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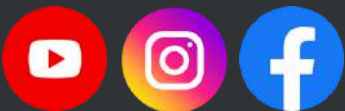
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Current Affairs August 2024
Index

Geography And Environment

The Calamitous Consequence of Cloudbursts in Himachal Pradesh: Understanding and Mitigation

I. Understanding Cloudbursts - An Intense and Sudden Menace

A. What Exactly is a Cloudburst?
- Defined by the India Meteorological Department (IMD), a cloudburst happens when more than 10 cm of rain abruptly falls within an hour over a small area of around 10 sq km.
- They occur predominantly in mountainous regions, particularly in the Himalayas.
- In the Indian subcontinent, cloudbursts could be attributed to monsoon clouds drifting northwards from the Bay of Bengal or the Arabian Sea which reach the plains and subsequently the mountains, resulting in heavy rainfall.

B. What Causes Cloudbursts?

- The phenomenon is initiated when powerful upward currents of hot air obstruct rainfall, leading to enlargement of raindrops and subsequent formation of smaller drops underneath them.
- This effect contributes to a substantial accumulation of water in the atmosphere that is released abruptly as upward currents weaken, causing a cloudburst.
- The Indian subcontinent's complex topography and the orographic lifting process play crucial roles in the occurrence of cloudbursts.

C. Cloudbursts Vs Rainfall

- While rain is a common phenomenon, cloudbursts are sudden and heavy rainstorms.
- The term 'cloudburst' is only used when rain is more than 10 cm per hour.

D. Prediction and Examples of Cloudbursts

- The anticipation of cloudbursts is a challenge due to their unpredictable and sudden nature, which can only be detected with expensive, finely netted radars.

- Prominent examples in India include devastating cloudbursts in Uttarakhand (July 2021) and Himachal Pradesh (August 2020) which led to flash floods, landslides, and widespread infrastructural damage.

II. The Catastrophic Aftermath of Cloudbursts

A. Flash Floods

- Flash floods are sudden local surges in water levels during or following intense rainfall, typically caused by thunderstorms.
- Factors such as rainfall intensity, location, land usage, topography, vegetation, soil type, and water content influence the onset and location of flash floods.

B. Landslides

- Landslides are mass movements of materials like rocks or earth down a slope.
- Heavy rainfall, erosion, and weathering can trigger landslides.

C. Mudflows

- Mudflows feature high-density water flow, with significant amounts of suspended particles and silt.

III. Relationship between Climate Change and Cloudbursts

- Increased atmospheric moisture, changes in precipitation patterns, altered atmospheric stability, and glacier retreat are amongst the impacts of climate change that can potentially increase the occurrence of cloudbursts.

IV. Proposed Measures to Alleviate the Devastating Impact of Cloudbursts

- Effective early warning systems, resilient urban planning and infrastructure, watershed management, reforestation, and education on cloudburst risks can help mitigate the disastrous effects of cloudbursts.
- Sustainable land use practices and collaborating with neighbouring countries and international organisations can also significantly contribute to managing cloudburst impacts.

Declaration of Nanjarayan and Kazhuveli Bird Sanctuaries & Tawa Reservoir as New Ramsar Sites

Introduction and Current News:
Recently, the Indian government declared Nanjarayan Bird Sanctuary and Kazhuveli Bird Sanctuary in TamilNadu, along with Tawa Reservoir in Madhya Pradesh, as three new Ramsar Sites making India's total Ramsar Sites to 85. Currently, Tamil Nadu and Uttar Pradesh lead with the highest number of Ramsar Sites.

Key Insights on the New Ramsar Sites:
- **Nanjarayan Bird Sanctuary:**

Located in Tiruppur District, Tamil Nadu, the Nanjarayan Bird Sanctuary spreads across 125.865 hectares. This sanctuary is home to various bird species and relies on rainfall from the Nallar drainage for sustenance. In addition to its historical importance as a site restored by a local king centuries ago, it's currently guarded and managed by both the local community and the Forest Department.

- **Kazhuveli Bird Sanctuary:**

This sanctuary is located on the Coromandel Coast in the Villupuram district, North of Pondicherry, covering over 5151.6 hectares. Notably, this sanctuary is vital with diverse water features and various specific plant species.

- **Tawa Reservoir:**

Constructed primarily for irrigation purposes, Tawa Reservoir lies within the Satpura Tiger Reserve and near the city of Itarsi in Madhya Pradesh. The reservoir is home to a variety of wildlife, and the Tawa River, the reservoir's longest tributary, flows through several districts before joining the Narmada River.

About Ramsar Convention:
The Ramsar Convention, officially ratified by India in 1982, is an international treaty signed in 1971 focused on conserving wetlands of international significance. As part of this convention, Montreux Record makes a record of wetland sites where changes in ecological character have occurred, or are likely due to human interference or technological developments.

General Knowledge (GK) Component:
- Nanjarayan Bird Sanctuary is Tamil Nadu's 17th bird sanctuary.
- Kazhuveli Bird Sanctuary is connected to the Bay of Bengal.
- The Tawa Reservoir is located within the Satpura Tiger Reserve and is also used for power generation and aquaculture.
- The Ramsar Convention, initially signed in Iran in 1971, focuses on the conservation of internationally important wetlands.
- Montreux Record is a register of wetland sites undergoing significant ecological changes.

Importance:
The declaration of these sites as Ramsar sites underlines the significance of these wetlands, helping in the conservation and protection on a global scale. These wetlands play a crucial role in countering climate change, hosting a diversity of species, and supporting the livelihoods of many local communities.

Understanding the Phenomenon of the Blue Moon

An Overview of the Blue Moon Phenomenon
- The term "Blue Moon" is used to describe the second full moon that occurs within a single calendar month.
- This phenomenon was recently observed in August 2024, sparking discussions about its occurrence and significance.
- The following Blue Moon is anticipated on 31st May 2026.

Variations of the Blue Moon
- There exist two types of Blue Moons - Seasonal Blue Moon and Monthly Blue Moon, remarkably, none of these involve the colour of the moon.
- A Seasonal Blue Moon happens when four full moons appear in one astronomical season instead of the typical three. The third moon in this series is referred to as the "Blue Moon".
- A Monthly Blue Moon refers to the occurrence of two full moons in one calendar month, a relatively rare event.

How Blue Moons are Formed
- The phases of the moon complete their cycle in around 29.5 days, resulting in 12 lunar cycles over 354 days.
- Every 2.5 to 3 years, a 13th full moon, the Blue Moon, takes place within a calendar year, deviating from usual naming conventions.
- Since February has only 28 or, in case of a leap year, 29 days, it can never witness a Blue Moon.

Instances When Moon Actually Appears Blue
- The Moon has appeared blue at certain moments in history due to atmospheric conditions following volcanic eruptions.
- Eruptions of Mt. Tambora (1815), the Indonesian volcano Krakatoa (1883), El Chichon in Mexico (1983), Mt. St. Helens (1980), and Mount Pinatubo (1991) have caused the moon to appear blue owing to the scattering of light by volcanic ash particles in the atmosphere.

Historical & Cultural Significance of Blue Moons
- The 1815 eruption of Mt. Tambora led to a significant global temperature drop causing the 'year without summer.'
- The term "once in a blue moon" has been coined manifesting the rarity of this phenomenon.

In conclusion, the Blue Moon, despite its name, has less to do with the moon's colour and more with the unique lunar cycle it signifies. Its occurrence sparks interest among scientists, historians, and sky-gazers alike.

Economics

US Emerges as the Second Largest Supplier of LNG to India

Analysis and Crucial Points of International LNG Trade and Energy Transition

Introduction and Snapshot
- The US has risen as India's second-largest supplier of Liquefied Natural Gas (LNG) by 2023, beating the UAE, accounting for 3.09 million tonnes (MT).
- This shift showcases the evolving trade dynamics in the international energy markets and India's pursuit of diversified energy sources.

Why in News and Current Global Scenario
- The rise of the US as a significant LNG supplier to India coincided with the country emerging as the world's largest LNG exporter in 2023.
- This achievement is owing to extensive investments made in liquefaction capacity, resulting in the strong growth of the US in the LNG market.
- It overtook prior leaders Qatar and Australia in the global LNG supply chain.

The Role and Importance of LNG
- The historical shift towards LNG as an alternative fuel represents the ongoing global transition to green and renewable energy sources.
- LNG is natural gas supercooled to become a liquid, reducing its volume making it easier and economical to transport over long distances.
- Primarily composed of methane, LNG converts back to gas at its destination, and it's used like conventional natural gas for heating, electricity generation, and fuel for vehicles.

Evolving Trade Dynamics
- The fluctuations in global LNG prices and India's geographical proximity to the US via the Cape of Good Hope facilitate the increased supply of US-sourced LNG.
- In contrast to the rising share of the US, African nations witness a decline in their share of India's LNG imports.
- Qatar has been India's largest LNG supplier over the last five years, despite shifts in other supplier nations' standings.

Future Perspective and GK Insights
- India being the fourth-largest LNG importer, witnessed a scaling back in 2022 due to the surge in prices and a decrease in shipments from the US.
- The UAE's LNG export to India has also exhibited fluctuations, with an increase from 2.6 MT in 2019 to 3.32 MT in 2020 and a subsequent decline.
- In the light of these developments, it's essential for countries to predict and adapt to substantial shifts in the LNG market and global energy resources.

In conclusion, the rise of the US as the second-largest LNG supplier in India signifies the fast-changing patterns of international LNG trade in parallel to the global energy transition and diversification goals. This development also holds potential implications for the global geopolitical

scenario, underlining the significance of energy dynamics in international relations.

RBI Urges Banks to Boost Deposit Growth and Strengthens HFC Liquidity Norms

I. Understanding Declining Deposit Growth Trends and Impacts:

A. Introduction and Background:
- RBI Governor recently urged banks to innovate product offerings to augment deposit growth.
- This measure is in response to the slower rate of deposit growth alongside the surge in credit demand, posing potential liquidity risks for the banking sector.

B. Deep-diving into Deposit Growth Concerns:
- The Credit-Deposit ratio has reached a 20-year peak, indicating a widening disparity between credit and deposit growth.
- There is a growing reliance on short-term deposits and liability instruments to meet credit demand.
- Households are switching to mutual funds, stocks, insurance, and pension funds over bank deposits due to high inflation and surging net financial assets.
- Regulatory requirements like the Cash Reserve Ratio and Statutory Liquidity Ratio also impact the quantity of lendable funds.

C. Impact on Banking System Stability and Liquidity Risk Management:
- The increasing gap between credit and deposit growth could threaten banking system stability.
- Banks' increasing reliance on certificates of deposit has complicated liquidity risk management.
- RBI plans to review the Liquidity Coverage Ratio to proactively manage emerging liquidity risks.

II. Strategies for Increasing Deposit Growth:

A. Role of Core Banking Functions and Innovative Strategies:
- Banks should focus on their fundamental functions, i.e. deposit mobilisation and lending.

- It is recommended for banks to expand their branch networks for tapping into new customer segments and to be innovative in deposit mobilisation.

B. Advantages of Flexible Financial Products:
- Banks can consider reducing the lock-in period for tax-saving fixed deposits to make them more competitive.
- Offering attractive interest rates, bonuses, or cash incentives could attract more depositors.

C. Use of Technology for Personalized Products:
- Banks can utilise data analytics to design personalised savings and deposit products to manage and grow savings.
- Mobile banking apps with user-friendly design and financial planning tools can motivate increased deposits.

III. Understanding RBI's New Liquidity Norms for Housing Finance Companies (HFCs):

A. Introduction to New Liquidity Requirements:
- HFCs are now required to maintain higher liquid assets to ensure financial stability.
- The liquid asset requirement will be increased from 13% to 15% in stages by 2025.
- HFCs need to maintain a minimum investment-grade credit rating annually to continue accepting public deposits.

B. Established Measures to Mitigate Long-term Liquidity Risks:
- The maximum tenure for public deposits at HFCs has been reduced from ten years to five years.
- RBI has also reduced the ceiling on the quantum of public deposits an HFC can hold to prevent over-leveraging.

Background and Importance of [Housing Finance Companies (HFCs):
- HFCs were established under the Companies Act 1956 and initially regulated by the National Housing Bank.
- The regulatory authority over HFCs was transferred to the RBI in 2019.
- HFCs were designed to meet rising loan demands from various income groups and have emerged as leading sources of home loans.

The tightening of HFC's liquidity norms is aimed at ensuring these companies maintain a healthy balance between their assets and liabilities and to align them with regulations for NBFCs to promote uniformity across all areas of Non-Banking financial operations.

RBI Governor's Five-fold Vision for India's Financial Future

Overview of the RBI's Five Strategic Priorities

- The strategy outlined by the RBI Governor at GFF 2024 reaffirms India's ambitious roadmap to becoming a major player in the global economy.

- The five strategic priorities are Financial Inclusion, Enhancing Digital Public Infrastructure (DPI), Strengthening Cybersecurity, Promoting Sustainable Finance, and Reinforcing Financial Infrastructure.

Advancing Financial Inclusion
- Notable increase in the RBI's Financial Inclusion Index from March 2021 to March 2024 demonstrates India's commitment to financial inclusivity.

- Central to this progress is the Prime Minister Jan Dhan Yojana (PMJDY), a key financial inclusion initiative that has opened over 530 million bank accounts.

- The RBI Governor outlined the future role of technology in fulfilling the financial needs of underserved populations, stressing the pivotal role of fintech firms.

Energising the Digital Public Infrastructure

- DPI is seen as a catalyst for integrating superior technologies into India's financial framework.

- The RBI's pilot project on the Unique Lending Interface (ULI) signals a new chapter in India's financial journey. The existing JAM (Jan Dhan-Aadhaar-Mobile) trinity and Unified Payments Interface (UPI) complement this initiative.

- By weaponizing DPI, India can revolutionise financial services, increasing inclusion and effectiveness across the country.

Securing the Cyberfront

- In an increasingly digital world, cybersecurity is crucial in safeguarding India's financial ecosystem.

- Continuous vigilance against cyber threats and promoting cybersecurity awareness together form an integral part of crafting a secure digital economy.

- Banks and fintech firms, especially Non-Banking Finance Companies (NBFCs), are expected to uphold customer-centricity, transparency, and fairness in their operations, especially under the Digital Personal Data Protection Act 2023.

Cultivating Sustainable Finance

- RBI's initiatives like sovereign green bonds and green deposits represent first steps towards encouraging sustainability in the financial sector.

- The transformative role of technology, including AI and big data, in assessing environmental risks and promoting sustainable finance were also reinforced by the Governor.

- Fintech firms are likely to lead this transition, positioning India as a global leader in sustainable finance.

Reinforcing Financial Infrastructure

- The RBI Governor underscored the need to fortify India's financial infrastructure, focusing on cross-border payments and internationalising UPI and RuPay.

- As AI adoption is an area to tread upon carefully, fostering innovation in the financial sector by harnessing IoT could enhance India's financial infrastructure further.

Current Scenario and Future Prospects of India's Financial Services Industry

- The industry has seen rapid diversification and expansion with the introduction of new entities like payment banks. The Unified Payments Interface

(UPI) and Immediate Payment Service (IMPS) have marked record transactions in recent years.

- The support to MSMEs through Credit Guarantee Scheme revamp, International Payment partnerships, e-RUPI launch, and various financial inclusion schemes have contributed to this transformative growth.

- Future prospects include growth in Private Wealth Management, Insurance Market, Mutual Funds, and Stock Market.

Subtopic 7: Opportunities for Growth in India's Financial Services Sector

- Strong growth prospects are apparent in the insurance sector which is expected to witness a surge in the investment corpus to USD 1 trillion by 2025.

- Digital gold investment options, digital literacy programs in rural areas, and secure transaction enablers like AePS constitute New Age avenues for investors and users.

- Digital finance could give a significant boost to India's GDP and job creation by 2025.

- Growth in Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI) along with improvements in financing models and risk factors could further accelerate this growth.

This strategic vision that was outlined by the RBI Governor for India's financial future represents a thought-through roadmap for progressive growth, strengthening India's standing as a forward-thinking global economy.

The Introduction of Unified Pension Scheme: A New Era of Pension Policies

Introduction to Unified Pension Scheme (UPS)

- The Union Cabinet has recently given its approval for the implementation of the Unified Pension Scheme (UPS).
- This scheme is set to provide government employees with an assured pension after retirement.
- The implementation of the UPS will commence from 1st April, 2025, shifting the central government employees from the current National Pension Scheme (NPS).
- State governments are also given the option to adopt UPS.

Provisions of Unified Pension Scheme

- Assured Pension: Under UPS, 50% of the employee's average basic pay in the last 12 months before retirement is provided as an assured pension, given a minimum qualifying service of 25 years.
- Assured Minimum Pension: After a minimum service of 10 years, the UPS guarantees a minimum pension of Rs 10,000 per month.
- Assured Family Pension: In the event of the retiree's death, their immediate family receives 60% of the pension last drawn by the retiree.
- Inflation Indexation: The three kinds of pensions mentioned above are eligible for dearness relief indexation based on the All India Consumer Price Index for Industrial Workers.
- Lumpsum Payment at Retirement: Employees receive a lump sum payment at retirement in addition to gratuity.

Distinguishing UPS from Old Pension Scheme (OPS) and National Pension Scheme (NPS)

- Pension Calculation Method: Unlike OPS, UPS calculation takes into account the average of basic salary plus DA drawn in the last year before retirement.
- Employee Contribution: While there was no employee contribution in OPS, UPS requires a 10% contribution of the basic pay and DA from the employee and an 18.5% contribution from the government.
- Tax Benefits: Unlike OPS, UPS may offer tax benefits for both employee and government contributions, but the government is yet to clarify this.
- Higher Minimum Pension: UPS offers a higher minimum pension compared to NPS.
- Lumpsum Payments: Unlike OPS, UPS provides a lump sum payment at retirement without affecting the assured pension.

Overview of National Pension Scheme (NPS)

- The NPS is a market-linked contribution pension scheme introduced by the Central Government on 1st January, 2004.

- The scheme was implemented to address the growing pension liability of the government.
- The scheme comprised 10% of the basic pay and dearness allowance contributed by both the employee and the government.
- The NPS faced opposition for its lower guaranteed returns and the requirement of employee contribution prompting the introduction of UPS.

Potential Fiscal Implications of UPS
- The implementation of UPS could severely impact the government's finances due to the high debt and large debt-to-GDP ratio.
- An RBI study warns of an increased fiscal burden if all states switch to UPS, possibly reaching 0.9% of GDP annually by 2060.
- Concerns are there about the UPS's impact on Union finances as it closely resembles the OPS.

Ending: UPS: A Step Towards a More Balanced Pension System

UPS aims to balance the aspirations of employees with the fiscal cost. It combines elements of both OPS and NPS, providing defined returns and reducing market risk. By providing guaranteed returns and inflation protection, UPS aims to increase the overall pension fund and mitigate some of the risks associated with the debt burden.

RBI discontinues Licences of 78 Urban Cooperative Banks (UCBs) From 2014 to 2024

I. Introduction and Overview
- The Reserve Bank of India (RBI) has, since 2014, revoked the licences of 78 Urban Cooperative Banks (UCBs) across various states. Notably, Maharashtra witnessed the highest number of revocations with 36 UCBs losing their licences.
- The revocation of licences impacted UCBs in seven states in a single year, 2024, undermining the financial stability of banks in Maharashtra, Karnataka, Uttar Pradesh, Gujarat, Rajasthan, Assam, and Andhra Pradesh.

II. Why this Matters: The Background
- The UCB licence cancellations from 2014 to 2024 were driven by several reasons including insufficient capital, unfruitful earning prospects, a deteriorating financial position, and operations prejudicial to depositors and the public.
- In 2024, 10 UCB licences were revoked, affecting banks across seven states, including two each in Maharashtra, Karnataka, UP, and one each in Gujarat, Rajasthan, Assam, and Andhra Pradesh.
- The preceding years, 2023 and 2022, also saw significant revocations with 14 and 12 UCBs losing their licences respectively.

III. Geographic Spread of Revocations
- The state wise distribution of licence cancellations includes:
  * Maharashtra - 36 UCBs
  * Uttar Pradesh - 14 UCBs
  * Karnataka - 8 UCBs
  * Gujarat - 2 UCBs
- Other negatively impacted states include Rajasthan, Assam, Odisha, Andhra Pradesh, Telangana, West Bengal, Goa, Madhya Pradesh, Kerala.

IV. Regulatory Measures and Future Projections
- As a response, regulatory measures are being implemented to bolster the financial resilience of UCBs, including:
  * Expanding and strengthening UCBs
  * Upping of Housing Loan Limits for UCBs
  * Enforcing compliance with Priority Sector Lending (PSL) target of 75% by March 31, 2026
  * Adherence to prudential exposure limits of 15% for single borrowers and 25% for groups
  * Setting minimum loan limits to ensure that at least 50% of loans are below or equal to ₹25 lakh or 0.2% of Tier-I capital, up to ₹1 crore per borrower.

V. Status of Rural Cooperative Banks
- Despite the challenges in the UCB sector, no State Cooperative Banks (StCBs) or District Central Cooperative Banks (DCCBs) have been closed since 2014, indicating higher stability in these sectors compared to their urban counterparts.

VI. General Knowledge Takeaways
- An understanding of the functioning of RBI, UCBs, StCBs, and DCCBs can be beneficial
- Knowledge about Priority Sector Lending (PSL) norms and loan limits as per RBI guidelines
- Insights into the financial health of different regions in India, through the distribution of revocations
- Information about recent regulatory measures and reforms in the banking sector.

Defence and Military Exercises

Exercise Tarang Shakti - India's First Multinational Air Exercise

Introduction to Exercise Tarang Shakti

- Exercise Tarang Shakti is a multinational air exercise scheduled to be held in India in two phases, starting from the next month.
- It will take place in Sular, Tamil Nadu, marking this as India's first multinational air exercise.
- This exercise is the Indian Air Force's (IAF) largest multilateral exercise, which leads to its immense significance.

Purpose and Participation

- The primary aim of conducting 'Tarang Shakti 2024' is to showcase India's defence capabilities on a global stage.
- It is designed to enhance cooperation among the participating militaries, fostering a spirit of international relations.
- The exercise will feature around 30 participating countries, out of which 10 countries will participate with their fighter aircraft.
- The ten countries include Australia, Bangladesh, France, Germany, Greece, Spain, the United Arab Emirates, the United Kingdom, the USA, and Singapore.

Observer Nations and Program Features
- Along with the participating countries, 18 other countries will be present as observers. This will further boost the international visibility of the exercise.
- The exercise will not only feature flying and ground training but also hold defence exhibitions and cultural exchange programs.
- The itinerary also includes visits to Indian tech companies by defence personnel from various participating countries.

Display of India's Indigenous Defence Capabilities

- India is aimed at showcasing its indigenous fighter aircraft and equipment during this exercise.

- The demonstration will include Tejas, Rafale, Mirage 2000, Jaguar, and MIG 29.

Relevance in Current Affairs and General Knowledge

- This event comes across as an important development in India's defence and international relations domain.
- It can be seen as a diplomatic effort by India to strengthen its strategic relations globally.
- As India's first multinational air exercise, this event has a strategic significance and adds value to the country's national security objectives.

Tenth Edition of MITRA SHAKTI: Bolstering the India-Sri Lanka Defence Partnership

Overview - MITRA SHAKTI

- The 10th Edition of Exercise MITRA SHAKTI was recently conducted, marking another milestone in the defence ties between India and Sri Lanka.
- Organised annually, Exercise MITRA SHAKTI involves counter-insurgency and counter-terrorism operations simulated in a semi-urban milieu.
- This bilateral exercise is not only the largest undertaken by the Sri Lankan Army but also stands as a manifestation of the growing defence partnership between India and Sri Lanka.

Exercise MITRA SHAKTI - An Emphasis on UN's Peacekeeping Dynamics

- A crucial aspect of Exercise MITRA SHAKTI is its objective to incorporate the evolving dynamics of United Nations peacekeeping operations.
- The exercise achieves this through a combination of tactical exercises and practical discussions that hone the abilities of both nations' military forces.

SLINEX - Another Dimension of the India-Sri Lanka Defense Partnership

- It is worth noting that, besides Exercise MITRA SHAKTI, India also conducts the SLINEX (Navy) exercise with Sri Lanka further fostering the defence relations.

A Glimpse at Sri Lanka's Geographical and Economic Aspects

- Sri Lanka, an island country situated in South Asia, lies in the Indian Ocean, to the southwest of the Bay of Bengal and southeast of the Arabian Sea.
- This island nation is separated from the Indian subcontinent by the Gulf of Mannar and the Palk Strait while sharing maritime borders with India and the Maldives.
- India not only shares geographical proximity with Sri Lanka but also substantial economic ties. India ranks as Sri Lanka's 3rd-largest export destination following the United States and the United Kingdom, benefitting over 60% of Sri Lankan exports under the India-Sri Lanka Free Trade Agreement.

India & Sri Lanka in the Regional Context

- Apart from the bilateral relations and platforms, both India and Sri Lanka take part in the regional groupings such as the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and the South Asian Association for Regional Cooperation (SAARC).
This recent edition of Exercise MITRA SHAKTI is a testament to the robust defence partnership between India and Sri Lanka, emphasising their aim to foster peace and stability in the region and contributing to their economic and politico-diplomatic ties on a larger scale.

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A Deep Dive into India's Nuclear Submarine Strength: The INS Arighat

I. Introduction: INS Arighat, India's Nuclear Groundbreaker

- The Indian Navy recently commissioned its second nuclear-powered ballistic missile submarine (SSBN), named INS Arighat.
- Built under the Advanced Technology Vessel (ATV) project, this submarine showcases India's growing defensive technological prowess.

II. Why does INS Arighat Makes Headlines?

- The INS Arighat made headlines primarily for its role in enhancing India's nuclear triad capabilities.

- A nuclear triad refers to the ability of a country to launch nuclear weapons from the land, air, and sea.
- INS Arighat is an essential addition and boosts the country's nuclear triad alongside its predecessor, INS Arihant, which became fully operational in 2018.

III. A Peek into the Capabilities of INS Arighat

- Despite equaling INS Arihant's size and displacement, INS Arighat outmatches it in terms of the number of K-15 missiles it can carry.
- Powered by an 83 MW pressurised light-water reactor developed with Russian assistance, it showcases global cooperative efforts in India's defence sector.
- One of its standout features is the four large vertical launch system (VLS) tubes that carry the Sagarika SLBMs (K-15), missiles with a range of over 700 km.

IV. Future Developments: Arrival of INS Aridhaman
- There's a lot to look forward to with the impending commissioning of the third submarine INS Aridhaman next year.
- This 7,000-tonne behemoth is set to carry K-4 missiles with a striking range of 3,500 km, further augmenting India's underwater strategic deterrence.

V. Importance of SSBNs in National Defence

- An SSBN, standing for "Ship, Submersible, Ballistic, Nuclear," refers to a submarine type that carries nuclear-tipped ballistic missiles.
- These submarines are pivotal to deterrence operations as their difficult detection and high survivability ensure they can evade an enemy's first-strike and launch retaliatory actions.

VI. The Backbone: DRDO's Role in Defence Technology Development

- The Defence Research and Development Organisation (DRDO), established in 1958, has been the backbone of India's technological advancements in defence.
- Beginning as a merger of the Indian Army's Technical Development Establishment (TDEs) and the Directorate of Technical Development & Production (DTDP) with the Defence Science Organisation (DSO), it has grown into a robust network of 52 laboratories.

- Today, DRDO counts on the support of over 5000 scientists and about 25,000 other scientific, technical, and supporting personnel.
- They are committed to developing varied and complex defence technologies like aeronautics, armaments, electronics, combat vehicles, engineering systems, advanced computing, and more.

VII. Conclusion: A Leverage in India's Naval Defence

- With the addition of the INS Arighat to India's naval fleet, the country emphasises its stake in securing militaristic and defensive power on a global stage.
- Strengthening the nuclear triad, these advancements highlight India's pursuit for balanced, deterrent defence capability.

Celebrating Innovation & Advancements: National Space Day 2024

Significance, Recent Findings & Highlights of Indian Space Missions

Introduction and About:

India marked its first National Space Day on the 23rd of August 2024, to honour the successful landing of the Chandrayaan-3 mission's Vikram Lander on the lunar surface a year earlier.

Why Celebrate National Space Day?

- The annual event of National Space Day highlighted India's space exploration accomplishments, with a special focus on the landmark achievement of Chandrayaan-3.
- The day aims to inspire a flow of fresh talent into fields of science, technology, engineering and mathematics (STEM), critical for fuelling India's future space endeavours.

Unveiling the Theme for 2024

The selected theme for National Space Day in 2024 is, 'Touching Lives while Touching the Moon: India's Space Saga'.

Recent Discoveries of Chandrayaan-3

- The relatively uniform terrain around the landing site of Chandrayaan-3.
- Evidence supporting the Lunar Magma Ocean (LMO) hypothesis with signs suggesting a molten surface once existing beneath the lunar surface.
- The lunar south pole's topsoil is surprisingly rich in minerals found in the lower layers of the lunar crust.

LMO Hypothesis & Moon Formation

About 4.5 billion years ago, a vast asteroid impacted Earth, leading to the formation of the Moon and initiating a process of cooling on its molten surface.

Highlights of Indian Space Missions in 2003-24

Aditya-L1 Mission:

- India's first space-based observatory for studying the Sun was launched, stationed at the Earth-Sun Lagrange point, L1.

Gaganyaan TV-D1 Test:

- ISRO piloted its Flight Test Vehicle Abort Mission-1 (TV-D1), using a modified L-40 Vikas engine, revealing the Crew Escape System (CES)'s efficiency.

XPoSat Launch:

- With the launch of the X-ray Polarimeter Satellite (XPoSat) on 1st January 2024, ISRO aims to study radiation polarisation in space.

RLV-TD Experiments:

- In March and June 2024, ISRO carried out two landing experiments utilising a Reusable Launch Vehicle, Pushpak, aimed at simulating space landing conditions.

SSLV Development:

- ISRO concluded the Small Satellite Launch Vehicle (SSLV) development after two successful test flights and transferred it to the industry in August 2024.

Private Space Missions:

- Private organisations like Agnikul Cosmos, Skyroot Aerospace, Dhruva Space and Bellatrix Aerospace also made noteworthy contributions in the realm of space missions during 2024, marking significant advancements in Indian space technology.

Polity

Supreme Court's Ruling on Sub-Categorisation within Scheduled Castes

Introduction and Background
- Recently, a 6:1 landmark verdict by the Supreme Court of India paved the way for sub-categorisation within Scheduled Castes in reservations, thereby widening the scope of protection for underrepresented groups.
- This historic development comes against the backdrop of the Court's 2004 decision that posited the disregard of sub-classification among Scheduled Castes for reservation, claiming it would violate the equality rights. Back then, the court insisted that the Scheduled Caste list should be approached as a uniform, unsegmented group.
- In recent years, states like Punjab, Bihar, and Tamil Nadu have attempted to integrate reservation laws at the State level, aiming to sub-classify Scheduled Castes.

Historical Antecedents
- The roots of the case date back to 1975, when the Punjab government created a two-tier division in its Scheduled Castes reservation. This action intended to provide a safety net for the Balmiki and Mazhabi Sikh communities, which were economically and educationally backward.
- A legal dispute arose when a somewhat similar law manifested by Andhra Pradesh in 2000 was abolished by a five-judge Constitution Bench in 2004.

Debating the Legality of Sub-Categorisation
- In E. V. Chinnaiah v State of Andhra Pradesh (2004), the judgement stated that all communities listed under Scheduled Castes in the Presidential List, as per Article 341 of the Constitution, constitute a broad class for reservations.
- Further, the State was deemed not empowered enough to produce sub-classifications within this broad class, arguing that such an action contradicted the Right to Equality.
- Presently, all plans revolve around the Supreme Court as it organises its larger Constitution Bench to decide the matter.

Examining Previous Committees and Commissions for Sub-categorisation
- Committees for Sub-categorisation include the Committee of Secretaries, which comprises five members from various ministries and is chaired by the Cabinet Secretary.
- Past Commissions that have deliberated the issue include the Justice P. Ramachandra Raju Commission (1996) and the National Commission (2007).

Revisiting the 2004 Judgement
- The present court is revisiting the EV Chinnaiah vs. State of Andhra Pradesh case (2004), which claimed Scheduled Castes form a uniform group, thereby making no room for a sub-division amongst them.
- The need to modify this ruling is presently being scrutinised.

Significance and Implications of Recent Judgements
- The introduction of sub-categorisation within Scheduled Castes promises to address the widespread inequalities among SC communities, providing opportunities to those with lesser access to basic facilities.
- This change also aims at ensuring equitable distribution of benefits to all castes within the Scheduled Castes category and recognising the diversity that exists within the SC community.

Anticipated Challenges
- Legal challenges stem from the fact that the State lacks the power to independently sub-categorise communities listed under Scheduled Castes or Scheduled Tribes.
- Practical challenges arise from outdated socio-economic and population data of Scheduled Caste, Scheduled Tribe, and OBC categories.
- The issue of untouchability, from which the Scheduled Castes have historically suffered, calls

for the present approach of special treatment to be reassessed.

Enhancing Governance of Waqf Boards through The Waqf (Amendment) Bill, 2024

Amendments to Enhance Transparency and Accountability in Waqf Boards
- Parliament is expected to introduce the Waqf (Amendment) Bill 2024 aimed at enhancing transparency and accountability in the functioning of Waqf boards.
- The bill proposes around 40 amendments including mandatory verification for property claims, modified board composition to include women representatives, and new verification procedures.
- These amendments aim to reduce unchecked powers of Waqf boards that could lead to disputes and misappropriation of Waqf properties.

Challenges and Criticism towards The Waqf (Amendment) Bill 2024
- The proposed amendments face criticism for potentially limiting the authority of Waqf boards and impacting the management of Waqf properties.
- Critics express concerns about potential damage to the interests of Muslim communities who use these properties for religious and charitable purposes.
- Increased government control and bureaucratic interference are also anticipated, potentially hampering freedom of religion and creating more disputes.

Understanding the Concept of Waqf and Waqf Act, 1995
- The Waqf Act was first passed in 1954 and was further amended in 1995 and 2013 granting the Waqf board extensive rights to classify property as 'Waqf Property'.
- The Waqf is a religious endowment made under Muslim law, dedicating movable or immovable properties for religious, pious, or charitable purposes, aiming to benefit the needy.
- The Act is regulated by a survey commissioner, and the Waqf is managed by a mutawali, acting as a supervisor.

Details of Waqf and Waqf Board
- A Waqf can be either public — for charitable purposes, or private — for the benefit of the owner's direct descendants.
- The board, a legal entity, is responsible for administering Waqf properties, recovering lost properties, and sanctioning transfer deals with approval from at least two-thirds of the board members.
- India's Central Waqf Council, established in 1964, oversees and advises state-level Waqf Boards.

Significance of Waqf Properties
- Being the third-largest landholder in India, there are currently 8,72,292 registered Waqf properties across the country, generating about Rs. 200 crores in revenue.
- Once a property is designated as Waqf, it becomes non-transferable and assigned perpetually as a charitable act toward God, transferring ownership essentially to God.

Conclusion: The Potential Impact of The Waqf (Amendment) Bill, 2024
- The proposed amendments aim to enhance the management and transparency of waqf properties in India, improving governance, accountability, and resource utilisation, while empowering waqf boards and ensuring benefits reach the intended communities.
- The revised Act seeks to uphold the Waqf's integrity while promoting social welfare and economic development, potentially fostering greater community trust and engagement.

DNA Profiling in the Indian Justice System: Its Role, Legal Provisions and Limitations

Deciphering DNA Profiling

- DNA profiling identifies individuals using unique regions of their DNA, focusing on specific sequences called Short Tandem Repeats (STRs).
- It is instrumental in forensic investigations, using biological samples such as blood, saliva, and semen to extract DNA and generate a person's DNA profile.
- The process of DNA Profiling involves Isolation, Purification & Quantitation, Amplification, Visualization & Genotyping, and Statistical Analysis & Interpretation.

The Role of DNA Profiling in Legal Proceedings

- DNA profiling assumes a critical role in the legal system by comparing DNA profiles from evidence with known samples, leading to results that either match, exclude, or remain inconclusive.
- A random occurrence ratio is provided to indicate how often similar profiles may appear in the population.
- The Madras High Court highlighted that a DNA match does not conclusively prove identity, stressing the need for corroborating evidence.

Legal Provisions Regarding DNA Profiling in India

- DNA profiling in India is regulated under the Constitution of India, Code of Criminal Procedure, 1973 (CrPC), and the Indian Evidence Act, 1872.
- Under Article 20(3) of the Indian Constitution, individuals are protected from being compelled to testify against themselves.
- The CrPC stipulates provisions for DNA profiling of suspects at the investigation agency's request. Section 53A specifically allows DNA profiling for rape suspects.
- The Indian Evidence Act specifies sections related to admissibility of expert testimony, including DNA evidence.

Reviews of DNA Profiling in Legal Cases

- Key judicial precedents have highlighted the importance and limitations of DNA profiling in legal cases, ruling that DNA evidence varies in value depending on the facts and circumstances of the case.

DNA Technology Bill and DNA Profiling Limitations

- The DNA Technology Bill, 2019, proposed by the Law Commission, calls for comprehensive legislation for DNA profiling, focusing on preventing misuse and restricting DNA profiling to legal uses only.
- DNA profiling can be limited by environmental stress, sample degradation, complexity, unreliability, cost, and legal interpretation.
- The Bill, introduced several times in Parliament, faced opposition regarding the accuracy of DNA technology, potential privacy threats, and possibility of abuse.

The Way Forward for DNA Profiling

- To enhance DNA profiling's accuracy and reliability, investment in research and development is necessary.
- Establishment of standard procedures and quality control in forensic labs is crucial.
- The DNA Technology Bill of 2019 needs to be revisited and revised addressing privacy concerns and ensuring robust safeguards.
- Ensuring transparency in the process of DNA evidence collection, analysis, and court presentation is vital to maintain public confidence.

Examining the Call for a Uniform Civil Code: Panacea or Pandora's Box?

The Concept of a Uniform Civil Code (UCC)

- The Constitution of India, under Article 44, envisions a Uniform Civil Code for all citizens, irrespective of their religious affiliations, considering it a tool towards secularism.
- The directive principle, however, leaves its enactment to the discretion of the government.
- Presently, Goa is the only state in India that applies UCC, following the Portuguese Civil Code.

Historical Timeline on the Debate for UCC

- The British regime standardised criminal laws but left family laws to cater to diverse religious sentiments.
- Constituent Assembly deliberations raised concerns about UCC, particularly on its influence on personal religious laws.
- Indian scholars including K.M. Munshi, Alladi Krishnaswami, and B.R. Ambedkar advocated for UCC, claiming it would promote equity.

Supreme Court's Stance on UCC: A Series of Judgments

- The Supreme Court, in multiple landmark verdicts, has recommended the application of UCC, expressing concern over the non-implementation of Article 44.
- Cases include Mohd. Ahmed Khan vs Shah Bano Begum (1985), Sarla Mudgal v. Union of India (1995), John Vallamattom v. Union of India (2003), Shayara Bano v. Union of India (2017), and Jose

Paulo Coutinho v. Maria Luiza Valentina Pereira (2019)

The Law Commission's Stand
   - The 21st Law Commission (2018) under Justice Balbir Singh Chauhan stated that introducing UCC is currently "neither necessary nor desirable."
Potential Implications of Adopting the UCC
   - National Integration: UCC could encourage secularism, reduce sectarian conflicts, and reinforce constitutional values.
   - Gender Justice: UCC could ensure equality by addressing gender bias in personal laws.
   - Legal Simplification: The Code could unravel legal complexities as it integrates personal laws within a uniform structure.
   - Modernisation: UCC could potentially replace outdated, regressive practices like triple talaq, polygamy, and child marriage.

Challenges in Implementing the UCC
   - The vast range of personal law diversity in India might complicate UCC implementation.
   - Religious communities fear infringement on their constitutional rights, as stated under Article 25.
   - UCC also faces significant opposition from political and social forces.
   - Legislating a comprehensive UCC may get bogged down by extensive legislative work and detailed legal drafting, not to mention cultural considerations.

Suggested Path to UCC Realisation
   - Emphasise Unity over Uniformity: The UCC, while promoting unification, should respect India's diverse culture.
   - Engage Stakeholders: Collaboration with religious leaders, legal experts, and community representatives can pave the way for UCC.
   - Balancing Act: Neutralising practices that oppose constitutional norms, while ensuring cultural compatibility, is a delicate task.
   - Reassessing Cultural Practices: Communities need introspection about practices in conflict with constitutional values.
   - Education and Awareness: Familiarising citizens with UCC is vital for its smooth application, implying a need for extensive outreach programs.

State Current Affairs

WCC's Knowledge Exchange Program: A Boon for Kashmiri Artisans

Introduction and Synopsis of the News
- The World Crafts Council (WCC) is planning to organise a knowledge exchange programme for artisans of Kashmir. This initiative is designed to align them with cities that have historically influenced Kashmiri craft aesthetics.
- The programme will connect artisans of similar cultural backgrounds and expertise, facilitating cultural and technical enrichment for them.
- In June 2024, the WCC designated Srinagar as a World Craft City, further underlining the significance of Kashmiri crafts on the global scale.

About the World Crafts Council (WCC)
- The WCC is an international nonprofit organisation, established in 1964.
- Smt Kamaladevi Chattopadhyay, an eminent social reformer from India, was one of the founding members of this organisation.
- The primary goal of the WCC is to uphold the status of crafts as essential cultural and economic assets.

A Glimpse of Kashmiri Crafts

- Seven prominent crafts of Kashmir - Kani Shawl, Pashmina, Sozni, Paper-Mache, Walnut Wood Carving, Khatamband, and Hand Knotted Carpets, hold a Geographical Indication (GI) certification.
- These crafts form a vital part of Kashmir's rich cultural tapestry and have a significant bearing on its economic landscape.

Srinagar - The World Craft City

- Srinagar, as per the INTACH-Kashmir report of 2024, holds a glorious history of about 1500 years, thereby qualifying as one the ancient cities of South Asia.
- Srinagar is globally celebrated for the 'Cashmere' brand and the paisley motif.

- The city uniquely blends different cultural influences with crafts such as Zanjan and Filigree introduced by Iranian artisans five centuries ago.
- Srinagar initiated its carpet-making tradition in the late 14th century under the influence of Sufi Saint Sayyid Ali Hamdani.
- A testament to its rich craft heritage, Srinagar was recognized as a UNESCO Creative City for crafts and folk arts in 2021.

Role of Indian National Trust for Art and Cultural Heritage (INTACH)

- Established in 1984 in New Delhi, INTACH endeavours to promote heritage awareness and conservation within India.
- Known as one of the world's largest heritage organisations, INTACH has played a crucial role in recognising and documenting the craft heritage of cities like Srinagar among others.

In conclusion, WCC's planned programme promises to be an enriching experience for Kashmiri artisans, providing them an opportunity for cultural exchange and technical enhancement. It signifies an essential step towards bringing the spotlight on the invaluable craft heritage of Kashmir.

Uttarakhand Pioneers Environmental Valuation with India's First Gross Environment Product

Introduction and About
- Uttarakhand has set a historic precedent by becoming the first Indian state to attribute monetary values to its abundant and diverse natural resources. Termed as the "Gross Environment Product (GEP)", this pioneering initiative includes air, water, forest, and soil among its gamut of valued ecosystems.

Why in the News?
- This new environmental-economical initiative places Uttarakhand in the limelight for recognizing and integrating the value of its ecosystem services and natural resources into sustainable economic planning.

Understanding the Gross Environment Product
- The Gross Environment Product (GEP) is a part of the Green Gross Domestic Product (Green GDP). It is calculated as the aggregate value of ecosystem services and products that contribute significantly to human welfare and sustainable socio-economic development. This includes various essential ecosystem services such as provisioning, regulating, and cultural services.
- The Green GDP, on the other hand, is an escalation over the standard GDP. It accounts for environmental costs like biodiversity losses and climate change impacts, along with conventional economic growth measurements.
- The GEP Index provides for a distinct compilation of man-made environmental conservation efforts, like Amrit Sarovars, separate from natural processes such as rainfall.
- The inaugural GEP index offers comparative data from 2020-2022. It shows an encouraging increase of 0.9% in environmental products.

GK and Significance
- This is the first time in India where a state has successfully integrated economic planning with ecological conservation by attributing monetary units to natural resources.
- The move marks a significant shift from the traditional measurement of economic success solely based on GDP, taking a more holistic approach by factoring in environmental sustainability.
- The GEP will serve as an essential tool for policymakers by providing comprehensive data on the health of the environment and the economic value of maintaining it.
- Monitoring of environmental changes through GEP might help to design proactive strategies for environmental conservation.
- Finally, this step could inspire other states to follow suit, promoting nationwide environmental sustainability while driving economic growth.

In essence, Uttarakhand's move to implement the GEP marks an essential stride towards an environmentally conscious future, underlining the potential harmony between economic development and environmental conservation.

Meeting and Submits

India's Participation and Diplomatic Efforts in Recent ASEAN Meet

The Importance of ASEAN in India's Foreign Policy

- External Affairs Minister of India stressed on ASEAN being the core of India's 'Act East Policy' and 'Indo-Pacific vision', during the recent meet that took place in Vientiane, Laos.

- 2024 will be a significant year marking the 10th anniversary of India's Act East Policy, which was announced in 2014 at the 9th East Asia Summit.

- This policy aims at enhancing India's commercial, strategic, and cultural relations with the Asia-Pacific region, thereby emphasising the crucial role played by the ASEAN partnership in India's political, economic, and security cooperation.

The Vision and Key Focus Areas

- In this meet, India stood for a free, open, inclusive, and peaceful region with a rules-based international order.

- Discussions involved expanding bilateral cooperation and people-to-people linkages.

Understanding The Association of Southeast Asian Nations (ASEAN)

- ASEAN, as a regional intergovernmental organisation, came into existence on August 8, 1967, in Bangkok, Thailand.

- The ASEAN Declaration was signed by five founder members: Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

- ASEAN expanded over years to include Brunei Darussalam, Vietnam, Laos PDR, Myanmar, and Cambodia.

- It is believed that by 2050, The ASEAN region will hold the position of the 4th-largest economy in the world.

- ASEAN's significant role in promoting economic integration among the member countries is noteworthy, especially with its effort in negotiating the world's largest free trade agreement - the Regional Comprehensive Economic Partnership.

- The ASEAN Summit is the highest policy-making body that meets twice in a year.

ndia-ASEAN Bonds

- India-ASEAN relationship traces back to 1992 when India began formal engagements as a "Sectoral Dialogue Partner", followed by status enhancement as a "Dialogue Partner" in 1995.

- In 2012, the relationship was uplifted to a Strategic Partnership and further to a Comprehensive Strategic Partnership in 2022.

Impact on Indo-Pacific Region

- The Indo-Pacific region is a diverse, extensive area constituting the Indian and western/central Pacific Oceans, with geopolitical importance.

- This region is home to major powers like India, US, Japan, and China. It accounts for over half the world's population, 60% of global GDP, and 2/3rd of global economic growth.

- The Indo-Pacific region faces certain challenges including territorial disputes, terrorism, piracy, nuclear proliferation, and environmental concerns.

- India's vision for this region is based on the principles of freedom, openness, and inclusivity while addressing disputes peacefully and respecting every nation's sovereignty and territorial integrity.

A Collaborative Venture: Ayush Ministry and WHO Donor Agreement

Introduction:

In a landmark move towards promoting traditional healthcare methods, the Ministry of Ayush and the World Health Organization (WHO) recently signed a Donor Agreement during a ceremony at the WHO Headquarters in Geneva in July 2024.

Unveiling the Donor Agreement:

- The agreement elucidates the financial terms required to execute the operations of the WHO Global Traditional Medicine Centre (GTMC) located in Jamnagar, Gujarat.

- It was drawn up against the backdrop of growing international interest in traditional complementary integrative medicine(TCIM).

Recognising the WHO Global Traditional Medicine Centre:

- The WHO Global Traditional Medicine Centre is highly acknowledged for its potential as a significant reservoir of knowledge pertaining to

evidence-based Traditional Complementary and Integrative Medicine (TCIM).

- The aim is to capitalise on traditional methods to improve the health and well-being of people worldwide while contributing constructively to ecological sustainability.

India's Significant Contribution:

- The agreement termed India as a major donor, pledging to contribute USD 85 million over a span of 10 years (2022-2032).
- The funds will be utilised to boost the operations of the WHO Global Traditional Medicine Centre (GTMC) in Jamnagar.

The Role of the WHO GTMC in Jamnagar, Gujarat:

- The WHO GTMC located in Jamnagar, Gujarat is a milestone in itself, being the first and only global out-posted centre for traditional medicine across the globe.
- Its strategic location fosters the propagation and exchange of traditional knowledge worldwide.

Understanding Traditional Medicine Systems:

- Traditional medicine essentially refers to an array of knowledge, skills and practices derived from diverse cultures and used over generations to preserve health, as well as to diagnose, treat and prevent physical and mental illnesses.
- India is home to a rich heritage of six recognised systems of traditional medicine, namely, Ayurveda, Siddha, Unani, Yoga, Naturopathy and Homeopathy.

GK Update: This alliance not only amplifies India's role in global health diplomacy but also reinforces its commitment towards the preservation and promotion of traditional health knowledge. This reinforces India's status as a global health player contributing actively to integrative, traditional healthcare worldwide.

Accelerating the BIMSTEC Free Trade Agreement: Significance and Outcomes

Introduction and Background

- BIMSTEC, or the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, is a regional organisation comprising seven member countries: India, Bangladesh, Bhutan, Nepal, Sri Lanka from South Asia and Myanmar and Thailand from South East Asia.
- The primary objective of this initiative is to facilitate socio-economic development and enhance regional cooperation.
- The BIMSTEC Free Trade Agreement (FTA) is a crucial component of this initiative and was signed in February 2004.

The Need for Fast-Tracking the FTA

- The urgency to expedite the BIMSTEC Free Trade Agreement was articulated by the Indian Minister of Commerce & Industry at the BIMSTEC Business Summit in New Delhi.
- The Minister stressed on kick starting with a preferential trade agreement to boost intra-regional trade and investment, thereby uplifting regional competitiveness.

India's Trade Relation with BIMSTEC Countries

- The total trade between India and the BIMSTEC nations equaled USD 44.32 billion in the financial year 2023-24, indicating the significant financial integration within this regional bloc.
- Among BIMSTEC countries, Thailand emerged as India's largest trading partner, with exports and imports valued at USD 5.04 billion and USD 9.91 billion, respectively.
- Bangladesh came in second, with trade figures presenting a favourable balance for India, marked by exports of USD 11.06 billion and imports of USD 1.84 billion.

BIMSTEC Free Trade Agreement Elements

- The BIMSTEC FTA includes provisions for negotiation of Free Trade Agreement on goods, services, investment, and economic cooperation among the participating nations.
- The BIMSTEC countries established a Trade Negotiating Committee particularly to expedite negotiations in line with the Framework Agreement.

The Significance of BIMSTEC FTA for India

- BIMSTEC offers a strategic advantage for India, as it provides access to fast-growing markets and resources of Southeast Asia and simultaneously negates the geopolitical redundancy of South Asian Association for Regional Cooperation (SAARC).
- It strengthens India's Act East Policy, enhancing its engagement with the economically vibrant Southeast Asian region.
- Accelerating the BIMSTEC FTA also translates to increased economic activities, investment

opportunities, and improved competitiveness for the output from this region in the global market.

Conclusion
- Thus, fast-tracking the BIMSTEC Free Trade Agreement holds immense potential for enhancing regional integration, fostering economic growth, and uplifting the competitiveness of member nations in the global market. The outcomes of this accelerated process would be watched keenly across the globe for the potential impacts and changes it brings to the geopolitical landscape.

India's Leadership at 3rd Voice of Global South Summit 2024

Overview of the Summit

- India hosted the 3rd Voice of Global South Summit (VOGSS) on August 17, 2024, themed "An Empowered Global South for a Sustainable Future".
- This event saw participation from 123 nations, excluding China and Pakistan.
- The first two editions of VOGSS were also hosted by India in a virtual format and took place in January and November 2023 respectively.

Objectives and Necessity of VOGSS

- The VOGSS is a novel initiative led by India to unite Global South countries and address a broad spectrum of issues through shared perspectives and priorities.
- It mirrors India's philosophy of "One Earth, One Family, One Future", aligned with the Prime Minister's vision of Sabka Saath, Sabka Vikas, Sabka Vishwas and Sabka Prayas.
- The summit was necessitated by several global challenges facing the developing world including the Covid pandemic, Ukraine conflict, debt crisis, and food and energy security issues.
- The objective is to give due attention to the often-neglected concerns of the developing world and provide a platform for globally addressing these concerns.

Key Outcomes of 3rd VOGSS 2024

- The Prime Minister of India proposed a comprehensive four-fold Global Development Compact (GDC) encompassing trade for development, capacity building for sustainable growth, technology sharing, and specific financial and grants projects.
- India announced initiatives for development partnerships with Global South countries, including two separate funds of USD 2.5 million and USD 1 million for trade promotion activities and trade policy capacity building respectively.
- India pledged to provide affordable generic medicines to Global South states, train drug regulators, and share experiences in 'natural farming'.
- Emphasis was laid on just and inclusive global governance and the need for reforming global institutions to prioritise Global South's concerns.
- Collaboration for the achievement of Sustainable Development Goals (SDGs) and tackling challenges of development finance, health, climate change, technology, governance, energy, trade, youth empowerment, and digital transformation were emphasised.

Explanation of "Global South"

- American academic Carl Oglesby coined the term "Global South" in 1969. It broadly refers to the regions of Latin America, Asia, Africa, and Oceania segregated by the Brandt line primarily based on GDP per capita.
- These regions, outside Europe and North America, are mostly low-income and often politically or culturally marginalised.
- China and India are the principal proponents of the Global South.

India's Challenges as the "Voice of Global South"

- India faces geopolitical competition, especially from China who is expanding influence in the Global South through the Belt and Road Initiative (BRI).
- India's food security decision to limit rice exports has been criticised, which poses a challenge to its leadership role in the Global South.
- Concerns about contaminated medicines linked to Indian manufacturers have put India's reputation as the "pharmacy of the world" under scrutiny.
- Critics argue India should emphasise its internal development issues before leading others in the Global South.

The Way Forward

- India needs to enhance its strategic partnerships, focus on co-operative projects in technology, education, and healthcare to counter China's influence.
- Advocacy for a development model prioritising sustainability and inclusivity can distinguish India from China's dominance.
- To maintain credibility in the Global South, India needs to balance domestic food security with global responsibilities.

India's Prime Minister's Historic Visit to Ukraine: Dynamics, Takeaways, and Impacts

Historic Milestone in India-Ukraine Relations
- The Indian Prime Minister's visit to Ukraine was the first by an Indian head of state since Ukraine's independence in 1991.
- India was among the first nations to offer recognition to Ukraine after its secession from the Soviet Union in 1991.
- The visit aims to strengthen India's wider engagement strategy with Europe, marking a significant shift from the traditional focus on the region's large powers - Germany, France, Russia, and Britain.

Key Developments during the Visit

- Emphasis on India's stance regarding the Russia-Ukraine conflict with the aim of promoting peace and resolution of the conflict.
- Establishment of an Intergovernmental Commission to restore and improve bilateral trade and economic ties that had faltered due to the Ukraine-Russia conflict.
- Signing of four crucial agreements in fields like agriculture, medical product regulation, and cultural cooperation to foster bilateral ties.
- India's generous donation of four BHISHMA cubes to Ukraine for providing emergency medical care.
- An invitation to Ukrainian President, Volodymyr Zelenskyy to visit India – a symbol of strengthening bilateral relations.

The Defence Sector: A Cornerstone for India-Ukraine Relations

- Ukraine's expertise in defence tech offers avenues for collaboration and joint manufacturing with India.
- Ukraine supplies major components for India's Soviet-era defence equipment, Indian Navy warships, and the IAF (Indian Air Force).
- Ukraine has also expressed interest in procuring military hardware from India, offering potential benefits to the Indian defence industry.

Persistent Challenges in the India-Ukraine Bond

- The ongoing Russia-Ukraine conflict presents a continual obstacle in India's relations with Ukraine and its Western allies.
- Disruptions in the supply chain for crucial defence equipment have occurred due to the ongoing conflict.
- Differences in foreign policy priorities and Ukraine's occasional comments on the issue of Kashmir pose another underlying challenge in the bilateral relations.

Looking ahead: Future Directions for India-Ukraine Relations
- India must judiciously address its position on the Russia-Ukraine conflict, balancing its historical ties with Russia and respect for Ukraine's sovereignty.
- India should continue to uphold its policy of strategic autonomy and non-alignment, affirming its independent relations with Russia and Ukraine.

Through this trip, India has demonstrated a steadfast approach to foster meaningful diplomatic ties with eastern European countries, while also showcasing its mature handling of complex international conflicts. This visit has major implications for India's standing in the global arena and its evolving diplomatic strategies.

Schemes and Initiative

"Million Designers, Billion Dreams" Initiative: An Innovative Empowerment Drive

Introduction to the "Million Designers, Billion Dreams" Initiative

- The "Million Designers, Billion Dreams" initiative is a recent program launched under the Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM).
- This innovative program aims to empower rural leaders, change-makers, and village entrepreneurs by imparting them with system design skills essential to produce scalable and impactful solutions.

Significance and Tenets of the Initiative

- The initiative is designed to enhance participants' proficiency in design frameworks that affect systems change.
- It emphasises promoting collaboration among diverse stakeholders to effectively address complex challenges.
- The program also cultivates the spirit of creativity and ownership, fostering confidence and agency to shape better futures.

Role of LEAP and the DAY-NRLM

- The initiative is spearheaded by the Leadership for Academics Program (LEAP) in partnership with the DAY-NRLM.
- The DAY-NRLM is a flagship poverty alleviation program undertaken by the Ministry of Rural Development, Government of India.

Historical Context and Importance of DAY-NRLM

- The National Rural Livelihood Mission (NRLM) was introduced in 2010, superseding the erstwhile Swarnajayanti Grameen Swarojgar Yojana (SGSY).
- In 2016, the program adopted its current name Deendayal Antyodaya Yojana — National Rural Livelihood Mission (DAY-NRLM).
- Funded jointly by the central and state governments, the mission aims at building strong institutions like Self-Help Groups (SHGs), especially for the marginalised and women.
- These institutions have access to a wide range of financial services and livelihoods.
- The DAY-NRLM encompasses four key components: (i) social mobilisation, community institution, and capacity building; (ii) financial inclusion; (iii) livelihood promotion; and (iv) convergence.

Conclusion - Potential Impact of the Initiative

- The "Million Designers, Billion Dreams" initiative, with its focus on training in design skills, could have a transformative effect on rural communities.
- By enhancing creativity and encouraging innovation, the program could lead to the development of impactful and scalable solutions for challenging rural issues.

The Deen Dayal SPARSH Yojana: A New Frontier for Young Philatelists

Overview of the Deen Dayal SPARSH Yojana

- The Government of India has introduced the Deen Dayal SPARSH Yojana, a nationwide scholarship scheme for school students.
- The acronym SPARSH stands for 'Scholarship for Promotion of Aptitude & Research in Stamps as a Hobby,' indicating that the scheme aims to promote philately, the collection and study of postage stamps.
- This program targets students from Standard VI to IX who have a good academic record and are actively engaged in philately as an interest.

Objective and Expectations from the SPARSH Scheme

- Central goal of the SPARSH Yojana is to expand the reach of philately, implying that the program seeks to encourage more students to take up stamp collection as a hobby.
- The scheme plans to foster a competitive environment, assigning scholarships through a selection process encompassing all postal circles in India.

Criteria for Scholarship Eligibility

- To be eligible for the scholarship, a student must be enrolled in a recognized school in India and belong to a Philately Club in the school.
- If a school has not yet formed a Philately Club, then a student possessing their own Philately Deposit Account may be considered.

Role of Philately Mentors in SPARSH Yojana

- As per the scheme, prospective schools participating in the competition would be matched

with a Philately mentor, chosen from among the renowned Philatelists.

- The mentors would be instrumental in forming the School level Philately Club, guiding young aspiring Philatelists in their pursuit of the hobby, and providing assistance with Philately Projects.

Selection Procedure for SPARSH Yojana

- The selection of scholarship recipients under the SPARSH Yojana is based on an evaluation of Philately Project work and performance in a Philately Quiz conducted by the Circles.

- This rigorous selection procedure emphasises the project's aim to not only increase interest in Philately but also foster original research and in-depth study in the field.

General Knowledge Part:

- Philately is not just stamp collection, but a more inclusive study of postal stamps, stamped envelopes, postal stationery, postmarks, and related items.

- Philately has a rich history, being one of the oldest hobbies in the world. The first postage stamp, the "Penny Black," was issued in Britain in 1840, marking the beginning of an era for stamp collection.

- This hobby is well-known for enhancing knowledge of history, geography, and culture, as stamps often depict important events, landscapes, and national heritage.

- The initiative by the Government of India to encourage Philately among young students through the Deen Dayal SPARSH Yojana is a positive step towards emphasising the importance of such educational hobbies. It not only boosts the hobby of Philately but also contributes to the overall development of students by increasing their knowledge base and promoting research skills.

Sweeping Upgrades in FloodWatch India 2.0: An Efficient Tool for Flood Monitoring

Unveiling of FloodWatch India 2.0:

- The Union Minister for Jal Shakti recently launched the second version of the FloodWatch India app, developed by the Central Water Commission (CWC).

- The launch reflects the government's commitment to utilise digital technology to boost disaster management.

About FloodWatch India:

- The application is designed to provide real-time data on flood situations and gives forecasts for up to 7 days, aiding users in effective planning.

- The app features a user-friendly interface available in both English and Hindi, including readable and audio broadcasts.

- Through the 'FloodWatch India', users can undertake real-time flood monitoring and check up-to-date flood situations across India.

- Advanced technologies such as satellite data analysis, mathematical modelling, and real-time monitoring are used to ensure accurate and timely flood forecasts.

- Users can view state-wise or basin-wise flood forecasts and advisories, providing personalised, area-focused alerts.

What's New in FloodWatch India 2.0:

- The second version of the app includes additional features that significantly enhance its utility.

- Users can now access information from an expanded network of 592 flood monitoring stations, an enhancement over the previous version's 200 stations.

- The app now includes data about the storage positions of 150 major reservoirs across the country. This added element offers a deeper perspective on potential flood situations downstream.

Significance for General Knowledge & Current Affairs:

- Understanding flood dynamics is crucial given India's history with monsoon-related flooding events.

- This development also highlights the Indian Government's move towards responsive and technology-driven governance, an important facet of modern public administration.

Geographical Relevance:

- India, with its diverse geography across states, experiences varying flood patterns. This app is crucial in providing region-specific forecasts, aiding disaster management efforts.

- The integration of major reservoir data also sheds light on India's water management infrastructure, a significant aspect of its geography.

Union Cabinet Approves the 'Vigyan Dhara' Scheme

An Overview of 'Vigyan Dhara'

- As an initiative to strengthen the Science, Technology and Innovation (STI) ecosystem in India, the Union Cabinet recently approved the 'Vigyan Dhara' scheme.
- The scheme operates under the Department of Science and Technology (DST), merging various existing schemes.
- Spanning the duration of the 15th Finance Commission period (2021-22 to 2025-26), Vigyan Dhara prominently features three components:
  1. Science and Technology (S&T) Institutional and Human Capacity Building
  2. Research and Development
  3. Innovation, Technology Development and Deployment.
- Existing schemes, such as the INSPIRE programme, will now operate under these three components.

Objectives and Goals of 'Vigyan Dhara'

- The primary objective of this scheme is to enhance S&T capacity building, innovation, research, and technology development in India.
- It plans to create a more balanced gender representation within the S&T industry by implementing focused interventions to boost women's participation.
- All programs within the 'Vigyan Dhara' scheme will dovetail with the DST's 5-year goals towards realising the vision of Viksit Bharat 2047.
- To adhere to global standards while tackling national priorities, the Research and Development component of the scheme will complement the Anusandhan National Research Foundation (ANRF).

The Office of the Principal Scientific Adviser

- The Office of the Principal Scientific Adviser came into existence in November 1999.

- Its key objectives include the generation of strategies, policies and missions for various innovative applications, while also coordinating scientific S&T tasks in vital economic, social and infrastructure sectors with government departments, institutions, and industry.
- The Prime Minister's Science, Technology and Innovation Advisory Council (PM-STIAC) aids this office as a supervisory council.

Role of the Department of Science and Technology

- The foundation of the DST was laid on 3rd May 1971, drawing from the model of the National Science Foundation (NSF), USA.
- Besides funding, DST is a policy-making body and coordinates scientific work with other nations.
- DST empowers scientists, scientific institutions, and works closely with a diverse system that includes school and college students, early-career researchers, startups, and NGOs active in the S&T domain.

This new scheme is set to play a significant role in enhancing India's science and technology capabilities while cultivating a balanced gender representation in this sector.

Revolutionising Indian Cotton Culture - The Kasturi Cotton Bharat Programme

An Introduction to Kasturi Cotton Bharat Programme

- The Kasturi Cotton Bharat programme is an initiative by the Ministry of Textiles aiming at the traceability, certification, and branding of Indian cotton.
- It is a joint effort made by the Indian government, more specifically the Cotton Corporation of India, trade bodies, and the cotton industry to enhance the traceability and certification of cotton.
- A microsite has been developed for this program embedded with a QR code feature and a blockchain platform, contributing significantly to achieving end-to-end traceability and transaction certification.

Implementation and Impact on a National Level

- The programme is promoted nationally and internationally, with funds allocated on a national level instead of specific states.
- Approximately 343 modernised ginning and pressing units are registered under the program with 15 units in Andhra Pradesh.
- About 100 bales from Andhra Pradesh have been certified under the Kasturi Cotton Bharat brand.

Importance of Cotton in Indian Economy

- Also known as the "White-Gold", cotton contributes significantly to India's economy, accounting for 25% of global production.
- Cotton is a versatile crop that can grow in various soil types and hot, sunny climates yet is sensitive to waterlogging.

General Knowledge Facts about Cotton
- Cotton is a Kharif crop which requires 6 to 8 months to mature.
- It is a drought–resistant crop ideal for arid climates.
- Cotton occupies 2.1% of the world's arable land, meeting 27% of the world's textiles needs.
- The ideal temperature for its growth is between 21-30°C and rainfall required is around 50-100 cm.
- The crop thrives best in well-drained black cotton soil, also known as Regur Soil, found extensively in the Deccan Plateau.
- Its products include fibre, oil, and animal feed.
- The top cotton producing countries are India, China, and the USA, respectively. In India, the leading cotton producers are Gujarat, followed by Maharashtra, Telangana, Rajasthan, and Andhra Pradesh.
- There are four cultivated species of cotton: Gossypium arboreum, G.herbaceum, G.hirsutum, and G.barbadense.
  - Gossypium arboreum and G.herbaceum are old-world cotton or Asiatic cotton.
  - G.hirsutum, known as American or upland cotton, and G.barbadense, known as Egyptian cotton, are both new world cotton species.
- Hybrid Cotton refers to cotton created by crossing two parent strains with different genetic characters. This often happens spontaneously in nature when open-pollinated plants cross-pollinate with other related varieties.
- Bt-Cotton is a genetically modified, pest-resistant variety of cotton.

Increasing Burden of Healthcare Costs for Senior Citizens under Ayushman Bharat

Introduction to Ayushman Bharat Scheme:

- Launched as a flagship scheme by the Government of India, Ayushman Bharat aims for Universal Health Coverage.
- The scheme involves two components: Health and Wellness Centres (HWCs) for primary health care and Pradhan Mantri Jan Arogya Yojana (PM-JAY) for secondary and tertiary healthcare.
- The scheme is implemented at both national and state levels, covering approximately 55 crore beneficiaries.

Recent Trends:

- Nearly 57.5 lakh out of the total approved hospital admissions are senior citizens aged 70 years and above.
- States with the highest elderly admission rates include Maharashtra and Kerala.
- While admissions for senior citizens are lower in Tamil Nadu, the cost of treatment there remains high.

Concerns Raised by Recent Data:

- With an ageing population expected to hit 19.5% by 2050, the financial burden on Ayushman Bharat is steadily increasing.
- Despite an ongoing plan to include all senior citizens over 70 years old, funding for the expansion seems bleak due to the minor increase in budget allocation.
- The need to provide comprehensive coverage to all senior citizens amidst rising healthcare costs is a major focus for policy makers.

Implications and Expert Points of View:

- Elderly individuals' predilection for healthcare increases the cost of the policy.
- As per experts, the cost for covering the ageing demographic may exceed the expenditure for covering the poorest 40% across all age groups.

Other Elderly Healthcare Initiatives in India:
- The government of India has launched several other initiatives such as Seniorcare Aging Growth Engine Initiative, Rashtriya Vayoshri Yojana,

SACRED Portal for Elderly, and helplines for elderly individuals.

The Way Forward:

- Targeted interventions including specialised packages to deal with common geriatric conditions are needed to optimise resources.
- The Ayushman Bharat budget allocation needs to be increased, particularly for geriatric care to ensure financial sustainability.
- Preventive healthcare measures for chronic conditions and community health programs promoting regular check-ups and early detection need to be emphasised.
- Leveraging public-private partnerships to share the financial burden can also be a viable solution.

This comprehensive overview covers the crucial aspects of the impact of the Ayushman Bharat scheme on senior citizens and suggests potential reforms to counteract the challenges faced due to increasing healthcare costs for the elderly.

India's Solar Energy Boost: Omkareshwar Floating Solar Project
Introduction to Omkareshwar Floating Solar Project
- Omkareshwar Floating Solar Project, with a power generation capacity of 90 MW, is a significant milestone in India's renewable energy journey.
- This project was recently commissioned by SJVN Green Energy Limited, a Mini Ratna Schedule 'A' Central Public Sector Undertaking under the Ministry of Power, Government of India.

Project Significance and Geography
- The plant is located in the Omkareshwar Floating Solar Park, on the Narmada river in Khandwa district, Madhya Pradesh.
- Known for being the largest floating solar park in India, this project holds significant geographical importance.
- The unique design of a 'floating' solar park enables land conservation and better efficiency due to a cooler environment.

Climate Impact and Goals
- The project will significantly reduce carbon emissions, estimated to be about 2.3 lakh tons of CO_2. This aligns with India's commitment to achieve net-zero emissions by 2070.

- In addition to green energy generation, it also aids in water conservation by reducing water evaporation.

India's Capacities in Renewable Energy
- India has made remarkable strides in the renewable energy space, with total installed capacity at 195.01 GW as of May 2024.
- Solar is a substantial contributor with 85.47 GW capacity by June 2024. Other significant contributors are wind power at 46.65 GW, large hydropower at 46.92 GW, biomass/cogeneration at 10.35 GW, small hydropower at 5 GW, and waste-to-energy protocols at 0.59 GW.

Forwarding The Renewable Energy Agenda
- The Omkareshwar Floating Solar Project seals India's commitment to enhance its renewable energy capacity.
- The convergence of technological innovation and governmental support will continue to power this momentum, paving the way for more such projects.

Conclusion: In a world grappling with climate change, renewable energy projects like the Omkareshwar Floating Solar Project are critical. It not just augments India's energy capacities but also illuminates the path to a cleaner, greener future.

"Har Ghar Tiranga, Har Ghar Khadi" Campaign: A Revolutionary Approach to Increasing Khadi Use

Encouraging National Pride & Use of Khadi through "Har Ghar Tiranga, Har Ghar Khadi" Campaign

Introduction and About:
- "Har Ghar Tiranga, Har Ghar Khadi" is a significant campaign introduced to promote the use of Khadi, India's traditional textile. The campaign was recently unveiled by the Chairman of the Khadi and Village Industries Commission (KVIC).
- This innovative initiative looks to increase the use and trade of Khadi clothes by encouraging the hoisting of national flags made from Khadi.

Why in News:
- As part of this campaign, special national flags, 3X2 feet in dimension and made entirely of

Khadi/Polyester, are made available at Khadi stores nationwide at a nominal cost of Rs 198.
- Prime Minister Narendra Modi, resonating with the campaign's spirit, appealed to the nation to join the Tiranga Yatra initiative on Independence Day and encouraged buying clothes made of Khadi.

Salient Aspects of the "Har Ghar Tiranga (HGT)" Campaign:
- The campaign plans to observe its 3rd edition from 9th to 15th August 2024, concurrent with the Independence Day celebrations.
- Its primary goal is to impart a sense of patriotism and national pride among citizens by inspiring every Indian to hoist the national flag.
- The campaign, first unveiled under the umbrella of Azadi Ka Amrit Mahotsav in 2022, has since grown into a popular people's movement.
- Complementing this campaign are outreach activities such as Tiranga Concerts, Street Plays (Nukkad Nataks), and Exhibitions showcasing the Evolution of Tiranga.

The Significance of National Flag Day:
- India adopted its national flag on 22nd July 1947, under the guidance of Dr. Rajendra Prasad, who chaired the Constituent Assembly of India at the time.
- The national flag signifies national pride, unity, and the struggle for freedom; it serves as a silent yet robust tribute to the sacrifices made by the nation's freedom fighters.
- Such initiatives that blend patriotism and indigenous industries' promotion, like the "Har Ghar Tiranga, Har Ghar Khadi" campaign, act as drivers in creating awareness and participation among the citizens towards supporting home-grown industries and national heritage.

Promoting Sustainable Fertilisation and Skilling Youth: PM-PRANAM and NATS 2.0 Portal

Spotlight on PM-PRANAM
- The Union Minister of State for Chemicals and Fertilisers has disclosed details about the recently initiated PM-PRANAM during a Lok Sabha session.

- The acronym PM-PRANAM represents PM Programme for Restoration, Awareness Generation, Nourishment, and Amelioration of Mother-Earth.
- The scheme was introduced in the 2023-24 Budget by the Union government with significant motives:
   - To support states/UT in promoting the sustainable and balanced use of fertilisers.
   - To encourage the application of alternative fertilisers for greener environments.
   - To advocate for organic and natural farming practices.
- A unique financial mechanism accompanies this initiative, in which states and UTs that demonstrate reduced chemical fertiliser usage compared to the average of the preceding three years will be rewarded with 50% of the savings from the fertiliser subsidy.

Unveiling of NATS 2.0 Portal
- The Union Minister for Education has initiated the National Apprenticeship and Training Scheme (NATS) 2.0 Portal in New Delhi.
- A staggering total of ₹100 crore in stipends was distributed to apprentices through the Direct Benefit Transfer (DBT) mode.
- The NATS 2.0 portal has been devised by the Ministry of Education, with support from AICTE and BoATs/BoPT.
- It skillfully manages apprenticeship lifecycle activities, including student registration, vacancy advertisements, applications, contract creation, certification, and stipend disbursal, and thereby enhances the skill of youth and improves employability.
- The portal also lends support to industries by aiding them in managing vacancies and contracts and equipping them to meet future challenges.
- The apprentices are receiving training in diverse sectors including IT/ITes, manufacturing, and automobiles.

Quick Facts on NATS
- NATS is one of the flagship programmes of the Indian Government aimed at skilling Indian youth in trade disciplines.
- The scheme, under the Apprentices Act 1961 (amended 1973), provides a platform for Graduate, Diploma students and Vocational certificate holders to gain practical, hands-on jobs based skilling

opportunities. The training duration varies from 6 months to 1 year.
- The introduction of NATS 2.0 displays the government's effort to democratise apprenticeships, address skills gaps, and meet the aspirations of Indian youth.

Power Sector's Technological Leap: PROMPT, DRIPS and JALVIDYUT-DPR Portals

Introduction and Overview

- The Union Minister of Power, in coordination with the Central Electricity Authority (CEA), has recently launched three online platforms - PROMPT, DRIPS, and JALVIDYUT DPR.
- These innovative digital solutions aim to boost efficacy, transparency, and responsiveness in the Power sector.

Unveiling the Power of PROMPT

- Portal for Online Monitoring of Projects-Thermal (PROMPT) is a real-time tracking platform for thermal power projects under construction across India.
- This digital solution seeks to identify and address, promptly and effectively, the hurdles causing delays in the construction of thermal power plants.

Disaster Resilience through DRIPS

- The Disaster Resilient Infrastructure for Power Sector (DRIPS) portal is a strategic response to effectively manage power disruptions caused by natural calamities like cyclones, earthquakes, and floods.
- DRIPS connects nodal officers across the power sector promptly, thereby ensuring rapid restoration of power supply in calamity-struck areas.

Streamlining Hydroelectric Projects with JALVIDYUT DPR

- JAL VIDYUT DPR monitors the survey and investigation activities of hydroelectric and pumped storage projects under construction countrywide.

- This platform aims to amplify the efficiency of management and coordination related to the building of these power plants.

Peek into Central Electricity Authority (CEA)

- The CEA, which had a pivotal role in developing these platforms, has a history dating back to 1951. It was instituted under the Electricity (Supply) Act of 1948, and later re-commissioned under the Electricity Act of 2003.
- The CEA operates under the Ministry of Power. It is tasked with preparing the National Electricity Plan, approving new hydroelectric power plants, among other responsibilities.
- The CEA's structure entails a Chairman and six full-time members appointed by the central government and is headquartered in New Delhi.

These technological strides in the Power sector not only enhance monitoring and response mechanisms but also hold substantial promise for the overall development and efficiency of the energy sector in India.

RBI Enhances Regulatory Surveillance on NBFC-P2P Lending Platforms amid Regulatory Violations

Overview of the Scenario

- The Reserve Bank of India (RBI) has tightened its regulatory observation on Non-Banking Financial Companies–Peer to Peer (NBFC-P2P) Lending Platforms. This initiative is in the wake of numerous regulatory violations being discovered.
- High levels of non-performing assets (NPAs), unauthorised deposit acceptance, and unusually high balances in escrow accounts were among the regulatory infringements identified.

Identification of Violations and their Impact

- During the RBI's examination, it was revealed that some P2P platforms permitted lenders to withdraw funds prematurely. They replaced them with new lenders, who were oblivious of the loans, reflecting the characteristics of Ponzi schemes.
- A Ponzi scheme, named after Charles Ponzi who initiated such fraudulent investment practices in Boston, USA in 1919, is a form of investment fraud.

It involves paying existing investors using funds collected from newer investors.

- Through its review, RBI raised concerns over these serious regulatory violations which indicated a misuse of the P2P lending platforms.

Explaining P2P Lending Platforms

- P2P lending platforms offer a platform for individuals to lend directly to borrowers through RBI-regulated NBFCs. This system assists in swift loan disbursements for short-term needs.

- According to the RBI, NBFC-P2P entities should act just as intermediaries without assuming any credit risk. However, during the review, instances of violation of these norms were detected.

- It's important to note that P2P platforms are not permitted to endorse peer-to-peer lending as an investment product offering features like guaranteed minimum returns or liquidity options.

Expectation of Compliance to RBI Guidelines

- The Reserve Bank of India, acting as a regulatory body, necessitates the strict adherence of NBFC-P2P entities to its guidelines.

- Any deviation from these rules not only attracts penalties but also puts the security of the lenders at risk, thus necessitating the ongoing scrutiny of the RBI.

Strengthening the Financial Ecosystem

- The RBI intensifying its scrutiny represents the government's commitment to strengthen the financial ecosystem, and maintain the transparency, credibility, and integrity of India's financial institutions.

In conclusion, the recent heightened scrutiny by RBI on P2P lending platforms highlights potential risks in the system. It is a call to all involved parties to operate within regulatory norms to maintain the healthy functioning of the financial ecosystem.

Rank Report and Awards

Review and Analysis of India's Performance at Paris Olympics 2024

Performance Highlights of Indian Athletes at Paris Olympics 2024

- Despite a drop in the overall medal tally, India secured medals in events like javelin throw, shooting, and made significant strides in others like badminton.

- Neeraj Chopra bagged a silver medal for javelin throw, becoming India's fifth two-time Olympic medallist.

- Woman shooter Manu Bhaker won two medals, becoming the first Indian woman to win an Olympic shooting medal, and the first Indian athlete to win two medals in a single Games.

- Swapnil Kusale won the first-ever Olympic medal for India in the 50m rifle 3 positions event.

- Lakshya Sen, a break-through athlete became the first Indian to reach the semi-finals in men's badminton at the Olympics and finished fourth.

Challenges and Roadblocks in Securing Olympic Medals

- Talent Identification: Unsatisfactory and inconsistent scouting of young athletes, especially in remote areas.

- Limited Infrastructure and Resources: Absence of necessary facilities and resources for training.

- Dominance of Cricket: Unequal distribution of sports capital, with 87% being allocated to Cricket, leading to underdevelopment of other sports.

- Inadequate Sports Policies: Fragmented and underfunded policies and initiatives hinder athletes' potentials.

- Deeper Socio-Cultural Issues: Societal preference for academia over sports, complex social stratification, and corruption and politics in sports administration.

Potential Measures for Performance Improvement at Olympics

- Grassroots Development: Early identification and nurturing of sporting talent.

- Investment in Infrastructure: Establishing state-of-the-art training facilities and access to top-notch coaching.

- Empowering Athletes: Allowing sportspeople to participate in decision-making for transparency and accountability.

- Collegiate Sports System: Development of a system akin to the NCAA in the US to balance academics and athletics.

- Cultural Shift: Changing societal attitudes towards sports by integrating them into education systems and motivating families to support sports-related careers.
- Increased Government Support: Substantial and consistent funding for Olympics sports.

Current Sports Development Initiatives in India

- Khelo India and National Sports Development Fund (NSDF): Promoting sports and games at the grassroots level.
- Sports Authority of India (SAI): A range of schemes for youth and senior sports promotion.
- National Sports Awards: Recognizing and encouraging excellence in sports.
- Scheme for Sports & Games for People with Disabilities: Training and support for athletes with disabilities.
- Rajiv Gandhi Khel Abhiyan: Federally funded program for building sports complexes at the block level under the Fit India Movement.

The performance of the Indian contingent at Paris Olympics 2024 has sparked a serious discourse on the need for improving the country's sports infrastructure, policies and promoting a culture that fosters athletic excellence.

Introducing the Rashtriya Vigyan Puraskar 2024: A New Era Recognising Scientific Achievements in India

Rashtriya Vigyan Puraskar 2024: A New Dawn in India's Scientific Recognition

- Introduction: The Rashtriya Vigyan Puraskar (RVP) 2024 has been announced by the Indian government, elevating the approach of acknowledging remarkable scientific achievements.
- The awards ceremony is slated on the first National Space Day, 23rd August, commemorating the notable event of Chandrayaan-3 moon landing.

Understanding the Significance of Rashtriya Vigyan Puraskar

- The RVP is a coveted collection of awards, saluting remarkable accomplishments by Indian

origin scientists, technologists, and innovators, both domestic and international.
- These awards honour those who have profoundly impacted research, innovation, or discovery to benefit Indian communities or society.
- The RVP was introduced for the first time in 2024, replacing the previous science awards, including the Shanti Swarup Bhatnagar Prize, for a more holistic and modernised system of recognition.
- The awards are announced annually on 11th May, National Technology Day, and the Annual Award Ceremony takes place on National Space Day.
- Various categories under RVP include Physical Sciences, Chemical Sciences, Biological Sciences, Mathematical Sciences, Earth & Atmospheric Sciences, and Engineering Sciences.

Comprehensive Look at the Categories and Eligibility of the Awards

- Vigyan Ratna honours lifetime achievements in any field of science and technology with maximum three awards given each year and is reserved for distinguished scientists and technologists.
- Vigyan Shri acknowledges singular contributions in a scientific or technological field, with a ceiling of 25 awards annually and is for individuals with remarkable achievements in their scientific or technological domains.
- Vigyan Yuva-Shanti Swarup Bhatnagar encourages young scientists under the age of 45 who've demonstrated extraordinary research or innovation, with up to 25 awards given each year.
- Vigyan Team awards a team of three or more for exceptional collaborative efforts in any science and technology field, with up to 3 team awards granted.
- Awardees receive a Sanad, a certificate signed by the President of India, and a brochure which includes the citation and photograph of awardees is published on the ceremony day.

The Key Awardees of the Inaugural Rashtriya Vigyan Puraskar 2024

- Vigyan Ratna: The award was given to G. Padmanabhan for his lifetime achievements in the field of biological sciences, focusing on malaria parasites.
- Vigyan Team: The award was conferred upon the Chandrayaan-3 Team for their successful Moon-landing mission in 2023.
- Vigyan Shri: Awards were received by Annapurni Subramaniam, Jayant Bhalchandra Udgaonkar, and

Naba Kumar Mondal for their distinguished achievements.
- Vigyan Yuva: The awardees included Vivek Polshettiwar, Urbasi Sinha, and Roxy Mathew Koll for their exceptional contributions in their respective fields.

The Rashtriya Vigyan Puraskar 2024 undeniably symbolises a monumental stride towards applauding scientific accomplishments in India, providing a fresh and encompassing platform for acknowledging and inspiring present and future innovators.

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Triumphs and Honours at the 26th CEAT Cricket Awards 2024

Understanding the CEAT Cricket Awards:

   - The CEAT Cricket Awards, organised annually since 1995, are prestigious accolades that recognize and reward remarkable performances in cricket worldwide.
   - The 26th edition of these awards was held in Mumbai on August 21, 2024.
   - Sponsored by RP Goenka Group's CEAT Tyres, the awards celebrate the exceptional talent displayed across various formats of the game during the 2023-2024 cricket season.

Victorious Victors: Major Awards and Recipients

   - International Cricketer of the Year: Rohit Sharma's exemplary season in 2023-24, in which he scored around 1800 runs and led India to the final of the ICC Men's ODI Cricket World Cup, earned him this prestigious award.
   - ODI Batter of the Year: Virat Kohli broke records this season, including surpassing Sachin Tendulkar with his 50th ODI century, which got him recognized as the Best ODI Batter of the Year.
   - Lifetime Achievement Award: Rahul Dravid, the former Indian cricket captain, and current coach, was honoured for his invaluable contribution to Indian cricket, both as a player and a coach.

Honours Across Formats: Other Notable Awards:

   - Test Cricket: Yashashvi Jaiswal (Batter), Ravichandran Ashwin (Bowler)
   - ODI Cricket: Mohammad Shami (Bowler)
   - T20 Cricket: Phil Salt, England (Batter), Tim Southee, New Zealand (Bowler)
   - Domestic Cricket: Sai Kishore from Tamil Nadu
   - Women's Cricket: Smriti Mandhana (Batter), Deepti Sharma (Bowler)

Extraordinary Achievements: Special Recognitions

   - Players and administrators who achieved unique milestones were given special mementos. Including Harmanpreet Kaur, Shreyas Iyer, Shafali Verma, and Jay Shah.

The Implication and Importance of the CEAT Cricket Awards

   - Over the past 26 years, the CEAT Cricket Awards have served as a benchmark for commendable performance in cricket.
   - The awards play a dual role as they recognize the hard work and dedication of cricketers as well as serve as a source of motivation.
   - Besides recognizing and motivating, the CEAT Awards also document the history of cricketing excellence year upon year, promoting the sport and its stars.

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Indian Independence Day Gallantry Awards 2024: A Tribute to Indian Valor and Bravery

Introduction
- On the 78th Independence Day, the President of India conferred prestigious gallantry awards to numerous personnel from the Armed Forces and Central Armed Police Forces.
- Additionally, 1,037 police medals were presented to brave members of Police, Fire, Home Guard & Civil Defence, and Correctional Services.
- The Prime Minister of India unveiled an ambitious roadmap for the country's future, underlining India's commitment to its defence forces and national development.
- The theme for Independence Day 2024 is 'Viksit Bharat', signifying India's goal of becoming a developed country by 2047.

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Highlight on the Gallantry Awards Given

- Kirti Chakra: The second highest peacetime gallantry award was given to four individuals, three of them posthumously. This award was initially known as the Ashoka Chakra Class -II and was renamed as Kirti Chakra in 1967.
- Shaurya Chakra: This award, noteworthy for its gallantry in non-combat situations, was given to 18 recipients, four posthumously.
- Sena Medal (Gallantry): One Bar to Sena Medal (Gallantry) and 63 Sena Medals, including two posthumous, were awarded.
- Nao Sena Medals: This naval award for extraordinary courage and exceptional duty was given to 11 recipients.
- Vayu Sena Medals: Six of these Indian Air Force gallantry awards were awarded for exceptional devotion to duty or acts of courage.
- Mention-in-Despatches: The President approved 39 Mention-in-Despatches for outstanding services to military operations like Operation Rakshak, Operation Snow Leopard, Operation Sahayata, Hifazat, Orchid, and Katchal, with one notable recipient being the Army Dog Kent awarded posthumously.

Historical and Geographic Significance

- The gallantry awards have a rich history dating back to 1952, acknowledging the unparalleled bravery and dedication of Indian military personnel.
- The operations for which personnel were recognized span across the vast geography of the nation, from Jammu and Kashmir (Operation Rakshak) to eastern Ladakh (Operation Snow Leopard), the Naga Hills and Tuensang area of Nagaland (Operation Orchid), and Nagaland-Manipur-Arunachal Pradesh area (Operation Hifazat).
- These awards and recognitions not only uphold the valour of the Indian defence forces but also highlight the geographical diversity of the nation and the variety of challenges it faces.

Importance and Impact

- These awards boost the morale of the armed forces, recognizing their immense sacrifices and commending their bravery.
- The awards serve as reminders of the nation's gratitude for its defence personnel on a public platform as significant as Independence Day.

- They play an essential role in instilling a sense of national pride and encouraging future generations to serve the country.
- They symbolise India's steadfast commitment to peace, stability, inclusivity, and development, consolidating its position on the global stage.

Conclusion

- The Independence Day Gallantry Awards 2024 once again stand testimonial to the commendable bravery of Indian defence personnel who risk their lives for national security, peace, and prosperity.
- As India continues on its journey towards becoming a 'Viksit Bharat' by 2047, the dedication and sacrifices of these gallant individuals serve as guiding stars for the entire nation.

Insight into the National Film Awards 2022

Introduction and Key Awards

- Initiated in 1954, the National Film Awards recognize the brilliant works in the Indian film industry. The 70th edition of these Awards recently took place in 2022, announced by the Ministry of Information and Broadcasting.
- "Aattam (The Play)", directed by Anand Ekarshi, won Best Feature Film, and "Ayena (Mirror)", directed by Siddhant Sarin, secured the title of Best Non-Feature Film.
- The Best Popular Film Providing Wholesome Entertainment was "Kantara".
- Rishab Shetty and Nithya Menen were awarded Best Actor and Best Actress for their performances in "Kantara" and "Thiruchitrambalam" respectively.
- Pavan Raj Malhotra and Neena Gupta bagged Best Supporting Actor and Best Supporting Actress, while "Brahmastra-Part 1: Shiva" won Best Film in AVGC category.

Understanding the National Film Awards

- Governed by the Directorate of Film Festivals (established 1973), the winners of the National Film Awards are awarded a Medallion, a cash prize, and a Certificate of merit.
- The Awards divvy up into categories like feature films, non-feature films, and best writing on cinema, with winners of some categories eligible for the

Swarna Kamal (Golden Lotus Award) and the rest for the Rajat Kamal (Silver Lotus Award).

Commendable Categories in National Film Awards

1. Feature Films:
   - Promotes films that demonstrate aesthetic and technical excellence.
   - Boosts the appreciation of regional cultures and fosters national unity.
   - Six categories are eligible for the Swarna Kamal Award under this.

2. Non-Feature Films:
   - Support films exhibiting social relevance and technical quality.
   - Contributes towards the appreciation of diverse cultural representations.
   - Swarna Kamal Award for Best non-feature film and Best Debut film of a Director fall under this category.

3. Best Writing on Cinema:
   - Aims at fueling study and critical appreciation of cinema as an art form.
   - Encourages dissemination of information through books, articles, reviews, and research.
   - The Swarna Kamal Award for Best Book on Cinema and Award for Best Film Critic are included.

The Eligibility to Compete

- Films must be produced in India, with the director and makers being Indian nationals. Co-productions with foreign entities should meet specific conditions.
- The films should be certified by the Central Board of Film Certification within the calendar year.
- Strikingly, over 100 films compete in each category (Feature and Non-Feature) every year.
- The juries, appointed by the Directorate of Film Festivals, ensure no influence from the Government or Directorate on the decision.

The Prestigious Dadasaheb Phalke Award

- The Dadasaheb Phalke Award, named after the pioneer of Indian Cinema, Dhundiraj Govind Phalke, is a part of the National Film Awards. The award is bestowed for the outstanding contribution to the growth and development of Indian cinema.
- The inaugural award was awarded to Devika Rani Roerich in 1969. The President of India presents

this honour, which includes a 'Swarna Kamal', a cash prize of Rs 10 lakh, a certification, a silk roll, and a shawl.

Indian President Honoured with Fiji's Highest Civilian Award: Strengthening Diplomatic Connections.

Introduction:
Indian President, Droupadi Murmu, was recently bestowed the "Companion of the Order of Fiji", which is the highest civilian honour in Fiji. The award was presented during her milestone visit to the South Pacific Island country, making her the first Indian President to travel to Fiji. This acknowledgment is a testament to the robust diplomatic ties between India and Fiji.

Fiji's Appreciation of Indian Diaspora:
- Murmu, during her acceptance speech, extended her gratitude to the contribution of the Indian diaspora, especially to the Girmitiya labourers' efforts.
- She underlined the crucial role played by overseas Indian communities towards the welfare of the country they reside in.
- Term 'Girmitiya' comes from 'girmit,' which signifies 'agreement'. These were the indentured labourers taken from India to places like Fiji and Mauritius.
- Despite not being named as slaves, Girmitiyas often fell prey to "blackbirding"-- a deceptive practice leading many to become impoverished labourers.

Geographical and Cultural Facts about Fiji:
- Fiji is a picturesque archipelago located in the South Pacific Ocean enclosing the Koro Sea and is positioned north of Auckland, New Zealand.
- The country is peppered with over 300 islands, among them, only about 100 are inhabited.
- Acknowledged as the "soft coral capital of the world," Fiji comprises over 4,000 square kilometres of vibrant coral reefs, making it a hotspot for marine biodiversity.
- The sugarcane industry has served as a significant economic driving force for Fiji for several years.

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Political Landscape and Demographics of Fiji:
- Fiji, a parliamentary democracy, flaunts a diverse population of Indigenous Fijians, Indians, Europeans, and other ethnic groups.
- The largest Hindu temple in the Southern Hemisphere, the Sri Siva Subramaniya Swami Temple, is located in Fiji further showcasing the strong Indian influence on the island.

Conclusion:
The honouring of President Droupadi Murmu by Fiji with its highest civilian award is a significant milestone in the diplomatic relations between Fiji and India. It not only strengthens the bond between these countries but also highlights the commendable contributions of the Indian diaspora in Fiji's development. It precisely portrays the impactful blend of Indian culture in Fiji's diverse population.

Timor-Leste Honours President Murmu with Highest Civilian Award

Recognition of President Murmu's Public Service
- President Droupadi Murmu has recently been bestowed by President Horta of Timor-Leste with the Grand-Collar of the Order of Timor-Leste.
- This high civilian honour acknowledges her significant contributions to public service, education, and women's empowerment.

MoUs: Strengthening Relations beyond Awards
- Along with the award function, three Memorandums of Understanding (MoUs) were signed.
- The MoUs focus on facilitating cultural exchanges, collaboration between Prasar Bharati and Timor-Leste Radio & Television (RTTL), and visa exemptions for diplomatic, official, and service passports.

Introduction to the Geographical Aspects of East Timor
- East Timor, also known as Timor-Leste, borders the Timor Sea to the Southeast, the Wetar Strait to the North, and the Ombai Strait to the Northwest.

- It is part of Timor Island, sharing its western half with the Indonesian province of East Nusa Tenggara.

Retracing East Timor's Historical Journey

- East Timor was colonised by Portugal in the 18th century, prior to being annexed by Indonesia in 1975 as Portugal withdrew.
- The annexation led to a long struggle for independence by the East Timor population.
- In the UN-supervised referendum of 1999, most of the East Timorese populace voted in favour of independence.
- This action resulted in further conflict before peace-keeping forces intervened. In 2002, the United Nations officially recognized East Timor as a separate country.

East Timor Seeking ASEAN Membership

- East Timor is currently seeking membership in ASEAN (Association of Southeast Asian Nations) and has been granted the status of an observer in the meantime.
- Its membership would strengthen geopolitical dynamics and help the country economically by expanding its trade and investment prospects with other ASEAN countries.

An Overview of the National Institutional Ranking Framework (NIRF) Rankings 2024

Introduction to NIRF Rankings

- The National Institutional Ranking Framework (NIRF) rankings for the year 2024 were recently announced by the Union Ministry of Education (MoE).
- NIRF rankings highlight the preeminent institutions of higher education in India, setting a benchmark for excellence.

The Leading Institutions in the NIRF 2024 Rankings

- Retaining the top spot in both the 'Overall' and 'Engineering' categories six and nine years in a row, is the Indian Institute of Technology (IIT) Madras. It

also maintained the second rank in the 'Research Institutions' and 'Innovations' categories.
- Dominating the 'Universities' and 'Research Institutions' categories, Indian Institute of Science (IISc), Bengaluru stood first.
- By continuing its winning streak in the 'Management' category for the fifth consecutive year, IIM Ahmedabad has secured its top position.
- AIIMS, New Delhi, leads the 'Medical' category, holding onto its first position for seven years straight, while also being ranked seventh in the 'Overall' category.
- Topping the 'Pharmacy' category was Jamia Hamdard, with IIT Roorkee leading in the 'Architecture and Planning' segment.
- Delhi University (DU) improved from the 11th to the 6th place in the overall rankings, resurfacing into the top ten universities in India.

The Landscape of the NIRF Rankings 2024

- The 9th edition of the NIRF Rankings introduced new categories, including State Public Universities, Open Universities, and Skill Universities, and dovetailed an "Innovation" ranking, increasing its sectors to 16.
- Anna University and Indira Gandhi National Open University (IGNOU) stood first in State Public Universities and Open Universities categories.
- Topping the Skill Universities category was Symbiosis Skill and Professional University (SSPU), Pune.
- The Union Ministry of Education is set to introduce a Sustainability Rankings category in the NIRF 2025 to assess the commitment of institutions towards environmental sustainability, energy efficiency, and green campus initiatives.
- In 2024, the unique institutions participating in the NIRF rose to 6,517 from a mere 2,426 in 2016, signalling a widening acceptance of the NIRF rankings.

The National Institutional Ranking Framework (NIRF) Explained

- The NIRF is a ranking system launched by the Ministry of Education, Government of India, in 2015, aiming to provide a transparent evaluation of higher education institutions in India using distinct parameters.
- The NIRF ranks institutions annually based on specific quantitative parameters, creating a

comparative platform of institutional performance across the country.
- It is essential to note that the National Assessment and Accreditation Council (NAAC) also undertakes evaluations of educational institutions for accreditation, seeking to assess the overall quality of these institutions.
- However, unlike NAAC's qualitative methodology, the NIRF focuses on quantitative parameters to provide rankings, proving to be a crucial tool for prospective students scouting for exemplary educational institutions.

Science and Tech

Attaining Criticality: India's Prototype Fast Breeder Reactor Program

Digging Into the Achievement

- Atomic Energy Regulatory Board (AERB) has given the nod to the "First Approach to Criticality" of India's first 500 MWe Prototype Fast Breeder Reactor (PFBR) stationed at Kalpakkam, Tamil Nadu.
- Criticality, in the terms of a nuclear reactor, signifies a state wherein the neutrons produced by fission replace those lost in leakage or absorption, maintaining constant neutron levels.

The Inside Story of India's FBR Programme

- The initiative to build an FBR started about two decades ago, adding to India's capabilities in the entire nuclear fuel cycle where uranium is the primary source for electricity production in nuclear power plants.
- The Department of Atomic Energy (DAE) has set a goal to augment the proportion of nuclear power in the country's energy mix by producing 22,400 MWe from nuclear power plants by 2032.
- The DAE has sanctioned the building of 10 new PHWRs in 'fleet mode' suggesting a plant's completion within five years from the initiation of construction.
- FBRs have an advantage of generating more nuclear fuel than they consume owing to their capability to convert fertile isotopes into fissile material.

- The Bharatiya Nabhikiya Vidyut Nigam Ltd or BHAVINI, introduced in 2003, was tasked with constructing and operating India's most sophisticated nuclear reactor, the PFBR.
- When commissioned, India will be only the second country after Russia to operate a commercial FBR.

Exploring the Three Stages of India's Nuclear Energy Program

- First Stage: It involves the ongoing installation of Pressurised Heavy Water Reactors (PHWRs) which employ natural uranium as fuel along with heavy water as a coolant and moderator.
- Second Stage: It targets the installation of FBRs supported by reprocessing plants and plutonium fabrication plants to multiply fissile material.
- Third Stage: Proposed at this stage is an Advanced Heavy Water Reactor (AHWR) for achieving Uranium-233 (U233) by irradiating thorium in PHWRs and FBRs, thereby initiating a Thorium and Uranium Cycle.
- The fusion of power reactors from all three stages will contribute significantly towards securing long-term energy for the country.

Challenges and Way Forward

- For commercial utilisation of thorium significantly, ample supplies of either Uranium-233 (U233) or Plutonium-239 (Pu239) are essential.
- The advancements on the FBR provide a clearer pathway towards the third phase of the nuclear energy program, bringing closer to a future of sustainable and secure energy for the country.

Critical Ransomware Attack Disrupts Indian Banking Sector: Significant Points and Analysis

Disruption in Banking Operations Due to Ransomware Attack

- A ransomware attack recently disrupted the operations of 150-200 cooperative banks and Regional Rural Banks (RRBs) in India.
- The attack was detected by the National Payments Corporation of India (NPCI), mainly impacting those banks which were serviced by

C-Edge Technologies Ltd. (a Joint Venture between TCS and SBI).

Impact of the Ransomware Attack on Banks

- The primary victim of the attack was C-Edge Technologies Ltd., adversely affecting its capability to provide services to cooperative banks and RRBs.
- Due to the ransomware attack, customers couldn't access payment systems, such as Unified Payments Interface (UPI) and Aadhaar-enabled payment systems (AePS).
- Few Regional Rural Banks functioned regularly, relying on different technology service providers.

Implications for the Payment System

- The attack elucidates the vulnerability of technological service providers, highlighting their crucial role in preserving the payment infrastructure.
- The event stresses the importance of robust cybersecurity measures to guard against such future attacks.
- Integral cooperation between NPCI, banks, and technology service providers is necessary for quick rectification and mitigation of such disruptions.

Introduction to Ransomware

- Ransomware is a type of malware that encrypts a victim's data, demanding a ransom in return for the decryption key or to regain access.
- Initial instances of ransomware attacks involved encrypting data and demanding a ransom; however, current attacks encompass double-extortion and triple-extortion tactics.
- Notable ransomware variants are Akira, LockBit, CryptoLocker, WannaCry, Petya, NotPetya, Ryuk, DarkSide, Locky, REvil, Conti.

Ransomware as a Cyber Threat

- Ransomware attacks can cost organisations millions of dollars, with the average cost of a data breach reaching Rs. 19.5 crore (USD 2.35 million) in 2024, marking a 7% rise over 2023.
- Once hackers gain access to a network, they can deploy ransomware in less than four days, giving organisations little time to detect and respond.

Responding to a Ransomware Attack

- Immediate actions include isolating the infected device, identifying the entry point, prioritising the restoration of systems, and restoring the systems from backup if available.

Infection Techniques of Ransomware

- Common techniques include phishing, exploiting vulnerabilities, credential theft, using other malware, drive-by downloads, and Ransomware as a Service (RaaS).

Indian Legislation and Protections Against Ransomware Attacks

- Ransomware attacks constitute offences under the Indian Penal Code 1860 and the Information Technology (IT) Act 2000.
- Specific cybersecurity measures have been implemented by banks and financial institutions, such as multi-factor authentication, encryption, and regular security audits.
- The Ransomware Task Force (RTF) plays a significant role in providing help for ransomware attack victims, offering investigation, recovery, and prevention efforts.

Understanding the Challenge of Subclinical Tuberculosis in India

The Enigma of Subclinical Tuberculosis in India

- Subclinical Tuberculosis (TB), which is a form of TB where the patient does not exhibit regular symptoms, is a rising threat in India.
- Despite advancements in diagnosis and cure, the prevalence of such latent TB is slowing down the overall decrease in TB incidence rates.
- Subclinical TB, often undetectable through routine screenings, is usually identified using chest X-rays or molecular tests.
- In the National TB Prevalence Survey of 2019-2021, Subclinical TB accounted for nearly 42.6% of all cases. Tamil Nadu reported a similar statistic at 39%.
- Asymptomatic individuals with Subclinical TB can still infect others, maintaining the disease's transmission, especially in high-burden countries like India.

Broad Spectrum Screening - The Need of the Hour

- The idea of universal screening, irrespective of symptoms, as employed by countries like Vietnam has successfully reduced TB prevalence.
- A similar large-scale screening campaign in India requires strategic policymaking, including mobile health units and proactive grassroots community engagement.

The Global Burden of Tuberculosis

- Tuberculosis, caused by Mycobacterium tuberculosis, is an airborne infectious disease, primarily affecting the lungs.
- The disease manifests in prolonged cough, chest pain, weakness, fatigue, weight loss, fever, and night sweats.
- People with weakened immunity, malnutrition, diabetics, or tobacco users are at a higher risk of developing TB.
- Approximately 25% of the world's population is infected with TB bacteria, with 5-10% developing into active TB disease.
- The spread of TB is preventable with early detection, medical attention, and targeted treatment including antibiotics and vaccines.
- However, Multidrug-resistant TB continues to pose a public health problem, with only 40% of patients accessing crucial treatment.

The Shadow of TB on HIV

- People living with HIV are 16 times more prone to developing active TB, making it the leading cause of death among the HIV- positive population.
- Lack of proper treatment can lead to death in 60% of HIV-negative people and almost all HIV-positive people with TB.

The Global Inequality in TB Prevalence

- TB predominantly affects adults in low and middle-income countries, accounting for over 80% of global cases and mortalities.
- The highest burden lies in WHO's South-East Asian and African regions.
- In 2022, TB claimed 1.3 million lives, including 167,000 HIV positive individuals, second to Covid-19.

Global and National Drive against TB

- In India, initiatives like the National TB Elimination Programme aim to eradicate TB by 2025, supported

by the Ni-kshay Mitra, DBT for TB patients, TB-Mukt Panchayat, and Pradhan Mantri TB Mukt Bharat Abhiyan.

- At the global level, WHO's Global Tuberculosis Programme, the Global Plan to End TB 2023-2030 align with UN's Sustainable Development Goals aiming to end tuberculosis as a public health challenge by 2030.

Wolbachia-Infected Mosquitoes: A Novel Approach to Combat Dengue and Other Mosquito-Borne Diseases

Current Scenario and Challenges in Mosquito-Borne Disease Control in India

* India faces significant challenges dealing with mosquito-borne diseases, including Dengue, Chikungunya, and Zika virus. These diseases cause significant healthcare and economic burden.

* Statistics from April 2024 show that India recorded 19,447 Dengue cases and 16 deaths, with the highest incidence reported in Kerala and Tamil Nadu.

* The economic cost of Dengue is estimated to be around Rs 28,300 crores annually, with a staggering 5.68 lakh years of young life lost.

* On a global scale, WHO reports over 7.6 million cases of Dengue as of April 2024.

Introduction to Wolbachia and Its Role in Mosquito Control

* Wolbachia is a common bacterium found in almost 60% of all insects, excluding Aedes Aegypti mosquitoes known for spreading Dengue, Zika, and Chikungunya.

* Wolbachia is harmless to humans and animals and is not found naturally in Aedes Aegypti mosquitoes. It plays a crucial role in controlling mosquito populations when introduced into them.

* The bacteria are introduced to mosquito eggs, creating Wolbachia-infected new mosquitoes. Two strains, wMel and wAlbB, are transfected into Aedes Aegypti mosquitoes for population replacement.

* Wolbachia-infected male mosquitoes mate with wild Aedes Aegypti females, leading to unhatched eggs and eventually reducing the mosquito population.

The Status and Potential of Wolbachia Programs in India

* Currently, India does not have an active Wolbachia mosquito release program.

* The ICMR-Vector Control Research Center has initiated the development of wMel Aedes strains but has faced ongoing delays due to government approvals and public updates.

* Recent findings revealed the natural presence of Wolbachia in Aedes mosquitoes in Northeast India. However, its immediate implications are unknown.

Global Successes with Wolbachia Implementation

* Singapore's implementation of Wolbachia-infected male mosquito release reduced its Aedes population by 90% and decreased Dengue cases by 77%.

* Australia saw significant dengue reduction by adopting a population replacement strategy using the Wolbachia's wMel strain.

* A random controlled trial in Indonesia showed areas with released wMel strain mosquitoes had a 77% decline in Dengue cases and an 86% reduction in hospitalizations. Such successes emphasise the potential of Wolbachia in controlling mosquito-borne diseases.

In conclusion, the innovative use of Wolbachia creates a promising path towards the formidable challenge of mosquito-borne disease control globally and in India. Future work should focus on enabling this method's widespread adoption by overcoming current barriers to implementation.

Important Days and Events

Commemorating World Lion Day: Significance, Conservation Efforts, and Threats to the King of Jungle

Introduction to World Lion Day:

- World Lion Day is celebrated annually on 10th August since its establishment in 2013 by Big Cat Rescue.
- The day sheds light on the urgent need for conserving these majestic creatures.

Importance of Lions in Ecosystem:

- Lions, the apex predators, significantly control the herbivore populations, therefore maintaining the ecological balance.
- They eliminate the weakest in their prey's populations, thus, indirectly aiding in disease control.

Threatening Factors to Lion Populations:

- Lions face considerable endangerment due to continual habitat loss, human-wildlife conflict, and rampant poaching.
- They are vulnerable to genetic inbreeding due to their isolation within a single population.
- Diseases such as plague and canine distemper, along with natural disasters, also pose substantial threats.

Conservation Status of Lions:

- The IUCN Red List classifies the overall lion species as "Vulnerable" and the Asiatic Lion as "Endangered."
- According to the Convention on International Trade in Endangered Species (CITES), India's lion populations come under Appendix I.
- India's Wildlife (Protection) Act 1972 places lions in Schedule I, implying they are given the highest degree of protection.

Recognizing the Asiatic Lion:

- The Asiatic lion, symbolising strength in the Indian national emblem, is a subspecies distinguished by a unique longitudinal fold of skin running along its belly.

- Despite being slightly smaller, they bear striking similarity to their African counterparts (Panthera leo leo).

Lion Population in India:

- Asiatic lions inhabit the protected Sasan-Gir National Park in Gujarat, India.
- The lion population has seen a rise from 523 in 2015 to approximately 674 in 2020, which is attributable to successful conservation strategies.

Project Lion: Safeguarding India's Majestic Cats

- India launched 'Project Lion' on 15th August 2020 to secure the future of Asiatic lions.
- This project aims at improving the lion's habitat, enhancing monitoring techniques, and addressing human-wildlife conflict.

The ongoing conservation efforts offer a ray of hope for the future of these majestic creatures. Still, more global attention and action are needed to ensure their continued survival and prosperity. Therefore, World Lion Day serves a critical purpose of making people worldwide mindful of the struggles faced by these regal beasts.

Honouring the Majestic Beast: Celebrating World Elephant Day

Introduction & Significance of World Elephant Day

- World Elephant Day is an annual event commemorated every year on August 12th with the endeavour to highlight the escalating plight of Asian and African elephants.
- The purpose of this day is to amplify awareness about the critical threats elephants face, such as poaching, habitat loss, and human-elephant conflicts.
- The theme planned for the year 2024 is "Personifying Prehistoric Beauty, Theological Relevance, and Environmental Importance" embodying the diverse ways elephants enrich our world.

Elephants in India: Significance and Status

- India is a sanctuary to nearly 60% of the world's Asian elephant population, housing an estimated 27,312 individuals as per the 2017 census, making it a significant habitat for these majestic creatures.

- Elephants are recognized as "keystone species", playing an instrumental role in maintaining biodiversity within their ecosystem. They are also designated as the National Heritage Animal of India.
- Karnataka secures the top position in India for hosting the maximum elephant population.

Threats to Elephant Population
- As per the International Union for Conservation of Nature (IUCN) Red List, Asian Elephants are classified as endangered due to multiple threats including habitat destruction, escalating human-elephant conflict, and ruthless poaching.
- Additionally, African Forest Elephants are listed as critically endangered and African Savanna Elephants are marked as endangered, highlighting the global crisis for elephant conservation.

Legal and Protection Status of Elephants
- Elephants are granted protection under the Wildlife (Protection) Act, 1972: Schedule I, in India.
- Internationally, they fall under Appendix I of the Convention of the Migratory Species (CMS), signifying the species are at risk of extinction and require global cooperation for their protection.

Conservation Efforts for Elephant Preservation
In India:
- "Gaj Yatra" and "Project Elephant" are major initiatives taken up by the Indian government to conserve and manage elephant populations.
Globally:
- The Monitoring of Illegal Killing of Elephants (MIKE) Programme, an international initiative, aims to monitor trends in illegal elephant killing for improved management and law enforcement.
- The observance of World Elephant Day contributes significantly to raising global awareness and directing conservation efforts.

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Miscellaneous

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- Once hackers gain access to a network, they can deploy ransomware in less than four days, giving organisations little time to detect and respond.

Responding to a Ransomware Attack

- Immediate actions include isolating the infected device, identifying the entry point, prioritising the restoration of systems, and restoring the systems from backup if available.

Infection Techniques of Ransomware

- Common techniques include phishing, exploiting vulnerabilities, credential theft, using other malware, drive-by downloads, and Ransomware as a Service (RaaS).

Indian Legislation and Protections Against Ransomware Attacks

- Ransomware attacks constitute offences under the Indian Penal Code 1860 and the Information Technology (IT) Act 2000.
- Specific cybersecurity measures have been implemented by banks and financial institutions, such as multi-factor authentication, encryption, and regular security audits.
- The Ransomware Task Force (RTF) plays a significant role in providing help for ransomware

attack victims, offering investigation, recovery, and prevention efforts.

Understanding the Challenge of Subclinical Tuberculosis in India

The Enigma of Subclinical Tuberculosis in India

- Subclinical Tuberculosis (TB), which is a form of TB where the patient does not exhibit regular symptoms, is a rising threat in India.
- Despite advancements in diagnosis and cure, the prevalence of such latent TB is slowing down the overall decrease in TB incidence rates.
- Subclinical TB, often undetectable through routine screenings, is usually identified using chest X-rays or molecular tests.
- In the National TB Prevalence Survey of 2019-2021, Subclinical TB accounted for nearly 42.6% of all cases. Tamil Nadu reported a similar statistic at 39%.
- Asymptomatic individuals with Subclinical TB can still infect others, maintaining the disease's transmission, especially in high-burden countries like India.

Broad Spectrum Screening - The Need of the Hour

- The idea of universal screening, irrespective of symptoms, as employed by countries like Vietnam has successfully reduced TB prevalence.
- A similar large-scale screening campaign in India requires strategic policymaking, including mobile health units and proactive grassroots community engagement.

The Global Burden of Tuberculosis

- Tuberculosis, caused by Mycobacterium tuberculosis, is an airborne infectious disease, primarily affecting the lungs.
- The disease manifests in prolonged cough, chest pain, weakness, fatigue, weight loss, fever, and night sweats.
- People with weakened immunity, malnutrition, diabetics, or tobacco users are at a higher risk of developing TB.
- Approximately 25% of the world's population is infected with TB bacteria, with 5-10% developing into active TB disease.

- The spread of TB is preventable with early detection, medical attention, and targeted treatment including antibiotics and vaccines.
- However, Multidrug-resistant TB continues to pose a public health problem, with only 40% of patients accessing crucial treatment.

The Shadow of TB on HIV

- People living with HIV are 16 times more prone to developing active TB, making it the leading cause of death among the HIV- positive population.
- Lack of proper treatment can lead to death in 60% of HIV-negative people and almost all HIV-positive people with TB.

The Global Inequality in TB Prevalence

- TB predominantly affects adults in low and middle-income countries, accounting for over 80% of global cases and mortalities.
- The highest burden lies in WHO's South-East Asian and African regions.
- In 2022, TB claimed 1.3 million lives, including 167,000 HIV positive individuals, second to Covid-19.

Global and National Drive against TB

- In India, initiatives like the National TB Elimination Programme aim to eradicate TB by 2025, supported by the Ni-kshay Mitra, DBT for TB patients, TB-Mukt Panchayat, and Pradhan Mantri TB Mukt Bharat Abhiyan.
- At the global level, WHO's Global Tuberculosis Programme, the Global Plan to End TB 2023-2030 align with UN's Sustainable Development Goals aiming to end tuberculosis as a public health challenge by 2030.

Wolbachia-Infected Mosquitoes: A Novel Approach to Combat Dengue and Other Mosquito-Borne Diseases

Current Scenario and Challenges in Mosquito-Borne Disease Control in India

* India faces significant challenges dealing with mosquito-borne diseases, including Dengue, Chikungunya, and Zika virus. These diseases cause significant healthcare and economic burden.

* Statistics from April 2024 show that India recorded 19,447 Dengue cases and 16 deaths, with the

highest incidence reported in Kerala and Tamil Nadu.

* The economic cost of Dengue is estimated to be around Rs 28,300 crores annually, with a staggering 5.68 lakh years of young life lost.

* On a global scale, WHO reports over 7.6 million cases of Dengue as of April 2024.

Introduction to Wolbachia and Its Role in Mosquito Control

* Wolbachia is a common bacterium found in almost 60% of all insects, excluding Aedes Aegypti mosquitoes known for spreading Dengue, Zika, and Chikungunya.

* Wolbachia is harmless to humans and animals and is not found naturally in Aedes Aegypti mosquitoes. It plays a crucial role in controlling mosquito populations when introduced into them.

* The bacteria are introduced to mosquito eggs, creating Wolbachia-infected new mosquitoes. Two strains, wMel and wAlbB, are transfected into Aedes Aegypti mosquitoes for population replacement.

* Wolbachia-infected male mosquitoes mate with wild Aedes Aegypti females, leading to unhatched eggs and eventually reducing the mosquito population.

The Status and Potential of Wolbachia Programs in India

* Currently, India does not have an active Wolbachia mosquito release program.

* The ICMR-Vector Control Research Center has initiated the development of wMel Aedes strains but has faced ongoing delays due to government approvals and public updates.

* Recent findings revealed the natural presence of Wolbachia in Aedes mosquitoes in Northeast India. However, its immediate implications are unknown.

Global Successes with Wolbachia Implementation

* Singapore's implementation of Wolbachia-infected male mosquito release reduced its Aedes population by 90% and decreased Dengue cases by 77%.

* Australia saw significant dengue reduction by adopting a population replacement strategy using the Wolbachia's wMel strain.

* A random controlled trial in Indonesia showed areas with released wMel strain mosquitoes had a 77% decline in Dengue cases and an 86% reduction in hospitalizations. Such successes emphasise the potential of Wolbachia in controlling mosquito-borne diseases.

In conclusion, the innovative use of Wolbachia creates a promising path towards the formidable challenge of mosquito-borne disease control globally and in India. Future work should focus on enabling this method's widespread adoption by overcoming current barriers to implementation.

Books and Author

Author/Editor	Book Title
Prof. K v subramanian	India@100: envisioning tomorrow's economic powerhouse"Kargil War: The Turning Point"
Air chief marshal VR chaudhari	Heroes of the indian air force
Tarun Chugh	Modi's Governance Triumph Released
MP Bhim Singh	75 Great Revolutionaries of India
Rajya Sabha MP Parimal Nathwani	Call of the Gir

Important days

Date	Important Days
01st August 2024	World Wide Web Day
01st August 2024	World Lung Cancer Day
01st August 2024	National Mountain Climbing Day
01st August – 07th August 2024	World Breastfeeding Week
04th August 2024	Friendship Day in India
06th August 2024	Hiroshima Day
07th August 2024	National Handloom Day
07th August 2024	National Javelin Day
09th August 2024	International Day of World's Indigenous People
09th August 2024	Nagasaki Day
10th August 2024	World Lion Day
10th August 2024	World Biofuel Day
11th August 2024	World Steelpan Day
12th August 2024	International Youth Day
12th August 2024	World Elephant Day
13th August 2024	World Organ Donation Day
14th August 2024	Partition Horrors Remembrance Day in India
15th August 2024	Independence Day of India
16th August 2024	Atal Bihari Vajpayee Death Anniversary
19th August 2024	World Humanitarian Day
19th August 2024	Rakshabandhan
21st August 2024	International Day of Remembrance and Tribute to the Victims of Terrorism

22nd August 2024	International Day Commemorating the Victims of Acts of Violence Based on Religion or Belief 2024
23rd August 2024	International Day for the Remembrance of Slave Trade and Abolition
23rd August 2024	ISRO Day
26th August 2024	Mother Teresa Anniversary
29th August 2024	National Sports Day
29th August 2024	International Day Against Nuclear Tests
29th August 2024	World Water Week 2024
30th August 2024	International Day of the Victims of Enforced Disappearances
31st August 2024	International Day for People of African Descent

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