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New Districts in Ladakh

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New Districts in Ladakh:
- The Ministry of Home Affairs has granted "in-principle approval" for the creation of five new districts in Ladakh. The new districts are: Zanskar, Drass, Sham, Nubra and Changthang.

Who has the Authority to Declare New Districts?
- The authority to declare new districts in a state or Union Territory in India lies with the respective state government or the central government, depending on the region:
- States: The state government has the authority to create new districts. This is typically done through a notification in the official gazette after approval from the state legislature.
- Union Territories: The central government, specifically the Ministry of Home Affairs, has the authority to create new districts in Union Territories. This is done through an official notification after considering various administrative and logistical factors.

How will the creation of new districts impact the local governance and administration?
- Improved Accessibility
  - Closer Administrative Services: With more districts, administrative offices and services will be closer to the residents, reducing travel time and making it easier for people to access government services.
  - Better Implementation of Schemes: Localized administration can ensure more effective implementation of government schemes and programs, tailored to the specific needs of each district.
- Enhanced Governance
  - Focused Development: Each district can focus on its unique developmental needs, leading to more balanced and inclusive growth across the Union Territory.
  - Efficient Resource Allocation: Resources can be allocated more efficiently, addressing the specific challenges and opportunities of each district.
- Increased Representation
  - Local Representation: More districts mean better representation of local communities in governance, ensuring that their voices and concerns are heard and addressed.
  - Community Engagement: Smaller administrative units can foster greater community engagement and participation in local governance.
- Economic and Social Benefits
  - Economic Growth: Improved infrastructure and services can stimulate local economies, creating jobs and boosting economic activities.
  - Social Development: Enhanced access to education, healthcare, and other essential services can improve the overall quality of life for residents.

Shanghai Cooperation Organisation (SCO)

Pakistan on Thursday said that it has invited India and Prime Minister Modi to the Shanghai Cooperation Organisation's Council of Heads of Government meeting to be held in October.

Background:
- Pakistan holds the rotating chairmanship of the Shanghai Cooperation Organisation (SCO) Council of Heads of Government (CHG) and in that capacity, will host the two-day in-person SCO Heads of Governments Meeting in October.

About Shanghai Cooperation Organisation (SCO)
- The Shanghai Cooperation Organisation (SCO) is a significant permanent intergovernmental organization that focuses on political, economic, and security-related cooperation across Eurasia.

Formation and Evolution
- Origins: The SCO evolved from the "Shanghai Five" group, which was established in 1996 by China, Russia, Kazakhstan, Kyrgyzstan, and Tajikistan. With the dissolution of the USSR in 1991 into 15 independent countries, there were concerns in the region about extremist religious groups and ethnic tensions. It was to manage these issues, the group was created.
- Establishment: The SCO was officially founded on June 15, 2001, in Shanghai, China, with the addition of Uzbekistan.
- Expansion: India and Pakistan joined as full members in 2017, Iran in 2023, and Belarus in 2024.

Member States and Structure
- Members: The SCO currently includes China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, India, Pakistan, Iran, and Belarus.
- Observers and Dialogue Partners: The organization also has several observer states and dialogue partners, including Afghanistan, Mongolia, and Turkey.
- Headquarters: The SCO Secretariat is based in Beijing, China.

The goals of the SCO are:
- to strengthen mutual trust, friendship and good-neighborliness between the Member States;
- to encourage the effective cooperation between the Member States in such spheres as politics, trade, economy, science and technology, culture, education, energy, transport, tourism, environmental protection, etc;
- to jointly ensure and maintain peace, security and stability in the region; and
- to promote a new democratic, fair and rational international political and economic international order.

Key Initiatives and Activities
- Annual Summits: The Heads of State Council (HSC) is the supreme decision-making body of the SCO, meeting annually to discuss and decide on major issues. The SCO council of heads of government level is the second-highest body in the grouping.
- Regional Anti-Terrorist Structure (RATS): This body coordinates efforts to combat terrorism, separatism, and extremism within the member states. RATS is headquartered in Tashkent, Uzbekistan.
- Economic Projects: The SCO has initiated various projects to enhance regional connectivity, including the Digital Silk Road and infrastructure development programs.

Significance and Impact
- Geopolitical Influence: The SCO is the world's largest regional organization in terms of geographic scope and population, covering approximately 80% of Eurasia and 40% of the world's population.
- Strategic Balance: The organization plays a crucial role in maintaining regional stability and fostering a multipolar world order.

Digital Agriculture Mission

Recently, the Union Cabinet Committee chaired by the Prime Minister of India approved the Digital Agriculture Mission with an outlay of Rs. 2817 Crore, including the central share of Rs. 1940 Crore.

Background: –
- This initiative is part of the broader vision of Viksit Bharat@2047, aiming to transform the agriculture sector through digital solutions.

About Digital Agriculture Mission
- The Digital Agriculture Mission is an initiative by the Ministry of Agriculture and Farmers' Welfare.
- The mission aims to create a robust Digital Public Infrastructure (DPI) for the agriculture sector.
- This includes initiatives like the Digital General Crop Estimation Survey (DGCES) and other IT projects by various government bodies.

Objectives:
- Enhance Farmers' Income: By providing timely and reliable information, the mission aims to improve the income of farmers.
- Digital IDs for Farmers: Farmers will receive digital identities similar to Aadhaar, known as Farmer IDs.
- Nationwide Crop Surveys: Implementing comprehensive crop surveys to gather accurate data on agricultural production.
- Job Creation: The mission is expected to create around 2.5 lakh jobs.
- Development of AgriStack: This will include a Krishi Decision Support System and Soil Profile Mapping, providing essential data to farmers.

Benefits:
- Improved Service Delivery: By leveraging data analytics, AI, and remote sensing, the mission aims to make service delivery mechanisms more efficient and transparent.
- Enhanced Decision-Making: Farmers will have access to timely and accurate information, aiding in better decision-making.
- Increased Productivity: With better access to information and resources, farmers can increase their productivity and profitability.
- Sustainable Agriculture: The mission promotes sustainable agricultural practices by providing data on soil health, crop patterns, and more.
- Economic Growth: By boosting the agriculture sector, the mission contributes to the overall economic growth of the country.

Northern Bald Ibis

After being extinct in Central Europe for 300 years, the northern bald ibis has made a comeback. Now, scientists acting as "foster parents" are guiding the birds to relearn their long-lost migration routes, leading them aboard a tiny plane.

Background: Thirty-six of these endangered birds are now following an ultralight aircraft on a 2,800 km journey from Austria to Spain, a trip that could take up to 50 days. During the flight, human foster parents sit at the back of the microlight, waving and shouting encouragement to the birds as they fly.

About Northern Bald Ibis
- The Northern Bald Ibis (Geronticus eremita), also known as the Hermit Ibis or Waldrapp, is an endangered bird species.

Description
- Appearance: The Northern Bald Ibis is a large bird, measuring about 70–80 cm in length with a wingspan of 125–135 cm. It has glossy black plumage with bronze-green and violet iridescence. One of its most distinctive features is its unfeathered red face and head, along with a long, curved red bill.
- Behavior: Unlike many other ibises, the Northern Bald Ibis is non-wading and prefers open areas such as grasslands, rocky mountains, and semi-deserts.

Habitat and Distribution
- Historical Range: Historically, this species was widespread across the Middle East, northern Africa, and southern and central Europe.
- Current Range: Today, the majority of the remaining wild population is found in southern Morocco, with smaller numbers in Syria and Turkey.
- Breeding: The Northern Bald Ibis breeds colonially on coastal or mountain cliff ledges, where it typically lays two to three eggs in a stick nest.

Conservation Status
- Threats: The species has faced significant threats from hunting, habitat loss, and slow reproduction rates.
- Conservation Efforts: Thanks to international reintroduction programs and natural population growth in Morocco, the Northern Bald Ibis was downlisted from Critically Endangered to Endangered on the IUCN Red List in 2018.
- Breeding efforts to increase their population over the past two decades have been successful, but without guidance from wild ancestors, the birds no longer had any knowledge of which direction to fly for winter.
- Early reintroduction attempts were largely unsuccessful – instead of returning to suitable wintering grounds such as Tuscany, Italy, the birds flew in different directions and died.
- To prepare them for migration, chicks were removed from their breeding colonies at Rosegg Zoo in Austria just days after hatching, taken to an aviary and looked after by a human foster parent to "imprint". Once this happens, the birds trust the human enough to follow them along the migration route.

"Finternet"

At the recent Global Fintech Fest (GFF) in Mumbai, the ex-chairman of UIDAI introduced the concept of "Finternet".

Background: The Global Fintech Fest (GFF) is an annual fintech conference organized by the Payments Council of India (PCI), the National Payments Corporation of India (NPCI), and the Fintech Convergence Council (FCC).

Key takeaways
- Finternet is a concept introduced to describe a network of interconnected financial ecosystems, similar to the internet.
- It aims to unify various financial services and systems, making transactions cheaper, more secure, and nearly instantaneous.
- Central banks remain central to the system, ensuring trust in money, while collaborating closely with commercial banks.
- Finternet aims to create a more inclusive and efficient financial ecosystem, enabling anyone to transfer any financial asset, in any amount, at any time, using any device, to anyone else, anywhere in the world.

Key features:
- Unified Ledgers: Bringing together multiple financial markets (e.g., tokenized assets, shares, bonds, real estate) on a single programmable platform.
- Interoperability: Ensuring seamless transfer of assets and funds across different platforms and services.
- Accessibility: Making financial services more accessible, especially for people in remote or underserved areas.
- Cost Efficiency: Reducing transaction costs to make financial services more affordable.
- Security: Enhancing security measures to protect users from fraud and cyber threats.

INS Arighaat

India bolstered its deterrence capability on Thursday with the commissioning of its second nuclear submarine, INS Arighaat, into the Navy.

Background: –
- The discreet commissioning ceremony of the Arihant-class vessel in Visakhapatnam was attended by Defence Minister Rajnath Singh.

Key takeaways
- INS Arighaat will join its predecessor INS Arihant strengthening the country's nuclear triad — the ability to fire nuclear missiles from platforms in the air, land and sea.
- The 6,000-tonne nuclear-propelled submarine will be armed with indigenously made K-15 missiles which have a range of over 700 km, and have undergone extensive trials over the last few months.
- Like INS Arihant, it is powered by 83 MW pressurised light-water reactors which allows it to remain submerged for longer periods when compared to conventional submarines.

INS Arihant Project
- The INS Arihant project was initiated over three decades ago, involving Russian assistance, private companies and the research establishment.
- The lead vessel of the Arihant class, INS Arihant, was laid down in 2004, launched in 2009, and commissioned into the Navy in 2016. It was the first ballistic missile submarine built by a country outside the United Nations Security Council's five.

Additional Information
- A robust, survivable and assured retaliatory capability is in line with India's policy to have a credible minimum deterrence capacity to underpin its 'no first use' commitment.
- In 2003, India declared its nuclear doctrine, reserving the right of massive retaliation if it is struck with nuclear weapons.

Retired Sportsperson Empowerment Training (RESET) Programme

Union Minister of Youth Affairs & Sports and Labour & Employment, Dr. Mansukh Mandaviya launched "Retired Sportsperson Empowerment Training" (RESET) Programme recently.

Background:
- RESET Programme represents a significant step towards recognizing and utilizing the invaluable experience and expertise of our retired athletes.

About Retired Sportsperson Empowerment Training (RESET) Programme
- The Retired Sportsperson Empowerment Training (RESET) Programme is an initiative launched by the Ministry of Youth Affairs & Sports in India to support retired athletes.
- Launch Date: August 29, 2024, on National Sports Day.
- Objective: To empower retired sportspersons with career skills and knowledge, enhancing their employability and enabling them to contribute to the sports ecosystem.

Eligibility Criteria
- Age: Retired athletes aged between 20 and 50 years.
- Achievements: Winners of an International Medal/participants in international events or have been National medallists/State medallists/participants in competitions recognized by National Sports Federations/Indian Olympic Association/Ministry of Youth Affairs and Sports are eligible to apply for courses under RESET Programme.
- Initially, the programmes will be of two levels based on educational qualifications viz., Class 12th and above and Class 11th and below.
- Mode of Learning: Hybrid mode, combining self-paced online learning with on-ground training.
- Lead Institute: Lakshmibai National Institute of Physical Education (LNIPE) is the lead institute for implementing the programme.

Support and Opportunities
- Placement Assistance: Guidance and support for job placements.
- Entrepreneurial Guidance: Support for starting entrepreneurial ventures.
- Internships: Opportunities for internships in sports organizations, competitions, training camps, and leagues.

Implementation and Benefits
- Self-Paced Learning: Participants can learn at their own pace through a dedicated online portal.
- On-Ground Training: Practical training sessions to enhance skills.
- Evaluation and Certification: Participants will be evaluated and certified upon successful completion of the programme.

2G (second-generation) bio-ethanol

The Indian government is planning to set up dedicated enzyme manufacturing facilities to boost ethanol production.

Background: –
- The first plant is expected to be established in Manesar, Haryana. This facility will likely supply enzymes to proposed 2G bio-ethanol plants in Uttar Pradesh, Punjab, and an existing plant in Haryana. This initiative is part of the BioE3 policy, which aims to enhance biotechnology-driven manufacturing in India.

About 2G (second-generation) bio-ethanol
- 2G (second-generation) bio-ethanol is produced from non-food biomass, such as agricultural residues, wood chips, and other lignocellulosic materials.
- Unlike first-generation bio-ethanol, which is made from food crops like corn and sugarcane, 2G bio-ethanol uses feedstocks that are not part of the human food chain. This makes it a more sustainable and environmentally friendly option.
- The process involves breaking down the complex carbohydrates in the biomass into simple sugars, which are then fermented to produce ethanol. This typically requires specialized enzymes to convert the lignocellulosic materials into fermentable sugars.

Key benefits of 2G bio-ethanol:
- Reduces waste: Utilizes agricultural residues that would otherwise be discarded or burned.
- Lower greenhouse gas emissions: Produces fewer emissions compared to fossil fuels and first-generation bio-ethanol.
- Energy security: Reduces dependence on imported fossil fuels by providing a renewable energy source.

Ethanol
- Ethanol, also known as ethyl alcohol, is a clear, colourless liquid that is flammable and has a characteristic odour.
- It is produced through the fermentation of sugars by yeast or through chemical processes like the hydration of ethylene.
- Ethanol can be derived from both biological and chemical sources, while bioethanol is exclusively produced from biological sources.

Uses of Ethanol
- Beverages: Ethanol is the type of alcohol found in alcoholic beverages such as beer, wine, and spirits.
- Fuel: It is used as a biofuel and is often blended with gasoline to produce ethanol-blended fuels. This helps reduce greenhouse gas emissions and reliance on fossil fuels.
- Industrial Solvent: Due to its ability to dissolve a wide range of substances, ethanol is used as a solvent in the manufacturing of pharmaceuticals, perfumes, and other products.
- Medical and Laboratory Uses: Ethanol is used as an antiseptic, disinfectant, and preservative in medical and laboratory settings.
- Chemical Feedstock: It serves as a feedstock for the production of various chemicals.

Anti-dumping duty

Directorate General of Trade Remedies (DGTR) has recommended imposing an anti-dumping duty on aluminium foils imported from China.

Background: –
- This recommendation follows a complaint by domestic producers, who argued that the influx of cheap Chinese aluminium foils was harming the local industry. The proposed duty ranges between $619 and $873 per tonne.

About Anti-dumping duty
- Anti-dumping duty is a protectionist tariff that a domestic government imposes on foreign imports believed to be priced below fair market value.
- This practice, known as "dumping," can harm domestic industries by undercutting local businesses and distorting market competition.
- The Directorate General of Trade Remedies (DGTR), under the Ministry of Commerce and Industry, is responsible for investigating and recommending the imposition of anti-dumping duties in India.

Decision-Making Process:
- Investigation: The DGTR conducts an investigation to determine if dumping has occurred and its impact on the domestic industry.
- Recommendation: Based on the findings, the DGTR makes a recommendation to the Ministry of Finance.
- Imposition: The Ministry of Finance makes the final decision to impose the anti-dumping duty.

Purpose of imposing anti-dumping duties in India are to:
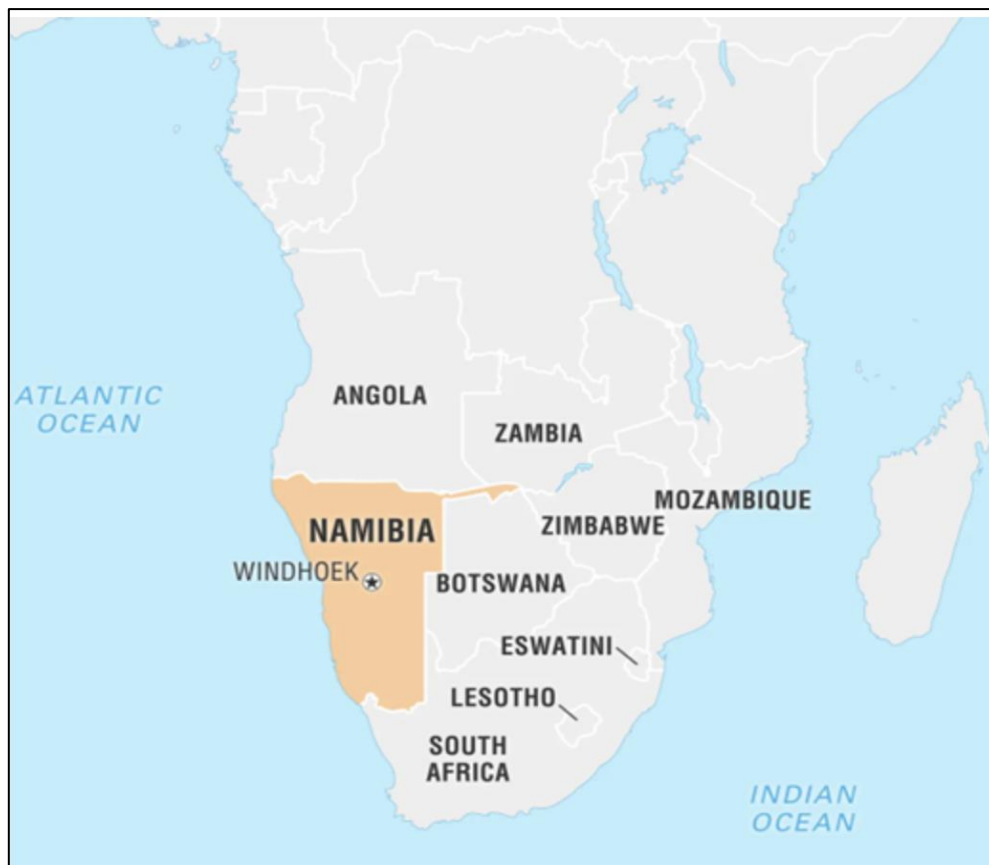- Protecting Domestic Industries: Anti-dumping duties shield domestic industries from unfair competition by preventing foreign companies from flooding the market with underpriced goods.
- Preserving Job: By safeguarding domestic industries from the adverse effects of dumping, anti-dumping duties help prevent job losses that may occur if local companies are unable to compete with cheaper imports.

- Maintaining Fair Competition: Anti-dumping duties promote fair competition by ensuring that imported goods are priced at levels comparable to their fair market value. This prevents foreign companies from gaining an unfair advantage.
- Supporting Fair Trade Practices: Imposing anti-dumping duties discourages unethical trade practices such as predatory pricing and dumping. By penalizing such practices, anti-dumping measures encourage adherence to fair trade principles and discourage market manipulation.
- Protecting Intellectual Property: Anti-dumping duties can also help protect intellectual property rights by discouraging the importation of counterfeit or infringing goods. By deterring the influx of low-priced counterfeit products, these duties help safeguard the interests of innovators and creators.
- Stimulating Domestic Production: Anti-dumping duties incentivize domestic production by reducing the competitive disadvantage faced by local manufacturers.
- Promoting Economic Stability: By safeguarding domestic industries and preserving jobs, anti-dumping duties contribute to economic stability and resilience. By preventing disruptions caused by unfair trade practices, these measures support sustainable growth and development in the long term.

Drought in Namibia

Namibia plans to cull hundreds of wild animals, including dozens of elephants and hippopotamuses, to provide meat for its 1.4 million people who are reeling under the worst drought in a century.

- The drought, which began in Botswana in October 2023, has spread and intensified across Angola, Zambia, Zimbabwe, and Namibia, affecting most of southern Africa.
- The severity of the situation is largely attributed to El Niño. Numerous studies have shown that rising global temperatures due to climate change are making extreme weather events, such as droughts and floods, more frequent and intense.
- Food availability in Namibia, typically low from July through September, has been further strained by the drought. Staple crops like maize have withered, large numbers of livestock have perished, and nearly 84% of the country's food reserves are depleted.
- As food stocks dwindle, prices have soared, severely limiting access to food for many people.
- The Namibian government is considering culling wild animals, not just for meat, but to prevent them from migrating in search of food and water, which could lead to conflicts with humans.
- Namibia is home to a significant number of wild animals, including approximately 24,000 elephants, one of the largest populations in the world.

About Namibia: Namibia is located on the southwestern coast of Africa.

Geography
- Bordered by Angola to the north, Zambia to the northeast, Botswana to the east, South Africa to the southeast and south, and the Atlantic Ocean to the west.
- Known for its diverse landscapes, including the Namib Desert along the coast, the Kalahari Desert in the east, and savannas and mountains.
- Climate: Mostly arid to semi-arid, with the coastal areas being cooler due to the Benguela Current.

Additional Information
- Colonial Era: Formerly known as South West Africa, it was colonized by Germany in the late 19th century and later administered by South Africa after World War .
- Independence: Gained independence from South Africa on March 21, 1990.
- Government Type: Republic with a semi-presidential system.
- Capital: Windhoek.
- Main Industries: Mining (diamonds, uranium, gold), agriculture, and tourism

Pacific Policing Initiative (PPI)

The Pacific Islands Forum (PIF) recently endorsed the Australia-funded Pacific Policing Initiative (PPI).

Background: –
- The PPI represents a significant investment in the security and stability of the Pacific region, reflecting Australia's commitment to supporting its Pacific neighbours.

About Pacific Policing Initiative (PPI)
- The Pacific Policing Initiative (PPI) is a comprehensive program funded by Australia.
- It aimed at enhancing policing capabilities across the Pacific region.
- This initiative, with a budget of approximately AU$400 million over five years, aims to reshape policing across the Pacific region.

The PPI focuses on three main areas:
- Regional Training Centres of Excellence: These will be located throughout the Pacific to enhance police training.
- Pacific Police Support Group: A multinational force that can respond to regional emergencies, such as natural disasters and transnational crime.

- Central Coordination Hub: Based in Brisbane, Australia, this hub will support the regional centres and the Pacific Police Support Group.

Objectives:
- Strengthen Regional Security: By enhancing the capabilities of local police forces, the PPI aims to improve overall security in the Pacific region.
- Promote Cooperation: The initiative encourages collaboration among Pacific nations, fostering a united approach to common security challenges.
- Build Resilience: Through training and support, the PPI seeks to build resilience against various threats, including natural disasters, transnational crime, and geopolitical tensions.

Pacific Islands Forum (PIF)
- The Pacific Islands Forum (PIF) is an inter-governmental organization that aims to enhance cooperation among countries and territories in the Pacific region.
- It was established in 1971 (originally as the South Pacific Forum, renamed in 1999 to be more inclusive of all Pacific nations).
- PIF members include 18 countries and territories, including Australia, New Zealand, Fiji, Papua New Guinea, and several smaller island nations.
- PIF Headquarters is in Suva, Fiji.

Project NAMAN

The Indian Army recently launched the first phase of Project NAMAN.
Background: –
- In the first phase, 14 Common Service Centres (CSCs) have been established in key locations across India, including New Delhi, Jalandhar, Leh, Dehradun, Lucknow, Jodhpur, Bengdubi, Gorakhpur, Jhansi, Secunderabad, Saugor, Guntur, Ahmedabad, and Bangalore.

About Project NAMAN
- Project NAMAN is an initiative under the Ministry of Defence.
- It aimed at providing dedicated support and services to Defence Pensioners, Veterans, and their families.
- It focuses on implementing the SPARSH (System for Pension Administration Raksha) digital pension system to streamline pension-related processes.

Components:
- SPARSH Digital Pension System: Streamlines pension-related processes for Defence Pensioners.
- Common Service Centres (CSCs): Established at key locations to offer various services.
- Tripartite MoU: Between the Indian Army's Directorate of Indian Army Veterans, CSC e-Governance India Limited, and HDFC Bank Limited.
- Village Level Entrepreneurs (VLEs): Manage the CSCs, selected from veterans or Next of Kin (NOKs).

Purpose:
- Streamline Pension Processes: Implement the SPARSH system to make pension-related processes more efficient and accessible.
- Provide Accessible Facilitation Points: Establish CSCs to offer SPARSH-enabled pension services, Government to Citizen (G2C) services, and Business to Consumer (B2C) services.
- Support Veterans and Families: Offer essential care and support to veterans, pensioners, war widows, and NOKs.

Benefits:
- Convenience: All services are available at a single, convenient location.

- Financial Assistance: HDFC Bank provides a monthly grant of ₹20,000 for the first 12 months to VLEs to help stabilize and sustain the centres.
- Comprehensive Training: VLEs receive training to deliver the required services effectively.
- Community Support: Extends services to the entire resident population of military stations and surrounding localities.

'Black Coat Syndrome'

Flagging the culture of adjournment in deciding cases, President Droupadi Murmu recently said that the poor from the villages are still anxious to approach courts as they feel that fighting for justice will make their lives even more difficult, and termed it the 'Black Coat Syndrome'

Windfall tax

The Centre has cut windfall tax on domestically produced crude oil to one thousand 850 rupees per tonne from two thousand 100 rupees per tonne.

Background: –
- Windfall tax, a relatively new taxation policy, was introduced in India in 2022

About Windfall tax
- Windfall tax is a special tax imposed by the government on companies that experience unexpected and above-average profits due to external events.
- In India, this tax was introduced in 2022, primarily targeting the oil and gas sector, which saw significant profit increases due to global events like the Russia-Ukraine war.

Key Points About Windfall Tax in India:
- Purpose:
  - The main aim is to redistribute unexpected profits that companies gain due to external factors, ensuring that these profits benefit society as a whole.
- How It Works:
  - Windfall tax is levied as an additional tax over the regular corporate tax. It is typically calculated as a percentage of the excess profits that exceed a certain threshold.
- Impact on Industries:
  - Oil and Gas: Companies like ONGC, Oil India, and GAIL have been significantly affected. The tax aims to curb excessive profits and ensure fair distribution.
  - Other Sectors: While primarily focused on oil and gas, the windfall tax can also apply to other sectors like mining and telecommunications if they experience similar profit surges.
- Advantages and Disadvantages:
  - Advantages: Increased government revenue, fair distribution of wealth, and contribution to sustainable development.
  - Disadvantages: Market uncertainty, reduced business profits, and potential deterrence for investors.

Law Commission

The Central Government has recently notified the constitution of the 23rd Law Commission, which will function from September 1, 2024, to August 31, 2027.

Background: –
- This move is part of the government's ongoing efforts to ensure that India's legal framework remains relevant and effective.

About Law Commission
- A Law Commission is an independent body established to review and recommend reforms to the legal system of a country.
- The new commission will advise the government on complex legal issues and review existing laws to ensure they align with current economic and social needs.

Origins and History:
- First Law Commission: Established in 1834 under the Charter Act of 1833, chaired by Lord Macaulay. It recommended the codification of the Penal Code and the Criminal Procedure Code.
- Post-Independence: The first Law Commission of independent India was established in 1955, chaired by M.C. Setalvad, the then Attorney-General of India.

Structure and Functioning:
- Non-Statutory Body: The Law Commission is neither a constitutional nor a statutory body. It is an executive body established by an order of the Government of India.
- Advisory Role: It works as an advisory body to the Ministry of Law and Justice, primarily comprising legal experts.
- Tenure: Each commission is established for a fixed tenure, usually three years.

Functions:
- Legal Reforms: The primary function is to work for legal reforms by reviewing existing laws and suggesting new ones.
- Research and Studies: Undertakes research in law and studies for bringing reforms in the justice delivery system, eliminating delays, and reducing litigation costs.
- Recommendations: Makes recommendations to the government in the form of reports, which are laid in Parliament and forwarded to concerned departments for implementation.

23rd Law Commission:
- Structure: The commission will have a full-time Chairperson, four full-time Members, including a Member-Secretary, and several ex-officio and part-time Members.
- Appointments: For the first time, serving judges of the Supreme Court and High Courts can be appointed as Chairperson and Members.
- Focus Areas: The commission will work on reviewing obsolete laws, developing Standard Operating Procedures (SoPs) for periodic reviews, and addressing legislative references from various departments.

Brunei and India relation

Prime Minister Narendra Modi landed in Bandar Seri Begawan, the capital of Brunei Darussalam, on Tuesday (September 3) for his official visit to the country.

Background:
- Narendra Modi is the first Indian PM to visit the Southeast Asian nation. His trip also marks 40 years since India and Brunei officially established diplomatic ties.

Brunei's population and Indian diaspora
- As of 2023, Brunei has an estimated population of 450,500. Brunei citizens make up approximately 76% of the population, while the rest are permanent or temporary residents. Ethnically, over 80% of the population is Malay or Chinese.
- Indian migration to Brunei began in the 1920s, coinciding with the discovery of oil. Currently, around 14,000 Indians reside in Brunei.
- The significant contributions of Indian doctors and teachers to the development of Brunei's healthcare and education sectors have been widely recognized.

Strategic Importance of Brunei

- Brunei holds strategic significance within India's 'Act East' Policy and Indo-Pacific Vision. The 'Act East' Policy evolved from the 'Look East' Policy, which was initiated in the 1990s.
- In the post-Cold War era, following the dissolution of the USSR — India sought to deepen its relationships with countries in Southeast Asia. The northeastern states of India, due to their geographic proximity, were envisioned as key players in this engagement.
- In 2014, the policy was revitalized as 'Act East,' emphasizing more proactive efforts to strengthen these connections. Prime Minister Narendra Modi has identified ASEAN (Association of Southeast Asian Nations) as the "central pillar" of this policy, with Brunei being one of the ASEAN members.
- Economic growth in Southeast Asia over the past few decades has made commerce a central focus of India's ties with the region. Brunei, as one of the largest oil and gas producers in Southeast Asia, plays a significant role in this economic engagement.
- The emphasis on Southeast Asia and the Indo-Pacific also gains importance in light of China's rising global influence.
- Under President Xi Jinping, China has adopted a more authoritarian stance, and while its economic power enables it to finance numerous projects and provide loans to other countries, its actions—such as its conduct in the South China Sea—have caused friction in the region.
- India's engagement in Southeast Asia, including its relationship with Brunei, serves as a counterbalance to China's growing influence.
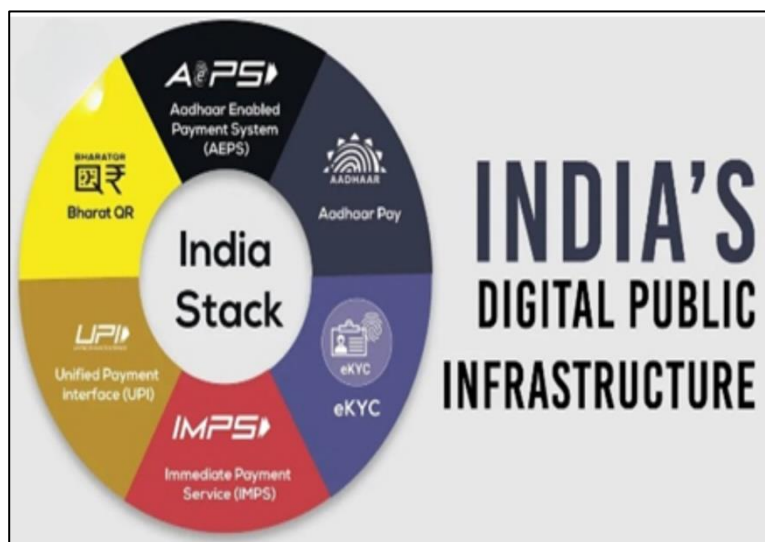
Digital Public Infrastructure (DPI)

India's G20 task force's release of comprehensive report outlining global strategy for digital public infrastructure development has triggered public debate about DPI.

Background: –

- DPI has the power to dramatically improve the lives of citizens and transform governance.

About Digital Public Infrastructure (DPI)

- Digital Public Infrastructure (DPI) refers to the **foundational digital systems and services that enable efficient, inclusive, and secure delivery of public and private services to citizens.**

- DPI is designed to serve as a shared platform, providing public goods that are open, scalable, and interoperable, fostering innovation and economic growth.

Key Elements of Digital Public Infrastructure:

- **Digital Identity:** A robust and secure digital identity system allows individuals to prove their identity online and access various services. In India, Aadhaar is a prime example, providing a unique identification number to residents, used for accessing government benefits, financial services, and more.

- **Digital Payments:** A reliable and inclusive digital payment system ensures that financial transactions can be performed electronically with ease and security. In India, platforms like Unified Payments Interface (UPI) have revolutionized digital payments, enabling seamless real-time bank transfers across the country.
- **Data Exchange:** Secure platforms that allow the sharing of data between individuals, businesses, and governments while respecting privacy. For example, India's DigiLocker enables citizens to store and share documents digitally, reducing paperwork and increasing efficiency.
- **Public Digital Platforms:** These platforms provide foundational services that are reusable across multiple sectors. Examples include the India Stack, which includes tools like Aadhaar for identity, UPI for payments, and e-KYC (Know Your Customer) for authentication.

Key Benefits:
- Inclusivity: DPI enables access to essential services (e.g., healthcare, education, banking) for all, especially underserved populations. It reduces the digital divide by creating accessible digital systems.
- Efficiency: DPI leads to faster, more transparent service delivery. It eliminates manual, paper-based processes and enhances government-to-citizen, business-to-customer, and peer-to-peer interactions.
- Cost-effectiveness: DPI reduces transaction costs for businesses and governments by minimizing reliance on intermediaries and streamlining operations.
- Fosters Innovation: By providing open and interoperable digital tools, DPI creates an environment for startups, businesses, and developers to build applications and services on top of it, driving economic growth.

Issues to be examined with regard to DPI:
- DPIs are essentially multi-sided platforms, where the value of the platform on one side increases with the increase in the number of participants on the other side. These inherent network effects of DPIs can lead to winner-takes-all outcomes, resulting in the creation of monopolies or oligopolies.
- For instance, the UPI payment system has resulted in the creation of a virtual duopoly of service providers. Participants captured these zero-price markets while harvesting vast amounts of user data over time.
- Concerns regarding the privatisation of public data, data security, and data privacy arise due to the operation of private entities.
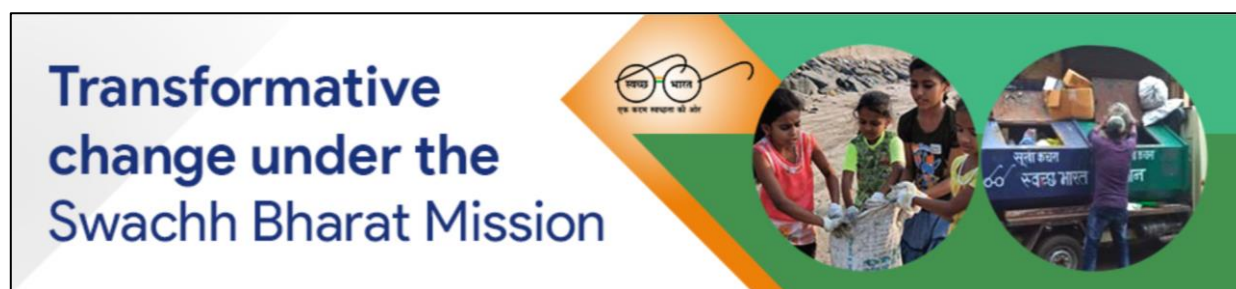
Swachh Bharat Mission (SBM)

The recent release of the scientific report in the Nature journal on the Swachh Bharat Mission's (SBM) impact on the reduction in infant and child mortality broadly coincides with the 10-year anniversary of the programme.

Background:
- Announced by Prime Minister Narendra Modi during his Independence Day speech to the nation from the Red Fort on August 15, 2014, it was formally launched on October 2 of the same year.

About Swachh Bharat Mission (SBM)
- India grappled with sanitation challenges, particularly in rural areas, affecting millions. In 2014, only 39% sanitation coverage was achieved, impacting vulnerable demographics, notably women and children.
- Responding to the imperative for comprehensive sanitation coverage, the Swachh Bharat Mission was launched on October 2, 2014.
- Main goal: Eliminate open defecation by October 2, 2019, targeting the construction of over 100 million household toilets for 550 million Indians.

Behavioral Change:
- The SBM was a Jan Andolan (mass movement) involving community-led initiatives to achieve Open Defecation Free (ODF) status.
- Focus on inspiring pride in villages through Gaurav Yatras (pride tours) upon achieving ODF status.
- Friendly competition among villages, districts, and states helped boost implementation.

Phase II of SBM:
- After October 2, 2019, when all Indian states declared themselves ODF, SBM entered its second phase.
- SBM Phase II was launched with the objective of achieving Sampoorn Swachhata, i.e., sustaining the ODF status and managing solid and liquid waste by 2024-25 and transforming all the villages from ODF to ODF Plus Model.

Health Impact:
- The Nature journal report (2024) validated SBM's significant health outcomes, stating that the mission saved 60,000–70,000 lives of infants and children under five annually by reducing diseases caused by poor sanitation.
- Other health benefits included a reduction in diarrheal diseases and improved public health.

Dignity and Security of Women:
- One of the core benefits was enhancing the dignity and security of women and girls, by providing them access to safe and private sanitation facilities.

Economic Benefits:
- A UNICEF study estimated that villages achieving ODF status saved households approximately Rs 50,000 annually on healthcare costs and time savings.
- Reduction in medical costs due to lower incidence of water-borne diseases.

Global Lessons and Replication:
- Key global takeaway: the four Ps – Political leadership, Public financing, Partnerships, and People's participation – recognized globally as essential for successful developmental programs.
- Example: Nigeria launched the Clean Nigeria Campaign after learning from SBM.

Sustainable Development Goals (SDGs):
- SBM contributed to the achievement of SDG 6 (Clean Water and Sanitation) by improving access to sanitation and hygiene.
- SBM was part of a broader suite of government initiatives aimed at improving the quality of life, such as:
  - Ujjwala Yojana (cooking gas cylinders),
  - Jan Dhan Yojana (bank accounts),
  - Awas Yojana (housing),
  - Ayushman Bharat (health insurance),
  - Jal Jeevan Mission (water supply).

Enemy property Act

A parcel of land in Uttar Pradesh, previously belonging to the family of former Pakistan President Pervez Musharraf, is set to be auctioned under The Enemy Property Act.

Background:
- The Union Home Affairs Ministry said in a notice erected on the plot that around 13 bighas of land in the Kotana Bangar village in Baghpat district has been directed for sale through e-auction until September 12.

WHAT IS ENEMY PROPERTY

ENEMY PROPERTY refers to movable and immovable property owned by those, who migrated to Pakistan after the partition of the country or after it waged war on India. It also includes the property of anybody who migrated to China after the 1965 India-China war.

INITIALLY, THE government took over the properties of those people under the Defence of India Act and later enacted an exclusive law called the Enemy Property Act in 1968.

THE RECENT amendment of the enemy property law debars the Indian heirs of those, who migrated to Pakistan or China, from laying claim to the property on the basis of their Indian citizenship.

Enemy Property and the Enemy Property Act
- Enemy Property refers to the properties left behind by individuals who migrated to Pakistan or China following the India-Pakistan wars of 1965 and 1971, and the Sino-Indian War of 1962. These properties were classified as "enemy property" under Indian law, as the people who left India acquired the nationality of an enemy country.

- The Indian government took control of these properties and vested them in the Custodian of Enemy Property for India, a government-appointed authority, under the Defence of India Rules (formulated under the Defence of India Act, 1962).
- The Enemy Property Act, enacted in 1968, provided for the continuous vesting of enemy property in the Custodian of Enemy Property for India.
- The Tashkent Declaration of January 10, 1966, featured a clause stating that India and Pakistan would consider the restitution of property and assets taken over during the fight. However, the Pakistani government disposed of all such properties throughout the country in 1971.

Key Features of the Enemy Property Act:
- Under the Enemy Property Act 1968, Custodian manages enemy properties on behalf of the Government of India, ensuring that these assets cannot be transferred or claimed by anyone.
- Enemy Property (Amendment and Validation) Act, 2017: In 2017, the Indian government amended the Enemy Property Act of 1968 to address legal issues and prevent claims by legal heirs. The key amendments included:
- Expansion of Definitions:
  - The amended Act expanded the definition of the term "enemy subject", and "enemy firm" to include the legal heir and successor of an enemy, whether a citizen of India or a citizen of a country which is not an enemy; and the succeeding firm of an enemy firm, irrespective of the nationality of its members or partners.
- Vesting of Property:
  - The amended law provided that enemy property shall continue to vest in the Custodian even if the enemy or enemy subject or enemy firm ceases to be an enemy due to death, extinction, winding up of business or change of nationality, or that the legal heir or successor is a citizen of India or a citizen of a country which is not an enemy.
- Disposal of Enemy Property:
  - The Custodian, with the approval of the central government, is empowered to sell or dispose of enemy property. The proceeds from such disposals are intended to benefit the government.
- Purpose of enemy property act amendment
  - The amendment effectively barred any claims of inheritance or succession on enemy property, regardless of whether the legal heir resides in India or a non-enemy country.
  - This move was aimed at preventing prolonged litigation, such as the case of the Raja of Mahmudabad, whose heirs fought a long legal battle to reclaim the properties.
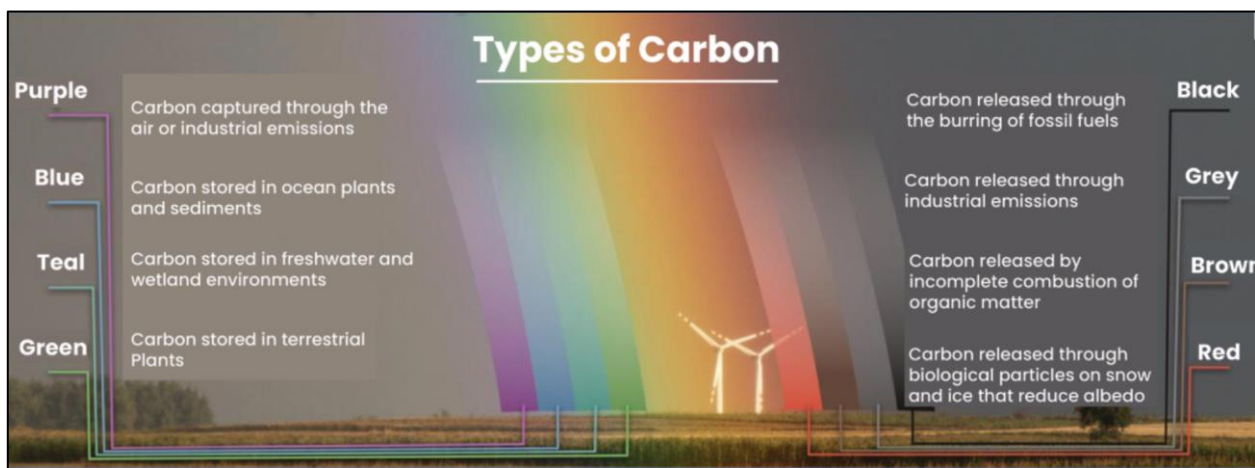
Teal Carbon

India's first study on 'teal carbon', undertaken at Keoladeo National Park (KNP) in Rajasthan's Bharatpur district, has highlighted the significance of wetland conservation to address the challenges of climate adaptation and resilience.

Background: –
- The concept of teal carbon is a recent addition to the environmental science

About Teal Carbon
- Teal carbon refers to carbon stored in non-tidal freshwater wetlands, encompassing carbon sequestered in vegetation, microbial biomass, and dissolved and particulate organic matter.

- Teal carbon being a colour-based terminology reflects the classification of the organic carbon based on its functions and location rather than its physical properties.
- As opposed to teal carbon, black and brown carbon are primarily produced by incomplete combustion of organic matter from sources such as wild fires, fossil fuel combustion, and industrial activities. They contribute to global warming.
- At the global level, the storage of teal carbon across the ecosystems is estimated to be 500.21 petagrams of carbon (PgC), which is a unit to measure carbon. Peatlands, freshwater swamps, and natural freshwater marshes account for significant amount of this storage.

Additional information
- The study in news has depicted the potential of teal carbon as a tool to mitigate climate change if the anthropogenic pollution in the wetlands can be controlled.
- Though wetlands play a crucial role in regulating greenhouse gases, they are vulnerable to degradation from pollution, land use changes, water extraction, and landscape modifications.
- Wetlands, when degraded, could release methane and carbon dioxide into the atmosphere.

PresVu & Drug Controller General of India (DCGI)

Mumbai-based Entod Pharmaceuticals announced that the Drug Controller General of India (DCGI), the nation's top drug regulatory authority, has approved its innovative eye drops designed specifically to reduce the need for reading glasses in individuals with presbyopia.

Background: –
- According to the company, the eye drop PresVu is the first of its kind in India, and Entod has applied for a patent for this invention in terms of its formulation and the process.

Key takeaways
- Presbyopia is an age-related disorder in which the eyes gradually lose their capacity to concentrate on adjacent objects.

- Cause: Presbyopia occurs due to the gradual stiffening of the lens inside the eye. The lens becomes less flexible, reducing its ability to change shape and focus light on the retina for close-up tasks.
- This condition typically becomes noticeable in individuals around the age of 40 and continues to progress with age. Doctors believe that spectacles are one of the most efficient strategies to manage the illness.

About PresVu

- The active ingredient — chemical compounds in medicines that have an effect on the body — in PresVu is pilocarpine.
- The compound contracts the iris muscles, which control the size of the pupil and help humans see things clearly, thereby enabling one's eyes to focus better on nearby objects, according to Entod Pharmaceuticals.
- PresVu also claims to employ "advanced dynamic buffer technology" — effectively, a base solution — to adapt to the pH level of tears. This guarantees that the eye drop has consistent efficacy and safety for extended use, keeping in mind that such drops will be used for years at a stretch.
- PresVu is a prescription-only medication, and experts say its effects are unlikely to endure more than four to six hours.

Additional Information

- Although Entod's claims suggest that PresVu is a new therapy, pilocarpine, the key ingredient in the eye drop, has been available in India for decades. In 2021, the US Food and Drug Administration approved a pilocarpine eye drop to treat presbyopia.

India and Singapore Relation

Prime Minister Narendra Modi recently met with his Singaporean counterpart, Lawrence Wong, to discuss and strengthen bilateral ties between India and Singapore.

Background: –

- The leaders agreed to elevate the bilateral relationship to a Comprehensive Strategic Partnership, reflecting the depth and breadth of their cooperation.

Key takeaways

- Singapore, is an island country and city-state in maritime Southeast Asia.
- It is about one degree of latitude north of the equator, off the southern tip of the Malay Peninsula, bordering the **Strait of Malacca** to the west, the **Singapore Strait to the south along with the Riau Islands in Indonesia, the South China Sea to the east, and the Straits of Johor along with the State of Johor in Malaysia to the north.**
- India and Singapore share a robust and multifaceted relationship, which has evolved significantly over the years.

Historical Context
- Colonial Era: The relationship dates back to 1819 when Sir Stamford Raffles established a trading station in Singapore. **Singapore was governed from Kolkata until 1867.**
- Post-Independence: Both countries have maintained strong ties since their independence, with regular political engagement and cooperation.

Economic Relations
- Trade: Singapore is one of India's largest trading partners, with significant trade volumes. The Comprehensive Economic Cooperation Agreement (CECA) signed in 2005 has boosted trade and investment.
- FDI: Singapore is the largest source of Foreign Direct Investment (FDI) into India, contributing significantly to various sectors.

Strategic and Defence Cooperation
- Strategic Partnership: In 2015, India and Singapore elevated their relationship to a Strategic Partnership, enhancing cooperation in various fields.
- Defence: Both countries conduct regular joint military exercises and have strong defence ties, focusing on maritime security and counter-terrorism.

Recent Developments
- Comprehensive Strategic Partnership: Recently, the bilateral relationship was further elevated to a Comprehensive Strategic Partnership.
- MoUs Signed: During the latest bilateral meeting, four Memorandums of Understanding (MoUs) were signed in the fields of digital technologies, semiconductors, health cooperation, and skill development.

Cultural and People-to-People Ties
- Cultural Exchange: The upcoming inauguration of India's Thiruvalluvar Cultural Centre in Singapore highlights the cultural ties between the two nations.
- Diaspora: A significant Indian community resides in Singapore, contributing to the vibrant cultural and economic exchanges.

Geopolitical Significance
- Indo-Pacific Region: Both countries share a common vision for a free, open, and inclusive Indo-Pacific region, emphasizing the importance of peace and stability in the South China Sea.
- ASEAN Relations: Singapore is a key member of ASEAN, and India's engagement with ASEAN is crucial for its Act East Policy.

Forum on China–Africa Cooperation (FOCAC)

At last week's Forum on China–Africa Cooperation (FOCAC) summit in Beijing, China stopped short of providing the debt relief sought by many African countries.

Background: –
- The Forum for China-Africa Cooperation (FOCAC) launched in 2000 took on an enhanced role after the 2013 inception of President Xi Jinping's Belt and Road Initiative (BRI).

About Forum on China-Africa Cooperation (FOCAC)
- The Forum on China-Africa Cooperation (FOCAC) is a multilateral platform established to foster cooperation and partnership between China and African countries.

Member Countries:
- FOCAC involves China and 53 African countries (all African nations except Eswatini, which recognizes Taiwan). It also includes the African Union (AU).

Objectives:
- Economic Cooperation: Enhancing trade, investment, and infrastructure development.
- Aid and Development: China provides loans, aid, and development assistance to African countries.
- Political Cooperation: FOCAC promotes multilateral cooperation on global governance issues.
- Cultural and Educational Exchanges: Fostering mutual understanding through student exchanges, training programs, and cultural exchanges between China and Africa.
- Peace and Security: Supporting African efforts to maintain peace and security, with China providing assistance in conflict zones, UN peacekeeping, and military cooperation.

Criticisms and Challenges:
- China has sought to use FOCAC to counter growing competition in Africa from the United States, the European Union, Japan and others.
- Debt Trap Diplomacy: Critics argue that Chinese loans to African nations may lead to debt dependency, with concerns that some African countries might struggle to repay Chinese debts, resulting in loss of control over key assets.
- Labor and Environmental Concerns: There have been concerns about the use of Chinese labor for construction projects instead of hiring local African workers, as well as issues related to the environmental impact of certain Chinese-led projects.
- Lack of Transparency: Some observers have criticized the lack of transparency in the terms of Chinese loans and agreements, raising concerns about governance and accountability in FOCAC-related projects.

Financialisation

Chief Economic Adviser (CEA) V. Anantha Nageswaran cautioned that financialisation might distort macroeconomic outcomes.

Background:
- India's stock market capitalisation was about 140% of the GDP, the Indian financial sector is seeing high profitability all pointing towards the surge of finanacialisation.

About Financialisation
- Financialisation refers to the increasing dominance of financial motives, financial markets, financial actors, and financial institutions in the economy.

Key Aspects of Financialisation
- **Growth of the Financial Sector:** Financialization involves the expansion of financial services, such as banking, insurance, and investment, relative to the overall economy.
- **Securitization**: This is the process of turning assets into financial instruments, which can be traded in markets. It has led to a massive increase in the variety and volume of financial products.

- **Shift from Industrial to Financial Capitalism**: Economies have moved from being driven by industrial production to being driven by financial activities.

- **Influence on Corporate Governance:** Companies increasingly focus on maximizing shareholder value, often prioritizing short-term financial gains over long-term investments.

Impacts of Financialization
- **Economic Policy and Corporate Behavior**: Financial markets and institutions have a significant influence on economic policies and corporate strategies.
- **Income Inequality:** Financialization has contributed to increasing income inequality, as the financial sector often sees higher income growth compared to other sectors.
- **Wage Stagnation:** There has been a transfer of income from the real sector (goods and services) to the financial sector, leading to wage stagnation in non-financial industries.
- **Decline in Manufacturing:** In some countries, like the U.S., financialization has been linked to the decline of manufacturing jobs as capital is diverted to financial markets rather than industrial investments.

India-Middle East-Europe Economic Corridor (IMEC)

External Affairs Minister S Jaishankar recently said that the India-Middle East-Europe Economic Corridor (IMEC) will be a cornerstone of global connectivity.

Background: –
- IMEC, announced during the G20 summit last year, has opened new possibilities according to experts.

Key takeaways
- The India-Middle East-Europe Economic Corridor (IMEC) is a significant initiative aimed at enhancing economic connectivity and integration between Asia, the Persian Gulf, and Europe.
- IMEC is designed to bolster economic development by creating a multi-modal transport network that includes rail, shipping lines, high-speed data cables, and energy pipelines.

Route and Connectivity
- The proposed route for IMEC includes:
  - India: Starting from India's west coast.
  - United Arab Emirates (UAE): Connecting via sea routes.
  - Saudi Arabia: Crossing the Arabian Peninsula by rail.
  - Jordan and Israel: Further rail connectivity.
  - Europe: Goods will be transported by sea from the Israeli port of Haifa to the Greek port of Piraeus, and then to various European destinations.
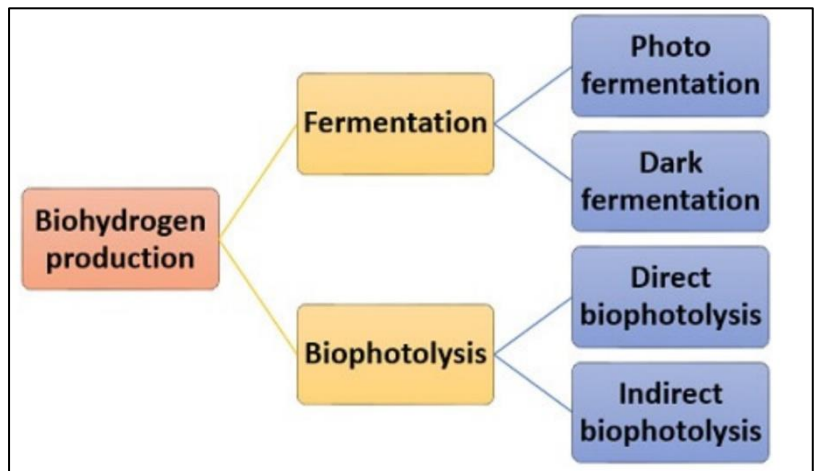
Key Components
- Rail Connectivity: Establishing a rail network across the Arabian Peninsula.
- Shipping Lines: Enhancing maritime routes between India, the Middle East, and Europe.
- High-Speed Data Cables: Laying undersea cables to improve internet connectivity.
- Energy Pipelines: Developing pipelines for the transportation of clean energy.

India's first bio hydrogen project

The Indian government awarded a contract to develop the country's first bio-hydrogen project, led by Gensol Engineering in collaboration with Matrix Gas & Renewables.

Valued at Rs 164 crore, the project aims to align with the National Green Hydrogen Mission and is set to process 25 tonnes of bio-waste daily, producing 1 tonne of green hydrogen using advanced gasification technology over 18 months.

What is Bio-Hydrogen?
Bio-hydrogen is a type of hydrogen that is produced from organic materials, such as plants, food waste, or certain microorganisms.

Unlike traditional hydrogen, which is typically made from fossil fuels like coal or natural gas, bio-hydrogen comes from natural sources like agricultural leftovers, food scraps, and industrial waste. This makes it a cleaner and more eco-friendly alternative.
There are different ways to produce bio-hydrogen:

Biophotolysis: This method uses sunlight to split water molecules in organisms like algae, releasing hydrogen.

Dark Fermentation: Here, bacteria break down organic material without oxygen, creating hydrogen as a byproduct.

In the new Indian project, Gensol Engineering will use a technology called Plasma-Induced Radiant Energy-Based Gasification System (GH2-PREGS). This advanced process turns carbon-based waste into hydrogen gas.

Why is Bio-Hydrogen Important for India?
India is working hard to reduce its dependence on fossil fuels and move towards greener energy. One of the key initiatives supporting this is the National Green Hydrogen Mission.

Given that India produces a huge amount of agricultural waste every year, bio-hydrogen provides a way to use that waste to create clean energy. This approach not only reduces environmental pollution but also supports industries, like steel and cement, that are looking to lower their emissions.

Bio-hydrogen also has the potential to help rural communities by setting up local plants that turn farm waste into energy, providing jobs and cleaner energy sources.

Agni-4

India recently conducted a successful test of the Agni-4 ballistic missile from the Integrated Test Range (ITR) in Chandipur, Odisha. The test was carried out by the Strategic Forces Command (SFC), confirming the missile's performance and technical abilities.

What is Agni-4?

Agni-4 is an Intermediate Range Ballistic Missile (IRBM) developed by India. It is a key part of India's strategy to strengthen its defense capabilities. The missile is designed to enhance India's ability to respond to threats with precision and effectiveness. The successful launch of Agni-4 proves that the missile performs as expected. This success highlights India's progress in missile technology and its capacity to carry out accurate and reliable strikes.

Recent Developments in Missile Testing

Before this Agni-4 test, there were other notable missile tests:

- On April 4, 2024, India successfully tested the Agni-Prime missile, which met all its objectives and showed reliable performance.
- In June 2023, India conducted the first night launch of Agni-Prime, demonstrating its capabilities under various conditions.

These missile tests show India's dedication to modernizing its defense systems and improving its strategic deterrence. This helps maintain stability in the region and protects against potential threats.

More About Agni-4

- Range: Agni-4 can travel between 3,000 to 4,000 kilometers.
- Payload: It can carry nuclear warheads weighing up to 1,000 kg.
- Design: It has a two-stage solid propellant system, which improves accuracy and effectiveness.
- Mobility: The missile is road-mobile, which enhances its survivability.
- Guidance: It uses advanced systems including inertial navigation and GPS for precision targeting.
- Development: Agni-4 is part of India's Integrated Missile Development Program, aimed at strengthening strategic deterrence. It was first tested in November 2011.

AI tokens

AI tokens, a novel intersection of Artificial Intelligence (AI) and Web3, have gained significant attention recently.

This interest surged following reports of major tech companies, such as Apple and Nvidia, considering investments in OpenAI, and Venture firm Thrive Capital's $1 billion funding infusion into OpenAI.

What are AI Tokens?

AI tokens are a type of cryptocurrency tied to Artificial Intelligence (AI) projects. Unlike regular cryptocurrencies like Bitcoin, AI tokens are used specifically within AI-related platforms or protocols. These tokens are often built on blockchain systems such as Ethereum or Cardano, and they help facilitate AI activities within these networks.

How are AI Tokens Used?

Decision-Making in AI Projects: People who own AI tokens can participate in important decisions regarding the direction of the AI projects. This gives them a say in how the project is managed and developed.

Payment Method: AI tokens can be used as currency within AI ecosystems, allowing users to pay for services or access specific AI tools.

Supporting AI Initiatives: AI tokens play a role in online marketplaces where AI services are traded. They are also used in Decentralized Autonomous Organizations (DAOs), which are groups that operate without central leadership.

Examples of AI Tokens

Some popular AI tokens include:
- Injective (INJ)
- Render (RENDER)
- Theta Token (THETA)
- Oasis Network (ROSE)
- SingularityNET (AGIX)

Each of these tokens supports different AI-based platforms or services.

What is the Future of AI Tokens?

Investment companies like VanEck predict a strong future for AI tokens. They believe that public blockchain systems, that host these tokens, will be crucial for the future of AI. By 2030, AI-driven cryptocurrency projects could generate $10.2 billion in yearly revenue. This makes AI tokens an exciting part of the financial world.

Benefits of AI Tokens

Efficiency: AI tokens can make transactions faster and cheaper by reducing the need for middlemen.

Transparency: Since blockchain records all transactions, it's easier to track them, ensuring honesty and reducing fraud.

Innovation: AI tokens can help detect fraud and even find new investment opportunities by analyzing data in ways that humans might miss.

"Dancing girls" Ginger Species

Researchers from the Indian Institute of Science Education and Research (IISER) Bhopal have made an exciting discovery by uncovering three new species of ginger in the Eastern parts of India, particularly in the states of Mizoram and Meghalaya.

These new types of ginger are special because of their unique flower shapes, and together, they are called the "dancing girls" ginger species.

G. yadaviana, Mizoram   G. tyrnaensis, Meghalaya   G. janakiae, Meghalaya

The discovery was made by two scientists, Ritu Yadav and Vinita Gowda, during their field explorations. Their work is important because it highlights the rich variety of plant life in these regions and adds to our knowledge about botany (the study of plants).

About the Globba Genus

The newly discovered species belong to a group of plants known as the Globba genus. This genus is known for its beautiful, ornamental flowers, and it includes about 136 different species. The Globba genus is part of the ginger family, called Zingiberaceae, and it is the fourth largest group in that family.

New Ginger Species Found

Floral Characteristics and Habitat

Each of these new ginger species has distinct floral characteristics, which is why they have earned names like weeping goldsmith and white dragon. They grow in specific habitats, with Globba tyrnaensis thriving in the lower parts of forests, known as the understory.

Conservation Status

One of the new species, Globba Yadaviana, is only found in small populations. Only about 30 individual plants have been seen along Reiek Tlang Road in Mizoram. Because these species are rare, conservation efforts will be important to protect them and their natural habitats.

This discovery shows how vital it is to continue exploring and researching the biodiversity of India, especially in regions that are still not fully explored. It also highlights the rich botanical heritage of the country.

YUDH ABHYAS- 2024

The 20th edition of the India-USA Joint Military Exercise, Yudh Abhyas 2024, started on September 9, 2024, at the Foreign Training Node in Mahajan Field Firing Ranges, Rajasthan. This exercise, scheduled from September 9 to 22, has grown larger and more complex compared to previous years.

History of YUDH ABHYAS

Yudh Abhyas has been held every year since 2004. The location alternates between India and the USA, providing both countries with a chance to work together and improve their military skills. It has become an important event for strengthening their defense ties.

This year, both nations are sending strong forces. India is represented by 600 personnel from the RAJPUT Regiment and other army branches. The United States has sent an equally strong team from the 1-24 Battalion of the 11th Airborne Division, based in Alaska.

Aims of the Exercise

The main goal of Yudh Abhyas is to improve how Indian and US forces work together to conduct counter-terrorism operations. These operations take place in unique, difficult situations, following the rules set out by the United Nations (Chapter VII).

What are the Focus Areas?

The exercise takes place in a semi-desert setting. Important activities include:
- Working together to respond to terrorist actions
- Joint planning for missions
- Field training that mimics real counter-terrorism operations

Benefits of the Exercise

Yudh Abhyas allows both countries to share knowledge about tactics and military strategies, improving how their forces work together. It helps build teamwork and friendship between Indian and US forces and strengthens defense cooperation, which supports a stronger relationship between the two nations.

About Yudh Abhyas

Yudh Abhyas is an annual exercise between the Indian and US military forces, focusing on improving how they work together during counter-terrorism missions. The exercise started in 2004 and takes place in both India and the US in alternating years. In addition to practicing tactical operations, it includes live-fire drills and training in providing humanitarian assistance. It also involves air and logistical support, reflecting the growing strategic partnership between the two countries.

Myristica magnifica

Researchers near the Goa-Maharashtra border have recently discovered a sacred Myristica swamp forest in Kumbral, Maharashtra.

This finding highlights the importance of local communities in preserving rare ecosystems. Sacred groves like this are often protected due to cultural beliefs, in this case, tied to the reverence of Lord Shiva, locally known as Bhalandeshwar.

What Is Myristica magnifica?

Myristica magnifica is an endangered plant species mainly found in Karnataka and Kerala. It plays a key role in the ecosystem, providing food for wildlife, including the threatened hornbill birds. This tree is part of the nutmeg family and can grow up to 50 meters tall. Though its seeds resemble nutmeg, they are not as commercially valuable. Its wood is used locally, and the tree's essential oil has potential in aromatherapy.

Significance of Discovery

This discovery makes Kumbral the second village in Maharashtra, after Hewale-Bambarde in Sindhudurg, to have a Myristica swamp forest. The village community has long protected this area, considering it sacred and associated with Lord Shiva (known locally as Bhalandeshwar). The community's efforts have helped preserve this endangered ecosystem.

The grove in Kumbral covers 8,200 square meters and is home to 39 different plant species. Within the grove, there is a 770 square meter area specifically dedicated to the swamp forest, which contains 70 Myristica magnifica trees. This forest provides essential ecosystem services such as:

- Groundwater recharge (helping store water in the ground)
- Carbon sequestration (absorbing carbon dioxide from the air)
- Flood mitigation (helping reduce flooding)

Research and Documentation

The research was led by Pravin Desai, along with Vishal Sadekar and Shital Desai, and their findings were published in the Journal of Threatened Taxa. The study shows that this freshwater ecosystem is essential for many species, including the vulnerable Asian short-clawed otter, and supports a wide range of wildlife.

Conservation Importance

Preserving the Myristica swamp forest is vital for maintaining the ecological balance in the Western Ghats, a biodiversity hotspot. Conservationists are advocating for stronger protection measures because of the forest's irreplaceable benefits to the environment and its role in supporting local wildlife.

Africa urban Forum

The Africa Urban Forum (AUF) was held in Addis Ababa from September 4-6, 2024, to address the rapid urbanisation happening across Africa. Urbanisation, or the growth of cities, was described as an "irreversible trend," meaning it's something that cannot be stopped and must be managed carefully.

The forum brought together many different people, including government officials, city planners, and experts, to discuss how to create cities that are environmentally friendly, socially fair, and economically strong.

Importance of Urban Planning

As more people move to cities, it's important to plan how the city will grow. Without good planning, cities could face problems like a lack of housing, poor infrastructure, and social inequality. Infrastructure includes basic services like roads, water supply, and electricity. Good urban planning ensures that cities can support their growing populations and provide everyone with equal access to services.

Curcuma ungmensis

During a field trip to Nagaland, researchers found a new species of plant closely related to turmeric. This new species, named Curcuma ungmensis, was discovered near the village of Ungma and has now been published in the scientific journal Phytotaxa.

Taxonomy and Family

Curcuma ungmensis belongs to the Curcuma genus, which is part of the ginger family, known scientifically as Zingiberaceae. This family includes about 200 species in India, such as the well-known turmeric (Curcuma longa) and black turmeric (Curcuma caesia). Plants in this genus are mainly found in South and Southeast Asia.

Botanical Characteristics

Curcuma ungmensis is a rhizomatous herb, meaning it grows from underground stems, or rhizomes. The plant reaches a height of 65-90 cm and has distinctive yellow flowers that bloom between August and October during the rainy season. The rhizomes grow deep in the soil, helping the plant anchor itself firmly.

Potential Uses

While researchers are still learning about Curcuma ungmensis, they believe it could become a popular ornamental plant because of its striking yellow flowers. The plant could be used in gardens or as ground cover, and its vibrant flowers may also be ideal for making decorative flower arrangements.

Curcuma ungmensis is only known to grow near the village of Ungma, making it vulnerable to threats from human activities, such as road development and construction. To protect this unique plant, researchers recommend taking steps to conserve its habitat.

About Curcuma ungmensis

- Curcuma ungmensis is a plant from the ginger family, Zingiberaceae.
- It grows in Southeast Asia, mainly in Myanmar and Thailand.
- The plant thrives in warm, tropical climates.
- It has bright yellow flowers and large green leaves.
- People in the region use its roots in traditional medicine, especially to reduce inflammation.

Precision farming

The Centre is contemplating to earmark Rs 6,000 crore to promote precision farming.

Background: –

- Apart from offering financial support, the Centre is also considering collaborating with the Netherlands and Israel, where tech-based modern farming solutions are being used, through Centres of Excellences (CoEs)

Key takeaways

- Precision Farming (also called Precision Agriculture) refers to the use of technology to manage farming inputs (like water, seeds, fertilizers, pesticides) more accurately and efficiently.
- It involves technologies like Global Positioning System (GPS), Geographic Information System (GIS), remote sensing, drones, soil sensors, and data analytics to monitor crops, manage variability in the field, and optimize resource use.

Benefits of Precision Farming:

- Increased Productivity: By applying inputs more accurately, farmers can improve crop yields and quality.
- Cost Reduction: It reduces the amount of fertilizers, water, and pesticides used, lowering costs for farmers.
- Environmental Sustainability: Reduces overuse of chemicals, promotes soil health, and limits environmental degradation.
- Efficient Resource Use: Optimizes the use of water, seeds, and other inputs, leading to better resource management.

Impact on Sustainable Agriculture:

- Precision farming supports the goals of sustainable agriculture by minimizing resource wastage, reducing chemical inputs, improving soil health, and mitigating environmental damage.
- It helps address key challenges like climate change, water scarcity, and soil degradation by enabling better resource management and adaptive farming techniques.

Harvest festival of Karma or Karam Parv

Tribal populations in Jharkhand, West Bengal, Bihar, Madhya Pradesh, Chhattisgarh, Assam, and Odisha celebrated the harvest festival of Karma or Karam Parv last week.

Background:

- At the heart of the Karma festival is the Karam tree — traditionally seen as a symbol of Karam Devta or Karamsani, the god of strength, youth, and vitality, and the object from which the festival takes its name.

Key takeaways

- The Karam Parv, also known as the Karma Festival, is a harvest festival celebrated primarily in the Indian states of Jharkhand, West Bengal, Bihar, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Assam, Odisha, and even in Bangladesh. This festival is dedicated to the worship of Karam-Devta, the god of power, youth, and youthfulness.
- The festival is popular especially among the Munda, Ho, Oraon, Baiga, Kharia, and Santhal peoples.
- Timing: The festival is observed on the Ekadashi tithi (eleventh day) of the lunar fortnight in the month of Bhado (August-September).
- Rituals:
  - Planting Seeds: Unmarried girls plant and nurture nine types of seeds (like rice, wheat, and corn) for 7-9 days.
  - Karam Tree Worship: On the festival day, villagers go to the forest to collect branches of the Karam tree, which are then worshipped and planted in the village center.
  - Singing and Dancing: The festival is marked by traditional songs and dances, creating a lively atmosphere.
  - Cultural Significance: The festival symbolizes the community's connection to nature and their prayers for a good harvest and overall well-being.

Subhadra Yojana

The Subhadra Yojana is a new scheme launched by the Odisha government to celebrate Prime Minister Narendra Modi's 74th birthday. It aims to provide financial help to women in the state. Eligible women will receive ₹10,000 per year, helping them to meet their basic needs.

What is the Subhadra Yojana?

The Subhadra Yojana is a new scheme launched by the Odisha government to celebrate Prime Minister Narendra Modi's 74th birthday. It aims to provide financial help to women in the state. Eligible women will receive ₹10,000 per year, helping them to meet their basic needs.

Registration and Eligibility

The scheme is focused on women aged 21 to 60 years who come from economically weaker backgrounds. Women who are part of wealthy families, work in government jobs, or already get large amounts of government help cannot apply. Over the next five years, more than 1 crore women (10 million) will benefit from the program.

Implementation Process

The financial support will be provided in two parts every year:

- ₹5,000 on Rakhi Purnima
- ₹5,000 on International Women's Day

The money will go directly into the women's Aadhaar-linked bank accounts. To make the process secure, every woman needs to complete e-KYC verification. They will also get a Subhadra Debit Card to access the funds easily. Women who make a lot of digital transactions will get additional incentives or rewards. Over 50 lakh women (5 million) have already registered to receive this help.

Carbon Credit Trading Scheme (CCTS)

India is preparing to create a carbon market through the Carbon Credit Trading Scheme (CCTS), first announced in June 2023. This plan is designed to help reduce harmful emissions in different industries. Under this scheme, sectors that manage to reduce their emissions more than required can sell carbon credits to those that cannot meet their targets. Those who fall short of their goals must buy these credits to offset their emissions.

When will the CCTS start?

The detailed rules for how the CCTS will work were shared by the Bureau of Energy Efficiency (BEE) in August 2024. However, the government has not yet set specific emission reduction targets, which are needed to make the scheme work. BEE officials believe that the scheme might start functioning by 2026.

What is the CCTS?

The CCTS is a system that encourages companies to either reduce or limit their emissions. It is part of India's commitment to the Paris Agreement of 2016, where the country promised to cut its emissions intensity (the amount of emissions per unit of GDP) by 45% from 2005 levels by 2030. This means that India is working to produce less pollution while growing its economy.

India's emission reduction goals

Apart from the 2030 target, India also has a long-term goal of achieving net-zero emissions by 2070. This means that by 2070, India aims to balance the amount of greenhouse gases it emits with the amount it removes from the atmosphere. This is important both for global climate efforts and for managing the impact of climate change within India.

Why is India introducing the CCTS?

India's decision to introduce the CCTS is partly influenced by international actions, such as the European Union's Carbon Border Adjustment Mechanism (CBAM). Set to start in 2026, the CBAM will place a tax on imported goods based on how much pollution was created during their production. Countries like China and Indonesia have also created carbon markets, which likely encouraged India to pursue similar strategies.
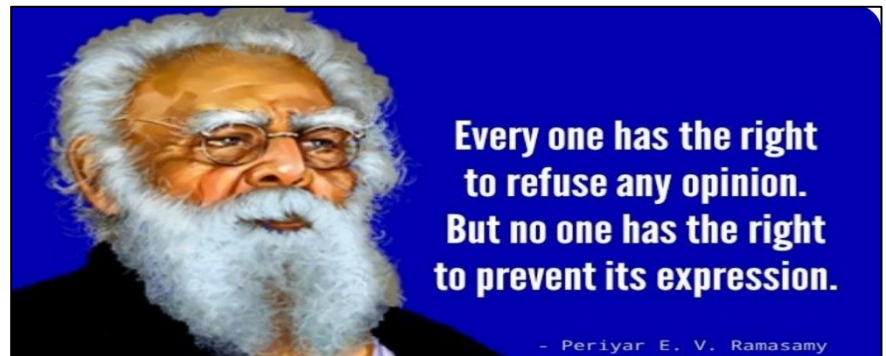
The biggest challenge for the CCTS is making sure it truly helps reduce emissions. Its success depends on setting strong emission targets and ensuring that industries follow the rules.

What is a carbon market?

A carbon market allows companies to trade carbon credits to reduce the overall impact of carbon dioxide (CO_2) emissions. One carbon credit equals one ton of CO_2 reduced. The idea started with the Kyoto Protocol in 1997. For example, California has a large cap-and-trade program, and the European Union began its Trading System in 2005. There are also voluntary markets, where companies or individuals can buy carbon credits to offset their own emissions. New technologies, like blockchain, are being explored to improve transparency in these markets. Carbon markets also support sustainable development and biodiversity conservation efforts.

Periyar E.V. Ramasamy

Chennai celebrated the 146th birth anniversary of Periyar E.V. Ramasamy, on September 17, 2024, a famous social reformer and rationalist from Tamil Nadu. The Chief Minister of Tamil Nadu, M.K. Stalin, led the tributes, honoring Periyar for his significant contributions to social justice and equality.

Every one has the right to refuse any opinion. But no one has the right to prevent its expression.

- Periyar E. V. Ramasamy

Early Life and Political Beginnings

Periyar was born in 1879 in Erode, Tamil Nadu. He started his political career as a member of the Congress party. However, he disagreed with how the party handled caste issues, especially the separation of Brahmin and non-Brahmin students in a Congress-run school. This experience led him to question the party's approach to social equality.

In 1925, Periyar left the Congress and joined the Justice Party, which worked for the rights of non-Brahmin communities. He created the Self-Respect Movement, which aimed to challenge the dominance of Brahmins in society and promote social equality for everyone, regardless of caste.

Vaikom Satyagraha and National Recognition

Periyar gained national attention during the Vaikom Satyagraha in 1924, a protest in Kerala that demanded public access for lower-caste individuals near the Vaikom temple. His role in this movement helped establish him as a key leader in the fight for social justice in India.

Creation of Dravidar Kazhagam

In the 1940s, Periyar founded the Dravidar Kazhagam, a political organization that advocated for the formation of "Dravida Nadu." This was a proposed region that would include speakers of Dravidian languages like Tamil, Malayalam, Telugu, and Kannada. His vision was based on the shared cultural and linguistic identity of these southern Indian states.

Social Reforms and Gender Equality

Periyar was a strong advocate for social reforms. He promoted gender equality and pushed for women's rights, including the right to own property, seek divorce, and live independently. He also encouraged people to move away from caste-based identities and practiced inter-dining, where people of different castes would eat together to break down social barriers.

Periyar's Legacy

Periyar passed away in 1973, but his ideas continue to influence Tamil society. He is remembered as "Thanthai Periyar," or the Father of Modern Tamil Nadu, for his efforts to promote self-respect, equality, and rationalist thinking. His work has left a lasting impact on Dravidian politics, and his vision of a just, caste-free society remains relevant today.

Mission Mausam

The Union Cabinet, led by Prime Minister Narendra Modi, has approved a major initiative called 'Mission Mausam.' This project, with a budget of ₹2,000 crore over two years, is designed to significantly improve India's weather prediction and atmospheric science capabilities.

The objective of Mission Mausam

Mission Mausam is an Indian program that began in 2016 to study climate change and monsoon patterns. The initiative brings together multiple research organizations to improve weather forecasting accuracy and promote better farming practices. It also aims to develop systems to warn people about extreme weather events and raise public awareness about how climate change impacts agriculture and livelihoods.

Who will lead Mission Mausam?

The Ministry of Earth Sciences will oversee the implementation of Mission Mausam. Several key institutions will be involved, including:
- India Meteorological Department (IMD)
- Indian Institute of Tropical Meteorology (IITM)
- National Centre for Medium-Range Weather Forecasting (NCMRWF)

These organizations will work together to ensure that the mission runs smoothly.

How will Technology play a role?

Mission Mausam will use cutting-edge technology, such as artificial intelligence (AI) and machine learning (ML), to improve weather prediction. It will involve installing modern radars and satellite systems with advanced sensors to gather more accurate data. Additionally, high-performance supercomputers will process this information quickly to deliver better forecasts.

Core Features of Mission Mausam

The mission will include:
- Enhanced earth system models that simulate weather patterns.
- A GIS-based automated Decision Support System, which will provide real-time data to decision-makers, helping them respond quickly to weather changes.

Who will benefit from this Initiative?

Mission Mausam is expected to benefit a wide range of sectors, including:

Agriculture: More accurate weather predictions can help farmers make better decisions about planting and harvesting crops.

Disaster management: Improved weather forecasting can help prepare for natural disasters like floods or cyclones.

Aviation and transportation: Better weather data can ensure safer and more efficient operations.

Health and urban planning: The mission will also support planning efforts by providing insights into environmental and weather changes.

Mission Mausam represents a crucial investment in India's ability to predict and manage weather conditions. It promises to enhance forecasting accuracy and provide multiple benefits to sectors like agriculture, disaster management, and health.

TARDIGRADES

Detailed 3D images of the first tardigrade fossils ever discovered have helped scientists predict when tardigrades evolved their near-indestructibility (tun state)— a trait that might have helped them survive multiple mass extinctions.

● Researchers have reexamined ancient fossils trapped in amber, uncovering when these tiny creatures first developed their ability to enter a "tun state." This special state allows them to survive in harsh conditions by shutting down their bodies.

About Tardigrades

● Tardigrades, also called "water bears" or "moss piglets," are tiny, water-dwelling micro-animals measuring just 0.3 to 0.5 millimeters in length.
● Body Structure: They have a cylindrical shape with four segments, each bearing a pair of legs. Each leg ends in tiny claws or suction disks.
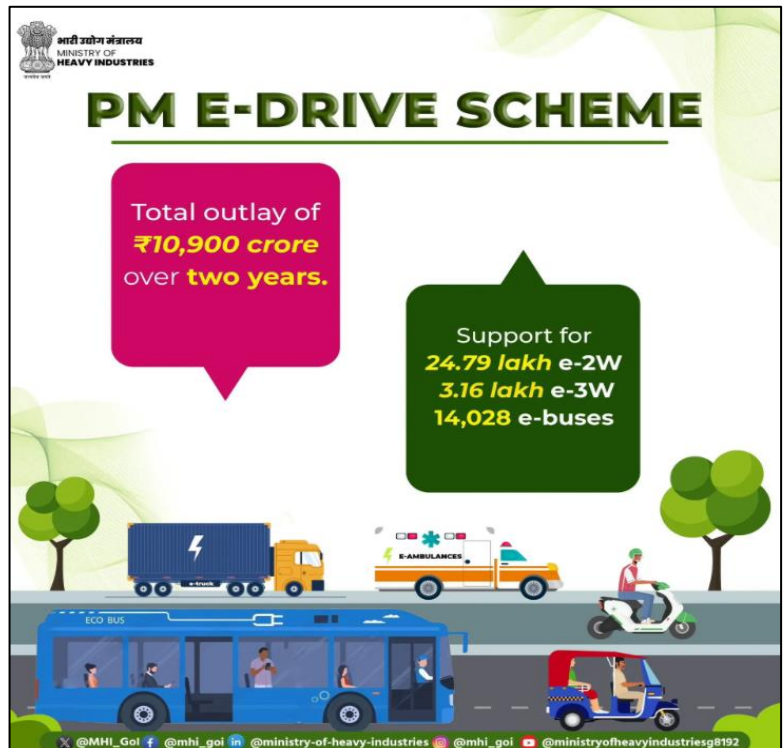

● Where are they found?
  ○ Tardigrades live almost everywhere on Earth, from mountaintops to ocean floors and from tropical rainforests to Antarctica. They are often found in moss, lichen, soil, and leaf litter.

PM Electric Drive Revolution in Innovative Vehicle Enhancement Scheme

Under the PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme, fiscal incentives have been extended to electric two- and three-wheelers, buses, trucks, and even ambulances. However, unlike its predecessor, the FAME-2 scheme, the latest subsidy makes a significant omission–electric cars.

Background: –

● Electric cars have been excluded from the new scheme after Minister of Road Transport and Highways, Nitin Gadkari, stated that the EV sector no longer needs subsidies. He cited falling lithium-ion battery costs and economies of scale, predicting that EV prices will match petrol and diesel vehicles within two years.

About PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE)

● The PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme is a significant initiative by the Indian government to promote electric mobility across the country.
● The PM E-DRIVE scheme replaces the Faster Adoption and Manufacturing of (Hybrid and) Electric Vehicles in India (FAME India) scheme, which was in operation from April 1, 2015, till March 31, 2024, in two phases.
● Launch Date: September 2024
● Duration: Two years
● Budget: ₹10,900 crore
● The scheme aims to:
  ○ Promote the adoption of electric vehicles (EVs) to reduce pollution and dependence on fossil fuels.
  ○ Enhance the infrastructure for EVs, including charging stations.
  ○ Support the development and deployment of various types of EVs, including two-wheelers, three-wheelers, buses, trucks, and ambulances.

Key Components

● Subsidies and Incentives:
  ○ Subsidies/Demand incentives worth Rs.3,679 crore have been provided to incentivize e-2Ws, e-3Ws, e-ambulances, e-trucks and other emerging EVs. The scheme will support 24.79 lakh e-2Ws, 3.16 lakh e-3Ws, and 14,028 e-buses.
● E-Vouchers:
  ○ Process: At the time of purchase, an Aadhaar-authenticated e-voucher is generated for the buyer. This voucher is used to avail demand incentives and is essential for Original Equipment Manufacturers (OEMs) to claim reimbursement.

- Infrastructure Development:
  - Charging Stations: Installation of 88,500 electric vehicle charging stations across major cities and highways.
  - Testing Facilities: ₹780 crore allocated for enhancing vehicle testing infrastructure.
- Special Initiatives:
  - E-Ambulances: ₹500 crore allocated for the deployment of electric ambulances to promote greener healthcare solutions.
  - E-Buses: ₹4,391 crore for the procurement of electric buses by state transport undertakings and public transport agencies.

Mumbai's Salt pans

Recently, the Centre approved the transfer of 256 acres of salt pan land in Mumbai to the Dharavi Redevelopment Project Pvt Ltd (DRPPL), a joint venture between Adani Realty Group and the Maharashtra government, for building rental housing for slum dwellers.

Background: –

- In a rapidly expanding city, the salt pans are among the last few crucial natural belts that maintain a delicate balance in the ecosystem.

About Mumbai's Salt pans

- Salt pan lands are low-lying areas where seawater flows in and evaporates, leaving behind salt and minerals.
- According to the Coastal Regulation Zone (CRZ) notification of 2011, the ecologically sensitive salt pans fall under CRZ-1B category, where no economic activity is allowed with the exception of salt extraction and natural gas exploration.
- Mumbai Salt Pan Lands:
  - 5,378 acres, nearly nine times the size of Dharavi.
  - 31% located in residential/commercial belts; 480 acres encroached upon.
  - 1,672 acres considered "developable" (State Govt. study, 2014).
- National Distribution: 60,000 acres spread across Maharashtra, Andhra Pradesh, Tamil Nadu, Odisha, Gujarat, and Karnataka.
- Andhra Pradesh (20,716 acres) boasts the largest expanse of such land, followed by Tamil Nadu (17,095 acres) and Maharashtra (12,662 acres).

Risk to Mumbai's Salt Pan Lands

- Land Demand: Salt pans are among the last undeveloped lands in Mumbai, making them a target for development projects.
- State Governments' Proposals: State government is proposing to use the salt pan lands for slum relocation, rehabilitation and affordable housing.

Importance of Salt Pans

- Flood Prevention: Salt pans collect rainwater and seawater, preventing flooding in Mumbai's eastern suburbs.
- Ecological Role: Host various species of birds and insects, and complement mangroves in flood prevention.

Southern Birdwing

India's second-largest butterfly, the Southern Birdwing, was recently spotted on the satellite campus of The American College in Madurai, Tamil Nadu. This discovery sheds light on the region's changing movements of butterfly species.

About the Southern Birdwing

The Southern Birdwing was once considered the largest butterfly in India, with a wingspan of 190mm. However, in 2020, it was surpassed by the Golden Birdwing, which has a wingspan of 194mm, according to a British researcher, Brigadier William Harry Evans.

It prefers areas close to water, such as the rivers and streams in the Western Ghats. The males of this species are known for their bright yellow and black colors, while the females, though larger, have more muted tones. The butterfly primarily feeds on the nectar of flowers like Bougainvillea and is the state butterfly of Tamil Nadu. As an indicator of ecological health, its presence shows the importance of maintaining a balanced and diverse environment.

In both the Southern and Golden Birdwing species, females are generally larger than males. This size difference is common among butterflies and can affect how they behave during mating.

Where are these butterflies found?

The Golden Birdwing is mostly found in the Himalayan region, while the Southern Birdwing lives primarily in the Western and Eastern Ghats, mountainous regions in southern India. Initially thought to be only in the Western Ghats, the Southern Birdwing was first seen in the Azahagar hills near Madurai in 2014 by researchers from The American College.

Conservation Status

The Southern and Golden Birdwing butterflies are classified as species of "least concern" regarding the risk of extinction. However, they are essential to their ecosystems, helping to maintain biodiversity by pollinating plants and flowers.

September marks the migration season for butterflies, including the Southern Birdwing. The recent sighting in Madurai may be linked to the species' search for suitable breeding grounds during this time of year. The butterfly is also common in areas like the Sirumalai hills near Dindigul, Tamil Nadu.

AL NAJAH Exercise

The Indian Army has sent a team to participate in the 5th edition of the India-Oman Joint Military Exercise AL NAJAH, which is being held from 13th to 26th September 2024 in Salalah, Oman. This exercise is an important event that has been helping improve military cooperation between the two countries since it first started in 2015.

India-Oman Joint Military Exercise

Indian Army contingent departs for the 5th edition of India-Oman Joint Military Exercise **AL NAJAH**

The exercise is scheduled to be conducted from 13th to 26th September 2024 at **Rabkoot Training Area in Salalah, Oman**

Aim of the Joint Exercise is to enhance joint military capability of both sides to undertake counter terrorism operations under Chapter VII of the United Nations Charter. The exercise will focus on **operations in the Desert environment**

Background of AL NAJAH
The AL NAJAH exercise is held every two years and alternates between India and Oman. The last edition took place in Mahajan, Rajasthan. The main goal of each exercise is to improve the joint operational abilities of the two armies, especially in situations involving counter-terrorism.

Indian Army Contingent
The Indian Army's team includes 60 personnel from a Mechanised Infantry Regiment, along with support from other arms and services. The Royal Army of Oman will also send an equal number of personnel from their Frontier Force.

Aim of the Exercise
The primary goal of Exercise AL NAJAH is to enhance the joint military capabilities of both India and Oman, especially for counter-terrorism operations. This cooperation follows Chapter VII of the United Nations Charter, which focuses on maintaining peace and security.

The legacy waste management initiative

The legacy waste management initiative under Swachh Bharat Mission 2.0 has seen sluggish progress, with only 470 out of 2,424 dumpsites fully remediated and just 16% of the area reclaimed, despite being three years into the mission's implementation.

Background: –
- According to estimates of the Union Housing and Urban Affairs Ministry, approximately 15,000 acres of prime real estate is buried under nearly 16 crore tonnes of legacy waste across the country.

About Legacy waste
- Legacy waste refers to solid waste that has been accumulated in landfills or dump sites over many years, often spanning decades.

Types of Legacy Waste:

- **Municipal Solid Waste (MSW):** Includes decomposed organic matter, plastics, metals, paper, and other residual waste that has been dumped over time.
- **Hazardous Waste:** Industrial or medical waste mixed with municipal waste, leading to toxic chemicals in the landfill.
- **Construction and Demolition Waste:** Debris from construction activities such as bricks, concrete, and steel.
- **E-waste**: Electronic products, containing harmful substances like lead and mercury, disposed of in landfills.

TREATING LEGACY WASTE AT BRAHMAPURAM

ABOUT BIOMINING

- ➤ Biomining is the technique of extraction and segregation of minerals and useful materials from mounds of waste
- ➤ The legacy waste would be treated scientifically for removing undigested organic matter
- ➤ Then, the remaining waste will be sorted
- ➤ Reusable items like plastic, glass, rubber, metals, etc. will be given to those industries or agencies which use them as raw materials
- ➤ Non-biodegradable waste will be capped in a scientific manner

GENERAL CONSTITUENTS OF LEGACY WASTE
- ➤ Soil | 35%
- ➤ Recyclable items | 5%
- ➤ Synthetic textiles | 4%
- ➤ Plastic of various grades | 16%
- ➤ Non-biodegradable items | 40%

Legacy Waste in India:
- Legacy waste dumpsites are places that contain solid waste that has been collected and stored for years in an unscientific and uncontrolled manner. **With almost no installed facility in India for handling solid waste, the municipal corporations, councils and nagar panchayats have traditionally opted for creating man-made garbage hills.**
- While the Swachh Bharat Mission had been launched on October 2, 2014, its second phase (2.0) was launched on October 1, 2021 for a period of five years, up to October 1, 2026, with a vision of achieving "**Garbage-Free Status**" for all cities through 100% source segregation, door-to-door collection, and scientific management of all fractions of waste, including safe disposal in scientific landfills.
- **It aimed at remediation of all legacy dumpsites and converting them into green zones. The mission has also made provisions for scientific landfills to dispose of untreated inert waste and process rejects, to prevent fresh dumpsites being created.**
- Action plans amounting to ₹3,226 crore of Central Share (CS) assistance on remediation of legacy waste dumpsites have been approved so far. As per financial norms of Centrally sponsored Schemes, State and U.T. governments are required to put in matching share from their own side, while disbursing the funds to respective urban local bodies.
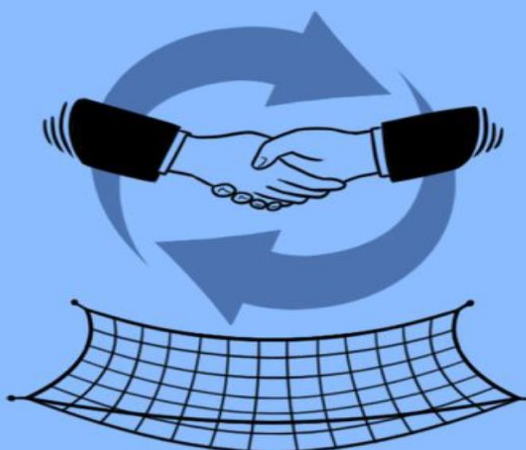
Credit Default Swaps

Securities and Exchange Board of India (SEBI) announced that mutual funds can now sell credit default swaps (CDS) citing the need to aid liquidity growth in corporate bond market, according to its latest circular.

Background: –
- The move follows RBI's directive in 2022 to provide revised regulatory framework for debt derivatives. So far, only buying CDS's were permitted. Allowing both purchase and sale of the instrument will improve flexibility for MFs.

About Credit Default Swap (CDS)
- Credit Default Swap (CDS) is a financial derivative that allows an investor to transfer the credit risk of a debt instrument, such as a bond, to another party.
- A CDS is essentially a contract between two parties: the buyer and the seller. The buyer of the CDS makes periodic payments to the seller in exchange for protection against the default of a debt instrument, such as a bond or loan.

How Does a CDS Work?
- **Premium Payments:** The buyer pays regular premiums to the seller, similar to an insurance policy.
- **Credit Event:** If the underlying debt instrument defaults or a specified credit event occurs (e.g., bankruptcy, failure to pay), the seller compensates the buyer.
- **Compensation:** The compensation typically includes the face value of the debt instrument and any unpaid interest.

Illustration:
- Imagine Company X has issued a bond worth ₹100 crore. An investor, Investor A, has purchased the bond but is concerned that Company X might default on its debt obligations. To mitigate this risk, Investor A buys a CDS from Bank B, a financial institution willing to take on this credit risk.
- Investor A (Protection Buyer) pays a regular premium to Bank B (Protection Seller) for insuring the bond issued by Company X (Reference Entity).
- If Company X continues to make payments on the bond, Investor A will continue paying the premium, and the CDS will expire without being triggered.
- If Company X defaults on its bond, Bank B will compensate Investor A for the value of the loss (say ₹100 crore or a part of it depending on the terms).

Key Uses of CDS
- Hedging: Investors use CDS to hedge against the risk of default on debt instruments they hold.
- Speculation: Traders can speculate on the creditworthiness of a company or country by buying or selling CDS.

Risks and Criticisms:
- Counterparty Risk: If the CDS seller (e.g., Bank B) itself becomes insolvent, the buyer of the CDS (e.g., Investor A) may not receive the payout even if a default occurs.
- Market Instability: During the 2008 financial crisis, CDS contracts exacerbated the instability as financial institutions struggled to honor CDS payouts.

QUAD leaders summit

Recently, Prime Minister Modi participated in the sixth Quad Leaders' Summit in Wilmington, Delaware during his three day visit to US.

Background: –
- Emphasizing that the Quad leaders were convening amidst global tensions, Prime Minister Narendra Modi reaffirmed that the alliance is not directed against any nation.

- He highlighted that the Quad stands in support of a **rules-based international order, upholds respect for sovereignty and territorial integrity, and advocates for the peaceful resolution of disputes.**

Key takeaways

- Modi's remarks during the Quad summit at President Joe Biden's hometown of Delaware were a thinly veiled reference to China and its aggressive behaviour in the Indo-Pacific region.

Wilmington Declaration

- The Quad declaration, adopted after the summit, **focused on "militarisation" and "intimidating maneuvers in the South China Sea"**. It also addressed other key global issues, including the conflicts in Ukraine and Gaza. The declaration highlighted the negative impacts of the war in Ukraine with regard to global food and energy security.
- The declaration also condemned the ongoing attacks perpetrated by the Houthis and their supporters against international and commercial vessels transiting through the **Red Sea and the Gulf of Aden**, which are destabilising the region and impeding navigational rights and freedoms and trade, and jeopardise the safety of vessels and people.
- The Quad leaders also announced the **Quad Cancer Moonshot —** a groundbreaking partnership that will focus initially on combating cervical cancer in the Indo-Pacific region while laying the groundwork to address other forms of cancer as well.
- The Quad is more strategically aligned than ever before and is a force for good that delivers real, positive, and enduring **impact for the Indo-Pacific, said the Wilmington Declaration issued after the summit.**
- The next Quad Foreign Ministers' meeting will be hosted by the US in 2025, and the Quad Leaders' Summit will be hosted by India in 2025. In 2025, the Quad Regional Ports and Transportation Conference is also likely to be held in Mumbai.
- **The US Coast Guard, Japan Coast Guard, Australian Border Force, and Indian Coast Guard plan to launch a first-ever Quad-at-Sea Ship Observer Mission in 2025, to improve interoperability and advance maritime safety.**
- A new regional **Maritime Initiative for Training in the Indo-Pacific (MAITRI)** was announced to enable partners in the region to "maximize tools provided through **IPMDA (Indo-Pacific Maritime Domain Awareness)** and other Quad partner initiatives, to monitor and secure their waters, enforce their laws, and deter unlawful behaviour." India will host the inaugural MAITRI workshop in 2025.
- The launch of a Quad Indo-Pacific Logistics Network pilot project was also announced.

Nagar Van Yojana

The Nagar Van Yojana (NVY) was launched by the Government of India in 2020 to increase the amount of greenery in cities. Within the first 100 days of this new initiative, the government aimed to create 100 urban forests, called Nagar Vans.

This target was exceeded, with 111 Nagar Vans approved across 6 states and 1 union territory.

Nagar Van Scheme 2020

Purpose of Nagar Van Yojana
The main goal of NVY is to improve the quality of life in cities by creating more green spaces. These urban forests will provide areas for relaxation, education, and environmental benefits.

 They also aim to help fight climate change by improving air quality and reducing the effects of rising temperatures in urban areas.

Financial Support and Size
The government is providing Rs. 4 lakh per hectare to help create and maintain these Nagar Vans. Each forest will cover an area between 10 to 50 hectares, depending on the size of the city. Cities with Municipal Corporations, Municipalities, and Urban Local Bodies will be part of the program.

Focus on Biodiversity
NVY focuses on improving biodiversity by planting a variety of trees, including fruit-bearing, medicinal, and native species. This will help attract wildlife and create a balanced environment within the city. These urban forests will not only be places of greenery but also havens for different forms of life.

Community Participation
The involvement of the community is a key part of the Nagar Van Yojana. **People are encouraged to participate in tree-planting events and educational programs**. Each urban forest must have at least two-thirds of its area covered with trees. By engaging the public, the initiative hopes to build a strong connection between people and their local environment.

Components of Nagar Vans

Each Nagar Van will have multiple features to serve different purposes. These may include:
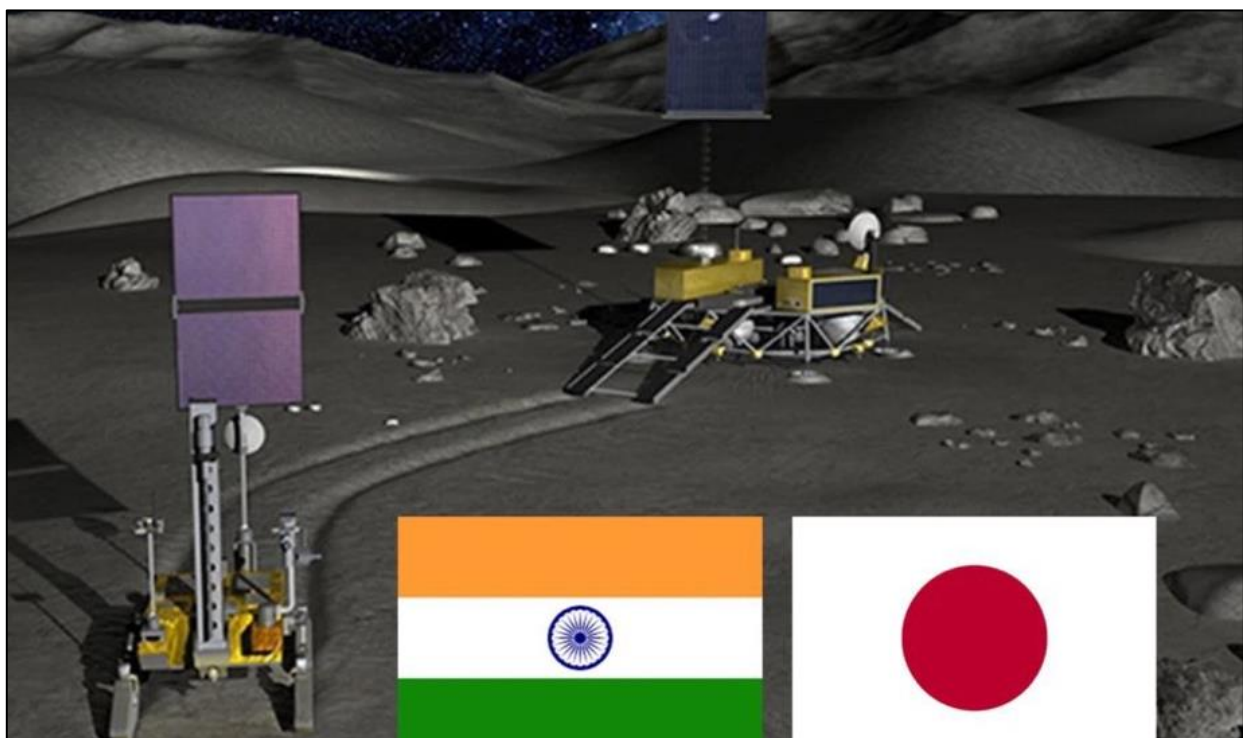
- Biodiversity Parks to protect various plant and animal species.
- Smriti Vans, where trees are planted in memory of loved ones.
- Butterfly Conservatories to attract and protect butterflies.
- Herbal Gardens to grow medicinal plants.
- Matri Vans, which are planted under the "Ek Ped Ma Ke Naam" (A Tree in Mother's Name) initiative.

Future Goals

By 2027, the government plans to create 1,000 Nagar Vans across India. This effort is supported by the National Compensatory Afforestation Management and Planning Authority (CAMPA). The aim is to protect urban forests and tackle important environmental issues like air pollution and habitat loss in cities.

Chandyaran 4 & Venus Mission

The Union Cabinet recently approved several important steps in India's space exploration plans. These include building the Bharatiya_Antariksh_Station (BAS), launching the Chandrayaan-4 mission to collect moon samples, and preparing for India's first mission to Venus.

 Prime Minister Narendra Modi called this a significant milestone, aiming for a self-sustained space station by 2035 and a manned moon mission by 2040.

Bharatiya Antariksh Station (BAS)

The BAS project focuses on building India's first space station. This will strengthen the country's Gaganyaan program (India's first human spaceflight mission). **India plans to launch the first part of the space station, called BAS-1, by 2028, with a full space station ready by 2035.**

 It will orbit 300 to 400 km above Earth and will support astronauts for up to 20 days at a time. The station will be used for scientific research and aims to promote national and international cooperation.

The Gaganyaan mission is an important step toward setting up this station. The BAS modules will be launched using India's GSLV Mk III rocket and highlight India's growing ability in space exploration.

Technological Validation

To develop the space station, India will carry out various missions to test the technologies needed for building and running it. These missions are essential to ensure safety and success in future crewed spaceflights.

Chandrayaan-4 Mission

The Chandrayaan-4 mission is focused on bringing moon samples back to Earth. This mission will build on the achievements of Chandrayaan-3, which proved India's ability to land on the moon. Chandrayaan-4 will be a cost-effective way to develop moon technologies as India prepares for a manned mission to the moon by 2040.

Venus Mission

Along with its moon missions, the government has approved India's first mission to Venus. This mission will expand India's role in planetary exploration and contribute to space research beyond the moon.

With these projects, India aims to demonstrate its growing strength in space exploration. The country is focusing on both lunar and interplanetary missions, to create a sustainable human presence in space by 2040.

PM AASHA SCHEME EXTENSION

The Union Cabinet has approved the continuation of the PM-AASHA schemes to ensure fair pricing for farmers and manage price volatility of essential commodities. PM-AASHA (Pradhan Mantri Annadata Aay Sanrakshan Abhiyan) aims to provide remunerative prices to farmers, ensuring they receive a guaranteed Minimum Support Price (MSP) for their produce.
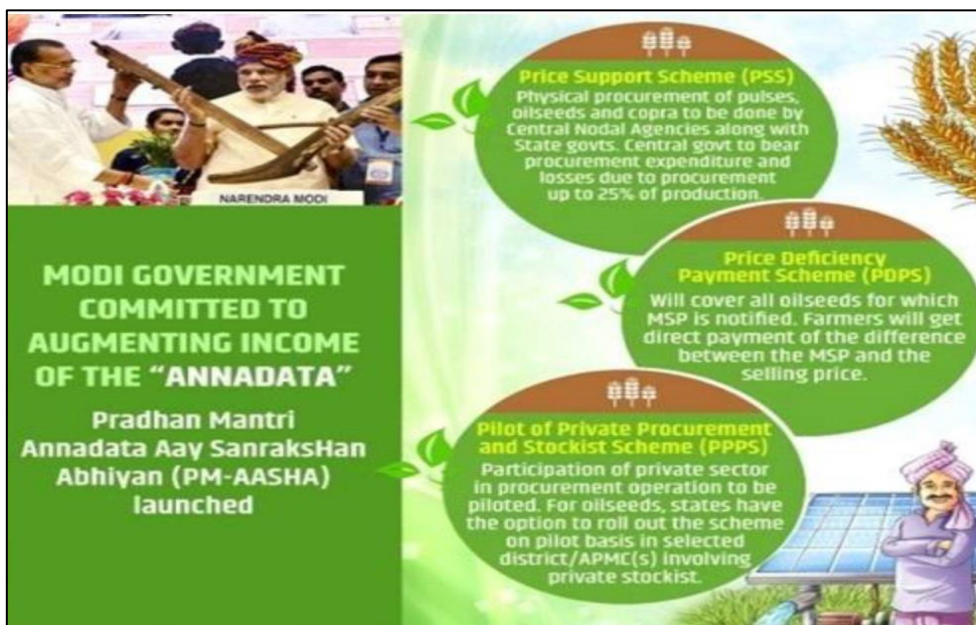
Key Components

PM-AASHA consists of:

Price Deficit Payment Scheme (PDPS): Compensates farmers when market prices fall below the MSP. The central government covers the difference, limited to 15% of MSP.

Price Support Scheme (PSS): Provides market intervention to purchase crops directly at MSP.

Price Stabilisation Fund (PSF): Aims to stabilize prices of essential commodities.

Market Intervention Scheme (MIS): Focuses on managing price volatility through strategic purchases.

Financial Implications

The total financial outlay for PM-AASHA is set at ₹35,000 crore during the 15th Finance Commission Cycle, lasting until 2025-26. Under the PDPS guidelines, farmers are eligible for a maximum compensation of 25% of MSP based on the notified rates.

Increased Coverage and Implementation

To incentivise state participation in the PDPS for oilseeds, the coverage has increased from 25% to 40% of state production, and the implementation period has been extended from 3 months to 4 months.

More About PM-AASHA

PM-AASHA (Pradhan Mantri Annadata Aay Sanraks han Abhiyan) is an Indian government initiative aimed at safeguarding farmers' incomes and ensuring fair prices for their produce. Launched in 2019, it encompasses three major schemes: PM's MSP (Minimum Support Price), the Pradhan Mantri Kisan Samman Nidhi, and the Agri-Market Infrastructure Fund.

The program focuses on enhancing farmers' access to markets, promoting agricultural diversity, and providing financial support. Its implementation involves collaboration with state governments and aims to reduce the income disparity among farmers nationwide.

White Revolution 2.0

Union Minister Amit Shah introduced "White Revolution 2.0" to further strengthen India's dairy sector. This initiative builds upon the success of Operation Flood, which started in 1970 and transformed the dairy industry through cooperative societies. Operation Flood made India one of the largest milk producers in the world.

Objectives of White Revolution 2.0

The primary goal of White Revolution 2.0 is to increase milk collection across the country by 50% over the next five years. The aim is to boost daily milk procurement from 660 lakh kilograms to 1,007 lakh kilograms by 2028-29. This will also give dairy farmers better access to markets by expanding the cooperative network.

Cooperatives were the backbone of Operation Flood, and they remain central to White Revolution 2.0. Currently, there are about 1.7 lakh dairy cooperative societies across India, covering 30% of the villages. These cooperatives handle about 10% of the national milk production, but the coverage is uneven across regions

To increase coverage, the National Dairy Development Board (NDDB) plans to set up 56,000 new cooperative societies and improve 46,000 existing ones over the next five years. **The focus will be on states like Uttar Pradesh, Odisha, Rajasthan, and Andhra Pradesh, where dairy cooperatives are currently less developed.**

Funding Strategies
The initiative will receive funding from the National Programme for Dairy Development (NPDD) 2.0. This money will be used to set up milk collection centers, create chilling facilities to keep milk fresh, and provide training programs for dairy farmers.

Current Milk Production Landscape
India is already the largest milk producer in the world, with a total production of 230.58 million tonnes in 2022-23. This is a huge increase compared to 17 million tonnes in 1951-52. However, the milk yield per animal is still low when compared to global averages.

Economic Impact
The dairy industry accounts for about 40% of India's agricultural output and provides livelihoods for more than 85 million people. **Around 63% of the milk produced reaches the market, with the majority coming from the unorganised sector, while cooperatives control most of the organised sector.**

White Revolution 2.0 is designed to build on past achievements. It aims to improve milk production, increase economic opportunities, and uplift rural communities, especially women, by empowering them through cooperative movements.

This initiative will play a crucial role in India's continued dairy development and in making the dairy sector more inclusive and efficient.

World Rhino Day

The 2024 State of Rhino Report by the International Rhino Foundation shows that all rhino species face different challenges due to environmental, social, and political factors in various regions. The report discusses both the difficulties and successes in protecting rhinos.

Current Status of Rhino Population
There are now fewer than 28,000 rhinos worldwide, spread across five species. They face major threats like poaching and habitat loss. The Javan rhino is especially at risk and has experienced serious setbacks.

Greater One-Horned Rhino Case Study
The Greater One-Horned Rhino (also known as the Indian Rhino) is mainly found in India and Nepal. Thanks to joint management efforts, its numbers have grown from fewer than 100 rhinos a century ago to about 4,014 today. Despite this success, it is still classified as Vulnerable by the IUCN, meaning it is at risk.

Threats to Conservation

Rhinos face several threats:

Poaching: Illegal hunting remains a significant issue.
Habitat Destruction: Invasive species and human activities destroy their homes.
Climate Change: Changes in weather patterns affect their habitat and food sources. For the Greater One-Horned Rhino, stronger monsoons and limited resources increase conflicts with humans.

Poaching Trends

In Africa, rhino poaching increased by 4% from 2022 to 2023, with at least 586 rhinos killed. While some populations are recovering, others, especially in Namibia and some South African parks, are still declining due to poaching.

About the Greater One-Horned Rhino

The Greater One-Horned Rhino, or Indian Rhino, is mostly found in northeastern India and Nepal. It has distinctive armor-plated skin with folds that offer protection. **This species can weigh over 2,200 kg and run up to 40 km/h.** Unlike other rhinos, it has just one horn, averaging 25 cm. They mainly eat grasses and can cool off by submerging in water. Although conservation efforts have increased their numbers, they are still vulnerable due to habitat loss and poaching.

Kaziranga National Park in Assam has achieved a remarkable 86% reduction in rhino poaching since 2016. This success was highlighted by Assam's Chief Minister Himanta Biswa Sarma during World Rhino Day, showing that ongoing efforts to protect the one-horned rhinoceros are paying off.

Why was Poaching a Big Problem?

Between 2000 and 2021, poachers killed 190 rhinos in Assam. The main reason for poaching is the illegal trade of rhino horns, which are highly valued in traditional medicine and as status symbols in some parts of the world. Protecting the one-horned rhino is not just about saving an animal—it's essential for preserving Assam's biodiversity.

Government's Commitment to Rhino Protection

The Indian government, led by Prime Minister Narendra Modi, has made protecting the one-horned rhino a key priority. When the "double-engine government" (referring to the strong state and central government partnership) took office in 2016, they introduced more focused conservation strategies to safeguard these animals.

What Conservation Steps Have Been Taken?

Several actions have been put in place since 2016 to ensure the safety and survival of rhinos:

Increased Protection: New anti-poaching camps were set up, and a special protection force was created to guard the rhinos.
Expanded Habitat: Efforts were made to increase the rhinos' natural habitat, giving them more space to thrive.

The "Kaziranga model" of conservation has gained global recognition for its success in protecting rhinos. Anti-poaching camps are established every 5.82 square kilometers, with 233 camps across the park. These camps are staffed with dedicated personnel who work to keep poachers at bay.

How the Local Community Helps

Local communities play an important role in protecting rhinos. The government has involved these communities in the conservation process and thanked them for their help. This has strengthened the bond between the people and wildlife protection efforts.

Current Rhino Population

According to the 2022 census, there are now over 2,850 one-horned rhinos in Assam. Kaziranga alone is home to 2,613 of them, which is a clear sign that the protective measures and community involvement are working well.

About Kaziranga National Park

Kaziranga National Park is a UNESCO World Heritage Site in Assam, India. It's known for having the world's largest population of the Indian one-horned rhinoceros. Covering an area of over 430 square kilometers, the park features a range of ecosystems, from grasslands and marshlands to dense forests. Established in 1905 to protect rhinos, the park is also home to more than 300 bird species and endangered animals like the Bengal tiger and Asian elephant. Its success in wildlife conservation is largely due to effective anti-poaching measures and community support.

India's defence exports and humanitarian law

Having India **amend its domestic laws** would be a better way to strengthen its credibility and assess the international humanitarian law-compliance of countries importing its defence goods

Introduction

The Supreme Court of India, earlier this month, **dismissed a public interest litigation**(PIL) asking that the central government be directed to stop **exporting defence equipment to Israel** as Tel Aviv is allegedly committing war crimes in Gaza. The top court refused to intervene, reportedly because **foreign policy is not its domain.** However, the issue that the PIL raised is a normative one that goes beyond Israel. It must be clearly understood given India's aspirations to become a major defence exporting nation.

- **About defence exports:** It is critical to recall that quite a few countries have curbed defence exports to Israel. For instance, a court in the Netherlands ordered the Dutch government to block the export of all F-35 fighter jet parts to Israel.
- **The basis of this order is a European Union (EU) regulation**, which prohibits military equipment export to a country if there is a clear risk that the recipient country would use such equipment to **violate international humanitarian law (IHL**).
- Likewise, the United Kingdom government, acting under the **Export Control Act,**reviewed Israel's compliance with IHL concerning the ongoing conflict in Gaza.
- **Admission of risks:** It concluded that there is a clear risk: if certain arms are exported to Israel, they would be used to commit or facilitate serious violations of IHL.

Legal gap

- **Lack of an equivalent law:** of the U.K.'s Export Control Act or the EU regulations in Indian law requiring an **assessment of a country's compliance** with IHL obligations in deciding whether to export defence equipment to such a country.
- **The Indian Foreign Trade Act, 1992 (FTA)** read with the Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) **(WMDA) Act, 2005**empowers the central government to regulate the export of designated goods relevant to India for various reasons.
  - These reasons are listed in Sections 3(5) and 2(l) of the WMDA and FTA, respectively.

- **The international obligations:** In addition to things such as India's national security, an important factor listed in these sections is **India's "international obligations** under any bilateral, multilateral or international treaty, Covenant, Convention".
- **The permission to prohibit:** the central government can prohibit the export of defence goods due to India's international law obligations.
  - This is the closest Indian law gets to connecting the export of defence goods with international law.
- **According to India's domestic law:** the central government, unlike in the U.K. and the EU countries, is not under an **obligation to review** the IHL compliance of the country to which India is exporting defence goods. Thus, the legal gap.

What has been the stand of the Supreme Court

- **Filling up the Vacuum:** The Supreme Court, in several cases, such as **Vishakha vs State of Rajasthan,** has not just used international law to enlarge the content of domestic law but has also **judicially incorporated international law** to fill the vacuum created by the absence of domestic law on the subject.

International law

- **Arms Trade Treaty (ATT):** aimed at regulating international trade in conventional arms. **Article 6(3)** of the ATT bars a country from supplying conventional arms if it has the "knowledge" that these arms "**would be used**" to inter alia commit war crimes.
- **Article 7 obligates states**: to assess whether the **conventional arms** they export would be used by the importing country to commit or facilitate a serious violation of IHL.
- Interestingly, India **is not a signatory** to this treaty.
  - As a result, this treaty is **not binding** on India and cannot be judicially incorporated,
  - though some provisions of the ATT reflect customary international law.

The obligation

- **Common Article 1 of the Geneva Conventions,** which is binding on India, obligates all states 'to respect and to ensure respect for' IHL.
- **Imposing obligations:** As it was held by the International Court of Justice in Nicaragua vs United States, this provision imposes a negative obligation on states.
  - Thus, countries are under **obligation not to supply weapons to a country** 'if there is an expectation, based on facts or knowledge of past patterns, that such weapons would be used to violate the Conventions'.
  - Scholars argue that the certainty required for the exporting state that its weapons will be used by the importing **state to commit violations** of the Geneva Conventions is quite high.

Conclusion

When India's domestic laws, the **WMDA and the FTA**, are read in light of India's IHL obligations, a clear duty arises **not to supply weapons** to a country that would use them to breach its IHL obligations. But rather than deriving this obligation using international law, it would be better for India to amend the WMDA and the FTA, This approach will explicitly evaluate the compliance of countries importing Indian defense goods with **International Humanitarian Law (IHL**). By doing so, India can enhance its credibility as a responsible **defence-exporting nation**.

POCSO Act

Court has done well to clarify law on online content showing child sex abuse.

Introduction

The Supreme Court of India's clear delineation of the penal consequences of accessing or storing sexual material concerning children is in complete consonance with the letter and spirit of the Protection of Children from Sexual Offences (POCSO) Act.

The critical need for intervention towards child safety from abuse
- **Enlightened Approach to Social Issues**: arose from the proliferation of online content featuring sexual exploitation of children, a three-Judge Bench has not only clarified the law but also drawn pointed attention to the **legislative intent** of presuming the **culpable mental state** of a person accessing and viewing such material.
- **Modifying the terminology in verdicts:** The Court has also advocated that the term 'child pornography' be avoided in both the law and in court verdicts, as it appears to **trivialise the enormity of the offence of exploiting children** to create and disseminate sexual material to gratify the perversions of a few.
  - Instead, the Court has suggested that such content be described as **'Child Sexual Exploitative and Abuse Material' (CSEAM).**
- **Making the legal provisions more clear:** The verdict also lays to rest doubts over what exactly some provisions of the **Information Technology Act, 2000,** and POCSO Act say on the subject, as High Court verdicts have differed on their exact implications.

Key details about the background of the case
- **The birth of case from an earlier case:** The case arose from a Madras High Court judgment that quashed a criminal case against an individual who had viewed sexual content involving children on the ground that the law only criminalised creating and disseminating such content, and not merely watching it in the private domain.
  - The apex court has now set aside the High Court order.
- **Invoking the doctrine of "constructive possession":**
- it has ruled that any act of viewing or displaying such material over the Internet without actual possession or storage in any device would also amount to "possession", made punishable under Section 15 of POCSO, provided the person had a degree of control over such material.
- **Acts and inclusions under scanner:** Further, an intent to share or transmit such material can also be inferred from any failure to delete, destroy or report such material.
- **A step of caution:** against narrow interpretation of some provisions so that the legislative intent of penalising cyber-offences relating to children is not defeated.
- **View of the Section 67B of the IT Act**: termed it a "comprehensive provision" to penalise various electronic forms of exploitation and abuse of children online.
- **Key responsibilities of platforms and intermediaries**: They have a duty to remove such content as well as report it to police units concerned.
- **Awareness campaigns through sex education**: Its advice to the government to implement comprehensive sex education programmes that include **the legal and ethical ramifications of child sex abuse materia**l merits immediate attention.

Conclusion

Through the judgment, the Supreme Court of India has strengthened child protection against online sexual exploitation with clear connotations from **the POCSO Act**. Phrase like **'Child Sexual Exploitative and Abuse Material'** instead of child pornography shows that courts are serious towards the growing issue. Thus, it becomes a key responsibility of **digital platforms** to remove harmful content and making an appeal for **proper sex education.** Thus, it reinforces the need for society to be more organized while **protecting children.**

NCRF

The National Credit Framework (NCrF) aims to help **higher education institutions** balance **vocational and skill training** and knowledge-generating academic pursuits, which are needed in a fast-changing world.

About the New Education Policy

- The NEP is a **vision document** that provides a broad contour of how education can be transformed in India while getting away from the clutches of the colonial mindset.
- **The National Credit Framework (NCrF)** is one of several transformative reforms that are derived from the NEP, providing a **flexible template for** educational institutions offering school, higher, vocational, and skill education.
- Using the NCrF, **higher education institutions (HEI)** can give a unified accumulation and transfer of credits across multidisciplinary education, including skill education.
- The NCrF is an **enabling framework** rather than a regulatory one.

More flexibility for students

- **Flexibility for student credits**: When HEIs adopt the NCrF, students can earn credits in various activities provided they **undergo an assessment.**
  - The NCrF gives students the flexibility to **earn credits from classroom teaching**, laboratory work, Atal Tinkering Laboratories, research projects, assignments, tutorials, sports and games, yoga, the performing arts, music, handicrafts, social work, National Cadet Corps and National Service Scheme activities, vocational and skill education, minor and major projects, on-the-job training, internships, apprenticeships, and experiential learning.
  - **Providing flexibility and broad-based educational** opportunities through the NCrF has unnerved some who are deeply rooted in the conventional ways of imparting higher education.
- **Issues with the nature of NEP:** The position of those few who remain bafflingly immune to the dynamic a**nd forward-looking nature** of the NEP 2020 is inherently "problematic".
  - Their dismissive attitude towards the curriculum changes based on the NCrF shows their unwillingness to understand India's societal, technological, and educational needs.
- **Need for dynamism:** This is precisely why India's higher education system should steadfastly **remain dynamic and relevant** to the country's needs to avoid the risk of becoming obsolete.
- **Ensuring flexibility:** In keeping with the inevitable rapid economic and technological changes, the NCrF aims to help institutions **remain flexible** and competitive.

- **Promoting Skilling and revising the curriculum:** Keeping the current and future evolution of job requirements, there is only one solution **— revise the curriculum** so that it is in tune with the NCrF.

- ○ HEIs should demonstrate their capacity to adapt to the evolving new situations by bridging the skill mismatch so that the career prospects of students are not hindered.
- **Emphasis on training:** Any view that HEIs should remain the place for the sole purpose of training students only to **become knowledge producers** is an outdated and obstinate refusal to see the reality.
- **Emphasis on skill upgradation: In** the modern world, HEIs, besides being havens of knowledge, must equip students with the skills and the competencies needed for emerging roles and self-employment.
- **The path to growth:** However, such a dual role is possible only when HEIs adopt the NCrF and allow students to pursue their academic and career goals.

Continuous adaptation is the key

- **Need for reforms:** we must not promote an elitist brand of higher education by not supporting reforms in higher education;
  - ○ these reforms are necessary for the **democratisation of education** and social equity.
- **Need to adapt and reinvent:** HEIs must continuously adapt and reinvent themselves in response to changing circumstances.
  - ○ Having a few hinder efforts in transforming higher education in HEIs can lead to a **stagnation and compromise** the effectiveness of our institutions.
- **Need for a multi-disciplinary approach**: The NEP 2020 also advocates the multidisciplinary education and research university (MERU) concept.
- **Need to focus at lower levels**: The focus of such HEIs would be to serve as nurseries for scholars and intellectuals.
  - ○ However, such universities should not be considered an end in itself, and many other HEIs should also focus on **vocational and skill training** to enhance the employability of students.
- **Opportunity to increase social mobility:** When students acquire practical skills and knowledge through a flexible curriculum — as envisaged in the NCrF — higher education will become a tool for students to increase their social mobility.

Way Forward: On vocational and skill training

- **Focussing on skills:** Depending on the nature of HEIs, institutions can lay emphasis on vocational and skill training, focus on **fundamental research**, innovation, and intellectual pursuits, and ensure that **knowledge production** and skill training coexist as deeply interconnected processes.
  - ○ The bottomline is that those who acquire **vocational and skill training** can be as impactful as those who produce new knowledge.
- **Achieving the balance:** The primary objective of the NCrF is to help HEIs balance vocational and skill training and **knowledge-generating academic pursuits** so that HEIs play a pivotal role in shaping individual futures and societal progress.

Conclusion

We must reimagine our higher education **curricula by integrating flexibility** and multidisciplinary and skill-based courses to transform India into an economic **powerhouse and technological leader**. In response to the inevitable rapid economic and technological changes, the NCrF seeks to assist institutions in staying **adaptable and competitive**.

<div style="text-align:center">**Rural-Urban Continuum**</div>

India sees challenges as either rural or urban; instead, **it needs to address them as part of a continuum.**

Introduction

This century is supposed to be India's urban century due not only to massive demographic shifts, with the country soon becoming **more urban than rural**, but also to the **demand for the infrastructure** required to support these large shifts.

These demographic changes are **occurring in Tier II and Tier III cities**, as well as the peripheries of major urban centres and urban agglomerations. India addresses challenges by viewing them as either rural or urban; it needs to instead look at them as part of an urban-rural continuum.

Current policy framework on funding

There has been an over-centralisation of finances in recent times.

- **Financial decentralisation**, which provides autonomy to local bodies, has been compromised.
  - The **13th Finance Commission** pointed out this issue by mentioning how local bodies were getting "asphyxiated".
- **Fixation of funding:** Some of these financial constraints arise from the tied nature of grants linked to **centrally sponsored schemes** and even financial devolution.
  - For example, **the rise in property tax** in cities should be commensurate with the rise in the State Goods and Services Tax.
  - If there is no linkage, most **towns are at risk of losing tied money grants**, which have increased relative to untied grants over the years.

Governments flagship initiatives

Flagship programmes such as **the Swachh Bharat Mission and the Atal Mission for Rejuvenation and Urban Transformation (AMRUT),** miss the urban-rural continuum.

- **Liquid waste management under AMRUT:** Urban infrastructure initially covered 500 cities but has now been extended to **all statutory towns.**
  - **Priority to urban population:** These towns account for only a portion of the urban population. Many people live in census towns (with a minomum population of 5,000) and in the more than 23,000 urban villages.
  - **Contiguity:** With census towns adjoining statutory towns, and urban villages accommodating large numbers of **migrant and informal workers.**
  - **Non-qualification of funding**: When urban infrastructure for liquid waste, such as sewage treatment plants, is designed, and **funding is sought under AMRUT,** these contiguous areas do not qualify for funding.
- **Mismanagement of waste**: The waste flow in cities and peri-urban areas does not adhere to urban-rural nomenclature, yet the planning process is obsessed with it.
  - This issue has been a **challenge for many States, particularly Kerala.**
  - **NITI Aayog** has pointed out that **90% of Kerala is urban.** In such a situation, AMRUT grants cannot be utilised to create infrastructure. AMRUT also does not support solid waste management infrastructure in urban areas.

- **The Swachh Bharat Mission, which is now Swachh Bharat Mission 2.0**: The goals of the Mission are twofold.
  - **For Swachh Bharat Mission-Urban**, the aim is to go beyond being open defecation-free to focusing on making **urban India garbage-free** and proposing sustainable solutions and practices for waste management.
  - **Swachh Bharat Mission-Rural** focuses on maintaining the **open defecation-free status**, managing solid and liquid waste in rural India, and **constructing household toilets.**
  - It also addresses **liquid waste management,** which Swachh Bharat Mission-Urban does; however, treatment plants cannot be built jointly.
- **Similar goals for both these programmes:** Run by the Government of India, aim for nearly the same outcomes, so realising these through imaginative practices could yield better results.
- **Collaborative designing:** Solid waste management plants in peri-urban and urban areas could be designed collaboratively **at the district or regional levels.**
- **Need for good governance**: Such liberty and autonomy will pave the way for better urban governance, rather than implementing programmes and projects from **a centralised perspective.**

Way forward: Governance models

- **Strengthening the framework established by the 73rd and 74th ConstitutionAmendments**: Under this framework, **District Planning Committees** comprising the Zila Panchayats and urban local bodies need to be strengthened and mobilised.
  - The original plan was for **district bureaucracies to be subordinate to the District Planning Committees,** but currently, in most states, these committees have become mere extensions of the district bureaucracy.
  - **Stronger District Planning Committees** can help address the challenge of a urban-rural continuum.

- **Alignment of the ministries:** In Kerala, a proposed solid waste landfill site in the periphery of a town had to be withdrawn due to public pressure.
  - This was possible only because both rural and urban local bodies **fall under the same Ministry.** In other States, this would have taken much longer.

Conclusion

Thus, the urban and rural continuum in rapidly expanding urban areas needs urgent interventions at **both the infrastructure and governance levels**. The previous models of separate urban and rural local bodies need to be updated in today's India, which is fast becoming urban.

It is important to review why funds and resources are **funded separately to urban and rural India**, even when they are becoming increasingly intertwined. There must at least be some liberty in imaginatively **designing plans in a joint manner.** Planning needs to be a less rigid creative process that **combines both.**

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Palakkad	8281098869	Idukki	8281098863
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Kannur	8281098875	Kasaragod	8281098876