



Factly Compilation

October, 2023

Factly Compilation for the Month of October, 2023

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1. **Toto Language: A dictionary to save a language from extinction**

Source: The post is based on the article “**Toto Language: A dictionary to save a language from extinction**” published in “**The Hindu**” on **2nd October 2023**

What is the News?

A dictionary titled “Toto Shabda Sangraha” is set to be released with the aim of preserving the Toto language.

What is Toto Language?

Toto is a Sino-Tibetan language. It is primarily spoken orally and is currently written in the Bengali script.

It is spoken by barely 1,600 people living in parts of West Bengal bordering Bhutan.

It is listed as a critically endangered language by UNESCO.

What is Toto Shabda Sangraha?

Toto Shabda Sangraha is a dictionary developed with the aim of preserving the Toto language.

The dictionary has been compiled by Bhakta Toto, a bank employee-cum-poet, and published jointly by the trust and Bhasha Samsad

2. **Army’s Project Udbhav to rediscover ‘Indic heritage of statecraft’ from ancient texts**

Source: The post is based on the article “**Army’s Project Udbhav to rediscover ‘Indic heritage of statecraft’ from ancient texts**” published in “**The Hindu**” on **2nd October 2023**

What is the News?

The Indian Army in collaboration with the United Service Institution of India (USI), has recently concluded a hybrid-panel discussion as part of Project Udbhav

What is Project Udbhav?

Started in: 2021

Started by: Indian Army in collaboration with the United Service Institution of India, a defence think-tank.

Aim: To rediscover the profound Indic heritage of statecraft and strategic thoughts derived from ancient Indian texts of statecraft, warcraft, diplomacy and grand strategy.

The project focuses on various aspects such as Indigenous Military Systems, Historical Texts, Regional Texts and Kingdoms, Thematic Studies and intricate Kautilya Studies.

Objective: Project Udbhav seeks to bridge the historical and the contemporary. Its ultimate goal is to understand the profound depths of indigenous military systems, their evolution, strategies that have been passed down through the ages and integrate that age-old wisdom with modern military pedagogy.

– By reintroducing these classical teachings into contemporary military and strategic domains, the army aims to: nurture its officers to apply ancient wisdom in modern scenarios and allow a more profound understanding of international relations and foreign cultures.

Significance: This project stands testimony to the Indian Army’s recognition of India’s age-old wisdom in statecraft, strategy, diplomacy and warfare.

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3. DRI saves 955 live baby Gangetic turtles in a crackdown on illegal wildlife trade in multicity Operation “Kachchhap”

Source: The post is based on the article “DRI saves 955 live baby Gangetic turtles in a crackdown on illegal wildlife trade in multicity Operation Kachchhap” published in “PIB” on 3rd October 2023.

What is the News?

The Directorate of Revenue Intelligence (DRI) has rescued 955 live baby Gangetic turtles as part of Operation “Kachchhap”.

What is Operation Kachchhap?

Conducted by: Directorate of Revenue Intelligence (DRI)

Aim: To combat the illegal wildlife trade of Gangetic turtles.

Which are the Gangetic Turtles rescued in this Operation Kachchhap?

Indian Tent Turtle

Indian Flapshell Turtle

Red Crowned Roofed Turtle

Brown Roofed Turtle: Brown roofed turtle (*Pangshura smithii*) is a common freshwater turtle. It is found in northern India, Bangladesh, Nepal and Pakistan.

– The species is found in fast flowing rivers, streams, ponds and areas with good vegetation which provides a breeding ground for turtles.

– **IUCN Status:** Near Threatened

Black spotted/Pond Turtle: Black pond turtle (*Geoclemys hamiltonii*), also known as the spotted pond turtle or the Indian spotted turtle, is a species of freshwater turtle endemic to South Asia.

– It is found in north and north-eastern Indian subcontinent primarily in India, Pakistan, Nepal and Bangladesh.

– **IUCN Status:** Endangered

4. Insolvency and Bankruptcy Board of India (IBBI) celebrates its Seventh Annual Day

Source: The post is based on the article “Insolvency and Bankruptcy Board of India (IBBI) celebrates its Seventh Annual Day” published in “PIB” on 3rd October 2023.

What is the News?

The Insolvency and Bankruptcy Board of India (IBBI) has celebrated its Seventh Annual Day.

What is the Insolvency and Bankruptcy Board of India (IBBI)?

The Insolvency and Bankruptcy Board of India (IBBI) is a statutory body established on 1st October, 2016 in accordance with the provisions of the Insolvency and Bankruptcy Code, 2016 (Code).

Purpose: The IBBI is one of the key pillars of the ecosystem responsible for implementation of the Code.

Functions: It is a unique regulator: regulates a profession as well as processes.

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- It has regulatory oversight over the Insolvency Professionals, Insolvency Professional Agencies, Insolvency Professional Entities and Information Utilities.
- It writes and enforces rules for processes, namely, corporate insolvency resolution, corporate liquidation, individual insolvency resolution and individual bankruptcy under the Code.
- It has also been designated as the ‘Authority’ under the Companies (Registered Valuers and Valuation Rules), 2017 for regulation and development of the profession of valuers in the country.

Governing Board: The affairs of the IBBI are governed by a Governing Board constituted by the Central Government.

- The Governing Board consists of (a) Chairperson; (b) three members from amongst the officers of the Central Government not below the rank of Joint Secretary or equivalent, one each representing the Ministry of Finance, Ministry of Corporate Affairs and Ministry of Law & Justice; (c) one member nominated by the Reserve Bank of India; (d) three whole-time members; and (e) two part-time members.

Headquarters: New Delhi.

5. Indian Coast Guard Pollution-Control Vessel Samudra Prahari visits Tanjung Priok Port, Indonesia

Source: The post is based on the article “Indian Coast Guard Pollution-Control Vessel Samudra Prahari visits Tanjung Priok Port, Indonesia” published in “PIB” on 3rd October 2023.

What is the News?

Indian Coast Guard Ship(ICGS) Samudra Prahari has arrived at the port of Tanjung Priok, Jakarta, Indonesia.

Why has ICGS ship Samudra Prahari been deployed in Indonesia?

The Indian Coast Guard Ship Samudra Prahari, a specialized Pollution Control Vessel, has embarked on an overseas deployment to ASEAN countries.

The initiative was announced during the ASEAN Defence Minister Meeting Plus meeting in Cambodia in November 2022.

During this deployment, the ship is scheduled to make port calls in Bangkok(Thailand), Ho Chi Minh (Vietnam), and Jakarta(Indonesia).

Moreover, the ship has aboard 13 National Cadet Corps (NCC) cadets, who will participate actively in the “**Puneet Sagar Abhiyan**” thereby giving the Abhiyan an international reach.

Significance: This initiative underscores India’s expertise and collaborative efforts in tackling regional maritime challenges, particularly those related to marine pollution threats.

- It also aligns seamlessly with India’s visionary approach, as outlined by the Prime Minister encapsulated in “SAGAR – Security and Growth for All in the Region”.

What is Samudra Prahari?

[Click Here to read](#)

What is Puneet Sagar Abhiyan?

[Click Here to read](#)

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6. CRPF in collaboration with Ministry of Women and Child Development is organizing a cross-country bike expedition with “Yashaswini” to celebrate women power

Source: The post is based on the article “CRPF in collaboration with Ministry of Women and Child Development is organizing a cross-country bike expedition with “Yashaswini” to celebrate women power” published in “PIB” on 3rd October 2023.

What is the News?

The Central Reserve Police Force (CRPF) collaborates with the Ministry of Women and Child Development for a cross-country bike expedition named “Yashaswini”.

What is Yashaswini?

Yashaswini is a cross-country bike expedition organized by the Central Reserve Police Force (CRPF) in collaboration with the Ministry of Women and Child Development.

Under this, a total of 150 women CRPF officers will embark on a cross-country rally on bikes to celebrate women power or *Nari Shakti* of the country.

The rally will cover approximately 10,000 km, passing through 15 states and 2 Union Territories.

Along their routes, various events are planned, including interactions with groups associated with “Beti Bachao Beti Padhao”(BBBP), such as school children, college girls, women self-help groups among others.

The women bikers will also proudly display the BBBP logo on their uniforms and banners, endorsing this cause throughout the country.

7. WHO approves use of malaria vaccine with adjuvant tech

Source: The post is based on the article “WHO approves use of malaria vaccine with adjuvant tech” published in “The Hindu” on 3rd October 2023.

What is the News?

The World Health Organization (WHO) has recommended a new vaccine named R21/Matrix-M for the prevention of malaria in children.

What is R21/Matrix-M Vaccine?

R21/Matrix-M is a Malaria Vaccine.

Developed by: Jenner Institute at Oxford University and the Serum Institute of India with support from the European and Developing Countries Clinical Trials Partnership (EDCTP), the Wellcome Trust, and the European Investment Bank (EIB).

The vaccine contains R21 antigen developed by University of Oxford, specific to the malaria parasite, and Novavax’s Matrix-M, a saponin-based adjuvant that enhances the immune response, making it broader and more durable.

Key Features of R21:

– **High efficacy** when given just before the high transmission season: In areas with highly seasonal malaria transmission (where malaria transmission is largely limited to 4 or 5 months per year), the R21 vaccine was shown to reduce symptomatic cases of malaria by 75% following a 3-dose series.

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- **Cost-effectiveness is favorable**, with a price range of \$2 to \$4 per dose, making it comparable to other recommended malaria interventions.
- **Safety:** The R21 vaccine was shown to be safe in clinical trials.

Significance: The R21 vaccine is the second malaria vaccine recommended by WHO, following the RTS,S/AS01 vaccine, which received a WHO recommendation in 2021.

8. Medicine Nobel 2023 goes to duo who paved the way for mRNA COVID vaccines

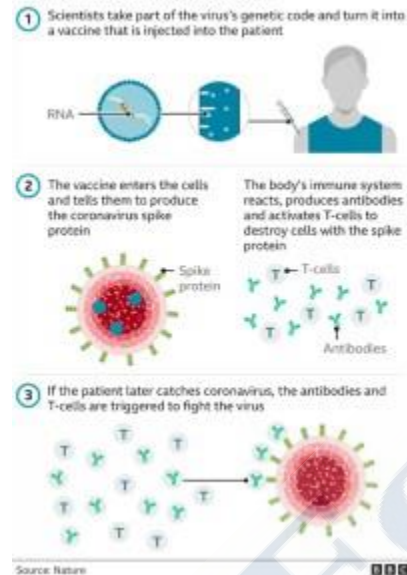
Source: The post is based on the article “Medicine Nobel 2023 goes to duo who paved the way for mRNA COVID vaccines” published in “The Hindu” on 3rd October 2023.

What is the News?

The 2023 Nobel Prize in Physiology or Medicine has been awarded to Katalin Karikó and Drew Weissman for their research that enabled the development of mRNA vaccines against COVID-19.

What are mRNA vaccines?

How an mRNA vaccine works



Source: BBC

mRNA stands for messenger RNA. It is a form of nucleic acid which carries genetic information.

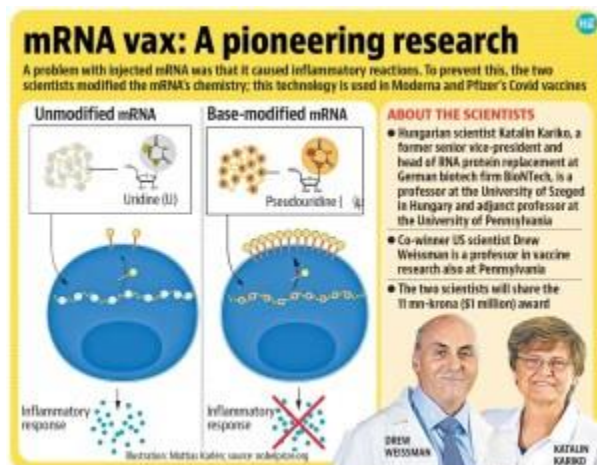
Like other vaccines, the mRNA vaccine also attempts to activate the immune system to produce antibodies that help counter an infection from a live virus.

However, while most vaccines use weakened or dead bacteria or viruses to evoke a response from the immune system, mRNA vaccines only introduce a piece of the genetic material that corresponds to a viral protein. This is usually a protein found on the membrane of the virus and is called spike protein. Therefore, the mRNA vaccine does not expose individuals to the virus itself.

However, a key challenge with mRNA vaccines is that they need to be frozen from -90 degree Celsius to -50 degree Celsius. They can be stored for up to two weeks in commercial freezers and need to be thawed at 2 degrees Celsius to 8 degrees Celsius at which they can remain for a month.

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What work did Katalin Karikó and Drew Weissman do for mRNA vaccines?



Source: Hindustan Times

A significant obstacle in the development of mRNA vaccines was early prototypes of synthetic mRNAs provoked inflammatory reactions making them unsuitable for medical use.

However, Karikó and Weissman found that by making slight chemical adjustments to the mRNA molecules, they could eliminate these inflammatory reactions and significantly boost the production of the desired protein.

This breakthrough became the basis for the development of mRNA vaccines against COVID-19.

What is the potential of mRNA technology beyond Covid-19?

Early studies suggest mRNA technology shows promise as a treatment for cancers, including melanoma and pancreatic cancer.

Other avenues of ongoing mRNA research include exploring a new avenue to treat autoimmune diseases. And mRNA technology is also being checked out as a possible alternative to gene therapy for intractable conditions such as sickle cell disease.

9. Cross-border CBDC trading: BIS and central banks successfully conclude Project Mariana Test

Source: The post is based on the article “Cross-border CBDC trading: BIS and central banks successfully conclude Project Mariana Test” published in “Economic Times” on 3rd October 2023

What is the News?

The Bank for International Settlements (BIS), in collaboration with the central banks of France, Singapore, and Switzerland, has announced the successful conclusion of Project Mariana.

What is Project Mariana?

Project Mariana was developed jointly by three BIS Innovation Hub centres (the Swiss, Singapore and Eurosystem Hub Centres) together with Bank of France, Monetary Authority of Singapore and Swiss National Bank.

Purpose: The project tested the cross-border trading and settlement of wholesale central bank digital currencies (wCBDCs) between financial institutions, using new decentralized finance (DeFi) technology concepts on a public blockchain.

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Process: The project relied on three key elements:

- A common technical token standard provided by a public blockchain to facilitate exchange and interoperability between the different currencies.
- Bridges for the seamless transfer of wCBDCs between different networks.
- An Automated Market Maker (AMM), which is a specific type of decentralized exchange to trade and settle spot Foreign exchange(FX) transactions automatically.

What is the Bank for International Settlements(BIS)?

The Bank for International Settlements(BIS) is an international financial institution established in 1930.

It is owned by 63 central banks, representing countries from around the world that together account for about 95% of world GDP.

Aim: To support central banks' pursuit of monetary and financial stability through international cooperation, and to act as a bank for central banks.

Head office: Its head office is in Basel, Switzerland and it has two representative offices: in Hong Kong SAR and in Mexico City.

10. Minister of State for Home Affairs attends two day conference to mark the 20th anniversary of United Nations Convention against Transnational Organised Crimes (UNTOC) at Palermo in Italy

Source: The post is based on the article “**Minister of State for Home Affairs attends two day conference to mark the 20th anniversary of United Nations Convention against Transnational Organised Crimes (UNTOC) at Palermo in Italy**” published in “**PIB**” on **3rd October 2023**

What is the News?

The Minister of State for Home Affairs attended a two day conference to mark the 20th anniversary of the United Nations Convention against Transnational Organised Crimes (UNTOC) at Palermo in Italy.

What is the United Nations Convention against Transnational Organised Crimes (UNTOC) ?

The United Nations Convention against Transnational Organized Crime was adopted by the UN General Assembly in 2000 and entered into force in 2003.

It is also known as the **Palermo Convention** since it was adopted in Palermo in Italy.

Purpose: The Convention is the first comprehensive and global legally binding instrument to fight transnational organized crime.

States that have ratified UNTOC commit themselves to taking a series of measures to prevent and control transnational organized crime including (i) the criminalizing of the participation in an organized criminal group, of money laundering, related corruption and obstruction of justice and (ii) the adoption of frameworks for extradition, mutual legal assistance and international cooperation.

Protocols: The Convention is further supplemented by three Protocols which target specific areas and manifestations of organized crime: 1) Protocol to Prevent, Suppress and Punish Trafficking in Persons especially Women and Children; the 2) Protocol against the Smuggling of Migrants by

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Land, Sea and Air and 3) Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components and Ammunition.

In 2011, Government of India ratified the UNTOC and its three protocols

Central Bureau of Investigation (CBI) is the nodal agency for all dealings with UNTOC.

11. Umbrella Scheme of “SHREYAS” comprising 4 central sector sub- schemes

Source: The post is based on the article “Umbrella Scheme of “SHREYAS” comprising 4 central sector sub- schemes” published in “PIB” on 4th October 2023

What is the News?

This article talks about the Scholarships for Higher Education for Young Achievers Scheme (SHREYAS).

What is SHREYAS Scheme?

Nodal Ministry: Ministry of Social Justice & Empowerment

Aim: To bridge educational disparities by providing financial support, coaching, and overseas opportunities to SCs and OBCs.

Sub-Schemes: The scheme comprises of four central sector sub-schemes:

Free Coaching Scheme for SCs and OBCs: The objective of the Scheme is to provide coaching of good quality for economically disadvantaged Scheduled Castes (SCs) and Other Backward Classes (OBCs) candidates to enable them appear in competitive and entrance examinations for obtaining appropriate jobs in Public/Private Sector as well as for securing admission in reputed technical and professional higher education institutions.

– **Income ceiling:** The ceiling of the total family income under the scheme is 8 lakhs per annum.

– **Seats allotted:** 3500 slots are allotted per annum. The ratio of SC: OBC students is 70:30 and 30% slots are reserved for females in each category.

– In case of non-availability of adequate number of candidates in SC category the Ministry can relax this ratio. However, in no case, less than 50% SC students shall be permitted.

Top Class Education for SCs: The Scheme aims at recognizing and promoting quality education amongst students belonging to SCs, by providing full financial support.

– **Coverage:** The scheme will cover SC students for pursuing studies beyond 12th class.

– **Income ceiling:** The ceiling of the total family income under the scheme is 8 lakhs per annum.

– **Institutes covered:** Presently, 266 higher education institutes which includes Government institutes and private institutes such as all the IIMs, IITs, NITs and top 100 National Institutional ranking Framework (NIRF) ranking institutes.

– **Financial support:** The scheme will provide tuition fee, academic allowance, and other expenses.

National Overseas Scheme for SCs: It aims to provide financial assistance to the selected students from SCs, De-notified, Nomadic and Semi-Nomadic Tribes, landless agricultural laborers and traditional artisan categories for pursuing masters and Ph.D. level courses abroad.

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Eligibility criteria: The total family income including the candidate should be less than Rs. 8 lakhs per annum.

– Moreover, the candidate should have secured more than 60% marks in the qualifying examination, is below 35 years of age and secured admission in top 500 QS ranking foreign Institutes/ Universities.

National Fellowship for SC Students: Under the scheme, fellowship is provided to Scheduled Castes students for pursuing higher education leading to M.Phil/ Ph.D degrees in Sciences, Humanities and Social Sciences in Indian Universities/Institutions/ Colleges recognized by University Grants Commission (UGC).

– **Eligibility:** Students should have qualified the National Eligibility Test- Junior Research Fellowship (NET-JRF) of UGC and Junior Research Fellows for Science stream qualifying UGC-Council of Scientific and Industrial Research (UGC-CSIR) Joint Test.

– **Seats:** Provides 2000 new slots annually (500 for Science and 1500 for Humanities/Social Sciences).

12. In a 1st, Olive Ridley turtle's 5,000-km migration tracked

Source: The post is based on the article “In a 1st, Olive Ridley turtle's 5,000-km migration tracked” published in “TOI” on 4th October 2023

What is the News?

Wildlife Institute of India, Dehradun and Maharashtra's forest department have conducted a study to understand the offshore movements and migration of Olive Ridley Turtles.

What are Olive Ridley Turtles?



Source: TOI

The Olive Ridley turtles are the smallest and most abundant of all sea turtles found in the world.

Olive ridley gets its name from its olive colored carapace, which is heart-shaped and rounded.

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They are carnivores, and feed mainly on jellyfish, shrimp, snails, crabs, molluscs and a variety of fish and their eggs.

They are found in warm waters of the Pacific, Atlantic and Indian oceans.

These turtles spend their entire lives in the ocean, and migrate thousands of kilometers between feeding and mating grounds in the course of a year.

They are best known for their unique mass nesting called Arribada, where thousands of females come together on the same beach to lay eggs.

Odisha's Gahirmatha Marine Sanctuary is the world's largest known rookery (breeding colony) of the olive Ridley sea turtles.

IUCN Red List: Vulnerable

Wildlife Protection Act, 1972: Schedule 1

CITES: Appendix I

Initiatives: Indian Coast Guard undertakes “**Operation Olivia**” every year. It is an Olive Ridley Turtle protection program.

– **Mandatory use of Turtle Excluder Devices(TEDs):** To reduce the accidental killing in India, the Odisha government has made it mandatory for trawlers to use Turtle Excluder Devices(TEDs). It is a net specially designed with an exit cover that allows the turtles to escape while retaining the catch.

13. Toilet use declining in rural India since 2018-19: WB paper

Source: The post is based on the article “**Toilet use declining in rural India since 2018-19: WB paper**” published in “**The Hindu**” on 4th October 2023

What is the News?

Researchers at the World Bank and a faculty member of economics at Yale University have released a working paper on the progress of the Swachh Bharat Mission-Gramin(SBM-G).

What is Swachh Bharat Mission-Gramin(SBM-G)?

Click Here to read

What are the key findings of the World Bank paper on progress made in Swachh Bharat Mission-Gramin(SBM-G)?

Swachh Bharat Mission-Gramin(SBM-G) has led to a substantial increase in access to own or shared improved toilets in rural India – from 38% in 2012 to 90% in 2019-20.

Most low-income States were among the best performers in terms of their overall increase in regular use of toilets and the performance of richer States was mixed.

A large increase in toilet use was seen in the poorest 20% of the rural population, which reported toilet use going up from 7% to 43% in between 2015-16 and 2019-21.

However, since 2018-19, there has been a clear trend of regular toilet use declining in rural India.

The decline in toilet usage was the largest among the SCs and the STs. For instance, there was a 20 percentage point decline in regular use of toilets for the SCs and a 24 percentage point decline

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for the STs compared to a decline of 9 and 5 percentage points for the Other Backward Caste and General categories.

The states where there has been a sustained decline in regular use of toilets since 2018 were Uttar Pradesh, Gujarat, Chhattisgarh, Telangana, Karnataka, and Himachal Pradesh.

On the other hand, states like Odisha, Punjab, Kerala, Bihar, Uttarakhand, Haryana, and Assam were found to be steady performers in terms of continued toilet usage.

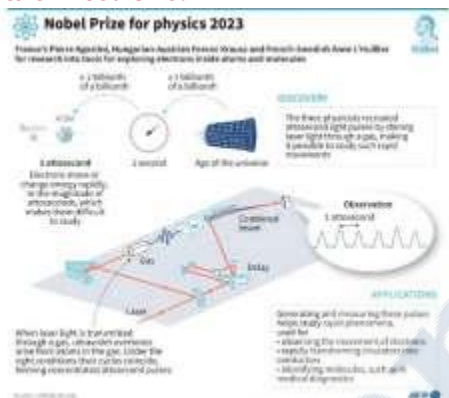
14. Nobel Prize in Physics 2023: What the three scientists have been awarded for

Source: The post is based on the article “Nobel Prize in Physics 2023: What the three scientists have been awarded for” published in “Indian Express” on 3rd October 2023

What is the News?

The Nobel Prize in Physics 2023 has been awarded to Pierre Agostini, Ferenc Krausz and Anne L’Huillier for experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter.

What are Electrons?



Source: AFP

An atom is a tiny unit into which matter can be divided.

Atom is composed of a nucleus of protons and neutrons and electrons that travel around this nucleus. Electrons move so fast that it is impossible to observe them in real time.

Before being able to study them directly, scientists understood the properties of electrons through averages.

Why is it difficult to capture electrons?

Electrons move at a whopping 43 miles a second. This speed has long made them impossible to study. For capturing them, it requires extremely short pulses of light such as attosecond.

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What is attosecond?



An attosecond is an astonishingly short unit of time, equivalent to one quintillionth of a second, or 10 to the power of 18 seconds.

To put this into perspective, if a second were stretched to cover the entire age of the universe, which is approximately 13.8 billion years, an attosecond would be just a fraction of a second.

What did the three Nobel Prize winners in Physics develop?

The three Nobel Prize winners Pierre Agostini, Ferenc Krausz and Anne L'Huillier demonstrated a way to generate attosecond pulses of light that can be used to measure the rapid processes in which electrons move or change energy.

Why is this work important?

Attosecond physics gives us the opportunity to understand mechanisms that are governed by electrons.

One possible application is to study molecular-level changes in blood, to identify diseases.

A better understanding of how electrons move and transmit energy can also help in creating more efficient electronic gadgets.

15. ED must give grounds of arrest in writing to accused: SC

Source: The post is based on the article “ED must give grounds of arrest in writing to accused: SC” published in “Indian Express” on 4th October 2023

What is the News?

The Supreme Court has held that the Enforcement Directorate (ED) should furnish the grounds of arrest to the accused in writing at the time of arrest.

What did the Supreme Court rule on Enforcement Directorate(ED) powers to arrest?

The Supreme Court has ruled that the Enforcement Directorate (ED) must provide a copy of the grounds of arrest to accused in money laundering cases instead of just verbal information.

The court held that it is the constitutional right of a person under Article 22(1) to be informed of the grounds of arrest and that this right can be effectively realized only when the grounds are supplied in a written form.

– **Article 22(1) of the Constitution says**, “No person who is arrested shall be detained in custody without being informed, as soon as may be, of the grounds for such arrest nor shall he be denied the right to consult, and to be defended by, a legal practitioner of his choice”.

The court also said that ED mandated with investigation of the offense of money laundering and violations of foreign exchange laws should not be vindictive in its approach while conducting an investigation.

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Significance of this judgement: This judgment of the Supreme Court is in contrast to a previous SC judgment in 2022 that had held that informing an accused about the grounds of arrest is “sufficient compliance” of the mandate of Article 22(1) of the Constitution.

16. Indian and Bangladesh armies begin Joint Exercise

Source: The post is based on the article “**Indian and Bangladesh armies begin Joint Exercise**” published in “**PIB**” on **4th October 2023**

What is the News?

India and Bangladesh have commenced the 11th edition of annual joint military exercise called Exercise SAMPRITI in Umroi, Meghalaya.

What is Exercise SAMPRITI?

Exercise SAMPRITI is an annual joint military exercise between India and Bangladesh.

The exercise was started in 2009. It is organized alternatively by both countries.

Aim: To share tactical drills and promote best practices in carrying out sub-conventional operations.

What are the other exercises between India and Bangladesh?

Exercise Bongosagar: It is a bilateral maritime exercise between India and Bangladesh. Its first edition was held in 2019.

17. 50 lakh Street Vendors covered under PM SVANidhi Scheme

Source: The post is based on the article “**50 lakh Street Vendors covered under PM SVANidhi Scheme**” published in “**PIB**” on **4th October 2023**

What is the News?

The Prime Minister Street Vendor’s AtmaNirbhar Nidhi (PM SVANidhi) scheme has achieved a significant milestone by extending its support to more than 50 lakh street vendors across the nation.

What is PM SVANidhi Scheme?

Launched in: 2020

Nodal Ministry: Ministry of Housing and Urban Affairs (MoHUA)

Type: Central Sector Scheme

Purpose: It is a micro credit scheme for urban street vendors that aims to provide collateral-free working capital loans up to ₹50,000.

Key Features of the scheme:

- The schemes facilitate collateral free working capital loan upto ₹10,000 of 1 year tenure, with enhanced loan of ₹20,000 and ₹50,000 in the second and third tranches respectively on repayments of earlier loans.
- Incentivizes regular repayment, through interest subsidy @ 7% per annum; and
- Reward digital transactions, by way of cashback upto ₹1,200 per year.
- The scheme employs Aadhaar-based e-KYC, utilizes an end-to-end IT platform, and employs SMS-based notifications for application status updates.

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Banks eligible to give loans: Scheduled Commercial Banks, Regional Rural Banks, Small Finance Banks, Cooperative Banks, Non-Banking Financial Companies, Micro-Finance Institutions and SHG Banks.

18. Countries pledge to raise \$12 billion to protect coral reefs from pollution, overfishing

Source: The post is based on the article “Countries pledge to raise \$12 billion to protect coral reefs from pollution, overfishing” published in “The Print” on 4th October 2023

What is the News?

The International Coral Reef Initiative (ICRI) has launched the Coral Reef Breakthrough in partnership with the Global Fund for Coral Reefs(GFCR) and the High-Level Climate Champions(HLCC).

What is the Coral Reef Breakthrough Initiative?

Launched by: International Coral Reef Initiative (ICRI) in partnership with the Global Fund for Coral Reefs(GFCR) and the High-Level Climate Champions(HLCC).

Aim: To secure the future of at least 125,000 km² of shallow-water tropical coral reefs with investments of at least US\$12 billion to support the resilience of more than half a billion people globally by 2030.

What is the International Coral Reef Initiative(ICRI)?

International Coral Reef Initiative (ICRI) is a global partnership between nations and organizations which strives to preserve coral reefs and related ecosystems around the world.

Founded in: The initiative was founded in 1994 by eight governments: Australia, France, Japan, Jamaica, the Philippines, Sweden, the United Kingdom, and the United States of America.

– It was announced at the First Conference of the Parties of the Convention on Biological Diversity in December 1994, and at the high level segment of the Intersessional Meeting of the U.N. Commission on Sustainable Development in April 1995.

Member countries: 45 Countries.**India is also one of the member countries.**

Secretariat: The ICRI Secretariat is hosted for a determined term (usually two years) by State members, on a voluntary basis.

Significance: The initiative is an informal group whose **decisions are not binding on its members**. But its actions have been pivotal in continuing to highlight globally the importance of coral reefs and related ecosystems to environmental sustainability, food security and social and cultural wellbeing.

19. This newly discovered fish can change its colour like a chameleon

Source: The post is based on the article “This newly discovered fish can change its colour like a chameleon” published in “Down To Earth” on 4th October 2023

What is the News?

Scientists have discovered a new fish species from the Milak river, Nagaland. It has been named as *Badis limaakumi*.

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What is Badis Limaakumi?



Source: Down To Earth

Badis limaakumi is a freshwater fish that belongs to the Badidae family.

The fish is commonly found in streams with slow or moderate water flow, in ditches and stagnant water bodies.

The fish is found in India, Bangladesh, Nepal, Pakistan, Thailand and Myanmar.

This new species of fish differs from other members of its family due to distinctive features, such as a dark opercular blotch at the base of its opercular spine and the absence of spots on its sides and cleithrum.

– **Note:** Fish from the Badis family are also known as chameleon fish for their ability to change colour. This helps them blend with the surroundings when under stress.

20. National Crisis Management Committee (NCMC) reviews situation in Sikkim

Source: The post is based on the article “National Crisis Management Committee (NCMC) reviews situation in Sikkim” published in “PIB” on 5th October 2023

What is the News?

The National Crisis Management Committee (NCMC), under the Chairmanship of Cabinet Secretary has met and reviewed the situation in Sikkim.

What is the National Crisis Management Committee(NCMC)?

NCMC has been constituted in the Cabinet Secretariat. It has been set up for effective coordination and implementation of relief measures and operations in the wake of a natural calamity.

The committee is headed by Cabinet Secretary. It also includes Secretaries of Ministries / Departments and agencies with specific Disaster management responsibilities.

The key functions of the committee include 1) oversee the Command, Control and Coordination of the disaster response and 2) give direction to the Crisis Management Group(CMG) as deemed necessary.

What is Crisis Management Group (CMG)?

Crisis Management Group (CMG) is a group under the Chairmanship of the Central Relief Commissioner comprising the senior officers from the various ministries and other concerned departments.

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Its functions are to 1) review contingency plans formulated by various Ministries 2) review measures required for dealing with a natural disaster and 3) coordinate the activities of the Central Ministries and the State Governments in relation to disaster preparedness and relief.

The CMG meets at least twice a year under the Central Relief Commissioner. In case of disaster, it meets daily or as frequently as the situation demands.

21. Govt. eases aircraft recovery rules

Source: The post is based on the article “Govt. eases aircraft recovery rules” published in “The Hindu” on 5th October 2023

What is the News?

Government has notified that the protection offered to a corporate debtor from recovery of dues under the Insolvency and Bankruptcy Code 2016 will not cover aircraft, helicopters and engines.

This change will make it easier for lessors to recover their planes in case an airline goes bankrupt.

Note: These changes were made after several experts said that earlier rules were in contravention of the **Cape Town Convention** and Protocol of 2001 to which India is also a signatory.

What is the Cape Town Convention?



Source: Livemint

Cape Town Convention on International Interests in Mobile Equipment, or Cape Town Treaty was signed in 2001 and became effective in 2006.

The convention was adopted under the International Civil Aviation Organisation (ICAO) and the International Institute for the Unification of Private Law (UNIDROIT).

The convention aims to solve problems of obtaining certain rights to aviation assets such as aircraft engines, helicopters and airframes, which, by their nature, have no fixed location.

The Convention guarantees the rights of lessors to repossess leased high-value equipment such as aircraft, engines, and helicopters in case of payment defaults.

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22. Let there be light

Source: The post is based on the article “**Let there be light**” published in “**The Hindu**” on **5th October 2023**

What is the News?

The Nobel Prize in Physics 2023 has been awarded to Pierre Agostini, Ferenc Krausz and Anne L’Huillier for experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter.

Why is it difficult to observe electrons?

Electrons, the negatively charged particles within atoms, were not directly observable by scientists initially. Instead, their properties were understood through averages.

Imagine taking a picture of a fast-moving race car. If the camera’s exposure time is long, the image becomes blurry. But with a shorter exposure time, you get a sharper image.

Similarly, electrons move so rapidly that they would appear blurred to a camera without the ability to capture images in attoseconds (10^{-18} seconds).

How did these three scientists make their contributions?

Electron dynamics are incredibly fast, operating on the order of attoseconds, which are a billionth of a billionth of a second.

In comparison, the movement of atoms in molecules can be studied using femtosecond pulses, which are a millionth of a billionth of a second.

By the 1980s, scientists had developed technology to create femtosecond light pulses, but they needed even shorter pulses to “see” electrons.

Anne L’Huillier and her colleagues in France discovered a method in 1987. They passed an infrared laser beam through a noble gas, which generated overtones of light waves with wavelengths that were integer fractions of the original beam’s wavelength.

These overtones of ultraviolet light interacted with each other. When the peaks of two overtones aligned, they created more intense light through constructive interference. Conversely, when a peak aligned with a trough, they canceled each other out through destructive interference.

Researchers realized they could fine-tune this setup to create intense attosecond-long pulses of light through constructive interference.

Pierre Agostini’s group in France successfully produced 250-attosecond light pulses in 2001, and Ferenc Krausz’s team in Austria isolated individual 650-attosecond pulses. These attosecond pulses enabled rapid experiments and measurements of electron behavior in atoms.

23. New defence indigenisation list has futuristic weapons, systems

Source: The post is based on the article “**New defence indigenisation list has futuristic weapons, systems**” published in “**The Hindu**” on **5th October 2023**

What is the News?

The Defence Minister has released the fifth Positive Indigenisation List of 98 items during the plenary session of ‘Swavlamban 2.0’.

What is Swavlamban 2.0?

[Click Here to read](#)

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What is a Positive Indigenisation List(PIL)?

The concept of the positive indigenization list entails that the Indian Armed Forces, comprising the Army, Navy, and Air Force, will exclusively source the listed items from domestic manufacturers.

These manufacturers may include entities from the private sector or Defense Public Sector Undertakings (DPSUs).

The fifth Positive Indigenisation List follows four previous PILs that were published in 2021 and 2022.

What does the fifth Positive Indigenisation List contain?

The fifth Positive Indigenisation List of the Department of Military Affairs (DMA) comprises 98 items which includes highly complex systems, sensors, weapons and ammunition.

All these items will be procured from indigenous sources as per provisions given in Defence Acquisition Procedure (DAP) 2020 in a staggered timeline.

What are the other initiatives launched at Swavlamban 2.0?

76 challenges for the industry under the 10th **Defence India Start-up Challenges (DISC-10)**

INDUS X challenges

SBI NAVeCash Card: It is a one-of-its-kind dual-chip debit card developed by the State Bank of India (SBI) and the Indian Navy.

- The card can be used in online mode (as a regular debit card) as well as in offline mode while at sea with no direct connectivity with the bank.
- The card has been developed and tested onboard various Indian Naval ships and is now ready for launch pan-Navy.

24. Government of India notifies establishment of National Turmeric Board

Source: The post is based on the article “**Government of India notifies establishment of National Turmeric Board**” published in “**PIB**” on **5th October 2023**

What is the News?

The Government of India has notified the constitution of the National Turmeric Board.

What is the National Turmeric Board?

Aim: To focus on the development and growth of turmeric and turmeric products in the country.

Objectives of the Board:

- To work closely with other government agencies, especially the Spices Board, to enhance the growth of the turmeric sector.
- Increasing awareness and consumption of turmeric, both domestically and internationally, by highlighting its health benefits.
- Exploring new markets worldwide to boost turmeric exports.
- Supporting research and development for innovative turmeric products.
- Focusing on the skill development of turmeric growers to add more value to their produce.
- Promoting quality and food safety standards.

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– Ensuring the well-being and prosperity of turmeric growers by enhancing their income through value addition.

Composition: The Board shall have a Chairperson to be appointed by the Central Government.

– It will have members from the Ministry of AYUSH, Departments of Pharmaceuticals, Agriculture & Farmers Welfare, Commerce & Industry of the Union Government, senior State Government representatives from three states (on rotation basis), select national/state institutions involved in research, representatives of turmeric farmers and exporters.

– The board will also have a Secretary to be appointed by the Department of Commerce.

What is the status of the Turmeric Industry of India?

India is the largest producer, consumer and exporter of turmeric in the world. More than 30 varieties of Turmeric are grown in India and it is grown in over 20 states in the country.

The largest producing states of Turmeric are Maharashtra, Telangana, Karnataka and Tamil Nadu.

India has more than 62% share of world trade in turmeric. The leading export markets for Indian Turmeric are Bangladesh, UAE, USA and Malaysia.

25. National Investment and Infrastructure Fund (NIIF) launches \$600 million India-Japan Fund (IJF) with Government of India and Japan Bank for International Cooperation (JBIC) as anchor investors

Source: The post is based on the article “National Investment and Infrastructure Fund (NIIF) launches \$600 million India-Japan Fund (IJF) with Government of India and Japan Bank for International Cooperation (JBIC) as anchor investors” published in “PIB” on 5th October 2023

What is the News?

The National Investment and Infrastructure Fund (NIIF) has entered into a collaboration with the Japan Bank for International Cooperation (JBIC) to launch a \$600 million India-Japan Fund (IJF).

What is India-Japan Fund (IJF)?

Launched by: National Investment and Infrastructure Fund (NIIF) in collaboration with the Japan Bank for International Cooperation (JBIC)

This fund is **NIIF's first bi-lateral fund.**

Purpose: The Fund will focus on investing in environmental sustainability and low carbon emission strategies and aims to play the role of being a ‘partner of choice’ to further enhance Japanese investments into India.

Contribution: Government of India (GoI) will contribute 49% of the target corpus and the remaining 51% will be contributed by JBIC.

Managed by: NIIF Limited (NIIFL) and JBIC IG (a subsidiary of JBIC)

Significance: This fund signals a key dimension of collaboration between the two countries in an area that is a shared priority viz. climate and environment.

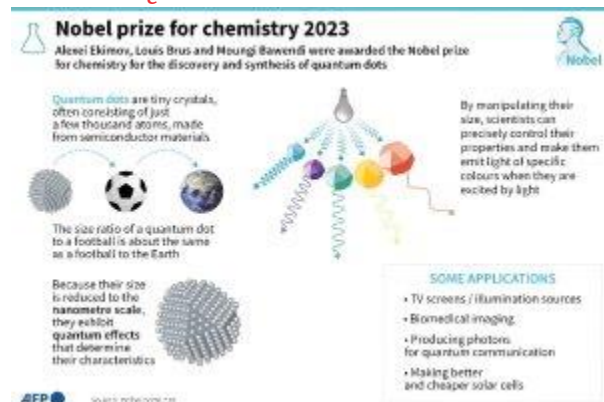
26. 2023 Nobel Prize in Chemistry: Three share prize for discovery of quantum dots, now used in LEDs

Source: The post is based on the article “2023 Nobel Prize in Chemistry: Three share prize for discovery of quantum dots, now used in LEDs” published in “The Hindu” on 5th October 2023

What is the News?

The 2023 Nobel Prize in chemistry was awarded to Moungi G. Bawendi, Louis E. Brus and Alexei I. Ekimov for the discovery and synthesis of quantum dots.

What are Quantum Dots?



Quantum dots are particles that are a few nanometres wide. They exhibit unique optical properties due to their small physical size.

Their structure and atomic composition are the same as bulk materials, but the properties of the latter don't depend on their size. In fact, the properties of quantum dots can be changed by changing their size.

What are the applications of Quantum Dots?

Display Enhancement: Quantum dots make computer monitors and TV screens more colorful and brighter. Blue LEDs behind the screen excite these dots, causing them to emit light of different colours. Combining these colours gives rise to even more colours as well as brightness.

Biological Tissue Mapping: Tiny quantum dots are used by biochemists to map biological tissues at a very small scale.

Solar Energy: Quantum dots improve the efficiency of solar panels by helping them absorb and convert sunlight into electricity.

Cancer Treatment: Quantum dots play a role in targeted drug delivery for certain cancer treatments and have broader applications in nanomedicine.

Anti-Counterfeiting: Quantum dots can be used as security markers on currency and documents to prevent counterfeiting.

Fluorescent Tagging: In general, quantum dots serve as bright fluorescent markers for tagging and tracking various objects.

Quantum Computing: Quantum dots are explored as potential qubits or quantum bits for use in quantum computing due to their quantum mechanical properties.

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27. Govt issues guidelines to prevent suicide among students

Source: The post is based on the article “Govt issues guidelines to prevent suicide among students” published in “Indian Express” on 5th October 2023

What is the News?

The Union Ministry of Education has released draft guidelines to prevent student suicides in schools.

These guidelines are titled UMMEED (Understand, Motivate, Manage, Empathise, Empower, Develop).

What is these draft guidelines to prevent student suicides in schools?

The guidelines aim to serve as directions to schools for enhancing sensitivity, understanding, and providing support in case of reported self-harm.

The guidelines emphasize the belief that “Every Child Matters” and are developed with the goal of preventing student suicides.

They recognize that students facing personal and social challenges may experience sadness, frustration, mood swings, hopelessness, and, in severe cases, engage in self-harm or suicide.

Key Features of these guidelines:

Firstly, it suggests the formation of a School Wellness Team (SwT) led by the school principal. These teams should be trained to handle crisis situations and respond immediately when a student shows signs of self-harm.

Secondly, it recommends an orientation a year for teachers and family members, to help build awareness around student suicides. These orientations will be conducted by the schools for the capacity-building of various stakeholders.

Thirdly, the guidelines outline actions that individuals at the school, or members of the wellness team, should take when they encounter a student displaying warning signs or attempting self-harm.

Fourthly, it has also asked schools to de-stigmatize mental health concerns such as anxiety, depression, suicide, substance abuse through storytelling, rallies, posters, exhibitions and other activities.

Fifthly, the guidelines have also proposed some smaller and immediate changes such as locking all empty classrooms and not having any dark corridors or areas in schools.

28. GI tags for Basohli Pashmina, Udhampur’s Kalari

Source: The post is based on the article “GI tags for Basohli Pashmina, Udhampur’s Kalari” published in “Hindustan Times” on 6th October 2023

What is the News?

Basohli Pashmina and Kalari cuisine from Jammu and Kashmir has got the Geographical Indication(GI) tag.

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What is Basohli Pashmina?



Source: KashmirObserver

Basohli Pashmina is a more than 100-year-old traditional craft from Jammu and Kashmir's Kathua district.

It is a hand-spun product known for extreme softness, fineness and light-weight.

Granting it a GI tag would not only protect the exceptional craftsmanship of these artisans but also preserve its uniqueness.

Note: [Pashmina Shawl](#) is a fine wool made from the undercoat of the Changthangi or Pashmina goat.

What is Kalari?

Kalari is a Dogra cuisine. The dish finds its origin in Udhampur district, J&K.

The dish is made from milk and is a dense cheese. It's cooked in its own fat, salted, and served hot with bun slices.

29. [Glacial lake outburst flood kills 14 in Sikkim, 102 people missing: What is GLOF, and why does it happen?](#)

Source: The post is based on the article "[Glacial lake outburst flood kills 14 in Sikkim, 102 people missing: What is GLOF, and why does it happen?](#)" published in "[The Indian Express](#)" on 6th October 2023

What is the News?

Fourteen people have died and 102 people are missing in Sikkim after the burst of the **South Lhonak Lake (a glacial lake)** due to heavy rains.

What is Glacial Lake outburst flood(GLOF)?

[Click Here to read](#)

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Where is South Lhonak Lake?



South Lhonak Lake is a glacial-moraine-dammed lake, located in Sikkim's far northwestern region.

It was formed due to the melting of the Lhonak glacier.

It is one of the fastest expanding lakes in the Sikkim Himalaya region, and one of the 14 potentially dangerous lakes susceptible to Glacial lake outburst flood(GLOFs).

It plays a role in the hydrological cycle, releasing water downstream, ultimately benefiting the Teesta River basin.

Where is Chungthang Dam?

Chungthang Dam, also known as the Chungthang Hydroelectric Project, is a dam and hydroelectric power station located in Chungthang, a town in Sikkim.

It is an integral part of the 1200 MW mega Teesta Stage III Hydro Electric Project, a major source of electricity for Sikkim and West Bengal.

It is a run-of-the-river hydroelectric project, which was commissioned in 2017.

What happened in Sikkim?

South Lhonak Lake, a glacial lake in the upper reaches of Sikkim, burst its banks following a cloudburst in the area.

The lake burst resulted in a sudden rise in the water level of the Teesta River and a flash flood.

This further led to the breach of the Chungthang Hydro-Dam in Sikkim causing parts of it to give way.

These all led to massive flooding downstream.

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30. 11th Meeting of the India-UAE High Level Joint Task Force on Investments

Source: The post is based on the article “11th Meeting of the India-UAE High Level Joint Task Force on Investments” published in “PIB” on 6th October 2023

What is the News?

The Eleventh meeting of the UAE-India High Level Joint Task Force on Investments (‘the Joint Task Force’) was held in Abu Dhabi.

What is the UAE-India High Level Joint Task Force on Investments?

The UAE-India High Level Joint Task Force on Investments was established in 2013.

Aim: To promote trade, investment and economic ties between India and the UAE. The Task Force has provided an effective mechanism for discussion on opportunities & prospects for investments in both countries as well as resolution of issues faced by investors of the two countries.

What are the key highlights from the 11th meeting of the UAE-India Joint Task Force on Investments?

Reviewed the implementation of CEPA: The two countries reviewed the progress made on the implementation of the Comprehensive Economic Partnership Agreement (CEPA) between the UAE and India, which came into force in May 2022.

- The CEPA has helped reduce tariffs on more than 80 percent of product lines, eliminate barriers to trade and create new pathways for investment and joint ventures.
- In the first 12 months of the CEPA, bilateral non-oil trade reached US\$50.5 billion representing a growth of 5.8% compared to the corresponding period a year earlier.
- The two countries are now fast moving towards the target of US\$100 billion non-oil trade by 2030.

India-UAE Start-Up Bridge: It is a joint initiative between the UAE Ministry of Economy and India’s Ministry of Commerce and Industry.

– The bridge is expected to act as a one-stop platform that offers training sessions and knowledge-sharing on important topics such as market access, investment funds, venture capital, incubators and the respective business landscape in each country.

Discussed the establishment of Abu Dhabi – India Virtual Trade Corridor: The corridor aims to increase overall trade volumes by developing data exchange systems to facilitate paperless trade between the two countries, improving efficiencies and security.

31. Norway’s Jon Fosse wins Nobel for literature

Source: The post is based on the article “Norway’s Jon Fosse wins Nobel for literature” published in “The Hindu” on 6th October 2023

What is the News?

The Nobel Prize for Literature 2023 has been awarded to Norwegian author Jon Olav Fosse for his innovative plays and prose which give voice to the unsayable.

Who is Jon Fosse?

Jon Fosse was born in 1959 in the Norwegian coastal town of Haugesund. He is considered as one of the most important contemporary European writers.

He published his first novel, *Red, Black* in 1983. He has since published numerous novels, stories, books of poetry, essay collections and even children’s books.

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His work “A New Name: Septology VI-VII” was a finalist for the International Booker Prize in 2022. Other notable works by Fosse include I Am the Wind, Melancholy, Boathouse and The Dead Dogs.

His themes explore the absurdity, the futility and yet the power of the human condition; everyday confusions and irresolutions and the difficulty to form actual connections.

Why is Jon Fosse not very popular in the English-speaking world?

Fosse has been celebrated in Europe for a long time, but he is not that popular in the United Kingdom and that has impacted his visibility in the rest of the English-speaking world like in India.

It has been said that the UK and the US find his themes difficult to relate to and his plays difficult to connect with.

32. RuPay Domestic Card Scheme Agreement between India and the UAE

Source: The post is based on the article “**RuPay Domestic Card Scheme Agreement between India and the UAE**” published in “**PIB**” on **6th October 2023**

What is the News?

NPCI International Payments Limited (NIPL), a subsidiary of the National Payments Corporation of India (NPCI) has signed an agreement with Al Etihad Payments (AEP), an indirect subsidiary of the Central Bank of UAE.

What is the purpose of the agreement signed between NIPL and UAE?

As per the agreement, NIPL and AEP will work together to build, implement and operationalize UAE's national Domestic Card Scheme (DCS).

The DCS will aim to facilitate the growth of e-commerce and digital transactions in the UAE, bolster financial inclusion, support UAE's digitization agenda, reduce the cost of payments and enhance UAE's competitiveness and position as a global payments leader.

The services that will be offered by NIPL consists of a RuPay stack and value-added services like fraud monitoring services and analytics. NIPL will also assist AEP in formulating the operating regulations for their domestic card scheme.

What is RuPay?

RuPay is an indigenous, highly secure, and widely accepted card payment network in India. RuPay cards have debit, credit, and prepaid propositions.

More than 750 Million RuPay cards are in circulation as of date. RuPay cards make up more than 60% of total cards issued in India, with every second Indian having a RuPay card now.

These cards are issued through the entire banking spectrum, including public sector, private, and small banks.

What is the significance of India's Digital Public Infrastructure (DPI)?

India's Digital Public Infrastructure (DPI) framework consisting of digital identity, digital payments and digital data exchange layers has played a crucial role in revolutionizing the payment industry.

This infrastructure has provided nearly every Indian adult with access to banking services, remote authentication through Aadhar, and affordable mobile internet connectivity.

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As a result, India has become the world's third-largest fintech ecosystem, with significant growth in digital transactions and a customer base exceeding 340 million

33. Cable Television Networks (Regulation) Act, 1995 decriminalized

Source: The post is based on the article **“Cable Television Networks (Regulation) Act, 1995 decriminalized”** published in **“PIB” on 6th October 2023**

What is the News?

The Ministry of Information and Broadcasting has notified amendments in the Cable Television Networks Rules, 1994.

These amendments operationalize the implementation of the decriminalized provisions of the Cable Television Networks (Regulation) Act, 1995.

What is the Cable Television Networks (Regulation) Act, 1995?

Cable Television Networks (Regulation) Act, 1995 is an act to regulate the operation of cable television networks in the country and for matters connected

Section 16 of the Act dealt with the punishment for contraventions under any of its provisions.

This section had provision for imprisonment which might extend up to 2 years, in case of first instance, and 5 years for every subsequent offence.

What are the changes made to the Cable Television Networks (Regulation) Act, 1995?

Cable Television Networks (Regulation) Act, 1995 has now been decriminalized through the Jan Vishwas (Amendment of Provision) Act, 2023.

The imprisonment provisions have been now replaced with monetary penalty and other non-monetary measures like Advisory, Warning and Censure.

These measures will be enforced through the “designated officer”. Moreover, Section 16 now introduces an appeal mechanism against the order made by designated officers.

What are the benefits of decriminalization of provisions under the Cable Television Networks (Regulation) Act, 1995?

It promotes compliance by focusing on education and offering a range of penalties like advisory, censure and warnings.

The appointment of a “designated officer” simplifies enforcement, reducing the burden on the criminal justice system.

An appeal mechanism ensures fairness and transparency, and definitions for industry terms enhance consistency.

34. First public sector caravan park in Kerala to bring in more tourists to Bekal Fort

Source: The post is based on the article **“First public sector caravan park in Kerala to bring in more tourists to Bekal Fort”** published in **“The Hindu” on 6th October 2023**

What is the News?

The Kerala Tourism Development Corporation (KTDC) will develop the caravan park and camp shelter at Bekal Fort.

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What is Bekal Fort?

Bekal Fort is located in Kasargod district, Kerala. It is the largest fort in Kerala.

It was built in the 17th century by Shivappa Nayaka of the Keladi dynasty.

The fort has seen rise and fall of several dynasties and later came under the control of the Kingdom of Mysore.

Structure: The fort appears to emerge from the sea. Almost three-quarters of its exterior is in contact with water.

- An important feature of the fort is the water-tank and the flight of steps leading to an observation tower built by Tipu Sultan.
- The fort's zigzag entrance and surrounding trenches reveal its defensive strategy. Holes on the outer walls are designed to defend the fort effectively from naval attacks. The upper holes are meant for aiming at the farthest targets; lower holes below for striking an enemy nearer and the lowest holes to attacking enemy closest to the fort.
- The fort's solid construction resembles the Thalassery Fort and the St. Angelo Fort at Kannur built by the Dutch.

35. Over 1.36 crore school students from across the country participate in Veer Gatha Project 3.0

Source: The post is based on the article “Over 1.36 crore school students from across the country participate in Veer Gatha Project 3.0” published in “PIB” on 6th October 2023

What is the News?

More than 1.36 crore school students from all 36 States and UTs participated enthusiastically in the 3rd edition of the Veer Gatha Project.

What is Project Veer Gatha?

Project Veer Gatha was initiated under the Gallantry Awards Portal (GAP) in 2021.

Aim: To disseminate the details of acts of bravery of the Gallantry Awardees and the life stories of these brave hearts among the students so as to raise the spirit of patriotism and instill amongst them values of civic consciousness.

The project deepened this noble aim by providing a platform to the school students to do creative projects/activities based on gallantry award winners.

- As part of this, the students framed different projects through various media like art, poems, essays and multimedia on these gallantry award winners and best projects were awarded at national level by the Ministry of Defence and the Ministry of Education.

Two editions of the Veer Gatha Project (i.e. Edition-I and Edition-II) have been conducted in 2021 and 2022 respectively.

The third edition of Project Veer Gatha is now being organized by the **Ministry of Defence (MoD)** in collaboration with the **Ministry of Education (MoE)**.

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36. India expanding censorship regime, creating uneven playing field: study

Source: The post is based on the article “India expanding censorship regime, creating uneven playing field: study” published in “The Hindu” on 6th October 2023

What is the News?

Freedom House, a Washington-based non-profit organization has released a report titled “Freedom on the Net 2023: The Repressive Power of Artificial Intelligence”.

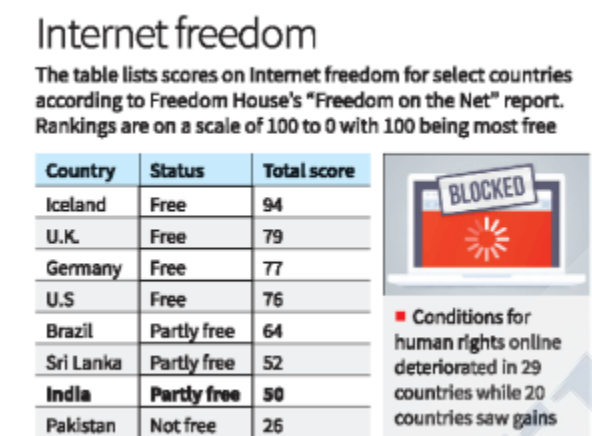
What is the Freedom on the Net report?

Freedom on the Net is an annual study of human rights in the digital sphere.

The report assesses internet freedom in 70 countries, accounting for almost 89 percent of the world’s internet users.

This report covered developments between June 2022 and May 2023.

What are the key findings of the Freedom on the Net report?



Source: The Hindu

Global Internet Freedom Decline: Internet freedom has declined globally for the 13th consecutive year. Out of 70 countries assessed, 29 have witnessed a deterioration in online human rights, while only 20 have shown improvements.

Worst country for Internet Freedom: China was ranked as the world’s worst environment for Internet freedom for the ninth consecutive year. Myanmar emerged as the world’s second most repressive country for online freedom.

– Iran also experienced a significant increase in digital repression, including Internet shutdowns and social media blockages during anti-government protests.

Legal Consequences for Online Expression: A record 55 countries saw individuals facing legal repercussions for online expression.

– The number of countries imposing arrests and long prison terms for online activities has risen from 18 in 2014 to 31 in 2023.

Elections as Triggers: Elections often serve as triggers for digital repression. Incumbent leaders frequently criminalize speech, block independent news sites, and control information to influence election outcomes.

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What are the key findings of the report related to India?

India's Censorship measures: India has incorporated censorship including the use of automated systems, into the country's legal framework.

– The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules require large social media platforms to use AI-based moderation tools for broadly defined types of content — such as speech that could undermine public order, decency, morality, or the country's sovereignty, integrity, and security, or content that officials had previously ordered removed.

Censorship methods adopted by India: The report evaluates countries on five censorship methods — Internet connectivity restrictions, blocks on social media platforms, blocks on websites, blocks on VPNs, and forced removal of content.

– India engaged in all forms of censorship methods except one (VPN blocking).

Digital Freedom score: India received a score of 50 on a scale of 1 to 100 for Digital freedom where '100' represented highest digital freedom. Iceland had the highest Internet freedom with a score of 94.

37. Sarakka Central Tribal University approved for Telangana: The figures of Sammakka-Sarakka, their significance

Source: The post is based on the article “Sarakka Central Tribal University approved for Telangana: The figures of Sammakka-Sarakka, their significance” published in “Indian Express” on 7th October 2023

What is the News?

The Union Cabinet has approved the Sarakka Central Tribal University which will come up in Mulugu district, Telangana.

Why has Sarakka Central Tribal University been approved for Telangana?

The Tribal University was a commitment made by the Central government as a part of the Andhra Pradesh Reorganisation Act, 2014.

The Act led to the split of the erstwhile state of Andhra Pradesh into Telangana and the residuary Andhra Pradesh state, as an outcome of the Telangana movement.

Under the Act, both Andhra Pradesh and Telangana would get support to establish a tribal university each.

Who was Sammakka and Sarakka?

Sammakka is said to have been married to Pagididda Raju, a feudal chief of the Kakatiyas (a Deccan dynasty) who ruled the Warangal area.

She had two daughters and one son – Sarakka or Saralamma, Nagulamma and Jampanna, respectively.

In the 13th-century, in a battle against the local rulers in protest against the imposition of taxes, Saralamma died while Sammakka disappeared into the hills.

The local (Koya) tribals believed that she (Sammakka) metamorphosed into a vermilion casket.

What is Sammakka Saralamma Jatara?

Sammakka Saralamma Jatara is a tribal festival celebrated in the state of Telangana. The Jatra begins at Medaram in Mulugu district.

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The festival commemorates the battle of the mother-daughter duo against the imposition of taxes on the Koya people.

Over the period, the festival has assumed so much importance that it is believed that after Kumbh Mela, the Sammakka Saralamma Jatara attracts the largest number of devotees in the country.

The Samakka-Sarakka Jatara was also declared as a state festival in 1996.

The festival also sees regular participation by the Ministry of Tribal Affairs, as much as by the state government of Telangana.

38. Arunachal Yak churpi gets GI tag, to boost conservation

Source: The post is based on the article “Arunachal Yak churpi gets GI tag, to boost conservation” published in “Deccan Herald” on 7th October 2023

What is the News?

Yak Churpi of Arunachal Pradesh has been given recognition with a Geographical Indication (GI).

What is Yak Churpi?



Yak Churpi is a naturally fermented milk product prepared from the milk of Arunachalee yak.

It is an excellent source of proteins and is frequently used as a substitute for vegetables by tribal yak herders in the vegetation-starved cold and hilly mountainous regions of the state.

It is also considered an integral part of the tangible cultural and tribal heritage of this Himalayan state.

What is Arunachalee yak?

Arunachalee yak is a unique yak breed found in West Kameng and Tawang districts of Arunachal Pradesh.

This breed is reared by tribal yak pastoralists known as Brokpas who migrate along with their yaks to higher reaches up to 10,000 ft altitude and higher during summers and descent to mid-altitude mountainous regions during winters.

What is Himalayan Yak?

[Click Here to read](#)

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39. Nobel Prize for Peace: Who is Narges Mohammadi, the Iranian woman awarded this year?

Source: The post is based on the article “Nobel Prize for Peace: Who is Narges Mohammadi, the Iranian woman awarded this year?” published in “Indian Express” on 7th October 2023

What is the News?

The Norwegian Nobel Committee has awarded Iranian activist Narges Mohammadi the 2023 Nobel Prize for Peace.

She has been awarded for her fight against the oppression of women in Iran and her fight to promote human rights and freedom for all.

Who is Narges Mohammadi?

Narges Mohammadi is an Iranian human rights activist and scientist.

She is the vice president of the Defenders of Human Rights Center (DHRC), headed by fellow Nobel Peace Prize laureate Shirin Ebadi.

Arrest: In 2011, she was arrested for the first time and sentenced to many years of imprisonment for her efforts to assist incarcerated activists and their families.

– After securing a bail in 2013, she campaigned against the use of the death penalty. She was again arrested in 2015 and was sentenced to additional years

Writings: Over the years she has written many articles arguing for social reforms in Iran and published an essay collection, ‘The Reforms, the Strategy, and the Tactics’.

– Her book ‘White Torture: Interviews with Iranian Women Prisoners’ also won an award for reportage at the International Film Festival and Human Rights’ Forum.

Recognition: She has received various awards over the years — from the Alexander Langer Award in 2009 to the UNESCO/Guillermo Cano World Press Freedom Prize and the Olof Palme Prize earlier in 2023.

In 2022, she was featured in the BBC’s list of 100 inspiring and influential women from around the world.

Significance: She is the 19th woman to ever win the Nobel Peace Prize and the second Iranian woman to win the award – after human rights activist Shirin Ebadi in 2003.

– It is also the fifth time in the 122-year history of the awards that the peace prize has been given to someone who is in prison or under house arrest.

40. REC launches ‘SUGAM REC’, a mobile app for 54EC Bonds Investors

Source: The post is based on the article “REC launches ‘SUGAM REC’, a mobile app for 54EC Bonds Investors” published in “PIB” on 7th October 2023

What is the News?

REC Limited, a Maharatna Central Public Sector Enterprise (CPSE) under the Ministry of Power has launched a mobile application named SUGAM REC.

What is SUGAM REC?

SUGAM REC is a mobile application exclusively for current and future investors in REC’s 54EC Capital Gain Tax Exemption Bonds.

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It will offer investors complete details of their investment in REC 54EC Bonds.

Investors will be able to download their e-bond certificates, apply for fresh investment, and also connect with REC's Investor Cell.

What are Section 54EC Bonds?

Section 54EC Bonds are a type of fixed income financial instruments which provide tax exemption under capital gains to investors, under Section 54EC of the Income Tax Act.

What is REC Limited?

REC Limited is a Government of India Enterprise. It is also a listed Maharatna Company under Ministry of Power.

It was incorporated in 1969 under the companies act 1956. It is a Systemically Important NBFC registered with RBI.

It is mandated to provide financial assistance to state electricity boards, state governments, central/state power utilities, independent power producers, rural electric cooperatives and private sector utilities.

REC's funding illuminates every fourth bulb in India.

41. Alternative fuel vehicles may get subsidy thrust

Source: The post is based on the article **"Alternative fuel vehicles may get subsidy thrust"** published in **"Business Standard" on 7th October 2023**

What is the News?

Government of India has initiated work on the third phase of the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME-III).

It is planning to incorporate vehicles powered by alternative sources such as hydrogen and biofuels in the FAME-III.

What is Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME) Scheme?

The FAME India Scheme is being implemented by the Ministry of Heavy Industries.

The main objective of the scheme is to encourage Faster adoption of Electric and hybrid vehicles by way of offering upfront Incentive on purchase of Electric vehicles and also by way of establishing a necessary charging Infrastructure for electric vehicles.

Currently, the government provides subsidies under the FAME scheme for battery electric vehicles (BEVs) and strong hybrids.

The initial two phases of the FAME scheme played a significant role in promoting the growth of electric vehicles (EVs) within the country, helping to achieve a 6 per cent market share for EVs.

Till date, the scheme has provided support to more than 1 million vehicles.

What are the plans for the third phase of the FAME Scheme?

The Government of India is planning to incorporate vehicles powered by alternative sources such as hydrogen and biofuels in the third phase of FAME.

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The objective behind this is to shift away from conventional polluting vehicles and the incentive for alternative fuels aims to encourage the transition from internal combustion engine (ICE) to cleaner technology.

Moreover, similar to the current phase, incentives will be extended to vehicles sold in all categories including two-wheelers, three-wheelers, four-wheelers, and buses. The proposal also includes adding trucks to the list of vehicles.

42. Here's why ex-servicemen are against the entitlement rules for award of disability compensation for military personnel

Source: The post is based on the article “Here's why ex-servicemen are against the entitlement rules for award of disability compensation for military personnel” published in “Indian Express” on 7th October 2023

What is the News?

Government has announced several changes in the disability pension rules of the armed forces.

The new guidelines are called “Entitlement Rules of Casualty Pension and Disability Compensation Award to Armed Forces Personnel 2023”.

The new guidelines will be applicable to personnel who retire after September 21, 2023.

However, the All India Ex-Servicemen Welfare Association has reportedly objected to the changes.

What are the key concerns raised by ex-servicemen related to the new disability pension rules of the armed forces?

Removal of ‘Benefit of Doubt’ Clause: The most important existing rule was that military personnel shall not be called upon to prove their entitlement and the ‘benefit of reasonable doubt’ will be given to the claimant. This rule has now been abrogated in the new rules.

Positive Presumption Clause Abrogated: The new rules state that the mere manifestation of a disease during military service does not mean it's attributable to service, which is contrary to the previous rules and global military practices.

Changes attributable to ‘military service rule’: In new rules, it has been stated that diseases will only be considered attributable to service in case they occur in active operations, high altitude, extreme physical exertion etc.

– In the earlier rules, the place of deployment was not a condition for the grant of benefits.

Changes in Service Conditions: The new rules provide that heart diseases etc would only be treated as connected with service in case the same occurs after a service of more than three months in active operations, high altitude areas and extreme physical exertion for more than 72 hours continuously.

– The earlier rules simply stated that such disabilities are all affected by stress and strain of military service.

Changes in ‘aggravation by service’: In new rules, aggravation by service has been linked to only extreme climatic conditions, field operations, high altitude etc.

– The old rule provided that in case of worsening of any disability persisting at the time of discharge, the disability would be treated as aggravated by service thereby resulting in grant of disability pension.

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Diseases Removed from List: Under the old rules, all cancers except those caused by smoking were deemed to be aggravated by service in case of worsening during military service. But now all cancers have been taken out of the list and only those caused by radiation or exposure to chemicals during service will be included in the attributable list.

– Moreover, all types of diabetes have also been excluded from the attributable/aggravation list.

Impairment Relief Clause: The definition of Disability Pension/Disability Element of Pension for those who retire on superannuation or are discharged from service or discharged voluntarily has been changed to 'Impairment Relief' so that it is taken out of the tax exemption regime wherein 'disability element and service element of disability pension' are exempted from Income Tax.

– A similar step has been taken for the war injury element/pension by changing its name to "War Injury Relief".

Psychiatric Disorders Clause: The new rules link psychiatric/ behavioral disorders with only combat areas, three-month continuous service in high altitude etc as if military service or being away from family or inability to cope with domestic issues due to military service has no link with psychiatric disorders.

43. MGNREGS runs out of funds; Ministry seeks more budget

Source: The post is based on the article "**MGNREGS runs out of funds; Ministry seeks more budget**" published in "**The Hindu**" on 7th October 2023

What is the News?

The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is facing a deficit of around Rs 6,000 crore.

To address this deficit, the Ministry of Rural Development (MoRD) has requested a supplementary budget of ₹23,000 crore from the Finance Ministry.

What is MGNREGA?

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was passed in 2005 and aimed at enhancing the livelihood security of households in rural areas.

Under it, the MGNREGS is a demand-driven scheme that guarantees 100 days of unskilled work per year for every rural household that wants it, covering all districts in the country except those with a 100% urban population.

There are currently 15.51 crore active workers enrolled under the scheme. The types of projects undertaken for employment generation under MGNREGA include those related to water conservation, land development, construction, agriculture and allied works.

Under the scheme, if work is not provided within 15 days from when it is demanded, the worker has to be given a daily unemployment allowance.

What are the challenges in the MGNREGA implementation?

Low Budget allocation: For the fiscal year 2023-24, MGNREGA was allocated ₹60,000 crore which is 18% less than the budget estimates of ₹73,000 crore and 33% less than the revised estimates of ₹89,000 crore for the previous fiscal year 2022-23.

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Low Employment Completion: MGNREGA guarantees 100 days of employment per household per year. But data shows since 2016-17, on average, less than 10% of the households completed 100 days of wage employment.

Delayed Wage Payments: Delays in paying wages to MGNREGA workers continue to be a problem.

Minimum Wage Rate Issue: The minimum wage rate for MGNREGA is calculated based on the Consumer Price Index-Agricultural Laborers, which differs from the work done by MGNREGA workers.

– Activists have suggested a switch to the Consumer Price Index-Rural, which accounts for recent trends and higher expenditure on education and medical care.

Corruption and Fraud: Challenges include fake job cards, widespread corruption, late uploading of muster rolls, and inconsistent payment of unemployment allowances, as pointed out by the Parliamentary Committee.

44. India Re-elected as President of Asia-Pacific Institute for Broadcasting Development (AIBD) for a Third Successive Term

Source: The post is based on the article “India Re-elected as President of Asia-Pacific Institute for Broadcasting Development (AIBD) for a Third Successive Term” published in “PIB” on 7th October 2023

What is the News?

India has been re-elected as the President of Asia-Pacific Institute for Broadcasting Development (AIBD) for a Third Successive Term.

What is the Asia-Pacific Institute for Broadcasting Development(AIBD)?

AIBD was established in 1977 under the auspices of the United Nations Educational, Scientific and Cultural Organization(UNESCO).

Purpose: It is a unique regional intergovernmental organization servicing countries of the United Nations Economic and Social Commission for Asia and the Pacific(UN-ESCAP) in the field of electronic media development.

Mandate: To achieve a vibrant and cohesive electronic media environment in the Asia-Pacific region through policy and resource development.

Members: It currently has 92 member organizations from across 44 countries. This includes 26 Government Members (countries) represented by 48 broadcasting authorities and broadcasters and 44 Affiliates (organizations) represented by 28 countries.

Secretariat: Kuala Lumpur, Malaysia.

India: India is one of the founding members of AIBD. Prasar Bharati, India’s public service broadcaster is the representative body of the Ministry of Information & Broadcasting at AIBD.

45. Two out of five amphibians are facing extinction threat due to climate change: study

Source: The post is based on the article “Two out of five amphibians are facing extinction threat due to climate change: study” published in “The Hindu” on 7th October 2023

Factly Compilation for the Month of October, 2023

What is the News?

A study titled 'Ongoing declines for the world's amphibians in the face of emerging threats' was published in the scientific journal *Nature*.

Who conducted this study on the world's amphibians?

The study was conducted by the Amphibian Red List Authority, a branch of the Amphibian Specialist Group of the IUCN's Species Survival Commission and managed by Re:wild, a wildlife conservation group.

It evaluated the extinction risk of more than 8,000 amphibian species from all over the world, including 2,286 species evaluated for the first time.

What are the key findings of the study on the world's amphibians?

Amphibian Extinction Threat: Two out of every five amphibian species are at risk of extinction. This alarming data will be added to the IUCN Red List of Threatened Species.

The highest concentration of threatened amphibian species were mapped to be located in India's Western Ghats, Sri Lanka, Madagascar, Caribbean islands, tropical Andes, Mesoamerica and the mountains and forests of western Cameroon and eastern Nigeria.

Impact of Climate Change: Between 2004 and 2022, more than 300 amphibian species have moved closer to extinction. Climate change was the primary threat for 39% of these species.

– **Note:** Climate change was the primary threat for only 1% of amphibian species whose conservation status in the IUCN Red List of Threatened Species worsened between 1980 and 2004. But since then, it has emerged as the primary threat for 39 per cent species.

Other Threats: Habitat destruction and degradation affect a staggering 93% of all threatened amphibian species.

– Hence, expanding habitat protection and creating corridors in vital biodiversity areas are crucial for their conservation.

46. Ministry of Textiles organizes National Conclave on Agrotech – Accelerating productivity of agriculture & horticulture products

Source: The post is based on the article “Ministry of Textiles organizes National Conclave on Agrotech – Accelerating productivity of agriculture & horticulture products” published in “PIB” on 7th October 2023

What is the News?

The Ministry of Textiles has organized the National Conclave on Agrotech under its flagship scheme National Technical Textiles Mission (NTTM).

At the conclave, there was a special session also discussing future growth and opportunities in Agrotexiles.

What are Agro Textiles?

Agro textiles, also known as agricultural textiles or agrotexiles are specialized textiles used in agriculture to enhance crop growth, protect plants, and improve farming practices.

Some of the common uses and types of agro textiles are:

– **Crop Protection:** Agro textiles are used to protect crops from adverse weather conditions, such as frost, hail, or excessive sunlight. They act as a barrier, shielding plants from external elements.

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- **Shade Nets:** Shade nets are used to provide shade to crops and control the amount of sunlight they receive. This is especially useful for plants that require partial shade or protection from extreme heat.
- **Fruit Packaging:** Agro textiles are used for packaging and protecting fruits during transportation and storage. They help reduce bruising and damage to produce.
- **Windshield Nets:** Windshield Nets are designed for the protection of crops, small trees and plants from strong winds. They are UV stabilized in order to ensure durability and they are easy to install.
- **Insect Nets:** Insect-proof nets or screens are employed to keep harmful insects and pests away from crops. They allow for adequate ventilation while creating a barrier against pests.

What is the importance of Agro Textiles in India?

Agro textiles offer various advantages in agriculture, including improved crop quality, increased yield, reduced pesticide use, and better resource management.

For instance, agro textiles in horticulture leads to an increase in farm productivity by 2-5 times, increase in crop intensity, reduction in water consumption by 30- 45%, reduction in fertilizer usage by 25- 30%, and higher harvest cycle per year.

India holds a tremendous potential in the global Agro textiles market of ~USD 12 Bn wherein India's share is ~3%.

What are the steps taken by the Government for promoting agro textiles?

Quality Standards Notification: Ministry of Textiles have notified Quality Control Orders (QCO) for 20 agro textile items, effective from April 1, 2024. This will ensure superior quality and safety.

Research and Development: Government has sanctioned 11 research and development (R&D) projects in agro textiles. These projects aim to develop innovative agro textile products.

Climate Smart Agrotextile Demonstration Center: Government plans to establish a Climate Smart Agrotextile Demonstration Center in collaboration with SASMIRA. This center will focus on digitized microclimate farming to revolutionize agriculture practices.

Schemes like the Mission for Integrated Development of Horticulture (MIDH) have incorporated various agro textile products to promote their wider usage and adoption in agriculture.

47. Udangudi Panangrupatti gets GI tag

Source: The post is based on the article “Udangudi Panangrupatti gets GI tag” published in “The Hindu” on 9th October 2023

What is the News?

Udangudi 'Panangrupatti' from Tamil Nadu has received a Geographical Indication (GI) Tag.

What is Udangudi Panangrupatti?

Udangudi Panangrupatti is also referred to as palm jaggery.

It is prepared using the palm sap collected from the inflorescence of palmyra trees that grow on the red sand dunes in and around the Tiruchendur region in Tamil Nadu.

Uniqueness of Udangudi Panangrupatti:

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Firstly, the palm jaggery preparation procedure in this area is traditional till date without inclusion of any additional modern strategies.

— Triple super phosphate and phosphoric acid are used in many other areas, but no such chemical additives are used in Udangudi Panangkarupatti.

Secondly, the jaggery prepared from the palm sap from the region is unique due to the presence of red sand dune soil found in the region.

— This soil holds less groundwater. The moisture content in the atmosphere is less because of the dry climatic condition which leads to high sucrose content, in turn adding taste.

48. Army concludes 70 schemes under EP-4 worth ₹11,000 crore

Source: The post is based on the article “Army concludes 70 schemes under EP-4 worth ₹11,000 crore” published in “The Hindu” on 9th October 2023

What is the News?

The Indian Army and Air Force have completed the fourth phase of Emergency Procurements (EP) with the Army finalizing over 70 schemes worth nearly ₹11,000 crore and the Indian Air Force concluding 64 contracts worth around ₹8,137 crore.

What are Indian Armed Forces Emergency Procurement Powers?

Emergency Procurement Powers were granted to the Armed Forces by the Defence Ministry for the first time after the 2016 Uri terror attack, followed by the 2019 Balakot air strikes and the 2020 standoff with China in Eastern Ladakh.

Under this, the armed forces could procure weapons systems up to ₹300 crore on an urgent basis without any further clearance to cut short the procurement cycle.

These emergency procurements have to be completed within 12 months as per the Defence Ministry's stipulations.

The armed forces are currently executing the fourth phase of the Emergency Procurements (EP).

What is the significance of these Emergency Procurements by these armed forces?

Emergency Procurements(EP) have not only ensured swift procurement but also led to cost savings primarily through procurement from the domestic defense industry.

Notably, about 50% of contracts in the first three tranches were awarded to domestic vendors, highlighting the increasing capability of the domestic defense industry

The major upgrades facilitated through the EP mechanism include various defense equipment, surveillance systems, UAVs, communication systems and more contributing to bolstering India's defense capabilities.

49. PM releases commemorative coin and stamp on 500th birth anniversary of Veerangana Rani Durgavati

Source: The post is based on the article “PM releases commemorative coin and stamp on 500th birth anniversary of Veerangana Rani Durgavati” published in “PIB” on 9th October 2023

What is the News?

The Prime Minister performed bhoomi poojan of 'Veerangana Rani Durgavati Smarak aur Udyaan' during the 500th birth anniversary of Rani Durgavati.

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Who is Rani Durgavati?

Rani Durgavati (1524 – 1564) was the ruling Queen of Gondwana from 1550 until 1564. She was born in Mahoba's Chandela dynasty.

She is chiefly remembered for defending her kingdom against the Mughal Empire.

She was married to Dalpat Shah, the son of the Gond King Sangram Shah of the kingdom of Garha-Katanga. This kingdom is noted as one of the most powerful kingdoms of the Gond tribe.

However, Dalpat Shah died in 1550 and due to the young age of their son, Durgavati took the reins of the Gondwana kingdom.

War with Mughals: In 1562, Akbar conquered Malwa and made it a Mughal dominion. Consequently, the state boundary of the Rani touched the Mughal Empire.

– Rani's contemporary was a Mughal General, Khwaja Abdul Majid Asaf Khan. The prosperity of Rani Durgavati's state lured him, and he invaded Rani's state after taking permission from the Mughal emperor Akbar.

– When Rani heard about the attack, she decided to defend her kingdom with all her might. She maintained that it was better to die respectfully than to live a disgraceful life.

– However, soon the Mughals fortified the area and overwhelmed the Gonds. While fighting them in battle, she is believed to have stabbed herself with her dagger to not surrender to the Mughal forces.

Recognitions and Honors: In 1983, the Government of Madhya Pradesh renamed the University of Jabalpur as Rani Durgavati Vishwavidyalaya in her memory.

– The government of India issued a postal stamp commemorating her death on 24 June 1988.

– The train between Jabalpur Junction and Jammu Tawi is known as Durgavati Express after the name of the Queen.

– Indian Coast Guard in 2018 commissioned ICGS Rani Durgavati, the third Inshore Patrol Vessel (IPV) of its kind.

50. Recommendations of 52nd GST Council Meeting

Source: The post is based on the article **“Recommendations of 52nd GST Council Meeting”** published in **“PIB” on 9th October 2023**

What is the News?

The 52nd GST Council met under the Chairpersonship of the Union Minister for Finance.

What is the GST Council?

Goods and Services Tax regime came into force after the Constitutional (122nd Amendment) Bill was passed by both Houses of Parliament in 2016.

The GST Council is a joint forum of the Centre and the states. It was set up by the President as per Article 279A (1) of the amended Constitution.

Purpose: The council is meant to make recommendations to the Union and the states on important issues related to GST, like the goods and services that may be subjected or exempted from GST, model GST Laws. It also decides on various rate slabs of GST.

Members: The members of the Council include the Union Finance Minister (chairperson), the Union Minister of State (Finance) from the Centre. Each state can nominate a minister in-charge of finance or taxation or any other minister as a member.

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Decisions: The council is devised in such a way that the Union Government has 1/3rd voting power and the States have 2/3rd. The decisions are taken by the 3/4th majority.

What are the key takeaways from the 52nd GST Council meeting?

The council recommended that Extra Neutral Alcohol (ENA), used for manufacture of alcoholic liquor for consumption be kept outside the GST ambit.

It clarified that the GST rate for corporate guarantees provided by a parent company to its subsidiaries will be levied at 18 per cent.

Millet flour in powder form, containing at least 70% millet by weight will not attract any GST if sold loose, but will face 5% levy if sold in pre-packaged, labeled form.

States also raised the issue of how the cess will continue under GST once it comes to an end in March 2026. Currently, cess is being used to pay off the borrowed amount meant to compensate states during the initial five-year period of GST which ended June 2022.

51. Territorial Army hires Chinese language interpreters, to induct cyber security experts next

Source: The post is based on the article “Territorial Army hires Chinese language interpreters, to induct cyber security experts next” published in “Indian Express” on 9th October 2023

What is the News?

The Territorial Army(TA) is recruiting Chinese language interpreters for border personnel meetings (BPM) and cyber security experts to support the Army.

What is Territorial Army(TA)?

Indian Territorial Army is an auxiliary military organization of the Indian Army.

It is a voluntary, part-time civilian force that receives military training and serves as a reserve force for the army to relieve it of static duties, to aid the civil power and to provide units for the regular Army as and when required.

Origin: The origins of India’s Territorial Army can be traced to the days of the British Raj when the British raised a territorial army through the Indian Territorial Act, 1920.

– This act divided the army into two parts — the Auxiliary Force and the Indian Territorial Force. The Auxiliary force was meant for the Europeans and Anglo-Indians, the Indian Territorial Force was for the Indians.

– Post-independence, the Territorial Army Act, 1948, was passed, resulting in the formation of the current Indian Territorial Army. The Army was inaugurated by C. Rajagopalachari in 1949.

Eligibility: Any citizen between the age of 18-42 can be a part of the TA service.

– The soldiers from the TA have to complete a mandatory two-month embodiment or service period in a year. It does not provide them a full-time career. They have the option of returning to civilian life after the two months.

Functions performed by TA: The primary role of the TA is to relieve the regular army from static duties such as road security and protection of communication lines.

– TA units are made available to the regular army as needed for specific tasks, such as aiding civil authorities during disasters or maintaining essential services.

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- TA units also play a crucial role in protecting border infrastructure projects in sensitive areas, as well as railway projects in the northeast connecting Manipur and Nagaland.
- They are also involved in maintaining anti-infiltration obstacle systems along the Line of Control.
- In times of crisis, TA units can be called upon to support additional forces, as seen in the ongoing situation in Manipur.
- Ministries and state governments also frequently request the raising of TA units for various purposes, including plantation drives, petroleum supply, oil exploration and safeguarding critical infrastructure.

52. Sagar Parikrama: A successful journey towards resolving issues of fishers on ground

Source: The post is based on the article “Sagar Parikrama: A successful journey towards resolving issues of fishers on ground” published in “PIB” on 9th October 2023

What is the News?

The Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying is undertaking a massive fishers and fish farmers outreach program namely Sagar Parikrama Yatra.

What is Sagar Parikrama?

Sagar Parikrama is an outreach program intended to reach out to the fishermen community across the entire coastal belt of the country.

It is being undertaken since March 2022 through a pre-decided sea route from Gujarat to West Bengal covering around 8000 km of India’s coastline.

Objectives:

- To facilitate interaction with fishermen, coastal communities and stakeholders so as to disseminate information of various fisheries related schemes and programs being implemented by the Government;
- demonstrating solidarity with all fisher folk, fish farmers and concerned stakeholder as a spirit of Atma Nirbhar Bharat;
- to promote responsible fisheries with focus on sustainable balance between the utilization of marine fisheries resources for food security of nation and livelihoods of coastal fisher communities and
- protection of marine ecosystems.

Significance: The fishermen, fisher communities and stakeholders in the coastal areas are likely to be benefitted with awareness of various beneficiary oriented schemes and programs being implemented by the Government and showcasing them the best practices that may be adopted.

53. India and Saudi Arabia sign MoU in Electrical Interconnections, Green / Clean Hydrogen and Supply Chains

Source: The post is based on the article “India and Saudi Arabia sign MoU in Electrical Interconnections, Green / Clean Hydrogen and Supply Chains” published in “PIB” on 9th October 2023

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What is the News?

India and Saudi Arabia have signed a Memorandum of Understanding in the fields of Electrical Interconnections, Green / Clean Hydrogen and Supply Chains.

What is the purpose of the MoU signed between India and Saudi Arabia?

The MoU aims to establish a general framework for cooperation between the two countries in the field of electrical interconnection; exchange of electricity during peak times and emergencies; co-development of projects and co-production of green / clean hydrogen and renewable energy.

What is the Middle East and North Africa(MENA) Climate Week 2023?

MENA Climate Week 2023 is being held in Riyadh, Saudi Arabia. It aims to discuss climate solutions ahead of COP28.

It also had a session on “Global Stocktake of the Paris Agreement (GST)”.

What is the Global Stocktake of the Paris Agreement (GST)?

The global stocktake was established under Article 14 of the Paris Agreement.

It is a process for countries and stakeholders to see where they’re collectively making progress towards meeting the goals of the Paris Climate Change Agreement – and where they’re not.

It is done in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support and in the light of equity and the best available science.

The stocktake takes place every five years. The first GST started in Glasgow in 2021 and will conclude at the climate change conference in Dubai, UAE (at COP 28).

The outcome of the GST shall inform Parties in updating and enhancing, in a nationally determined manner, their action and support, as well as in enhancing international cooperation for climate action.

54. PATA and India to jointly promote Travel for LiFE in Asia-Pacific region

Source: The post is based on the article “PATA and India to jointly promote Travel for LiFE in Asia-Pacific region” published in “PIB” on 9th October 2023

What is the News?

Pacific Asia Travel Association(PATA) will work with India to expand the Travel for LiFE initiative across the Asia Pacific region.

The Ministry of Tourism will set up a PATA desk to strengthen engagement with PATA on Travel for LiFE and other areas of cooperation in the tourism sector. This is the first major international partnership for the Travel for Life program.

What is Travel for LiFE Initiative?

‘Travel for LiFE’ is a sectoral program under **Mission LiFE** targeted towards the tourism sector.

Launched on: September 27, 2023 on World Tourism Day.

Launched by: Ministry of Tourism in partnership with the Ministry of Environment, Forest and Climate Change (MoEFCC), United Nations World Tourism Organisation (UNWTO), and the United Nations Environment Programme(UNEP).

The initiative embodies the ethos of “**Pro Planet People**” and operates on the fundamental principles of living “**Lifestyle of the planet, for the planet, and by the planet**”.

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Aims: To bring about significant behavioral changes in both tourists and tourism businesses, with a strong emphasis on environmental protection and socio-cultural sustainability.

Themes: The program covers eight core themes including energy conservation, water preservation, reducing single-use plastic, waste reduction, supporting local businesses and communities, respecting local culture and heritage, consuming local foods, and preserving nature.

Certification: The initiative also goes beyond raising awareness. It encourages tourism businesses to adopt sustainable practices and earn certification at bronze, silver, and gold levels within the program.

Significance: Travel for LiFE Program will position India as leader in promoting sustainable and responsible tourism and using tourism as a vehicle for achieving Sustainable Development Goals by 2030.

What is the Pacific Asia Travel Association(PATA)?

Pacific Asia Travel Association (PATA) was founded in 1951. It is a not-for-profit membership-based association that acts as a catalyst for the responsible development of travel and tourism to, from and within the Asia Pacific region.

55. Prey base, habitat dictate Asiatic wild dog-tiger coexistence: study

Source: The post is based on the article “**Prey base, habitat dictate Asiatic wild dog-tiger coexistence: study**” published in “**The Hindu**” on **9th October 2023**

What is the News?

A recent study in Manas National Park in Assam has found that dholes (Asiatic wild dogs) and tigers may have a positive association due to overlapping prey availability of suitable habitats.

What is the study conducted on Dholes?

A study was conducted titled ‘Do dholes segregate themselves from their sympatrids? Habitat use and carnivore co-existence in the tropical forest’.

– **Sympatric** refers to animals, plant species, and populations within the same or overlapping geographical areas.

The study aimed to assess the relative abundance index, habitat use, and factors influencing dhole co-existence with other sympatric carnivores in Manas National Park, a UNESCO World Heritage Site.

– **Note:** Manas National Park in Assam and the adjoining Royal Manas National Park in Bhutan form one of the largest areas of conservation significance in South Asia representing the full range of habitats from the subtropical plains to the alpine zone. The range of habitats in the cross-border national park is ideal for the dholes.

What are the key findings of the study?

The study found a positive relationship between dhole habitat use and tigers challenging the assumption of antagonistic interactions between the two species.

The positive association could be attributed to overlapping prey availability or habitat suitability, suggesting the possibility of co-existence or cooperative behaviors between dholes and tigers.

Significance of this study: The study highlights the importance of good habitats and forests, such as Manas National Park, as wildlife mega-cities or hotspots that provide various niches and possibilities.

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– Any disruption to such ecological balance could have far-reaching consequences.

What is Dhole?



Dhole (*Cuon alpinus*) is a wild carnivorous animal and is a member of the family Canidae and the class *Mammalia*. They are also known as Asian wild dogs.

Historically, dholes purportedly occurred throughout southern Russia all across central Asia, south Asia and southeast Asia.

But recent research and current distribution maps indicate that they are restricted to south and southeast Asia with the northernmost populations in China.

In India, Dholes are found in three clusters namely the Western and Eastern Ghats, central Indian landscape and North East India.

According to a 2020 study, Karnataka, Maharashtra and Madhya Pradesh rank high in conservation of dhole.

IUCN Status: Endangered

CITES: Appendix II

Wildlife Protection Act: Schedule II

56. Why Punjab wants to ban the cultivation of PUSA-44 paddy variety

Source: The post is based on the article “Why Punjab wants to ban the cultivation of PUSA-44 paddy variety” published in “Indian Express” on 10th October 2023

What is the News?

Punjab Chief Minister has announced that the state will ban the cultivation of the PUSA-44 paddy variety from 2024.

When did Punjab farmers begin cultivating PUSA-44?

PUSA-44 is a variety of paddy. It was developed in 1993 by the Delhi-based Indian Council of Agricultural Research (ICAR).

Subsequently, Punjab’s farmers started sowing it in a few areas initially. After getting a high yield from the crops, they started increasing the area under PUSA-44 by multiplying the seed.

By the end of 2010s, it had gained widespread popularity among farmers across the Punjab, covering approximately 70 to 80% of the area under paddy cultivation.

By 2018, the Punjab government reduced the area under PUSA-44 to 18% of the total area under paddy, but it rebounded to 22% in 2022.

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What are the reasons behind the ban of PUSA-44?

Extended Maturity Period: PUSA-44 takes about 160 days to mature, which is much longer (about 35-40 days) than other paddy varieties.

Water Conservation: Punjab is facing severe groundwater depletion and banning PUSA-44 is a measure to conserve irrigation water.

Stubble Burning: PUSA-44 is harvested right before the ideal time for wheat sowing which is around November 1st.

– Farmers typically need 20 to 25 days between paddy harvesting and wheat sowing to effectively handle stubble disposal.

– However, PUSA-44's late harvest makes it difficult to manage stubble through both in-field and out-of-field methods. This leads to more incidents of stubble burning.

– Moreover, PUSA varieties produce about 2 percent more stubble compared to shorter varieties, which is a significant concern when cultivated extensively.

57. ICMR to set up study to develop solutions to remedy childhood undernutrition

Source: The post is based on the article “**ICMR to set up study to develop solutions to remedy childhood undernutrition**” published in “**The Hindu**” on 10th October 2023

What is the News?

The Indian Council of Medical Research (ICMR) is forming a team to conduct a research study on improving the nutrition of children aged 6 to 24 months in India.

What is the study ICMR planning to conduct?

ICMR has formed a team to conduct a research study on improving the nutrition of children aged 6 to 24 months in India.

This age range is crucial for a child's growth and poor nutrition during this time can lead to issues like stunting and undernutrition.

Complementary feeding is important but faces challenges like inadequate quantity and quality of food, improper feeding practices and timing.

ICMR believes that the current Take Home Ration (THR) program can be enhanced to improve child nutrition. They emphasize the need for not only providing the right food but also ensuring that children actually eat it.

Hence, that's why ICMR is planning to conduct this study to identify ways to promote proper complementary feeding practices and provide optimal nutrition to reduce childhood undernutrition.

What is Complementary Feeding?

Complementary feeding is defined as the process starting when breast milk alone is no longer sufficient to meet infants' nutritional requirements, resulting in the need for other foods and liquids along with breast milk.

The ICMR points out several challenges in complementary feeding such as not giving enough or good-quality food, not feeding properly, starting too early or late, and not giving enough food frequently.

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What is the Take Home Rations (THR) programme?

The Take Home Rations (THR) programme is part of the Supplementary Nutrition Programme (SNP) under [Integrated Child Development Services \(ICDS\)](#).

It offers fortified rations for use at home for children aged 6 to 36 months as well as pregnant and lactating women, with the goal of bridging the nutrition gap among them.

58. **Vocal for local: NSG takes on invasive vilayati kikar, to regreen 5-km stretch of Manesar campus with local trees**

Source: The post is based on the article **“Vocal for local: NSG takes on invasive vilayati kikar, to regreen 5-km stretch of Manesar campus with local trees”** published in **“Indian Express”** on **10th October 2023**

What is the News?

National Security Guard (NSG) has decided to take on the vilayati kikar (*Prosopis juliflora*) populating its Aravali hills campus after it was found to be responsible for the depleting water table.

What is Vilayati kikar (*Prosopis juliflora*)?



Source: Indian Express

Vilayati kikar (*Prosopis juliflora*) is a thorny shrub or tree growing up to 15 m height.

It is an invasive Mexican tree species. It was introduced by the British in Delhi in the 1930s.

Harmful Impact: The roots of the tree can grow over 50 meters deep, depleting groundwater.

– The trees also make it difficult for native species to germinate around them.

Court on *Prosopis juliflora*: The Madras High Court in 2016, passed an interim order clearing removal of *Prosopis juliflora* as they were depleting the water table in areas already struggling for water.

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Why is the National Security Guard (NSG) taking action against vilayati kikar (Prosopis juliflora)?

The National Security Guard (NSG) was given 1,600 acres of land along the Delhi-Ajmer highway in Manesar to construct its campus.

Initially, there were 98 functional borewells on this land. However, presently, 63 of these borewells have dried up.

The NSG has identified vilayati kikar (Prosopis juliflora), a non-native plant species, as one of the factors contributing to the declining water table.

To address the issue of depleting water resources and to promote local biodiversity, the NSG has initiated a project.

This project covers an area of 1,000 acres on the campus, spanning a 5-km stretch. The primary goal of the project is to restore the Aravalli hills with indigenous plant species.

Importantly, the NSG is removing the vilayati kikar trees before planting new native saplings. This action is necessary because vilayati kikar is an invasive species that inhibits the growth of other plants in its vicinity.

59. Minister of Cooperation addressed 89th General Council meeting of the National Cooperative Development Corporation (NCDC)

Source: The post is based on the article “Minister of Cooperation addressed 89th General Council meeting of the National Cooperative Development Corporation (NCDC) ” published in “PIB” on 10th October 2023

What is the News?

The Union Minister of Cooperation addressed the 89th General Council meeting of the National Cooperative Development Corporation (NCDC).

What is the National Cooperative Development Corporation (NCDC)?

The National Cooperative Development Corporation (NCDC) is a statutory Corporation set up under an Act of Indian Parliament in 1963.

Parent Ministry: Ministry of Cooperation

Functions:

- To plan, promote and finance programmes for production, processing, marketing, storage, export and import of agricultural produce, food stuffs, certain other notified commodities.
- To assist different types of cooperatives and to expand its financial base.
- To finance projects in the rural industrial cooperative sectors and for certain notified services in rural areas like water conservation, irrigation and micro irrigation, agri-insurance, agro-credit, rural sanitation, animal health, etc.
- To give loans and grants to State Governments for financing primary and secondary level cooperative societies and direct to the national level and other societies having objects extending beyond one State.
- To go in for direct funding of projects under its various schemes of assistance on fulfillment of stipulated conditions.

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60. Periodic Labour Force Survey(PLFS) Annual Report 2022-2023 Released

Source: The post is based on the article “Periodic Labour Force Survey(PLFS) Annual Report 2022-2023 Released” published in “PIB” on 10th October 2023

What is the News?

The National Sample Survey Office(NSSO) has released the Periodic Labour Force Survey (PLFS) Annual Report 2022-23.

What is the Periodic Labour Force Survey(PLFS)?

Launched in: 2017 by National Sample Survey Office(NSSO)

Objectives: To estimate the key employment and unemployment indicators (viz. Worker Population Ratio(WPR), Labour Force Participation Rate(LFPR), Unemployment Rate(UR)) in the short time interval of three months for the urban areas only in the ‘Current Weekly Status’ (CWS).

– To estimate employment and unemployment indicators in both ‘Usual Status’ (ps+ss) and CWS in both rural and urban areas annually.

Click Here to read more about PLFS

What are the key findings of PLFS Annual Report 2022-23?

Labour Force Participation Rate(LFPR): It increased significantly over the last six years, from 36.9 per cent in 2017-18 to 57.9 percent in 2022-23.

– In rural areas, LFPR increased from 50.7% in 2017-18 to 60.8% in 2022-23 while for urban areas it increased from 47.6% to 50.4%.

– LFPR for male in India increased from 75.8% in 2017-18 to 78.5% in 2022-23 and corresponding increase in LFPR for females was from 23.3% to 37.0%.

Worker Population Ratio (WPR): In rural areas, WPR increased from 48.1% in 2017-18 to 59.4% in 2022-23 while for urban areas it increased from 43.9% to 47.7%.

– WPR for male in India increased from 71.2% in 2017-18 to 76.0% in 2022-23 and the corresponding increase in WPR for females was from 22.0% to 35.9%.

Unemployment Rate (UR): India’s unemployment rate dropped to a six-year low in the financial year July-June 2022-23 to 3.2 per cent.

– In rural areas, UR decreased from 5.3% in 2017-18 to 2.4% in 2022-23 while for urban areas it decreased from 7.7% to 5.4%.

– UR for male in India decreased from 6.1% in 2017-18 to 3.3% in 2022-23 and corresponding decrease in UR for females was from 5.6% to 2.9%.

61. Smart fence along Myanmar border in the pipeline: govt.

Source: The post is based on the article “Smart fence along Myanmar border in the pipeline: govt.” published in “The Hindu” on 10th October 2023

What is the News?

The Government of India is planning to build an advanced smart fencing system of 100 km along the Myanmar border to strengthen the existing surveillance system.

What is the Free Movement Regime(FMR) along the India Myanmar Border(IMB)?

India shares a 1,643-km border with Myanmar which passes through Arunachal Pradesh (520 km), Nagaland (215 km), Manipur (398 km) and Mizoram (510 km).

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A Free Movement Regime (FMR) exists between India and Myanmar.

Under the FMR, every member of the hill tribes, who is either a citizen of India or a citizen of Myanmar and who is resident of any area within 16 km on either side of the Indo-

Myanmar border can cross the border on production of a border pass (one year validity) issued by the competent authority and can stay up to two weeks per visit.

The Manipur government has suspended the FMR since the 2020 post COVID-19 pandemic.

Why was FMR conceptualized between India and Myanmar?

The border between India and Myanmar was demarcated by the British in 1826, without seeking the opinion of the people living in the region.

The border effectively divided people of the same ethnicity and culture into two nations without their consent.

Hence, that's why FMR was conceptualized to facilitate people-to-people contact. Apart from that, FMR was also supposed to provide impetus to local trade and business. The region has a long history of trans-border commerce through customs and border haats.

Why is the Government now planning to build a smart fencing system along the India Myanmar Border?

Unfenced border and unregulated migration from Myanmar have been attributed as some of the factors responsible for the ethnic violence in Manipur.

In 2022, out of the 201 insurgency-related incidents registered in all the northeast States, as many as 137 incidents were registered in Manipur.

62. District Mineral Foundation Funds Transforming Lives of Mining Affected Areas / People

Source: The post is based on the article “**District Mineral Foundation Funds Transforming Lives of Mining Affected Areas / People**” published in “**PIB**” on 10th October 2023

What is the News?

District Mineral Foundations (DMFs) have been set up in as many as 644 districts of 23 states/UTs which have DMF rules in place.

Seventeen states/UTs of the country have already formed DMF in all the districts.

What is the District Mineral Foundation(DMF) Trust?

Section 9B of the Mines & Minerals (Development & Regulation) (MMDR) Act, 1957 empowers the State Government to establish District Mineral Foundation(DMF) Trust as a non profit body in all the Districts affected by mining for the benefit of the people and areas affected by mining activities.

The object of the DMF is to work for the interest and benefit of persons and areas affected by mining related operations in such a manner as may be prescribed by the State Government.

What is Pradhan Mantri Khanij Kshetra Kalyan Yojana(PMKKY)?

The Ministry of Mines launched the Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) in 2015.

Purpose: It is meant to provide for the welfare of areas and people affected by mining related operations, using the funds generated by District Mineral Foundations(DMFs).

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Objectives: (a) to implement various developmental and welfare projects/programs in mining affected areas, and these projects/ programs will be complementing the existing ongoing schemes/projects of State and Central Government; (b) to minimize/mitigate the adverse impacts, during and after mining, on the environment, health and socio-economics of people in mining districts and (c) to ensure long-term sustainable livelihoods for the affected people in mining areas.

Utilization of Funds: PMKKKY provides for utilization of at least 60% of the funds for high priority areas like: (i) drinking water supply; (ii) environment preservation and pollution control measures; (iii) health care; (iv) education; (v) welfare of women and children; (vi) welfare of aged and disabled people; (vii) skill development; and (viii) sanitation.

The remaining 40% of the funds shall be utilized for other priority areas (i) physical infrastructure; (ii) irrigation; (iii) energy and watershed development; and (iv) any other measures for enhancing environmental quality in mining districts.

63. What is multimodal artificial intelligence and why is it important?

Source: The post is based on the article “**What is multimodal artificial intelligence and why is it important?**” published in “**The Hindu**” on 10th October 2023

What is the News?

This article talks about Multimodal artificial intelligence and its importance.

What is Multimodal artificial intelligence?

Multimodal artificial intelligence refers to a type of AI system that can understand and process information from multiple modalities or sources, such as text, images, videos, audio, and other forms of data simultaneously.

This means it can analyze and extract insights from various types of data to gain a more comprehensive understanding of a situation or problem.

Some notable developments in multimodal AI include **OpenAI’s GPT-3.5 and GPT-4 models**, which can analyze images and engage in spoken conversations and Google’s multimodal large language model called **Gemini** which leverages its vast image and video database for understanding multiple modalities.

Why is Multimodal artificial intelligence important?

Enhanced Understanding: Multimodal AI can provide a richer and more nuanced understanding of data by combining information from different sources. For example, it can analyze both the text and images in a news article to gain a deeper understanding of the content.

Improved Accuracy: Combining data from multiple modalities can lead to improved accuracy in tasks like natural language processing (NLP), computer vision, and speech recognition. It helps AI systems make more informed decisions.

Real-World Applications: Multimodal AI has a wide range of practical applications, such as in healthcare (integrating medical images with patient records), autonomous vehicles (processing both visual and sensor data), and content recommendation systems (analyzing text and user behavior).

Better User Experience: In applications like virtual assistants or chatbots, multimodal AI can better understand and respond to users by considering both their spoken words and visual cues.

Problem Solving: Multimodal AI can help address complex problems that require insights from different data sources. For instance, in disaster response, it can analyze text reports, satellite images, and sensor data to assess the situation and plan a response.

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64. Claudia Goldin wins 2023 Economics Nobel Prize for research on workplace gender gap

Source: The post is based on the article “Claudia Goldin wins 2023 Economics Nobel Prize for research on workplace gender gap” published in “The Hindu” on 10th October 2023

What is the News?

The Nobel Prize for economics has been awarded to Harvard University professor Claudia Goldin for her research that has advanced the understanding of the gender gap in the labour market.

Who is Claudia Goldin?

Claudia Goldin was born in 1946. She currently holds the position of Henry Lee Professor of Economics at Harvard University.

Work on Gender gap in labour market: Claudia Goldin’s extensive research on gender disparities in the labor market spanning over 200 years reveals several key insights:

- **U-Shaped Female Labor Force Participation:** Female participation in the labor market doesn’t show a consistent upward trend over time. Instead, it follows a U-shaped curve. Initially, it declined as society shifted from agrarian to industrial in the early 19th century. It later increased with the growth of the service sector in the early 20th century. This pattern is influenced by changes in economic structure and evolving societal norms about women’s roles.
- **Education and the Contraceptive Pill:** Women’s education levels have steadily risen throughout the 20th century and often surpass those of men in high-income countries. Access to contraception, notably the contraceptive pill, played a vital role in enabling women to plan their careers more effectively.
- **Persistent Earnings Gap:** Despite modernization, economic growth and increased female employment, the earnings gap between men and women remained largely unchanged for a long time.
- This is because young women’s expectations for their careers are often shaped by the experiences of previous generations such as their mothers who delayed their return to work until their children were older.



- **Impact of Motherhood:** Goldin’s research indicates that the bulk of the gender earnings gap now exists between men and women in the same occupation and it primarily emerges after the birth of the first child. This suggests that parenthood significantly influences the gender pay gap in contemporary times.

65. What is Hemochromatosis, the rare genetic disorder that causes organ dysfunction?

Source: The post is based on the article “What is Hemochromatosis, the rare genetic disorder that causes organ dysfunction?” published in “Hindustan Times” on 11th October 2023

What is the News?

Health experts have revealed all about Hemochromatosis or ‘bronze diabetes’.

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What is Hemochromatosis?

Hemochromatosis is a disorder associated with deposits of excess iron that causes multiple organ dysfunction.

The organs affected by hemochromatosis include the liver, pancreas, heart, thyroid, joints, skin, gonads and pituitary.

Hemochromatosis has been dubbed “**bronze diabetes**” because of the skin darkening and concomitant pancreatic illness.

Types: It is primarily classified into two types:

Hereditary hemochromatosis: It is a genetic disorder driven by a mutation in the HFE gene, resulting in individuals being homozygous for the C282Y variant.

– This genetic anomaly sets the stage for a lifelong struggle with excessive iron absorption within the intestines.

Secondary hemochromatosis: It differs from the hereditary form as it is typically caused by external factors like frequent blood transfusions, excessive iron supplementation, or certain medical conditions.

– The iron accumulation in secondary hemochromatosis is often more rapid and can have a similar impact on organ function.

Symptoms: With the buildup of harmful levels of iron, hemochromatosis can cause symptoms including feeling tired or weak, pain in the joints, pain in the abdomen over the liver and darkening of skin color.

Treatment: Treatment options include therapeutic phlebotomy, which involves regular blood removal to reduce iron levels and iron-chelating medications to help manage iron overload. Phlebotomy is usually performed once or twice a week.

66. RBI proposes card-on-file tokenization for debit and credit cards: What this means for online shoppers

Source: The post is based on the article “**RBI proposes card-on-file tokenization for debit and credit cards: What this means for online shoppers**” published in “**TOI**” on **10th October 2023**

What is the News?

The Reserve Bank of India (RBI) Governor has recently proposed the introduction of card-on-file tokenization (CoFT) facility at the issuer-bank level.

What is Tokenisation?

Tokenisation replaces a debit or credit card’s 16-digit number with a unique token that is specific to the user’s card and specific for one merchant at a time.

The token hides the true details of your card, so that in case a data leak happens from the merchant website, the hackers cannot misuse the card. This token contains no personal information and keeps changing.

Tokens can be used for online transactions, mobile point-of-sale transactions, or in-app transactions. A customer can choose whether or not to let his, her card tokenized.

What has RBI announced now for card-on-file tokenization (CoFT) facility?

RBI has introduced Card-on-File Tokenization (CoFT) in 2021 and began implementation from 2022.

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Until now, the cardholders had to create different tokens through each merchant's application or webpage. This would require time and effort from the users.

Going forward, tokens will be created at the issuer bank level and linked to their existing accounts with various e-commerce applications.

This will eliminate the duplication of the tokenization process at each app or website along with increased transaction security resulting in reduced card-data-related frauds.

67. NeGD launches State Capacity Building Workshops Under Digital India programme

Source: The post is based on the article “NeGD launches State Capacity Building Workshops Under Digital India programme” published in “PIB” on 10th October 2023

What is the News?

National e-Governance Division, Ministry of Electronics & Information Technology is organizing State Capacity Building Workshops under its Capacity Building Scheme.

These workshops aim to help people understand how emerging technologies can enhance service delivery and how to create policies and strategies for the changing digital environment.

What is Capacity Building scheme?

Capacity Building scheme under Digital India programme envisions building adequate and relevant capacities at all levels in the Government.

Launched in: The scheme was initially approved in 2008. In 2015, the scheme was continued under Digital India programme.

Implemented by: National e-Governance Division, Ministry of Electronics & Information Technology.

What is the Digital India Programme?

The Digital India programme was launched by the Prime Minister in 2015.

Aim: To transform India into a knowledge-based economy and a digitally empowered society by ensuring digital services, digital access, digital inclusion, digital empowerment and bridging the digital divide.

The programme is coordinated by the Ministry of Electronics & Information Technology (MeitY) with the Ministries and Departments in the Central and State Governments partnering it in their respective domain areas.

Major Initiatives under Digital India Programme:

Aadhaar: Aadhaar provides 12 digit biometric and demographic based identity that is unique, lifelong, online and authenticable.

Common Services Centres – CSCs are offering government and business services in digital mode in rural areas through Village Level Entrepreneurs (VLEs).

DigiLocker: Digital Locker provides an ecosystem with a collection of repositories and gateways for issuers to upload the documents in the digital repositories.

Unified Mobile Application for New-age Governance (UMANG) – for providing government services to citizens through mobile.

MyGov – It is a citizen engagement platform that is developed to facilitate participatory governance.

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CO-WIN – It is an open platform for management of registration, appointment scheduling & managing vaccination certificates for Covid-19.

Jeevan Pramaan: Jeevan Pramaan envisages to digitize the whole process of securing the life certificate for Pensioner.

National Knowledge Network: A high speed data communication network has been established to interconnect Institution of higher learning, and research.

Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDISHA): It aims to usher in digital literacy in rural India by covering 6 Crore rural households (one person per household).

FutureSkills Prime: It was launched by MeitY in collaboration with NASSCOM. It aims at re-skilling/ up-skilling IT professionals in 10 new/emerging technologies which include Augmented/Virtual Reality, Internet of Things, Big Data Analytics, Artificial Intelligence among others.

68. **Gaganyaan” Test Vehicle Space flight, that is, “Gaganyaan” Test Vehicle Development flight (TV-D1) scheduled on 21st October, says Union Minister**

Source: The post is based on the article **“Gaganyaan Test Vehicle Space flight, that is, “Gaganyaan” Test Vehicle Development flight (TV-D1) scheduled on 21st October, says Union Minister”** published in **“PIB” on 10th October 2023**

What is the News?

The Union Minister has announced that the “Gaganyaan” Test Vehicle Development flight (TV-D1) will be launched from Satish Dhawan Space Centre in Sriharikota, Andhra Pradesh.

What is Test Vehicle Development Flight (TV-D1)?

Test Vehicle Development Flight (TV-D1) is intended to test the ‘crew module’ or the part of the Gaganyaan vehicle where the Indian astronauts will be housed.

The test involves launching the crew module to outer space and bringing it back to earth and recovering it after touchdown in the Bay of Bengal.

Additionally, there’s a crew escape system that can safely return the astronauts to the sea if there are any issues during the launch.

The success of this test will set the stage for the first unmanned “Gaganyaan” mission and ultimately manned mission to outer space in low earth orbit.

What is Gaganyaan Mission?

Gaganyaan mission envisages demonstration of human spaceflight capability by launching a human crew to an orbit of 400 km and bringing them back safely to earth, by landing in Indian sea waters.

The prerequisites for Gaganyaan mission include development of many critical technologies including 1) human rated launch vehicle for carrying crew safely to space 2) Life Support System to provide an earth like environment to crew in space and 3) crew emergency escape provision and evolving crew management aspects for training, recovery and rehabilitation of crew.

The mission is expected to be executed in the second half of 2024.

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69. State-owned NBFCs put under PCA norms

Source: The post is based on the article “State-owned NBFCs put under PCA norms” published in “The Hindu” on 11th October 2023

What is the News?

The Reserve Bank of India(RBI) has announced that it will bring state-owned non-banking finance companies(NBFCs) under the prompt corrective action (PCA) framework from October 2023.

What is the Prompt corrective action (PCA) framework?

Prompt Corrective Action or PCA is a framework under which financial institutions with weak financial metrics are put under watch by the RBI.

The objective of the PCA framework is to enable supervisory intervention at appropriate time and require the supervised entity to initiate and implement remedial measures in a timely manner, so as to restore its financial health.

The framework is also intended to act as a tool for effective market discipline.

The framework also does not preclude the Reserve Bank of India from taking any other action as it deems fit at any time in addition to the corrective actions prescribed in the framework.

The PCA Framework for NBFCs came into effect from October 1, 2022 based on the financial position of NBFCs on or after March 31, 2022.

What happens when an NBFC is put under the PCA framework?

The RBI has drawn up a menu of corrective actions for NBFCs/ core investment companies (CICs), depending on the level of breach of the risk threshold. These actions include:

1) Restriction on dividend distribution/remittance of profit 2) requiring promoters/shareholders to infuse equity and reduce leverage 3) restriction on issue of guarantees or taking on other contingent liabilities on behalf of group companies (only for CICs) 4) restriction on branch expansion; special supervisory actions and 5) discretionary actions related to governance, capital, profitability and business.

70. India, Italy ink agreement to boost defence cooperation

Source: The post is based on the article “India, Italy ink agreement to boost defence cooperation” published in “PIB” on 10th October 2023

What is the News?

India and Italy have signed an agreement on defence cooperation.

What is the purpose of India-Italy agreement on Defence cooperation?

The agreement will promote bilateral cooperation in areas such as security and defence policy, research and development, education in the military field, maritime domain awareness, sharing of defence information and industrial cooperation including co-development, co-production and setting up of joint ventures.

How are the trade relations between India and Italy?

Italy is India’s fourth largest European trading partner and the 12th largest foreign investor in the country with FDI reaching the US\$2 billion mark in 2020.

The bilateral trade between India and Italy, has reached around US\$ 16 Billion in 2022.

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Over 600 Italian companies are present in India, and Italy has previously identified India amongst its top five priority countries for business.

India's primary exports to Italy comprise metals such as iron and steel, leather, chemicals, gems, and jewellery.

The relationship between India and Italy was elevated to strategic partnership in March 2023 during the visit of the Italian Prime Minister to India.

In 2021, India and Italy inked a Strategic Partnership on Energy Transition to advance collaboration on areas like green hydrogen and bio-fuels and Italy also joined the successful India-France led International Solar Alliance comprising over 90 members.

71. Competition Commission of India to host 8th BRICS International Competition Conference

Source: The post is based on the article “**Competition Commission of India to host 8th BRICS International Competition Conference**” published in “**PIB**” on 10th October 2023

What is the News?

The Competition Commission of India (CCI) will be hosting the 8th BRICS International Competition Conference (BRICS ICC) 2023.

What is BRICS International Competition Conference (BRICS ICC)?

BRICS International Competition Conference (BRICS ICC) is an important event under the framework of the BRICS Leaders' Meeting.

The conference is held biennially by the BRICS competition authorities on a rotation basis.

The conference was established at the meeting of the Heads of State of BRICS (then BRIC) countries in Yekaterinburg, Russia in 2009.

The first conference was organized by Russia in September 2009, followed by China (2011), India (2013), South Africa (2015), and Brazil (2017).

Who is hosting the 8th BRICS International Competition Conference (BRICS ICC) 2023?

Hosted by: Competition Commission of India (CCI)

Aim: To provide a platform for promoting cooperation, experience sharing and mutual learning amongst the competition authorities of BRICS countries.

Theme: 'New Issues in Competition Law and Policy – Dimensions, Perspectives, Challenges'.

72. National Security Council Secretariat organizes the 2nd Edition of the National Cyber Security Exercise 'Bharat NCX 2023

Source: The post is based on the article “**National Security Council Secretariat organizes the 2nd Edition of the National Cyber Security Exercise 'Bharat NCX 2023**” published in “**PIB**” on 10th October 2023

What is the News?

The second edition of the National Cyber Security Exercise — 'Bharat NCX 2023' — is being conducted over a period of 12 days.

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What is Exercise Bharat NCX 2023?

Conducted by: National Security Council Secretariat (NSCS) in strategic partnership with Rashtriya Raksha University (RRU)

Aim: To train senior management and technical personnel of Government/Critical Sector organizations and Public and Private agencies on contemporary cyber threats and handling cyber incidents and response.

– The participants will be trained on various key cyber security areas such as Intrusion Detection Techniques, Malware Information Sharing Platform (MISP), Vulnerability Handling & Penetration Testing, Network Protocols & Data Flows, Digital Forensics etc.

Significance: Bharat NCX India will help strategic leaders to better understand cyber threats, assess readiness, and develop skills for cyber crisis management and cooperation.

– This will also help develop and test cybersecurity skills, teamwork, planning, communication, critical thinking and decision-making.

73. What is Hamas, the Palestinian militant group?

Source: The post is based on the article “What is Hamas, the Palestinian militant group?” published in “The Hindu” on 11th October 2023

What is the News?

Israel and the armed Palestinian group Hamas are locked in an escalating conflict that has left thousands of people dead

What is Hamas?

Hamas stands for the Islamic Resistance Movement and in Arabic means “zeal”.

The group politically controls the Gaza Strip, a territory of about 365 sq km.

Hamas has been in power in the Gaza Strip since 2007 after a brief war against Fatah forces loyal to President Mahmoud Abbas, the head of the Palestinian Authority and Palestine Liberation Organization (PLO).

When was Hamas formed and what is its aim?

The Hamas movement was founded in Gaza in 1987 after the start of the first Intifada, an uprising against Israel’s occupation of the Palestinian territories.

The movement started as an offshoot of the Muslim Brotherhood in Egypt and created a military wing to pursue an armed struggle against Israel with the aim of liberating historic Palestine.

Unlike the PLO, Hamas does not recognise Israel’s statehood but accepts a Palestinian state on 1967 borders.

The group as whole or in some instances its military wing is designated as a “terrorist” organization by Israel, the United States, European Union, Canada, Egypt and Japan.

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What is the Gaza Strip?



Source: BBC

The Gaza Strip is a 41km (25-mile) long and 10km-wide territory between Israel, Egypt and the Mediterranean Sea.

Israel controls the airspace over Gaza and its shoreline and restricts who and what goods are allowed in and out through its border crossings. Similarly, Egypt controls who passes in and out through its border with Gaza.

According to the UN, about 80% of the population of Gaza depends on international aid, and about one million people rely on daily food aid.

74. Generic drugs are everywhere – and that’s a problem

Source: This post has been created based on the article “” published in **The Indian Express** on **12th October 2023**.

UPSC Syllabus Topic: GS Paper 2 Social Justice — Issues relating to development and management of Social Sector/Services relating to Health.

News: This article discusses the issue of unbranded generic drugs and the related problem of substandard and spurious drugs. It also highlights the need for Good Manufacturing Practices in the pharmaceutical sector to tackle these challenges.

What are some allegations raised with respect to pharmaceutical companies?

Manipulation of trials, hiding of side effects, establishing monopolies through patents and other means, bribing doctors and harming patients.

Asymmetric information with respect to pharmaceuticals leads to uninformed choice, and health-care costs for patients are also unnecessarily increased.

However, there is only a small amount of truth in all these allegations.

The real issue is the cost of drugs, since medicines account for a large share of costs, especially if it is out-of-pocket.

Unregulated markets where tax evasion, spurious and substandard drugs, non-adherence to temperature and lack of other quality controls takes place, are also a cause of concern.

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What are the different types of medicine?

Broadly, medicines are of three types:

- (1) Still on patent and therefore, a brand;
- (2) Off patent and generic, but nonetheless produced by a reputed company, with a brand;
- (3) Off-patent, generic and unbranded.

For a particular course of treatment, there may be a choice and substitution between (1), (2) and (3), with variations in side effects as well as prices.

What is the status of pharmaceutical manufacturing?

Out of the 8,500 drug-manufacturing MSMEs, only 2,000 are GMP-compliant (GMP = Good Manufacturing Practices).

Enforcement of the Drugs and Cosmetics Act, and also the **lack of enforcement**, increases the problem.

Mashelkar Committee 2003 on drug regulatory issues had stated that, “the extent of **substandard drugs varied from 8-10%** and spurious drugs (fake, counterfeit drugs) are less than half a percent.”

What are the issues with unbranded generic medicine?

Additional health costs of substandard generic drugs not taken into account: Unbranded generic medicines are being pushed through **Jan Aushadi outlets** due to their prices being cheaper. However, there is a **health cost of substandard drugs** which is not being taken into account.

Undue Influence by big pharma companies: Pharma companies may lobby and influence pharmacies which will sell these generic medicines, just like they do with doctors.

A lack of information about the effects of unbranded generic medicines hampers patients' freedom of choice.

75. **Elusive dancing frogs of Western Ghats a threatened species: Global Amphibian Assessment report**

Source: The post is based on the article “**Elusive dancing frogs of Western Ghats a threatened species: Global Amphibian Assessment report**” published in “**Deccan Herald**” on **11th October 2023**

What is the News?

The Second Global Amphibian Assessment report has been released.

What is Global Amphibian Assessment?

It is a comprehensive analysis of 8,011 species worldwide.

The analysis was led by Re:wild, Synchronicity Earth and the IUCN SSC Amphibian Specialist Group.

What are the key findings of the Second Global Amphibian Assessment Report?

Amphibians on the brink of extinction: Around 41% of amphibian species are on the brink of extinction.

– This means around two out of every five amphibian species are at risk of extinction.

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Major threats to amphibians include climate change, habitat loss, disease, fire, invasive species and over-exploitation.

Out of 426 amphibian species assessed in India, 139 are threatened (Critically Endangered, Endangered, and Vulnerable).

Region rich in Amphibian Diversity: The Western Ghats, a biodiversity hotspot spread across Kerala, Karnataka and Tamil Nadu is rich in amphibian diversity.

– However, around 64 species of amphibians found in the Western Ghats are on the list of endangered species.

– The *Micrixalus* genus (dancing frogs) in the Western Ghats is the most threatened frog genus in India.

Note: Dancing Frogs are endemic to the Western Ghats of India. They have a curious habit of waving their hind legs to defend their territory from intruding males during the breeding season.

– Nyctibatrachidae (night frogs) are also highly threatened in southern states.

Amphibian Recovery Project: Wildlife Trust of India has launched Amphibian Recovery Project in the Munnar Landscape of Kerala.

– The project is actively working to recover the population of threatened amphibians by addressing the challenges that cause the risk of extinction.

– Currently, the project is focussing on 5 species —Deccan Night Frog (Endangered), Resplendent Resplendent shrub frog (Endangered), Kadalar Swamp Frog (Endangered), Anaimalai Flying Frog (Vulnerable), and Meowing Night Frog (Near Threatened).

76. India launches Op Ajay to bring home citizens from Israel-Hamas war zone

Source: The post is based on the article “India launches Op Ajay to bring home citizens from Israel-Hamas war zone” published in “Indian Express” on 12th October 2023

What is the News?

India has launched Operation Ajay to facilitate the return of citizens from Israel amid a full-blown war with the Hamas group in Gaza.

What is Operation Ajay?

Launched by: India

Aim: To facilitate the return of citizens from Israel amid a full-blown war with the Hamas group in Gaza.

What are the other similar operations of India?

Operation Dost: It was the search and rescue operation initiated by the Government of India to aid Syria and Turkey, after the 2023 Turkey–Syria earthquake devastated both countries.

Operation Kaveri: It is a mission by India to evacuate its nationals from violence-hit Sudan.

Operation Ganga: It was launched to help stranded Indian nationals come back to India from Ukraine through special flights amidst the Russian invasion of Ukraine.

Operation Devi Shakti: Under this Operation, Indians and foreign nationals are being evacuated from Afghanistan following the Taliban’s takeover of the nation.

Operation Raahat: It was launched by the Indian Armed Forces, to evacuate Indian citizens and foreign nationals of 41 countries from Yemen during the 2015 Yemen Crisis.

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Operation Maitri: It was a rescue and relief operation in Nepal carried out by the government of India and Indian armed forces in the aftermath of the 2015 Nepal earthquake.

Operation Safe Homecoming: It was an operation launched by the Indian government in 2011 to evacuate its citizens, fleeing from the Libyan Civil War.

77. **Russia may pull out of Comprehensive Nuclear Test Ban Treaty(CTBT): How the treaty tried — and failed — to stop nuclear testing**

Source: The post is based on the article “**Russia may pull out of Comprehensive Nuclear Test Ban Treaty(CTBT): How the treaty tried — and failed — to stop nuclear testing**” published in “**Indian Express**” on 12th October 2023

What is the News?

Russia might revoke its ratification of the Comprehensive Nuclear Test Ban Treaty(CTBT).

What is the Comprehensive Nuclear Test Ban Treaty(CTBT)?

CTBT is a multilateral treaty that bans all nuclear explosions, whether for military or peaceful purposes.

The treaty was adopted by the **United Nations General Assembly in 1996.**

For the treaty to enter into force, it must be signed and ratified by 44 specific nuclear technology holder countries. But the eight of these 44 countries have not ratified the agreement yet. These eight countries are: China, Egypt, **India**, Iran, Israel, North Korea, Pakistan and the **United States.**

Preparatory Commission for the Comprehensive Nuclear Test-Ban Treaty Organization (CTBTO): It is an international organization established by the States Signatories to the Treaty on 19 November 1996 and has its headquarters in Vienna, Austria.

– The objective of the organization is to achieve the object and purpose of the Treaty, to ensure the implementation of its provisions, including those for international verification of compliance with the Treaty and to provide a forum for consultation and cooperation among Member States.

How did the Comprehensive Nuclear Test Ban Treaty(CTBT) come into being?

Nuclear Tests in 1940's: USA conducted the world's 1st successful nuclear weapons test in 1945 whereas the Soviet Union tested its 1st nuclear weapon in 1949. These tests triggered a decades-long arms race between the two superpowers. Between 1945 and 1996, more than 2,000 nuclear tests were carried out.

Limited Nuclear Test-Ban Treaty (LTBT), 1963: It prohibited nuclear testing in the atmosphere, outer space, and underwater, but underground tests were still permitted.

Threshold Test Ban Treaty (TTBT): The US and Soviet Union agreed to sign the Threshold Test Ban Treaty (TTBT), which established a nuclear threshold by banning the two countries from conducting tests that would produce a yield exceeding 150 kilotons (equivalent to 150,000 tons of TNT).

CTBT: A major breakthrough came after the Cold War ended through the CTBT in 1996 that will prohibit all nuclear weapons tests and other nuclear explosions upon its entry into force.

Did the CTBT stop nuclear testing?

Since the CTBT, 10 nuclear tests have taken place. India conducted two in 1998, Pakistan also two in 1998, and North Korea conducted tests in 2006, 2009, 2013, 2016 (twice) and 2017.

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The United States last tested in 1992, China and France in 1996 and the Soviet Union in 1990. Russia, which inherited most of the Soviet nuclear arsenal, has never conducted a nuclear test.

78. What the GI tag can mean for the cashew industry in Goa

Source: The post is based on the article “What the GI tag can mean for the cashew industry in Goa” published in “Indian Express” on 12th October 2023

What is the News?

Goan cashew (kernel) has been granted the geographical indication (GI) tag.

How did cashew come to Goa and become a contributor to the economy?

Cashew was native to northeast Brazil in Latin America and was introduced to Goa by the Portuguese in the 16th century (1570).

At the time of its introduction on Indian coasts, cashew was known mainly as a crop for afforestation and soil conservation.

However, the economic value of cashew nuts became known about a century after its introduction.

The first cashew factory in Goa started operations in 1926 and the first consignment of cashew kernels was exported in 1930.

By 1961, the cashew processing industry accounted for about 60% of industrial production in Goa, a bulk of which was exported.

What is the significance of Goan Cashew getting GI Tag?

Cashew manufacturers and processors in Goa have said that the GI tag for Goan cashew would help consumers differentiate between authentic Goan cashews and cashews sourced from outside the state which are often marketed as ‘Goan cashews’.

79. Cabinet approves establishment of an autonomous body Mera Yuva Bharat

Source: The post is based on the article “Cabinet approves establishment of an autonomous body Mera Yuva Bharat” published in “PIB” on 12th October 2023

What is the News?

The Union Cabinet has approved the establishment of an autonomous body Mera Yuva Bharat (MY Bharat).

What is Mera Yuva Bharat (MY Bharat)?

Mera Yuva Bharat (MY Bharat) will be an autonomous body.

Purpose: To support youth development and youth-led development with the help of technology.

– To create a platform that encompasses the entire government’s efforts for youth development.

Target group: Mera Yuva Bharat will benefit the youth in the age-group of 15-29 years, in line with the definition of ‘Youth’ in the National Youth Policy.

– In case of programme components specifically meant for adolescents, the beneficiaries will be in the age-group of 10-19 years.

Features: The body will allow youth to get access to resources & connection to opportunities. This will help them become community change agents and nation builders. This will also allow them to act as the Yuva Setu between the Government and the citizens.

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Key expected outcomes: The establishment of MY Bharat will lead to achieve several key outcomes.

These include: 1) enhancing youth leadership skills 2) cultivating them as social innovators and community leaders 3) empowering them to become active drivers of development 4) aligning their aspirations with community needs 5) providing a unified platform for both young individuals and ministries and 6) facilitating two-way communication to connect youth with government initiatives.

80. Why Gaza is known as the world's biggest 'open air prison'

Source: The post is based on the article “Why Gaza is known as the world's biggest ‘open air prison’” published in “Indian Express” on 12th October 2023

What is the News?

Israel has announced a “total blockade” of Gaza, which includes a ban on food, water, fuel and electricity supplies.

Israel is able to impose such conditions on Gaza because Gaza has been under an air, land and sea blockade by Israel since 2007.

Where is Gaza?



Source: BBC

Gaza is a strip located on the Mediterranean Sea. It is one of two Palestinian territories, the other being the occupied West Bank.

Gaza is separated from Israel by a separation barrier and it has a southern border crossing with Egypt.

It is under the control of the militant Islamist group Hamas since 2007.

Since then, Israel and Egypt have restricted the movement of goods and people in and out of Gaza saying their blockade is needed for security reasons.

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Why is Gaza called an Open Air Prison?

According to the U.N. Relief and Works Agency for Palestine Refugees in the Near East, the socioeconomic situation in Gaza has been in steady decline for more than a decade.

Longstanding restrictions on the movement of people and goods to and from Gaza have made living conditions extremely difficult.

Israel prevents all access to and from the Gaza Strip by sea and air. Movement of people and goods is restricted to three crossings: Rafah crossing, controlled by Egypt and Erez and Kerem Shalom crossings, controlled by Israel.

Around 63% of the population of Gaza is considered food-insecure, and 81% are living in poverty. Access to clean water and electricity were at crisis levels even before this month's hostilities.

Hence, due to these conditions created by the blockade, many experts refer to Gaza as an "open air prison".

81. Watermeal: Earth's tiniest flowering plant could feed and oxygenate astronauts in space

Source: The post is based on the article "**Watermeal: Earth's tiniest flowering plant could feed and oxygenate astronauts in space**" published in "**Wion**" on 12th October 2023

What is the News?

Scientists from Thailand are conducting groundbreaking research into the potential of Watermeal plants as a source of nutrition and oxygen for astronauts.

What is Watermeal?



Watermeal is the world's smallest flowering plant. It is known for its tiny size and floating habit on water bodies. It lacks roots, stems, or leaves.

Watermeal thrives in quiet, nutrient-rich freshwater environments like ponds, lakes and marshes.

It is also a producer of oxygen through photosynthesis and a rich source of protein. In Thailand, it has been part of the local diet for generations.

Why can watermeal be a source of nutrition and oxygen for astronauts?

Firstly, watermeal doesn't have any roots, stems or leaves. It is basically just a sphere floating on a body of water. That means we can focus directly on the effects that gravity shifts will have on its growth and development.

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Secondly, as a complete protein, it offers astronauts a sustainable source of essential amino acids.

Thirdly, watermeal is a producer of oxygen. This means it can be vital for life support systems in space.

82. Cabinet approves royalty rates for mining of three critical and strategic minerals- Lithium, Niobium and Rare Earth Elements (REEs)

Source: The post is based on the article “**Cabinet approves royalty rates for mining of three critical and strategic minerals- Lithium, Niobium and Rare Earth Elements (REEs)**” published in “**PIB**” on **12th October 2023**

What is the News?

The Union Cabinet has approved a royalty rate for lithium, niobium, and for Rare Earth Elements (REEs).

Background:

Recently, the Mines and Minerals (Development and Regulation) Amendment act, 2023 was passed by the Parliament.

The amendment delisted six minerals including Lithium and Niobium, from the list of atomic minerals, thereby allowing grant of concessions for these minerals to the private sector through auction.

Further, the amendment provided that mining lease and composite license of 24 critical and strategic minerals including Lithium, Niobium and REEs (not containing Uranium and Thorium) shall be auctioned by the Central Government.

Why have new royalty rates been approved for lithium, niobium and Rare Earth Elements (REEs)?

The Second Schedule of the MMDR Act provides royalty rates for various minerals.

The act currently specifies a royalty rate of 12% of the average sale price (ASP) for minerals that are not specifically listed in that Schedule. This rate is much higher than global benchmarks.

Hence, that's why new royalty rates have been specified by amending the Second Schedule of the Mines and Minerals (Development and Regulation) Act, 1957.

These amendments effectively aligns India's royalty rates with global benchmarks and paves the way for commercial exploitation of these minerals through auctions, which can be conducted by the Centre or states.

What are Lithium, Niobium and Rare Earth Elements(REEs)?

Lithium: It is an alkali metal. It is one of the key components in rechargeable batteries that find usage in mobiles, laptops, electric vehicles, and medical devices like pacemakers. It is also used in energy storage solutions.

Rare earth elements: It refers to a group of 17-odd minerals that cover ones like scandium, yttrium, and cerium, among others. Most of these are used as catalysts and magnets, with the most common usage being in alloys, glass, electronics, petroleum extraction, electric motors of hybrid and EVs and wind turbines, among others.

Niobium: It is a silvery metal with a layer of oxide on its surface which makes it resistant to corrosion.

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- It is used in alloys, including stainless steel, to improve their strength, particularly at low temperatures.
- Alloys containing niobium are used in jet engines, beams and girders for buildings, and oil and gas pipelines. Given its superconducting properties, it is also used in magnets for particle accelerators and MRI scanners.
- The main source of Niobium is the mineral columbite, which is found in countries such as Canada, Brazil, Australia, and Nigeria.

83. 3.21 lakh appeals pending with Information Commissions: report

Source: The post is based on the article “3.21 lakh appeals pending with Information Commissions: report” published in “The Hindu” on 12th October 2023

What is the News?

The ‘Report Card on the Performance of Information Commissions in India, 2022-23’ has been released.

The report has been compiled based on the performance of Information Commissions across the country and on information accessed under the Right to Information (RTI) Act by the Satark Nagrik Sangathan (SNS), a citizens’ group working to promote transparency and accountability in governance.

What are the key findings of the report?

Pending appeals: More than 3 lakh appeals and complaints are pending in 27 State Information Commissions across the country.

– **Note:** In 2019, there were 2.1 lakh pending appeals/complaints. This number increased to 2.8 lakh in 2021 and then surpassed three lakh by 2022.

Vacancies: Four Information Commissions, namely Jharkhand, Telangana, Mizoram and Tripura are defunct because no new Information Commissioners were appointed after the incumbents left their positions.

– Further, six Information Commissions are currently without a head including the Central Information Commission and the State Information Commissions of Manipur, Chhattisgarh, Maharashtra, Bihar and Punjab.

Time taken to dispose of an appeal: West Bengal takes around 24 years and one month to dispose of an appeal. In comparison, Uttar Pradesh may take seven months to clear an appeal.

Maharashtra with the highest pendency cases may take four years and three months to clear a case.

84. Pharmacopoeial Discussion Group welcomes Indian Pharmacopoeia Commission as a member

Source: The post is based on the article “Pharmacopoeial Discussion Group welcomes Indian Pharmacopoeia Commission as a member” published in “PIB” on 14th October 2023

What is the News?

Indian Pharmacopoeia Commission (IPC) has joined as a member of the Pharmacopoeial Discussion Group (PDG).

IPC officially joined as a member of PDG at the PDG’s Annual Meeting in Hyderabad.

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What is the Indian Pharmacopoeia Commission(IPC)?

[Click Here to read](#)

What is Pharmacopoeial Discussion Group(PDG)?

PDG was established in 1989 by the European Union(EU), Japan and United States Pharmacopoeial Convention.

The World Health Organization joined it as an observer in 2001.

Objective: To reduce the challenges faced by drug manufacturers who have to conduct tests differently and meet various quality standards to comply with drug regulations that vary from country to country.

What are the benefits of the Indian Pharmacopoeia Commission joining Pharmacopoeial Discussion Group(PDG)?

Enhances the international visibility and recognition of the Indian Pharmacopoeia.

Leads to the production of high-quality pharmaceutical products that meet global standards benefiting both domestic and export markets.

Will enable the Indian Pharmacopoeia commission to collaborate and align pharmacopoeial standards with major international regulatory authorities.

Helps improve the acceptance of Indian medicinal products in global markets.

Helps reduce trade barriers and facilitate the global trade of pharmaceutical products.

85. 'Project Nilgiri Tahr' launched in Tamil Nadu

Source: The post is based on the article "Project Nilgiri Tahr launched in Tamil Nadu" published in "The Hindu" on 14th October 2023

What is the News?

Tamil Nadu has launched 'Project Nilgiri Tahr'.

What is Project Nilgiri Tahr?

Launched by: Tamil Nadu

Objectives: 1) To develop better understanding of Nilgiri Tahr population, distribution and ecology 2) To re-introduce Nilgiri Tahr to their historic habitats 3) To address the threats to Nilgiri Tahr and 4) To increase awareness among public about the Nilgiri Tahr.

Activities under the project: The project will involve doing surveys every six months, keeping track of Nilgiri Tahr, helping sick ones, training support to staff and restoration of Shola grassland where Nilgiri Tahr survives.

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What is Nilgiri Tahr?



Nilgiri Tahr is an ungulate **endemic to the Western Ghats**.

It is the **only mountain ungulate in southern India** amongst the 12 species present in India.

It is also the **state animal of Tamil Nadu**.

They are known for their gravity defying skills in climbing steep cliffs. That's why they are called "**Mountain Monarch**".

IUCN Status: Endangered

Wildlife (Protection) Act of India, 1972: Schedule I

Significance: There are multiple references to **Nilgiri Tahr in the Sangam Tamil literature**. Two epics — Silappathikaram and Sivakasindamani — mention descriptions of the Nilgiri Tahr and its habitat.

The play, **Courtallar Kuravanji** written by Trikoondarasappa Kavirayar in 1600-1700 A.D. describes Nilgiri Tahr in a song "Kurathi malai valam koral".

The **late Mesolithic (10,000-4,000 BC) paintings** also highlight the significance of the Tahr in folklore, culture and life.

86. UN General Assembly elects 15 new members to Human Rights Council

Source: The post is based on the article "**UN General Assembly elects 15 new members to Human Rights Council**" published in "**UN**" on **14th October 2023**

What is the News?

The UN General Assembly has elected 15 new countries to serve on the Human Rights Council.

What is the United Nations Human Rights Council (UNHRC)?

United Nations Human Rights Council (UNHRC) is an intergovernmental body within the United Nations system.

Created in: 2006 to replace the United Nations Commission on Human Rights.

Mandate: It is responsible for 1) strengthening the promotion and protection of human rights around the globe and 2) addressing situations of human rights violations and making recommendations on them.

Members: It is composed of 47 member states elected by the United Nations General Assembly.

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– The term of each seat is three years, and no member may occupy a seat for more than two consecutive terms.

– The seats are distributed along the following lines: a) 13 for the African Group b) 13 for the Asia-Pacific Group c) 6 for the Eastern European Group d) 8 for the Latin American and Caribbean Group e) 7 for the Western European and Others Group.

Universal Periodic Review (UPR): It is a unique mechanism within the UNHRC designed to assess and review the human rights records of all United Nations member states.

Headquarters: Geneva, Switzerland.

87. Seven MeitY AI Working Groups submit first edition of IndiaAI Report

Source: The post is based on the article “Seven MeitY AI Working Groups submit first edition of IndiaAI Report” published in “PIB” on 14th October 2023

What is the News?

Seven working groups of the Ministry of Electronics and Information Technology (MeitY) have released the first edition of **IndiaAI report**.

What is IndiaAI?

IndiaAI is the **National AI Portal of India**.

Launched in: 2020

Launched by: It is a joint initiative by the Ministry of Electronics and IT, National e-Governance Division, and NASSCOM.

Key Features: The portal serves as a hub for AI-related knowledge, research, and collaboration.

– It provides news, articles and information about AI and provides insights into the global and Indian AI landscape.

– It also offers resources and career guidance for students, entrepreneurs, professionals and executives interested in AI.

What are the key recommendations given by IndiaAI report? The report suggests using public-private partnerships to:

1) produce semiconductors for AI purposes.

2) create GPU clusters, which are essential for AI applications and make them accessible to Indian startups and researchers.

What is the Global India AI Summit?

To be organized by: Ministry of Electronics and Information Technology.

Purpose: The summit will discuss various topics related to artificial intelligence (AI), such as next-gen learning, AI applications in areas like governance, healthcare, and electric vehicles, future AI research, AI computing, investment opportunities and developing AI talent.

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88. Indian Railways' PSUs, RITES Ltd and IRCON granted Navratna status

Source: The post is based on the article “Indian Railways’ PSUs, RITES Ltd and IRCON granted Navratna status” published in “PIB” on 14th October 2023

What is the News?

Ircon International Limited (IRCON) and RITES Ltd(RITES) have been announced as 15th and 16th Navratna respectively.

These are both Central Public Sector Enterprise (CPSE) under the Ministry of Railways.

What is Navratna Status?

The Government of India had introduced the ‘Navratna’ status in 1997.

Aim: To identify Central Public Sector Enterprises(CPSEs) that had comparative advantages and to support them in their drive to become global giants.

Criteria: CPSEs fulfilling the following criteria are eligible to be considered for grant of Navaratna status:

- Having Schedule ‘A’ and Miniratna Category-1 status.
- Having obtained an ‘excellent’ or ‘very good’ MOU rating in three of the last five years.
- Having a composite score of 60 or above in six selected performance indicators such as Net Profit to Net worth, Manpower Cost to total Cost of Production, Earning Per Share among others.

Benefits of Getting Navratna Status:

- Financial independence to invest up to ₹1,000 crore without seeking approval from the central government.
- Can invest up to 15% of their net worth on a single project or 30% of their net worth in a given year, subject to a cap of ₹1,000 crore.

Navratna CPSEs: 1) Bharat Electronics Limited 2) Container Corporation of India Limited 3) Engineers India Limited 4) Hindustan Aeronautics Limited 5) Mahanagar Telephone Nigam Limited 6) National Aluminium Company Limited 7) NBCC (India) Limited 8) NMDC Limited 9) NLC India Limited 10) Oil India Limited 11) Power Finance Corporation Limited 12) Rashtriya Ispat Nigam Limited 13) Rural Electrification Corporation Limited 14) Shipping Corporation of India Limited 15) Ircon International Limited (IRCON) and 16) RITES Ltd(RITES).

What is Maharatna Status?

[Click Here to read](#)

89. RISE Initiative: World Bank and Japan collaborate to boost mineral investments and clean energy jobs for developing countries

Source: The post is based on the article “RISE Initiative: World Bank and Japan collaborate to boost mineral investments and clean energy jobs for developing countries” published in “The Print” on 14th October 2023

What is the News?

The World Bank has partnered with several countries to launch the Resilient and Inclusive Supply-chain Enhancement(RISE) initiative.

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What is the RISE Initiative?

Launched by: World Bank in partnership with Japan, Italy, Republic of Korea, Canada and United Kingdom

Aim: To deal with two important problems: creating jobs and addressing climate change.

Focus: The initiative will focus on assisting emerging markets and developing countries in expanding their clean-energy production and increasing their involvement in the minerals industry.

– This effort is expected to stimulate economic growth and generate quality local jobs, ultimately contributing to poverty alleviation.

Funding: The initiative has received substantial financial support from Japan, Canada, Italy, the Republic of Korea, and the United Kingdom

90. ImmunoACT's cell therapy to treat blood cancer gets CDSCO nod

Source: The post is based on the article “ImmunoACT's cell therapy to treat blood cancer gets CDSCO nod” published in “The Hindu” on 14th October 2023

What is the News?

Immunoadoptive Cell Therapy Private Limited (Immune ACT) has received Central Drugs Standard Control Organisation (CDSCO) approval for the ‘first’ humanized Chimeric Antigen Receptor T cell (CAR-T cell) therapy named **NexCAR19**.

Note: ImmunoACT is an IIT Bombay incubated company.

What is NexCAR19?

NexCAR19 is an indigenously developed **CAR-T cell therapy**.

Developed by: IIT Bombay and Tata Memorial Centre.

The therapy has been approved for the treatment of relapsed / refractory B-cell lymphomas and leukemia.

What is CAR-T cell therapy?

TREATMENT IN INDIA WOULD COST A 10TH OF ₹3-4CR IN US

CANCER & TREATMENT

- Cancer is a disease in which some cells grow uncontrollably and destroy body tissues
- It is the cause for nearly 1 in 6 deaths across the world

NEWER THERAPIES / IMMUNOTHERAPY

- Immunotherapies, designed to put delicate molecules using body's immune system to attack cancer cells
- It's early days yet, but it is known to be effective against tumors in some people with advanced cancer
- Results can last for a few years in a small percentage of patients

CAR T CELLS

- Another emerging immunotherapy called CAR-T cell therapy
- It is used for blood cancers, leukemia, some forms of lymphoma, and multiple myeloma
- It has also been called a "living drug"

THE PROCESS

- White blood cells include T cells whose main task is to tackle specific foreign particles
- CAR-T stands for chimeric antigen receptors that are made in the laboratory
- T cells are collected from the patient and re-engineered in a laboratory
- Millions of the re-engineered T cells are made before being infused back into the patient
- The re-engineered cells produce proteins on their surface called chimeric antigen receptors (CARs)
- CARs bind to specific proteins (antigens) on the surface of cancer cells
- Ideally, the CAR-T cells should continue to multiply in the patient's body and recognize and kill any cancer cells

DRAWBACKS

- So far, long-term survival has been seen in less than half of the patients treated
- They are costly, requiring nine weeks for a single infusion

NOW

- A "first in India" gene therapy has been developed by IIT Bombay and Tata Memorial Hospital
- NBT-119 for B-cell lymphoma and 4 patients (under 25 years) for leukemia
- Doctors said the safety trials were encouraging
- Treatment costs ₹3-4cr in the US, but would cost a 10th in India

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Source: TOI

CAR T-cell therapy, or chimeric antigen receptor T-cell therapy is a major breakthrough in cancer treatment.

Unlike chemotherapy which involves taking drugs, CAR T-cell therapies use a patient's own cells. They are modified in the laboratory to activate T-cells and target tumor cells.

Currently, this therapy is offered as a second-line treatment for late-stage leukaemia and lymphoma when patients do not respond to conventional treatments like chemotherapy and bone marrow transplants or experience relapsed cancer.

How does CART-T cell therapy work?

First, a patient's T cells are extracted from their blood. The extracted T cells are then genetically modified in a laboratory.

Scientists then introduce a synthetic gene into the T cells, which encodes a chimeric antigen receptor (CAR). This receptor is designed to target a specific protein or antigen found on the surface of cancer cells.

After genetic modification, the T cells are cultured and allowed to multiply to create a larger population of these modified cells.

Once a sufficient number of CAR T cells have been generated, they are infused back into the patient's bloodstream. The CAR T cells then circulate throughout the body, seeking out and binding to the cancer cells with the targeted antigen.

When the CAR T cells encounter cancer cells with the specific antigen, they become activated and attack the cancer cells. This immune response can lead to the destruction of the cancer cells.

91. Minister of Electronics releases draft National Strategy on Robotics for public consultation

Source: The post is based on the article “Minister of Electronics releases draft National Strategy on Robotics for public consultation” published in “PIB” on 14th October 2023

What is the News?

The Ministry of Electronics and Information Technology (MeitY) has released the Draft National Strategy on Robotics.

What is the Draft National Strategy on Robotics?

Aim: To harness the potential of robotic technology and support its development to make India a global leader in robotics.

Objectives: To make India a global robotics leader by 2030.

– To build upon the mandates of the Make in India 2.0 plans which identified robotics as one of the 27 sub-sectors to further enhance India's integration in the global value chain.

Core sectors: The strategy has identified 1) manufacturing 2) agriculture 3) healthcare and 4) national security as the four core sectors to prioritize robotics automation.

Implementation: The National Strategy on Robotics is proposed to be undertaken as the 'National Robotics Mission'.

– This mission will be implemented through the establishment of the Robotics Innovation Unit (RIU) as an institutional framework under IndiaAI.

Recommendations: Create Centers of Excellence (CoEs) for research in robotics.

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- Promote private sector participation in key robotic sectors.
- Support startups, utilize research capabilities in universities and establish dedicated zones for robotics industries.
- Fiscal interventions to facilitate local manufacturing of robotics hardware.
- Initially, the government should be a major buyer of Indian-made robotic systems. This can be done through a Public Procurement Policy for Robotics which encourages local production by favoring suppliers with a minimum domestic content requirement.

Challenges in India's robotics sector:

- India relies heavily on importing robotics components, mainly from China and Japan.
- The cost of robotics hardware components is high.
- Insufficient investments in research and development hinder progress.
- Absence of dedicated legislation for robotics or allied technologies such as artificial intelligence.

92. ICRISAT joins One CGIAR global initiative

Source: The post is based on the article “**ICRISAT joins One CGIAR global initiative**” published in “**Hindu Businessline**” on **12th October 2023**

What is the News?

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) has joined the One CGIAR integrated partnership.

This partnership involves the CGIAR System Organization and 12 One CGIAR research centres (including ICRISAT).

The aim behind this partnership is to work together to address climate-related challenges in food, land and water systems.

What is CGIAR (Consortium of International Agricultural Research Centres)?

CGIAR was established in 1971. It is a network of publicly-funded agri-food systems research centres.

Aim: To reduce rural poverty, increase food security, improve human health and nutrition, and sustainable management of natural resources.

Members: It consists of 15 international agricultural research institutes.

What is the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)?

ICRISAT is a non-profit, non-political organization founded in 1972. Its charter was signed by the FAO and the UNDP.

Aim: To conduct agricultural research for development in Asia and sub-Saharan Africa.

ICRISAT holds a special status as a UN organization in India. This makes it eligible for special immunities and tax privileges.

Headquarters: Patancheru, Hyderabad

– It also has regional centers in Mali and Kenya and research stations in several African countries.

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Recognition: ICRISAT has been awarded the 2021 Africa Food Prize, for work that has improved food security across 13 countries in sub-Saharan Africa.

93. Notification issued for Green Credit Program (GCP) and Ecomark scheme Under LiFE Initiative

Source: The post is based on the article “Notification issued for Green Credit Program (GCP) and Ecomark scheme Under LiFE Initiative” published in “PIB” on 14th October 2023

What is the News?

Government of India has notified two initiatives Green Credit Programme(GCP) and Ecomark scheme.

What is the Green Credit Programme(GCP)?

Green Credit Programme(GCP) is a market-based mechanism that aims to incentivize voluntary environmental actions by various stakeholders like individuals, communities, private sector industries and companies.

Features of the programme: The program focuses on two key activities: water conservation and afforestation.

- These activities can earn green credits certificates.
- The certificates can be traded – that is, bought and sold – on a trading platform.
- To obtain these Green Credits, individuals and entities must register their actions through the government’s website. The Administrator verifies the activities and will then grant a Green Credit certificate.

Implementing and Monitoring Agency: The Indian Council of Forestry Research and Education (ICFRE)

What is Ecomark Scheme?

Ecomark Scheme provides accreditation and labelling for household and consumer products that meet specific environmental criteria while maintaining quality standards as per Indian norms.

Products accredited under this scheme will adhere to specific environmental criteria ensuring minimal environmental impact.

Administered by: Central Pollution Control Board in partnership with Bureau of Indian Standards(BIS).

Significance: Will build consumer awareness of environmental issues and encourage eco-conscious choices.

- Motivates manufacturers to shift towards environmentally friendly production.

94. Railways develops anti-freeze flushes and fuel tanks for journeys in J&K

Source: The post is based on the article “Railways develops anti-freeze flushes and fuel tanks for journeys in J&K” published in “The Hindu” on 16th October 2023

What is the News?

Indian Railways is constructing the Udhampur-Srinagar-Baramulla Rail Link (USBRL) project.

But the project is facing challenges due to sub-zero temperatures in the Jammu and Kashmir region during winter. Due to this, water and fuel in train systems can freeze, causing problems for toilets, taps and safety.

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What is Udhampur- Srinagar-Baramulla Rail Link (USBRL) project?



Source: Indian Express

Udhampur-Srinagar-Baramulla Rail Link Project(USBRL) is 272 km-long. The project connects Udhampur to Baramulla.

It aims to connect Kashmir Valley with the rest of the country by a railway line.

It includes 38 tunnels with a combined length of 119 kilometers. The longest tunnel in the project is **Tunnel T-49**, which is 12.75 kilometers long making it **India's longest transportation tunnel**.

There are 927 bridges in total. One of the bridges is **Chenab Bridge** which will be the **highest railway bridge in the world**.

Indian railway's **first cable-stayed bridge** is also being constructed on Anji Khad.

How is Indian Railways planning to overcome challenges in constructing Udhampur- Srinagar-Baramulla Rail Link (USBRL) project?

Engineers at the Rail Coach Factory (RCF) have developed indigenous innovations to address these challenges.

Preventing Water Freezing: It has designed double-walled composite insulated water tanks with capacities ranging from 450 to 685 liters.

- These tanks have a design similar to thermoplastic bottles, with two walls and a foam insulation layer that traps air.
- This can keep water in liquid form for 16 to 20 hours, even in sub-zero conditions, ensuring toilets and taps function properly.

Dealing with Frozen Supply Pipelines: To prevent water in supply pipelines from freezing, RCF adopted technology from the defense services.

- They are using heated pipes with a distributed heating system covered by insulation. This technology maintains water in a liquid state at temperatures between five to eight degrees Celsius.

Efficient Energy Use: Geysers are installed at the point of use in toilets, ensuring that only the necessary amount of water is heated, reducing energy wastage.

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95. Study estimates count of UAVs required for the three Services

Source: The post is based on the article “Study estimates count of UAVs required for the three Services” published in “The Hindu” on 16th October 2023

What is the News?

Chief of Defence Staff, has initiated two studies on major military platforms used by the three Services in India.

The studies focus on unmanned aerial vehicles(UAVs) and armoured helicopters.

The goal of these studies is to optimize the number of platforms needed, allocate resources effectively and avoid duplication in military acquisitions.

What are the key findings of the studies?

Study on UAVs: There is a requirement of 31 MQ-9B high-altitude long-endurance (HALE) UAVs and 155 medium-altitude long-endurance (MALE) UAVs.

The procurement of the MQ-9B deal is in progress. But the allocation of the 155 MALE UAVs among the three Services is yet to be determined.

– **Impact on Existing Fleet:** The three Services currently operate Israeli Heron MALE UAVs. The study outcome may lead to a major upgrade in UAVs.

Helicopters: Indian Army and the Air Force are inducting the initial batch of 15 Light Combat Helicopters (LCH).

– The Cabinet Committee on Security has also approved the procurement of 39 AH-64 Apache attack helicopters from the U.S.

What is AH-64 Apache?

AH-64 Apache is the world’s most advanced multi-role combat helicopter.

Country of Origin: U.S

Manufacturer: Boeing

Features: It is designed and equipped with an open systems architecture to incorporate the latest communications, navigation, sensor, and weapon systems.

– It also has greater thrust and lift, joint digital operability, improved survivability and cognitive decision aiding.

96. Finland investigates suspected sabotage of Baltic-connector gas pipeline

Source: The post is based on the article “Finland investigates suspected sabotage of Baltic-connector gas pipeline” published in “BBC” on 16th October 2023

What is the News?

Finland is investigating potential sabotage of the Baltic-connector gas pipeline.

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What is the Baltic-connector gas pipeline?



Baltic-connector gas pipeline is a natural gas pipeline between Finland and Estonia.

The gas pipeline was opened in 2020. It is used to send gas between Estonia and Finland, depending on which country is most in need at any point.

The pipeline has been Finland's only natural gas import channel since Russian imports were stopped in 2022.

Where is the Baltic Sea?



Source: World Atlas

The Baltic Sea is a part of the Atlantic Ocean.

Surrounded by: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia, Sweden and the North and Central European Plain.

What are Baltic States?

Baltic states is a geopolitical term typically used to refer to three countries namely: Estonia, Latvia and Lithuania.

All three countries are members of NATO, the European Union, the Eurozone, and the OECD.

These countries are also classified as high-income economies by the World Bank and maintain a very high Human Development Index.

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97. Centre likely to raise age of retirement of scientists to 65

Source: The post is based on the article “Centre likely to raise age of retirement of scientists to 65” published in “The Hindu” on 16th October 2023

What is the News?

The Ministry of Science and Technology is considering a plan to increase the retirement age of scientists from 60 to 65.

What is the current retirement age of scientists?

Currently, Scientists in most wings of the government retire at 60. But those working at the Indian Council of Agricultural Research (ICAR) and the Indian Council of Medical Research (ICMR) retire at 62.

Why is the government planning to increase the retirement age of scientists?

Government is planning to increase the retirement age of scientists to prevent experienced scientists from leaving for universities and institutes where the retirement age is already 65.

Was this proposal on increasing the retirement age of scientists considered earlier?

In 2015, the Government was planning to increase the retirement age of scientists but it was not implemented.

So far, the government has been giving scientists who are near retirement, ‘extensions’ that may increase their tenure by two or up to five years.

Government has also opted for short-term contracts to retain valuable senior employees.

98. 1st P20 Summit hosted by India has been the most successful P20 Summit ever: Lok Sabha Speaker

Source: The post is based on the article “1st P20 Summit hosted by India has been the most successful P20 Summit ever: Lok Sabha Speaker” published in “PIB” on 16th October 2023

What is the News?

The Prime Minister inaugurated the 9th G20 Parliamentary Speakers’ Summit(P20) in New Delhi.

What is the P20 Summit?

Parliament 20(P20) Engagement Group was started during Canada’s G20 Presidency in 2010.

The group is led by Speakers from Parliaments of G20 countries.

Aim: To bring a parliamentary dimension to global governance, raise awareness, build political support for international commitments and ensure that these are effectively translated into national realities.

Who hosted the 9th P20 Summit?

Hosted by: Parliament of India in cooperation with Inter-Parliamentary Union (IPU)

Theme: ‘Parliaments for One Earth, One Family, One Future’.

The summit hosted discussions on four subjects: 1) Accelerating SDGs 2) Sustainable Energy Transition 3) Women led Development and 4) Transformation in Peoples’ Lives through Public Digital Platforms.

What is the Inter-Parliamentary Union(IPU)?

[Click Here to read](#)

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99. World Health Summit 2023

Source: The post is based on the article “World Health Summit 2023” published in “PIB” on 16th October 2023

What is the News?

India’s Union Minister for Health and Family Welfare attended the World Health Summit 2023.

What is the World Health Summit?

World Health Summit is the unique international strategic forum for global health

Founded in: 2009 on the occasion of the 300th anniversary of Berlin’s Charité Hospital.

Held under: It is held under the patronage of the German Chancellor, President of the Republic of France, President of the European Commission and Director-General of the World Health Organization(WHO).

Held at: annually held in Berlin, Germany

Aim: To set the agenda for a healthier future by inspiring innovative solutions for better health and wellbeing for all.

Theme for 2023: “A Defining Year for Global Health Action.”

What are the key highlights from the Health Minister’s address at the World Health Summit 2023?

Union Minister highlighted the steps taken by India to reduce the prevalence and impact of Non-communicable diseases (NCDs).Some of these steps are:

National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD): It was launched under the National Health Mission (NHM) in 2010. It aims to strengthen infrastructure, human resource development, health promotion, early diagnosis, management and referral.

75/25 initiative: It is aimed at screening and providing standard of care for 75 million individuals with hypertension and diabetes by 2025.

Budget 2023-24: The Outcome Budget document of the Union Budget for 2023-2024 has included hypertension and diabetes treatment as output indicators for the first time.

Population-Based Screening(PBS): It is organized under the umbrella of Comprehensive Primary Health Care (CPHC) across Ayushman Bharat- Health and Wellness Centres (AB-HWC).

– The individuals in the age groups of 30 years and above are targeted for risk assessment and screening of common NCDs (hypertension, diabetes, oral cancer, breast cancer and cervical cancer).

National NCD portal: It is being used for prevention, control, screening and management of common NCDs.

– Primary-level information is captured through this portal at public health facilities for reporting and monitoring individual-wise screening and compliance of treatment for NCDs.

100. World Organisation for Animal Health Approves Self Declaration of Freedom from Avian Influenza in Indian Poultry Compartments

Source: The post is based on the article “World Organisation for Animal Health Approves Self Declaration of Freedom from Avian Influenza in Indian Poultry Compartments” published in “PIB” on 16th October 2023

What is the News?

World Organisation for Animal Health(WOAH) has approved India’s self-declaration of freedom from Highly Pathogenic Avian Influenza(HPAI) in specific poultry compartments.

What is Highly Pathogenic Avian Influenza(HPAI)?

Avian influenza is also known as ‘bird flu’.It is a disease primarily affecting birds.It is caused by a virus of the Orthomyxoviridae family.

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It can generally be classified into two categories:

- **The Low Pathogenic Avian Influenza Virus (LPAIV)** can cause a mild illness, often unnoticed or without any symptoms.
- **The Highly Pathogenic Avian Influenza Virus (HPAIV)** causes serious illness in birds that can spread rapidly, resulting in high death rates in different species of birds.

Note: Most of the influenza viruses circulating in birds are not zoonotic. However, some HPAI strains have the ability to infect humans.

Highly Pathogenic Avian Influenza(HPAI) in India: HPAI was first detected in India in the state of Maharashtra in 2006.

– Since then, India has experienced annual outbreaks of HPAI in different regions, leading to substantial economic losses.

India's approach to controlling HPAI: India follows a “detect and cull” policy as outlined in the National Action Plan for Prevention, Control, and Containment of Avian Influenza (revised – 2021).

– The policy approach includes the 1) humane destruction of infected and exposed animals, eggs, feed, litter and other contaminated materials and 2) restricting the movement of poultry and poultry products, disinfection and clean-up of infected premises.

Note: India does not permit vaccination against HPAI.

What is the significance of WOAAH approving India's self-declaration of freedom from HPAI?

This approval by WOAH signifies India's commitment to international biosecurity standards.

It will also contribute to enhancing the export potential of Indian poultry and poultry products, including meat and eggs.

Note: India is the third-largest producer of eggs and the fifth-largest producer of poultry meat globally.

101. How is GI-tagged Jaderi namakatti made in Tamil Nadu?

Source: The post is based on the article “**How is GI-tagged Jaderi namakatti made in Tamil Nadu?**” published in “**The Hindu**” on 17th October 2023

What is the News?

Jaderi namakatti from Tamil Nadu has been recently given the Geographical Indications(GI) Tag.

What is Jaderi Namakatti?

Jaderi Namakatti is a type of clay stick that is white in colour. They are usually available in finger-like shape with a smooth texture.

Who makes it?

People from a small village called Jaderi in Tiruvannamalai district, Tamil Nadu make it.

What is it made from?

The namakatti is made from the rich deposit of hydrous silicate minerals. The clay is processed and shaped into finger-like sticks.

The production of Namakatti depends on the weather. It needs a lot of sunlight to dry properly.

Significance: Jaderi Namakatti are used to adorn the foreheads of idols, men and temple elephants.

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102. Anti-money laundering: Sebi releases fresh set of guidelines

Source: The post is based on the article “Anti-money laundering: Sebi releases fresh set of guidelines” published in “Livemint” on 17th October 2023

What is the News?

The Securities Exchange Board of India (SEBI) has released a set of amendments to strengthen anti-money laundering (AML) standards and combat finance terrorism (CFT).

These guidelines are based on rules established under the Prevention of Money Laundering Act of 2002.

What are the key amendments introduced by SEBI to strengthen anti-money laundering (AML)?

Measures needed: If a host country doesn't follow the same rules as the home country when it comes to preventing money laundering and financing terrorism, financial groups need to take extra steps to manage these risks.

Financial groups must set up company-wide programs to combat money laundering. These rules apply to all branches and subsidiaries mostly owned by the financial group.

The programs include:

- Creating policies and procedures to share information needed to stop money laundering and terrorist funding.
- Providing customer account and transaction information from branches and subsidiaries when necessary for anti-money laundering and counter-terrorism purposes. This includes analyzing transactions that seem unusual.

Disclosing status: In case of a trust, the reporting entity will ensure that trustees disclose their status at the time of commencement of an account-based relationship.

Beneficial Ownership: In case the client is a partnership firm, the beneficial owner would be the one who has ownership of more than 10% of capital or profits of the partnership or who exercises control through other means. Earlier, the requirement was 15%.

103. Magnetic-Stress as a new chauffeur of metal-insulator transition

Source: The post is based on the article “Magnetic-Stress as a new chauffeur of metal-insulator transition” published in “PIB” on 16th October 2023

What is the News?

Scientists have found the reason behind how certain materials can change from being good conductors of electricity (metallic) to insulators (materials in which electric current does not flow freely).

What is Metal-insulator transition (MIT)?

Normally, materials are either good at conducting electricity (metallic) or they block it (insulators).

But some special materials can switch between these two states when we change things like temperature or pressure. This switching is known as a metal-insulator transition (MIT).

This phenomenon was first discovered in magnetite in 1939.

Why does Metal-insulator transition (MIT) happen?

Scientists have found the reason behind how certain materials can change from being good conductors of electricity (metallic) to insulators.

They used one of the metal-insulator transition (MIT) materials called chromium nitride (CrN) to demonstrate this.

They have found that the magnetic stress caused by the arrangement of atoms in a material can be the reason for this transition of materials from metallic to insulators.

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What is the significance of these findings?

These findings can lead to a better understanding of how different factors like magnetism, electrical charge, and atomic arrangement work together in materials.

It could also help us discover new materials that can switch between being conductors and insulators.

104. New toad species discovered in Dampa tiger reserve of Mizoram

Source: The post is based on the article “New toad species discovered in Dampa tiger reserve of Mizoram” published in “Hindustan Times” on 17th October 2023

What is the News?

Scientists have discovered a new species of toads named *Bufoides bhupathyi*.

Note: Toad is a common name for certain frogs. They are characterized by dry, leathery skin, short legs, and large bumps covering the parotoid glands.

What is *Bufoides bhupathyi*?



Source: Hindustan Times

Bufoides bhupathyi is a toad species. It has been discovered in the **Dampa tiger reserve of Mizoram**.

Named after: S Bhupathy, a prominent herpetologist who served as the principal scientist at the Salim Ali Centre for Ornithology and Natural History in Coimbatore.

Features: It differs from other similar species in terms of colouration, skin and the presence of depressed parotid glands.

– It is currently known to exist only in the Dampa tiger reserve. Hence, it is likely to meet the criteria for being assessed as critically endangered according to the International Union for Conservation of Nature (IUCN).

Significance: This marks the third species in a genus found in the north-eastern region of India.

– The previous two species, *Bufoides meghalayanus* and *Bufoides kempii* were found in Meghalaya.

105. Gulf of Guinea: Indian Naval Ship SUMEDHA visits Nigeria

Source: The post is based on the article “Gulf of Guinea: Indian Naval Ship SUMEDHA visits Nigeria” published in “PIB” on 17th October 2023

What is the News?

The Indian Navy Ship (INS) SUMEDHA has made a port call to Nigeria to improve existing bilateral relations as well as security in the Gulf of Guinea.

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Where is the Gulf of Guinea?



The Gulf of Guinea is the northeasternmost part of the Atlantic Ocean.

Null Island, defined as the intersection of the Equator and Prime Meridian (zero degrees latitude and longitude) is in the gulf.

Among the many rivers that drain into the Gulf of Guinea are the Niger and the Volta.

The Gulf of Guinea is known for its rich maritime resources, including oil and natural gas. It is also an important region for international shipping and trade.

However, the Gulf of Guinea is also known as the world's hotspot for maritime piracy. Over the last 15 years container ships, fishing vessels, and oil tankers in the region have been the targets of numerous armed attacks and kidnappings.

What is INS Sumedha?

INS Sumedha is the third vessel of the indigenously designed 'Saryu' Class Naval Offshore Patrol Vessels (NOPV).

The ship can handle various tasks both on its own and as part of the fleet. It is equipped with weapons, sensors, advanced navigation and communication systems, as well as Electronic Warfare tools.

It has been involved in different missions like supporting the fleet, patrolling the coast, monitoring the ocean, and assisting in humanitarian and disaster relief efforts.

One such mission was **Operation Kaveri**, where it helped evacuate Indian citizens from conflict-stricken Sudan.

106. Amendment to Aircraft Rules, 1937: A Significant Step towards Strengthening Aviation Safety and Ease of Doing Business in aviation regulation

Source: The post is based on the article "Amendment to Aircraft Rules, 1937: A Significant Step towards Strengthening Aviation Safety and Ease of Doing Business in aviation regulation" published in "PIB" on 17th October 2023

What is the News?

The Government of India has made several amendments to the Aircraft Rules, 1937.

These amendments aim to make doing business in aviation easier and ensure safety and security.

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What are the key amendments made to the Aircraft Rules, 1937?

License Validity of Pilots extended: The validity of Airline Transport Pilot Licenses (ATPL) and Commercial Pilot Licenses (CPL) has been increased from five years to ten years. This means pilots don't have to renew their licenses as often.

Display of Lights near Aerodromes: The rules have been updated to tackle the concerns regarding the display of lights near aerodromes (part of an airport that is used by aircraft)

- The term 'light' now includes lantern lights, wish kites and laser lights.
- Government's jurisdiction over those displaying such lights has been increased from a 5-kilometer radius to 5 nautical miles around an aerodrome.
- Government also has the power to take action against people who use lights that could disrupt aircraft safety or harm the crew.
- For instance, if such lights are left unattended for 24 hours, the government can enter the location and turn them off. Legal action under the Indian Penal Code (IPC) can also be taken in such cases.

Foreign License Validation Removed: The requirement to validate foreign pilot licenses has been removed.

Flexible Rules for Air Traffic Controllers (ATC): ATC license holders have more flexibility now when it comes to hours of work.

- They now need to complete a minimum of ten hours of simulated exercises including emergency scenarios. A skill assessment for their rating must be done within ten days of starting these exercises.

107. What is the white phosphorus that Israel is accused of using in Gaza?

Source: The post is based on the article "What is the white phosphorus that Israel is accused of using in Gaza?" published in "Al Jazeera" on 17th October 2023

What is the News?

Human Rights Watch (HRW) have said that the Israeli military has recently used white phosphorus munitions in Lebanon and Gaza.

What is White Phosphorus?



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Source: Al Jazeera

White phosphorus is a waxy, yellowish-to-clear chemical with a pungent, garlic-like odour.

It is a highly combustible chemical that burns quickly and brightly when exposed to air.

It can be deployed through artillery shells, bombs, rockets or grenades.

It is not considered a chemical weapon because it operates primarily by heat and flame rather than toxicity.

It is used primarily to create a smokescreen at night or during the day to hide the visual movement of troops.

What harm can white phosphorus cause to humans?

White phosphorus causes severe burns that are slow to heal and are likely to develop infections.

It can also cause dysfunction in multiple organs, including the liver, kidneys and heart. It can also be lethal if inhaled.

Is White Phosphorus banned?

White phosphorus is not explicitly banned by international conventions.

Protocol III of the 1980 Convention on Certain Conventional Weapons prohibits incendiaries or the use of other substances to attack civilian populations.

But to be considered an “incendiary weapon”, an item needs to be “primarily designed” to set fire or cause burns.

However, white phosphorus can also be used as a smokescreen, to signal or to illuminate a target. This allows militaries to argue that its use is not covered by Protocol III.

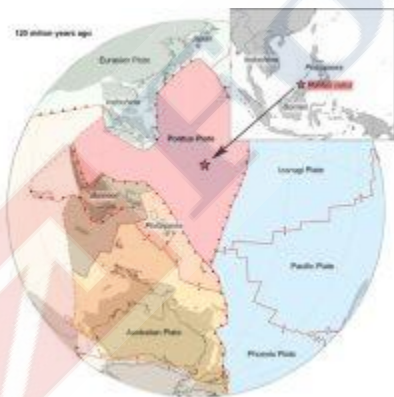
108. **Pontus Plate: Scientists discover ghost of ancient mega-plate that disappeared 20 million years ago**

Source: The post is based on the article “**Pontus Plate: Scientists discover ghost of ancient mega-plate that disappeared 20 million years ago**” published in “**Science Alert**” on 17th October 2023

What is the News?

Scientists have rediscovered a long-lost tectonic plate named “Pontus Plate”.

What is a Pontus Plate?



The Pontus plate is a tectonic plate that disappeared about 20 million years ago.

It has been recently discovered in the West Pacific Ocean.

It has been named as Pontus Plate as it once existed beneath an ancient ocean known as the Pontus Ocean.

Features: The plate was formed at least 160 million years ago.

– It was approximately a quarter the size of the Pacific Ocean.

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– It eventually disappeared as it was subducted beneath the Australian and Chinese plates.

Significance: This discovery provides insight into Earth's geological history and plate movements.

What are Tectonic Plates?

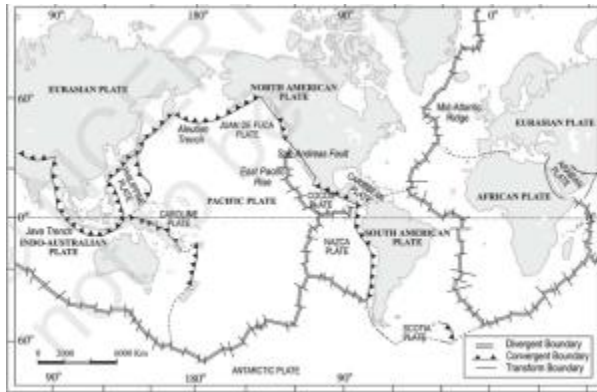


Figure 4.5: Major and minor plates of the world

Source: NCERT

A tectonic plate (also called lithospheric plate) is a massive, irregularly shaped slab of solid rock. It is generally composed of both continental and oceanic lithosphere.

A plate may be referred to as the continental plate or oceanic plate depending on which of the two occupy a larger portion of the plate.

The Pacific plate is largely an oceanic plate whereas the Eurasian plate may be called a continental plate.

Important Major Plates: 1) Antarctica and the surrounding oceanic plate 2) Pacific plate 3) India-Australia-New Zealand plate among others.

Important Minor Plates: 1) Cocos plate : Between Central America and Pacific plate 2) Nazca plate : Between South America and Pacific plate 3) Arabian plate : Mostly the Saudi Arabian landmass 4) Philippine plate : Between the Asiatic and Pacific plate 5) Caroline plate : Between the Philippine and Indian plate (North of New Guinea) and 6) Fiji plate : North-east of Australia.

109. Court declines abortion plea, says it can't 'stop heartbeat' of viable foetus

Source: The post is based on the article “Court declines abortion plea, says it can't 'stop heartbeat' of viable foetus” published in “The Hindu” on 17th October 2023

What is the News?

The Supreme Court has declined a married woman's plea to medically terminate her 26-week pregnancy.

The court gave this judgment based on the report of the AIIMS medical board that had found no substantial foetal abnormalities.

What is the case about?

A married woman had filed a petition to medically terminate her 26-week pregnancy.

She argued that she already has two boys and that the pregnancy was unplanned.

According to her, her family income is insufficient to support another child, and that she is under medication for postpartum depression.

Earlier, a 2-judge Bench had allowed the termination of the pregnancy. The court had said that an unwanted pregnancy due to failure of contraceptive methods is the same as a forced pregnancy.

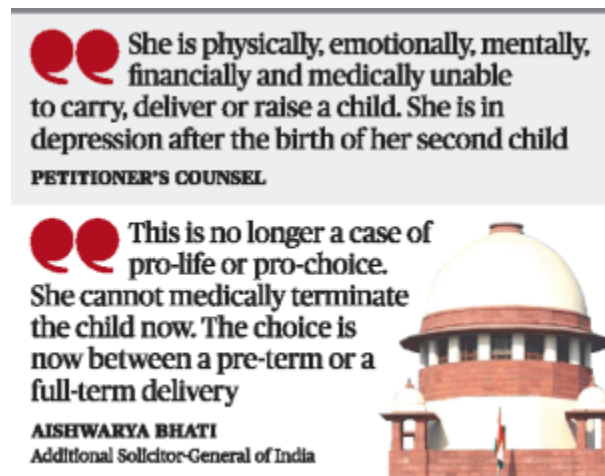
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However, AIIMS wrote to the SC and said that it would need a directive on whether a foeticide can be done before termination since the foetus is “currently viable”.

— **Note:** Foetus Viability is the point at which a foetus can survive outside the womb. It is generally considered to be around 23 or 24 weeks, but there’s no universal consensus.

Later, the case went before a 3-judge Bench headed by the Chief Justice of India (CJI).

What is the judgment given by the Supreme Court on this?



Source: The Hindu

The Supreme Court has declined permission to a married woman to terminate her over 26-week pregnancy.

The court gave this judgment based on following grounds:

Firstly, the pregnancy had crossed 24 weeks — the upper limit for allowing Medical Termination of Pregnancy (MTP).

Secondly, the woman cannot claim an absolute right to abort especially when multiple reports from the AIIMS medical Board have confirmed that the pregnancy was not a cause of immediate danger to her life or the foetus.

Thirdly, Section 5 of the Medical Termination of Pregnancy Act prescribes medical termination if the pregnancy was immediately necessary to save the life of the pregnant woman.

– The term ‘life’ used in this provision cannot be equated to the broader meaning in which ‘life’ is used in Article 21 of the Constitution. Article 21 upholds an individual’s fundamental right to a dignified, meaningful life.

– On the other hand, Section 5 uses ‘life’ in the context of a life-and-death situation when medical opinion confirms that a woman’s very existence is threatened if she attempts to carry her pregnancy to full term.

110. SC’s marriage equality judgment unpacked: Two views on four key issues

Source: The post is based on the article “SC’s marriage equality judgment unpacked: Two views on four key issues” published in “Indian Express” on 18th October 2023

What is the News?

A five-judge Constitution Bench of the Supreme Court has refused to grant legal status to same-sex marriages by 3-2 majority.

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What are the views of the judges on the four key questions related to same-sex marriages?



Source: Hindustan Times

On Fundamental Right to Marry: The petitioners argued that there exists a fundamental right to marry a person of one's own choice under the Constitution and that the court must address the denial of that right:

- **Minority View:** The marriage is not inherently a fundamental right as it has been shaped by state regulation.
- **Majority View:** It agreed with the minority view. It said that personal importance doesn't automatically make something a fundamental right.

Interpretation of Special Marriage Act: SMA was enacted in 1954 to enable marriage between inter-faith or inter-caste couples without them giving up their religious identity or resorting to conversion.

The petitioners had asked the SC to interpret the word marriage as between "spouses" instead of "man and woman".

The petitioners had asked for striking down provisions of the SMA that are gender-restrictive.

- **Minority View:** It opposes expansive interpretation of the Special Marriage Act, fearing it could infringe on legislative powers.
- **Majority View:** It stated that the court could not interpret the SMA to include same-sex couples since the objective of the legislation is not to include same-sex couples within the realm of marriage.

Queer couples' right to adopt a child: The petitioners had argued that the guidelines of the Central Adoption Resource Authority (CARA), which does not allow unmarried couples to jointly adopt children is discriminatory against queer couples who cannot legally marry.

CARA guidelines allow only a couple who have been in at least two years of a stable marital relationship to be eligible to adopt. Individually, queer persons can adopt as single people.

However, a single male is not eligible to adopt a girl child even though a single female is eligible to adopt a child of any gender.

- **Minority View:** It strikes down certain CARA regulations emphasizing that preventing unmarried couples, including queer ones, from adopting isn't in the child's best interests.
- **Majority View:** It largely agrees with the discrimination against queer couples but suggests only the legislature can change the adoption criteria.

Civil unions for queer couples: The judges had discussed recognising civil unions for queer couples as a halfway approach during the hearing.

In US, before full marriage rights were recognised for same-sex couples by the US Supreme Court, several states had allowed civil unions.

- **Minority View:** It held that the right to form civil unions falls within the fundamental right to freedom of speech and expression.

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– It also noted the Solicitor General’s statement that a committee chaired by the Cabinet Secretary would be constituted to set out the rights which would be available to queer couples in civil unions.

– **Majority View:** It disagreed with the view that the court can prescribe a “choice” of civil unions to queer couples. It recommended that the state can facilitate this option if the community desires it.

111. Govt offers 8 blocks for production of hydrocarbons under OLAP bid

Source: The post is based on the article “Govt offers 8 blocks for production of hydrocarbons under OLAP bid” published in “Hindu Businessline” on 18th October 2023

What is the News?

The Ministry of Petroleum & Natural Gas (MoPNG) has offered 8 blocks for exploration and production (E&P) of hydrocarbons under the Open Acreage Licensing Policy (OALP).

What is Open Acreage Licensing Policy(OALP)?

Open Acreage Licensing Policy(OALP) is a part of the Hydrocarbon Exploration and Licensing Policy(HELP).

It was introduced by the government in 2016 and became operational from 2017.

OALP gives an option to a company to select the exploration blocks on its own without waiting for the formal bid round from the Government.

Under OALP, a bidder intending to explore hydrocarbons may apply to the Government seeking exploration of any new block which was not already covered by exploration.

The Government will examine the interest and if it is suitable for award, then the govt will call for competitive bids after obtaining necessary environmental and other clearances.

What is Hydrocarbon Exploration and Licensing Policy(HELP)?

Hydrocarbon Exploration and Licensing Policy(HELP) was adopted in 2016.

It replaced the New Exploration Licensing Policy (NELP).

The objective of the policy is to enhance domestic oil and gas production by intensifying exploration activity and investment.

Components of the policy:

– **Uniform license for exploration and production of all forms of hydrocarbon**

– **Open acreage policy**

– **Revenue sharing model:** This encourages cost efficiency in mining operations by replacing the profit-sharing contract established by NELP. The contractor pays the government a share of its revenue (net of royalty) as per the contract.

– **Marketing and pricing freedom:** The contractor is free to sell crude oil in the domestic market through a transparent bidding process.

112. NHAI Upgrades ATMS Standards for Enhanced Road Safety and Digital Enforcement

Source: The post is based on the article “NHAI Upgrades ATMS Standards for Enhanced Road Safety and Digital Enforcement” published in “PIB” on 18th October 2023

What is the News?

National Highways Authority of India (NHAI) has released the Advanced Traffic Management System(ATMS) Standards and Specifications 2023 to improve road safety and reduce incident response time.

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What is Advanced Traffic Management System(ATMS) Standards and Specifications 2023?

Aim: To improve road safety and reduce incident response time with the help of advanced AI technologies.

Key Technologies introduced under ATMS:

Video Incident Detection and Enforcement System(Vides): It aims to enhance digital enforcement of traffic rules.

– The cameras can identify 14 distinct incidents, such as triple riding, helmet and seatbelt violations, wrong lane driving, presence of animals on the highway, and pedestrian crossings.

– Depending on the detected incident, it can alert route patrol vehicles, ambulances, generate e-challans, relay alerts on variable messaging boards, or notify nearby travelers through the ‘rajmargyatra’ mobile app.

– It will be installed every 10 kilometers along national highways.State-of-the-art command and control centers will also be set up every 100 kilometers, integrating various camera feeds.

Traffic Monitoring Camera System (TMCS): It is installed every 1 km on the National Highway.It will be upgraded with advanced capabilities like automated detection of accidents and stalled vehicles.

Strengthening collaboration with local traffic agencies: NHAI will allocate dedicated workstations in the Command & Control Centre for traffic police representatives.

113.PM unveils long-term blueprint for India’s maritime economy

Source: The post is based on the article “PM unveils long-term blueprint for India’s maritime economy” published in “The Hindu” on 18th October 2023

What is the News?

The Prime Minister has inaugurated the Global Maritime India Summit 2023 in Mumbai.

What is the Global Maritime India Summit?

Organized by: Ministry of Ports, Shipping and Waterways.

Aim: To boost the Indian maritime economy by promoting global and regional partnerships and facilitating investments.

The first Maritime India summit was held in 2016 in Mumbai while the Second Maritime Summit was held virtually in 2021.

What are the key highlights from the Global Maritime India Summit 2023?

Amrit Kaal Vision 2047: It is a 25-year blueprint for the Indian maritime blue economy.

– The plan outlines strategic initiatives aimed at enhancing port facilities, promoting sustainable practices and facilitating international collaboration.

Tuna Tekra all-weather deep draft terminal: It is going to be built at Deendayal Port in Gujarat.

– The port will be developed through a public-private partnership(PPP) mode.

– The port will handle modern vessels with a capacity exceeding 18,000 twenty-foot equivalent units (TEUs).

– It will also serve as a key entry point for Indian trade along the India-Middle East-Europe Economic Corridor (IMEEC).

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114. PM 'directs' ISRO to land man on moon by 2040, work towards interplanetary missions

Source: The post is based on the article "PM 'directs' ISRO to land man on moon by 2040, work towards interplanetary missions" published in "The Hindu" on 18th October 2023

What is the News?

The Prime Minister chaired the meeting to assess the progress of the Gaganyaan mission and outline the future of Indian space exploration.

What are the key highlights from the meeting?

Gaganyaan Mission is scheduled to be launched in 2025. It aims to demonstrate human spaceflight capability by launching a human crew to an orbit of 400 km and bringing them back safely to earth, by landing in Indian sea waters.

Indian on Moon: PM has said that ISRO should now plan to land an Indian on the moon by 2040. This will strengthen India's position in the space field.

– **Note:** The US is planning to send the first humans to explore the region near the south pole of the moon later this decade, in a mission called **Artemis II**.

– China has also planned to place astronauts on the moon by 2030.

Indigenous space station: PM has said that India should now aim for setting up 'Bharatiya Antariksha Station' (Indian Space Station) by 2035.

– **International Space Station:** It has been developed and maintained by the U.S., Russia, Canada, Japan, and European agencies. It is the largest space station. It is expected to be decommissioned by 2030.

Interplanetary Missions:

– **Shukrayaan-1:** It is a proposed mission of ISRO. It aims to study the surface and atmosphere of Venus.

– **Mangalyaan 2:** It is a proposed second mission to Mars by ISRO. It will study aspects of Mars, including interplanetary dust, and the Martian atmosphere and environment.

115. Must visit Parvati Kund and Jageshwar temples in Kumaon: PM

Source: The post is based on the article "Must visit Parvati Kund and Jageshwar temples in Kumaon: PM" published in "Economic Times" on 18th October 2023

What is the News?

The Prime Minister has encouraged people to visit the Parvati Kund and Jageshwar temples in the Kumaon region of Uttarakhand.

What are Parvati Kund and Jageshwar temples?

Jageshwar: It is a Hindu pilgrimage town in the Almora district of Uttarakhand.

– It is known for its group of 125 ancient temples built between the 7th and 14th centuries.

– These temples were primarily constructed and restored by the Katyuri dynasty kings. These temples are dedicated to various deities with many honouring Lord Shiva.

– It is believed that Lord Shiva came to meditate in the dense forests of Jageshwar, leaving behind these temples as a testimony of his presence.

– **Architecture:** The Jageshwar temples are a prime example of the Nagara style of architecture.

– The temples are characterized by intricately carved stone structures and tall shikharas.

– The engravings and sculptures on the temple walls depict various deities and mythological narratives, offering a glimpse into the rich cultural heritage of the region.

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Parvati Kund: It is located in Uttarakhand. It is situated at an elevation of about 5,338 feet.

– It is believed to be the location where Lord Shiva and Goddess Parvati engaged in meditation.

116. Union Health Secretary delivers keynote address at National Conclave on “Augmented Zoonotic Diseases Surveillance at Human – Wildlife Interface” & National Conclave for Endorsement of “National Action Plan for Prevention and Control of Snakebite Envenoming”

Source: The post is based on the article “Union Health Secretary delivers keynote address at National Conclave on “Augmented Zoonotic Diseases Surveillance at Human – Wildlife Interface” & National Conclave for Endorsement of “National Action Plan for Prevention and Control of Snakebite Envenoming” published in “PIB” on 18th October 2023

What is the News?

Union Health Secretary has delivered the keynote address at the National Conclave on “Augmented Zoonotic Diseases Surveillance at Human – Wildlife Interface” and National Conclave for Endorsement of “National Action Plan for Prevention and Control of Snakebite Envenoming”.

What are the key highlights from the address of the Union Health Secretary on Zoonotic Disease and Snakebite Envenoming?

Zoonotic disease is one of the areas of concern which is affecting humans as well as animals’ health

- 75% of new infectious diseases that have emerged in the last 30 years are zoonotic.
- Limited knowledge and skills to identify zoonotic diseases and limited diagnostic facilities at all levels has resulted in neglect of the infectious diseases caused due to zoonotic pathogens.
- Hence, in the light of these new and emerging health threats, there is a growing importance of the ‘One Health’ approach.

Snake Envenoming: Snake bite is a neglected public health issue in many tropical and subtropical countries.

- Most of these occur in Africa, Asia and Latin America. In Asia up to 2 million people are envenomed by snakes each year.
- In India, snake bites continue to be a huge problem causing nearly 60,000 deaths annually.

Measures taken by India: Union Health Ministry is implementing various national programs under National Centre for Disease Control (NCDC) which includes:

- National One Health Programs for Prevention and Control of Zoonoses (NOHPPCZ)
- National Rabies Control Programs (NRCP)
- Program for Prevention and Control of Leptospirosis (PPCL)
- Snake Bite Prevention and Control (SBPC)
- National Programme on AMR Containment
- National programme on Climate Change and Human Health (NPCHH).

117. India’s 2036 Olympic dream

Source: The post is based on the article “India’s 2036 Olympic dream” published in “The Hindu” on 18th October 2023

What is the News?

The Prime Minister has announced India’s bid to host the 2036 Olympic and Paralympic Games.

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What is the International Olympic Committee?

The International Olympic Committee was founded in 1894.

It is an international non-governmental not-for-profit organization.

It is the authority responsible for organizing the modern (Summer, Winter, and Youth) Olympic Games.

Headquarters: Lausanne, Switzerland.

How are cities chosen for the Olympics?

Exploring the idea: A city that wants to host the Olympics first seeks support from its National Olympic Committee (NOC).

– The NOC communicates with the International Olympic Committee (IOC) for advice and support. If the NOC is serious about the project, it sends an official letter to the IOC.

Future Host Commissions: There are two Future Host Commissions, which overlook the election process.

– It may recommend a project to the IOC Executive Board to begin a Targeted Dialogue for an edition or year of the Summer or Winter Games when it feels that the project is ready to get into the next stage.

– From this stage, the interested bidder can be said as the preferred host.

IOC Member Decision: At the end of the Targeted Dialogue, the IOC Executive Board decides whether to propose one or more hosts for election.

The International Olympic Committee (IOC) members decide the host nation during an IOC Session.

Voting Process: Members vote by secret ballot, and a majority vote is needed for a city to host the Games. An IOC member cannot vote when their country is a candidate.

If no majority is achieved in the first round, the city with the fewest votes is eliminated, and further rounds of voting occur until one candidate gets a majority.

118. Kerala CM flags-in first ever ship into Vizhinjam port

Source: The post is based on the article “Kerala CM flags-in first ever ship into Vizhinjam port” published in “Indian Express” on 18th October 2023

What is the News?

Kerala Chief Minister has inaugurated the first-ever cargo ship at the under-construction Vizhinjam international seaport project.

Why does India need a Transshipment Port?

India has 13 major ports but lacks infrastructure for handling ultra-large container ships.

About 75% of India’s transshipment cargo is managed at foreign ports like Colombo, Singapore and Klang.

For instance, in fiscal year 2021-22, India’s total transshipment cargo was approximately 4.6 million TEUs. Of this, around 4.2 million TEUs were processed outside India.

What are the benefits of Transshipment Port?

Establishing a transshipment hub in India offers several advantages such as:

- Forex savings (saving foreign exchange)
- Attracting foreign direct investment (FDI)
- Creating job opportunities

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- Encourages various associated businesses such as ship repair services, crew change facilities, logistics value-added services, Warehousing among others.
- Can attract a significant portion of the container transshipment traffic currently diverted to ports in Colombo, Singapore, and Dubai.
- Enhancing operational and logistics efficiency

What is Vizhinjam Port?

Vizhinjam Port is located near Thiruvananthapuram, Kerala.

It is India's first international deepwater transshipment port.

Built by: Adani Ports and SEZ Private Limited on a design, build, finance, operate and transfer (DBFOT) model.

It is the first greenfield port project to receive viability gap funding from the government of India.

Key Features:

Deep Natural Depth: The port boasts a natural depth of over 18 meters. This will help in accommodating large vessels and mother ships.

Cargo Handling: The port is designed to handle various types of cargo such as: Container transshipment Multi-purpose cargo and Break-bulk cargo.

Strategic Location: The port is located just ten nautical miles from the international shipping route.

Capacity: The port has the capability to accommodate substantial cargo volumes.

Advanced Features: The port offers large-scale automation for quick turnaround of vessels.

119. Lao PDR becomes second country in 2023 after Bangladesh to eliminate lymphatic filariasis

Source: The post is based on the article "Lao PDR becomes second country in 2023 after Bangladesh to eliminate lymphatic filariasis" published in "Down To Earth" on 19th October 2023

What is the News?

Lao People's Democratic Republic has eliminated lymphatic filariasis (LF).

Note: Lao PDR is now the second country after Bangladesh to eliminate lymphatic filariasis (LF) in 2023.

What is Lymphatic Filariasis (LF)?

Lymphatic filariasis commonly known as elephantiasis is a neglected tropical disease.

Infection occurs when filarial parasites are transmitted to humans through mosquitoes.

Causes: Lymphatic filariasis is caused by infection with parasites classified as nematodes (roundworms) of the family Filarioidae. There are 3 types of these thread-like filarial worms:

- *Wuchereria bancrofti*, which is responsible for 90% of the cases
- *Brugia malayi*, which causes most of the remainder of the cases
- *Brugia timori*, which also causes the disease.

Symptoms: Lymphatic filariasis infection involves asymptomatic, acute, and chronic conditions. In chronic conditions, it leads to lymphoedema (tissue swelling) or elephantiasis (skin/tissue thickening) of limbs and hydrocele (scrotal swelling).

Treatment: WHO recommended strategy for lymphatic filariasis elimination is mass drug administration (MDA).

- MDA involves administering an annual dose of medicines to the entire at-risk population.

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– The medicines used have a limited effect on adult parasites but effectively reduce the density of microfilariae in the bloodstream and prevent the spread of parasites to mosquitoes.

Lymphatic filariasis(LF) in India: India aims to eliminate Filariasis by 2027, three years ahead of the global target.

For this, Government of India has launched a five-pronged strategy for elimination of LF. The five pillars are as follows:

- Multi-drug administration (MDA) Campaign twice a year synchronized with National Deworming Day (10th Feb and 10th August)
- Early diagnosis and treatment; engagement of medical colleges for strengthening Morbidity management and disability (MMDP) services
- Integrated Vector Control with multi sectoral coordinated efforts
- For inter sectoral convergence with allied departments and ministries
- Leveraging existing digital platforms for LF and exploring alternate diagnostics.

120. Could 'marine cloud brightening' reduce coral bleaching on the Great Barrier Reef?

Source: The post is based on the article “Could ‘marine cloud brightening’ reduce coral bleaching on the Great Barrier Reef?” published in “The Hindu” on 19th October 2023

What is the News?

Researchers in Australia are exploring the concept of “marine cloud brightening” as a potential solution to protect the Great Barrier Reef from heat-induced coral bleaching.

What is Marine cloud brightening?

Marine cloud brightening is a proposed technique to combat global warming.

The idea is to make clouds over the ocean brighter so they reflect more sunlight back into space, which could help cool down the Earth.

British cloud physicist John Latham originally proposed cloud brightening in 1990.

How does Marine cloud brightening work?

Tiny particles like sea salt are sprayed into clouds over the ocean. These particles attract water vapor, forming small cloud droplets.

The increased number of droplets makes the clouds whiter, so they reflect more sunlight.

By reflecting more sunlight, less heat reaches the Earth’s surface. This could potentially lower the temperature of both the atmosphere and oceans.

How can Marine cloud brightening help corals?

Marine cloud brightening could help reflect sunlight back into space. This will help in cooling down the ocean surface.

This can in turn protect underwater life, including corals and may reduce coral bleaching.

The aim behind this method is to delay coral bleaching during marine heatwaves, potentially buying more time for the reef’s recovery.

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121. 6th Assembly of International Solar Alliance to be held in New Delhi

Source: The post is based on the article “6th Assembly of International Solar Alliance to be held in New Delhi” published in “PIB” on 19th October 2023

What is the News?

The Sixth Assembly of the International Solar Alliance is being held in New Delhi.

What is the International Solar Alliance(ISA)?

[Click Here to read](#)

Member Countries: 109

ISA Assembly: It is the apex decision-making body of ISA in which each Member Country is represented.

This body makes decisions concerning the implementation of the ISA’s Framework Agreement and coordinated actions to be taken to achieve its objectives.

The Assembly meets annually at the ministerial level at the ISA’s seat.

The Republic of India holds the office of the President of the ISA Assembly with Government of the French Republic as the co-president.

What are the key reports released during the sixth assembly of the International Solar Alliance?

World Solar Technology Report 2023: The report focuses on solar photovoltaics (solar PV) and specifically highlights advancements in crystalline silicon technology.

- Solar PV has shown remarkable growth and is projected to capture 56.4% of total renewable energy share by 2050.
- Crystalline silicon technology dominates the market with a 98% share.

World Solar Market Report 2023: This report looks at how the solar power market has changed over time. It started in Europe but now the Asia-Pacific region is leading.

- The solar market has been growing really fast (37% each year) and expanded a lot in 2022.

World Solar Investment Report 2023: The report shows that investment in solar power went up a lot in 2022, to more than \$300 billion (a 36% increase from 2021).

- China, Germany and the USA were the top solar investment destinations.
- The report recommends that to keep solar power growing, we need to invest in electricity grids and storage, have a variety of supply chains and focus on developing markets.

122. Final estimates of production of major crops released for the year 2022-23

Source: The post is based on the article “Final estimates of production of major crops released for the year 2022-23” published in “PIB” on 19th October 2023

What is the News?

The Department of Agriculture and Farmers Welfare has released the Final Estimates of production of major crops for the year 2022-23.

What is the data on production of major crops for the year 2022-23?

The food grain production in 2022-23 recorded an increase of over 4% when compared to 2021-22.

Rice output during 2022-23 was 4.6% higher than 2021-22. It was also higher than the five-year production average.

Wheat production during 2022-23 was higher by 4.7% than 2021-22.

Total Pulses production during 2022-23 was higher than the last five years’ average pulses production.

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Oilseeds production showed a 9% increase in 2022-23 compared to 2021-22.

Sugarcane output for 2022-23 was 11.6% higher than 2021-22.

123. India's first tilapia parvovirus reported in Tamil Nadu

Source: The post is based on the article “India's first tilapia parvovirus reported in Tamil Nadu” published in “The Hindu” on 19th October 2023

What is the News?

The Tilapia parvovirus (TiPV) case has been reported for the first time in India in Tamil Nadu.

What is Tilapia parvovirus (TiPV)?

Tilapia parvovirus (TiPV) is a small, nonenveloped, single-stranded DNA (ssDNA) virus.

The virus affects Tilapia, a freshwater fish species.

The virus was first reported in China in 2019 and Thailand in 2021. India is the third country to report the occurrence of TiPV.

It has a mortality rate ranging from 30 to 50% in the farm and 100% mortality in the laboratory.

What is Tilapia?

Tilapia are **mainly freshwater fish**. It inhabits the shallow streams, ponds, rivers, and lakes, and less commonly found living in brackish water.

They are mainly considered as a **poor man's fish**.

Mozambique tilapia was introduced to Indian fresh water bodies in the 1950s and it is called Jilabi in Tamil. It is capable of surviving in low-oxygen levels in water. The fish has turned invasive across the country.

Nile tilapia was introduced in the 1970s. It is a little bigger and is cultured on a large-scale.

Among the tilapia species, the Indian government had authorized **import of only Oreochromis niloticus** in 1970 and red hybrids because of their fast growth and market demand.

In India, tilapia farming is being carried out in different parts of Andhra Pradesh and Kerala. It is also sold in domestic markets as whole fish.

124. New evolutionary law explains how living beings, minerals & species evolve

Source: The post is based on the article “New evolutionary law explains how living beings, minerals & species evolve” published in “Down To Earth” on 19th October 2023

What is the News?

Scientists have proposed a new evolutionary law that can explain the evolution of living and non-living entities from minerals to stars.

What is the purpose of this law proposed by scientists?

The law aims to establish a relationship between evolution of living beings, minerals and stars.

It says that as life evolved from single-celled to multi-celled organisms, Earth's minerals also became more complex contributing to diversity.

This interaction between biodiversity and mineral diversity played a crucial role in shaping life as it exists today.

What are the three types of functions in nature according to the proposed law?

The law identifies three kinds of functions that occur in nature:

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Stability: Systems with stable arrangements of atoms or molecules will continue to survive.

Dynamic Systems: These are systems with an energy supply.

Novelty: This refers to the exploration of new configurations or arrangements that can give rise to new behaviours or characteristics.

– Examples of novelty include the evolution of single-celled organisms using light to produce food and the development of new behaviors in multicellular species, such as swimming, walking, flying, and thinking.

What is the role of Minerals and Stars in the evolution of life?

Minerals and Their Role in Evolution: Earth's early minerals had stable atomic arrangements, serving as the foundation for the evolution of subsequent mineral generations.

– These minerals became incorporated into living organisms, forming components like shells, teeth, and bones.

Evolution of Stars and Chemical Elements: Early stars in the universe primarily consisted of hydrogen and helium. These stars produced approximately 20 heavier chemical elements.

– Subsequent generations of stars contributed to the creation of nearly 100 additional elements.

125. Second advance estimate for the year 2022-23 released for area and production of horticultural crops

Source: The post is based on the article “Second advance estimate for the year 2022-23 released for area and production of horticultural crops” published in “PIB” on 19th October 2023

What is the News?

The Ministry of Agriculture and Farmers Welfare has released the 2nd Advance Estimates of the area and production of various horticultural crops for the year 2022-23.

What is the data on production of various horticultural crops for the year 2022-23?

Total horticulture production in the year 2022-23 was higher by 1.37% as compared to 2021-22.

Fruit production has increased in the year 2022-23 as compared to 2021-22.

The production of vegetables is also estimated to have increased in the year 2022-23 compared to 2021-22.

Production of plantation crops is estimated to have increased by 1.78% in 2022-23 compared to 2021-22.

126. India-Sri Lanka ferry service restarted after 40 yrs

Source: The post is based on the article “India-Sri Lanka ferry service restarted after 40 yrs” published in “Indian Express” on 18th October 2023

What is the News?

India and Sri Lanka have inaugurated passenger ferry service from Tamil Nadu to Sri Lanka.

Note: A ferry is a watercraft that carries passengers, and sometimes vehicles and cargo, across a body of water.

What is the ferry service launched between India and Sri Lanka?

The passenger ferry service between India and Sri Lanka will run from Nagapattinam in Tamil Nadu to Kankesanthurai in Jaffna, Northern Sri Lanka.

A high-speed vessel named ‘Cheriyapani’ is being operated by Shipping Corporation of India to run this ferry service.

What are the benefits of ferry service between India and Sri Lanka?

It can promote religious tourism in the coastal regions of both countries. For example, Indian travelers can access significant religious sites in Colombo and southern Sri Lanka.

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The service will also boost regional commerce and trade.

What has been the historical maritime connection between India and Sri Lanka?

There has been a historical maritime connection between India and Sri Lanka.

The Indo-Ceylon Express, known as Boat Mail, operated between Chennai and Colombo via the Thoothukudi port from the early 1900s until 1982.

However, the civil war in Sri Lanka caused these services to stop.

127. List Niemann-Pick as rare disease, parents of young patients urge govt

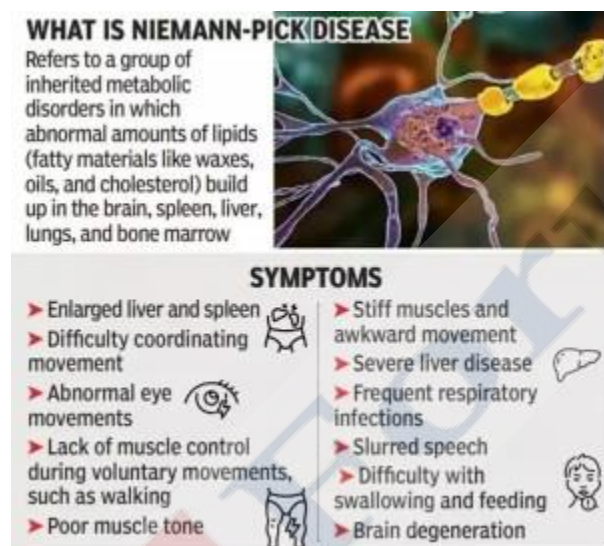
Source: The post is based on the article “List Niemann-Pick as rare disease, parents of young patients urge govt” published in “TOI” on 20th October 2023

What is the News?

Parents of children suffering from Niemann-Pick disease have urged the Government of India to notify this disease under the National Policy for Rare Diseases.

This would enable eligible patients to receive financial support from the government and access Xenpozyme, an expensive enzyme replacement therapy used for treatment.

What is Niemann-Pick disease?



Source: TOI

Niemann-Pick disease is a group of rare and inherited metabolic disorders that affect the body’s ability to process lipids or fats properly.

This buildup of lipids can lead to a wide range of symptoms including liver and spleen enlargement, lung problems, neurological issues, and other complications.

Caused by: Niemann-Pick is caused by mutations in specific genes related to how the body metabolizes fat (cholesterol and lipids).

– The Niemann-Pick gene mutations are passed from parents to children in a pattern called autosomal recessive inheritance.

– This means that both the mother and the father must pass on the defective form of the gene for the child to be affected.

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Types of Niemann-Pick disease:

- **Type A** is the most severe form and typically presents itself in infancy or early childhood.
- **Type B** is less severe than Type A and typically presents in childhood or adolescence.
- **Type C** is a rare form that typically presents in adolescence or adulthood.

Treatment: There is currently no cure for Niemann-Pick disease.

128. Estivation: The summer's urge to nap

Source: The post is based on the article “Estivation: The summer's urge to nap” published in “The Hindu” on 20th October 2023

What is the News?

This article talks about estivation.

What is Estivation?

Estivation is also known as aestivation.

It is a biological phenomenon during which some animals enter a prolonged state of dormancy or inactivity during hot and dry conditions. It serves as a survival strategy to conserve energy and water.

Animals during estivation seek shelter in cool places like underground burrows, crevices, or cocoons.

During this time, animals will also reduce their metabolic activity which in turn reduces their energy consumption.

This helps them avoid extreme dryness and safe from predators.

What are the examples of animals undergoing Estivation?

West African lungfish: It burrows into the mud of a drying water body and secretes a cocoon of mucus around itself during a drought.

Desert tortoises: It digs burrows to stay cool in hot summers.

Land snails: They seal themselves in their shells with a mucous plug and stay inactive until the conditions outside improve.

129. PM flags off RRTS: What is this mass transport system, how it can benefit NCR

Source: The post is based on the article “PM flags off RRTS: What is this mass transport system, how it can benefit NCR” published in “Indian Express” on 20th October 2023

What is the News?

The Prime Minister has inaugurated the first leg of the Regional Rapid Transit System (RRTS).

Note: RRTS has now been named as **Namo Bharat**.

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What is the Regional Rapid Transit System (RRTS)?



RRTS is a new rail-based, semi-high-speed, high-frequency commuter transit system.

Aim: To ensure balanced and sustainable urban development through better connectivity and access across the National Capital Region(NCR).

Implemented by: National Capital Region Transport Corporation (NCRTC), which is a joint venture company of the Central government and the governments of Delhi, Haryana, Rajasthan and Uttar Pradesh, has constructed the Regional Rapid Transit System (RRTS).

Corridors: Eight corridors will be developed under the RRTS project which includes: 1) Delhi-Ghaziabad-Meerut 2) Delhi-Gurugram-SNB-Alwar 3) Delhi-Panipat 4) Delhi – Faridabad – Ballabgarh – Palwal; 5) Ghaziabad – Khurja 6) Delhi – Bahadurgarh – Rohtak 7) Ghaziabad-Hapur and 8) Delhi- Shahadra-Baraut.

Speed: RRTS trains will travel significantly faster than metro trains. These will operate at a speed of 160 km/hour but are designed to be able to run at speeds up to 180 km/hour.

How is RRTS different from existing metro or railways systems?

RRTS is different from metro as it caters to passengers looking to travel a relatively longer distance with fewer stops and at higher speed.

RRTS is different from conventional Railway as it will provide reliable, high frequency, point to point regional travel at high speed along dedicated path way.

What are the benefits of the RRTS Project?

Firstly, RRTS will be integrated with various modes of transport like Airports, Railway Stations, Inter-State Bus Terminals, Delhi Metro Stations etc providing seamless connectivity.

Secondly, with fast connectivity with satellite towns, the urbanization burden in Delhi will reduce.

Thirdly, it will reduce usage of fossil fuel powered vehicles for ferrying people from the outskirts to the city.

Fourthly, RRTS will increase the share of public transport resulting in a reduction in traffic.

130. Why a Supreme Court order on telcos' licence fee tax has the industry worried

Source: The post is based on the article “Why a Supreme Court order on telcos' licence fee tax has the industry worried” published in “Indian Express” on 20th October 2023

What is the News?

The Supreme Court has ruled that payment of entry fee as well as variable annual license fee made by telecom companies will be considered as capital expenditure and not revenue expenditure.

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How do telecom companies currently pay entry fee and variable annual license fee?

Currently, telecom companies treat license fees as a revenue expenditure. Based on this, they claim deductions for computing their tax liability.

How will this judgment impact telecom companies?

After the judgment, the telecom companies would have to treat license fees as a capital expenditure. This is expected to result in additional tax liabilities for telecom companies.

However, the Supreme Court's order has not clarified whether the changes to the accounting structure will have to be made on a retrospective basis.

What are revenue and capital expenditures?

Revenue expenditures: These are the ongoing operating expenses, which are short-term expenses used to run the daily business operations. For example, salaries and wages of employees.

Capital expenditures: These are typically one-time large purchases of fixed assets that will be used for revenue generation over a longer period. For example, land or building.

131. CCI issues draft of 'leniency plus' norms to curb cartelisation

Source: The post is based on the article "CCI issues draft of 'leniency plus' norms to curb cartelisation" published in "Hindu Businessline" on 20th October 2023

What is the News?

The Competition Commission of India (CCI) has released draft regulations under the 'leniency-plus' regime.

What is a Leniency Programme?

The Leniency programme allows companies that provide sufficient information about a cartel in which they have participated to receive partial immunity from penalty.

Such a programme helps competition authorities to discover secret cartels and to obtain insider evidence of the infringement.

Leniency programme is provided under the Competition Act 2002. Under this, Competition Commission of India (CCI) may impose a lesser penalty on a person involved in a cartel if such person has made a full and true disclosure in respect of alleged violations and such disclosure is vital.

What is Leniency plus Programme?

Leniency plus regime was introduced in the Competition (Amendment) Act, 2023.

In this regime, a cartel member cooperating with the Competition Commission of India (CCI) for leniency can reveal the existence of another unrelated cartel during the original leniency proceedings. In return, they receive an additional reduction in penalties.

This strategy is proactive in enforcing antitrust laws and aims to encourage companies already under investigation for one cartel to report other cartels unknown to the competition regulator.

What is Cartel?

A cartel is a collection of independent businesses or organizations that collude to manipulate the price of a product or service.

Cartels are competitors in the same industry and seek to reduce that competition by controlling pricing in agreement with one another.

Tactics used by cartels include reduction of supply, price-fixing, collusive bidding, and market carving.

The actions of cartels hurt consumers through increased prices and lack of transparency.

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132. Major regional disparity in overcoming cancer though survival rates are up: study

Source: The post is based on the article “Major regional disparity in overcoming cancer though survival rates are up: study” published in “The Hindu” on 20th October 2023

What is the News?

A study has examined the cervical cancer survival rates in India.

This study is based on the data from Population Based Cancer Registries (PBCRs) from 2012 to 2015.

What is Cervical Cancer?

[Click Here to read](#)

What are the key findings of the study on the cervical cancer survival rates?

Nearly 52% of patients diagnosed with cervical cancer between 2012 and 2015 survived.

The highest survival rate was observed in Ahmedabad's at 61.5% followed by Thiruvananthapuram (58.8%) and Kollam (56.1%).

In contrast, Tripura reported the survival rate at 31.6%.

The survival rates were lower in India's northeastern region.

What are the factors that contributed to the cervical cancer survival rates?

The factors that contributed to variations in survival rates of cervical cancer patients are: access to diagnostic services, effective treatment varied across the population, distance from clinical care facilities, travel costs, co-morbidities and poverty.

133. Microalgae are adapting to warming climate, declining nutrient levels in seas with novel strategy

Source: The post is based on the article “Microalgae are adapting to warming climate, declining nutrient levels in seas with novel strategy” published in “Down To Earth” on 20th October 2023

What is the News?

Microalgae have adopted a unique strategy to adapt to global warming.

What is Microalgae?

Microalgae are microscopic algae that are invisible to the naked eye. They are typically found in freshwater and marine systems.

They are unicellular species that exist individually or in chains or groups.

Unlike higher plants, microalgae do not have roots, stems, or leaves.

Microalgae are capable of performing photosynthesis. They produce approximately half of the atmospheric oxygen and capture the carbon dioxide from the atmosphere.

What is the importance and applications of Microalgae?

Food Chain: They play a crucial role in the food chain as they serve as a primary source of nutrition for a wide range of aquatic organisms. They are often consumed by various aquatic creatures, including zooplankton, which, in turn, are eaten by larger organisms like fish.

Nutrition: Some species of microalgae, such as spirulina and chlorella, are highly nutritious and are used as dietary supplements. They are rich in proteins, vitamins, minerals, and other essential nutrients.

Biofuel: Microalgae can be used to produce biofuels, such as biodiesel. They have a high lipid content, which can be converted into fuel through various processes.

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Environmental Remediation: Microalgae can help in wastewater treatment and carbon capture. They can absorb nutrients and pollutants from water and help improve water quality.

Biotechnology: Microalgae are used in biotechnology for the production of various compounds, including pigments, pharmaceuticals, and chemicals.

What is the strategy adopted by Microalgae to adapt to global warming?

As climate change reduces nutrient availability in the ocean, microalgae activates a protein called **rhodopsin**. This protein is related to the one responsible for low-light vision in the human eye.

Rhodopsin enables these microalgae to thrive by using sunlight instead of traditional chlorophyll when nutrients are scarce.

Note: Rhodopsins are proposed to be major light capturers in the ocean. They absorb light as much as chlorophyll-based photosynthesis in the sea to generate energy and food.

134. SC asks States to appoint officers under POSH Act

Source: The post is based on the article “SC asks States to appoint officers under POSH Act” published in “The Hindu” on 20th October 2023

What is the News?

The Supreme Court has directed the Centre and all the states and Union territories (UTs) to immediately appoint district officers under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act (POSH Act).

What is Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act (POSH Act)?

[Click Here to read](#)

What are District Officers under the POSH Act?

The Sexual Harassment of Women At Workplace (Prevention, Prohibition and Redressal) Act of 2013, or POSH Act mandates States to appoint a District Officer in every district.

Functions of District Officer under POSH Act:

Constitute Local Complaints Committees (LCCs): District Officers would constitute Local Complaints Committees (LCCs) to receive complaints from women employed in small establishments with less than 10 workers or cases in which the accused is the employer himself.

Appoint Nodal Officers: A District Officer would appoint nodal officers under the Act in rural, tribal and urban areas. The nodal officers would receive complaints and forward the same to the concerned Local Complaints Committees (LCCs).

– The Local Complaints Committees (LCCs) after conducting an inquiry have to submit its report to the district officer and the employer recommending action.

Submit Annual reports to Government: The district officer will forward a brief statement on the annual reports submitted by every employer in their jurisdiction to the government.

– **Note:** An Internal Committee (IC) is to be set up under the POSH Act if the organization has 10 or more employees.

135. Little Ice Age (LIA) was wet (moist) and was not uniformly cold and dry

Source: The post is based on the article “Little Ice Age (LIA) was wet (moist) and was not uniformly cold and dry” published in “PIB” on 20th October 2023

What is the News?

A study was conducted in Western Ghats to understand the variations of rainfall patterns during the Little Ice Age.

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What is the Little Ice Age?

The Little Ice Age was a period of cooler climate conditions that occurred roughly between CE 1671-1942.

What is the purpose of the study?

The Western Ghats region in India experiences two main monsoons: the southwest summer monsoon (SWM) from June to September and the northeast winter monsoon (NEM) from October to December.

The study aims to understand how vegetation and climate changed in Western Ghats region influenced by both monsoons during the last millennium.

What are the key findings of the study?

The study has found the presence of moist conditions during the Little Ice Age (LIA) in the Western Ghats. This is likely due to increased northeast winter monsoon (NEM) influence.

These findings indicate that the Little Ice Age (LIA) period was also wet (moist) and was not uniformly cold and dry.

Factors Influencing Climate Change: The study suggested several factors that may have contributed to this climate change and increased southwest summer monsoon (SWM).

– These factors include: northward movement of the Inter Tropical Convergence Zone (ITCZ), positive temperature anomalies, increased sunspot numbers and high solar activity.

Weakest Phase of Indian Summer Monsoon Explained: The study attributed the weakest phase of the Indian Summer Monsoon (ISM) across the Indian subcontinent during the LIA to the southward shift of the ITCZ.

136. APAAR: All you need to know about this 'One Nation, One ID' to be rolled out for students

Source: The post is based on the article “APAAR: All you need to know about this ‘One Nation, One ID’ to be rolled out for students” published in “TOI” on 20th October 2023

What is the News?

The Union Education Ministry has introduced the concept of ‘One Nation, One Student ID’ referred to as APAAR ID.

This concept is in alignment with the National Education Policy (NEP) 2020. The policy aims to create unique ID numbers for school students across India.

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What is APAAR?

APAAR REGISTRY OF ACADEMIC FEATS	
<ul style="list-style-type: none">➤ It will help track educational progress and achievements of students	
<ul style="list-style-type: none">➤ Students can digitally store all achievements, like exam results, learning outcomes, achievements in Olympiad, sports, skill training etc	
<ul style="list-style-type: none">➤ Students can use the credit score for their higher education or employment purpose in future	available to entities engaged in various educational activities, scholarships, educational institutions
<ul style="list-style-type: none">➤ Aadhaar number will be masked while sharing data with other government users➤ Personal information, such as name, address, age, date of birth, gender and photograph, will be made	<ul style="list-style-type: none">➤ It will make transfer from one school to another easy➤ It will help monitor students dropping out and mainstreaming them. New students entering the education system can also be tracked

Source: TOI

APAAR stands for 'Automated Permanent Academic Account Registry'.

It is a 12 digit digital identification system for school students in India. It will give each student enrolled from pre-primary to higher education a unique identification number.

It will digitally store academic qualifications, credit scores, certificates, and other academic data of students.

How can students enroll in APAAR?

The enrolment process will be carried out by the school, with the consent of the students parents.

The parents can withdraw their consent at any given point in time.

The data will be shared only with concerned government agencies if and when required.

The data collected on each student by the schools will be stored in a centrally functioning District Information for Education portal.

What are the benefits of APAAR for students?

APAAR is like a lifelong ID that helps you keep track of your school journey and achievements.

You can store your exam results, what you've learned and even your extra accomplishments like Olympiad rankings or receiving specialized skill training

It also makes switching schools easier because all the documents for admission are in one place.

What are the challenges with APAAR ID?

Data Security Worries: Because of past issues with Aadhaar data security, people are worried about the safety of their information with APAAR.

Extra Work for Schools: Schools are already dealing with verifying Aadhaar details for students. Adding APAAR registration can make things more complicated for teachers and staff.

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137. Mahua Moitra and 'cash for query' row: How MPs ask questions in Lok Sabha

Source: The post is based on the article “Mahua Moitra and ‘cash for query’ row: How MPs ask questions in Lok Sabha” published in “Indian Express” on 21st October 2023

What is the News?

Lok Sabha MP has been accused of asking questions in Parliament in exchange for cash and gifts from a businessman. In this context, let us look at the procedure for asking questions in Lok Sabha.

What is the procedure for raising the questions?

The procedure for raising questions is governed by “Rules of Procedure and Conduct of Business in Lok Sabha” and “Directions by the Speaker, Lok Sabha”.

Notice Submission: MPs must give notice addressed to the Secretary-General of the Lok Sabha to ask a question.

– The notice includes the question text, the Minister’s designation to whom it’s directed, the desired answer date, and order of preference if multiple questions are submitted.

Typically, the notice period for a question is at least 15 days.

Limit on Notices: MPs can submit up to five notices for both oral and written answers for a single day.

– Excess notices are considered for the following day during the session.

Examination by Speaker: The Speaker of Lok Sabha reviews the notices according to specified rules. The Speaker decides if a question or part of it is admissible.

What are the conditions for the admissibility of questions?

Word Limit: Questions usually should not exceed 150 words. They must not contain arguments, defamatory statements, or reference to an individual’s character or conduct, except in their official or public capacity.

Policy Questions: Questions raising broad policy issues are generally not allowed because policy matters can’t be fully addressed in a brief answer.

Pending Matters: Question isn’t admissible if its subject matter is pending judgment before any court of law or any other tribunal or body set up under law or is under consideration before a Parliamentary Committee.

Threatens unity: A question can’t seek information on matters which may weaken the unity and integrity of the country.

What are the different types of questions?

[Click Here to read](#)

What is the importance of raising questions?

Legislative Control: Asking questions is an inherent parliamentary right of MPs. It allows legislative control over executive actions.

Information and Critique: Questions are used to obtain information about government activities and criticize policies.

– They shed light on government shortcomings and encourage action for the common good.

Public Feedback: The government uses questions to gauge public reactions to their policies.

– Sometimes, questions can lead to the formation of a parliamentary commission, a court of enquiry or even the enactment of a legislation.

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138.No violation of Vienna Convention rules: India

Source: The post is based on the article “No violation of Vienna Convention rules: India” published in “Business Standard” on 21st October 2023

What is the News?

Canada has accused India of violating the Vienna Convention after India had asked for a reduction in the number of Canadian diplomats posted in India.

What is the Vienna Convention?

The Vienna Convention on Diplomatic Relations is an international treaty signed in 1961.

Aim: To put forth a framework for diplomatic interactions between independent nations and aims to ensure the development of friendly relations among nations.

Signed by: At present 193 countries are party to the convention.

The convention formalizes the longstanding practice of diplomatic immunity. It grants diplomatic missions privileges that enable diplomats to perform their functions without fear of coercion or harassment by the host country.

Why has Canada accused India of violating the Vienna Convention?

Canada has accused the Indian government of violating the Vienna Convention by forcing it to downsize its mission in India.

What was India’s response to this violation of the Vienna Convention?

India has said that its actions are as per provisions of Article 11.1 of the Vienna Convention on Diplomatic Relations (VCDR).

Article 11.1 pertains to the size of international missions within other countries.

It provides the receiving state the right to limit the size of a diplomatic mission to what it considers reasonable and normal.

139.Solar Panels to have Star Label indicating Quality and Energy Efficiency, Programme to be voluntary for first two years

Source: The post is based on the article “Solar Panels to have Star Label indicating Quality and Energy Efficiency, Programme to be voluntary for first two years” published in “PIB” on 21st October 2023

What is the News?

The Government has launched the Standards & Labelling Programme for solar panels.

What is the Standards & Labelling Programme?

Launched by: Bureau of Energy Efficiency(BEE)

Aim: To provide consumers an informed choice about the energy and cost-saving potential of the star labelled appliances/equipment being sold in the Indian market.

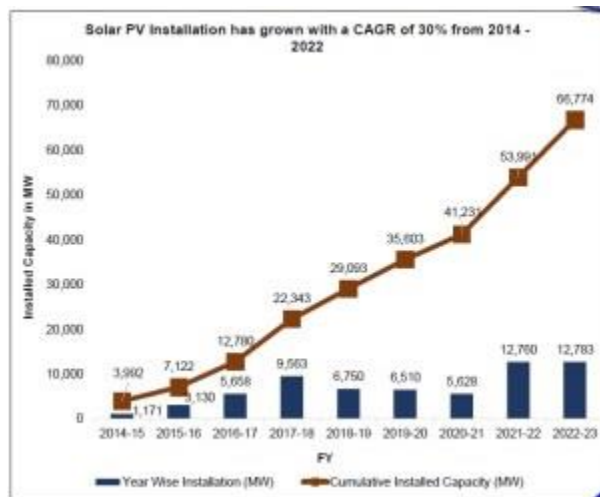
Rating: The scheme involves laying down energy performance norms for appliances/equipment by rating its energy performance on a scale of 1 to 5 with 5 star labelled appliance being the most energy efficient one.

Appliances covered: The program presently covers 34 appliances.Out of which 15 appliances are under the mandatory regime which means these appliances cannot be sold in the market without the label and 19 appliances are in voluntary regime where the market is in development stage.

Significance: The scheme has resulted in overall electricity saving of 70.56 billion units translating to an abatement of 57.05 million ton of CO emission in FY 2021-2022.

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What is the Standards & Labelling Programme for solar panels?



Source: PIB

Aim: To help the Indian customers to make an informed decision by helping citizens to know which brands of solar panels are more or less efficient.

Duration: The labelling will be voluntary for the first two years from January 1, 2024, to December 31, 2025. During this period, no labelling fee will be charged.

Significance: The program is expected to enhance Solar PV module efficiency by 2% over its existing levels.

– Due to this performance improvement, the electricity generation is expected to increase by 33GWh/year and this will offset ~27,000 tons of CO2 emission per annum.

140. Gaganyaan Mission: ISRO is set for first test flight

Source: The post is based on the article “Gaganyaan Mission: ISRO is set for first test flight” published in “The Hindu” on 21st October 2023

What is the News?

The Indian Space Research Organisation (ISRO) has launched Gaganyaan’s first Flight Test Vehicle Abort Mission-1 (TV-D1).

What is Flight Test Vehicle Abort Mission-1 (TV-D1)?

Flight Test Vehicle Abort Mission 1 (TV-D1) is the first of two abort missions to test crew safety mechanisms for the Gaganyaan mission.

Aim: To check the effectiveness of Crew Escape System (CES) in taking the Crew Module (CM) to safety in case of an emergency during the Gaganyaan mission.

Objectives:

- Flight demonstration and evaluation of Test Vehicle sub systems.
- Flight demonstration and evaluation of the Crew Escape System including various separation systems.
- Crew Module characteristics & deceleration systems demonstration at higher altitude & its recovery.

Features: The test vehicle is a single-stage liquid rocket.

– It carries the Crew Module (CM) and Crew Escape Systems (CES) along with other components like the CM fairing (CMF) and Interface Adapters.

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- The CM is the part where astronauts will stay during the Gaganyaan mission. For this test (TV-D1), an unpressurized version of CM is used.
- The flight will simulate the abort condition. CES with CM will be separated from the Test Vehicle at an altitude of about 17 km.
- Subsequently, the abort sequence will be executed with the separation of CES, parachutes deploying and eventually, the CM landing safely in the sea.

Significance of this test: The success of this test flight will set the stage for the remaining qualification tests and unmanned missions, leading to the first Gaganyaan mission with Indian Astronauts.

141. As part of 'Meri Maati, Mera Desh', Railways plans special trains

Source: The post is based on the article "As part of 'Meri Maati, Mera Desh', Railways plans special trains" published in "The Hindu" on 21st October 2023

What is the News?

Indian Railways will run special trains on October 29 to carry volunteers with soil (mitti) from different parts of the country to New Delhi.

This is part of the 'Meri Maati Mera Desh' (My soil, my country) campaign.

What is the 'Meri Maati Mera Desh' (My soil, my country) campaign?

Launched by: Ministry of Culture

Aim: To pay tribute to the Veers and Veeranganas [bravehearts] who have made the supreme sacrifice for the country.

Under the campaign, about 20,000 volunteers, each carrying soil in an urn (kalash), will gather in Delhi for events related to the year-long Azadi Ka Amrit Mahotsav.

– Volunteers will collect soil from households as a mark of respect for those who sacrificed their lives for the country. If soil isn't available, a grain of rice can be contributed.

– The collected soil will be used in the creation of the 'Amrit Vatika,' a special garden in Delhi, and an 'Azadi Ka Amrit Mahotsav' memorial.

What is the contribution of the Ministry of Railways in this?

The Ministry of Railways would operate special 'Amrit Kalash Yatri' trains to facilitate the movement of the volunteers.

These trains would have halts at major stations for meet and greet with local Members of Parliament, celebrities and officials.

142. SC: The way Centre approves collegium picks 'troublesome'

Source: The post is based on the article "SC: The way Centre approves collegium picks troublesome" published in "TOI" on 21st October 2023

What is the News?

The Supreme Court has cautioned the Union government against a "pick and choose" approach in matters of judicial appointments.

Background:

In 2021, the Supreme Court had expressed concerns over the growing number of vacancies in High courts and urged the central government to promptly notify the appointments of candidates endorsed by the Supreme Court collegium.

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To streamline the process, the court established a timeline: The Intelligence Bureau (IB) should submit its reports to the central government within four to six weeks from the date of the high court collegium's recommendation.

In turn, the central government should forward the recommendations to the Supreme Court within eight to 12 weeks of receiving the intelligence agency inputs and the state government's views.

After the Supreme Court collegium sends its recommendations, the Centre should immediately notify the appointments of the candidates so endorsed or return the recommendations within the same period specifying the reasons for its reservations.

Finally, if any or all of the names are reiterated, the appointments would have to be processed and notified within three to four weeks from the receipt of the names.

What has happened after the Supreme Court streamlined the appointment process of judges?

A contempt petition was filed by the Advocates Association Bengaluru accusing the Centre of violating the court's directions by not approving 11 names reiterated by the Supreme Court collegium.

What are the observations made by the Supreme Court on this contempt petition?

The Supreme Court said that the delay in appointments of judges 'frustrated the whole system'.

It also expressed grave concerns over the Centre's practice of pick and choose approach in matters of judicial appointments. It said that such practice disrupts the seniority of the persons nominated for judgeship.

143. Mid-Planning Conference For Multilateral Naval Exercise (MILAN) – 24

Source: The post is based on the article "Mid-Planning Conference For Multilateral Naval Exercise (MILAN) – 24" published in "PIB" on 21st October 2023

What is the News?

The Mid Planning Conference (MPC) of MILAN 24 (Multilateral Naval Exercise – 2024) was hosted by the Indian Navy at Visakhapatnam.

What is Exercise MILAN?

Type: Biennial multilateral naval exercise

Started by: Indian Navy in 1995

Aim: To enhance professional interaction between friendly foreign navies and learn from each other's strengths and best practices in the maritime domain.

Countries participation: The exercise began with the participation of just four countries: Indonesia, Singapore, Sri Lanka, and Thailand.

– Over the years, it has grown in terms of both the number of participants and the complexity of exercises. In 2022, 39 countries participated in Milan exercise.

Significance: The exercise originally aligned with India's 'Look East Policy'. It later expanded to include more countries as part of India's 'Act East Policy' and the Security and Growth for All in the Region (SAGAR) initiative.

– This expansion involved nations from both the western Indian Ocean Region (IOR) and the countries along the IOR coast.

Exercise MILAN 2024: It is likely to witness the largest-ever participation with invites being extended to over 50 countries.

– The exercise aligns with India's G20 Presidency and the theme "Vasudhaiva Kutumbakam" emphasizing global unity.

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144. Scientists reveal source of most powerful marsquake in history

Source: The post is based on the article “Scientists reveal source of most powerful marsquake in history” published in “Indian Express” on 20th October 2023

What is the News?

Scientists have found out the source of the most powerful Marsquake on Mars.

What are Marsquakes?

Marsquakes are seismic events or earthquakes that occur on the planet Mars.

Who detected Marsquakes on Mars?

NASA’s InSight mission had detected and recorded numerous marsquakes in 2022. This is the largest ever marsquake recorded in history.

What caused Marsquakes on Mars according to the study?

The study has found that the marsquake was caused by the release of tectonic forces from within the planet’s interior.

These stresses are the result of billions of years of evolution including the cooling and shrinking of different parts of the planet at different rates.

145. ₹2.9-crore project to improve amenities around Edakkal Caves

Source: The post is based on the article “₹2.9-crore project to improve amenities around Edakkal Caves” published in “The Hindu” on 23rd October 2023

What is the News?

Kerala Tourism has launched a project to improve civic amenities around the Edakkal Caves in Wayanad.

Where is Edakkal Caves?

Located in: Wayanad, Kerala

Hills: The caves are located 3,900 feet above sea level in the Ambukuthi Hills.

Meaning: Edakkal Caves are not actually caves. They are part of a prehistoric rock shelter formed naturally when one huge boulder got wedged between two bigger ones. That’s why the name Edakkal itself means “a stone in between”.

Features: The caves feature Neolithic-era pictorial writings dating back to at least 6,000 BCE.

- The cave has engravings of human and animal figures besides symbols and letters.
- The Muniyaras or ancient burial sites have been discovered in these caves. This has yielded a rich collection of ancient earthenware and pottery.

146. Canada’s actions are in violation of Vienna Convention, says Jaishankar

Source: The post is based on the article “Canada’s actions are in violation of Vienna Convention, says Jaishankar” published in “The Hindu” on 23rd October 2023

What is the News?

India had recently sent back 41 diplomats of Canada from India citing disparity in the number of diplomats between the two countries .

However, Canada has accused India of violating the Vienna Convention by forcing it to downsize its mission in India.

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On this, the Indian Foreign Minister has said that Canada has only violated the Vienna Convention by not ensuring the safety of Indian diplomats.

What is the Vienna Convention?

[Click Here to read](#)

Members: 193 countries have ratified the convention.

Ratification means that a country should seek approval for the treaty on the domestic level and enact a law in their country to give effect to it.

India ratified it through the Diplomatic Relations (Vienna Convention) Act of 1972.

What does the 1961 Vienna Convention say about recalling diplomats?

Article 9: It says that the receiving State (host country) has the right to declare a diplomat or a member of their staff as “persona non grata” or unwelcome. This decision can be made at any time.

– The host country is not required to provide a detailed explanation for this decision.

Article 11: If there is no specific agreement on the number of diplomats allowed in a mission, the receiving State (host country) can set limits.

– The host country can determine the reasonable and normal size of a diplomatic mission.

– This determination can be made based on the circumstances and conditions in the host country and the specific needs of the mission.

Are there any past instances of recalling diplomats?

In 2017, Russia and the United States asked for each other’s diplomats to be recalled on the principle of parity.

In August, 2023 Moldova demanded a reduction of diplomats from Russia on the grounds of parity.

147. **Army to start phasing out Cheetah, Chetak helicopters from 2027**

Source: The post is based on the article “**Army to start phasing out Cheetah, Chetak helicopters from 2027**” published in “**The Hindu**” on **23rd October 2023**

What is the News?

The Army will start phasing out the Cheetah and Chetak helicopters from 2027.

They plan to replace these helicopters with indigenous light utility helicopters (LUHs).

What is Chetak Helicopter?

The Chetak Helicopter is a two-ton class helicopter. It is a versatile, multi-role, multi-purpose and spacious helicopter.

It is designed for seven-seaters (two pilots and five passengers).

Manufactured by: Hindustan Aeronautics Limited (HAL).

What is a Cheetah?

Cheetah is a five-seater helicopter. It is a high-performance helicopter designed for operation over a very wide range of weight, center of gravity and altitude conditions.

It holds the world record in high-altitude flying among all categories of Helicopters.

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Manufactured by: Hindustan Aeronautics Limited (HAL).

What is Indigenous light utility helicopters(LUHs)?

LCH is the first indigenous Multi-Role Combat Helicopter.

Designed and developed by: Hindustan Aeronautics Limited (HAL).

Specifications:

- **Maximum take-off weight:** 3,100 kg.
- **Can carry a useful load** of 1,500 kg.
- **Maximum speed:** 220 km/h, cruise speed: 200 km/h.
- **Service ceiling (maximum altitude it can reach):** 6,500 meters.

Range: Approximately 500 km.

Features: It has potent ground attack and aerial combat capability.

- Equipped with a 3-axis autopilot for stable and controlled flight in various conditions.
- Features a modern glass cockpit with digital avionics and instrumentation.
- Includes a weather radar system for real-time weather information.
- Cockpit lighting works with night-vision goggles for low-visibility conditions.

148. **Geologist unearths coral reef fossils in Ladakh Himalayas**

Source: The post is based on the article “**Geologist unearths coral reef fossils in Ladakh Himalayas**” published in “**Deccan Herald**” on **23rd October 2023**

What is the News?

Geologists have discovered coral reef fossils in the Burtse region, Eastern Ladakh.

What is the significance of the discovery of coral reef fossils in Ladakh?

Coral reefs are often associated with tropical, shallow waters.

They are the last thing one expects to find in the Himalayan region of Ladakh which is known for its rugged mountains and high-altitude terrain.

However, this discovery of coral reef fossils in the Burtse area of Ladakh provides information on the region’s ancient underwater world and biodiversity.

It suggests that Ladakh may have been home to vibrant marine life, coral reefs and beaches in the past.

What are Corals?

Corals are marine invertebrates or animals which do not possess a spine.They are the largest living structures on the planet.

Corals have a symbiotic relationship with microscopic algae called zooxanthellae that live in their tissues.These algae are the coral’s primary food source and give them their color.

Types of Corals:

Hard corals: They are also known as scleractinian and stony coral.They produce a rigid skeleton made of calcium carbonate (CaCO₃) in crystal form called aragonite.

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– They are the primary reef-building corals. Hard corals that form reefs are called hermatypic corals.

Soft corals: They are also known as Alcyonacea and ahermatypic coral. They do not produce a rigid calcium carbonate skeleton and do not form reefs, though they are present in reef ecosystems.

The Great Barrier Reef is the world's largest and longest coral reef system. It is located in Australia.

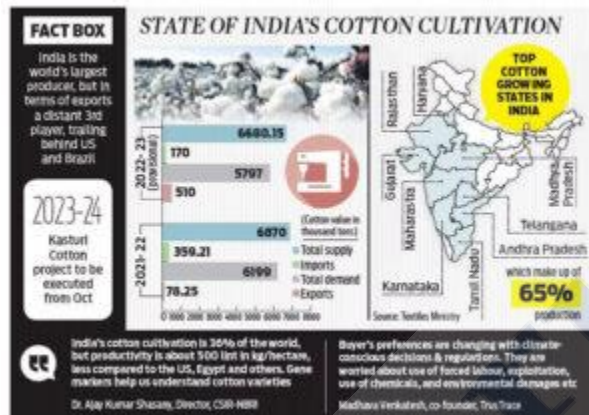
149. Union Textiles Minister launches Website of “Kasturi Cotton Bharat”

Source: The post is based on the article “Union Textiles Minister launches Website of Kasturi Cotton Bharat” published in “PIB” on 23rd October 2023

What is the News?

The Union Minister of Textile has launched a website of Kasturi Cotton Bharat.

What is Kasturi Cotton Bharat?



Source: Indian Express

Launched by: Ministry of Textiles, the Cotton Corporation of India, trade organizations, and the industry.

Aim: To boost the global competitiveness of Indian cotton by taking charge of branding, traceability, and certification, with a focus on sustainability and benefiting all involved stakeholders.

Designated agency: Cotton Textiles Export Promotion Council (TEXPROCIL) has been designated as the implementing agency for Traceability, Certification and Branding of “KASTURI Cotton India”.

To provide complete traceability of Kasturi Cotton Bharat across the supply chain, QR based certification technology will be used at each stage of the processing and a blockchain based software platform will provide end to end traceability and transaction certificate.

What is the data on Cotton Production in India?

Cotton is one of the most important commercial crops cultivated in India. It accounts for around 25% of the total global cotton production.

India is the country to grow all four species of cultivated cotton G. arboreum and Herbaceum (Asian cotton), G. barbadense (Egyptian cotton) and G. hirsutum (American Upland cotton).

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India has the largest area under cotton cultivation and is also the largest producer and second largest consumer of cotton.

150. **Defence Minister launches 'Project UDBHAV'**

Source: The post is based on the article **"Defence Minister launches 'Project UDBHAV'"** published in **"PIB" on 23rd October 2023**

What is the News?

The Defence Minister has launched 'Project UDBHAV'.

What is Project UDBHAV?

Launched by: Indian Army and the United Service Institution of India (USI), a defence services think tank.

Aim: To revive and integrate India's ancient military wisdom with contemporary military practices.

Objectives of the project:

- Understanding ancient military systems and India's indigenous military culture.
- Studying the evolution of the Indian military system and strategic ideas.
- Educating junior and senior military leaders about concepts in classical texts.
- Creating a knowledge resource for scholars and defense personnel.
- Considering the inclusion of historical military concepts in modern practices.

Features: The project involves organizing events and workshops focusing on various aspects of India's strategic culture.

- It will culminate in a publication scheduled for January 2024, which will document and institutionalize this knowledge.

What are the major military practices Project UDBHAV takes inspiration from?

Chanakya's Arthashastra: It emphasizes strategic partnerships, alliances, and diplomacy. This aligns with modern military practices like international cooperation and soft power projection.

Thirukkural: It is authored by Tamil philosopher Thiruvalluvar. It promotes ethical conduct in all endeavors, including warfare. This aligns with modern military codes of ethics and principles of the Geneva Convention.

Prominent Military Campaigns and Leaders: The project examines historical examples like the empires of Chandragupta Maurya, Ashoka and the Cholas.

Clever Diplomacy and Military Intelligence: Explores instances of clever diplomatic negotiations, psychological warfare and military intelligence. The Naval [Battle of Saraighat](#) in 1671, led by Lachit Borphukan, exemplifies these strategies.

What is the significance of Project UDBHAV?

By combining ancient wisdom with contemporary military education and operations, Project UDBHAV is preparing a strong, forward-looking Indian Army.

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151. Navy gets delivery of Imphal, its first warship with separate living spaces for women sailors

Source: The post is based on the article “Navy gets delivery of Imphal, its first warship with separate living spaces for women sailors” published in “Hindustan Times” on 23rd October 2023

What is the News?

The Indian Navy has received its latest stealth destroyer named INS Imphal.

What is INS Imphal?

INS Imphal is the third ship to be launched under [Project 15-B](#).

Designed by: Indian Navy’s Warship Design Bureau

Built by: Mazagon Dock Shipbuilders Limited (MDL)

Features:

- The ship has indigenous content of around 75%.
- The ship is armed with supersonic Surface-to-Surface ‘Brahmos’ missiles and ‘Barak-8’ Medium Range Surface to Air Missiles. T
- It can accommodate a crew of 312 persons. It has an endurance of 4,000 nautical miles and can carry out a typical 42-day mission.
- It is propelled by a powerful Combined Gas and Gas Propulsion Plant (COGAG), consisting of four reversible gas turbines, which enables Imphal to achieve a speed of over 30 knots (approximately 55 kilometers per hour).

Significance: INS Imphal is the first warship with separate accommodation for women sailors.

152. CBI launches Operation Chakra-II: What it is and why Microsoft and Amazon are part of this

Source: The post is based on the article “CBI launches Operation Chakra-II: What it is and why Microsoft and Amazon are part of this” published in “TOI” on 25th October 2023

What is the News?

The Central Bureau of Investigation (CBI) has launched Operation Chakra-II.

What is Operation Chakra-II?

Launched by: Central Bureau of Investigation (CBI)

Aim: To fight against transnationally organized cyber-enabled financial crimes in India.

For the operation, CBI has partnered with Microsoft and Amazon as well as with national and international agencies to combat and dismantle infrastructure of illegal call centers.

Why Microsoft and Amazon are part of Operation Chakra-II?

Most of the illegal call centers raided by CBI posed as Microsoft and Amazon customer support.

These call centers target vulnerable individuals and defraud thousands annually.

That is why, Microsoft and Amazon have collaborated with CBI to share critical information and help Indian law enforcement agencies in their investigations.

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153. **Delhi govt to use dust suppressants to combat poor AQI: what are they and do they work?**

Source: The post is based on the article “**Delhi govt to use dust suppressants to combat poor AQI: what are they and do they work?**” published in “**Indian Express**” on **25th October 2023**

What is the News?

Dust suppressants are being used in Delhi to reduce pollution from dust.

What are Dust suppressants?

Dust suppressants are used to reduce pollution from dust.

They are typically salts of calcium or magnesium. They have the ability to absorb moisture.

In Delhi, dust suppressant powder would be mixed along with water and sprayed on roads to keep dust levels lower.

Are Dust suppressants effective in reducing pollution from dust?

CPCB Study: In 2019, Central Pollution Control Board (CPCB) had found that using dust suppressants along with water is more effective in controlling pollution compared to just spraying water.

– It conducted a study which showed a 30% reduction in dust concentration (PM10, PM2.5, and PM1) for up to six hours when dust suppressants were used on construction sites and roads.

Delhi PWD Advisory: In 2019, the Delhi Public Works Department (PWD) had issued an advisory supporting the use of dust suppressants.

– It said that using dust suppressants with bio-additives can reduce dust for five to six hours, compared to plain water sprinkling which is effective for only 15 to 30 minutes.

154. **Food labels to have QR code to help the visually disabled**

Source: The post is based on the article “**Food labels to have QR code to help the visually disabled**” published in “**The Hindu**” on **24th October 2023**

What is the News?

The Food Safety and Standards Authority of India (FSSAI) has recommended the use of Quick Response (QR) codes on food products.

What is Food Safety and Standards (Labelling and Display) Regulations, 2020?

Food Safety and Standards (Labelling and Display) Regulations, 2020 has comprehensively outlined the information to be included on the labels of food products.

This includes product name, shelf life, nutrition facts, vegetarian/non-vegetarian logos, ingredient lists, allergen warnings, and other product-specific labelling requirements.

The information is aimed at empowering consumers to make informed choices when selecting food products.

Why has FSSAI recommended the use of QR code on food products?

The Rights of Persons with Disabilities Act 2016 recognises the rights and needs of individuals with disabilities. It emphasizes on the accessibility and the promotion of health for persons with disabilities.

One effective means to achieve this on food products is by incorporating Quick Response (QR) codes on product labels.

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These QR codes will have comprehensive details about the products ingredients, nutritional information, allergens, manufacturing date among others.

Note: The inclusion of a QR code for the accessibility of information does not replace the requirement to provide mandatory information on the product label.

155. Understanding the components of a SIM card, its functions and working

Source: The post is based on the article “Understanding the components of a SIM card, its functions and working” published in “The Hindu” on 25th October 2023

What is the News?

Over the years, the SIM card has shrunk from the SIM to the mini SIM to the micro SIM to the nano SIM. The latest on this path is the eSIM card.

What is a SIM Card?

SIM stands for ‘subscriber identification module’. It is an integrated circuit or a microchip that identifies the subscriber on a given network.

In order for a mobile phone to connect to any cellular network that follows the Global System for Mobile Communications (GSM) standard, a SIM card is mandatory.

This relationship is established using a unique authentication key — a piece of data that you need to ‘unlock’ access to the network.

Every SIM card stores this data and it is designed such that you can’t access it through your phone.

Instead, signals sent by your phone into the network are ‘signed’ by the key and the network uses the signature to understand whether your phone’s connection is legitimate.

Note: It is possible to duplicate a SIM card by accessing its key and putting it into another card. This is known as SIM cloning.

What information does a SIM card store?

The SIM card contains important information that identifies the user to the mobile network and allows the device to connect to the network.

This information includes its own ID number (the integrated circuit card identifier), the International mobile subscriber identity (IMSI), the subscriber’s location area identity (i.e. their current location), a list of preferred networks (to whom the subscriber can connect when roaming) and emergency numbers.

What is eSIM?

An eSIM, or embedded SIM is a digital or electronic SIM card that is built into a device, such as a smartphone, tablet, or smartwatch, rather than being a physical, removable card.

It serves the same purpose as a traditional SIM card, which is to identify a user to a mobile network and enable connectivity.

Advantages of eSIM:

Firstly, it is considered to be environmentally friendlier than a physical SIM. Its reprogrammability means no need for more plastic and metal for a new SIM.

Secondly, if a malicious person gains access to your phone, they won’t be able to separately access the SIM application nor be able to duplicate it.

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Disadvantages of eSIM:

Firstly, in some countries, including the U.S, eSIMs can be programmed by subscribers themselves. But this process might be difficult for those with low digital literacy such as the elderly.

Secondly, an eSIM can in theory allow network operators to track subscribers data including inside apps on the device, especially in the absence of data privacy laws.

156. Centre to introduce DNA, face matching systems at police stations across country

Source: The post is based on the article “Centre to introduce DNA, face matching systems at police stations across country” published in “The Hindu” on 25th October 2023

What is the News?

The Government of India is all set to implement the “DNA and face-matching” systems at 1,300 police stations across the country.

Which act allows the government to implement DNA and face matching systems at police stations?

The Government of India is implementing DNA and face-matching systems at police stations across the country as per Criminal Procedure Identification Act, 2022.

The act allows the police and the Central investigating agencies to collect, store and analyze physical and biological samples including retina and iris scans of arrested persons.

This Act replaced the Identification of Prisoners Act, 1920 whose scope was limited to capturing finger impressions, footprints and photographs of convicted prisoners and a specific category of arrested and non-convicted persons under the orders of a Magistrate.

The National Crime Records Bureau (NCRB) has been given responsibility to implement this act.

How is the government implementing DNA and face matching systems at police stations?

The Union Home Ministry has established a Domain Committee with representatives from state police, central law enforcement agencies, and other stakeholders to ensure the successful implementation of the Act.

Some police stations have started recording measurements such as thumbprints, finger impressions, and photographs of accused individuals using existing methods.

The National Automated Fingerprint Identification System (NAFIS) is also being integrated with the Criminal Procedure Identification Act.

Note: NAFIS has created a central database of fingerprints of criminals which can be accessed by users from all States, Union Territories and Central Agencies.

What are the challenges in implementing DNA and face matching systems at police stations?

Lack of Training of Police Officials

Lack of funds and resources in police departments

Tools and systems used by the police should be technologically, legally and forensically sound.

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157. **Telangana's law under scanner: How preventive detention works**

Source: The post is based on the article “**Telangana's law under scanner: How preventive detention works**” published in “**The Hindu**” on **25th October 2023**

What is the News?

The Supreme Court has expressed concerns about the Telangana government's use of Preventive Detention law in three different cases.

What is Preventive Detention?

Preventive detention means detention of a person by the state without trial and conviction by court, but merely on suspicion. The detention could be up to a year unless extended.

In countries such as Britain, United States and Canada, preventive detention is a wartime measure. In India, the Constitution itself allows for preventive detention.

Article 22 of Part III of the Constitution, which deals with fundamental rights, grants the state the power to suspend these rights for preventive detention.

Under what laws can the state order preventive detention?

The state can order preventive detention under various laws. At the national level, examples of such laws include the National Security Act and the Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 (COFEPOSA).

Additionally, around 25 states have their own laws that allow for preventive detention.

What is the procedure for Preventive Detention?

First, the district magistrate would issue an order to detain a person when it is necessary to maintain “public order.” The state can delegate this power to the police as well.

If the detention ordered is for more than three months, such a detention requires the approval of an Advisory Board.

These Advisory Boards are set up by states and normally consist of retired judges and bureaucrats. A detainee is generally not allowed legal representation before the Board. If the Board confirms the detention, the detainee can move Court challenging the detention order.

The detainee is entitled to know the grounds of his detention. However, the state may refuse to divulge the grounds of detention if it is in the public interest to do so.

The detaining authorities must also give the detainee earliest opportunities for making representation against the detention.

How do courts assess detention orders?

For preventive detention, there are very narrow grounds of judicial review because the Constitution emphasizes the state's “subjective satisfaction” when ordering a detention.

Judicial review in such cases is often limited to whether the Advisory Board applied its mind, considered all material facts and whether the state showed malicious intention in ordering detention.

However, courts have also invalidated detention orders based on technical issues. These could include delays in the Advisory Board's decision, timely communication of detention grounds and ensuring that the detainee understands these grounds.

Factly Compilation for the Month of October, 2023

158. **Minister of Cooperation inaugurated IFFCO's Nano DAP (Liquid) plant at Kalol in Gandhinagar, Gujarat**

Source: The post is based on the article “**Minister of Cooperation inaugurated IFFCO's Nano DAP (Liquid) plant at Kalol in Gandhinagar, Gujarat**” published in “**PIB**” on **24th October 2023**

What is the News?

The Union Minister of Cooperation has inaugurated IFFCO's Nano DAP (Liquid) Plant at Kalol in Gandhinagar, Gujarat.

What is Nano DAP?

Nano-DAP (Di-ammonium Phosphate) is a nanotechnology-based agri-input developed by the Indian Farmers Fertilizer Cooperative Limited (IFFCO).

It will have 8% nitrogen and 16% phosphorus compared to 18% nitrogen and 46% phosphorus contained in the conventional granular bag.

Comparison with conventional DAP: A 500 ml bottle of nano-DAP is equal to a 50kg bag of regular DAP. The cost of a bottle of nano-DAP is ₹600 (without subsidy) while conventional DAP is priced at ₹1,350 per bag (with fertilizer subsidy).

Patent and Royalty: IFFCO has obtained a 20-year patent for nano-urea and nano-DAP, entitling them to receive a 20% royalty for global usage of these products.

What are the benefits of Nano DAP?

Nutrient use efficiency is more than 90 percent under optimum field conditions.

Enhances Crop Growth and Quality.

It is cheaper than conventional DAP and is economical for the farmers

Reduces pollution of soil, air and water due to excessive use of phosphatic fertilizers.

Reduced production cost and increased output will also boost the annual income of Indian farmers.

It is eco friendly as nano DAP will minimally contaminate the land.

159. **Losses from extreme events over 31 years were \$3.8 trillion**

Source: The post is based on the article “**Losses from extreme events over 31 years were \$3.8 trillion**” published in “**The Hindu**” on **25th October 2023**

What is the News?

The Food and Agriculture Organization (FAO) has released a report titled ‘The Impact of Disaster on Agriculture and Food Security’.

What are the key findings of the report?

Warmest Decade: In 2023, we saw the end of the warmest decade on record with a lot of extreme weather and disasters. These disasters were made worse by conflicts and the COVID-19 pandemic.

Rising Disaster Frequency: Over the past 50 years, the number of extreme disaster events has increased significantly.

– In the 1970s, there were about 100 disasters per year, but in the last 20 years, it's gone up to about 400 annually globally.

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Impact on Agriculture: Agricultural activities and livelihoods depend on environmental conditions, natural resources, and ecosystems.

– But the agriculture sector is facing threats from hazards such as flooding, water scarcity, drought, and environmental degradation.

– For instance, in Pakistan, exceptional monsoon rainfalls in 2022 led to nearly \$4 billion in damages to the agricultural sector.

Agriculture losses due to disasters: Over the last 31 years, extreme events have caused around \$3.8 trillion in losses to agriculture.

– Droughts are the biggest threat to agriculture, causing over 65% of losses.

– Floods, storms, cyclones, and volcanic activities each account for around 20% of losses.

Region wise differences: Asia has the highest economic losses from disasters (45%). Oceania experienced the lowest losses from disasters.

160. **Pradhan Mantri Anusuchit Jaati Abhuyday Yojana(PM-AJAY)**

Source: The post is based on the article “**Pradhan Mantri Anusuchit Jaati Abhuyday Yojana(PM-AJAY)**” published in “**PIB**” on **24th October 2023**

What is the News?

This article talks about Pradhan Mantri Anusuchit Jaati Abhuyday Yojana(PM- AJAY).

What is Pradhan Mantri Anusuchit Jaati Abhuyday Yojana (PM- AJAY)?

Nodal Ministry: Ministry of Social Justice & Empowerment

Combination of Three Schemes: The scheme is a merger of 3 Centrally Sponsored Schemes namely: Pradhan Mantri Adarsh Gram Yojana (PMAGY), Special Central Assistance to Scheduled Castes Sub Plan (SCA to SCSP) and Babu Jagjivan Ram Chhatrawas Yojana (BJRCY).

Aim: To reduce poverty within Scheduled Caste (SC) communities by creating additional job opportunities through skill development, income-generating initiatives, and more.

– To enhance socio-economic development indicators by providing necessary infrastructure and essential services in SC-dominated villages.

Components: The Scheme has three components:

1. Development of SC dominated villages into an “Adarsh Gram”: It aims to ensure integrated development of SC majority villages so that they have adequate infrastructure.

2. Grants-in-aid’ for District/State-level Projects: It offers financial support for district or state-level projects with the aim to improve the socio-economic conditions of SC communities.

– This may include the construction of infrastructure in SC-dominated villages, including those chosen under the Adarsh Gram component as well as the establishment of hostels and residential schools.

3. Construction of Hostels in

– higher educational institutions which are top-ranked as per the National Institutional Ranking Framework (NIRF) of Government of India and are funded by the Centre/State/UT Governments either fully or partially.

– schools which are either fully or partially funded by the Centre/State/UT Governments and recommended by the Ministry of Education

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161. **2020 Winner: Changemaker Social Transformation – Shanti Raghavan Developing a ‘purple economy’ for disability inclusion**

Source: The post is based on the article “**2020 Winner: Changemaker Social Transformation – Shanti Raghavan Developing a ‘purple economy’ for disability inclusion** ” published in “**Hindu Businessline**” on 26th October 2023

Why in the News?

Shanti Raghavan is the recipient of the Business Line Changemakers Award in 2020.

She leads an organization called EnAble India. It is working on creating a **purple economy**.

What is the Purple Economy?

Purple Economy obtains its name from the color adopted by many feminist movements.

It represents a new vision of economics that recognizes the importance of care work, empowerment and autonomy of women.

Pillars: There are four pillars of the purple economy:

1. Universal Care Services: To address gender and class disparities, ensure that professional care services are accessible to all households, either through publicly funded or state-subsidized private services.

2. Work-Life Balance in the Job Market: Implement measures for a fairer distribution of care responsibilities between genders, like parental leave and reduced work hours.

3. Alleviate Rural Unpaid Work: Reduce the extra caregiving burden on women and girls in rural areas by improving infrastructure to save time spent on tasks like fetching water, farming and cooking.

4. New Economic Policies: Support these measures with macroeconomic policies that generate jobs, allocate resources for care services, invest in rural infrastructure and ensure effective regulations to make these changes a reality.

UPSC Syllabus Topic: Economy

162. **Dogra architecture gets a revival at J&K’s Maharaj Gunj**

Source: The post is based on the article “**Dogra architecture gets a revival at J&K’s Maharaj Gunj**” published in “**The Hindu**” on 26th October 2023

Why in the News?

Srinagar Smart City Ltd. and the Kashmir chapter of the Indian National Trust for Art and Cultural Heritage (INTACH) have joined hands to conserve vernacular elements of Dogra architecture in Kashmir.

What is Dogra Architecture?

Dogra architecture refers to the traditional architectural style and building practices associated with the Dogra community.

They primarily ruled over Jammu and Kashmir from 1846 to 1947.

Examples of Dogra Architecture: Mubarak mandi, Jharokha style of balcony, Amar Mahal Palace.

Key Features of Dogra Architecture:

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1. Use of Local Materials: Dogra architecture often utilizes locally available materials such as wood, stone, and clay, which help in maintaining a comfortable indoor temperature and provide insulation from the harsh weather.

2. Sloping Roofs: Houses in this style typically have sloping roofs to allow for the shedding of snow and rain which is common in the region.

3. Carved Wooden Elements: Intricate wood carvings on doors, windows and balconies showcasing the artistic skills of the local craftsmen.

4. Courtyard Design: Houses are often designed around a central courtyard, providing a private and functional space for the family.

5. Adaptation to Climate: Dogra architecture is designed to withstand extreme weather conditions, including cold winters and hot summers.

UPSC Syllabus Topic: Architecture

163. In a first, Army gets vertical wind tunnel to train special forces

Source: The post is based on the article “In a first, Army gets vertical wind tunnel to train special forces” published in “The Hindu” on 26th October 2023

Why in News?

The Indian Army has installed its first vertical wind tunnel (VWT) at the Special Forces Training School (SFTS) at Bakloh in Himachal Pradesh.

Why is the Vertical Wind Tunnel(VWT) installed by the army?

Purpose: It offers a controlled environment to enable military trainees to enhance their skills by simulating real-life free fall conditions.

Benefits:

1. Improved Skill Development: It helps armed forces personnel enhance their abilities by simulating various freefall scenarios.

2. Stability and Safety: It reduces potential instability during freefall and parachute deployment. This makes it an invaluable tool for training beginners and advanced free-fallers.

3. Assessment: The system aids in assessing individual reactions to situations in airborne operations.

UPSC Syllabus Topic: Indian Defence

164. ISA to release report on global adoption of solar technology in November

Source: The post is based on the article “ISA to release report on global adoption of solar technology in November” published in “The Hindu” on 26th October 2023

Why in the News?

The International Solar Alliance (ISA) will for the first time compile and release a ‘Global solar stocktake report’.

What is the Global solar Stocktake Report?

To be released by: International Solar Alliance (ISA)

Inspired by: ‘Global Stocktake’ of the United Nations Conference of Parties

Factly Compilation for the Month of October, 2023

Aim: To take stock of the progress made by countries in the solar energy sector.

Focus of the report: In 2020, there was about \$300 billion invested in solar, and in 2022, it was around \$380 billion. But most of the manufacturing is in China. The stocktake will explore ways to diversify this manufacturing.

What is a Global Solar Facility?

To be Launched by: International Solar Alliance (ISA)

Aim: To help reduce the remaining constraints related to contracts and financing for solar energy projects.

Focus area: To expand solar installations in Africa and then expand it to West Asia, Latin America, and the Caribbean.

Funds: It will have three funds: **1)** payment guarantee fund **2)** Insurance fund to mitigate project risks and **3)** Investment fund for technical assistance.

How much gigawatts of solar photovoltaic panels have been installed globally?

As of 2022, global solar photovoltaic installations have reached 1,133 gigawatts (GW) with 191 GW added in 2022.

China accounts for about a quarter of this total solar photovoltaic installations followed by the United States.

India is also among the top five countries globally with 62 GW of installations.

UPSC Syllabus Topic: International Organizations

165. **Cabinet approves Memorandum of Cooperation between India and Japan on Japan-India Semiconductor Supply Chain Partnership**

Source: The post is based on the article “**Cabinet approves Memorandum of Cooperation between India and Japan on Japan-India Semiconductor Supply Chain Partnership**” published in “**PIB**” on **26th October 2023**

Why in the News?

The Union Cabinet of India has approved a memorandum of cooperation between India and Japan on a Semiconductor Supply Chain Partnership.

What is the purpose of the Japan-India Semiconductor Supply Chain Partnership?

Aim: To strengthen cooperation between India and Japan towards enhancement of the semiconductor supply chain.

Duration of the Partnership: Five Years

Type of Cooperation: The partnership is for both Governments-to-Government (G2G) and Business-to-Business (B2B) collaboration in the semiconductor supply chain sector.

What is India-Japan Digital Partnership (IJDP)?

Signed in: 2018

Aim: To strengthen existing cooperation within the Science and Technology/Information and Communication Technology sector.

UPSC Syllabus Topic: International Relations

Factly Compilation for the Month of October, 2023

166. India hosting meeting of the United Nations Forum on Forests to deliberate on forest fires and forest certification

Source: The post is based on the article “India hosting meeting of the United Nations Forum on Forests to deliberate on forest fires and forest certification” published in “PIB” on 26th October 2023

What is the News?

The Ministry of Environment, Forest and Climate Change is organizing a Country-Led Initiative (CLI) event as part of the United Nations Forum on Forests (UNFF) at the Forest Research Institute (FRI), Uttarakhand.

What is the United Nations Forum on Forests (UNFF)?

Specification	Details
Established in	2000
Type	High-level intergovernmental policy forum
Established by	Economic and Social Council of the United Nations (ECOSOC)
Aim	To promote the management, conservation, and sustainable development of all types of forests.
Members	It is composed of all Member States of the United Nations and specialized agencies.
India	Founding Member
Headquarters	New York United States

What is the United Nations Strategic Plan for Forests 2017-2030 (UNSPF)?

Adopted by: UN General Assembly in 2017

Purpose: It is a global framework to achieve the sustainable management of all types of forests, including trees outside forests, and to combat deforestation and forest degradation.

Target: To increase forest area by 3% worldwide by 2030.

Goals: The plan contains a set of six Global Forest Goals and 26 associated targets to be reached by 2030.

All these are voluntary in nature and universally applicable.

Six Global Forest Goals:

Goal 1: Reverse the loss of forest cover worldwide. This is by adopting sustainable forest management, including protection, restoration, afforestation and reforestation.

Goal 2: Enhance forest-based economic, social and environmental benefits. This includes improving the livelihoods of forest-dependent people.

Goal 3: Increase significantly the area of protected forests worldwide and other areas of sustainably managed forests.

Goal 4: Mobilize new and additional financial resources from all sources. This is for the implementation of sustainable forest management and strengthening scientific and technical cooperation and partnerships.

Goal 5: Promote governance frameworks to implement sustainable forest management.

Goal 6: Enhance cooperation, coordination, coherence and synergies on forest-related issues at all levels

Factly Compilation for the Month of October, 2023

UPSC Syllabus Topic: Environment

167. **As Gujarat's Dhordo village gets UNWTO recognition, PM Modi says it showcases India's tourism potential**

Source: The post is based on the article “As Gujarat's Dhordo village gets UNWTO recognition, PM Modi says it showcases India's tourism potential” published in “The Hindu” on 26th October 2023

Why in the News?

The United Nations World Tourism Organization (UNWTO) has included Dhordo village (Gujarat) on the list of 'Best Tourism Villages 2023'.

Where is Dhordo Village?

Located in: Great Rann of Kutch, Gujarat.

Known for: Annual Rann Utsav Festival, which celebrates the region's rich cultural heritage, traditional arts, music and crafts.

What is the Best Tourism Villages Initiative?

Started by: United Nations World Tourism Organization (UNWTO)

Aim: To promote tourism for sustainable development globally.

The award is given to villages that are leaders in rural development and preservation of landscapes, cultural diversity, local values and food traditions.

What is the United Nations World Tourism Organization (UNWTO)?

Specification	Details
Established in	1975
Type	United Nations Specialized Agency
Aim	To promote responsible, sustainable and universally accessible tourism
Headquarters	Madrid, Spain

UPSC Syllabus Topic: Art and Culture/International Organizations

168. **Lemru Elephant Corridor: Coal Ministry ensures utmost Environ care while Enhancing Coal Production**

Source: The post is based on the article “Lemru Elephant Corridor: Coal Ministry ensures utmost Environ care while Enhancing Coal Production” published in “PIB” on 26th October 2023

Why in the News?

The Ministry of Coal has excluded certain coal mines from development to protect forest areas including the Lemru Elephant Corridor.

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Where is Lemru Elephant Reserve?



Located in: Chhattisgarh

Objective: To provide elephants with a permanent habitat, reduce property damage, and mitigate human-elephant conflicts.

Significance: The area under the reserve is part of the **Hasdeo Aranya forests**.

Where is Hasdeo Aranya forests?

Located in: Chhattisgarh

Called as: “Lungs of Chhattisgarh“

River: It is the catchment area of the Hasdeo river, the largest tributary of the Mahanadi.

Significance: It is said to be the largest contiguous stretch of dense forestland in central India.

UPSC Syllabus Topic: Environment – Elephant Reserve

169. **Lok Sabha’s Ethics Committee: its history, constitution and members**

Source: The post is based on the article “**Lok Sabha’s Ethics Committee: its history, constitution and members**” published in “**Indian Express**” on **26th October 2023**

Why in News?

Lok Sabha Speaker has referred a “cash-for-query” complaint made by an MP against another MP to the Lok Sabha Ethics Committee.

What is Lok Sabha Ethics Committee?

Specifications	Detail
Origin	1996: Presiding Officers’ Conference suggested ethics panels for both houses. 1997: Ethics Committee constituted in Rajya Sabha 13th Lok Sabha: Committee of Privileges recommends Lok Sabha Ethics Committee

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	2000: Ad hoc Ethics Committee established in Lok Sabha. 2015: Ethics Committee becomes a permanent part of Lok Sabha.
Members	15
Appointed by	The Speaker appoints members of the committee for one year.
Functions	<ol style="list-style-type: none"> 1. To examine every complaint relating to unethical conduct of a Member of Lok Sabha referred to it by the Speaker and make recommendations 2. To formulate a code of conduct for Members 3. To suggest amendments or additions to the code of conduct from time to time.

What is the difference between Ethics committee and privilege committee?

The work of the Ethics Committee and the Privileges Committee often overlap. An allegation of corruption against an MP can be sent to either body, but usually more serious accusations go to the Privileges Committee.

A non-MP too can be interrogated by the privilege committee for actions that attack the authority and dignity of the House. The Ethics Committee can take up only cases of misconduct that involve MPs.

UPSC Syllabus Topic: Indian Polity– Important Bodies.

170. **Vajra Mushti Kalaga: A martial art form in terminal decline**

Source: The post is based on the article “**Vajra Mushti Kalaga: A martial art form in terminal decline**” published in “**The Hindu**” on **26th October 2023**

Why in the News?

Vajra mushti kalaga is a martial art form. It has gone extinct and takes place only during Dasara.

What is Vajra Mushti Kalaga?



Source: The Hindu

Specifications	Details
Vajra Mushti Kalaga	It is a Martial Art Form
Meaning	Thunderbolt Fist
Objective	Neutralize opponent and counter their weapon

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Technique used	Hand-to-hand combat like grappling, wrestling, and striking
Weapon used	Knuckle Duster, a small metal weapon.
Knuckle duster Material	Made of animal horns and worn on the knuckles of the fighter
Characteristics	It is a form of wrestling different from conventional grappling. In this, two persons take a swipe at each other's head with a knuckle duster. Whoever draws the blood from the opponent's head first is declared the winner.
Popular During	Vijayanagar rulers (14th-17th centuries)
Significance	Noticed by medieval travelers from Portugal during Navaratri celebrations in Vijayanagar empire

UPSC Syllabus Topic: Paintings and other art forms

171. **World Energy Outlook 2023: Substantial cut likely in India's CO2 emissions by 2050**

Source: The post is based on the article **“World Energy Outlook 2023: Substantial cut likely in India's CO2 emissions by 2050”** published in **“TOI” on 27th October 2023**

Why in the News?

The [International Energy Agency\(IEA\)](#) has released the World Energy Outlook 2023.

What is the World Energy Outlook 2023?

Released by: International Energy Agency(IEA)

Aim: To provide in-depth analysis and strategic insights into every aspect of the global energy system.

Key Highlights from the report:

Globally:

- 1.Fossil fuel share in the global energy supply is projected to reduce from around 80% to 73% by 2030.
- 2.Investment in clean energy has risen by 40% since 2020.
- 3.In 2020, one in 25 cars sold was electric.in 2023, this is now one in 5.

India:

India is expected to have the highest growth in energy demand over the next three decades.

But India's industrial sector will emit 30% less CO2 by 2030 and passenger cars will emit 25% less CO2 per kilometer driven.

This is due to the government policies in addressing climate commitments through increased efficiency and new technologies.

UPSC Syllabus Topic: Renewable Energy

Factly Compilation for the Month of October, 2023

172. **Gulf of Guinea: EU and India carry out joint naval exercise**

Source: The post is based on the article “**Gulf of Guinea: EU and India carry out joint naval exercise**” published in “**PIB**” on **27th October 2023**

Why in the News?

India and the European Union (EU) have conducted their maiden joint naval exercise in the Gulf of Guinea.

The exercise was conducted with the aim to boost maritime security cooperation in the region.

Where is the Gulf of Guinea?



Specification	Details
Location	Western African Coast
Ocean	Northeastern most part of the Atlantic Ocean
Rivers	The Volta and Niger rivers are two of its primary tributaries
Known for	Oil and natural gas.
Significance	Null Island, defined as the intersection of the Equator and Prime Meridian (zero degrees latitude and longitude) is in the gulf.
Piracy	The Gulf of Guinea is also known as the world's hotspot for maritime piracy.

UPSC Syllabus Topic: Places in News

173. **India's green hydrogen move may worsen pollution if steps are not in place, says study**

Source: The post is based on the article “**India's green hydrogen move may worsen pollution if steps are not in place, says study**” published in “**The Hindu**” on **27th October 2023**

Why in the News?

A study by Climate Risk Horizons(CRH) has said that India's plans to produce 'green hydrogen' could lead to increased pollution without proper oversight.

Can India achieve the target setup under the National Green Hydrogen Mission?

The **National Green Hydrogen Mission** aims to make five million tonnes of green hydrogen by 2030.

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To do this, India needs to set up renewable energy sources with a capacity of 125 gigawatts and use 250,000 gigawatt-hour units of power which is around 13% of what India currently uses for electricity.

However, as of August 2023, India's renewable energy capacity was 131 gigawatts.

To meet this 2030 green hydrogen goal, India needs to add a similar amount of renewable energy by 2030.

This is on top of the commitment to add 500 gigawatts of renewable energy by 2030, which is part of the Paris Agreement.

In 2023, India added only 15 gigawatts of new solar and wind energy capacity, falling short of the 45 gigawatts they need to add each year to reach their 2030 target.

What are the concerns related to production of Green Hydrogen?

Specification	Details
Definition of Green Hydrogen	Green hydrogen has been defined as hydrogen with emissions of no more than two kg of carbon dioxide per kg of hydrogen. This definition leaves room for interpretation.
Source of electricity for Green Hydrogen production	Running electrolyzers 24x7 could lead to reliance on coal-based power, especially during nighttime when solar power is unavailable. This would lead to increase in carbon emissions.

UPSC Syllabus Topic: Renewable Energy

174. **SC allows surrogacy, strikes down rule banning use of donor gametes**

Source: The post is based on the article “**SC allows surrogacy, strikes down rule banning use of donor gametes**” published in “**The Hindu**” on **27th October 2023**

Why in the News?

The Supreme Court has allowed a woman with **Mayer-Rokitansky-Kuster-Hauser (MRKH)** Syndrome to undergo surrogacy using a donor egg.

What was the case about?

Easing the path

On March 14, 2023, government notified amendments to the law to ban the use of donor gametes, saying ‘intending couples’ must use their own gametes for surrogacy

■ Supreme Court says the amendment cannot contradict Rule 14(a), which specifically recognises the absence of a uterus or any allied condition as a medical indication necessitating gestational surrogacy



Source: The Hindu

The woman suffers from Mayer Rokitansky Kuster Hauser syndrome. Medical records confirm her inability to produce eggs or have a uterus.

Due to this, the couple began the gestational surrogacy process.

But the government amended the surrogacy act in 2023 which banned the use of donor gametes. It required “intending couples” to use their own gametes for surrogacy.

Against this, a petition was filed in the Supreme Court arguing that the amendment violated a woman’s right to parenthood.

The petitioner argued that the amendment contradicted Surrogacy Act, 2021 which recognised the situation when a medical condition would require a couple to opt for gestational surrogacy in order to become parents.

However, the government argued that surrogacy could only be availed if the child was “genetically related” to the intending couple.

What did the Supreme Court ruled on this?

The Supreme Court found the amendment contrary to the main provisions of the Surrogacy Act.

The court said that the Surrogacy Act recognizes medical conditions necessitating gestational surrogacy and the amendment cannot contradict this.

Factly Compilation for the Month of October, 2023

What is Mayer-Rokitansky-Kuster-Hauser(MRKH)?

Specifications	Details
Definition	It is a rare congenital disorder that affects the female reproductive system. This condition is characterized by an underdeveloped vagina and uterus.
Caused by	Incomplete development of the Müllerian duct. This structure in the embryo develops into the uterus, fallopian tubes, cervix and the upper part of the vagina.
Prevalence	Rare, occurring in approximately 1 in 4,000 to 5,000 female births.
Fertility	Usually unable to conceive and carry a pregnancy due to the absence of a uterus, but assisted reproductive technologies like surrogacy may be an option.

UPSC Syllabus Topic: Diseases

175. 'Super rich' incomes' share ebbing amid middle-class mobility: CBDT

Source: The post is based on the article “‘Super rich’ incomes’ share ebbing amid middle-class mobility: CBDT” published in “The Hindu” on 27th October 2023

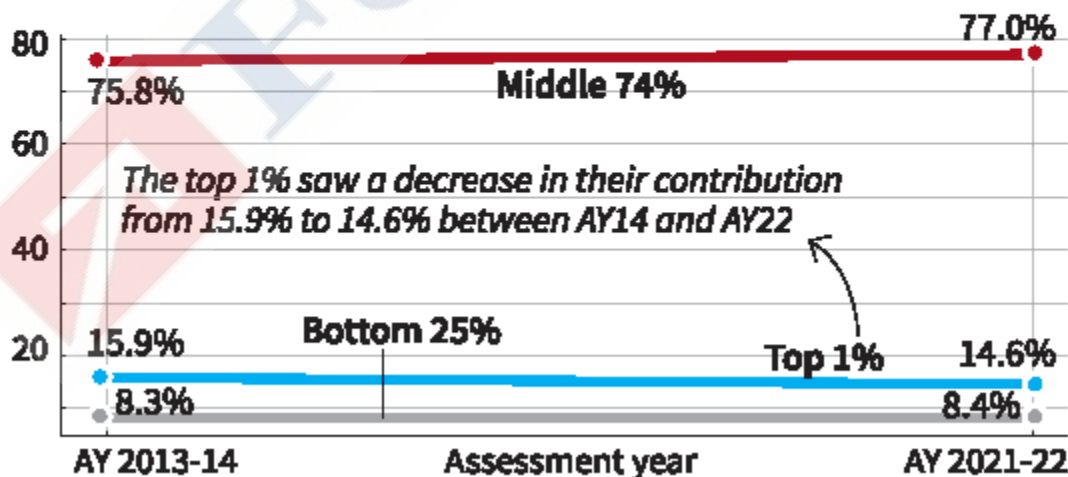
Why in the News?

Central Board of Direct Taxes(CBDT) has released data on India's Tax base.

What are the key highlights from the CBDT's data?

Marginal shift in contributions

There has been a subtle change in the gross total income contributions among individual taxpayers



Source: The Hindu

Factly Compilation for the Month of October, 2023

1. Widening Tax Base in India since 2013-14: India's tax base has significantly expanded since 2013-14.

– The number of income tax returns filed by individuals has increased from 3.36 crore to 6.37 crore between assessment years 2013-14 and 2021-22.

2. Increased Taxpayer Diversity Across Income Ranges: The number of returns filed by individual taxpayers in various income ranges has grown.

– In the income range up to ₹5 lakh, there has been a 32% increase in the number of returns filed, including those with incomes below the taxable limit.

– For higher income ranges of ₹5 lakh to ₹10 lakh, the number of returns filed increased by 295%.

3. Share of Top 1% Individual taxpayers: The share of the top 1% of individual taxpayers, compared to all individuals, has gone down from 15.9% to 14.6%.

– In contrast, the share of the bottom 25% of taxpayers increased slightly from 8.3% to 8.4% during the same time.

4. Gross Total Income: The increase in average gross total income for top 1% individual taxpayers is 42% while that for bottom 25% individual taxpayers is 58%.

UPSC Syllabus Topic: Taxation

176. **Eight former Indian Navy officers get death penalty in Qatar**

Source: The post is based on the article “**Eight former Indian Navy officers get death penalty in Qatar**” published in “**The Hindu**” on **27th October 2023**

Why in the News?

Eight former Indian Navy personnel working for a company in Doha were given the death penalty by a local court in Qatar.

Why have former Indian Navy personnel sentenced to death in Qatar?

Case History	Initially, they were kept in solitary confinement without clear charges	India had secured consular access to the accused and provided legal assistance	Trial started in March this year	Qatari court of first instance has pronounced them guilty and awarded death sentence	India is 'deeply shocked' at the verdict and 'exploring legal options'
<p>In August 2022, eight Indian nationals – all retired Indian Navy personnel – were arrested by Qatari intelligence</p> <p>Capt Navtej Singh Gill, Capt Birendra Kumar Verma, Capt Saurabh Vasisht, Cdr Amit Nagpal, Cdr Purnendu Tiwari, Cdr Sugunakar Pakala, Cdr Sanjeev Gupta, Sailor Ragesh were working for Al Dahra company</p> <p>Before taking up jobs at Al Dahra, all had retired from Indian Navy several years ago</p>	<p>They were charged with spying in Qatar on behalf of Israel</p> <p>Al Dahra was shut down after the arrests</p> <p>Reports said the personnel were working on a project to develop small, stealth submarines for the Qatar Navy</p>				

Source: Economic Times

The Former Indian Navy Personnel were working for a defence company in Qatar.

This company was involved in training Qatar's armed forces. It also used to produce high-tech Italian-origin submarines that are known for stealth capabilities.

The former navy personnels have been charged with the offense of spying for Israel on Qatar's advanced submarines.

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What will be the impact of this verdict on India-Qatar relations?

This verdict could impact relations between India and Qatar because:

1. There are over seven lakh Indians in Qatar.
2. Qatar is the largest supplier of LNG to India which accounts for over 48% of India's global LNG imports.
3. India also imports ethylene, propylene, ammonia, urea and polyethylene from Qatar.

UPSC Syllabus Topic: International Relations: India-West Asia

177. Global Tax Evasion Report 2024

Source: The post is based on the article “Global Tax Evasion Report 2024” published in “EU” on 27th October 2023

Why in the News?

The European Union Tax Observatory has released ‘Global Tax Evasion Report 2024’.

What is the Global Tax Evasion Report 2024?

Released by: European Union Tax Observatory

Aim: To discuss tax evasion, the **Global Minimum Tax (GMT)** and measures to combat tax evasion.

Note: Tax evasion is the illegal act of not paying owed taxes to the government by under-reporting income, hiding money offshore or inflating deductions to reduce tax liability.

Key highlights of the report:

1. Tax Rates for Global Billionaires	Global billionaires often have effective tax rates as low as 0% to 0.5% due to the use of shell companies to avoid income taxation.
2. Profit Shifting by Multinational Corporations (MNCs)	In 2022, MNCs shifted around USD 1 trillion to tax havens, equivalent to 35% of their profits earned outside their home countries. – “Greenwashing the Global Minimum Tax” allows MNCs to use ‘green’ tax credits to lower their tax rates below the 15% minimum.
3. Challenges in Curbing Offshore Tax Evasion	Over the past decade, offshore tax evasion has reduced, with only 25% of previously untaxed wealth remaining. – However, challenges persist such as non-compliance by offshore financial institutions and limitations in sharing bank information automatically.

Key recommendations of the report:

1. Global Minimum Tax for Billionaires: Proposes a global minimum tax of 2% on billionaires' wealth to increase government revenue and reduce wealth inequality.

2. Reform Corporate Taxation: Reform international agreements on minimum corporate taxation by implementing a 25% tax rate and eliminating tax competition loopholes.

3. Unilateral Measures for Tax Collection: Implement unilateral measures to collect taxes from multinational companies and billionaires if global agreements fail.

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4.Global Asset Registry: Work towards establishing a Global Asset Registry to enhance the fight against tax evasion.

5.Strengthen Economic Substance and Anti-Abuse Rules: Strengthen the application of economic substance and anti-abuse rules to deter tax avoidance and evasion.

UPSC Syllabus Topic: Taxation- Indian Economy

178. **Centre launches ‘Dark Patterns Buster Hackathon 2023’ to design & prototype innovative app or software that can detect dark patterns on e-Commerce platforms**

Source: The post is based on the article “**Centre launches ‘Dark Patterns Buster Hackathon 2023’ to design & prototype innovative app or software that can detect dark patterns on e-Commerce platforms**” published in “**PIB**” on **27th October 2023**

Why in the News?

The Department of Consumer Affairs in collaboration with IIT (BHU) has launched Dark Patterns Buster Hackathon 2023.

What are Dark Patterns?

Dark Patterns- A dark pattern refers to a design or user interface technique that is intentionally created to **manipulate or deceive users into making certain choices** or taking specific actions that **may not be in their best interest**.

It is a deceptive practice employed to influence user behavior in a way that benefits the company implementing it.

What are the different types of Dark Patterns?

Specifications	Details
Trick Questions	It means the deliberate use of confusing or vague language to misguide or misdirect a user from taking desired action or leading consumers to take a specific response or action.
Saas Billing	It is a process of generating and collecting payments from consumers on a recurring basis in a software as a service (SaaS) business model.
Rogue Malwares	It uses ransomware to mislead/trick users into believing there is a virus on their computer. It then convinces them to pay for a fake malware removal tool that actually installs malware on their computer.
Forced action	It means forcing a user into taking an action that would require the user to buy any additional good(s) or subscribe or sign up for an unrelated service <i>or share personal information</i> , in order to buy or subscribe to the product/service originally intended by the user.
Confirm shaming	It means using a phrase, video, audio or any other means to create a sense of fear or shame or ridicule or guilt in the mind of the user, so as to nudge the user to act in a certain way that results in the user purchasing a product

Factly Compilation for the Month of October, 2023

	or service from the platform or continuing a subscription of a service,
Nagging	In this, the user is continuously subjected to requests, information, choices or disruptions in order to push them to make a transaction and make some commercial gains
Basket sneaking	It is used to add additional products or services to the shopping cart without the user's consent
Bait & switch	Advertising a certain product/ service but delivering another, often of lower quality;

UPSC Syllabus Topic: Science and Technology

179. **Anamalai Tiger Reserve panel assesses progress of tiger rewilding project**

Source: The post is based on the article **“ATR panel assesses progress of tiger rewilding project”** published in **“The Hindu” on 27th October 2023**

Why in the News?

A committee visited the Anamalai Tiger Reserve to check the progress of the Forest Department's first Tiger rewilding project.

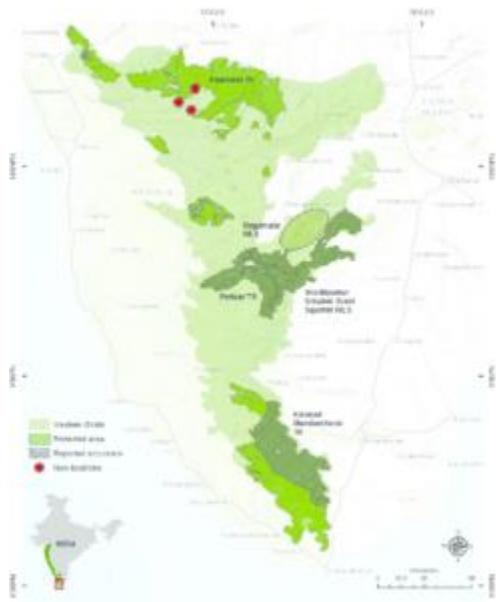
What is Tiger Rewilding?

Rewilding involves the reintroduction of a captive tiger cub into the wild when it becomes clear that the tiger cub is capable of surviving in the jungle independently.

Where is Anamalai Tiger Reserve?

Specification	Details
State	Tamil Nadu
Located in	South Western Ghats
Surrounded by	Parambikulam Tiger Reserve on the East, Chinnar Wildlife Sanctuary and Eravikulam National Park on the South Western side.
Declared as a Tiger Reserve in	2007
Forest Type	It supports diverse forest types: Wet evergreen forests, semi evergreen forests, moist deciduous, dry deciduous, dry thorn and shola forests.
Flora	Around 2500 species are found
Fauna	Tiger, Asiatic elephant, Nilgiri Tahr, Lion Tailed Macaque, Great Indian Hornbill among others. It is also home to 15 of 16 species of birds endemic to the Western Ghats.
Tribes	The reserve is home to six tribes: Kadars, Malasars, Pulaiyars, Mudugars and Eravallan.

Factly Compilation for the Month of October, 2023



Source- Research Gate

UPSC Syllabus Topic: National Parks/Wildlife Sanctuaries

180. Pradhan Mantri Matru Vandana Yojana

Source: The post “Pradhan Mantri Matru Vandana Yojana” is based on the article **“Pradhan Mantri Matru Vandana Yojana is a prime example of how Digital Connection and emotional and administrative responsibility can come together: Union Minister”** published in **“PIB”** on **28th October 2023**

Why in the News?

The Ministry of Women and Child Development has launched a new Pradhan Mantri Matru Vandana Yojana (PMMVY) portal.

What is Pradhan Mantri Matru Vandana Yojana(PMMVY)?

Launched in	2017
Component of	Mission Shakti since 2022
Nodal Ministry	Ministry of Women and Child Development
Type	Centrally Sponsored Scheme
Objectives	1.To provide partial compensation for the wage loss in terms of cash incentive, so that the woman can take adequate rest before and after delivery of the first child. 2.To improve health seeking behavior amongst the Pregnant Women & Lactating Mothers (PW&LM).
Eligibility	The scheme covers all Pregnant Woman & Lactating Mothers (PW&LM), excluding PW&LM who are in regular employment with the Central Government or State Governments or the Public Sector Undertakings (PSUs) or those who are in receipt of similar benefits under any law.
Limit	The maternity benefit is to be provided to a woman for the first two children provided the second child is a girl
Benefits	First Child: ₹5000 (in two installments) under PMMVY. Second Child: Benefit of ₹6000 is to be provided

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	Plus additional cash incentive of Rs 1000 under Janani Suraksha Yojana (JSY) after institutional delivery. On an average ,a women gets ₹6000 total	subject to the second child being a girl child. This will be provided in one instalment after the birth.
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UPSC Syllabus: Government Schemes

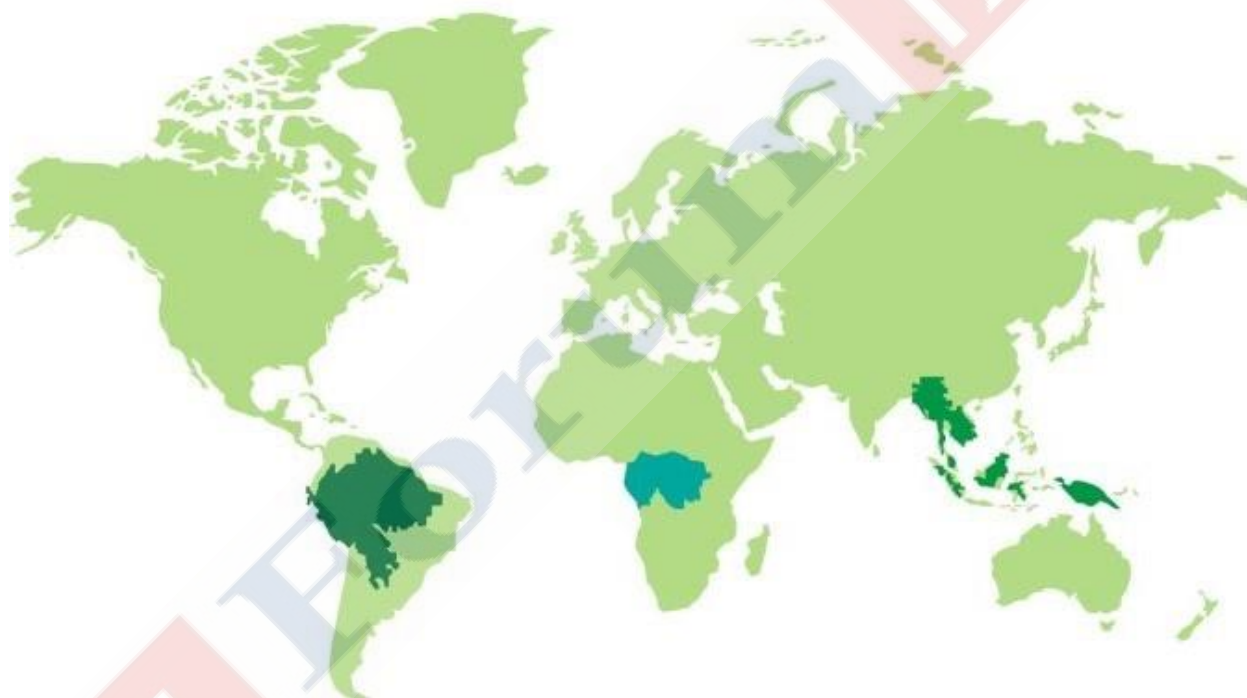
181. **Brazzaville Declaration**

Source: The post is based on the article “**Brazzaville Declaration**” published in “**MEA**” on **28th October 2023**

Why in the News?

A Summit of Three basins is going to be held at Brazzaville, Republic of Congo.

What are these three basins?



Three Basins	Details
Congo Basin	1) It is the second-largest tropical forest in the world in terms of area. 2) It spans across six countries—Cameroon, Central African Republic, Democratic Republic of the Congo, Republic of the Congo, Equatorial Guinea and Gabon.
Amazon basin	It is the largest tropical forest on the planet. It extends over 9 countries in South America: Brazil, Peru, Ecuador, Colombia, Venezuela, Bolivia, French Guiana, Suriname and the Republic of Guyana.

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Borneo-Mekong-Southeast Asia Basin	It is the world's third largest carbon sink. It is composed of two sub-regions, the island of Borneo and the Mekong River. The Mekong River is one of the largest rivers in the world. It crosses six countries: China, Myanmar, Thailand, Laos, Cambodia and Vietnam. Borneo is the fourth largest island in the world. It is divided between Brunei, Malaysia and Indonesia.
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What is the Brazzaville Declaration?

Specification	Details
Signed in	2018
Signed by	Democratic Republic of Congo(DRC), the Republic of Congo and Indonesia
Objective	To protect the Cuvette Centrale region in the Congo Basin, the world's largest tropical peatlands, from unregulated land use and prevent its drainage and degradation.

UPSC Syllabus: International Relations

182. **Mizoram has highest cancer incidence rate in India, finds study**

Source: The post is based on the article “Mizoram has highest cancer incidence rate in India, finds study” published in “The Hindu” on 28th October 2023

Why in the News?

A study has been released titled “Cancer awareness, diagnosis and treatment needs in Mizoram, India: evidence from 18 years trends (2003–2020)”.

What are the key findings of the study related to Cancer cases in Mizoram?

Specifications	Details
Highest Cancer Incidence in Mizoram	Mizoram has the highest cancer incidence rate in India despite being the second least populated state in India.
Most Cancer causes	Stomach cancer is the primary cause of cancer-related deaths in men, while lung cancer is a significant cause among women.
Increase in Cancer cases among younger population	Cancer cases and deaths are growing among the younger generation in Mizoram. Factors might include the sedentary lifestyle and dietary habits among the local tribal population.
Reasons for higher cancer deaths in Mizoram	Lack of specialized diagnostic facilities, skilled medical personnel, treatment strategies based on genetic research and transportation challenges.

What is Cancer?

According to the World Health Organisation, cancer is a large group of diseases that can start in almost any organ or tissue of the body when abnormal cells grow uncontrollably and go beyond their usual boundaries to invade adjoining parts of the body or spread to other organs.

Factly Compilation for the Month of October, 2023

Cancer is the **second leading cause of death globally** accounting for one in six deaths in 2018.

Among men, lung, prostate, colorectal, stomach and liver cancer are the most common types of cancer.

Among women, Breast, colorectal, lung, cervical and thyroid cancer are the most common among women.

What is the data related to cancer cases in India?

1.Cancer Likelihood: One in nine people in India is at risk of developing cancer during their lifetimes.

2.Leading Cancer causes: Lung cancer is prominent among males, while breast cancer is prevalent among females.

– For childhood cancers (0-14 years), lymphoid leukaemia is the most common cause.

3.Expected Increase in Cancer Cases: Study has indicated a 12.8% increase in cancer cases in India by 2025 compared to 2020.

UPSC Syllabus: Social Issues, Health and Disease

183. **Dark pattern sales deemed ‘cybercrime’**

Source: The post is based on the article **“Dark pattern sales deemed ‘cybercrime’”** published in **“The Hindu” on 28th October 2023**

Why in the News?

The Consumer Affairs Secretary has said that the dark patterns practices carried out by airlines and travel portals can be called a “cybercrime.”

What are Dark Patterns?

[Click Here to read](#)

What are Dark Pattern practices used by Airlines?

Indigo website: It uses false urgency to make customers feel they must pay an extra fee for a seat as all free seats appear unavailable.

– Even if there are four or five available free seats, they are displayed at the bottom of the page making them harder to find.

– Passengers can click “skip” at the end of the seat selection but they aren’t clearly told that they’ll be automatically assigned a free seat if they don’t pay the extra fee.

SpiceJet’s booking website: It encourages passengers to buy travel insurance by using phrases like “I will risk my trip” if they decide not to make the purchase.

– This creates a sense of fear suggesting that not getting the insurance could be risky or harmful for the trip.

What are the Parliamentary Committee recommendations on ticket prices of Airlines?

1.Airlines must display seat-wise airfares to ensure transparency.

2.Diretorate General of Civil Aviation(DGCA) should ensure proper implementation of the Aircraft Rules, 1934 to ensure that airlines earn only a reasonable profit while pricing their tickets.

3.Effective mechanism should be there to address consumer grievances in a time-bound manner.

Factly Compilation for the Month of October, 2023

184. What is a ghost particle?

Source: The post is based on the article “What is a ghost particle?” published in “The Hindu” on 28th October 2023

Why in the News?

China is building the world’s largest telescope called “Trident” below the South China Sea. The job of the telescope is to detect “ghost particles” also known as neutrinos.

What are Ghost Particles or Neutrinos?

Neutrinos are tiny subatomic particles. They are often called ‘ghost particles’ because they barely interact with anything else.

Characteristics of Neutrinos:

Specifications	Details
Electrically neutral	Neutrinos do not carry an electric charge which means they are not affected by electromagnetic forces. This allows them to pass through matter including most atoms, with minimal interaction.
Extremely low mass	Neutrinos have a mass much smaller than other fundamental particles like electrons or quarks.
Weak Charge	Neutrinos’ weak charge have made them difficult to observe. They can only be seen when they interact with other particles.

How Do Scientists detect Ghost Particles or Neutrinos?

Ghost particles rarely interact with other particles but can interact with water molecules.

Underwater telescopes can detect neutrino interactions when they produce “muons,” which create detectable flashes of light.

The University of Madison-Wisconsin’s “IceCube” telescope is the largest neutrino-detecting telescope, located in Antarctica.

China is building a telescope called “Trident” in the South China Sea to detect Neutrinos.

Why Does the Detection of Neutrinos Matter?

1. **Detecting Cosmic Rays:** Neutrinos will help solve a number of scientific mysteries like the origin of the cosmic rays which are known to contain neutrinos.

2. **Understanding Universe:** Neutrinos are essential for understanding the origins of our universe.

UPSC Syllabus: Science and Technology

185. Manual Scavenging

Source: The post “Manual Scavenging” is based on the article “Rs 30 lakh compensation to be paid to families of those who die while cleaning sewers: SC” published in “Deccan Herald” on 25th October 2023

Why in the News?

The Supreme Court has directed the Union and state governments to ensure the complete eradication of manual scavenging.

Factly Compilation for the Month of October, 2023

What is Manual Scavenging?

Definition: Manual scavenging refers to the practice of manually cleaning, handling, and disposing of human excreta and other waste materials from dry latrines, open drains and sewers.

Banned in: In India, manual scavenging has been officially banned since 1993.

Deaths: Over the past five years, 347 people have lost their lives while cleaning sewers and septic tanks in India. Uttar Pradesh, Tamil Nadu and Delhi accounted for 40% of these deaths.

What are the directives issued by the Supreme Court on Manual Scavenging?

1. Provide compensation of Rs 30 lakh to the families of individuals who lose their lives while cleaning sewers.
2. Those who suffer permanent disabilities during such work should receive a minimum compensation of Rs 20 lakh and
3. Those with other disabilities caused by sewer cleaning should receive Rs 10 lakh as compensation.

UPSC Syllabus- Polity and Nation

186. China imposes export curbs on graphite

Source: The post is based on the article “China imposes export curbs on graphite” published in “Financial Times” on 28th October 2023

Why in the News?

China has imposed export controls on graphite.

Why has China decided to impose an export curb on graphite?

Aim: To protect China’s national security and controlling supplies of critical minerals.

Restrictions: From December 1st, exporters in China will need to apply for permits to ship two types of graphite including high-purity, high-hardness and high-intensity synthetic graphite material and natural flake graphite and its products.

Impact: China is the world’s largest graphite producer and exporter. It refines more than 90% of the world’s graphite into the material used in almost all Electric Vehicles (EV) batteries.

– Hence, the ban on graphite exports by China will lead to an increase in the scarcity of graphite, which in turn raises the cost of power batteries, leading to higher production costs for EVs.

What is Graphite?

Specification	Details
Type	Allotrope of carbon
Properties	1. Good conductor of electricity 2. High thermal stability and resistance to heat
Uses	Pencil “lead” As a Lubricant Electrodes in batteries and electrical devices As a moderator in the nuclear furnace.
Reserves	According to the United States Geological Survey, Turkey (27.3%) and Brazil (22.4%) together own half of the world’s natural graphite resources. China comes third at 16%.

Factly Compilation for the Month of October, 2023

UPSC Syllabus: Science and Technology

187. **What is 'Visa Shopping' and why is it being done to enter countries in Europe**

Source: The post is based on the article “**What is 'Visa Shopping' and why is it being done to enter countries in Europe**” published in “**Indian Express**” on **28th October 2023**

Why in the News?

The practice of **'Visa Shopping'** has been gaining popularity in several Indian states.

What is Visa Shopping?

Specifications	Details
Definition	It is a practice where individuals obtain visas for countries one may or may not intend to visit during the visa's validity period.
Purpose	Individuals opt for visa shopping as a means to enter their preferred countries, particularly in Europe, even if they already have a visa for another European nation.
Example	Schengen Visa: It allows travelers to explore many European countries without the need for separate visas. The Schengen system was established by European countries in 1985. Under it, member countries form the Schengen area and people can travel freely between them without going through border controls.
Concerns	Visa Shopping is not illegal if the traveller follows the norms and guidelines of the visa process and gets valid permission to stay in that country. However, legal concerns arise if a traveller seeks visas for one country but actually intends to stay in another or use it merely as an entry point.

UPSC Syllabus: International Relations