Current Affairs 2024 JULY

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CONTENT

SCIENCE AND TECH

PLACES IN NEWS

SPECIES IN NEWS

Brazil · Russia · India · China · South Africa

BRICS GROUPING AND ITS EXPANSION

The six additional nations include Iran, Saudi Arabia, and the UAE from West Asia; Egypt and Ethiopia from Africa; and Argentina from Latin America.

OUTCOMES OF 15TH BRICS SUMMIT

• **Reaffirmation of Multilateralism and Reform**: BRICS leaders reiterated their commitment to principles such as multilateralism, adherence to international law, and sustainable development. They advocated for the restructuring of global organizations like the United Nations to enhance inclusivity and responsiveness to the needs of developing nations.

• **Exploration of Common Currency**: BRICS leaders initiated discussions on the potential development of a shared currency for trade and investment within their nations. Finance ministers and central bank governors were tasked with assessing the practicality and benefits of introducing such a currency, aimed at reducing reliance on the US dollar and other major currencies.

• **Space Cooperation Initiative**: Prime Minister of India proposed the establishment of a space exploration consortium within BRICS nations, highlighting India's recent lunar mission achievements.

• **Addressing Global and Regional Challenges**: BRICS leaders discussed a wide array of global and regional issues, including the Covid-19 pandemic, climate change, terrorism, cyber security, energy security, trade, and investment. They emphasized fair access to vaccines and medical resources globally and committed to strengthening collaboration in health, research, and innovation.

Implications of New Members Addition

Energy Resources

• The inclusion of Saudi Arabia and Iran, prominent West Asian nations, holds significant geostrategic importance due to their vast energy reserves.

• Saudi Arabia, a major oil producer, supplies a substantial amount of oil to BRICS nations like China and India.

• Despite facing sanctions, Iran has increased its oil production and exports, focusing primarily on China, underscoring the critical role of energy cooperation and trade among BRICS members.

Diversification of Energy Suppliers

• Russia, traditionally a key oil supplier to China and India, is exploring new markets for its energy exports with the addition of new BRICS members.

• This diversification enhances the potential for varied energy sources within the BRICS framework, contributing to energy security and economic stability among member nations.

Strategic Geographical Presence

• Egypt and Ethiopia, strategically located in the Horn of Africa and the Red Sea region, hold significant geostrategic importance due to their proximity to crucial maritime trade routes.

•Their inclusion strengthens BRICS' geopolitical influence in this strategic region, facilitating enhanced cooperation in trade, infrastructure development, and security among member states.

Latin American Economic Influence

• Argentina, as one of the largest economies in Latin America, brings substantial economic influence to the BRICS coalition.

• Latin America has historically been a focal point for global economic interests, and Argentina's inclusion bolsters BRICS' presence in this region, opening avenues for increased economic cooperation, trade diversification, and strategic partnerships.

Significance of BRICS

Economic Influence

• BRICS represents major emerging economies, contributing significantly to global GDP and trade.

• The New Development Bank (NDB), established in 2015, has committed $32.8 billion to 96 infrastructure and sustainable development projects in member countries like Brazil, Russia, India, China, and South Africa.

• Currently, the five-member grouping is home to 40 per cent of the world's population, which controls 26 per cent of the global GDP, But with the six new members (BRICS+6), their GDP share will jump to 30 per cent and share of population will go up to 46 per cent.

Political Influence

• BRICS serves as a platform for geopolitical coordination and cooperation on global issues.

• Fareed Zakaria calls it Post American world order and describes BRICS as the fall of west and rise of rest.

• BRICS National Security Advisors' meetings focus on counterterrorism, cybersecurity, and regional stability, enhancing collective security efforts.

• Joint statements and initiatives by BRICS leaders on reforms in global governance institutions like the IMF and World Bank underscore their influence in shaping global policies.

Development and Infrastructure Projects

• BRICS promotes joint development projects and infrastructure initiatives.

• The Contingent Reserve Arrangement (CRA), established in 2015 with a total lending capacity of $100 billion, supports member countries facing balance of payments difficulties due to liquidity pressures.

CRA provides financial stability and resilience against global economic uncertainties, benefiting member economies during crises.

Cultural Exchange and People-to-People Ties

• BRICS enhances cultural exchange and people-to-people contacts through various initiatives.

• BRICS Parliamentary Forum, Film Festival, Youth Summit, and Academic Forum foster mutual understanding and cooperation in cultural, academic, and youth exchanges.

• These initiatives promote cultural diplomacy and strengthen ties among member countries, facilitating deeper regional integration and collaboration.

• Strategic Partnerships and Security Cooperation: BRICS fosters strategic partnerships and security cooperation among member countries. BRICS countries collaborate on counterterrorism efforts, cybersecurity,etc.

BRICS Payment System

• BRICS countries aim to establish a payment system as an alternative to SWIFT, reducing dependence on dollardenominated transactions.

• The BRICS Payment System seeks to enhance financial autonomy and resilience against external economic pressures.

• This initiative reflects BRICS' efforts to strengthen economic sovereignty and mitigate risks associated with global financial systems.

Challenges

Diverse Economic Structures

• BRICS countries exhibit diverse economic structures, impacting their ability to coordinate policies effectively.

• During the 2010s, Brazil and Russia, heavily dependent on commodity exports like oil and minerals, faced economic downturns due to volatile commodity prices. In contrast, China's diversified economy and manufacturing sector provided more stability.

Geopolitical Differences

• Geopolitical alignments and interests among BRICS members can diverge, complicating unified positions on global issues.

• For instance,India's strategic partnerships with countries like the US and Japan sometimes conflict with China's geopolitical ambitions, influencing BRICS' collective stance on international matters such as climate change agreements or UN reforms.

Infrastructure and Development Needs

• Varied infrastructure requirements and development disparities within BRICS nations hinder regional integration efforts.

• Like South Africa's infrastructure challenges, especially in transport and energy, differ significantly from China's advanced infrastructure network. This disparity affects joint development projects under initiatives like the New Development Bank.

Financial and Currency Challenges

Differences in monetary policies and currency exchange rates pose challenges for financial cooperation and stability.

For example, fluctuations in the Russian ruble's exchange rate impact trade flows and investment within BRICS. In 2014, the ruble's depreciation due to geopolitical tensions affected intra-BRICS trade and investment activities.

Institutional Coordination

Coordination among BRICS institutions like the New Development Bank requires effective management and alignment of member state priorities.

Delays in project approvals by the New Development Bank due to bureaucratic procedures have slowed disbursements for infrastructure projects. As of 2023, only a portion of the committed funds have been disbursed, impacting member countries' development plans.

External Economic Pressures

External economic pressures, such as trade disputes and sanctions, affect BRICS (Brazil, Russia, India, China, South Africa) economies individually and collectively.

Sanctions imposed on Russia and Iran by Western countries have repercussions for BRICS' economic relations and strategic partnerships. This external pressure influences the group's ability to maintain economic cooperation.

CLIMATE FINANCE

• According to the report, $115.9 billion was allocated to developing countries to support climate action in 2022.

   • The public climate finance, drawn from bilateral (countries) and multilateral sources (like World Bank) accounted for close to 80 percent of the total financial flow in 2022.

• This figure increased from $38 billion in 2013 to $91.6 billion in 2022.

   • Most climate finance went to mitigation.

   • Lower-income countries accounted for 64 percent of total public climate finance provided as grants, while for lower-middleincome countries, grants made up only 13 percent of the share.

Climate Finance

• Climate finance refers to large-scale investments required for actions aiming to mitigate or adapt to the consequences of climate change.

• **Adaptation**: It involves anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage they can cause.

• **Mitigation**: It involves reducing the emission of greenhouse gases (GHG) into the atmosphere so that impacts of climate change are less severe.

• **Examples of climate finance** : It include grants provided by multilateral funds, market-based and concessional loans from financial institutions, sovereign green bonds issued by national governments, and resources mobilized through carbon trading and carbon taxes. Importance:

• Countries have put forward ambitious targets to reduce GHG emissions and increase their resilience to climate change impacts through their Nationally Determined Contributions (NDC), Long-term Climate Strategies (LTS), and National Adaptation Plans (NAP)

• However, a recent analysis by UNDP shows that finance remains a fundamental barrier to the acceleration of climate action in developing countries.

• Climate action requires a large amount of investment and many lower- and middle-income nations are simultaneously managing debt distress and multi-dimensional crises.

• Climate finance is critical to addressing climate change because of the large-scale investments that are needed to transition to a low-carbon global economy. Progress and Developments:

• The Kyoto Protocol and the Paris Agreement call for financial assistance from Parties with more financial resources to those that are less endowed and more vulnerable.

• Developing countries have argued that developed nations should provide financial assistance to tackle climate change because it was due to the (now) rich world's emissions over the last 150 years that caused the climate problem in the first place.

• The 1994 United Nations Framework Convention on Climate Change (UNFCCC) required high-income countries to provide climate finance to the developing world.

• In 2009, developed countries pledged to provide $100 billion a year to developing countries by 2020.

• In 2010, the Green Climate Fund (GCF) was established as a key delivery mechanism.

• The 2015 Paris Agreement reinforced this target, and extended it to 2025.

New Collective Quantified Goal On Climate Finance (Ncqg)

• In 2015, the financial assistance goal of collective mobilisation of $100 billion by developed countries was extended to 2025.

• It was also decided that year that a new climate finance goal to succeed this one would have to be decided prior to 2025, amounting to at least $100 billion per year, and 'taking into account the needs and priorities of developing countries'.

• This is the New Collective Quantified Goal (NCQG), also called the post-2025 climate finance goal / new goal.

Need of NCQG

• The figure of $100 billion is inadequate for the climate finance needs of developing countries, which, by varying estimates, range from $1-2.4 trillion per year until 2030.

• The goal of $100 billion was not a negotiated one – it was a political one.

Joint Sitting of Parliament

The President of India recently addressed the joint sitting of both houses of Parliament. It was the first time he addressed the newly elected 18th Loksabha.

• A joint sitting involves both the houses of Parliament.

• There are two main types of joint sittings in the Indian parliamentary system.

• First is the presidential address under Article 87 and second is the resolution of legislative deadlocks under Article 108.

• The President addresses the Rajya Sabha and Lok Sabha at the beginning of the first session after each general election.

• The President also addresses both Houses at the beginning of the first session of each year.

• The Constitution (First Amendment) Act of 1951 modified Article 87 as follows: In clause (1), the phrase "every session" was replaced with "the first session after each general election to the House of the People and at the commencement of the first session of each year.

Khelo India Rising Talent Identification Programme

The Government's ambitious Khelo India Rising Talent Identification (KIRTI) program is set to get a fresh boost under the leadership of the Union Minister for Youth Affairs.

• Khelo India Rising Talent Identification (KIRTI) Program is aimed at school children between nine and 18 years age group.

• The nation-wide scheme will have two main objectives to hunt talent from every nook and corner of the country.

• KIRTI made a solid launch across 50 centres in India. Fifty thousand applicants are being assessed in the first phase across 10 sports, including athletics, boxing, wrestling, hockey, football and wrestling.

• It aims to conduct 20 lakh assessments across the country throughout the FY 2024-25 to identify talent through notified Talent Assessment Centres.

• Its athlete-centric programme is conspicuous by its transparent selection methodology based on Information Technology. Data analytics based on Artificial Intelligence are being used to predict the sporting acumen of an aspiring athlete.

SAUBHAGYA SCHEME

The Meghalaya Lokayukta recently issued notifications to the former chief secretary and other former officials of the Meghalaya Energy Corporation Limited (MeECL) for their alleged irregularities in the implementation of the Saubhagya scheme in the state.

• The Government of India launched Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) in October, 2017

• Objective is achieving universal household electrification, by providing electricity connections to all un-electrified households in rural areas and all poor households in urban areas in the country.

• Under the Saubhagaya scheme, LED bulbs, wire, holders, switches, etc. are to be provided to BPL families free of cost.

• In the rural areas, families other than BPL family's electricity connection have to be provided for Rs. 500. The consumer has to pay the amount in 10 equal installments of Rs. 50 in each bill, in the urban areas; the BPL families will be provided free power connection.

• Rural Electrification Corporation (REC) has been designated as its nodal agency for the Saubhagya scheme.

• The beneficiaries for free electricity connections will be identified using **Socio Economic and Caste Census (SECC) 2011 data.**

eSankhyiki Portal

The Ministry of Statistics and Programme Implementation (MoSPI) has developed an eSankhyiki portal.

• eSankhyiki Portal provides real-time inputs for planners, policy-makers, researchers and the public at large.

• The objective of this portal is to establish a comprehensive data management and sharing system for ease of dissemination of official statistics in the country.

It has two modules namely:

• **Data Catalogue Module**: This module catalogues the major data assets of the Ministry at one place for ease of access.

• It allows users to search within datasets, including within tables, and download data of interest to increase its value and re-usability.

• **Macro Indicators Module**: This module offers time series data of key macro indicators with features for filtering and visualizing data enabling ease of access for the users.

• The module also allows users to download custom datasets,visualizations and share them through APIs, thereby increasing the re-usability of data.

• The first phase of the module includes four major products of MoSPI: National Accounts Statistics, Consumer Price Index, Index of Industrial Production, and Annual Survey of Industries, encompassing the data of the last ten years.

9 YEARS OF THE DIGITAL INDIA INITIATIVE

The Prime Minister praised the successful completion of 9 years of the Digital India initiative, highlighting its role in enhancing 'Ease of Living' and transparency.

• Digital India Initiative launched in 2015 aims to transform India into a digitally empowered society and knowledge economy. It covers various projects from Central Ministries, Departments, and States/UTs.

Key focus areas include:

• Digital infrastructure
• Governance
• Services on demand
• Digital empowerment of citizens

• The initiative encompasses nine pillars of growth, with the Deparment of Electronics and Information Technology (DeitY)as the main coordination agency,along with other ministries and a monitoring committee led by the Prime Minister.

• Digital India focuses strongly on expanding digital infrastructure and access to rural areas through initiatives like BharatNet for internet This helps bridge the technology access gap.

Social Security for Gig Workers

Karnataka became the second state after Rajasthan to come up with legislation for Gig Workers.

• Through a draft version of the law (Karnataka Platform-based Gig Workers (Social Security and Welfare) Bill), the Karnataka government aims to regulate the social security and welfare of platform-based gig workers in the state by creating a board, welfare fund, and grievance cell among the mechanisms.

Highlights of the Karnataka Bill:

• Creation of Welfare Board: Board comprising Karnataka labour minister, two aggregator officials, two gig workers, and one civil society member to be formed.

• A two-level grievance redressal mechanism for workers, and more transparency with regards to the automated monitoring and decision-making systems deployed by platforms has been envisaged by the draft bill.

• The draft mandates aggregators to make payments at least every week and to inform the worker about the reasons for any payment deductions.

• Gig workers can apply to receive a Unique ID applicable across all platforms upon registration with the board.

• Social Security and Grievance Redressal: Access to general and specific social security schemes based on contributions along with a grievance redressal mechanism for gig workers.

• The Bill aims to provide greater autonomy to the gig workers to terminate contracts and resist being over worked by employers.

•The aggregator shall not terminate a worker without giving valid reasons in writing and prior notice of 14 days.

• There is a mandate for aggregators to maintain a safe working environment for gig workers.

• Proposed fund financed by a welfare fee from aggregators along with state and worker contributions.

• Basic penalty of Rs 5,000 extendable up to Rs 1 lakh for aggregators violating conditions under the Bill.

Gig Workers:

• As per the Code on Social Security 2020, a gig worker is a person who performs work or participates in a gig work arrangement and earns from such activities outside of traditional employer-employee relationship.

Right to Repair Portal

The Central government of India asked the automobile companies to join the unified Right to Repair Portal India.

• Right to Repair Portal aims to provide consumers with access to repair information for their products and reduce e-waste.

• It was launched by the Union Ministry of Consumer Affairs (MCA) on   National Consumer Rights Day 2022.

• It provides information about the circular economy, which is the new economic model that focuses on repairing and reusing products, as opposed to throwing them away.

• The portal brings together information from different sectors, including automobiles, consumer durables, mobile and electronics, and farming equipment.

• All public information related to proucts, services,warranties, terms, and conditions, etc. will also be easily accesble through this portal.

• It gives consumers access to affordable repair mobile phones, appliances, and other electronic devices by original equipment manufacturers (OEMs) or third-party repairers.

• The aim is to offer a cheaper alternative to expensive replacements to customers, instead of buying new products altogether.

GOVERNMENT OF INDIA

DEPARTMENT OF CONSUMER AFFAIRS

MINISTRY OF CONSUMER AFFAIRS, FOOD & PUBLIC DISTRIBUTION

RIGHT TO REPAIR PORTAL INDIA

सत्यमेव जयते

EXPUNCTION POWERS

The first special session of the 18th Lok Sabha saw heated debates and clashes between the government and opposition over remarks that led to expunction from records.

• Expunction powers refer to the authority vested in parliamentary presiding officers, such as the Rajya Sabha Chairman and Lok Sabha Speaker, to delete remarks from official records that are deemed defamatory, indecent, unparliamentary, or undignified.

• This process helps maintain decorum and uphold parliamentary standards during debates and proceedings.

• This standard procedure is intended to maintain decorum and uphold parliamentary etiquette.

• The presiding officers, under Rules 261 (Rajya Sabha) and 380 (Lok Sabha), can order the deletion of objectionable remarks during debates.

• Expunged portions are marked and excluded from official records to prevent their circulation, although challenges persist in the digital age with live telecasts and social media dissemination.

SDG India Index 2023-24

NITI Aayog recently released the SDG India Index 2023-24, which evaluates India's progress on the 16 Sustainable Development Goals (SDGs).

• India's overall SDG score improved to 71 in 2023-24, up from 66 in 2020-21 and 57 in 2018.

• Top Performing States: Kerala and Uttarakhand achieved the highest scores of 79 each.

• Notable advancements in Goals 1 (No Poverty), 8 (Decent Work and Economic Growth), 13 (Climate Action), and 15 (Life on Land).

• Fastest Moving States: Uttar Pradesh (increase by 25 points), followed by J&K (21), Uttarakhand (19), Sikkim (18), Haryana (17), Assam, Tripura, and Punjab (16 each), Madhya Pradesh and Odisha (15 each).

• New Entrants in Front-Runner Category: Arunachal Pradesh, Assam, Chhattisgarh, Madhya Pradesh, Manipur, Odisha, Rajasthan, Uttar Pradesh, West Bengal, and Dadra and Nagar Haveli and Daman and Diu.

Naavu Manujaru Programme

The Karnataka government has ordered the implementation of 'Naavu Manujaru' programme from this academic year.

• Naavu Manujaru' Programme is to improve the capacity of the students to think independently and rationality and understand the pros and cons of every issue.

• It is implemented in all government, aided and unaided primary and high schools of the State.

• Implementation of this programme would involve discussions and dialogues for two hours per week

• It involves discussion on social harmony and its significance, based on local and national festivals, folk games, sports

• The discussion also includes thoughts of social reformers, visiting and sharing information on outbound/local famous places, cottage industries, discussion on nuclear and non-nuclear families, discussion on elimination of inequality and dialogue on constitutional values like equality, liberty and fraternity etc.

• The Department of State Educational Research and Training (DSERT) is the implementation authority of this programme.

FISHMIP INITIATIVE

The report produced by the Ecosystem Model Intercomparison Project (FishMIP) projects that exploitable fish biomass declined more than 10 per cent, particularly under the high-emissions scenario, by mid-century for many regions of the world.

• Fisheries and Marine Ecosystem Model Intercomparison Project (FishMIP) was officially launched in 2013.

• It provides knowledge to industry and governments to support effective planning for adaptive and resilient seafood sectors under climate change.

• It has a network of more than 100 marine ecosystem modellers and researchers from around the world.

• The FishMIP and Food and Agriculture Organization (FAO) collaborated to understand the long-term impacts of climate change on marine ecosystems and fisheries through a set of state-of-the-art numerical models.

• In 2024, FishMIP 2.0 was established to increase the reliability of modelling projections and to answer a broader set of policy-related questions relevant to food security and marine resource management, with climate change remaining the overarching theme.

FishMIP
Fisheries & Marine Ecosystem
Model Intercomparison Project

U-WIN Portal

The U-WIN portal, a replication of the Covid-19 vaccine management system Co-WIN, is set for a pan-India launch likely by the end of August.

• U-WIN Portal is aiming to maintain an electronic registry of routine immunizations.

• Currently, U-WIN is in pilot mode across all states and Union Territories, except for West Bengal.

• It captures every vaccination event for pregnant women and children under the Universal Immunization Programme (UIP).

• It will ensure timely administration of vaccine doses by digitally recording every vaccination event under the Universal Immunisation Programme among all pregnant women and children aged 0-5 years.

• The platform generates a uniform QR-based, digitally verifiable e-vaccination certificate, similar to Covid vaccination certificate, which can be accessed anytime by the citizens through a single click.

• The U-WIN is going to be the single source of information for immunisation services which will record pregnancy details and outcome, newborn registration and immunisation at birth.

• It will update vaccination status and delivery outcome, among others, on real time.

• Citizens can self-register for vaccinations via the U-WIN web portal or its Android mobile application, select preferred vaccination centres, and schedule appointments.

• Automated SMS alerts inform citizens about registration confirmations, administered doses and upcoming dose reminders, ensuring timely and-age-appropriate vaccinations.

• It also facilitates the creation of Ayushman Bharat Health Account (ABHA) IDs for comprehensive health record maintenance.

U-WIN

• It also supports the frontline workers to digitally record all vaccination events for children and pregnant women for complete, accurate and easy record maintenance.

International Centre for Audit of Local Governance

The International Centre for Audit of Local Governance (iCAL) was inaugurated by the Comptroller and Auditor General (CAG) of India.

• iCAL, the first of its kind in India, aims to set global standards for auditing local governance bodies.

• iCAL will bring together policymakers, administrators, and auditors associated with local governments to enhance auditing practices and capacity building.

• The centre aims to set international benchmarks for local governance audits, improving financial performance assessment, service delivery, and data reporting.

• iCAL's primary goal is to empower auditors, executives, and elected representatives of local governments through training and leadership development.

•The centre will function as a knowledge hub and think tank, addressing governance issues through workshops, knowledge-sharing sessions, and peer exchanges.

DIGIPIN

The Department of Posts has issued a beta version of National Addressing Grid under the brand name of DIGIPIN, which can be used for creating and sensing geo-location of addresses, for public feedback.

• DIGIPIN is an initiative to establish a standardized, geo-coded addressing system in India, for ensuring simplified addressing solutions for citizen-centric delivery of public and private services.

• In this regard, the Department had collaborated with IIT Hyderabad for developing this National Addressing Grid.

• This system will act as a strong and robust pillar of Geospatial Governance, leading to enhancements in public service delivery, faster emergency response and a significant boost to logistics efficiency.

• The DIGIPIN layer will act as the addressing reference system which can be used for logically locating addresses with directional properties built into it due to the logical naming pattern followed in its construction.

• It is proposed to be fully available in the public domain and can be easily accessed by everyone. The DIGIPIN Grid system being an addressing referencing system, can be used as the base layer for other ecosystems, including various service providers and utilities, where addressing is one.

भारतीय डाक

India Post

ASMITA Project

The Ministry of Education and the University Grants Commission (UGC) recently unveiled the ASMITA Project, aimed at bolstering the availability of educational resources in Indian languages.

• ASMITA (Augmenting Study Materials in Indian Languages through Translation and Academic Writing) is an initiative to develop 22,000 books in Indian languages in the next five years.

• It is a collaborative effort of the UGC and the Bharatiya Bhasha Samiti, a high-powered committee under the Ministry of Education.

• The primary objective of this initiative is to promote and integrate Indian languages more deeply into the education system, thereby enriching the learning experience and making it more inclusive.

• This project is seen as part of a broader strategy to enhance the accessibility and quality of educational materials across various Indian languages.

GRSE ACCELERATED INNOVATION NURTURING SCHEME

Raksha Rajya Mantri Shri Sanjay Seth launched "GRSE Accelerated Innovation Nurturing Scheme (GAINS 2024) of Garden Reach Shipbuilders & Engineers Limited (GRSE) in Kolkata.

• GRSE Accelerated Innovation Nurturing Scheme is an innovative scheme which seeks solutions to the problems related to the shipyards and promotes technology development using the start-ups created and nurtured in the country.

• It encourages and enables MSMEs and Start-Ups to develop innovative solutions for further technological advancement.

• It will give a new dimension to the future of Indian defence and with technological advancements and dedication it will enhance the strength of our armed forces and enhance maritime security.

• It is a unique national scheme to encourage and enable MSMEs and Start-Ups to develop innovative solutions that GRSE may incorporate for further technological advancement.

• The aim is to leverage the vast eco-system of MSMEs and Start-Ups to address present and emerging challenges in the ship design and construction industry, while achieving the objectives of Atmanirbharta.

• This initiative is in keeping with the 'Make in India' and 'Start-up India' policies of the Government of India.

National Landslide Forecasting Centre

Union Minister G Kishan Reddy Inaugurates National Landslide Forecasting Centre and Launches Bhusanket Web Portal & Bhooskhalan Mobile App

• The National Landslide Forecasting Centre (NLFC) aims to mitigate landslide hazards in India. It provides early warning bulletins for landslide-prone states and plans to operationalize a nationwide Landslide Early Warning System (LEWS) by 2030

• Bhusanket Web Portal facilitates dissemination of information on landslide hazards and initiates short- and medium-range forecasting.

• Bhooskhalan Mobile App provides quick daily landslide forecasts.

• A landslide is "a movement of a mass of rock, earth or debris down a slope".

First State to adopt a 10-year Road Safety Action Plan

Rajasthan will become the first state in India to adopt a 10-year road safety action plan aimed at reducing road accidents by 50% by 2030.

• Measures included in the Rajasthan government's 10-Year Road Safety Action Plan:

• Technology Use: Implementation of the iRAD application for online data entry of road accidents.

• Campaigns to raise awareness and bring about behavioural changes regarding road safety rules and provisions.

Specific Safety Measures:

- • Speed Limits
- • Safe Distance
- • Traffic Signals
- • Road Barriers
- • Pedestrian Safety
- • Seatbelt and Helmet Use
- • Vehicle Insurance
- • World Bank Assistance
- • Coordination Among Stakeholders
- • Workshops and Training

NIRMAN Scheme

The Union Minister for Coal and Mines recently launched the portal "Noble Initiative for Rewarding Mains Aspirants of National Civil Services Examination (NIRMAN)".

• Initiative for Rewarding Mains Aspirants of the National Civil Services Examination (NIRMAN) is a unique Corporate social responsibility (CSR) scheme by Coal India Limited (CIL) designed to support meritorious candidates from its operational districts.

• The NIRMAN scheme is tailored to provide financial assistance of ₹1,00,000 to candidates who have successfully cleared the preliminary round of the UPSC Civil Services and Forest Service Examinations in 2024.

• The eligible beneficiaries include those with an annual family income of less than ₹8 lakhs, and who are permanent residents of the 39 districts where CIL operates.

• This support extends to individuals from Scheduled Castes (SC) and Scheduled Tribes (ST), as well as female and third-gender candidates.

• The application process for NIRMAN is fully digital and facilitated through a dedicated portal.

Revised Currency Swap Framework for SAARC

The Reserve Bank of India (RBI), has decided to put in place a revised framework for currency swap arrangements for SAARC (South Asian Association for Regional Cooperation) countries for the period 2024 to 2027.

• A currency swap agreement between two countries is a contract to exchange currencies with predetermined terms and conditions for liquidity support.

• Central banks and Governments engage in currency swaps with foreign counterparts to meet short-term foreign exchange liquidity requirements or to ensure adequate foreign currency to avoid the Balance of Payments (BOP) crisis till longer arrangements can be made.

• These swap operations carry no exchange rate or other market risks as transaction terms are set in advance.

• The swap can be made in US dollars, euro or Indian rupees. The framework provides certain concessions for swap in the Indian rupee.

• The facility will be available to all SAARC member countries, subject to their signing the bilateral swap agreements.

• Under the framework for 2024-27, a separate INR (Indian Rupee) swap window has been introduced with various concessions for swap support in Indian Rupee.

RoDTEP Scheme

The tea industry has sought higher rates under the RoDTEP scheme to make exports more competitive in overseas markets.

• RoDTEP Scheme is a flagship export promotion scheme of the Union Ministry of Commerce and Industry.

• The WTO-compliant scheme aims to refund to the exporters the embedded central, state, and local duties and taxes paid on inputs that have so far not been refunded or rebated.

• RoDTEP was announced in September 2019 with the aim of boosting domestic exports and replacing the export incentive scheme, Merchandise E

• By providing support to crucial export sectors, the government aims to not only enhance their competitiveness but also create employment opportunities and contribute to overall economic growth, aligning with the vision of building an Aatmanirbhar Bharat.

• This scheme is open to both manufacturers and merchant exporters, without any threshold of turnover.

• The most important condition is that such goods should have been directly exported by such a person.

• The RoDTEP scheme covers physical exports as well as outbound shipments of services from India. Service providers can also claim refunds on applicable hidden levies.

Mutual Evaluation Report of India

The Mutual Evaluation Report of India, adopted at the FATF plenary in Singapore from June 26 to 28, places India in the "regular follow-up" category, a status shared by only four other G-20 countries.

• This distinction highlights India's significant progress in combating money laundering (ML) and terrorist financing (TF).

• Financial Action Task Force (FATF) is an inter-governmental policy-making and standard-setting body dedicated to combating money laundering and terrorist financing.

• Objective is to establish international standards, and to develop and promote policies, both at national and international levels, to combat money laundering and the financing of terrorism.

• FATF members include 39 countries, including the United States, India, China, Saudi Arabia, Britain, Germany, France, and the EU as such.

•India became a member of FATF in 2010.

Mutual Evaluation Report of FATF:

• The mutual evaluation report is an assessment of a country's measures to combat money laundering, financing of terrorism and proliferation of weapons of mass destruction

• The reports are peer reviews, where members from different countries assess another country.

• During a mutual evaluation, the assessed country must demonstrate that it has an effective framework to protect the financial system from abuse.

• The FATF conducts peer reviews of each member on an on-going basis to assess levels of implementation of the FATF Recommendations, providing an in-depth description and analysis of each country's system for preventing criminal abuse of the financial system.

Artificial Intelligence Preparedness Index

The International Monetary Fund (IMF) released an Artificial Intelligence Preparedness Index (AIPI) Dashboard.

• Artificial Intelligence Preparedness Index (AIPI) assesses the level of AI preparedness across 174 countries.

• The rating for each country is given based on the assessment of readiness in four key areas – digital infrastructure, human capital and labour market policies, innovation and economic integration, and regulation and Ethics.

• The Index has categorised each country into Advanced Economy (AE), Emerging Market Economy (EM), and Low-Income Country (LIC).

• Singapore (0.80), Denmark (0.78), and the United States (0.77) are among the highest-rated AEs,

• India was categorised as an EM with a 0.49 rating. India ranks 72 in a total of 174 countries, with Bangladesh (0.38) on 113, Sri Lanka (0.43) on 92, and China (0.63) on 31.
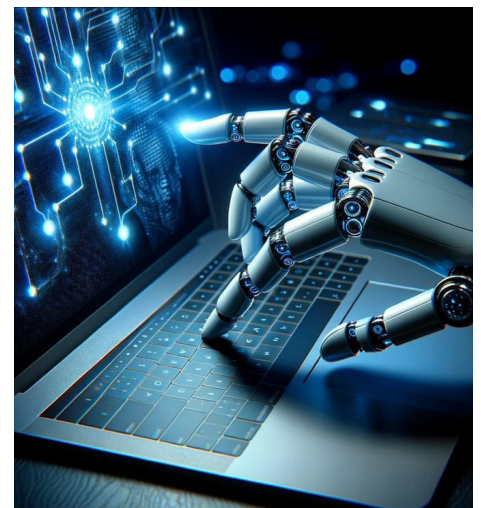
Union Budget 2024-2025

The focus of the budget remains on four major groups: 'Garib' (Poor), 'Mahilayen' (Women), 'Yuva' (Youth), and 'Annadata' (Farmers).

• The Union Budget 2024-25 emphasises employment, skilling, support for MSMEs, and the middle class. A significant allocation of Rs 1.48 lakh crore is earmarked for education, employment, and skilling.

• The budget prioritizes nine areas including agriculture, employment, human resource development, manufacturing, services, urban development, energy security, infrastructure, innovation, research & development, and next-generation reforms.

• Measures include releasing new 109 high-yielding crop varieties, promoting natural farming among 1 crore farmers, establishing 10,000 need-based bio-input bio-input centres, and enhancing production, storage, and marketing of pulses and oilseeds (achieve'atmanirbharta' for oil seeds).

• A provision of Rs 1.52 lakh crore has been announced for agriculture and allied sectors this year.

• Government along with the states, will facilitate the implementation of the Digital Public Infrastructure (DPI) in agriculture for coverage of farmers and their lands in 3 years.

• The budget introduces schemes like Employment Linked Incentive and initiatives to boost skilling with a focus on skilling 20 lakh youth over a 5-year period and upgrading 1,000 Industrial Training Institutes.

• The budget introduces schemes like Employment Linked Incentive and initiatives to boost skilling with a focus on skilling 20 lakh youth over a 5-year period and upgrading 1,000 Industrial Training Institutes.

• Financial support for higher education and loans for skilling are also announced.

• The Model Skill Loan Scheme will be revised to facilitate loans up to Rs 7.5 lakh with a guarantee from a government promoted fund, which is expected to help 25,000 students every year.

• Enhanced support for economic activities among marginalised groups, including tribal communities and women entrepreneurs, is emphasized.

• The government's Purvodaya initiative aims to comprehensively develop the eastern region of India- including Bihar, Jharkhand, West Bengal, Odisha, and Andhra Pradesh, focusing on human resource development, infrastructure enhancement, and economic growth to advance towards a developed nation.

• The Finance Minister announced the launch of the Pradhan Mantri Janjatiya Unnat Gram Abhiyan to enhance the socio-economic conditions of tribal communities, covering 63,000 villages in tribal-majority areas and aspirational districts, benefiting approximately 5 crore tribal people.

• Over 100 branches of India Post Payment Bank will be established in the North East region to enhance banking services, alongside a provision of Rs 2.66 lakh crore allocated for rural development and infrastructure this year.

• The budget emphasises support for MSMEs, focusing on labour-intensive manufacturing, with a new self-financing guarantee fund offering up to Rs 100 crore per applicant.

• Public sector banks will enhance their internal assessment capabilities for MSME credit. Additionally, Mudra loan limits will increase to Rs 20 lakh for previous 'Tarun' category borrowers.

• The budget also includes initiatives like setting up 50 food irradiation units, establishing 100 food quality labs, and creating E-Commerce Export Hubs.

• Furthermore, a scheme for internships in 500 top companies aims to benefit 1 crore youth over 5 years.

• PM Awas Yojana Urban 2.0, has been allocated Rs 10 lakh crore to address housing needs of 1 crore urban poor and middle-class families, with Rs 2.2 lakh crore in central assistance over 5 years.

• The government will also collaborate with State Governments and Multilateral Development Banks to promote water supply, sewage treatment, and solid waste management in 100 large cities through bankable projects.

• Additionally, building on the success of PM SVANidhi, the government plans to establish 100 weekly street food hubs (haats) annually over the next five years.

• PM Surya Ghar Muft Bijli Yojana aims to install rooftop solar plants for free electricity to 1 crore households (up to 300 units every month).

• Nuclear energy is highlighted as a significant part of India's energy mix.

• Government will try to maintain strong fiscal support for infrastructure over the next 5 years on this line Rs 11,11,111 crore for capital expenditure has been allocated this year, which is 3.4% of our GDP.

• Phase IV of Pradhan Mantri Gram Sadak Yojana (PMGSY) to connect 25,000 rural habitations with all-weather roads due to population growth has been announced.

• For Bihar, under the Accelerated Irrigation Benefit Programme and other sources, the government will allocate Rs 11,500 crore for projects like the Kosi-Mechi intra-state link and 20 other schemes including barrages, river pollution abatement, and irrigation.

• Additionally, financial assistance will be provided to Assam, Himachal Pradesh, Uttarakhand, and Sikkim for flood management, landslides, and related projects.

• The government will establish the Anusandhan National Research Fund to support basic research and prototype development, allocating Rs 1 lakh crore to spur private sector-driven research and innovation at a commercial scale.

• To expand the space economy fivefold in the next decade, a venture capital fund of Rs 1,000 crore will be established.

• Plans for an Economic Policy Framework, labour reforms, and simplification of FDI regulations are outlined to spur economic growth.

• Jan Vishwas Bill 2.0 to improve Ease of Doing Business will be introduced by the government.

Producer Price Index: New Model

The DPIIT is finalizing a new model of the Producer Price Index (PPI) to better capture input prices in the economy.

• Producer Price Index measures the average change in prices received by producers for goods and services sold in the domestic market or exported.

• It includes two types: Output PPI for goods and services leaving production sites, and Input PPI for goods and services entering production processes.

• The new model of PPI aims to replace WPI due to biases in double counting of products, exclusion of exports/imports, and overlooking the service sector (55% of GDP).

• It has been shared with the IMF, and consultations are underway to transition from WPI to PPI, aligning with most G20 economies.

• The government is also considering changing the base year of the Wholesale Price Index (WPI) from 2011-12, with discussions ongoing with MoSPI and the National Statistical Commission.

PROJECT NEXUS

RBI recently joined Project Nexus, an initiative to enable instant cross-border retail payments by linking domestic Fast Payment Systems.
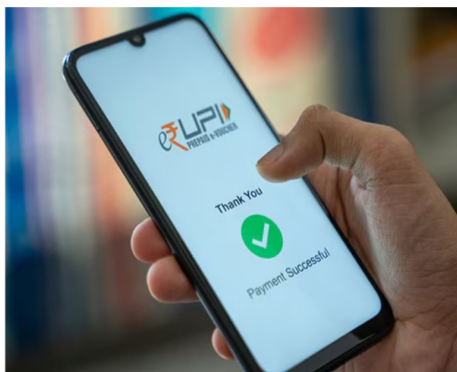
• Project Nexus is a multilateral international initiative to enable instant cross-border retail payments by interlinking domestic Fast Payments Systems (FPSs).

• Rather than requiring FPS operators to establish multiple custom connections for each country, Nexus provides a standardized, single-connection solution that enables seamless transactions across borders.

• With Nexus, an FPS operator can connect to a single network, enabling instant access to other countries within the network.

• It was conceptualized by the Innovation Hub of the Bank for International Settlements (BIS).

• It aims to connect the FPSs of four ASEAN countries (Malaysia, Philippines, Singapore, and Thailand); and India, who would be the founding members and first mover countries of this platform.

• The platform, which can be extended to more countries, is expected to go live by 2026.

• When a new country joins Nexus, existing members are automatically connected to that country and vice versa. This means the network can expand at a near-zero marginal cost for existing members.

• By simplifying and unifying the payment infrastructure, Project Nexus seeks to enhance efficiency, reduce costs and improve the accessibility of international payments.

SEBI: Introduction of a New Asset Class or Product Category

The Securities and Exchange Board of India (SEBI) has proposed the introduction of a new asset class or product category.

• This move is aimed at providing investors with a regulated investment product that features higher risk-taking capabilities, while also curbing the proliferation of unregistered and unauthorised investment products.

• The minimum investment threshold under the new asset class has been proposed at Rs 10 lakh per investor.

• SEBI proposes distinct naming for this new asset class to differentiate it from traditional MFs, PMS, Alternative Investment Funds (AIFs), Real Estate Investment Trusts (REITs), and Infrastructure Investment Trusts (INVITs).

• Some of the investment strategies that may be permitted include long-short equity funds and inverse ETF (exchange-traded fund) (funds that are traded on stock exchanges, much like individual stocks).

• Investors may also have an option of systematic plans such as systematic investment plan (SIP), systematic withdrawal plan (SWP) and systematic transfer plan (STP) for investment strategies under the new asset class.

India Maritime Centre

India Maritime Centre (IMC) moves closer to reality under the Maritime India Vision 2030.

• India Maritime Centre (IMC) is a cornerstone initiative of the Ministry of Ports, Shipping, and Waterways (MoPSW) under the Maritime India Vision 2030.

• It aims to provide a unified platform for the Indian maritime industry, acting as a think tank for policy formulation and industry recommendations.

• It is poised to be a pivotal institution in advancing India's maritime interests both domestically and internationally.

• Its primary goals include Strengthening India's participation in the International Maritime Organisation (IMO) and global maritime forums.

• Conducting flagship events to build a strong global brand for the Indian maritime cluster.

• Providing expert analysis and recommendations for sustainable growth.

• Establishing platforms for industry stakeholders to collaborate and network.

• Creating a pool of funds to support the industry, including startups.

• Mumbai has been finalized as the location for the IMC.

Economic Survey 2023-24

Finance Minister Nirmala Sitharaman on Monday tabled the Economic Survey 2023-24 in Parliament, setting the stage for the Union Budget 2024-25.

Growth and Macroeconomic Outlook

• **GDP Growth**: India's GDP is projected to grow by 6.5-7% in FY25. For FY24, real GDP grew by 8.2%, surpassing the 8% mark in three out of four quarters.

• **Inflation**: Overall inflation decreased from 6.7% in FY23 to 5.4% in FY24. The forecast for FY25 is 4.5%, and 4.1% for FY26.

Fiscal and External Sector

• **Current Account Deficit(CAD):** Improved to 0.7% of GDP in FY24 from 2.0% in FY23.

• **Tax Revenue**: Direct taxes contributed 55% of total tax revenue, with indirect taxes making up the remaining 45%.

• **Capital Spending**: The government increased capital expenditure and provided free food grains to 814 million people.

• **Services Exports**: Grew by 4.9% to USD 341.1 billion, with significant contributions from IT/software and business services.

• **Remittances**: India remained the top global recipient with USD 120 billion in 2023.

• **External Debt**: India's external debt to GDP ratio was 18.7% as of March 2024.
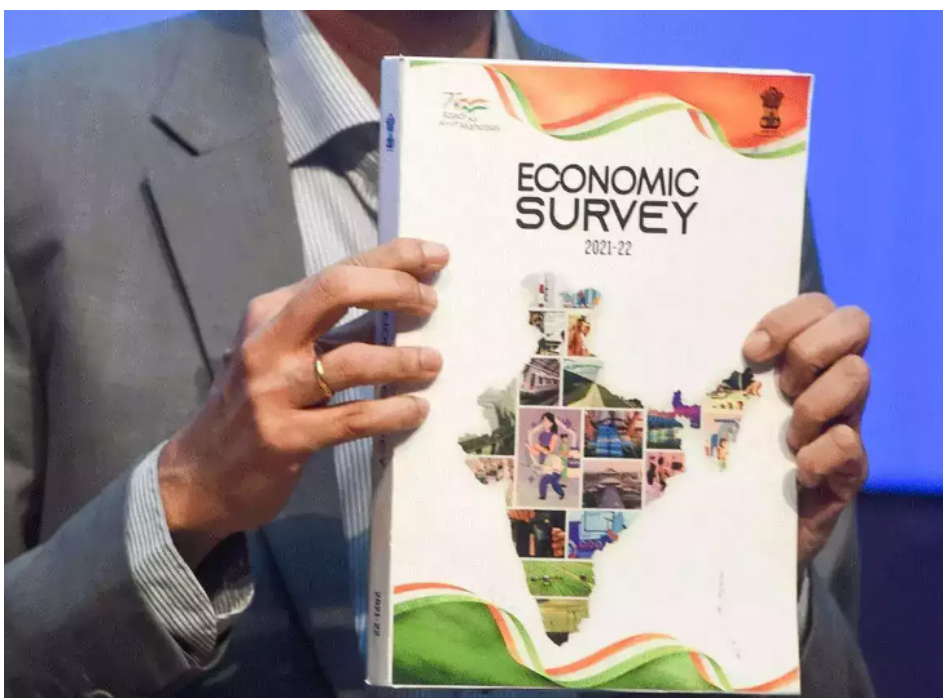
Monetary Management

• **Policy Repo Rate**: The RBI maintained a steady rate at 6.5% throughout FY24.

• **Core Inflation**: Declined by around 4% from April 2022 to June 2024.

• **Credit Growth**: Credit disbursal by Scheduled Commercial Banks (SCBs) grew by 20.2%, reaching Rs 164.3 lakh crore by March 2024.

Banking and Financial Sector

• **Non-Performing Assets (NPAs)**: Gross NPAs declined to 2.8% in March 2024, a 12-year low.

• **Insolvency and Bankruptcy Code**: Effective in resolving the twin balance sheet problem, disposing of Rs 13.9 lakh crore in corporate debt as of March 2024.

Capital Markets and Insurance

• **Primary Capital Markets**: Facilitated capital formation of Rs 10.9 lakh crore, approximately 29% of gross fixed capital formation of private and public corporates in FY23.

• **Insurance Market**: Poised to become one of the fastest-growing globally and has the second-largest microfinance sector.

Inflation Trends

• **Regional Inflation**: 29 States and Union Territories recorded inflation below 6% in FY24.

• **Core Services Inflation**: Eased to a nine-year low.

• **Food Inflation**: Increased from 6.6% in FY23 to 7.5% in FY24

• **Retail Fuel Inflation**: Remained relatively low due to price cuts on LPG, petrol, and diesel.

Infrastructure and Development

- **Highways**: Construction pace increased from 11.7 km per day in FY14 to approximately 34 km per day by FY24.
- **Railways**: Capital expenditure increased by 77% over the past five years.
- **Aviation**: 21 new airport terminal buildings operationalized in FY24.
- **Logistics**: Improved rank in the International Shipments category to 22nd in 2023 from 44th in 2014.
- **Space**: India has 55 active space assets, including communication, navigation, scientific, meteorological, and earth observation satellites.

Social and Human Development

- **Healthcare**: Over 34.7 crore Ayushman Bharat cards issued.
- **Housing**: 2.63 crore houses constructed under PM-AWAS-Gramin in the past nine years.
- **Youth Unemployment**: Fell from 17.8% in 2017-18 to 10% in 2022-23.
- **Female Labor Force Participation**: Rising for six consecutive years, currently at 37.0%.

Sectoral Highlights

- **Pharmaceuticals**: India's market is the world's third-largest by volume, valued at USD 50 billion.
- **Textiles**: Second-largest clothing manufacturer globally, with textile and apparel exports reaching Rs 2.97 lakh crore in FY24.
- **Digital Services**: Share in global digitally delivered services exports increased to 6% in 2023, with services exports constituting 44% of India's total exports in FY24.
- **Tourism**: India's share in world tourism receipts increased from 1.38% in 2021 to 1.58% in 2022.

Overall Economic Position:

- **Logistics Index**: Improved rank to 38th in 2023 from 44th in 2014.

This comprehensive overview of India's economic performance and outlook demonstrates robust growth, improved fiscal health, and advancements in infrastructure, social development, and various economic sectors.
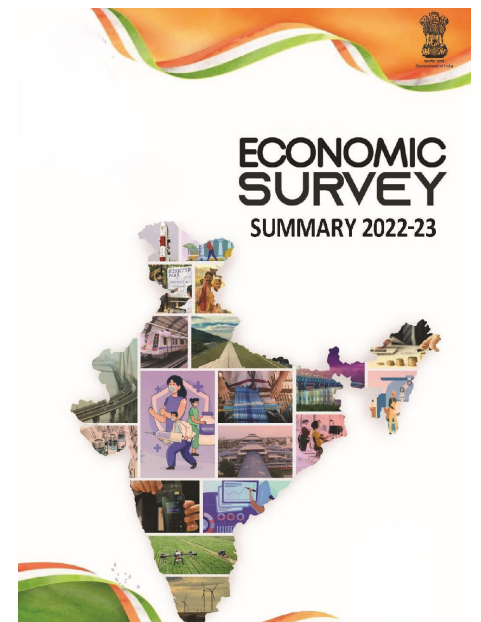
Windfall Tax: Increased

The Indian government has increased the windfall tax on domestically produced crude oil from Rs 3,250 per tonne to Rs 6,000 per tonne.

- A Windfall Tax is a type of tax that is levied on companies or individuals who have unexpectedly and/or dramatically gained large profits, often due to external factors beyond their control.
- It is commonly levied on industries such as oil, gas, and mining.
- The purpose is to capture a portion of the extraordinary profits that companies make and redistribute it for public good.
- It is a strategic measure to promote transparency and fairness and responsible economic practices in the energy industry.
- This hike will impact the profits of oil companies operating in India and reduce their earnings.
- India first implemented windfall profit taxes on 1st July 2022, aligning with other countries that tax excessive profits of energy companies.
- The tax rates are reassessed every 2 weeks, taking into account international crude prices from the preceding fortnight.

Employment Rate Rises Significantly In FY24: RBI

The Reserve Bank of India (RBI) data revealed a significant rise in India's employment rate, growing by 6% in FY24 from 3.2% in FY23, reflecting positive trends in the labour market.

• The RBI's India KLEMS [Capital (K), Labour (L), Energy (E), Material (M) and Services (S)] database showed that in the year 2022-23, employment in the country was 57.75 crore, compared to 56.56 crore in 2021-22.

• The database covers 27 industries and provides estimates at the broad sectoral levels and all-India levels. It includes measures of Gross Value Added, Labour Employment, Capital Stock, and inputs such as Energy, Material, and Services.

• The female unemployment rate showed a notable decline, dropping from 9.2% in January–March 2023 to 8.5% in January–March 2024.

• The female worker population ratio (WPR) in urban areas increased from 20.6% in January – March 2023 to 23.4% in January – March 2024, indicating a general upward trend in WPR.

BOMBAY STOCK EXCHANGE

The Bombay Stock Exchange (BSE) Sensex has crossed the 80,000 mark for the first time on 4th July 2024, hitting a new peak of 80,074 during intraday trades.

• The Sensex has doubled in the last 5 years, after taking 12 years to climb from 20,000 to 40,000.

• It has crossed its first 10,000 level in 2006, the 20,000 level in 2007, and the 40,000-mark in 2019.

• Sensex is a stock market index that tracks the performance of the 30 largest and most actively traded companies listed on the Bombay Stock Exchange (BSE) in India.

• A stock exchange is a centralised location where the shares of publicly traded companies are bought and sold. BSE is the oldest stock exchange in Asia established in 1875.

• The Sensex is re-evaluated two times a year, one in June and the next in December.

Liberalised Remittance Scheme

The Reserve Bank of India (RBI) in a notification issued recently allowed resident individuals to open Foreign Currency Accounts (FCAs) in International Financial Services Centres (IFSCs) at GIFT City in Gujarat under the Liberalised Remittance Scheme (LRS).

• Liberalised Remittance Scheme (LRS) is a foreign exchange policy initiative introduced by the RBI in 2004.

• It is intended to simplify and streamline the process of remitting funds outside India.

• This scheme helped Indians overcome international fund transfer restrictions as set by the FEMA (Foreign Exchange Management Act), 1999.

• Under LRS, all resident individuals, including minors, are allowed to freely remit up to USD 250,000 per financial year (April–March).

• Only individual Indian residents are permitted to remit funds under LRS. Corporates, partnership firms, HUFs, trusts, etc. are excluded from its ambit.

• This can be for any permissible current or capital account transaction or a combination of both.

• The remittances can be made in any freely convertible foreign currency.

Vizhinjam International Seaport: First Cargo Ship

Kerala Chief Minister officially welcomed the first cargo ship, the Chinese vessel 'San Fernando,' at the Vizhinjam International Sea Port.

• Developed by Adani Ports and Special Economic Zone Ltd (APSEZ), this marks the beginning of operations for India's largest deep-water trans-shipment port.

• The port is constructed under a public-private partnership.

• The Vizhinjam International Transhipment Deepwater Multipurpose Seaport is an ambitious project taken up by Government of Kerala.

• It is designed primarily to cater container transhipment besides multi-purpose and break bulk cargo.

• The port is being currently developed in landlord model with a Public Private Partnership component on a design, build, finance, operate and transfer ("DBFOT") basis.

INTERNATIONAL RELATIONS

First Meeting of the Colombo Process

India chaired the first meeting of the Colombo Process in Geneva, marking its first time at the helm.

• Colombo Process is a regional consultative forum comprising 12 Asian member states and aims to share best practices related to overseas employment for South and Southeast Asian countries that send migrant workers abroad.

• The member states include Afghanistan, Bangladesh, Cambodia, China, India, Indonesia, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand, and Vietnam.

• The forum, founded by 10 of these states, makes non-binding decisions by consensus.

• The International Organisation for Migration (IOM) and the Colombo Process Technical Support Unit (CPTSU) provide technical and administrative support.

4th Periodic Review Of The ICCPR

India successfully concluded its 4th periodic review by the Human Rights Committee under the International Covenant on Civil and Political Rights (ICCPR) in Geneva.

• The ICCPR is an important international human rights treaty that, along with other key documents, forms the International Bill of Human Rights.

• It obligates countries to protect and preserve basic human rights such as the right to life, freedom of speech, and gender equality.

• Adopted by the UN General Assembly in 1966, ICCPR came into force in 1976 and has been ratified by 173 countries including India in 1979, undergone three previous reviews, with the latest in 2024.

• The 4th periodic review covered diverse issues including anti-corruption measures, non-discrimination, women's and minority

Global Conclave On Plastic Recycling And Sustainability

The Global Conclave on Plastic Recycling and Sustainability (GCPRS) began yesterday at Bharat Mandapam, Pragati Maidan, addressing issues of plastic waste management, recycling, and sustainability to promote circularity.

• The Global Conclave on Plastics Recycling and Sustainability (GCPRS), organized by the AIPMA (All-India Plastics Manufacturers' Association (AIPMA), gathers industry stakeholders to address critical issues in plastic use and recycling, showcasing innovative technologies and fostering collaboration for sustainable practices across sectors.

• Initiative: Project REPLAN (REducing PLAstic from Nature), Promotion of Circular Economy, EPR Portal for Plastic Packaging, Swachh Bharat Mission, Lifestyle for the Environment (LiFE) Movement

International North-South Transport Corridor (INSTC)

Russia has sent two trains carrying coal to India through the International North-South Transport Corridor (INSTC) for the first time.

• The consignment will travel over 7,200km from St. Petersburg, Russia to Mumbai port via Bandar Abbas port of Iran.

• International North-South Transport Corridor (INSTC) is a 7,200-kilometer Multimode Transit Route linking the Indian Ocean and the Persian Gulf to the Caspian Sea via Iran and onward to northern Europe via St. Petersburg in Russia.

• It connects ship, rail, and road routes for moving cargo between India, Iran, Azerbaijan, Russia, Central Asia, and Europe.

• Since then, INSTC membership has expanded to include 10 more countries (total 13)-Azerbaijan, Armenia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Ukraine, Syria, Belarus, and Oman.

Mutual Recognition Agreement with Taiwan

The Mutual Recognition Agreement (MRA) for organic products between India and Taiwan has been implemented.

• Mutual Recognition Agreement (MRA) with Taiwan is a landmark achievement as it is the first bilateral agreement for organic products.

• The implementing Agencies for the MRA are the Agricultural and Processed Food Products Export Development Authority (APEDA), Ministry of Commerce and Industry, India and the Agriculture and Food Agency, Ministry of Agriculture (AFA), Taiwan.

• Under this agreement, agricultural products produced and handled organically in conformity with the National Programme for Organic Production (NPOP) and accompanied by an organic demonstration document issued by an accredited certification body under NPOP are allowed for sale in Taiwan as organically produced including display of the "India Organic" logo.

• It will ease the export of organic products by avoiding dual certifications; thus, reducing compliance costs, simplifying compliance requirements by adhering to only one regulation and enhancing trade opportunities in the organic sector.

• It will pave the way for the export of major Indian organic products such as Rice, Processed Food, Green/Black and Herbal Tea, Medicinal plant products etc to Taiwan.

15-MINUTE NEIGHBOURHOODS

The 15-minute neighbourhood concept is an urban planning approach where all essential services and amenities—such as groceries, schools, healthcare, and recreational facilities—are accessible within a 15-minute walk or bike ride from residents' homes.

• This model aims to reduce car reliance, improve environmental sustainability, and enhance community well-being by promoting walkability and local accessibility.

• The 15-minute neighborhood concept can help address Bengaluru's urban challenges through:

• By promoting walking and cycling for short trips, it decreases the reliance on cars, alleviating road congestion.

• Less vehicle use leads to lower emissions, enhancing air quality.

• Close proximity to essential services fosters stronger social connections and a sense of community.

• Better infrastructure for non-motorized transport reduces accidents and improves public safety.

• Accessible services within walking distance benefit women, children, the elderly, and economically weaker sections.

• Encouraging active transport like walking and cycling boosts physical health and well-being.

FEATURES OF A 15-MINUTE NEIGHBOURHOOD

First Overseas Jan Aushadi Kendra

India's first overseas Jan Aushadi Kendra was inaugurated in Mauritius.

• This event highlights the strong bilateral cooperation in the health sector between India and Mauritius.

• The Jan Aushadi Kendra aims to provide affordable generic medicines to enhance public healthcare in Mauritius.

• Janaushadhi Kendras are centres that provide quality generic medicines to the public.

• Supported by the Bureau of Pharma PSUs in India (BPPI) under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP), these centres aim to make affordable healthcare accessible.

• The government has set a target to increase the number of Janaushadhi Kendras to 10,500 by the end of March 2025.

Russia's Highest Civilian Honour

The Prime Minister was awarded Russia's highest civilian honour, the Order of Saint Andrew the Apostle, during his visit to the country.

• Order of Saint Andrew the Apostle award is given to prominent government and public figures, military leaders, and outstanding representatives of science, culture, art, and various sectors of the economy for exceptional services to Russia.

• Tsar Peter the Great (1672–1725) established the Order of Saint Andrew in 1698.

• It can also be awarded to heads of foreign states for outstanding services to the Russian Federation.

• Its name comes from Saint Andrew, who is believed to be one of the apostles or 12 original followers of Jesus. After Christ's crucifixion, the apostles are said to have travelled great distances to spread his message.

•The award consists of

• The chain of the Order consists of 17 alternating links and features a gilded image of the State Emblem of the Russian Federation, a double-headed eagle.

• It also includes a badge, a star, and a light blue silk moire ribbon. For those recognised for distinction in combat, the badge and star are adorned with swords.

12ᵗʰ India-UAE Joint Defence Cooperation Committee Meeting

The 12th edition of the Joint Defence Cooperation Committee (JDCC) meeting between India and the United Arab Emirates (UAE) was held in Abu Dhabi focusing on enhancing bilateral defence and security cooperation.

• The meeting covered a wide range of areas, including training, joint exercises, defence industrial cooperation, and R&D, demonstrating a comprehensive approach to strengthening the partnership.

• The India-UAE JDCC was established in 2006. Since then, 11 rounds have been held. India and UAE have seen steady growth in bilateral defence interaction.

• India-UAE Defence Collaboration:

  • Air Force: Trilateral Air Exercise on Humanitarian Assistance & Disaster Relief (HADR) in 2018.

  • Navy: Exercise "Gulf Star 1", Zayed Talwar, and IDEX/NAVDEX.

  • The UAE is located on the Arabian Peninsula, bordering the Gulf of Oman and the Persian Gulf. It is bordered by Saudi Arabia to the south and west, and the Sultanate of Oman (southeast), while Qatar lies to the northwest

  • The UAE, along with Iran and Oman, shares a coastline with the Strait of Hormuz, making it one of the three countries bordering this strategic waterway.

  • The UAE is governed by a Federal Supreme Council and is made up of seven Emirates of: Abu Dhabi (largest emirate), Dubai, Ajman, Fujairah, Sharjah, Ras al-Khaimah, and Umm al-Qaiwain.

Report Of India's G20 Task Force On DPI

India's increasing influence in the digital sphere has been globally acknowledged, particularly through its advancements in Digital Public Infrastructure (DPI).

• The recent Report of India's G20 Task Force on DPI highlighted India's leadership in this domain and urged the country to proactively extend its digital solutions to the Global South.

Highlights of the Report:

• The report recommends establishing a global-standard organisation to harness the DPI ecosystem across various regions.

• This entity should have a multinational presence and the expertise necessary to formulate policies and implement strategies effectively.

• Its goal would be to facilitate collaboration among nations, especially in the Global South.

• Explore the integration of Artificial Intelligence to enhance DPI capabilities while ensuring ethical use and data privacy safeguards.

• The report suggests using open-source software and AI models to promote innovation and scalability in DPI, making it more accessible for private players.

• Implementing measures to protect user data is crucial for building trust in AI-enabled services.

• Addressing biases in AI algorithms ensures fair treatment for all users, Ensuring transparency in AI processes helps in gaining public confidence in digital services.

Retreat Of The Foreign Ministers Of The Bay Of BIMSTEC

The 2nd Retreat of the Foreign Ministers of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) was held in New Delhi, taking on added significance amid escalating tensions and major developments in Myanmar.

• External Affairs Minister of India emphasised the need for BIMSTEC to address regional challenges internally, especially in light of recent setbacks faced by Myanmar's military junta against various Ethnic Armed Organisations (EAOs).

Highlights of the BIMSTEC Foreign Ministers' Retreat:

• The meeting underscored the urgency of addressing long-standing goals like capacity building and economic cooperation due to current global and regional challenges.

• Discussions centred on the impact of the Myanmar crisis on regional stability and developmental projects.

• The instability in Myanmar is a major concern for BIMSTEC as it has affected various developmental and connectivity projects aimed at strengthening ties among Nepal, Bhutan, India, Bangladesh, Myanmar, and Thailand.

• Conversations included the potential for humanitarian aid, though India's current assistance has been limited to displaced populations and military personnel who have taken refuge in Mizoram.

• India maintains a cautious stance, particularly since Ethnic Armed Organizations (EAOs) have gained control over crucial trade routes and territories near international borders.

• India continues to cooperate on countering transnational crimes such as cybercrime, narcotics, and illegal arms.

World Bank Group Guarantee Platform

The World Bank Group (WBG) guarantee platform was opened for business.

• World Bank Group Guarantee Platform is housed at the Multilateral Investment Guarantee Agency (MIGA) and brings together products and experts from the World Bank, International Finance Corporation (IFC), and MIGA for simplicity, efficiency and speed.

• It aims to boost WBG annual guarantee issuance to $20 billion by 2030.

• WBG Guarantees will serve as a one-stop shop for all WBG guarantee businesses, providing the best guarantee solutions for clients to meet project needs and development priorities.

• WBG clients can now choose from a simplified market-friendly menu of guarantee options.

• The platform will provide three types of coverages:

• Credit guarantees for loans to the public or private sector;

• Trade finance guarantees for trade finance projects involving public entities;

• Political risk insurance against non-commercial risks for private sector projects or public-private partnerships.

AI System for Early Detection of Forest Fires

The Pench Tiger Reserve recently launched an advanced Artificial Intelligence (AI) system for the early detection of forest fires.

• Pench Tiger Reserve is located in the southern reaches of the Satpura hills in the Seoni and Chhindwara districts in Madhya Pradesh and continues in Nagpur district in Maharashtra as a separate Sanctuary.

• It is named after the Pench River, which flows from north to south through the Reserve.

• It comprises of the Indira Priyadarshini Pench National Park, the Pench Mowgli Sanctuary, and a buffer.

• It is undulating, with most of the area covered by small hills and steep slopes on the sides.

• The undulating topography supports a mosaic of vegetation ranging from a moist sheltered valley to an open, dry deciduous forest.

• The reserve boasts a diverse range of flora, including teak, saag, mahua, and various grasses, and shrubs.

• The area is especially famous for large herds of Chital, Sambar, Nilgai, Gaur (Indian Bison), and wild boar.

• The key predator is the tiger, followed by the leopard, wild dogs, and wolf.

• There are over 325 species of resident and migratory birds, including the Malabar Pied Hornbill, Indian Pitta, Osprey, Grey Headed Fishing Eagle, White Eyed Buzzard, etc.

Copernicus Climate Centre Service

The Copernicus Climate Change Service (C3S) said that the world witnessed it's warmest-ever June last month with the average temperature being 0.67°C above the 1991-2020 average.

• Copernicus Climate Centre Service (C3S) is one of six thematic information services provided by the Copernicus Earth Observation Programme of the European Union.

• Copernicus is an operational programme building on existing research infrastructures and knowledge available in Europe and elsewhere.

• It supports society by providing authoritative information about the past, present and future climate in Europe and the rest of the World.

• It aims to support European climate policies and actions, contributing to building a European society with more resilience against human-induced changing climate.

• C3S relies on climate research carried out within the World Climate Research Programme (WCRP) and responds to user requirements defined by the Global Climate Observing System (GCOS).

• It is implemented by the European Centre for Medium-Range Weather Forecasts (ECMWF) on behalf of the European Commission.

UNEP Foresight Report 2024

The United Nations Environment Programme (UNEP) released a report titled "Navigating New Horizons: A Global Foresight Report on Planetary Health and Human Wellbeing, 2024.

Key Highlights of the Report:

• 85% of the 169 SDG targets are off track and 37% of the targets have shown no progress or have regressed since 2015, as of the latest 2023 SDG Progress Report.

• 42.85% of the targets for SDG 6 (Clean Water and Sanitation), SDG 13 (Climate Action), SDG 14 (Life Below Water), and SDG 15 (Life on Land) are either stagnating or regressing.

• 60% of environmental indicators remain either deteriorating or unclear in their status.

• The UNEP report identified 8 critical shifts with 18 potential signals of change.

• Rapidly Changing Relationship Between Humans and Environment: Human activities are predicted to affect over 90% of land by 2050. Up to 46% of species may face extinction.

• Global temperatures are projected to rise 2.1-3.9°C by 2100.

• Greenhouse gas emissions, mainly from fossil fuels, are driving these changes, with developed nations responsible for most emissions.

• The global competition for critical resources is reshaping international security. Demand outpaces supply, amplifying volatility and potential conflicts, especially in regions with concentrated reserves.

Manjeera Wildlife Sanctuary : State's First Ramsar Site

The Manjeera wildlife sanctuary in Telangana is undergoing a study to potentially become the state's first Ramsar site.

• Manjeera Wildlife Sanctuary is a wildlife sanctuary and a reservoir located in the Medak district of Telangana.

• Originally a crocodile sanctuary, today more than 70 species of birds are spotted here, and is home to the vulnerable species of mugger crocodile.

• The sanctuary follows the course of river Manjeera, a tributary of Godavari, and abuts the Manjeera reservoir.

• It is a man-made reservoir that provides water for irrigation and also drinking water for the twin cities of Hyderabad and Secunderabad.

• The reservoir has nine small island These islands contain extensive marshy fringes, which act as nesting sites for waterbirds. Additionally, thick cover of trees also provides nesting spots for birds.

UN Water Convention : Ivory Coast Joined

Ivory Coast joined the United Nations Water Convention, becoming the 10th African nation to do so.

• It is also known as the Convention on the Protection and Use of Transboundary Watercourses and International Lakes which was adopted in Helsinki in 1992 and entered into force in 1996.

• It is a unique legally binding instrument promoting the sustainable management of shared water resources, the implementation of the SustainableDevelopment Goals, the prevention of conflicts, and the promotion of peace and regional integration.

• It was originally negotiated as a regional framework for the pan-European region.

• It requires Parties to prevent, control and reduce transboundary impact, use transboundary waters in a reasonable and equitable way and ensure their sustainable management.

• Parties bordering the same transboundary waters have to cooperate by entering into specific agreements and establishing joint bodies.

• As a framework agreement, the Convention does not replace bilateral and multilateral agreements for specific basins or aquifers; instead, it fosters their establishment and implementation, as well as further development.

• It is a powerful tool to promote and operationalize the achievement of the 2030 Agenda for Sustainable Development and its SDGs.

Mid-Year Air Quality Assessment For India: CREA

The mid-year air quality assessment for India by the Centre for Research on Energy and Clean Air (CREA), covering the period from January to June 2024, provides a comprehensive overview of the nation's air pollution levels.

• This report highlights the severity and distribution of air pollution across Indian cities, emphasising the importance of stringent measures to combat this environmental crisis.

Highlights of the Reports:

• Byrnihat, located on the Assam-Meghalaya border, emerged as the most polluted city in India, with an average PM2.5 concentration of 140 µg/m³(Micrograms per Cubic Metre).

• Among India's top 10 polluted cities, three were in Haryana, two each in Rajasthan and Uttar Pradesh, and one each in Delhi, Assam, and Bihar.

• Delhi ranked as the 3rd most polluted city, with PM2.5 levels at 102 µg/m³, exceeding the National Ambient Air Quality Standards (NAAQS) and World Health Organization (WHO) guidelines.

• Out of 256 cities monitored, 163 exceeded the annual NAAQS (40 µg/m³), while all exceeded the WHO standard (5 µg/m³).

• Among the 97 National Clean Air Programme (NCAP) cities, 63 exceeded the NAAQS.

• Only 63 out of 163 cities exceeding the NAAQS are part of the NCAP, leaving 100 cities without action plans to reduce air pollution.

• The top 10 most polluted cities were spread across 16 states and union territories, indicating the widespread nature of air pollution in India.

• Six new Continuous Ambient Air Quality Monitoring Stations (CAAQMS) were added, increasing the total to 545.

• Karnataka and Maharashtra had the highest number of cities under the "Good" and "Satisfactory" categories, while Bihar had the most cities in the "Moderate" category.

National Clean Air Programme: New Study

A new study by Centre for Science and Environment (CSE) said that road dust mitigation works undertaken to reduce particulate matter 10 (PM10) pollution is draining a lion's share — 64% — of funds under the National Clean Air Programme (NCAP).

• National Clean Air Programme was launched in January, 2019 by the Ministry of Environment, Forest, and Climate Change.

• It is a long-term, time-bound, national level strategy to tackle the air pollution problem across the country in a comprehensive manner.

Objectives

  • Stringently implementing mitigation measures to prevent, control, and abate air pollution.
  • Strengthening an air quality monitoring network across the country.
  • Increasing public awareness and capacity building measures.

• NCAP envisages reduction by 20-30% in PM 10 concentration over baseline in A new study by Centre for Science and Environment (CSE) said that road dust mitigation works undertaken to reduce particulate matter 10 (PM10) pollution is draining a lion's share — 64% — of funds under the National Clean Air Programme (NCAP).

• National Clean Air Programme was launched in January, 2019 by the Ministry of Environment, Forest, and Climate Change.
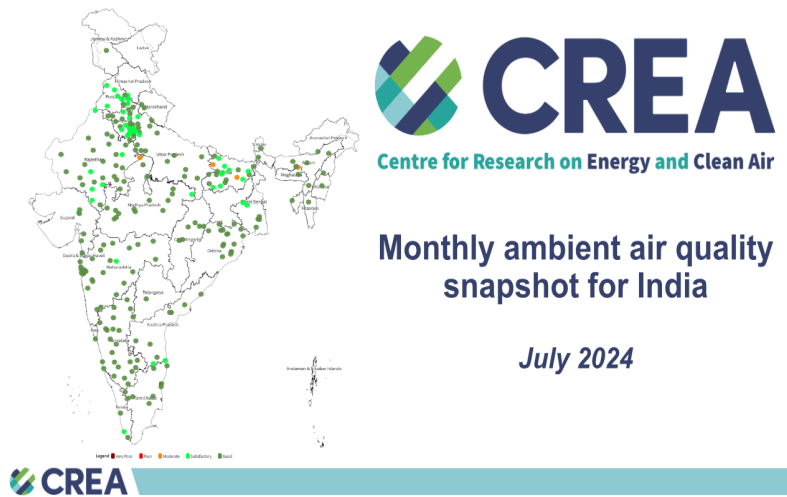
• Target has been revised to achieve reduction in PM10 level up to 40% or achievement of national standards (60 µg/m3) by 2025-26.

• In accordance with the Air (Prevention and Control of Pollution) Act, 1981, the Central Pollution Control Board (CPCB) will execute this nationwide program.

• 131 non-attainment cities have been identified across the country for the implementation of the programme.

• City-specific action plans have been developed, which include measures to strengthen the monitoring network, reduce vehicular or industrial emissions, raise public awareness, etc.

UNESCO Recently Added 11 New Biosphere Reserves Worldwide

UNESCO recently added 11 new biosphere reserves worldwide, spanning countries like Colombia, Italy, Mongolia, and the Republic of Korea.

• These reserves, including two transboundary sites, aim to conserve biodiversity and cultural heritage amid global biodiversity and climate challenges.

• Biosphere Reserves try to balance economic and social development and maintenance of associated cultural values along with the preservation of nature.

• There are now 759 reserves in 136 countries, including 24 transboundary sites. India has 18 internationally recognized Biosphere reserves, with the Nilgiri reserve being the first.

• The latest addition is Panna in Madhya Pradesh.

• Twelve of the eighteen biosphere reserves are a part of the World Network of Biosphere Reserves, based on the UNESCO Man and the Biosphere (MAB) Programme list.

• November 3 is celebrated as World Biosphere Reserve Day (to raise awareness of the importance of biosphere reserves)

• Biosphere reserves are areas designated by UNESCO to promote the conservation of biodiversity, sustainable development, and scientific research.

• It is managed by Managed under UNESCO's Man and Biodiversity Programme. They consist of three zones:

• a core zone for the strict protection of ecosystems

• a buffer zone where people live and work in harmony with nature

• a transition zone for sustainable activities.

Mount Etna: Alert

Italy's Mount Etna and the smaller Stromboli volcano spewed hot ash and lava, raising alert levels on the Mediterranean island of Sicily.

• Mount Etna is Europe's most active volcano and one of the largest in the world.

• Its recorded volcanic activity dates back to 1500 B.C.

• It is on the eastern coast of Sicily.

• It is the highest Mediterranean island mountain and the most active stratovolcano in the world.

• It is about 3,326 metres high and is the highest peak in Italy South of the Alps.

• stratovolcano is also called a composite volcano.

• This volcanic landform is characterized by a conical shape formed by layers of volcanic material deposited during successive volcanic eruptions.

• These volcanoes tend to slope gently at the base but rise quickly near the summit to form tall mountain peaks.

Groynes: Concrete Structures

Groynes are low-lying wood or concrete structures which are situated out to sea from the shore.

• They are designed to trap sediment, dissipate wave energy, and restrict the transfer of sediment away from the beach through longshore drift.

• Longshore drift is caused when prevailing winds blow waves across the shore at an angle that carries sediment along the beach.

• Groynes slow the process of erosion at the shore.

• They can also be permeable or impermeable, permeable groynes allow some sediment to pass through and some longshore drift to take place.

• However, impermeable groynes are solid and prevent the transfer of any sediment.

• They are very effective at protecting the coastline in the short-term as they are immediately effective as opposed to some longer-term soft engineering methods.

• However, they are often intrusive and can cause issues elsewhere in other areas along the coastline.

GEOGRAPHY

Chagos Archipelago

The external affairs minister said that India will continue supporting Mauritius on the issue of the Chagos Archipelago in line with its stand on decolonization.

• Chagos Archipelago is an island group located in the central Indian Ocean and is about 1,000 miles (1,600 km) south of the southern tip of the Indian subcontinent.

• It is an overseas territory of the United Kingdom that was established on November 8, 1965.

• Its key islands include the Diego Garcia atoll, Danger Island, Egmont Islands, Eagle Islands, Nelsons Island, Peros Banhos atoll. (Diego Garcia island, which houses a strategic US military base).

• It experiences a tropical marine climate with high temperatures and elevated humidity levels. The island's climate is heavily moderated by the trade winds which blow over the islands.

• The Chagos dispute centres around the archipelago in the Indian Ocean, which Britain claimed along with Mauritius in 1814.

©Chagos Conservation Trust

Rogue Waves

Researchers have developed a new tool that can be used to predict the emergence of unusually large and unpredictable waves at sea—known as rogue waves.

• Rogue waves are also known as Freak waves and are relatively rare, large and spontaneous ocean surface waves whose heights are larger than maxi-

mum wave height expected for a given sea state.

• These are formed from the coincidental stacking of multiple wind-driven wave crests passing through a single point or arising from a combination of waves

• Rogue waves tower to heights greater than twice the size of nearby waves, and they may move in either the same direction, the opposite direction, or at oblique angles to the prevailing wind and wave motion.

• They have been observed all over the world ocean and their characteristics are studied in the Mediterranean Sea, the Pacific, the Atlantic, and some parts of the Indian Ocean.

• The generation of freak waves is not only restricted to the open ocean, but also observed in the near-shore area, where these sudden waves cause damage to coastal structures and danger for small fishing boats.

Meta 3D Gen AI System

Meta has introduced a new AI tool that can generate or retexture 3D objects in under a minute.

• Meta 3D Gen AI System is a combined AI system that can generate high-quality 3D assets, with both high-resolution textures and material maps, all within one minute.

• It uses two AI-powered sub-systems called Meta 3D AssetGen and Meta 3D TextureGen.

• The system can take text prompts from the user and produce a final output of AI-generated 3D content such as characters, props or scenes.

• Additionally, the user can also provide the system with an already created 3D mesh, which is essentially the structure of a 3D model and ask it to add texture to it.

RIMPAC Exercise

Indian multi-role stealth frigate INS Shivalik, mission deployed in the South China Sea and North Pacific Ocean, has reached Pearl Harbour in Hawaii to take part in the Rim of the Pacific (RIMPAC) exercise.

• Rim of the Pacific (RIMPAC) Exercise is the world's largest international maritime exercise, being held in Hawaii.

• It is aimed at enhancing interoperability and building trust among the navies of friendly foreign countries.

• It is being held under the theme of Partners: Integrated and Prepared, which runs until August 1.

• It is led by the US Navy, approx 29 countries are participating in the current edition of the multi-dimensional exercise.

• The harbour phase of the exercise from 27 Jun to 07 Jul 2024 will see participation in multiple symposiums, exercise planning discussions, sports competitions and reciprocal deck visits.

• The sea phase of RIMPAC–24, divided into three sub-phases will witness ships undertaking basic and advanced level integration exercises during the first two sub-phases.

• t provides a unique training opportunity while fostering and sustaining cooperative relationships among participants, critical to ensuring the safety of sea lanes and the security of the world's oceans.

Rudram-1 Missile

India has successfully test-fired its first indigenous anti-radiation missile, the Rudram-1, developed by the Defence Research and Development Organisation (DRDO) for the Indian Air Force (IAF).

• Rudram-1 Missile is an air–to–surface missile developed by the Defence Research and Development Organisation (DRDO).

• It is integrated with the IAF's Sukhoi-30MKI fighter jets, serving as the launch platform.

• It is India's first indigenous anti-radiation missile.

• It features Inertial Navigation Systems (INS)-GPS navigation and a Passive Homing Head for the final attack, allowing it to accurately hit radiation-emitting targets.

• INS-GPS navigation provides a technological edge, enabling accurate targeting over a wide range of frequencies.

• The missile can be launched from varying altitudes, ranging from 500 meters to 15 kilometers and has a range of up to 250 kilometers depending on the launch conditions.

Exercise NOMADIC ELEPHANT

India-Mongolia Joint Military Exercise NOMADIC ELEPHANT is scheduled to be conducted from 03rd to 16th July 2024 in Umroi, Meghalaya.

• Exercise NOMADIC ELEPHANT is the 16th edition of the India-Mongolia Joint Military Exercise.

• Battalion of SIKKIM SCOUTS is representing the Indian contingent comprising of 45 personnel along with personnel from other arms and services.

• It is an annual training event conducted alternatively in India and Mongolia. The last edition was conducted in Mongolia in July 2023.

• Aim is to enhance the joint military capability of both sides to undertake counter-insurgency operations in a sub-conventional scenario under Chapter VII of the United Nations Mandate.

EXERCISE PITCH

Indian Air Force (IAF) is all set to participate in Exercise Pitch Black 2024.

• This edition is slated to be the largest in the 43 year long history of Ex Pitch Black, which includes participation by 20 countries, with over 140 aircraft and 4400 military personnel of various air forces.

• Exercise Pitch Black is a biennial warfare exercise hosted by the Royal Australian Air Force (RAAF).

• The exercise is normally held in Northern Australia, primarily at RAAF Bases Darwin and Tindal.

• The aim of the exercise is to practice Offensive Counter Air (OCA) and Defensive Counter Air (DCA) combat, in a simulated war environment.

• The name 'Pitch Black' was derived from the emphasis on night time flying over large un-populated areas.

• The exercise provides an excellent opportunity for strengthening the ability of the participating nations to deploy over large distances, support integrated operations in the Indo-Pacific region and building strong aviation associations in a highly challenging environment.

Mars Odyssey

NASA has recently captured an epic view of the largest volcano in our solar system named Olympus Mons using the Mars Odyssey orbiter.

• Mars Odyssey was an early mission in NASA's Mars Exploration Program.

• It was launched from Cape Canaveral, Florida, on April 7, 2001.

• The Odyssey spacecraft has been orbiting Mars since 2001.

• Odyssey's original goals were to search for signs of water, make detailed maps of the planet's surface materials and determine radiation levels for humans.

• The spacecraft holds the record for the longest continually active mission in orbit around a planet other than Earth. Its mission is scheduled to last until 2025.

• It created the first global map of chemical elements and minerals that make up the Martian surface.

• Odyssey continues to study Mars's surface to see how the planet changes over time.

• The spacecraft also serves as a communications relay to Earth for spacecraft on the surface that lack high-powered antennas and cannot beam information to Earth very quickly.

• Olympus Mons is a shield volcanolocated in Mars' western hemisphere.

• It is the highest point on Mars and the largest known volcano in the solar system

Ariane 6 Rocket : Launch

The European Space Agency (ESA) successfully launched the Ariane 6 rocket, for the first time, from French Guiana, marking Europe's return to independent space access after delays and setbacks.

• It is the latest rocket in Europe's Ariane rocket series (taking over from Ariane 5) that can launch missions from low-Earth orbit and farther out into deep space.

• Ariane-5 Rocket has been used to launch ISRO's communication satellites like GSAT-11, GSAT-30, GSAT-31, ESA's Juice mission and NASA's James Webb Space Telescope (JWST).

• This debut flight carried nine cubesats into orbit, including NASA's CubeSat Radio Interferometry Experiment (CURIE) and other satellites studying Earth's climate and weather.

• The Vinci engine used in the upper stage is designed to restart repeatedly, allowing the operating agency to place payloads into several different orbits.

• 29 missions will be launched by Ariane 6 over the next several years and aims for up to 12 flights a year.

Air Breathing Propulsion System: ISRO

Indian Space Research Organisation (ISRO) successfully carried out the second experimental flight for the demonstration of Air Breathing Propulsion Technology.

• Air Breathing Propulsion System : this system the rocket will carry its fuel, but will not carry an on-board oxidiser.

• Instead, this system will utilize atmospheric oxygen as an oxidiser to burn the fuel. This makes rockets significantly lighter and more efficient.

• However, such air-breathing technologies can be used only within the denser layers of the Earth's atmosphere, where there is an adequate supply of oxygen.

• Such technologies might be feasible in the denser layers of Earth's atmosphere (up to 70 kilometres altitude), and thereafter the rocket must switch to another stage that has both fuel and an on-board oxidizer.

• It is an air breathing propulsion engine operating on the principle of supersonic combustion. It has the absence of any rotator and relies solely on the forward motion of the engine to compress incoming air.

• It is an upgraded version of the Ramjet and generates thrust through supersonic air flow and combustion. It moves at hypersonic speed and performs best at high speeds, greater than Mach 5.

• In 2023, India became the fourth countryto successfully demonstrate the flight testing of a Scramjet Engine.

• It is a jet engine where a ramjet transforms into a scramjet over Mach 4-8 range and it can efficiently operate both in subsonic and supersonic combustor modes.

APSTAR-6E Satellite

China's APSTAR-6E satellite has officially begun operating after successfully passing technical reviews both in orbit and on the ground in Hong Kong.

• APSTAR-6E Satellite is China's first all-electric propulsion communication satellite.

• Developed by the China Aerospace Science and Technology Corporation (CASC), this satellite operates in geostationary orbit.

• As the first in its series, APSTAR-6E holds the distinction of being the world's initial telecommunication satellite to autonomously transfer from low Earth orbit to geostationary orbit using electric propulsion, marking a significant technological achievement.

• It is designed to last 15 years.

• Its primary mission is to deliver efficient and high-capacity broadband communication services across Southeast Asia, aiming to provide reliable connectivity at a competitive cost.

Gaia Spacecraft

Gaia spacecraft has faced and overcome significant challenges in its mission to map over a billion stars in the Milky Way.

• Gaia Spacecraft was launched by the European Space Agency (ESA) in December 2013.

• It is located 1.5 million kilometres from Earth at the second Sun-Earth Lagrange point (L2).

• It monitors each of its target stars about 14 times per year. It is precisely charting their positions, distances, movements, and changes in brightness.

• It is expected to discover hundreds of thousands of new celestial objects, such as extra-solar planets and brown dwarfs, and observe hundreds of thousands of asteroids within our own Solar System

• The mission is also studying more than 1 million distant quasars and providing stringent new tests of Albert Einstein's General Theory of Relativity.
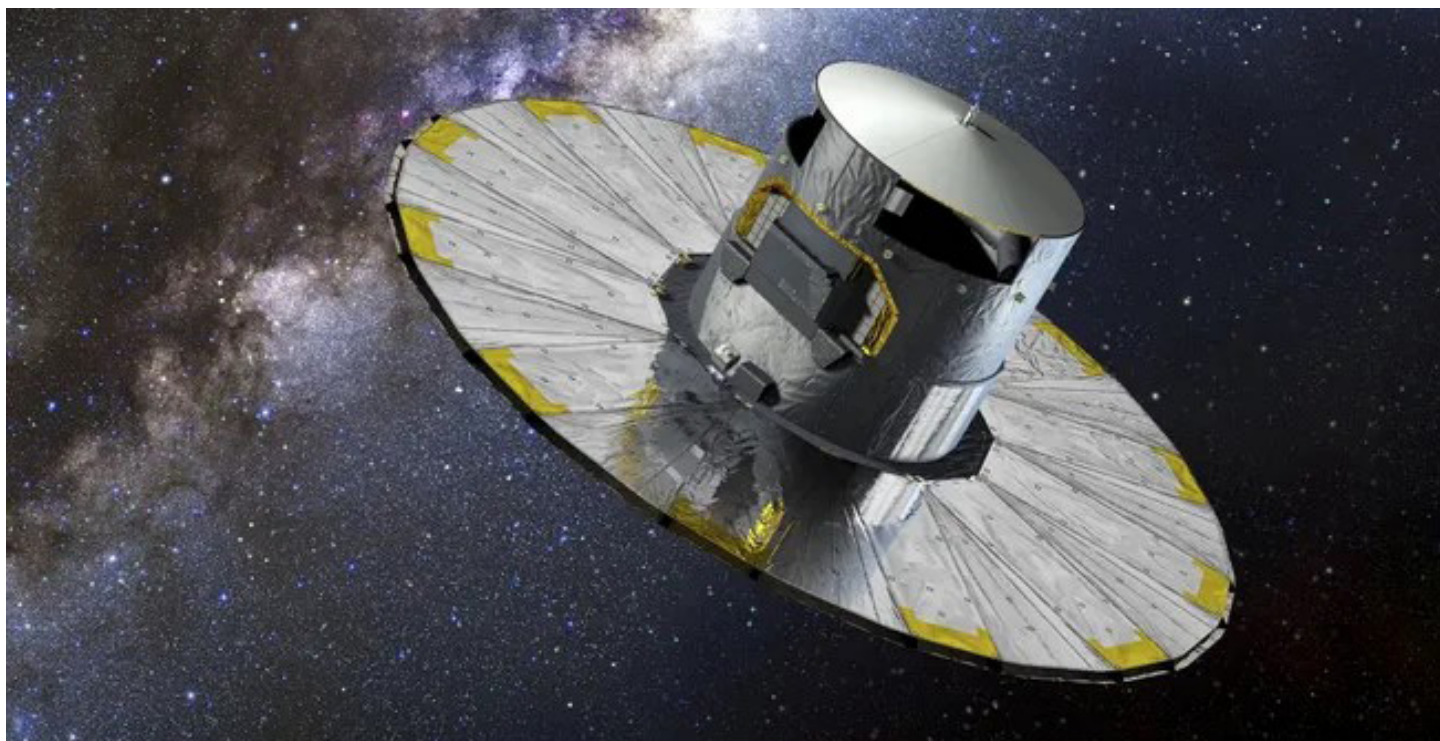
South China Sea

India recently said it opposes unilateral actions seeking to change the status quo by force in South China Sea amid concerns over China's escalatory moves against the Philippines' maritime operations in the region.

• South China Sea is an arm of the western Pacific Ocean that borders the Southeast Asian mainland.
• It is bordered by China, Taiwan, Philippines, Malaysia, Indonesia, Brunei, and Vietnam.
• The southern boundary of the South China Sea is a rise in the seabed between Sumatra and Borneo, and the northern boundary stretches from the northernmost point of Taiwan to the coast of Fujian province, China, in the Taiwan Strait.
• It is connected by the Taiwan Strait with the East China Sea and by the Luzon Strait with the Philippine Sea (both marginal seas of the Pacific Ocean).
• The two major archipelagos are known as the Paracel Islands, controlled by China, and the Spratly Islands.
• It is the second most used sea lane in the world. It is a significant trade route for crude oil from the Persian Gulf and Africa through the Strait of Malacca to Singapore, Thailand, Hong Kong, Taiwan, South Korea, and Japan.

Pangong Lake

According to satellite pictures, China's military is preparing for the long haul in the area surrounding Pangong Lake in eastern Ladakh.
• Pangong Lake, also known as Pangong Tso, is an endorheic lake in the Himalayas situated at a height of about 4,350 m (14,270 ft).
• It derives its name from the Tibetan word, "Pangong Tso", which means "high grassland lake".
• It is one of the world's highest brackish water lakes, situated at a height of 4350 meters.

PLACES IN NEWS

Kaziranga National Park

The devastating flood in Assam's famed Kaziranga National Park (KNP) has claimed the lives of 114 wild animals, while 95 others have been rescued recently.

• Kaziranga National Park is situated in the north-eastern part of the country in the districts of Golaghat and Nagoan in the state of Assam.

• It is the single largest undisturbed and representative area in the Brahmaputra Valley floodplain.

• It is inhabited by the world's largest population of one-horned rhinoceroses, as well as many mammals, including tigers, elephants, panthers, and bears, and thousands of birds.

• It was declared a National Park in 1974.

• It is the first national park in Assam and is spread over an area of 400 sq. km.

DAVIS STRAIT

A microcontinent has been recently discovered in the Davis Strait, between Canada and Greenland.

• The discovery was made around the Davis Strait, a large stretch of water located between Canada's Baffin Island and Greenland.

• The strait was formed millions of years ago when the tectonic plates between the two islands shifted, reconfiguring the Earth's crust.

• This resulted in the formation of a thick continental crust in the ocean, which has now been declared a newly discovered primitive microcontinent.

• It has been named the Davis Strait proto-microcontinent since it formed owing to the tectonic evolution of the strait in the region.

• The microcontinent is 19–24 km thick thinned continental crust and is surrounded by two narrow bands of thin (15–17 km) continental crust.

• Davis Strait known as the northern arm of the Atlantic Ocean, the Davis Strait is situated north of the Labrador Sea amidst southwestern Greenland and southeastern Baffin Island in Nunavut, Canada

Changthang Wildlife Sanctuary

As the summer rush peaks in July, a conservationist looks at how rash development and irresponsible tourism are threatening Changthang Wildlife Sanctuary's unique animals and environment.

• Changthang Wildlife Sanctuary is located in the Ladakhi Changthang plateau in the Leh district of Ladakh.

• It covers an area of almost 1,600 sq. km and is home to the highest altitude water lakes, namely, Tso Moriri (which also happens to be the highest lake on earth), Pangong Tso and Tso Kar.

• The Changthang region is inhabited by nomadic pastoral communities, primarily the Changpa tribe, who lead a traditional way of life herding yaks, goats and sheep across the vast grasslands.

• This region is steeped in Tibetan Buddhist culture and heritage.

• It includes one of the world's highest villages, Korzok Village, which attracts tourists to the Korzok Monastery.

• Fauna: Tibetan wolf, wild yak, bharal, brown bear and the mormot that seems to be present everywhere.

• Flora: It is home to almost 200 species of wild plants that grow in the higher pastures and are food for the animals inside the sanctuary.

SPECIES IN NEWS

Xenophrys apatani

A team of researchers from the Zoological Survey of India recorded the forest-dwelling frog from the Talley Wildlife Sanctuary and named it as Xenophrys apatani.

• The discovery was made by a team of researchers from the Zoological Survey of India (ZSI) in Shillong, in collaboration with their colleagues from ZSI, Pune, and ZSI, Itanagar.

• Talley Valley Wildlife Sanctuary is a protected area located in the Indian state of Arunachal Pradesh.

• Notable species include the clouded leopard, Malayan giant squirrel, Indian muntjac, and Asian palm civet.

• Additionally, 130 bird species have been observed, including the black eagle, collared owlet, and Verditer flycatcher.

• The sanctuary is also home to 16 endangered plant species, such as Panax sikkimensis, Acer hookeri, and Lilium grandiflora.

New Spider Species

Two new species of litter-dwelling jumping spiders from the evergreen forests of the southern Western Ghats have been found by researchers from Christ College, Irinjalakuda.

• The newly discovered species, Habrocestum swaminathan and Habrocestum benjamin, which have been added to the illustrious roster of the genus Habrocestum.

• These spider species are the unsung heroes of natural pest control and vital indicators of ecosystem health.

• Habrocestum swaminathan was discovered from the banks of the river Kunthi and was named after M.S. Swaminathan, considering his contributions to the science field and his efforts on the conservation of Silent Valley, from where the Kunthi river originates.

• Habrocestum benjamin was collected from Thusharagiri, one of the foothills of the Nilgiri biosphere reserve.

• These spiders are attractive with beautiful colour patches and were spotted near the Thusharagiri waterfalls, a busy tourist destination.

• This species was named after Suresh P. Benjamin, a Sri Lanka-based jumping spider specialist.

Zebra Mussel : Spotted

Zebra mussel, an invasive species capable of wiping out entire aquatic ecosystems, has been found for the first time in the Colorado River, the most important river in the American Southwest.

• Zebra mussels are an invasive, fingernail-sized mollusk.
• Scientific Name: Dreissena polymorpha
• They are native to the Caspian and Black Seas, south of Russia and Ukraine.
• They entered the Great Lakes of North America in the late 1980s through ballast water discharged from ships.
• They live underwater, attached to natural and man-made substrates such as rocks, wood, plants, native mussels, pipes, docks, boat lifts, swim rafts, moored watercraft, and other debris.
• They are easy to identify, with a distinct, flat-bottomed 'D' shape to their shells that allows them to sit flat against a solid surface, and black, zigzag stripes against a cream background that earned them their name.

• They grow around two inches long at most, and are microscopic in their larval stage, which is known as a "veliger."
• They are short-lived (between two and five years), and begin reproducing at two years of age.
• Zebra Mussels are especially harmful for native mussels, many of which are species at risk. They outcompete these species for food and will attach themselves to native mussels, suffocating them.
• Their massive clustering on water-intake valves and pipes, bridge abutments, and other structures can cause severe commercial damage.

Brown Palm Civet

The Discover Koyna group, renowned for their discoveries of rare owls and butterflies, observed a rare brown palm civet in the Koyna Wildlife Sanctuary
• Brown Palm Civet is also known as Jerdon's palm civets, are endemic to the Western Ghats and play a vital ecological role as seed dispersers.
• It is solitary and nocturnal, small carnivores that thrive in the high altitude tropical rainforests
• Its distribution extends from Castle Rock in Goa to the southern tip of the Western Ghats in Kalakkad Mundanthurai Tiger Reserve. It inhabits rainforest tracts at an elevation of 500–1,300 m.
• It is predominantly frugivorous, foraging over a wide range, but has one of the smallest diet ranges among South Asia's small carnivores.
• Conservation status
• IUCN: Least Concern
• CITES : Appendix III
• Koyna Wildlife Sanctuary is situated in the Western Ghats of Maharashtra.

Vaquita : Endangered Marine Mammal

The world's most endangered marine mammal, the vaquita, is teetering on the edge of extinction.

• The vaquita is a shy member and the smallest of the porpoise family.

• Scientific Name: Phocoena sinus

• Vaquitas are the most endangered of the world's marine mammals. Less than 20 vaquitas remain in the wild.

• Vaquitas have the smallest range of any whale, dolphin, or porpoise.

• They only live in the northern part of the Gulf of California, an area that is rich in fish and shrimp.

• They are most commonly sighted in shallow waters up to 50 metres deep.

• Conservation Status: Critically Endangered

Phlogacanthus Sudhansusekharii : New Plant Species

Researchers from the Botanical Survey of India (BSI) recently discovered a new plant species named Phlogacanthus sudhansusekharii, from Itanagar Wildlife Sanctuary in Arunachal Pradesh.

• Phlogacanthus Sudhansusekharii is a newly discovered plant species which belongs to the family 'Acanthaceae' and the 'Phlogacanthus' genus.

• It was discovered from the Itanagar Wildlife Sanctuary in Papum Pare district, Arunachal Pradesh.

• The species is named to honor Dr. Sudhansu Sekhar Dash, a scientist at the BSI, for his "significant contribution" to plant and ecological research in the Indian Himalayan region.

• The genus 'Phlogacanthus' comprises 13 species in India and is spread over mainly the northeastern and eastern Himalayan states.

• Itanagar Wildlife Sanctuary is a protected area located in Naharlagun, near the capital city of Arunachal Pradesh.

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