and raise awareness about biodiversity.

Bihar's budget of Rs 3.17 lakh crore for 2025-26

- Bihar Deputy Chief Minister Samrat Choudhary presented a budget of Rs 3.17 lakh crore for 2025-26, which is Rs 38,169 crore more than the previous budget. This includes Rs 60,954 crore for education, Rs 20,335 crore for health, Rs 16,193 crore for rural development and Rs 13,483 crore for energy.
- 'Mahila Haat' in Patna, 'Kanya Vivah Mandap' in all panchayats, and rehabilitation centers for migrant laborers are proposed.
- Cancer hospital in Begusarai, greenfield airports in Bhagalpur and Raxaul, pink toilets and pink buses will also be built. 33% job reservation and e-rickshaw subsidy for women were announced.
- Scholarship will increase from Rs 1,000 to Rs 2,000. There will be cooperation from NAFED to fix the minimum support price for pulses.

MCQs Based on Current Affairs

1. Consider the following statements regarding ONOP initiative:

1. The 'One Nation-One Port Process' (ONOP) initiative aims to standardize operations across all major ports in India.
2. The ONOP initiative is expected to reduce operational costs by harmonizing port procedures.
3. The primary focus of the initiative is to improve India's inland waterways infrastructure.

Which of the above statements are correct?

- A: Only 1
- B: Only 2
- C: All Three
- D: None

2. Consider the following statements regarding Logistics Port Performance Index (LPPI):

1. The Logistics Port Performance Index (LPPI) was launched for the fiscal year 2023-24.
2. The LPPI will assess the performance of both major and non-major ports based on key performance indicators (KPIs).
3. The LPPI aims to evaluate the global competitiveness of Indian ports.
4. The LPPI results will help identify areas for improvement and promote operational excellence in Indian ports.

Which of the above statements are correct?

- A: 1, 2, and 3
- B: 1, 2, and 4
- C: 2, 3, and 4
- D: All of the above

3. Consider the following statements regarding the MAITRI Initiative:

1. The MAITRI initiative aims to streamline international trade processes through digital integration, using technologies like Artificial Intelligence (AI) and Blockchain.
2. MAITRI will create a 'Virtual Trade Corridor'

(VTC) between India and UAE as part of the India-Middle East-Europe Economic Corridor (IMEEC).

Which of the above statements are correct?

- A: Only 1
- B: Only 2
- C: Both
- D: None

4. Consider the following statements regarding the Supreme Court's judgment on Customs and GST officers:

1. The Supreme Court ruled that Customs and GST officers can make arrests arbitrarily without adhering to specific procedures.
2. The judgment mandates that Customs and GST officers must follow the procedures.

Which of the above statements are correct?

- A: Only 1
- B: Only 2
- C: Both
- D: None

5. Consider the following statements regarding India's Aditya-L1 mission:

1. Aditya-L1 is India's first solar mission, launched by ISRO on September 2, 2023.
2. Recently, The Solar Ultraviolet Imaging Telescope (SUIT) on Aditya-L1 captured the solar flare, known as a 'kernel', in the photosphere and chromosphere of the Sun.
3. Aditya-L1 is positioned at Lagrange Point 2 (L2), which offers a stable position for uninterrupted solar observation.

How many statements are correct?

- A: Only 1
- B: Only 2
- C: All three
- D: None

6. Consider the following statements:

1. The Parliament of India can amend any provision of the Constitution.
2. Article 368 of the Indian Constitution deals with the process of amending the Constitution.

Which of the above statements are correct?

- A: Only 1
 B: Only 2
 C: Both
 D: None

7. What is India's ranking in the global digital economy?

- A: 1st
 B: 3rd
 C: 10th
 D: 28th

8. Which of the following countries does Thailand not share its land boundaries with?

- A: Cambodia
 B: Malaysia
 C: Myanmar
 D: Vietnam

9. Consider the following statements:

1. Recently, 30th International mother language day was observed at UNESCO head quarter in Paris.
2. International mother language day observed each years on 21 February.
3. The first international mother language day was celebrated February 21, 2000.

How many statements are correct?

- A: Only 1
 B: Only 2
 C: All three
 D: None

10. What is the presumption regarding the constitutionality of colonial-era laws in India?

- A: They are presumed constitutional unless challenged
 B: They are presumed unconstitutional unless justified

C: They are neutral and require no justification

D: They are automatically repealed

11. Consider the following statements:

1. The Dramatic Performances Act, 1876, was introduced by the British colonial government to control public expression and suppress nationalist sentiments in India.
2. The law allowed the government to ban any performance that was considered scandalous or defamatory.
3. The Dramatic Performances Act was declared unconstitutional by the Supreme Court of India in 1956.

Which of the above statements are correct?

- A: 1 and 3 only
 B: Only 1 and 2
 C: Only 3
 D: All of the above

12. Consider the following statement with reference to Cities Coalition for Circularity (C-3):

1. Recently, India has launched Cities Coalition for Circularity (C-3) initiative at the 12th Regional 3R and Circular Economy Forum held in New delhi.
2. C-3 was launched to address environmental challenges and promote sustainable urban development in the Asia-Pacific region.
3. The Regional 3R and Circular Economy Forum was established in 2009, to promote sustainable waste management in the Asia-Pacific region.

How many statements are correct?

- A: Only 1
 B: Only 2
 C: All three
 D: None

13. Consider the following statement with reference to Rights of Persons with Disabilities (RPwD) Act, 2016:

1. RPwD Act, 2016 is based on the United Nations Convention on the Rights of Persons with

Disabilities (UNCPRD), 2007.

2. The Act recognizes 21 types of disabilities and guarantees various rights such as the right to education, employment, social security, and accessibility.
3. Under the RPwD Act, a person with a disability is defined as someone who has a long-term physical, mental, intellectual, or disability.

How many statements are correct?

- A: Only 1
- B: Only 2
- C: All three
- D: None

14. Consider the following statement with reference to Ganga River Dolphin

1. The Ganga River Dolphin (*Platanista gangetica*) is endangered species found in the rivers of Ganga and its tributaries.
2. It is known for its long, thin snout, large flippers, and slit-like nostril.

Which of the above statements are correct?

- A: Only 1
- B: Only 2
- C: Both
- D: None

15. What is a Bose metal?

- A: A traditional metal that becomes a superconductor at low temperatures
- B: An exotic state of matter where electrons pair up but do not condense into a superconducting state
- C: A material that exhibits superconductivity at room temperature
- D: A metal that becomes an insulator at low temperatures

16. Consider the following statements:

1. Recently, the 9th meeting of the Mission Steering Group (MSG) was chaired by Union Health Minister Shri Jagat Prakash Nadda in New Delhi.
2. The MSG is the highest policy-making body under

National Health Mission (NHM).

3. NHM, launched in 2013, aims to strengthen healthcare delivery across India, especially in rural and urban areas.

How many statements are correct?

- A: Only 1
- B: Only 2
- C: All three
- D: None

17. What was the decline in Infant Mortality Rate (IMR) between 1990 and 2020?

- A: 50%
- B: 69%
- C: 75%
- D: 80%

18. Consider the following statements with reference to Delimitation:

1. Delimitation is the process of redrawing the boundaries of electoral constituencies in India.
2. Delimitation is done after each Census to adjust the number of seats in Parliament and state Assemblies based on changes in population.
3. The goal of delimitation is to ensure equal representation, so each constituency has roughly the same population size.

How many statements are correct?

- A: Only 1
- B: Only 2
- C: All three
- D: None

19. Consider the following statements with reference to PUNCH mission:

1. Recently, ISRO has launched the Polarimeter to Unify the Corona and Heliosphere (PUNCH) mission.
2. It aims to study the solar corona, the Sun's outermost layer, to better understand solar flares and solar wind.

Which of the above statements are correct?

- A: Only 1
- B: Only 2
- C: Both
- D: None

20. Assertion (A): Tamil Nadu has the highest share of women borrowers in India, with 44% of women having active loans as of December 2024.

Reason (R): Southern states have been more successful in promoting financial inclusion for women compared to other regions in India.

Choose the correct option:

- A: Both Assertion (A) and Reason (R) are correct, and Reason (R) is the correct explanation of Assertion (A).
- B: Both Assertion (A) and Reason (R) are correct, but Reason (R) is not the correct explanation of Assertion (A).
- C: Assertion (A) is correct, but Reason (R) is incorrect.
- D: Assertion (A) is incorrect, but Reason (R) is correct.

21. Consider the following statements about Green land?

1. Green land is semi-autonomous territory of France.
2. It is located in the west of North America
3. It has vast quantity of natural resources, including minerals and oils.

How many statements are correct?

- A: Only 1
- B: Only 2
- C: All three
- D: None

22. Consider the following statements about the Livestock Health and Disease Control Programme (LHDCP):

1. The Livestock Health and Disease Control Programme (LHDCP) is a centrally sponsored scheme designed to improve the health of livestock in India.
2. The LHDCP has an allocated outlay of 3,880 crore for the period 2024-26.

Which of the above statements is/are not correct?

- A: Only 1
- B: Only 2
- C: Both
- D: None

23. What is the primary objective of establishing the second National Gene Bank in India?

- A: To conserve and store animal genetic resources
- B: To enhance India's agricultural productivity by introducing new plant species
- C: To safeguard plant genetic resources and strengthen global biodiversity conservation
- D: To replace the first National Gene Bank completely

24. Consider the following statements:

1. Recently, PM Modi has announced establishment of second National Gene Bank that will house 10 lakh germplasm lines.
2. A Gene Bank is a facility designed to store genetic material, such as seeds, pollen, or tissue samples, collected from various plant species.
3. India's first Gene Bank was established in 1996 by the Indian Council of Agricultural Research-National Bureau of Plant Genetic Resources (ICAR-NBPGR) in New Delhi.

Which of the above statements is/are correct?

- A: Only 1 and 2
- B: Only 2 and 3
- C: Only 1
- D: 1, 2, and 3

25. Consider the following statements with reference to Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY):

1. It has been launched to achieve Universal Health Coverage.
2. It is the world's largest health assurance scheme fully financed by the government, and the cost of implementation is shared between the Central and State Governments.
3. It is only applicable to the people aged 60 and

above.

Which of the statements given above are correct?

- A: 1 and 2 only
- B: 2 and 3 only
- C: 1 and 3 only
- D: 1, 2 and 3

26. Consider the following statements about AI Kosha:

1. AI Kosha is a platform launched by the Indian government to provide access to crucial datasets, computing resources, and tools for AI application development.
2. AI Kosha offers access to over 14,000 Graphics Processing Units (GPUs) for shared use.
3. The cost of using GPUs on AI Kosha is set at Rs 100 per hour.

Which of the above statements is/are correct?

- A: Only 1 and 2
- B: 2 and 3 only
- C: Only 1
- D: All of the above

27. Consider the following statements:

1. The Paris Agreement sets the goal of limiting global warming to well below 2°C.
2. To meet the 1.5°C target, global greenhouse gas emissions must peak before 2025 and decrease by 43% by 2030.

Which of the above statements is/are correct?

- A: Only 1
- B: Only 2
- C: Both
- D: None

28. Consider the following statements based on the ILO report on gender parity:

1. The ILO report reveals that gender parity in global employment will take over 190 years to achieve at the current pace.
2. As of 2023, women hold 40% of managerial positions globally, showing a significant

improvement over the past two decades.

3. Women are underrepresented in low-paid sectors such as nursing, childcare, and education.

Which of the above statements is/are correct?

- A: 1 and 2 only
- B: 2 and 3 only
- C: Only 1
- D: All of the above

29. Consider the following statement about IndiaAI Mission:

1. The mission aims to create a comprehensive ecosystem, drive AI innovation, and encourage AI use across sectors.
2. The nodal ministry is the Ministry of Electronics and Information Technology.
3. The implementing agency is Digital India Corporation (DIC).

Which of the above statements is/are correct?

- A: 1 and 2 only
- B: 2 and 3 only
- C: Only 1
- D: All of the above

30. Consider the following statements with reference to International Labour Organisation (ILO):

1. The ILO is a United Nations agency that works to advance social and economic justice by setting international labour standards.
2. The ILO was founded in October 1919 under the League of Nations.
3. The ILO has 187 member states, all of which are UN states.

Which of the above statements is/are correct?

- A: 1 and 2 only
- B: 2 and 3 only
- C: Only 1
- D: All of the above

31. **Assertion (A):** The primary causes of the decline in butterfly populations in the US are insecticides,

climate change, and habitat loss.

Reason (R): Insecticides disrupt the life cycles of butterflies, climate change makes environments less hospitable, and habitat loss destroys key resources for butterflies.

Which of the following is the correct option?

- A: Both Assertion and Reason are correct, and the Reason is the correct explanation for the Assertion.
- B: Both Assertion and Reason are correct, but the Reason is not the correct explanation for the Assertion.
- C: The Assertion is correct, but the Reason is incorrect.
- D: Both Assertion and Reason are incorrect.

32. Assertion (A): India and Ireland have established a Joint Economic Commission (JEC) to enhance bilateral trade, investment, and technology ties.

Reason (R): The JEC will serve as a strategic platform to explore new opportunities in various sectors, including trade, technology, and investment.

Which of the following is the correct option?

- A: Both Assertion and Reason are correct, and the Reason is the correct explanation for the Assertion.
- B: Both Assertion and Reason are correct, but the Reason is not the correct explanation for the Assertion.
- C: The Assertion is correct, but the Reason is incorrect.
- D: Both Assertion and Reason are incorrect.

33. Consider the following statements about India-Ireland relations:

1. Formal diplomatic relations between India and Ireland were established in 1947.
2. As of 2023-2024, the total trade between India and Ireland stands at USD 10 billion.
3. Around 60,000 Indian students are currently studying in Irish universities.

Which of the above statements is/are correct?

- A: 1 and 3 only
- B: 2 and 3 only

C: Only 1

D: All of the above

34. Consider the following statements about India and Bhutan's bilateral relationship:

1. India and Bhutan share a strong relationship underpinned by the Treaty of Friendship, first signed in 1949.
2. The two countries recently discussed technological and capacity-building collaboration on survey and boundary-related work.
3. Bhutan is India's largest trade partner in the region, with over 50% of Bhutan's trade being conducted with India.

Which of the above statements is/are correct?

- A: 1 and 3 only
- B: 1 and 2 only
- C: Only 1
- D: 1, 2, and 3

35. Consider the following statements about the Ganges Water Treaty:

1. The Ganges Water Treaty, signed in 1996, ensures equitable water distribution from the Ganges River between India and Bangladesh.
2. The treaty will expire in 2026, and discussions are already underway to address its renewal.
3. The Joint River Commission (JRC), established in 1972, only manages the Ganges River between India and Bangladesh.

Which of the above statements is/are correct?

- A: 1 and 2 only
- B: 2 and 3 only
- C: Only 1
- D: 1 and 3

36. Consider the following statements with reference to the Koch-Rajbongshi tribe:

1. Koch-Rajbongshi is an ancient indigenous tribe that originated from the Koch kingdom.
2. This tribe is found only in the Indian states of Assam and West Bengal.

3. The Koch-Rajbongshi community is classified into different categories in different states of India.

Which of the above statements is/are correct?

- A: 1 and 3 only
- B: 2 and 3 only
- C: Only 1 and 2
- D: 1, 2, and 3

37. Consider the following statements with reference to Madhav National Park and Tiger Reserves:

1. This national park is covered only by moist deciduous forests and has no other ecosystems.
2. Madhav National Park has recently been declared as the 58th tiger reserve of India.
3. By being declared a tiger reserve, the area will help strengthen wildlife corridors and genetic exchange.

Which of the above statements is/are correct?

- A: 1 and 3 only
- B: 2 and 3 only
- C: Only 1 and 2
- D: 1, 2, and 3

38. Consider the following statements with reference to tiger conservation efforts in India:

1. Project Tiger was launched in 1973 by the Government of India to protect the endangered Bengal tigers.
2. The National Tiger Conservation Authority (NTCA) is a non-governmental organisation (NGO) that provides financial assistance to state governments.
3. India currently has 58 tiger reserves, covering about 2.3% of the country's total land area.

Which of the above statements is/are correct?

- A: 1 and 3 only
- B: 2 and 3 only
- C: Only 1 and 2
- D: 1, 2, and 3

39. Consider the following statements:

1. Scientists from INST and BARC have developed

an advanced security ink that will help prevent counterfeiting.

2. This ink is based on strontium bismuth fluoride (Sr BiF) compound.
3. It is produced by co-precipitation technique.
4. This ink glows only in ultraviolet (UV) light and not in any other light.

Select the correct statement:

- A: 1, 2 and 3 only
- B: 2, 3 and 4 only
- C: 1 and 4 only
- D: 1, 2, 3 and 4

40. Consider the following statements with reference to Extradition:

1. Extradition is a legal process under which one country requests the return or handover of a criminal to another country.
2. Extradition in India is governed by the Indian Extradition Act, 1962.
3. Extradition is applicable only to persons who have been convicted by a court.
4. India can extradite only to countries with which it has a bilateral treaty.

Select the correct statement:

- A: 1 and 2 only
- B: 2, 3 and 4 only
- C: 1, 2 and 4 only
- D: 1, 2, 3 and 4

41. Consider the following statements:

1. According to the SIPRI report, India remained the world's largest arms importer during 2020-2024.
2. India's arms imports declined by 9.3% compared to 2015-2019.
3. France became India's largest arms supplier, while Russia's share declined to 36%.

Which of the above statements is/are correct?

- A: 1 and 2 only
- B: Only 2
- C: Only 1 and 3

D: 1, 2, and 3

42. Consider the following statements:

1. The Bill of Lading Bill, 2025 replaces the Indian Bill of Lading Act, 1856.
2. The Bill seeks to develop India's maritime laws in line with international standards.
3. The Bill empowers state governments to make laws for maritime trade.

Which of the above statements is/are correct?

- A: 1 and 2 only
 B: 2 and 3 only
 C: Only 1 and 3
 D: 1, 2, and 3

43. Consider the following statements:

1. Influenza virus mainly affects the respiratory system and causes acute viral infection.
2. Type D influenza primarily affects humans and can cause severe pandemics.
3. Both A(H1N1) and A(H3N2) are subtypes of influenza A virus that can spread to humans.

Which of the above statements is/are correct?

- A: 1 and 2 only
 B: 2 and 3 only
 C: Only 1 and 3
 D: 1, 2, and 3

44. Which of the following statements is not correct?

- A: Influenza viruses can spread through contaminated objects and airborne virus particles.
 B: The A(H1N1) virus was associated with the 2009 pandemic and is also called A/(H1N1)pdm09.
 C: Influenza type C is the leading cause of pandemics and severe seasonal infections.
 D: Globally, an estimated 2.9 to 6.5 million deaths occur each year from influenza.

45. Consider the following statements regarding the APAAR ID:

1. It provides a unique digital identity for students to

store their academic records.

2. It is linked to Aadhaar and stored in DigiLocker for easy access.
3. The registration for APAAR ID is completely mandatory for all students across India.

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 2 and 3 only
 C: Only 1 and 3
 D: 1, 2, and 3

46. APAAR ID is primarily associated with which of the following government initiatives?

- A: National Digital Health Mission
 B: New Education Policy (NEP) 2020
 C: Digital India Land Records Modernization Programme
 D: Samagra Shiksha Abhiyan

47. With reference to food security in India, consider the following statements:

1. The National Food Security Act (NFSA) provides legal entitlement to subsidized food grains under the Targeted Public Distribution System (TPDS).
2. Under Article 21 of the Indian Constitution, the Supreme Court has recognized the right to food as part of the right to life.
3. The e-Shram portal was launched to provide financial assistance to small farmers in India.

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 2 and 3 only
 C: Only 1 and 3
 D: 1, 2, and 3

48. Consider the following statements regarding the Squad grouping:

1. The Squad is an informal security alliance comprising the United States, Japan, Australia, and the Philippines.
2. The group conducts joint maritime operations in the Indian Ocean to counter China's naval

presence.

3. The expansion of the Squad to include India and South Korea aims to strengthen maritime security in the Indo-Pacific.

How many of the above statements are correct?

- A: Only 1
 B: Only 2
 C: All three
 D: None

49. Consider the following statements regarding the incentive scheme for low-value BHIM-UPI transactions:

1. The scheme offers a 0.15% incentive for UPI transactions up to Rs 2,000 made to both small and large merchants.
2. Under this scheme, there will be zero Merchant Discount Rate (MDR) for transactions across all merchant categories.
3. 80% of the admitted claims by acquiring banks will be disbursed unconditionally, while the remaining 20% will be based on performance conditions.

How many of the above statements are correct?

- A: Only 1
 B: Only 2
 C: All three
 D: None

50. Which of the following best describes the relationship between labour migration and inflation?

- A: Migration reduces inflation by increasing competition in the job market.
 B: Migration leads to higher inflation by increasing demand for essential goods and services.
 C: Migration has no impact on inflation, as prices are determined only by government policies.
 D: Migration only affects rural economies and does not impact urban inflation.

ANSWER

1	B
2	D
3	C
4	B
5	B
6	C
7	B
8	D
9	B
10	B

11	B
12	B
13	C
14	C
15	B
16	C
17	B
18	C
19	B
20	A

21	A
22	D
23	C
24	C
25	A
26	A
27	C
28	C
29	D
30	A

31	A
32	A
33	C
34	A
35	A
36	A
37	B
38	A
39	A
40	C

41	B
42	A
43	C
44	C
45	A
46	B
47	A
48	B
49	B
50	B



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