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## WORLD WILDLIFE CRIME REPORT 2024

United Nations office on drugs and crime UNODC released WORLD WILDLIFE CRIME REPORT 2024.

### Key findings

- During 2015-2021, rhinoceroses and cedars were most impacted animal and plant species respectively.
- Largest numbers of seizures reported during 2015- 2021 involved corals, followed by crocodilians and elephants.
- For seizures of animal species, there is gradual increase from 2015–2019 and then decline in 2020 and 2021.
- For seizures of plant species, there is sharp increase in 2020 and 2021.

### Wildlife crime

It can be defined as taking, possession, trade or movement, consumption of wild animals and plants or their derivatives in contravention of any international, regional, or national legislation(s).

### Factors driving wildlife crime

- Demand for medicine, pets, bushmeat, ornamental plants etc.
- Huge profits earned by illegal traders by selling exotic animals, plants, and their parts. Eg. Rhinoceros horn, etc.
- Corruption undermines government restrictions on wildlife harvest, trade and use, thus enabling wildlife crime.

### Impact of Wildlife Crime

- **Environmental:** Overexploitation and reduced populations of wildlife species; Increasing invasive alien species etc.
- Out of all seized fauna, 40% were either threatened or near-threatened on red list.
- **Economical:** Money-laundering and illegal cross-border financial flows.
- **Social:** Risks of disease transmission to people from live animals, plants, wildlife meat;
- Degradation of services like food, medicines, energy, etc

## Steps taken to combat wildlife crime

### Global

- UNODC's Global Programme for Combating Wildlife and Forest Crime, 2014. UNODC was established in 1997 in Vienna (Austria), to fight against illicit drugs and organised crime.
- Wildlife Crime Initiative to respond to global poaching crisis. It is a strategic partnership between TRAFFIC, wildlife trade monitoring network and World Wildlife Fund.

### India

- Wildlife (Protection) Act, 1972 provides for forfeiture of any equipment, vehicle or weapon that is used for committing wildlife offence(s).
- Wildlife Crime Control Bureau was established under Ministry of Environment and Forests to combat organized wildlife crime.

## TEA BOARD OF INDIA

The **Tea Association of India (TAI)** has warned of a **potential 50% drop in tea production in Assam and West Bengal** in the coming months due to **insufficient and poorly distributed rainfall**.

### About TBI

- It is a statutory body set up in 1954 under the Tea Act, 1953.
- Ministry: Ministry of Commerce.
- Headquarter: Kolkata.
- Overseas offices are in London, Dubai, and Moscow.
- Member: 31 members (including Chairman)
- It is reconstituted every three years.
- Major Tea Growing Regions- Assam, West Bengal, Tamil Nadu, Kerala and Karnataka, Andhra Pradesh, Tripura, Himachal Pradesh, etc

## XENOTRANSPLANTATION

Xenotransplantation is any procedure that involves transplantation, implantation, or infusion of live non-human animal cells, tissues, or organs into a human recipient.

- Need for such procedure was felt because of gap between number of transplantations needed by patients and availability of donor organs.

## **Why are Pigs often used for Xenotransplantation?**

- Pig's organ size, physiological metabolism and immune system are similar to those of human beings.
- Organs that can be used for xenotransplantation includes Heart, Liver, Lungs, etc.
- In 2022, the first xenotransplantation of a genetically-modified pig heart was done.
- Breeding pigs on farms is widespread and cost-effective.
- Varieties of pig breeds are farmed, providing an opportunity for harvested organs to be matched with specific needs of human recipient.

## **Process of Xenotransplantation**

- Gene Editing Technology CRISPR-Cas9 was utilized to eliminate specific pig genes responsible for producing sugars triggering immune responses.
- It introduces specific human genes to enhance organ (kidney, heart) compatibility with humans.

## **Benefits of Xenotransplantation**

- Alternative supply of organs to those with life-threatening diseases.
- Reduce shortage of transplantable organs.

## **Concerns**

- High Organ rejection rate; Risk of infection from an animal organ; Animal welfare, etc

## **DEDA METHOD OF SEED PRESERVATION**

Muria tribes practice the deda, traditional method of preserving seeds.

### **About Deda Method**

- Seeds are wrapped in leaves, packed tightly to look like boulders, and woven with Siali leaves.
- Benefits: Protection of seed from pests and worms, which can be stored and used upto 5 years.

### **About Murias**

- Sub-group of Gond tribe, belonging to Chhattisgarh.

- Associated with Muria Rebellion of Bastar (1876) against Gopinath Kapardas, diwan of Bastar.
- Customs: Dead pillars (Gudi), where dead are buried with a stone placed 6 to 7 feet high and Ghotul where young boys and girls chose their own life partner.

## NATIONAL ENDANGERED SPECIES DAY 2024

National Endangered Species Day 2024 has been observed.

### About NESD, 2024

- The theme for the year 2024 is “Celebrate Saving Species”
- It is observed on the third Friday in the month of May.
- David Robinson and the Endangered Species Coalition established NESD in 2006.

### Significance

- To increase awareness about the number of species facing extinction
- Calls for action to reduce the harmful human activities that threaten species.
- Encourages us to contribute to the well-being of nature and endangered species.

## NORWESTERS

India is establishing **its first research testbed** to study **severe thunderstorms known as Nor’westers**, primarily affecting the **eastern and northeastern regions**.

- It is a collaboration between the India Meteorological Department (IMD), the Indian Institute of Tropical Meteorology (IITM), Pune, and the National Centre for Medium-Range Weather Forecasting (NCMRWF), Delhi.
- The testbed aims to improve the accuracy and lead time of thunderstorm predictions and warnings, which currently have a three-hour lead time.

### About Nor’westers

- Nor westers are severe thunderstorms that occur during the pre-monsoon season (March to May) in Bangladesh and the Indian states of Bihar, Jharkhand, Odisha, Tripura, Assam, and West Bengal.

- They are also known as **Kalbaisakhis in India and bordoisilas in Assam.**
- **Formation:** The warm, moist, southerly low-level flow from the Bay of Bengal and a cool, dry westerly or NW upper-level flow existing over the region gives rise to a favourable synoptic setting for the formation of Nor'westers.

## NATIONAL COMMISSION FOR BACKWARD CLASSES (NCBC)

Presently, the reservations in public employment made available to Scheduled Castes, Scheduled Tribes and Other Backward Classes (OBCs) cumulatively are 37% and 45 % in Punjab and West Bengal respectively.

- An increase in the reservation quota for OBCs will adhere to the Supreme Court's ceiling of up to 50% reservation in the Indra Sawhney case for socially and educationally backward classes.

### About National Commission for Backward Classes (NCBC)

- The NCBC was set up as a statutory body under the NCBC Act, 1993.
- It has been accorded Constitutional Status **through 102<sup>nd</sup> Constitution Amendment Act, 2018** with insertion of **Article 338B.**
- The commission consists of a Chairperson, Vice- Chairperson and three other Members in the rank & pay of Secretary to the Government of India.
- NCBC investigates and monitors all matters related to the safeguards provided for the socially and educationally backward classes.
- The Commission will advise the Central Government on OBC inclusion/exclusion requests from state or central governments.
- NCBC present report to the President, annually and at such other times as the commission may deem fit.
- If the Government does not agree with its recommendation, it must record its reasons.

## CONSUMER PROTECTION ACT

The Supreme Court ruled that lawyers cannot be sued under the Consumer Protection Act for providing faulty service.

- The Supreme Court overturned the National Consumer Disputes Redressal Commission's 2007 judgment, stating that services

provided by lawyers are not covered under the Consumer Protection Act (CPA) 1986 (re-enacted in 2019)

- Justices Bela M Trivedi and Pankaj Mithal held that lawyers' services must be treated differently as they involve factors beyond their control and impact the entire justice delivery system. The court concluded that lawyer services do not fall under the purview of the Consumer Protection Act.
- Additionally, the court suggested a review of VP Shantna's (1995) judgment, which held doctors and medical professionals liable under the CPA.

### **Consumer Protection Act**

- **Enacted in 1986 to protect consumer interests** and establish consumer protection councils for dispute resolution.
- **Replaced by the CPA 2019**, which strengthened consumer protection provisions

#### **Key Features of CPA 2019:**

1. Expanded the definition of '**consumer**' to include online or electronic purchases.
2. **Established the Central Consumer Protection Authority** to promote and enforce consumer rights.
3. **Enhanced dispute resolution mechanisms**, including mediation and e-filing of complaints.
4. **Introduced product liability** action against manufacturers and service providers.
5. **Implemented measures to prevent unfair trade practices** in e-commerce and direct selling sectors.

## **RIGHT TO PROPERTY**

SC in Kolkata Municipal Corporation & Anr Vs Bimal Kumar Shah & Ors has stated that Article 300A has been characterised both as a constitutional and also a human right.

- Article 300A states that "no person shall be deprived of his property save by authority of law"

#### **Key highlights of the judgment**

- Deprivation of any person's immovable property must follow a fair procedure of law.



- Minimum content of constitutional right to property comprises of seven sub-rights or procedures (non-exhaustive).
- Compulsory acquisition will be unconstitutional if proper procedure is not established or followed before depriving a person of their right to property.

### Status of Right to Property in India

- **Right to property** was explicitly held as a fundamental right under **Articles 19(1)(f) and 31** at the inception of the Constitution in 1950.
- **1st Constitutional Amendment (1951)**: Added **Article 31A** to provide for acquisition of any estate as against the provisions enshrined under Articles 14 and 19.
- **44th Constitutional Amendment (1978)**: Removed right to property as a fundamental right by repealing Articles 19(1)(f) and Article 31 and made it a constitutional right under **Article 300A**.

## INFLATION

April's retail inflation data showed a **slight slowdown in overall price gains** to an 11-month low of **4.83%** according to the Consumer Price Index (CPI). However, **food price inflation accelerated, reaching a four-month high of 8.7%**.

### Recent Trends in Overall Inflation and Food Prices:

- Food Price gains were 8.75% for rural consumers, 19 basis points higher than for urban consumers.
- Rural CPI stood at 5.43%, significantly higher than the urban rate of 4.11%.
- Cereals, the heaviest category in food, increased to 8.63%.
- A significant year-on-year increase in the average prices of rice and wheat.
- Vegetables remained in double-digit inflation for the sixth consecutive month, reaching 27.8% due to soaring temperatures.
- Pulses also saw prolonged double-digit inflation, extending to the eleventh month.
- In 2023, while world food prices experienced a significant decline from their 2022 highs, India saw persistently high food inflation, reaching 9.5% in December 2023. This contrasts sharply with global deflation of -10.1% during the same period.

## **Inflation**

Inflation refers to the overall increase in the prices of goods and services, coupled with a decrease in people's purchasing power.

### **Causes of Inflation**

**1. Demand-Pull Inflation:** It occurs when the demand for goods and services surpasses the supply. When there is high overall demand in the economy, consumers are willing to pay more for available goods and services, causing a general increase in prices.

**2. Cost-Push Inflation:** Cost-push inflation is fueled by a rise in the production costs of goods and services, this can result from factors such as increased incomes, elevated costs of raw materials, or disruptions in the supply chain.

**3. Wage-Price Inflation:** This form of inflation is often characterized as a feedback loop between wages and prices, when workers demand higher wages, businesses may raise prices to offset the increased labour costs and consequently, workers seek higher wages in response, perpetuating the cycle.

### **Different Indices for Measuring Food Inflation in India**

**1. Consumer Price Index (CPI) :** CPI for Industrial Workers (IW), CPI for Agricultural Labourer (AL), CPI for Rural Labourer (RL), and CPI for Urban Non-Manual Employees (UNME).

**2. Consumer Food Price Inflation (CFPI):** CFPI is a component of the broader Consumer Price Index (CPI), where the Reserve Bank of India (RBI) utilizes the CPI-Combined (CPI-C) for this purpose. It monitors the price fluctuations of a particular selection of food items commonly consumed by households.

**3. Wholesale Price Index (WPI):** The WPI tracks changes in the prices of goods sold and traded in bulk by wholesale businesses to other businesses. It specifically focuses on goods, and services are not part of it. It is utilized to monitor supply and demand dynamics in industries, manufacturing, and construction sectors. **Components: Primary articles** (Food Articles, Non-Food Articles) and other categories like Fuel and Power and manufactured Products. **Food Articles in WPI:** Cereals, Paddy, Wheat, Pulses, Vegetables,

Fruits, Milk, Eggs, Meat, Fish, Oil Seeds. **Non-Food Articles in WPI:** Oil Seeds, Minerals, Crude Petroleum.

- Food inflation in India is primarily calculated using the Consumer Price Index (CPI) for Food and Beverages, a key measure tracking price changes of a typical consumer basket.
- Food carries a weight of 45.9% in the CPI, but its contribution to overall inflation has risen from 48% in April 2022 to 67% in November 2023.
- Recent data from the government's Household Consumption Survey indicates a decline in food's share of the consumption basket, dropping below 50% for rural consumers and 39% for urban consumers.

## INDIA INTERNATIONAL BULLION EXCHANGE (IIBX)

The **State Bank of India (SBI)** has become the first bank to be a trading-cum-clearing member of the India International Bullion Exchange (IIBX) at **GIFT City in Gujarat**.

- This allows SBI's branch at GIFT City to conduct and settle trades on the IIBX platform on behalf of its clients.
- According to RBI guidelines, Indian bank branches at GIFT IFSC can act as trading and clearing members of IIBX, and special category clients can import gold through IIBX.

### **About India International Bullion Exchange (IIBX):**

- The IIBX is located at the GIFT City (Gujarat International Finance Tec-City) in Gandhinagar, Gujarat.
- GIFT City is a planned business district aimed at becoming a global financial and IT services hub.
- The primary objective of the IIBX is to create a globally recognized bullion trading platform.
- It aims to bring transparency, standardization, and cost efficiency to the bullion market, benefitting various stakeholders, including miners, importers, banks, and jewellers.

## COLENDING

The Finance Ministry has asked the State Bank of India to form a committee to tackle co-lending issues.

### **About Co-lending/Co-origination**

- It is an arrangement where multiple lenders partner to provide loans to borrowers.

- This helps increase lending capacity and reduces risk for individual lenders.
- As per RBI, banks and NBFCs can co-lend loans to priority sectors, with a minimum 20% credit risk on NBFCs, and the rest on banks.
- Banks are not allowed to enter into co-lending arrangement with an NBFC belonging to the promoter Group.

## SAARC SECRETARY GENERAL VISIT TO INDIA

South Asian Association for Regional Cooperation (SAARC) Secretary-General discusses status of regional cooperation in South Asia.

- SAARC has been largely dysfunctional since 2016 when the 19th Summit, scheduled to be held in Pakistan, was cancelled due to concerns about cross-border terrorism.
- Since then, India has focused on bolstering cooperation with countries in South Asia through other groupings such as Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and Bangladesh, Bhutan, India, Nepal (BBIN) initiative.

### About SAARC

- Established in 1985, through SAARC Charter in Dhaka.
- Member states: India, Bangladesh, Afghanistan, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka.
- **Secretariat: Kathmandu**
- Decisions at all levels in SAARC are taken on the basis of unanimity.
- Bilateral and contentious issues are excluded from its deliberations.

### Significance of SAARC for India

- Central pillar for India's Neighbourhood first policy
- Forum to deal with common issues of the region.
- Critical forum for economic integration of South Asian Region

### Reasons for SAARC's failure

- Asymmetry between India and other member countries.
- Differences between India and Pakistan hamper effective functioning of the forum.
- SAARC does not have any arrangement for resolving disputes or mediating conflicts

- Signing of South Asian Free Trade Agreement (SAFTA) to reduce customs duties.
- Establishment of institutions like South Asian University (New Delhi), SAARC international college (Bangladesh).
- Establishment of SAARC development fund, for the welfare of member countries.

## TELECOM DEIPLOMACY

### India Celebrates '**Telecom Diplomacy**' on World Telecommunication and Information Society Day

- World Telecommunication and Information Society Day is an international day proclaimed in November 2006 by the International Telecommunication Union Plenipotentiary Conference in Antalya, Turkey, to be celebrated annually on 17 May

### **What is Telecom Diplomacy?**

Telecom Diplomacy is the **strategic effort by a country to use its telecommunications industry** to attract business ventures, form international partnerships, and secure a leading role in the global telecommunications landscape.

### **Key initiatives by India include:**

- Strategic Partnerships: Collaboration with countries and companies, exemplified by the 'US-India Open Radio Access (ORAN) Network Acceleration Roadmap'.
- R&D and Innovation: Exploring collaborations to advance R&D, innovation, and the startup ecosystem in Quantum Communications.
- India Mobile Congress (IMC): Efforts to elevate IMC to a global level like the Mobile World Congress by 2025.
- Exported telecom equipment worth Rs 25200 crores last year.
- Secured Indian interests in international forums and future 5G deployments.
- Hosting the World Telecommunication Standardization Assembly (WTSA) for the first time in India.

### **International Telecommunication Union (ITU)**

- It is the United Nations specialized agency for information and communication technologies (ICTs).
- Founded in 1865, it is the oldest of the UN's 15 specialized agencies.
- ITU allocates global radio spectrum and satellite orbits, develops technical standards for network interconnectivity, and aims to improve ICT access for underserved communities.
- Based in Geneva, Switzerland
- ITU is part of the UN Development Group and operates 12 regional offices.
- It functions as an intergovernmental public-private partnership with 193 member states and around 800 sector members.
- India, a member since 1952, was re-elected to the ITU Council for the 2019-2022 term.

### **INDIA CHINA TRADE**

According to the think tank Global Trade Research Initiative (GTRI), India's bilateral trade with China reached at \$118.4 billion in the fiscal year 2024.

- China replaced the United States (US) which was India's top trading partner during FY22 and FY23.
- GTRI's Report also highlighted that Between FY19 and FY24, India's exports to China witnessed a marginal decline in exports by 0.6%, while imports from China surged by 44.7%.

### **Concerns related to rising import Dependency on China**

- National Security: Trade can be used as a tool to exert political pressure on India or advance its strategic interests.
- It complicates efforts to address border disputes effectively.
- Reliance on Chinese technology and equipment in critical sectors such as telecom will make more vulnerable to cyber warfare.
- China's share in India's electronics sector import (including telecom) is about 43.9%.
- Strategic autonomy: Constrains India's ability to counter Chinese influence in neighbourhood (e.g. South Asia and Indian Ocean region).
- India's pharmaceutical sector is highly dependent on China's Active Pharmaceutical Ingredients (APIs).

- Other: Stifle the growth of domestic industries as they are not able to compete with low-cost import, etc.

### **Initiatives taken to reduce Dependency on China**

- Make in India initiative
- Production-linked incentive (PLI) schemes for domestic manufacturing capacities in critical sectors like Medical devices, electronic components, etc.
- Promotion of Bulk Drug Parks, reducing import dependency for APIs
- Imposing Anti-dumping duties

## CAATSA

India and Iran signed a 10-year contract on Chabahar Port, but the US State Department warned against business deals with Iran due to potential sanctions risk under CAATSA.

### **About CAATSA**

- It is a US federal law, enacted in 2017, which aims to punish countries having deep engagements with Russia, North Korea, and Iran using economic sanction.
- It entails economic & financial penalties for any nation that have significant transactions with Russian intelligence and military agents.
- In 2018, US House of Representatives passed an amendment to exempt India from economic sanctions under CAATSA for purchasing S-400 missile defence system from Russia.

## AI IN DRUG DEVELOPMENT

AI has significantly enhanced the efficiency and speed of drug development, a traditionally costly and time-consuming process.

### **AI Tools in Drug Development:**

AlphaFold 3 and RoseTTAFold All-Atom:

- Developers: AlphaFold is developed by DeepMind, a Google - company, and RoseTTAFold by the University of Washington.
- Functionality: These tools use deep neural networks to predict the three-dimensional structures of proteins and their interactions with drugs.

- They provide a major leap in predicting not just static protein structures but also dynamic interactions with various biological molecules, including DNA, RNA, and small molecules.
- Performance: In tests, AlphaFold 3 accurately predicted drug interactions 76% of the time, outperforming RoseTTAFold All-Atom at 40%.

### AlphaFold 3

- **AlphaFold is an AI tool by Google's DeepMind** to predict protein folding since 2018.
- It aims to **understand 3D protein shapes**, crucial for biology and health.
- Versions like AlphaFold 3 offer **about 80% accuracy and model DNA, RNA**, and more.
- Protein folding is vital for biological function and disease understanding.
- While AlphaFold aids drug development, its limitations include a lack of explanation for protein folding and restricted access.

### GPT-4o

**OpenAI has introduced GPT-4o**, its newest and most advanced AI model, designed to enhance ChatGPT by making it **smarter, faster, and free for all users**.

#### Features of GPT-4o:

- This model, named "Omni," represents a significant upgrade from previous models by supporting multimodal interactions—processing and responding to text, audio, and images.
- Unlike its predecessors, which used separate models for different tasks, GPT-4o integrates all functionalities into a single model, improving efficiency and response speed.
- GPT-4o's capabilities include real-time translations, emotion detection in audio, and understanding and interacting with visual inputs like screenshots and documents.
- It also offers multilingual support and better performance with non-English texts, aiming to be more accessible globally.
- The technology behind GPT-4o enables holistic understanding of inputs, considering factors like tone and background noise.



- Its response times are remarkably fast, between 232 to 320 milliseconds.
- Safety measures include filtered training data and post-training model refinement to address risks like misinformation and bias

## LUNAR POLAR EXPLORATION MISSION (LUPEX)

The **India-Japan joint moon mission**, the **Lunar Polar Exploration Mission (LUPEX)**, is **expected to launch in a few years**.

- This collaboration between the Indian Space Research Organisation (ISRO) and the Japan Aerospace Exploration Agency (JAXA) aims to explore the lunar surface and search for subsurface water.
- ISRO is developing the lander, while JAXA is responsible for the rover and launch vehicle.
- The mission will also carry instruments from NASA and the European Space Agency (ESA), enhancing its scientific potential

## ULTRA-PROCESSED FOODS (UPF)

A 30-year U.S. observational study links **higher consumption of most ultra-processed foods to a slightly elevated risk of death**, particularly from neurodegenerative causes.

- Ready-to-eat meat, sugary drinks, dairy desserts, and highly processed breakfast foods showed the strongest associations.

### What is Ultra-processed foods (UPF)?

- UPFs are **heavily processed foods with additives, high in fat, sugar, and salt (HFSS)**, and low in essential nutrients. Their increased consumption poses various health risks.
- In India, **efforts to curb UPF consumption include revised dietary guidelines**, the Eat Right India Campaign by FSSAI, limits on transfatty acids, and taxation on aerated beverages and HFSS foods.

## TAK 003 DENGUE VACCINE

Developed by Japan's pharma company Takeda, TAK-003 is a live-attenuated vaccine containing weakened versions of the four serotypes of the virus that cause dengue.

- It is the second dengue vaccine to receive WHO prequalification, following the CYD-TDV vaccine.
- WHO recommends the use of TAK-003 in children aged 6–16 years in settings with high dengue burden and transmission intensity.

### **About WHO Vaccine prequalification**

- It was created in 1987 to assure the quality of vaccines distributed by UN purchasing agencies.
- Vaccines showing positive outcomes after evaluation of relevant data, testing of samples and WHO inspection of relevant manufacturing sites are included in the list.
- However, inclusion in the list does not imply approval of vaccines and manufacturing sites by the WHO.
- Such approval is a prerogative of the National Regulatory Authorities.
- Yet, pre-qualification is an important step in the expansion of global access to vaccines as it enables procurement by UN agencies (including UNICEF) and PAHO (Pan American Health Organization).
- Other vector-borne disease for which vaccines are included in this list include malaria, yellow fever, Japanese encephalitis, Rabies, etc.

### **WHO prequalifies new dengue vaccine TAK-003**

- Symptoms: High fever, severe headache, pain behind the eyes, muscle and joint pain, etc. may lead to death.
- Pathogen: Dengue virus named DEN-1, DEN-2, DEN-3, and DEN-4.
- Vector: Infected female mosquitoes, primarily the *Aedes aegypti*. Transmission by *Aedes albopictus* (tiger mosquito) has been seen in Europe.
- It can also be transmitted from a pregnant mother to her baby, via blood products, organ donation and transfusions.
- Affected regions: Dengue is found in tropical and sub-tropical climates worldwide, mostly in urban and semi-urban areas (most of which are in Asia, Africa, and the Americas)

## **UNEP PHASING OUT MERCURY MEASURING DEVICES IN HEALTHCARE PROJECT**

It is \$134-million initiative led by UN Environment Programme (UNEP).

### **About Project**

- Aim: Phase out mercury thermometers and sphygmomanometers at a rate of 20% annually, and reduce mercury spillages.
- Encourage adoption of accurate, affordable and safe mercury-free alternatives, while improving management of mercury-containing medical waste.
- Member countries: Albania, Burkina Faso, India, Montenegro, and Uganda.
- Funding: By Global Environment Facility.
- Execution: By World Health Organisation.

### About Mercury

- It is a naturally occurring element found in air, water and soil.
- It is the only metal which is found in liquid state at room temperature.
- It is a persistent, bio-accumulative, toxic pollutant.
- All humans are exposed to low levels of mercury.
- Several countries and international organizations have established reference levels for daily or weekly methyl-mercury or mercury intakes that are estimated to be safe (or without appreciable risk to health).
- Sources: Gold mining, Coal-based thermal power plant, Volcanic emissions, etc.
- **Effect:** Toxic effects on nervous, digestive and immune systems, lungs, kidneys, skin and eyes.
- Minamata disease is a chronic neurological disorder caused by methyl-mercury, a heavy metal with many industrial uses.
- When released into environment, it accumulates in water laid sediments where it converts into toxic methyl-mercury and enters food chain.

#### **Minamata convention on mercury**

- Adopted in 2013 at Kumamoto (Japan) and came into force in 2017.
- 1st global legally binding treaty to protect human health and environment from adverse effects of mercury.
- **Purpose:** Ban on new mercury mines, phase-out of existing ones, phase-out and phase-down of mercury use in products and processes.
- Named after the city in Japan that became the epicentre of Minamata disease, caused by severe mercury poisoning.
- India ratified it in 2018

## EXERCISE TARKASH

- The seventh edition of the Indo-U.S. joint counter-terrorism exercise 'Tarkash' was recently held in Kolkata.
- It was held between the India's National Security Guard (NSG) and U.S. Special Operations Forces (SOF).

## 50 YEARS OF POKHARAN

Test was carried out at Pokhran, an army test range in the desert of western Rajasthan, with a plutonium device in the 10-15 kilotons range and code named **Operation Smiling Buddha in 1974.**

- With the test, India became the first nation to conduct a nuclear test apart from the five permanent members of the United Nations Security Council (P-5).
- In 1998, India conducted a series of nuclear tests again in Pokhran by the code-named **Operation Shakti.**
- These tests gave India the capability to build nuclear weapons from low yields up to around 200 kilotons.

### **Factors driving India's Pokhran I:**

- To establish a deterrent capability against potential adversaries and safeguard national security interests.
- India's objection to Nuclear Non Proliferation Treaty (NPT) on the grounds that it was discriminatory to countries except the P-5.
- Response to the test
- In 1975, Nuclear Suppliers Group (NSG) was established following the explosion.
- It comprises 48 states that have voluntarily agreed to coordinate their export controls to non-nuclear-weapon states.
- It governs the transfers of civilian nuclear material and nuclear-related equipment and technology.

### **India's Nuclear doctrine**

- Building and maintaining a credible minimum deterrent.
- A posture of "No First Use", nuclear weapons will only be used in retaliation against a nuclear attack
- Non-use of nuclear weapons against non-nuclear weapon states.
- Nuclear retaliatory attacks can only be authorised by the civilian political leadership.
- Commitment to the goal of a nuclear weapon free world.

## UNESCO'S MEMORY OF THE WORLD ASIA-PACIFIC REGIONAL REGISTER

The Ramcharitmanas, Panchatantra, and Sahṛdayāloka-Locana have been added to **UNESCO's Memory of the World Asia-Pacific Regional Register**, celebrating India's rich literary heritage and cultural legacy.

### UNESCO's Memory of the World Asia-Pacific Regional Register:

- Launched in 1992.
- It consists of three Registers namely, International, Regional and National Register.
- International Register consists of several Indian entries namely Tamil Medical Manuscript Collection, Saiva manuscripts Rig Veda etc.

Literary Work	Author	Description
<b>Ramcharitmanas (Awadhi)</b>	Goswami Tulsidas	An epic poem consisting of seven Kāndas; a poetic retelling of the Ramayana.
<b>Panchatantra (Sanskrit)</b>	Pt.Vishnu Sharma	One of the oldest collections of Indian fables, consisting of five parts with a 'story within a story' structure.
<b>Sahṛdayāloka-Locana (Sanskrit)</b>	Acharya Anandvardhan	A text on Indian poetics with commentary by philosopher Abinava Gupta.

## KANWAR LAKE

Condition of the Kanwar Lake has been deteriorating.

### About Kanwar Lake (also known as Kabartal Wetland or Jheel)

- Located in Begusarai district, Bihar, it is a freshwater natural wetland.
- Draws water from **confluence of Gandak, Bia and Kareh river**.
- **Bihar's first Ramsar** site recognised as wetland of international importance in 2020.
- Important stopover along Central Asian Flyway.
- **Important species:** Red-headed vulture, white-rumped vulture and Indian vulture.

- **Importance:** Acts as a sink for sediments, Habitat for several migratory species, provide livelihood opportunities, Supports lifecycle of fish or amphibians etc.
- **Threat:** Water management activities like drainage, water abstraction, damming and canalization.

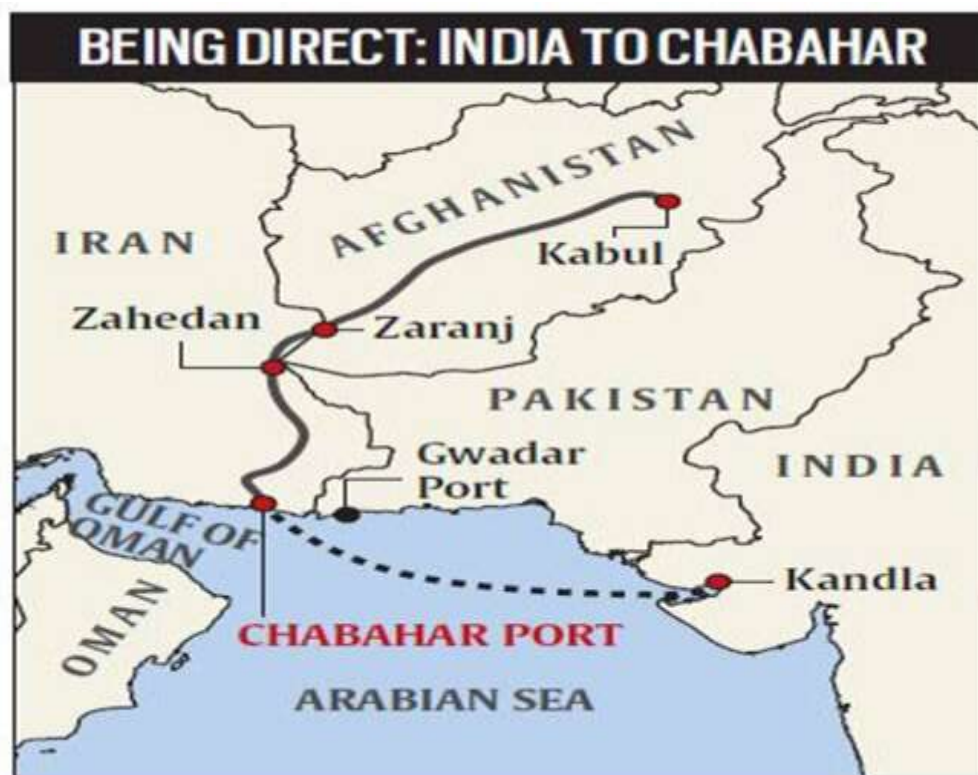
## CHABHAR PORT

The US has warned of potential sanctions following India's signing of a 10-year contract with Iran to operate the Chabahar port.

- This will enhance regional connectivity; facilitate trade and investment opportunities between India, Iran and Afghanistan.
- Chabahar is one of the overseas ports that will be managed by India. The other is Sittwe port in Myanmar.

### About Chabahar Port

- It is located in Sistan and Baluchestan province on the Makran coast in South-eastern part of Iran, on the Gulf of Oman and outside Strait of Hormuz.



- It is the only deep-sea port in Iran with direct ocean access.
- There are two terminals in Chabahar Port project i.e. Shahid Beheshti and Shahid Kalantari.
- Port is part of proposed International North-South Transport Corridor (INSTC).

**NOTE:** INSTC is a 7,200-km-long multi-mode transport project linking Indian Ocean and Persian Gulf to Caspian Sea via Iran and onward to northern Europe via Saint Petersburg in Russia.

## ARUN CHANDRA GUHA

Freedom fighter and renowned writer Arun Chandra Guha was remembered on his birth anniversary.

### About Arun Chandra Guha

- Born in Barisal (East Bengal).
- He was a member of the Constituent Assembly and, since 1946 a Member of Parliament till the third Lok Sabha (1963).
- Started taking interest in politics during the Swadeshi movement of 1905.
- After 1910, he took an active part as a member of the Jugantar Party, a secret revolutionary society.
- Published Bengali and English journals, Mandira and Forward, respectively.
- Subscribed to Jatindranath Mukhopadhyay, alias Bagha Jatin's Zimmermann plan.
- Literary works: Shristi Sabhyata, First Spark of Revolution, etc

## SUKHDEV THAPER

Freedom fighter Sukhdev Thapar was remembered on his birth anniversary (15 May).

### About Sukhdev Thapar

- Born in Ludhiana (Punjab)
- He educated the youth at the National College in Lahore.
- He was a **member of the Hindustan Socialist Republican Association.**
- He along with other revolutionaries **started the 'Naujawan Bharat Sabha' at Lahore in 1926.**
- He along with Bhagat Singh and Rajguru were arrested for their involvement in **Lahore Conspiracy Case**
- The day **the three were hanged to death is observed as Shaheed Diwas (23rd March)**

## RED PANDA (AILURUS FULGENS)

A Red panda was recently sighted in Eaglenest Wildlife Sanctuary (Arunachal Pradesh).

### About Red Panda

- Small arboreal mammal found in high-altitude forests of Nepal, India, Bhutan, Myanmar, and China.
- Habitat: Temperate forest of Himalayas (Sikkim, West Bengal, Meghalaya, and Arunachal Pradesh).
- It thrives best at 2,200-4,800m in mixed deciduous and conifer forests with dense understories of bamboo.

#### **Protection status:**

- IUCN status: Endangered
- Wildlife Protection Act: Schedule I
- CITES: Appendix I
- Conservation Issues: Habitat fragmentation and degradation, Predation by feral dogs, Occasional hunting and poaching

## LEOPARD CAT

Leopard cat (*Prionailurus bengalensis*) is sighted in Maharashtra's Pench Tiger Reserve for the first time.

### About Leopard cat

- Forest-dwelling cat belongs to the family Felidae, noted for its leopard-like colouring.
- Distribution: Found across India, Southeast Asia, and nearby islands.
- Characteristics: Coat is yellowish or reddish brown above, white below, and heavily marked with dark spots and streaks.
- It is a Nocturnal animal.
- Habitat: tropical rainforest to temperate broadleaf forest, coniferous forest, shrub forest, grasslands.

#### **Conservation status**

- IUCN: Least Concern
- CITES: Appendix I
- Wild Life (Protection) Act, 1972: Schedule I



## SEA ANEMONE

Scientists at the **ICAR-National Bureau of Fish Genetic Resources (NBFGR)** have discovered mass sea anemone bleaching off Agatti island in the Lakshadweep group.

### About Sea anemones:

- They belong to the **phylum Cnidaria**, and reside in ocean waters, mainly in coastal tropical regions.
- Establishing **symbiotic relationships** with green algae, akin to corals, they face bleaching when sea surface temperatures rise.
- Additionally, they **form symbiotic bonds with clownfish**, providing protection in exchange for food from the clownfish's meals.
- Sea anemones play vital biogeochemical roles in benthic ecosystems.

### Agatti Island

- **Agatti Island, situated 459 km (248 nautical miles) west of Kochi, Kerala**, and adjacent to Kavaratti Island, the capital of Lakshadweep Union Territory,
- Area: spans an area of **3.84 sq km**.
- Its lagoon, covering **17.50 sq km**,
- Hosts vibrant coral growth and multicoloured fish.
- Fishing dominates its economy, with Agatti being one of the few islands, along with Minicoy, to yield surplus fish. Coir and copra production follow fishing as key industries on the island.

## SEMAL TREES

Semal trees, crucial **to Udaipur's Holi festivities**, face peril in south Rajasthan.

- Despite their ecological significance, thousands are cut annually for **bonfires, violating forest laws**.
- Semal trees, also known as **silk cotton trees or Bombax Ceiba**, are **large**, fast-growing trees (large deciduous trees, known for their **Crimson red flowers**) native to India.
- Ayurvedic medicines can be prepared from every part of the tree (e.g., roots are used for treating ailments such as diabetes, etc).

- It is worshipped by **many tribal communities in Rajasthan (e.g. Garasia tribe, Kathodi tribe) and Madhya Pradesh.**
- Its seed produces edible oil, used in **making soaps.**
- Semal plays a crucial role in the forest ecosystem, providing habitat and food for various species, including rock bees, moths, sparrows, and bugs.
- Additionally, tribal communities rely on Semal for food, crafting, and cultural beliefs.