Factly Compilation

August, 2023

Factly Compilation for the Month of August 2023

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1. Two Indian military aircraft visit Australia's strategic Cocos Islands

Source: The post is based on the article **"Two Indian military aircraft visit Australia's strategic Cocos Islands"** published in **The Hindu on 31st July 2023.**

What is the News?

Indian Navy Dornier maritime patrol aircraft and an Indian Air Force (IAF) C-130 transport aircraft have visited Australia's Cocos (Keeling) Islands (CKI) in the Southern Indian Ocean.

What is Cocos (Keeling) Islands (CKI)?

Source: Wiki

Cocos Islands also called Keeling Islands is an external territory of Australia in the Indian Ocean.

It comprises a small archipelago approximately midway between Australia and Sri Lanka and relatively close to the Indonesian island of Sumatra.

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The islands were discovered in 1609 by the British sea captain William Keeling, but no settlement occurred until the early 19th century

The island consists of two atolls made up of 27 coral islands, of which only two – West Island and Home Island – are inhabited.

What is the strategic significance of Cocos (Keeling) Islands for India?

Cocos can be an important base for refuelling and operational turnaround for the Indian military, especially once the runway there is expanded to accommodate large aircraft like the P-8 long range maritime patrol aircraft.

Apart from military cooperation, Cocos Islands had been a point of cooperation between the space agencies of the two countries for India's Gaganyaan human space flight mission.

Australia is in discussion with India on the establishment of a temporary ground station at Cocos (Keeling) Islands for the Gaganyaan missions.

2. [PM hails fight against drugs, says a record 10 lakh kg destroyed](#)

Source: The post is based on the article **"PM hails fight against drugs, says a record 10 lakh kg destroyed"** published in **The Hindu on 31st July 2023.**

What is the News?

During Man ki Baat, Prime Minister has said that India had created a unique record of destroying 10 lakh kg of drugs worth ₹12,000 crore in the past year.

He also talked about the ***Nasha Mukt Bharat Abhiyan***, which had so far reached more than 11 crore people.

What is Nasha Mukt Bharat Abhiyan (NMBA)?

Launched on: 15th August 2020

Nodal Ministry: Ministry of Social Justice & Empowerment

Aim: To create awareness about ill effects of substance abuse among the youth, women, children with special focus on higher education institutes, university campuses, schools and reaching out into the community and garnering community involvement and ownership of the Abhiyaan.

Implementation: The initiative is implemented in 372 identified vulnerable districts identified based on the findings of the first Comprehensive National Survey and inputs from the Narcotics Control Bureau (NCB).

Significance: The abhiyaan has targeted and involved stakeholders that might be directly or indirectly affected by substance abuse and those who are vulnerable to it.

– The major stakeholders and beneficiaries of NMBA are Youth, Women, Children, Educational Institutions, Civil Society and Community at large.

– Hence, there has been a shift from an earlier approach of organizational involvement to community involvement in the issue of substance abuse.

What is the example given by the Prime Minister on the successful fight against substance abuse?

About 25 years ago, Bichharpur village in Shahdol district of Madhya Pradesh was infamous for illicit liquor.

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Despite limited resources, Raees Ahmed, a former national player and coach, started teaching football to the local youth. Within a few years, football became popular in the village, now known as "*Mini Brazil*".

More than 40 national and State-level players have emerged from Bicharpur village.

3. [GOBARdhan Initiative Begins Reaping Good Results & Stimulating Investments In Biogas Sector in India](#)

Source: The post is based on the article **"GOBARdhan Initiative Begins Reaping Good Results & Stimulating Investments In Biogas Sector in India"** published in **PIB on 29th July 2023.**

What is the News?

Union Minister for Jal Shakti has launched the Unified Registration Portal for GOBARdhan.

What is the GOBARdhan Initiative?

Launched in: 2018

Full Form: Galvanizing Organic Bio-Agro Resources Dhan (GOBARdhan)

Aim: To convert waste to wealth with the aim of promoting a circular economy.

Nodal Ministry: Department of Drinking Water and Sanitation, Ministry of Jal Shakti

Part of: Gobardhan is an integral part of Swachh Bharat Mission (Gramin) Phase II under Solid Waste Management.

Objectives: To support villages safely manage their cattle and agricultural waste, and make the villages clean.

– To support communities in converting cattle and organic waste into wealth using treatment systems.

– To convert organic waste, especially cattle waste, to biogas and organic manure for use in rural areas.

– To promote environmental sanitation and curb vector-borne diseases through effective disposal of waste in rural areas.

– To promote rural employment and income generation opportunities by involving entrepreneurs, SHGs and youth groups in setting up, operating and managing GOBARdhan units.

Financial incentive: For every district, the Government of India provides technical assistance as well as financial support of up to 50 lakhs to achieve the safe disposal of cattle and organic waste.

What has Budget 2023-24 announced for the GOBARdhan scheme?

As per Budget Announcement 2023-24, 500 new 'waste to wealth' plants under GOBARdhan scheme will be established for promoting the circular economy.

These will include 200 compressed biogas (CBG) plants, including 75 plants in urban areas, and 300 community or cluster-based plants.These plants will be established primarily by the private sector with support from stakeholder Ministries/Departments.

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What are the benefits of the GOBARdhan scheme?

3. Benefits of GOBARdhan

GOBARdhan is central to the attainment of Swachh Bharat Mission Grameen objectives.

Manages waste

Helps manage the major solid waste in villages, i.e, cattle dung, and promotes environmental sanitation

Protects health

Substantially reduces the incidence of vector-borne diseases and promotes public health

Increases employment

Promotes employment and income generation opportunities for SHGs/ farmers groups

Generates organic manure

Helps generate organic manure, which boosts agriculture and farm productivity

Improves savings

Promotes household income and savings as the use of biogas as fuel will cut down the LPG cost

Source: PIB

4. Room-temperature superconductor: Is the Holy Grail within grasp?

Source: The post is based on the article **"Room-temperature superconductor: Is the Holy Grail within grasp?"** published in **Livemint on 31st July 2023.**

What is the News?

Korean researchers have claimed to have developed a superconductor that can operate at room temperature and ambient pressure.

What is a Superconductor?

A superconductor is a material that achieves superconductivity, which is a state of matter that has no electrical resistance and does not allow magnetic fields to penetrate. An electric current in a superconductor can persist indefinitely.

Superconductors have important applicability in our daily lives, too. In 1933, Walther Meissner and Robert Ochsenfeld discovered that superconductors are also perfect diamagnets (they repel magnetic fields, known as the Meissner effect), making them ideal for magnetic resonance imaging (MRI).

However, superconductivity can only typically be achieved at very cold temperatures.

Researchers are now trying to find and develop superconductors that could operate at room temperature.

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How will the room temperature superconductors help?

The temperature of a superconductor known as the critical temperature, is typically below 10 Kelvin (-263 degrees Celsius). Room temperature is 20-22°C.

Hence, superconductors at room temperature can cut the cost of electricity grids, computer chips, magnets for maglev trains, energy-storage devices and fusion reactors by saving electricity and money on coolants.

What have the researchers developed?

Researchers have claimed to have developed a superconductor called **LK-99,** that works at room temperature and ambient pressure.

LK-99 is a mix of powdered compounds of lead, oxygen, sulphur and phosphorus. When heated at very high temperatures, it forms a dark grey solid.

If these results can be replicated in other labs, it could be a monumental discovery.

However, other researchers are skeptical as this research is not peer-reviewed and the results need to be replicated by others.

How can computing get benefitted from this research?

Computers process information with bits—ones and zeroes. But two bits can only represent one of four possible states at one time.

Superconductors are the building blocks of quantum computers that use quantum bits, or qubits, to process ones and zeroes at the same time — it's like running four computers in one. The physical qubits are typically super-cooled to avoid errors.

This research could get them to work at room temperature and ambient pressure without the need for elaborate cooling systems.

5. What is Sam Altman's biometric project?

Source: The post is based on the article "**What is Sam Altman's biometric project?**" published in **The Hindu on 31st July 2023.**

What is the News?

OpenAI CEO Sam Altman has formally re-introduced the Worldcoin Project.

What is the Worldcoin Project?

Worldcoin is an iris biometric cryptocurrency project developed by Tools for Humanity. This organization was founded in 2019 by OpenAI chief executive Sam Altman, Max Novendstern, and Alex Blania.

Purpose: It is an initiative to create a digital network in which everyone can claim some kind of stake, and join the digital economy.

Working of the project: The Worldcoin project uses a straightforward model: Worldcoin volunteers known as "Orb operators" scan a person's iris pattern with a device called "Orb" to collect their biometric data and issue them with a World ID through the World app.

– With the World app, the members can claim the World Coin(WLD) crypto, which they may use for transactions or hold on to the asset in the hope that its price might rise.

– In return for signing up more people to the Worldcoin network, Orb operators get WLD, which is a token based on the Ethereum blockchain.

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Has Worldcoin come to India?

Worldcoin has deployed Orb operators in various locations, particularly in Delhi, Noida, and Bangalore, where people's irises are scanned to join the network.

Why does Worldcoin scan irises?

Worldcoin explained that it wanted to include everyone in its network and that using biometric information to avoid duplication was a valid method for this.

The company claimed that it ensures privacy of users through zero-knowledge proofs (ZKPs) and claims full compliance with Europe's General Data Protection Regulation (GDPR).

Why is the Worldcoin Project facing criticism?

Experts have questioned the necessity of using the iris as a digital identifier, as it is a sensitive and unalterable biometric data that could be used for malicious or discriminatory purposes.

Additionally, concerns have been raised about Worldcoin storing user data on a centralized server, which could potentially facilitate unauthorized access or data leaks.

6. Bill to amend Forest (Conservation) Act clears Lok Sabha: objections, concerns around it

Source: The post is based on the article **"Bill to amend Forest (Conservation) Act clears Lok Sabha: objections, concerns around it"** published in **Livemint on 31st July 2023.**

What is the News?

Lok Sabha has passed the Forest (Conservation) Amendment Bill, 2023.

What is the Forest (Conservation) Amendment Bill, 2023?

Click Here to read

What are the objections raised against the Forest (Conservation) Amendment Bill, 2023?

States objections: The Bill aims to expedite projects of strategic importance, national security, and public utility within 100 km of international borders and in Left Wing Extremism affected areas.

– Himachal Pradesh and Chhattisgarh sought clarity on defining 'National importance and National Security' and specifying security-related infrastructure and user agencies.

– Mizoram expressed concerns that any linear project could be labeled as of national importance or security, potentially impacting activities in states with international borders.

– Sikkim objected to the 100 km exemption range, fearing it would affect the entire state and pristine forest areas suggesting a reduction to 2 km.

– The BRO and Arunachal Pradesh wanted the exemption range extended to 150 km to reduce infrastructure differences with China.

Restricting applicability: The Forest (Conservation) Act, 1980 provides for the conservation of forests by putting certain restrictions on the use of forest land.

– The Bill amends the Act to cover specific forest lands, and exclude certain forest lands. Land that will be covered under the Act is: (i) land declared/notified as a forest under the Indian Forest Act, 1927 or under any other law; (ii) land recorded as a forest in a government record on or after October 25, 1980.

– This implies that any land that was recorded as a forest before this date, but not notified as one by the state government, will be excluded from the purview of the Act.

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– The Bill also exempts from its purview forest land that was changed to non-forest purpose on or before December 12, 1996 by any state/UT authority.

– These exclusions may be going against a Supreme Court judgment in **T.N. Godavarman Thirumulpad vs. Union of India** and others, 1996, on the prevention of deforestation.

Focus on Plantations: The Government had earlier agreed that natural forests, lost from the diversion, cannot be replaced with the plantation. But the proposed Bill encourages plantations in private lands to enhance the carbon sink.

7. Education Minister launches the mobile application of ULLAS

Source: The post is based on the article **"Education Minister launches the mobile application of ULLAS"** published in **PIB on 30th July 2023.**

What is the News?

The Union Minister of Education has launched the mobile application of ULLAS: Nav Bharat Saksharta Karyakram on the occasion of three years of National Education Policy (NEP) 2020.

What is the ULLAS Initiative?

ULLAS stands for Understanding Lifelong Learning for All in Society.

Aim: To revolutionize education and literacy across India by fostering a learning ecosystem that reaches every individual, bridging the gaps in basic literacy and critical life skills.

– To impart basic education, digital and financial literacy and critical life skills to citizens aged 15 and above who lost the opportunity to go to school.

Focus areas: It will focus on promoting functional literacy, vocational skills, and many important life skills like financial literacy, legal literacy, digital literacy, and empowerment of citizens to involve in nation-building of the country.

Implementation: The initiative operates through volunteerism. It encourages volunteers to participate as DUTY or Kartavya Bodh towards nation-building.

– Student volunteers will be incentivised with credits in school/university and appreciation through certificates, letters of appreciation, felicitation, among other means.

Significance: According to government data, as many as 12.5 lakh students are out of school in the year 2022-23 with the number of boys greater than girls.

– The ULLAS initiative has the potential to bring these students back to learning by providing them with an open source learning platform.

8. BSIP scientists discover new species of flower from Sikkim

Source: The post is based on the article **"BSIP scientists discover new species of flower from Sikkim"** published in **The Times of India on 28th July 2023.**

What is the News?

Scientists from the Botanical Survey of India (BSI) Prayagraj Centre have discovered a new plant species in the state of Sikkim named Pedicularis Revealiana.

Note: Sikkim is renowned for its remarkable biodiversity. This state alone accounts for 45 percent of the total plant diversity in the Indian Himalayan region.

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What is Pedicularis Revealiana?

Pedicularis Revealiana is a plant belonging to the Pedicularis species group. It is commonly known as a perennial herb.

This plant thrives in remote forests, which remain snow-covered for most of the year.

It is a hemi-parasitic species meaning it is partially parasitic, setting it apart from all other known Pedicularis species.

This plant not only produces its own food but also demonstrates the remarkable ability to draw nutrients from the roots of neighboring trees and plants.

9. **What is a stapled visa, and why does China issue these to Indians from Arunachal and J and K?**

Source: The post is based on the article **"What is a stapled visa, and why does China issue these to Indians from Arunachal and J&K?"** published in **Indian Express on 28th July 2023.**

What is the News?

India has withdrawn its eight-athlete wushu contingent from the Summer World University Games beginning in China after China issued stapled visas to three athletes from the team who belong to Arunachal Pradesh.

What are Stapled Visas?

A stapled visa is simply an unstamped piece of paper that is attached by a pin or staples to a page of the passport and can be torn off or detached at will.

This is different from a regular visa that is affixed to the passport by the issuing authority and stamped.

The Chinese government began issuing 'stapled visas' to Indian citizens from Arunachal Pradesh in 2009.It says the visas are valid documents but the Government of India has consistently refused to accept this position.

Why does China issue Stapled Visa?

Passports and visas reinforce the concept of a nation-state's sovereignty. It ensures that its citizens can travel with legal protection across borders.

China disputes India's unequivocal and internationally accepted sovereignty over Arunachal Pradesh. It challenges the legal status of the McMahon Line, the boundary between Tibet and British India that was agreed at the Convention Between Great Britain, China, and Tibet at the Simla Convention of 1914.

Hence, in this context, China makes periodic efforts to assert its unilateral claim over Indian territory and undermine the sovereignty of India over its territory by taking steps such as issuing stapled visas,

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10. Draft National Deep Tech Startup Policy (NDTSP) Released for Public Consultation

Source: The post is based on the article **"Draft National Deep Tech Startup Policy (NDTSP) Released for Public Consultation"** published in **PIB on 31st July 2023.**

What is the News?

The National Consortium and Working Group set up by the Prime Minister's Science, Technology, and Innovation Advisory Council has released the Draft National Deep Tech Startup Policy (NDTSP) for public consultation.

What is Deep Technology?

Deep Technology refers to innovations founded on advanced scientific and technological breakthroughs. Due to their disruptive nature, they have the potential to solve India's most pressing societal issues.

What is the Draft National Deep Tech Startup Policy (NDTSP)?

Draft National Deep Tech Startup Policy (NDTSP) is strategically formulated to stimulate innovation, spur economic growth and promote societal development through the effective utilization of deep tech research-driven innovations.

Aim of the policy: To address the challenges confronting deep tech startups through definitive policy interventions to create a conducive ecosystem.

Prepared by: National Consortium and Working Group set up by the Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC),

Key Features of the policy:

Firstly, the policy suggests necessary changes in nine policy areas such as: 1) Nurturing Research, Development & Innovation 2) Strengthening the Intellectual Property Regime 3) Facilitating Access to Funding 4) Enabling Shared Infrastructure and Resource Sharing 5) Creating Conducive Regulations, Standards, and Certifications 6) Attracting Human Resources & Initiating Capacity Building 7) Promoting Procurement & Adoption 8) Ensuring Policy & Program Interlinkages and 9) Sustaining Deep Tech Startups.

Secondly, the policy restates the government's disappointment with international agreements that it argues have left India on the backfoot in terms of manufacturing and development power.

Thirdly, the policy calls for a more multi-pronged approach to protect Indian interests. The need of the hour is a coordinated, comprehensive push to optimally engage with international partners and multilateral institutions to push the Indian Deep Tech Ecosystem.

Fourthly, the policy also suggests resource-intensive policy approaches to attract global talent, such as offering networking opportunities to international deep tech startups and experts interested in relocating and contributing to the local ecosystem.

Significance of the policy: This policy complements and adds value to the existing *Startup India* policies, programmes and initiatives, by fostering a conducive ecosystem for deep tech startups to thrive and address their unique and complex challenges.

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11. Cell-free DNA promises to transform how we find diseases

Source: The post is based on the article **"Cell-free DNA promises to transform how we find diseases"** published in **The Hindu on 31st July 2023.**

What is the News?

Scientists have been aware of cell-free DNA (cfDNA) since 1948.But only in the last two decades, since genome sequencing started to become more accessible, have they really figured out what to do with that knowledge.

What is cell-free DNA (cfDNA)?

In the human body, most of the DNA in a genome is neatly packed inside cells with the help of specific proteins, protecting it from being degraded.

In a variety of scenarios, some fragments of DNA are 'released' from their containers and are present outside the cell, in body fluids. These small fragments of nucleic acids are widely known as cell-free DNA (cfDNA).

How are cell-free DNA (cfDNA) produced?

Cell-free DNA can be produced and released from a cell in various situations, such as during cell death when nucleic acids degrade.

The degradation is influenced by multiple processes causing variations in the amount, size, and origin of cfDNA.

The release of cfDNA could occur together with a variety of processes, including those required for normal development, those related to the development of certain cancers and those associated with several other diseases.

What are the applications of cell-free DNA (cfDNA)?

One of the most widely used applications of cfDNA has been in screening foetuses for specific chromosomal abnormalities, an application known as non-invasive prenatal testing.

Another emerging application of cfDNA is in the early detection, diagnosis and treatment of cancers.

It is also useful in understanding why a body is rejecting a transplanted organ.

Further, cfDNA could also be used as a biomarker for neurological disorders like Alzheimer's disease, neuronal tumours, stroke, traumatic brain injury.

12. ISRO successfully conducts TransLunar Injection of Chandrayaan-3

Source: The post is based on the article **"ISRO successfully conducts TransLunar Injection of Chandrayaan-3"** published in **The Hindu on 1st August 2023.**

What is the News?

The Indian Space Research Organisation (ISRO) has successfully performed the TransLunar Injection (TLI) to slingshot Chandrayaan-3 towards the moon.

Note: TLI has been performed successfully on many missions to the Moon, including the Apollo missions, the Chang'e missions and the Artemis missions.

What is Trans Lunar Injection(TLI)?

The Trans Lunar Injection(TLI) manoeuvre is a vital space travel technique used to launch a spacecraft from Earth's orbit and place it on a track beyond the Moon.

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The TLI is performed when the spacecraft is at a specific point in its orbit known as the 'perigee' or the closest point to Earth.

By firing its engines at this strategic moment, the spacecraft gains enough speed to break free from Earth's gravitational pull and embark on its journey toward the moon.

What happens after Trans Lunar Injection(TLI)?

Once the TLI is successfully completed, the spacecraft is put on a lunar trajectory, and it will continue its journey to the Moon without further propulsion from Earth.

The spacecraft typically enters a transfer orbit, which is an elliptical path that intersects with the Moon's orbit. It continues to travel in its highly eccentric orbit until it reaches the Moon's surface.

As the spacecraft approaches the Moon, it may perform additional manoeuvres, such as lunar orbit insertion (LOI), to enter into lunar orbit or land on the lunar surface, depending on the mission's goals.

13. What is the Akira ransomware, and why has the government issued a warning against it?

Source: The post is based on the article "**What is the Akira ransomware, and why has the government issued a warning against it?**" published in **The Hindu on 1st August 2023.**

What is the News?

The Computer Emergency Response Team of India has issued an alert for ransomware called "Akira."

What is Akira?

Akira is a type of ransomware. It is found to target both Windows and Linux devices.

It gets its name due to its ability to modify filenames of all encrypted files by appending them with the ".akira" extension.

How does Akira infect devices?

Ransomware typically spreads through spear phishing emails that contain malicious attachments in the form of archived content (zip/rar) files.

Other methods used to infect devices include drive-by-download, a cyber-attack that unintentionally downloads malicious code onto a device and specially crafted web links in emails, clicking on which downloads malicious code.

What does Akira do after infecting devices?

Once it infects the device, Akira ransomware deletes Windows Shadow Volume copies. These files are instrumental in ensuring that organizations can back up data used in their applications for day-to-day functioning.

It then steals the sensitive data and leaves a note (akira_readme.txt) with attack details and a link to the negotiation site.

The attackers then demand a ransom, threatening to publish the data on their dark web blog if the demands are not met.

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14. [DGT collaborates with Amazon Web Services India to offer skilling programs on emerging technologies](#)

Source: The post is based on the article **"DGT collaborates with Amazon Web Services India to offer skilling programs on emerging technologies"** published in **PIB on 31st July 2023.**

What is the News?

The Directorate General of Training (DGT) is collaborating with Amazon Web Services (AWS) India to upskill students in emerging technologies.

What is the collaboration between DGT and Amazon Web Services(AWS)?

Directorate General of Training (DGT) works under the aegis of the Ministry of Skill Development and Entrepreneurship (MSDE).

DGT is collaborating with Amazon Web Services (AWS) India to provide individuals with self-paced online learning programs in emerging technologies such as cloud computing, data annotation, artificial intelligence (AI), and machine learning (ML) at no cost.

This learning content will be offered on Bharat Skills platform.

What is Bharat Skills platform?

Launched in: 2019

Launched by: Directorate General of Training(DGT) in the Ministry of Skill Development and Entrepreneurship(MSDE)

Purpose: It is a Central Digital Repository of updated curriculum, course content, digitally blended content, question banks and learning videos of all courses under the Craftsmen Training Scheme (CTS) and Crafts Instructor Training Scheme (CITS).

15. [Measures to curtail Urban Flooding](#)

Source: The post is based on the article **"Measures to curtail Urban Flooding"** published in **PIB on 31st July 2023.**

What is the News?

The Ministry of Jal Shakti has informed Lok Sabha about the steps the government is taking to tackle urban flooding.

What are Urban Floods?

Click Here to read

Main cause of Urban Flooding: The increased incidence of high intensity rainfall of short duration is mainly responsible for urban floods, which is further compounded by unplanned growth, encroachment of natural water bodies and poor drainage system.

Deaths due to floods: Over 17,000 people died in floods and heavy rains between 2012 and 2021 in India.

Management of urban flooding falls under purview of the State Governments and the Urban Local Bodies / Urban Development Authorities who are responsible for maintaining the drainage and sewerage system.

What are the steps taken to tackle urban flooding?

Master Plan for Artificial Recharge to Groundwater – 2020: It has been prepared by the Central Ground Water Board (CGWB) in collaboration with States/UTs. The plan aims to

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construct about 1.42 crore rain water harvesting and artificial recharge structures in the country to harness 185 Billion Cubic Meter (BCM) of water.

The Government of India is implementing **Jal Shakti Abhiyan (JSA)** in the country in which special emphasis is being given for rainwater harvesting/groundwater recharge.

The **Amrit Sarovar Mission** has been launched with an aim of developing and rejuvenating 75 water bodies in each district of the country.

[Atal Bhujal Yojana](#)

Under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0 Scheme, provisions have been made for harvesting the rainwater through storm water drains into the water body (which is not receiving sewage/effluent) & creation/ strengthening of storm water drains around the water body.

Model Building Bye Laws (MBBL), 2016: It has been formulated by the Ministry of Housing & Urban Affairs (MoHUA) for the States/UTs.As per MBBL, all buildings having a plot size of 100 sq.m. or, more shall mandatorily include the complete proposal of rainwater harvesting. 35 States/ UTs have adopted the features of the Bye Laws.

National Water Policy (2012) advocates that the conservation of rivers, river corridors, water bodies and infrastructure should be undertaken in a scientifically planned manner through community participation.

16. [New catalytic process of producing hydrogen offers sustainable method of manufacturing the green fuel](#)

Source: The post is based on the article **"New catalytic process of producing hydrogen offers sustainable method of manufacturing the green fuel"** published in **PIB on 31st July 2023.**

What is the News?

Researchers have developed a new process of producing hydrogen from methanol through a catalytic reaction under ambient conditions.

About Hydrogen as a clean source of energy:

Hydrogen is considered one of the cleanest sources of energy that can be easily obtained from indigestible biomass or bio-derived alcohols.

Various methods can generate hydrogen but the cost of hydrogen depends on how environmentally friendly and energy efficient the production process is.

For instance, Water and methane are the main sources of hydrogen on Earth but extracting pure hydrogen from them consumes a lot of energy through techniques such as natural gas reforming electrolysis and water-splitting reactions.

Notably, **Methanol** can serve as a potential candidate for obtaining hydrogen due to its gravimetric hydrogen content of 12.6% and its effective conversion to H2 and CO2 as final products.

What have researchers developed?

Researchers have developed a new process of producing hydrogen from methanol through a catalytic reaction under ambient conditions.

This method offers a sustainable and green method of manufacturing the much-needed Hydrogen fuel.

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17. ISRO rocket debris on Australian shore: rules governing space junk

Source: The post is based on the article **"ISRO rocket debris on Australian shore: rules governing space junk"** published in **Indian Express on 1st August 2023.**

What is the News?

A large object found on the shores of western Australia has been confirmed to be the debris of an Indian Space Research Organisation (ISRO) rocket.

What has ISRO said on this?

As per ISRO, the object was most likely an unburned part of the Polar Satellite Launch Vehicle (PSLV) rocket that launched a navigation satellite for the Indian Regional Navigation Satellite System (IRNSS) constellation two months ago.

That satellite was launched in the southward direction.

It is possible that one of the parts of the rocket did not burn completely while dropping back into the atmosphere, and fell into the ocean. It could later have been swept towards the Australian shore.

What are the previous instances of space objects falling to the earth

Junk from space objects falling to the earth are not unheard of. Most such incidents involve relatively small fragments from rockets that survive the friction of the atmosphere.

Most recently, in November 2022, large fragments of China's Long March 5B rocket plunged uncontrolled into the south-central Pacific Ocean.

These fragments were stages of the rocket used to deliver the third and final module of the Tiangong space station.

What are the threats of space objects to the earth?

Falling space junk poses a significant threat to life and property. Even when landing in the oceans (which is more likely due to the Earth's surface being 70% ocean), large objects can harm marine life and cause pollution.

So far, there have been no recorded incidents of significant damage to inhabited areas from falling space junk. However, the lack of a controlled system to ensure designated landing is concerning.

What happens if these objects cause damage?

There are international regulations governing space debris which include junk falling back on the earth such as:

Convention on International Liability for Damage Caused by Space Objects: This convention is one of the several international agreements that complement the Outer Space Treaty, the overarching framework guiding the behavior of countries in space.

– The Convention deals mainly with damage caused by space objects to other space assets, but it also applies to damage caused by falling objects on earth.

– The Convention makes the launching country "absolutely liable" to pay compensation for any damage caused by its space object on the earth or to a flight in air.The country where the junk falls can stake a claim for compensation if it has been damaged by the falling object.

– This provision of the Convention has resulted in compensation payment only once so far — when Canada sought damages from the then Soviet Union for a satellite with radioactive substance that fell into an uninhabited region in its northern territory in 1978.The Soviet Union is reported to have paid 3 million Canadian dollars.

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18. Pakistan and China ink six agreements to expedite cooperation under CPEC

Source: The post is based on the article **"Pakistan and China ink six agreements to expedite cooperation under CPEC"** published in **The Hindu on 1st August 2023.**

What is the News?

Pakistan and China have signed six important documents to expand and expedite cooperation under the ambitious multi-billion dollar China-Pakistan Economic Corridor (CPEC) project.

What is the China-Pakistan Economic Corridor (CPEC)?

CPEC is a bilateral project between Pakistan and China.

Its stated objective is to enhance connectivity across Pakistan with a network of highways, railways, and pipelines accompanied by other infrastructure development projects.

It connects Gwadar Port in Pakistan's Balochistan with China's Xinjiang province.

CPEC is a component of the Belt and Road Initiative (BRI) initiative of China.

It is opposed by India as it is being laid through Pakistan-occupied Kashmir.

What is the Belt and Road Initiative (BRI)?

The Belt and Road Initiative (BRI) was launched by Chinese President Xi in 2013.

It aims to link Southeast Asia, Central Asia, the Gulf region, Africa and Europe with a network of land and sea routes.

The BRI is seen as an attempt by China to further its influence abroad with infrastructure projects funded by Chinese investments all over the world.

The initiative has led to allegations of smaller countries reeling under mounting Chinese debt after Sri Lanka gave its Hambantota port in a debt swap to China in 2017 on a 99-year lease.

India has opposed the BRI. It cited issues of sovereignty, transparency and unilateral decision making.

WHO report on tobacco control: Key findings, how India fares

Source: The post is based on the article **"WHO report on tobacco control: Key findings, how India fares"** published in **Indian Express on 2nd August 2023**

What is the News?

The World Health Organisation (WHO) has recently released a report on tobacco control measures.

This was the ninth WHO report on the global tobacco epidemic. It tracks the progress made by countries in tobacco control since 2008.

What are MPOWER measures?

In line with the WHO Framework Convention on Tobacco Control (WHO FCTC), WHO had introduced the MPOWER measures in 2008.

MPOWER are a set of six cost-effective and high impact measures that help countries reduce demand for tobacco.

These measures include: 1) Monitoring tobacco use and prevention policies 2) Protecting people from tobacco smoke 3) Offering help to quit tobacco use 4) Warning about the dangers of tobacco 5) Enforcing bans on tobacco advertising, promotion and sponsorship and 6) Raising taxes on tobacco.

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What are the key findings of the WHO report on tobacco control?

MPOWER: In the 15 years since the MPOWER measures were first introduced, 5.6 billion people in the world – or 71% of the entire population – remain protected by at least one of the measures. This has increased from just 5% of the population in 2008.

Countries implementing MPOWER measures: The number of countries implementing at least one MPOWER measure has increased from 44 countries in 2008 to 151 in 2022.

However, there are at least 44 countries in the world that still do not implement any MPOWER measure.

Harmful effects of e-cigarettes: E-cigarettes are harmful to both the people using them and those around them, especially when used indoors.

The tobacco industry is aggressively promoting E-cigarettes as a safer alternative to cigarettes. This is undermining the progress made on tobacco control.

Controlling second-hand smoking: The report focuses on controlling second-hand smoking (being in the presence of someone who is smoking).

It talks of creating smoke-free public areas and also de-normalising the act of smoking in the society.

Of the estimated 8.7 million tobacco-related deaths each year, 1.3 million are of non-smokers exposed to second-hand smoke.

Moreover, severe asthma, respiratory tract infections, and sudden infant death syndrome are more common among children exposed to second-hand smoke.

What does the WHO report say about India?

India has the highest level of achievement when it comes to putting health warning labels on tobacco products and providing tobacco dependence treatment.

With 85% of cigarette packs carrying health warnings both on the front and back, India figures among the top 10 countries in terms of the size of health warnings. The cigarette packets in the country also carry a toll-free number for a quit-line.

India has also banned the sale of e-cigarettes, and banned smoking in healthcare facilities and educational institutions.

India is also implementing warnings on OTT platform content when actors are seen using tobacco products. This would make India the first country in the world to do so.

19. Panel submits report on sub-categorisation of OBCs after 6 years

Source: The post is based on the article **"Panel submits report on sub-categorisation of OBCs after 6 years"** published in **The Hindu on 2nd August 2023**

What is the News?

The report of a Rohini Commission set up to examine the sub-categorisation of Other Backward Classes (OBCs) has been submitted to the President.

However, the contents of the report have not been made public as yet.

What is the need for sub-categorisation of OBCs?

OBCs get 27% reservation in central government jobs and admission to educational institutions.

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There are more than 2,600 entries in the Central List of OBCs but over the years only a few affluent communities among them have benefited from the quota.

Therefore, there is an argument that a "sub-categorisation" of OBCs — quotas within the 27% quota — is needed in order to ensure "equitable distribution" of the benefits of reservation.

What were the terms of reference of the Rohini Commission?

Examine the extent of inequitable distribution of benefits of reservation among the castes or communities included in the broad category of OBCs with reference to such classes included in the Central List.

Work out the mechanism, criteria, norms and parameters in a scientific approach for sub-categorisation within such OBCs and

Take up the exercise of identifying the respective castes or communities or sub-castes or synonyms in the Central List of OBCs and classifying them into their respective sub-categories.

How did the work of the commission proceed till now?

In 2018, the commission analyzed the data of 1.3 lakh central government jobs under the OBC quota over the preceding five years, and OBC admissions to central higher education institutions, including universities, IITs, NITs, IIMs and AIIMS, over the preceding three years.

The analysis showed 97% of all jobs and education seats have gone to 25% of OBC castes and 24.95% of these jobs and seats have gone to just 10 OBC communities.

As many as 983 OBC communities — 37% of the total — were found to have zero representation in jobs and educational institutions and 994 OBC sub-castes had a representation of only 2.68% in recruitments and admissions.

However, this analysis suffered from limitations due to the absence of updated population data.

20. Tamil Nadu's Jaderi 'namakatti', chedibutta saree and Kanniyakumari Matti banana get GI tag

Source: The post is based on the article **"Tamil Nadu's Jaderi 'namakatti', chedibutta saree and Kanniyakumari Matti banana get GI tag"** published in **The Hindu on 31st July 2023.**

What is the News?

The Geographical Indications Registry has granted the GI tag to three famous products from Tamil Nadu.

What are the products from Tamil Nadu which got GI Tag?

Jaderi namakatti: These are clay sticks that are white in colour. They are usually available in finger-like shape with a smooth texture.

They are used to adorn the foreheads of idols, men and temple elephants.

The namakatti is made up of the rich deposit of hydrous silicate minerals that form fine grain particles of clay The clay is processed and shaped in a finger-like structure.

The production of namakatti depends on the climatic condition as it needs a lot of sunlight to dry.

Kanniyakumari Matti banana: Matti banana is a traditional table banana cultivar of medicinal value.

The fruit is highly fragrant, sweet with sub-acid flavour, firm texture and powdery nature.

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The Matti banana fruit looks like the mouth of a crocodile hence it is also called *'Crocodile Finger Banana'*.

Chedibutta Saree: It is a handloom saree which depicts the Chedibutta design in art silk and cotton mix fabric.

The name 'Chedibutta' is a combination of two Tamil words- 'Chedi' (plant) and 'Butta' (repeated motif or design).

The iconic 'plant and flower' motif is woven on the border and pallu (edge of the saree).

The Sowrashtra community are the primary weavers.

What are the other products that got the GI Tag?

The seven other products from across India were also given GI tags. These products are: 1) Agra leather footwear 2) Rajasthan's Nathdwara Pichhwai Painting 3) Kashmir's Mushqbudji rice 4) Bihar's Marcha Rice 5) Jammu Kashmir's Rajouri Chikri Wood Craft 6) Agsechi Vayingim (Agassaim Brinjal) of Goa and 7) Sat Shiro Bheno (Sat Shirancho Bhendo) also known as Okra, vegetable crop of Goa.

21. Government introduces Delhi services Bill in the Lok Sabha amid vociferous protests

Source: The post is based on the article **"Government introduces Delhi services Bill in the Lok Sabha amid vociferous protests"** published in **The Hindu on 2nd August 2023**

What is the News?

The Government has introduced the Government of National Capital Territory of Delhi (Amendment) Bill, 2023 in Lok Sabha.

What is the Government of National Capital Territory of Delhi (Amendment) Bill, 2023?

The Bill establishes the **National Capital Civil Services Authority(NCCSA)** which consists of the Chief Minister, Chief Secretary of Delhi, Principal Home Secretary of Delhi.

The Authority will make recommendations to the Lieutenant Governor(LG) regarding transfers and postings of officials and disciplinary matters.

The Bill empowers the LG to exercise his sole discretion on several matters including those recommended by the National Capital Civil Services Authority and the summoning, prorogation and dissolution of the Delhi Legislative Assembly.

It authorizes department secretaries to bring to the notice of the LG, the Chief Minister and the Chief Secretary any matter that may bring Delhi Government into controversy with the Central Government.

What are the issues with the National Capital Territory of Delhi (Amendment) Bill, 2023?

Firstly, conferring powers over the transfer and posting of officers to the Authority may break the triple chain of accountability that links the civil services, ministers, the legislature and citizens. This may violate the principle of parliamentary democracy, which is a part of the basic structure doctrine.

Secondly, the LG has been granted sole discretion in several matters including when the Legislative Assembly will convene. This implies that the Chief Minister may be unable to convene a session needed for essential government business.

Thirdly, department secretaries will bring certain matters directly to the LG, Chief Minister and the Chief Secretary, without consulting the concerned minister. This may go against the collective responsibility of the Cabinet, as the concerned ministers cannot provide his inputs.

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World's Largest Food/ Grain Storage Plan

Source: The post is based on the article **"World's Largest Food/ Grain Storage Plan"** published in **PIB on 1st August 2023.**

What is the News?

The Minister of Cooperation has informed Lok Sabha about the "World's Largest Grain Storage Plan in the Cooperative Sector".

What is the World's Largest Grain Storage Plan in the Cooperative Sector?

Aim: To create various agri infrastructure at Primary Agricultural Credit Societies (PACS) level, including warehouses, custom hiring center, processing units, Fair Price Shops, etc. by leveraging the 'whole-of-Government' approach.

Funding: The plan will be implemented by the convergence of 8 schemes:

– Ministry of Agriculture and Farmers Welfare: Agriculture Infrastructure Fund (AIF), Agricultural Marketing Infrastructure Scheme (AMI), Mission for Integrated Development of Horticulture (MIDH) and Sub Mission on Agricultural Mechanisation (SMAM).

– Ministry of Food Processing Industries: Pradhan Mantri Formalisation of Micro Food Processing Enterprises Scheme (PMFME) and Pradhan Mantri Kisan Sampada Yojana (PMKSY).

– Ministry of Consumer Affairs, Food and Public Distribution: Allocation of food grains under the National Food Security Act (NFSA) and Procurement operations at Minimum Support Price (MSP).

Monitoring body: Ministry of Cooperation has constituted an Inter-Ministerial Committee (IMC) with Minister of Cooperation as its chairman and Ministers and Secretaries of Ministries concerned as its members for smooth and effective implementation of the Plan.

Implementing agency: National Cooperative Development Corporation(NCDC) with the support of NABARD, Central Warehousing Corporation (CWC), Food Corporation of India (FCI) etc is implementing the Pilot Project in 24 PACS of 24 different States/ UTs.

Expected Benefits of the Project: The creation of decentralized storage capacity ranging from 500 MT to 2000 MT at PACS level would reduce food grain wastage by creating sufficient storage capacity, strengthen food security of the country, prevent distress sale of crops and enable farmers to realize better prices for their crops.

22. What can the amended Forest (Conservation) Act change?

Source: The post is based on the article "**What can the amended Forest (Conservation) Act change?**" published in **The Hindu on 2nd August 2023.**

What is the News?

Lok Sabha has passed the Forest (Conservation) Amendment Bill 2023.

How does the Bill restrict the scope of the Act?

The Bill stipulates that only those lands that were notified as 'forest' under the Indian Forest Act 1927, any other relevant law or were recorded as 'forests' in government records will be acknowledged as 'forests' under this Act as well.

This revision stands in stark contrast to the wide applicability of the extant Act at present.

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A Supreme Court judgment in 1996 had reiterated such a broad application. It said that a 'forest' includes all land recorded as such in government records regardless of ownership as well as "deemed forests", which are not officially classified as 'forests' but satisfy the dictionary meaning of the word: any large area with significant tree cover and undergrowth.

What is the exemption for border Infrastructure provided in the bill?

The Bill seeks to exempt linear infrastructure projects like roads and highways from seeking forest clearance permissions if they are located within 100 km of the national border.

Experts have raised concerns because "strategic linear projects of national importance" is an undefined term and can thus be misused to push through infrastructure projects that are devastating for the local ecology.

Did the Joint Parliamentary Committee(JPC) raise any concerns with the Bill?

The JPC did not propose a single change to the Bill in its report despite receiving objections from tribal groups, conservationists, environmental lawyers, activists, and citizen groups.

The Ministry of Tribal Affairs also raised concerns about the amendment's implications on community rights enshrined in the Forest Rights Act 2006.

23. The holocene climate anomalies

Source: The post is based on the article **"The holocene climate anomalies"** published in **The Hindu on 2nd August 2023.**

What is the News?

Recently, a study has claimed that a particular day in July was the warmest in more than 100,000 years. However, it is scientifically impossible to make such a claim.

Why is it scientifically impossible to claim that a particular day was the warmest in more than 100,000 years?

Temperature estimates from before thermometers existed rely on "palaeo proxies," which have limitations in accuracy and timescale.

The "paleo proxies" can provide insights into temperature anomalies over longer timescales such as centuries or thousands of years.

However, they cannot accurately determine daily temperatures due to mixing processes in oceans and lakes.

Hence, making such alarmist claims without scientific basis damages trust in climate action initiatives and scientists' credibility.

What is Paleoclimatology?

Paleoclimatology is the study of past climates. Since it is not possible to go back in time to see what climates were like, scientists use imprints created during past climates, known as proxies, to interpret paleoclimate.

Organisms, such as diatoms, forams, and coral serve as useful climate proxies. Other proxies include ice cores, tree rings, and sediment cores

What is the Holocene epoch?

The Holocene is the name given to the last 11,700 years of the Earth's history — the time since the end of the last major glacial epoch or "ice age."

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Since then, there have been small-scale climate shifts — notably the "Little Ice Age" between about 1200 and 1700 A.D. — but in general, the Holocene has been a relatively warm period in between ice ages.

24. Roadmap to making India a $5 trillion economy

Source: The post is based on the article "**Roadmap to making India a $5 trillion economy**" published in **PIB on 1st August 2023.**

What is the News?

Government has informed the Lok Sabha about the steps taken to make India a $5 trillion economy.

What is the roadmap of the government to make India a $5 trillion economy?

Government's roadmap to achieve a $5 trillion economy involves focusing on macro-level growth while ensuring comprehensive welfare at the micro level.

The roadmap also includes promoting digital economy and fintech, technology-enabled development, energy transition, climate action, and relying on a virtuous cycle of investment and growth.

What are the major steps taken by the government to make India a $5 trillion economy?

Reforms undertaken: The major reforms include Goods and Services Tax (GST), Insolvency and Bankruptcy Code (IBC), a significant reduction in the corporate tax rate, Make in India and Start-up India strategies and Production Linked Incentive Schemes.

Increase in Capital Investment: Government has focused on a capex-led growth strategy to support economic growth and attract investment from the private sector by increasing its capital investment outlay substantially during the last three years.

– The Central Government's capital expenditure has increased from 2.15% of GDP in 2020-21 to 2.7% of GDP in 2022-23.

Union Budget 2023-24: It has taken steps to sustain the high growth of India's economy. These include a substantial increase in capital investment outlay for the third year in a row by 33% to ₹10 lakh crore (3.3% of GDP). Direct capital investment by the Centre is also complemented by Grants-in-Aid to States for the creation of capital assets.

25. Nearly 50 MMT per annum of CO2 emissions can be averted through Green Hydrogen: New & Renewable Energy Minister

Source: The post is based on the article **"Nearly 50 MMT per annum of CO2 emissions can be averted through Green Hydrogen: New & Renewable Energy Minister"** published in **PIB on 1st August 2023.**

What is the News?

The Union Minister for New & Renewable Energy has informed Rajya Sabha about the Green Hydrogen.

What are the steps taken by the Government to promote Green Hydrogen?

G20 Energy Transitions Ministers Meeting under India's G20 Presidency: At this meeting, the members discussed the importance of building a sustainable and equitable global hydrogen ecosystem that benefits all nations, and affirmed High level Voluntary Principles on Hydrogen.

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– These principles include promotion of free and fair trade of hydrogen produced from zero and low emission technologies and its derivatives.

National Green Hydrogen Mission

– Strategic Interventions for Green Hydrogen Transition (SIGHT) Programme: It is a major financial measure under **National Green Hydrogen Mission.** The programme consists of two distinct financial incentive mechanisms to support domestic manufacturing of electrolysers and production of Green Hydrogen.

Benefits of National Green Hydrogen Mission: The mission is expected to lead to development of 5 MMT Green Hydrogen production capacity per annum by 2030.

– It is estimated that nearly 50 MMT per annum of CO_2 emissions can be averted through production and use of the targeted quantum of Green Hydrogen.

26. Single pill strategy to beat cardiovascular diseases

Source: The post is based on the article **"Single pill strategy to beat cardiovascular diseases"** published in **The Hindu on 2nd August 2023.**

What is the News?

The World Health Organization has included three fixed dose combinations of cardiovascular medicines or **Polypills** on its revised Model Lists of Essential Medicines 2023 for use in cardiovascular diseases.

What are Polypills?

A polypill is a type of drug combination consisting of a single drug product in pill form and thus combines multiple medications.

The prefix "poly" means "multiple", referring to the multiplicity of distinct drugs in a given "pill".

About Polypill strategy to treat cardiovascular diseases:

Polypills are a safe and effective strategy to reduce the risk of heart attacks and strokes.

For instance, a 2000 research has shown that a polypill which combined two or more blood pressure lowering drugs plus a statin and aspirin could significantly reduce the risk of future heart attacks and strokes.

They demonstrated that the polypill reduced the risk of future heart attacks and strokes by about 40% to 50%.

27. Adopt WHO-standard good manufacturing practices: Govt sets deadline for pharmas

Source: The post is based on the article **"Adopt WHO-standard good manufacturing practices: Govt sets deadline for pharmas"** published in **Indian Express on 3rd August 2023**

What is the News?

Government of India has set a deadline for mandatory implementation of the Good Manufacturing Practices (GMP) in India pharmaceutical industries.

What are Good Manufacturing Practices (GMP)?

Good Manufacturing Practices (GMP) is the aspect of quality assurance that ensures that medicinal products are consistently produced and controlled to the quality standards appropriate to their intended use and as required by the product specification.

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In India, GMP was revised in 2018, bringing them on par with World Health Organisation (WHO) standards.

Why has the government made it mandatory for Indian pharmaceutical industries to follow GMP?

The Indian pharma industry is facing a credibility crisis. In 2022, the WHO had said that the deaths of dozens of children in Gambia and Uzbekistan were due to contaminated cough syrups manufactured by Indian drugmakers.

In February 2023, blindness, severe eye infections and a death in the US were linked to India-made eye drops.

In this context, making GMP mandatory would help restore India's image as the pharmacy of the world.

Which Pharma companies need to follow GMP?

Companies with a turnover of over Rs 250 crore will have to implement the revised GMP within six months.

However, medium and small-scale enterprises with turnover of less than Rs 250 crore will have to implement it within a year.

The companies will also have to introduce a GMP-related computerized system. These computer programmes will be designed to automatically record all the steps followed and checks done, which will ensure all the processes are followed.

Those who do not comply with these directions will face suspension of license and/ or penalty.

What is the significance of these directions?

Currently, only 2,000 of the 10,500 manufacturing units in the country have been found to be compliant with the global WHO-GMP standards.

Now, all will have to implement the revised GMP, ensuring quality medicines for the domestic market and abroad.

28. Govt. kicks off contractual dispute settlement scheme

Source: The post is based on the article **"Govt. kicks off contractual dispute settlement scheme"** published in **The Hindu on 3rd August 2023**

What is the News?

Government of India has launched the Vivad se Vishwas-II scheme for settling contractual disputes involving the government and government undertakings.

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What is the Vivad se Vishwas-II Scheme?

Smooth settlement

The Centre launches a scheme to end disputes with suppliers by offering them a voluntary settlement amount

- The scheme applies to all domestic contractual disputes where the government is a party

- Govt. to offer contractors settlement amounts of up to 85% of net amount awarded by the court

- FM Nirmala Sitharaman had promised in this year's Budget to introduce a settlement scheme

Source: The Hindu

Vivad se Vishwas-II Scheme was announced in the **Union Budget 2023-24.**

Aim: To resolve the government's contractual disputes with private parties, clear the backlog of litigation and improve the ease of doing business.

Applicability: The scheme will apply to all domestic contractual disputes where one of the parties is either the Government of India or an organization operating under its control.

Cases covered: The scheme will cover cases where the **court order** was passed by 30 April 2023, and the **arbitral order** given by 30 January 2023.

Under the scheme, for court orders passed on or before 30 April 2023, the settlement amount offered to the contractor will be up to 85 per cent of the net amount awarded or upheld by the court.

– For arbitral orders passed on or before 1 January 2023, the settlement amount offered is up to 65 percent of the net amount awarded.

Claims processed through: Eligible claims will be processed only through the **government e-marketplace.**

29. Under the Startup India initiative, 'Action Plan' for Startups unveiled to create a vibrant startup ecosystem in the country

Source: The post is based on the article **"Under the Startup India initiative, 'Action Plan' for Startups unveiled to create a vibrant startup ecosystem in the country"** published in **PIB on 2nd August 2023.**

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What is the News?

The Union Minister of State for Commerce and Industry has informed Lok Sabha about the various programs undertaken by the Government to promote startups across the country.

What are the programs launched by the Government to promote startups across the country?

Startup India Action Plan: It was unveiled in 2016.The Action Plan comprises 19 action items spanning across areas such as "Simplification and handholding", "Funding support and incentives" and "Industry-academia partnership and incubation".

Fund of Funds for Startups (FFS) Scheme: It was established with a corpus of Rs. 10,000 crore, to meet the funding needs of startups. DPIIT is the monitoring agency and Small Industries Development Bank of India (SIDBI) is the operating agency for FFS.

Credit Guarantee Scheme for Startups (CGSS): It is aimed at providing credit guarantee up to a specified limit against loans extended by Member Institutions (MIs) to finance DPIIT recognised startups.

Support for Intellectual Property Protection: It facilitates the startups to file applications for patents, designs and trademarks through registered facilitators in appropriate IP offices by paying only the statutory fees. Startups are provided with an 80% rebate in filing of patents and 50% rebate in filing of trademark vis-a-vis other companies.

International Market Access to Indian Startups: It aims to help connect Indian startup ecosystems to global startup ecosystems through various engagement models.

Start-ups Intellectual Property Protection(SIPP) Scheme: It facilitates the startups to file applications for patents, designs and trademarks through registered facilitators in appropriate IP offices by paying only the statutory fees.

– The Government bears the entire fees of the facilitators for any number of patents, trademarks or designs, and startups only bear the cost of the statutory fees payable. Startups are provided with an 80% rebate in filing of patents and 50% rebate in filing of trademark vis-a-vis other companies.

Income Tax Exemption for 3 years: Startups incorporated on or after 1st April 2016 can apply for income tax exemption. The recognized startups that are granted an Inter-Ministerial Board Certificate are exempted from income-tax for a period of 3 consecutive years out of 10 years since incorporation.

Faster Exit for Startups: The Government has notified Startups as 'fast track firms' enabling them to wind up operations within 90 days vis-a-vis 180 days for other companies.

Startup India Hub: The Government launched a Startup India Online Hub in 2017 which is one of its kind online platforms for all stakeholders of the entrepreneurial ecosystem in India to discover, connect and engage with each other.

National Startup Advisory Council

Startup India Seed Fund Scheme (SISFS): The Scheme aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry and commercialization.

National Startup Awards(NSA)

National Mentorship Portal(MAARG)

Startup20 Engagement Group: It is a new engagement group initiated under India's G20 presidency. It aims to create a global narrative for supporting startups and enabling synergies

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between startups, corporates, investors, innovation agencies and other key ecosystem stakeholders.

30. Narco-terror nexus examined case-wise, Centre informs RS

Source: The post is based on the article **"Narco-terror nexus examined case-wise, Centre informs RS"** published in **The Hindu on 3rd August 2023.**

What is the News?

The Union Home Ministry has informed the Rajya Sabha that the nexus between illegal trade in narcotics and terrorist activities is examined case-wise.

India's Vulnerability to drug trafficking:

Traditionally, India has been seen as sandwiched between the Golden Crescent (Afghanistan, Iran and Pakistan) and Golden Triangle (Lao People's Democratic Republic, Myanmar and Thailand).

India is being flooded with drugs, especially heroin and methamphetamine, from these two regions by drug lords indirectly supported by intelligence setups.

Nearly 90% of the world's demand for these drugs is being met from these two regions. India is both a big market and a transit route for other countries.

Is there a nexus between narcotics business and terrorist activities?

The Home Ministry said that the nexus between illegal trade in narcotics and terrorist activities is examined case-wise.

For instance, in Manipur, since 2018, four cases have been reported to the Narcotics Control Bureau (NCB), in which five "Indians" were arrested with narcotic substances along with arms and ammunition.

What are the steps taken by the government of India to tackle illegal drug trafficking?

The Government of India has entered into bilateral agreements with 27 countries, Memorandum of Understanding (MoU) with 16 countries and two agreements on security cooperation for preventing illicit trafficking in narcotic drugs, psychotropic substances and precursor chemicals.

The Government of India has introduced the Narco Coordination Centre (NCORD) mechanism in 2016 to have effective coordination of actions among various ministries, departments, Central and State law enforcement agencies dealing with narcotics.

A Special Task Force on Darknet and Crypto Currency has been constituted to monitor suspicious transactions related to drugs on Darknet.

31. Government introduces a new category of Ayush visa for foreign nationals seeking treatment under Indian systems of medicine

Source: The post is based on the article **"Government introduces a new category of Ayush visa for foreign nationals seeking treatment under Indian systems of medicine"** published in **PIB on 2nd August 2023.**

What is the News?

The Ministry of Home Affairs, Government of India has notified the creation of a new category of Ayush (AY) visa for foreign nationals for treatment under Ayush systems/Indian systems of medicine.

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Ayush Visa for Foreign Nationals:

In 2022, the Prime Minister had announced the creation of a special Ayush Visa category to facilitate foreign nationals' travel to India for Ayush therapy.

This move is also part of the **Heal in India initiative** aimed at promoting India as a medical value travel destination.

The Ministry of Ayush and the Ministry of Health & Family Welfare are working together to develop a one-stop Heal in India portal for promoting India as a world-class medical tourism destination.

Medical Tourism in India:

Medical Value Travel(MVT) has seen significant growth in India in recent years.

According to the report 'The Global Wellness Economy: Looking beyond COVID' by the Global Wellness Institute (GWI), the Global Wellness economy will grow at 9.9% annually. Ayush based healthcare & Wellness economy is estimated to grow to $70 billion by 2025.

India is clearly poised for a greater share of the MVT pie. In the MTA's Medical Tourism Index (MIT) India is ranked 10th out of the 46 global destinations, 12th in 20 wellness tourism markets, and 5th in the wellness tourism market in Asia Pacific.

According to the data from the Indian Institute of Public Administration (IIPA), approximately 6,97,453 medical tourists visited India in 2019 alone for medical treatment and by 2023, India is expected to account for 6% of the global MVT market share.

32. Rescued Himalayan vultures script India's first captive breeding success story in Assam Zoo

Source: The post is based on the article "**Rescued Himalayan vultures script India's first captive breeding success story in Assam Zoo**" published in **Deccan Herald on 1st August 2023.**

What is the News?

In 2011-2012, Himalayan vultures were rescued from poisoning incidents in Assam. Despite initial skepticism from veterinarians about their survival in the hot and humid weather, most of them not only survived but also contributed to India's first captive breeding success story of Himalayan vultures at Assam State Zoo in Guwahati.

What is Himalayan Vulture?

Himalayan Griffon vulture or Himalayan Vulture inhabits the higher regions of the Himalayas and the Tibetan Plateau.

This species is distributed from western China, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan and Pakistan, east through the Himalayan mountain range in India, Nepal and Bhutan, to central China and Mongolia.

They can fly at an elevation of up to 5,500 metre with help of their wide and powerful wings.

IUCN Status: Near Threatened

Vultures Found in India:

In India, a total of nine species of vultures are found. Out of these six species are resident (white–rumped vulture, Indian vulture, slender-billed vulture, red-headed vulture, bearded vulture and Egyptian vulture) and three species are migratory (cinereous vulture, griffon vulture and Himalayan vulture).

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33. India's telemedicine service eSanjeevani completes over 14 crore consultations: Center

Source: The post is based on the article **"India's telemedicine service eSanjeevani completes over 14 crore consultations: Center"** published in **The New Indian Express on 1st August 2023.**

What is the News?

India's telemedicine application eSanjeevani has completed 14 crore consultations.

What is eSanjeevani?

eSanjeevani is a cloud-based integrated telemedicine solution of the Ministry of Health and Family Welfare, Govt. of India.

It is a telemedicine app that provides both doctor-to-doctor and doctor-to-patient telecommunication.

It is being designed, developed, deployed and maintained by The Centre for Development and Advanced Computing (C-DAC), Mohal

eSanjeevani service is available in two variants:

– The first one is eSanjeevani Ayushman Bharat-Health and Wellness Centre (AB-HWC): It is the Doctor-to-Doctor telemedicine service through which the beneficiaries visiting a HWC can virtually connect to doctors/ specialists in the Hub that could be at tertiary healthcare facility/hospital/medical college.

– This enables the government to provide general and specialized health services in rural areas and isolated communities.

– The second variant is eSanjeevani OPD: It is serving patients across the country, connecting them directly to doctors from the comforts of their homes.

34. Centre forms expert panel to revise anti-discrimination guidelines on campuses

Source: The post is based on the article **"Centre forms expert panel to revise anti-discrimination guidelines on campuses"** published in **The Hindu on 3rd August 2023.**

What is the News?

The Union Education Ministry has constituted an expert committee to revisit its regulations and guidelines on anti-discrimination guidelines in higher educational institutions.

About anti-discrimination guidelines in higher educational institutions:

University Grants Commission (UGC) had in 2012 issued the UGC (Promotion of Equity in Higher Educational Institutes) Regulations,2012.

This covered all forms of discrimination, provided for liaison officers to check reservation fulfillment and gave mandates for strict grievance redressal cells to address concerns of discrimination.

However, these guidelines have not been fully implemented in several higher educational institutions, including a lot of the Indian Institutes of Technology.

The IIT-Delhi in fact got the mandate for its SC/ST Cell passed only in 2023, providing for a liaison officer and anti-discrimination officers.

Why has the government decided to revisit the anti-discrimination guidelines?

In the last six months, at least half a dozen students from marginalised backgrounds have died of suicide on campuses of IIT-Madras, IIT-Bombay, and IIT-Delhi.

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After this, the Supreme Court had then asked the UGC to detail the steps it had taken to address caste discrimination on campuses.

After this, the government formed an expert committee to revisit the UGC regulations/schemes concerning the SC/ST/OBC/PwD and minority communities in Higher Educational Institutions [HEIs] and suggest further remedial measures if required.

35. Centre restricts laptop, PC and tablet imports; calls for license

Source: The post is based on the article **"Centre restricts laptop, PC and tablet imports; calls for license"** published in **The Hindu on 5th August 2023.**

What is the News?

The Government of India has imposed restrictions on imports of laptops, all-in-one personal computers and tablets.

The restrictions have been imposed under HSN Code 8471 on seven categories of electronic gadgets.

What does the HSN Code 8471 say?

The Harmonised System of Nomenclature (HSN) code is a classification system used to identify products for taxation purposes.

HSN code 8471 is used to identify devices that are designed to perform data processing tasks.

What are the exemptions provided under this order?

People who travel abroad can bring along one laptop, tablet, all-in-one personal computer, or ultra-small form factor computer in their baggage without import restrictions when returning to India. The exemption applies to items bought from e-commerce platforms and shipped via post or courier.

An exemption is also provided for up to 20 items per shipment, particularly for research, testing, evaluation, repair, re-export, and product development. The imports are permitted under the condition that they are used solely for their stated purposes and not sold.

Why has the government imposed these restrictions?

Dragon's iron grip

In FY22 and FY23, India imported $9,446 million worth of laptops from China. Hong Kong was a distant second

China 9,446 (all figures in $ million)

Hong Kong 1,442

Singapore 1,318

Taiwan 229

Malaysia 142
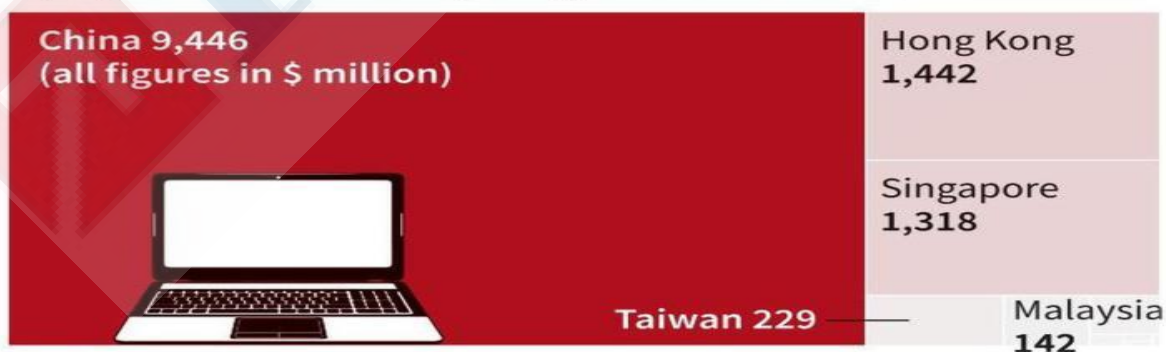
SOURCE: COMMERCE MINISTRY

Source: The Hindu

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Strengthen local manufacturing: With the curbing imports of these devices, the government aims to reduce reliance on foreign markets and encourage the growth of local manufacturing capabilities.

To boost PLI Scheme: This move will give a direct boost to the Center's production-linked incentive (PLI) scheme for IT hardware.

Reduce Reliance on China: The highest share of imports is in the category of personal computers including laptops, and palmtops, under which imports from China stood at $558.36 million in April-May this year as against $618.26 million in the year-ago period. China accounts for roughly 70-80 per cent of the share of India's imports of personal computers, laptops.

What is its potential impact?

This announcement is expected to impact companies that import bulk of their products from outside India. Tech giants like Apple will have to either start manufacturing their laptops in India or stop importing their gadgets to India.

36. Amid row, Data Protection Bill tabled

Source: The post is based on the article **"Amid row, Data Protection Bill tabled"** published in **The Hindu on 4th August 2023**

What is the News?

Digital Personal Data Protection Bill, 2023 has been introduced in the Lok Sabha. The Bill seeks to provide for the protection of personal data and the privacy of individuals.

What are the key provisions of the Digital Personal Data Protection Bill, 2023?

Safety net

A look at salient features of the Digital Personal Data Protection Bill, 2023

- The law will require companies to clearly mention to users what data are being collected and what they are being used for
- Users will get the right to delete or modify their personal data
- Entities failing to protect user data may face penalty of up to ₹250 crore per violation
- The Bill proposes creation of Data Protection Board of India
- It strikes off Section 43A of the IT Act, 2000 that requires companies which mishandle user data to compensate users
- Many facets of implementation will be prescribed via Gazette notifications at a later stage

- The Bill provides a wide range of exemptions for the "State and its instrumentalities". For instance, personal data can be processed "in the interest of sovereignty and integrity of India or security of the State" for "fulfilling any obligation under law"

- While the law requires firms to disclose to users the identity of other firms to which their data would be entrusted for processing, they are explicitly exempted from disclosing sharing of such data in the case of lawful interception of data

Source: The Hindu

Applicability: The bill will apply to processing of digital personal data within India and to data processing outside the country if it is done for offering goods or services, or for profiling individuals in India.

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Obligations of data principals: Companies are required to protect digital data taken from individuals (the former termed 'data fiduciaries' and the latter 'data principals') by clearly mentioning to them what data are being collected and what they are being used for, appointing and giving contact information of a data protection officer and giving users the right to delete or modify their personal data.

Data protection board: It proposes to set up a data protection board that will adjudicate on matters related to violations of the provisions including data breaches. The Union government will notify the appointment of its members.

The Bill strikes off Section 43A of the Information Technology Act, 2000 that requires companies which mishandle user data to compensate users.

Data Localisation: The Bill permits relaxed data localisation requirements and permits cross-border data flow to certain countries and territories as may be notified by the central government.

Exemptions: The Bill provides a wide range of exemptions for the "state and its instrumentalities". For instance, personal data can be processed "in the interest of sovereignty and integrity of India or security of the state" for "fulfilling any obligation under law".

Fines: The bill proposes fines ranging from ₹50 crore to ₹250 crore for companies that fail to protect user data or default on disclosure requirements. These fines can be compounded, that is separate fines can be imposed on the same data fiduciary for each violation.

37. Ministry of Education launches Study In India portal for international students

Source: The post is based on the article **"Ministry of Education launches Study In India portal for international students"** published in **PIB on 3rd August 2023.**

What is the News?

The Union Minister of Education and Union External Affairs Minister have jointly launched Study in India Portal.

What is Study in India Portal?

Study in India (SII) portal is a one-stop platform that will simplify international students' academic journey in India.

The portal will provide information about higher education institutions (HEIs) in India. It will showcase the academic programmes in the HEIs covering undergraduate, postgraduate, doctoral programmes as well courses in Indian Knowledge System (IKS) such as Yoga, Ayurveda, classical arts and more.

The portal will have information about the academic facilities, research support and related information available in the institutes.

Students will be able to apply to more than one institute/course of their choice.

The portal will also be a one-stop spot for student registration, visa application process, choosing the desired courses and receiving offer letters from the institute.

What is the Study in India Programme?

Launched by: Ministry of Education

Aim: To increase the number of international students in India and promote India as the preferred study destination, providing affordable and quality education as per global standards.

Partnership with Premier Education Institutes: The programme involves partnership with educational institutes fulfilling one of the following criteria:

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– National Institutional Ranking Framework (NIRF) ranking (<=100)

– National Assessment and Accreditation Council (NAAC) accreditation score (>=3.01)

– Institutes of National Importance (INI)

Significance: India being one of the largest higher education systems in the world, our universities offer a diverse range of courses catering to the evolving needs of the global workforce. The programme seeks to facilitate international students' access to these courses and showcase the country's academic excellence.

38. Union Minister says, NIDHI program has various components to support innovations, startups and startup incubation ecosystem in the country

Source: The post is based on the article **"Union Minister says, NIDHI program has various components to support innovations, startups and startup incubation ecosystem in the country"** published in **PIB on 3rd August 2023.**

What is the News?

The Union Minister of Science & Technology (DST) has informed Lok Sabha about the NIDHI Program.

What is the NIDHI Program?

Nodal Department: Department of Science & Technology(DST)

Launched in: 2016

Aim: 1) To promote S&T based entrepreneurship and startup ecosystem across the county and 2) To nurture start-ups through scouting, supporting and scaling of innovations.

Key Components of NIDHI: The components of NIDHI are designed to support ideators and innovators since their early startup journey and link them to the entire market value chain.

– **NIDHI-Entrepreneur in Residence (EIR):** Inspiring graduating students to take entrepreneurship by providing fellowship

– **NIDHI-Promotion and Acceleration of Young and Aspiring Technology Entrepreneurs (PRAYAS):** Supports innovators and startups technically and financially from Idea to Prototype stage.

– **NIDHI – Inclusive-Technology Business Incubator (iTBI):** Program has been rolled out to increase outreach of incubation programs in terms of geographies, gender etc.

– **NIDHI-Technology Business Incubator (TBI):** Support and nurture knowledge driven innovative start-ups into successful enterprises.

– **NIDHI-Seed Support Program (SSP):** Provides early-stage funding to potential start-ups with promising ideas / innovations to help them graduate to the next level.

– **NIDHI-Center of Excellence (CoE):** To create a world class facility to help startups go global.

– **NIDHI-Accelerator:** Fast tracking a startup through focused intervention.

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39. Endangered Himalayan vulture, bred in captivity for the first time in India

Source: The post is based on the article **"Endangered Himalayan vulture, bred in captivity for the first time in India"** published in **The Hindu on 4th August 2023.**

What is the News?

Researchers have recorded the first instance of captive breeding of the Himalayan vulture (*Gyps himalayensis)* in India at the Assam State Zoo, Guwahati.

What is Captive breeding?

Captive breeding is the process of breeding animals outside of their natural environment in restricted conditions in farms, zoos or other closed facilities.

The choice of individual animals that are to be part of a captive breeding population, and the mating partners within that population, are controlled by humans.

What is Himalayan vulture?

Source: wiki

Himalayan Griffon vulture or Himalayan Vulture inhabits the higher regions of the Himalayas and the Tibetan Plateau.

They can fly at an elevation of up to 5,500 metre with help of their wide and powerful wings.

They generally feed on dead carcasses and would sometimes wait for a few days before eating the dead animal.

IUCN Status: Near Threatened

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About Vulture Conservation Breeding Centres(VCBC):

Vulture Conservation Breeding Centres(VCBC) have been established by Bombay Natural History Society (BNHS) at Pinjore in Haryana, Bhopal in Madhya Pradesh, Rani in Assam and Rajabhatkhawa in West Bengal.

These centres are involved in conservation breeding of the white-rumped vulture (*Gyps bengalensis*), slender-billed vulture (*Gyps tenuirostris*), and the Indian vulture (*Gyps indicus*).

40. Rajya Sabha passes Mediation Bill, 2021

Source: The post is based on the article **"Rajya Sabha passes Mediation Bill, 2021"** published in **The Economic Times on 1st August 2023.**

What is the News?

Rajya Sabha has passed the Mediation Bill 2021.

What is Mediation?

Mediation is a type of ADR (alternative dispute resolution), where a dispute is referred to a neutral person, who engages with the warring parties and tries to find a solution agreeable to both.

Courts have regularly been ordering mediation to settle civil, commercial, and family disputes among others.

What are the key provisions of the Mediation Bill 2021?

Firstly, persons can try to settle civil or commercial disputes through mediation before approaching any court or tribunal. However, the pre-litigation mediation is voluntary and not mandatory.

Secondly, a party may withdraw from mediation after two mediation sessions.

Thirdly, the mediation process must be completed within 180 days, which may be extended by another 180 days by the parties.

Fourthly, the Mediation Council of India will be set up. Its functions include registering mediators, and recognising mediation service providers and mediation institutes (which train and certify mediators).

Fifthly, currently, mediations are ordered by the courts and when a dispute is thus settled, the settlement agreement is converted into a decree by the court, thus making it binding on the parties. However, the Mediation bill puts a mediated settlement agreement on par with a court judgment without the need for any further court sanction.

Lastly, Mediation agreements can only be challenged on grounds of: (i) fraud, (ii) corruption, (iii) impersonation, or (iv) relating to disputes not fit for mediation.

41. NHAI Launches 'Rajmargyatra' a Unified Mobile Application for National Highway Users

Source: The post is based on the article "**NHAI Launches 'Rajmargyatra' a Unified Mobile Application for National Highway Users**" published in **PIB on 3rd August 2023.**

What is the News?

The National Highways Authority of India (NHAI) has launched the 'Rajmargyatra' app.

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What is Rajmargyatra?

Rajmargyatra is a citizen-centric unified mobile application. It empowers travelers with comprehensive information on Indian National Highways while also offering an efficient complaint redressal system.

Aim: To create a seamless, user-friendly experience for highway users, fostering a safer and more enjoyable journey on Indian National Highways.

Key Features of Rajmargyatra app:

Comprehensive Highway Information: The app serves as a one-stop repository of essential information for National Highway users. Get real-time weather conditions, timely broadcast notifications, and access to details about nearby toll plazas, and other essential services that ensure a seamless and safe journey on National Highways.

Hassle-Free Complaint Redressal: The app comes equipped with an inbuilt complaint redressal and escalation mechanism. Users can easily report highway-related issues, attaching geo-tagged videos or photos for better clarity. Users can also track the status of their grievances for complete transparency.

Seamless FASTag Services: The app integrates its services with various bank portals, making it convenient for users to recharge their FASTags, avail monthly passes, and access other FASTag-related banking services – all within a single platform.

Over-speeding notifications and voice-assistance to encourage responsible and safe driving behavior.

42. Net zero emissions target

Source: The post is based on the article **"Net zero emissions target"** published in **PIB on 3rd August 2023.**

What is the News?

Union Minister of State for Environment, Forest and Climate Change has informed Lok Sabha about India's net zero emissions target and the measures it has taken to address the rapidly growing environmental problems in the country.

India's Greenhouse emissions:

India is an emerging economy whose priority is to achieve development and poverty eradication goals. Due to this, Greenhouse emissions are bound to increase.

However, it is to be noted that India's historical cumulative emissions from 1850 to 2019 amount to less than 4 percent of cumulative carbon dioxide emissions of the world from the pre-industrial era, despite being home to 17% of the world's population.

Hence, India's responsibility for global warming thus far has been minimal and even today its annual per capita emissions are only about one-third of the global average.

India's Net Zero Emissions Target:

At COP 26 in November 2021, India has committed to achieving **net-zero emissions by 2070.**

India's long-term low-carbon development strategy submitted to the UN is guided by principles of equity, climate justice, and the idea of Common but Differentiated Responsibilities and Respective Capabilities.

The strategy rests on seven key transitions to low-carbon development pathways. These include **1)** low-carbon development of electricity systems consistent with development **2)** develop

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an integrated, efficient and inclusive transport system **3)** promote adaptation in urban design, energy and material efficiency in buildings **4) p**romoting economy-wide decoupling of growth from emissions and development of an efficient, innovative low emission industrial system **5)** development of carbon dioxide removal and related engineering solutions **6)** enhancing forest and vegetation cover and **7)** economic and financial needs of low-carbon development.

What are the steps taken by India to address the growing environmental problems in the country?

National Clean Air Programme(NCAP)

PRANA Portal

Commission for Air Quality Management in NCR and Adjoining Area(CAQM)

India has moved from **BS-IV to BS-VI norms** for fuel and vehicles from 1stApril, 2020.

Sustainable Alternative Towards Affordable Transportation(SATAT) has been launched as an initiative to set up a Compressed Biogas (CBG) production plant and make CBG available in the market for use in automotive fuels.

India has added ten wetlands to the List of Wetlands of International Importance (also called Ramsar Sites) within the framework of the Ramsar Convention, taking the total number of Ramsar Sites in India to 75, the highest in Asia,

The government has taken a defining step to **eliminate single use plastics.** A ban has been imposed on identified single use plastic items from 1st July 2022.

Desertification and Land Degradation Atlas of India

Government has initiated the work of **Circular Economy.**Extended Producer Responsibility (EPR) rules have been notified for 4 categories of waste a) Plastic waste, b) Waste tyre, c) Batteries, and E-Waste.

43. House clears tweaked law to set off undersea mineral hunt

Source: The post is based on the article "**House clears tweaked law to set off undersea mineral hunt**" published in **Times of India on 4th August 2023.**

What is the News?

The Rajya Sabha has passed the Offshore Areas Mineral (Development and Regulation) Amendment Bill,2023.

What is Offshore Areas Mineral (Development and Regulation) Amendment Bill,2023?

The Bill seeks to make amendments to the Offshore Areas Mineral (Development and Regulation) Act, 2002.

The Act categorizes offshore mining-related activities into: (i) reconnaissance, which involves a preliminary survey to locate mineral resources, (ii) exploration, which includes exploring, proving, or locating mineral deposits, and (iii) production, the commercial activity of the extraction of minerals.

Key Provisions of the bill:

Composite license: The Act provides for following types of concessions: (i) a reconnaissance permit for reconnaissance, (ii) an exploration license for exploration and (iii) a production lease for undertaking mining.

– The Bill introduces a composite license for granting rights for exploration as well as production.

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– Under the composite license, the licensee will be required to complete exploration within three years. This may be extended by two years upon application by the licensee. If mineral resources have been established, the licensee will be granted one or more production leases for the explored area.

Validity of concessions: Under the Act, a production lease is granted for a period of up to 30 years. It may be further renewed for up to 20 years. The Bill instead provides that a production lease, as well as a production lease under a composite license, will be valid for 50 years.

Mining of atomic minerals: The Bill adds that in case of atomic minerals, exploration, production, and composite licenses will be granted only to the government or government companies. Atomic minerals are defined in the Mines and Minerals (Development and Regulation) Act, 1957.

Standard area of blocks: A limit has also been introduced on total area one person can acquire offshore (not more than 45 minutes latitude by 45 minutes longitude) in respect of any mineral or prescribed group of associated minerals under one or more operating rights (taken together).

Offshore Areas Mineral Trust: The Bill sets up the Offshore Areas Mineral Trust. Concession holders will be required to pay an amount to the Trust in addition to any royalty.

– The funds will be used for specified purposes including: (i) exploration in offshore areas, (ii) research and studies about the mitigation of adverse effects of offshore mining on the ecology, and (iii) relief upon the occurrence of a disaster.

44. House panel proposes reducing minimum age to contest polls

Source: The post is based on the article **"House panel proposes reducing minimum age to contest polls"** published in **Business Standard** on **5th August 2023**.

What is the news?

The parliamentary panel has proposed lowering the minimum age for participating in national elections, especially Assembly elections, from 25 to 18 years.

Why has the committee come up with such a proposal?

Global Practices: The Parliamentary Standing Committee on Personnel, Public Grievances, Law, and Justice **cited examples from the UK, Australia, and Canada**, where the minimum age to run for any elected public office is 18.

Even in most European countries, the minimum age for contesting national general elections is 18.

Inadequate Representation: In 2019**, a report by PRS Legislative Research revealed that** 47 percent of Lok Sabha MPs were over 55 years old. The panel found this troubling considering India's median age was only 27.9 years.

The report also highlighted that only 2.2 percent of Lok Sabha MPs were under 30 years old. Hence, the panel has raised concerns over lack of representation.

Bridging the generation gap: The committee stated that global surveys indicate a significant political awareness among the youth. Hence, **having younger candidates could help bridge the generation gap, promote dialogue, and foster cooperation.**

What has been the response of the Election Commission for the proposal?

The Election Commission (EC) has said that expecting 18-year-olds to have the required experience and maturity to serve as public representatives was unrealistic.

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Hence, **it advised the panel not to change the constitutional provision for the age requirement** to contest in the Lok Sabha, Rajya Sabha, Legislative Assemblies, and Legislative Councils, **unless compelling reasons exist.**

45. Govt. allows Indian companies to list on foreign exchanges through IFSC

Source: The post is based on the article **"Govt. allows Indian companies to list on foreign exchanges through IFSC"** published in **The Hindu** on **5th August 2023**.

What is the news?

The finance minister has said that **Indian companies can now directly list their shares on foreign exchanges operating at the** International Financial Services Centre (IFSC) in Gujarat's **GIFT City.**

This move is aimed at enabling Indian companies to access global capital at better valuations.

FM has also inaugurated the Limited Purpose Clearing Corporation (LPCC) mechanism called AMC Repo Clearing Ltd. (ARCL) and the Corporate Debt Market Development Fund (CDMDF) in Mumbai.

About Limited Purpose Clearing Corporation (LPCC)

The LPCC has been established to facilitate clearing and settling corporate bond repo transactions and promote an active repo market. This initiative aims to enhance liquidity in the corporate bond market.

It will also enable market makers to obtain affordable funding for their inventory, assist bondholders in fulfilling their short-term liquidity requirements without selling their assets, and provide entities with short-term surpluses a secure and efficient way to utilize their funds.

About Corporate Debt Market Development Fund (CDMDF)

During market dislocations, the CDMDF will have access to ₹33,000 crore in capital.

It will use this capital to buy and hold eligible corporate debt securities from participating investors, such as specified debt-oriented MF schemes, **and subsequently sell these securities as markets recover.**

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Listing reforms

Indian firms have been permitted to directly list their shares in foreign exchanges operating at the IFSC in GIFT City, Gujarat

■ **Both listed and unlisted Indian companies will be able to access global capital through the IFSC**

■ **The FM launches a mechanism and a fund to foster an active repo market for corporate bonds in India**

■ **Lack of a central counterparty restricted market for corporate repo transactions, Ms. Sitharaman says**

Source: The Hindu

46. [Rare 'Einstein cross' warps light from one of the universe's brightest objects in this stunning image](#)

Source: The post is based on the article **"Rare 'Einstein cross' warps light from one of the universe's brightest objects in this stunning image"** published in **LiveScience** on **5th August 2023**.

What is the news?

Astronomers have discovered a stunning, rare example of an "Einstein cross" splitting and magnifying light from the far depths of the universe.

About the Discovery

A foreground elliptical galaxy located about 6 billion light-years away from Earth has warped and quadrisected a bright beam of light from a background galaxy approximately 11 billion light-years away.

The resulting pattern was first predicted by Albert Einstein in 1915.

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Source: LiveScience

It is a rare arrangement that astronomers will study to get a better understanding of the universe.

The background light emitted by a quasar, which is a young galaxy with a supermassive black hole at its center.

It consumes immense amounts of matter and blasts out enough radiation to shine more than a trillion times more brightly than the brightest stars.

What does Einstein's theory of general relativity explain?

Einstein's theory of general relativity describes the way massive objects warp the fabric of the universe, called space-time.

Einstein discovered that gravity is not an unseen force but rather a consequence of space-time curving and distorting in the presence of matter and energy.

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Light, though usually traveling in a straight line, bends when passing through highly curved regions of space-time creating a halo-like effect.

In this case, Earth, the lensing galaxy and the quasar have aligned to perfectly duplicate the quasar's light, arranging them along a so-called Einstein ring.

What is the significance of this discovery?

First, these rings magnify and reconstruct light, allowing astronomers to observe distant galaxies with enhanced details.

Second, the degree of light bending in Einstein rings provides a valuable tool for estimating the masses of galaxies and black holes on a cosmic scale.

Third, studying the distant light warping around these rings can help scientists to look at objects that would otherwise be too dark to be seen on their own, such as black holes or wandering exoplanets.

47. National Health Authority (NHA) extends its incentive scheme under Ayushman Bharat Digital Mission (ABDM)

Source: The post is based on the article "**National Health Authority (NHA) extends its incentive scheme under Ayushman Bharat Digital Mission (ABDM)**" published in **PIB on 4th August 2023.**

What is the News?

The National Health Authority(NHA) has announced the extension of its Digital Health Incentives Scheme (DHIS) under the Ayushman Bharat Digital Mission (ABDM) till 31st December 2023.

What is the Digital Health Incentives Scheme (DHIS)?

Launched on: 1st January, 2023 as part of the Ayushman Bharat Digital Mission.

Aim: To give a further boost to digital health transactions in the country under the Ayushman Bharat Digital Mission (ABDM).

Under the scheme, the eligible health facilities and digital solutions companies shall be able to earn financial incentives of up to Rs. 4 crores based on the number of digital health records created and linked to ABHA (Ayushman Bharat Health Account) numbers of the patients.

– This incentive can be availed by the health facilities (hospitals, diagnostic labs) and Digital Solution Companies registered with ABDM's Health Facility Registry(HFR).

Significance: This scheme has proven to be a significant catalyst in promoting the adoption of digital health technologies and practices in healthcare delivery across the country.

48. Gamechanger for India's vultures: Experts laud Centre's move to ban aceclofenac, ketoprofen

Source: The post is based on the article **"Gamechanger for India's vultures: Experts laud Centre's move to ban aceclofenac, ketoprofen"** published in **Down To Earth on 3rd August 2023.**

What is the News?

Experts who work on vultures have welcomed the Centre's decision to prohibit for animal use the manufacture, sale and distribution of ketoprofen and aceclofenac. They said this move would be a gamechanger for India's vultures.

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What are Ketoprofen and Aceclofenac?

Ketoprofen and aceclofenac are both non-steroidal anti-inflammatory drugs (NSAIDs) commonly used to relieve pain, reduce inflammation and manage various conditions.

Why has Ketoprofen and Aceclofenac been banned?

Ketoprofen and aceclofenac have been banned as they are harmful to cattle and can kill vultures too if they eat the carcasses of the animals that were administered with these two drugs.

What are the other steps taken for Vulture conservation?

During 1980's,India had around 4 crore vultures and by the late 1990s, the vulture population started declining.

In 2004, it was found that diclofenac was the cause of vulture deaths and that 97% of the population had been lost till then.

That same year,, the Indian government along with other agencies came up with a Vulture Recovery Plan which recommended banning the veterinary use of diclofenac, finding its substitute and setting up conservation breeding centers for vultures.

In 2006 the Vulture Recovery Plan was incorporated into the Action Plan for Vulture Conservation 2006.

The use of diclofenac as a veterinary drug was banned in 2006.The Centre also restricted the vial size of diclofenac for human use to just three milliliters after it was found that people were using diclofenac meant for humans in cattle.

What are Vultures?

Click Here to read

49. Assam's Manas Tiger Reserve 63% short of sanctioned staff, Environment Minister told

Source: The post is based on the article **"Assam's Manas Tiger Reserve 63% short of sanctioned staff, Environment Minister told"** published in **The Hindu on 5th August 2023.**

What is the News?

The All India Tiger Estimation 2022 has indicated that Assam's Manas National Park and Tiger Reserve is moving from a low to high-tiger-density area.

This is bad news for the Manas National Park as it is almost 63% short of staff.

What is Manas National Park?

Manas National Park is located in Assam. It is a **UNESCO Natural World Heritage site**, a tiger reserve and a biosphere reserve.

Manas is located at the foothills of the **Eastern Himalayas.**

Origin of name: The name of the park originated from the Manas River. The Manas river is a major tributary of Brahmaputra River, which passes through the heart of the national park.

It shares a common border with the **Royal Manas National Park of Bhutan.**

Vegetation: The monsoon forests of Manas lie in the Brahmaputra Valley semi-evergreen forests ecoregion.

– The combination of Sub-Himalayan Bhabar Terai region with riverine succession leading up to the Himalayan subtropical broadleaf forests makes it one of the richest biodiversity areas in the world.

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Fauna: The Park is home to many endangered species like Assam roofed turtle, golden Langur, hispid hare, and pygmy hog. It is also famous for its wild water buffaloes.

Village: There is only one forest village, **Pagrang,** in the core of the national park. Apart from this village 56 more villages surround the park.

Threats: Manas National Park faces threats such as encroachment (for farm activity), impact from upstream hydroelectric projects in Bhutan, improper protection and management of grasslands, invasive plants as well as some amount of poaching.

50. [Union Minister introduces a Bill to establish the Anusandhan National Research Foundation in the Lok Sabha](#)

Source: The post is based on the articl**e "Union Minister introduces a Bill to establish the Anusandhan National Research Foundation in the Lok Sabha "** published in **PIB on 4th August 2023.**

What is the News?

The Union Science Minister has tabled the Anusandhan National Research Foundation Bill in the Lok Sabha.

What is the Anusandhan National Research Foundation Bill?

The Bill proposes to establish the National Research Foundation(NRF). It will replace the Science and Engineering Research Board (SERB).

Purpose: NRF will be an apex body to provide high-level strategic direction of scientific research in the country as per recommendations of the National Education Policy (NEP).

Functions: NRF will forge collaborations among the industry, academia, and government departments and research institutions and create an interface mechanism for participation and contribution of industries and State governments in addition to the scientific and line ministries.

– It will also focus on creating a policy framework and putting in place regulatory processes that can encourage collaboration and increased spending by the industry on R&D.

Governing Board: The Department of Science and Technology (DST) will be the administrative Department of NRF which will be governed by a Governing Board consisting of eminent researchers and professionals across disciplines.

– **Prime Minister** will be the ex-officio President of the Board

– **Union Minister of Science & Technology & Union Minister of Education** will be the ex-officio Vice-Presidents.

– NRF's functioning will be governed by an **Executive Council** chaired by the P**rincipal Scientific Adviser to the Government of India.**

Significance of the bill: The bill will give a much-needed boost to the education sector in India.

– It will provide high-level strategic direction for research, innovation, and entrepreneurship in the fields of natural sciences including mathematical sciences, engineering, and technology, environmental and earth sciences, health and agriculture.

– It will also cater to the vast amount of skilled human resources of the country, who otherwise seek opportunities outside the country. It will act as a significant element in strengthening India's competitiveness in the global economy.

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51. Cabinet okays draft telecom, postal bills

Source: The post is based on the article **"Cabinet okays draft telecom, postal bills"** published in **PIB on 5th August 2023.**

What is the News?

The Union Cabinet has cleared the Draft Indian Telecommunications Bill,2022 and Postal Services Bill,2023.

What is Draft Indian Telecommunications Bill,2022?

Click Here to read

What is the Postal Services Bill,2023?

The Bill seeks to replace the Indian Post Office Act of 1898, which governs the functioning of post offices in the country.

The bill is aimed at bringing significant reforms in postal services.

The bill seeks to revamp the postal department, especially its parcel services, making them competitive with private players to generate revenue.

It also seeks to enhance financial services in rural areas through the postal system.

Significance of the bill: At a time the postal department is facing several challenges from private players in the areas of dominance, the proposed new postal bill may help in revitalizing the department as well as its officials in scripting new success stories in the days to come.

52. Remove wheat import duty till Feb for food security: FCI

Source: The post is based on the article **"Remove wheat import duty till Feb for food security: FCI"** published in **Livemint on 5th August 2023.**

What is the News?

Food Corporation of India(FCI) has recommended the government to remove import duty on wheat till February 2024.

Why has the Food Corporation of India(FCI) asked the government to remove import duty on wheat?

Food prices have been on the rise globally against the backdrop of the Russia-Ukraine war.

But the prices began showing signs of easing, thanks to the Black Sea grain deal under which Russia agreed to allow wheat to be exported from the three ports in the conflict-hit region.

However, prices have resumed the upward trend, with Russia pulling out of the deal last month, stating that the deal was only helping Western countries and not the African nations in need.

Soon after, India also restricted wheat exports to protect its own food supplies.

However, Inflation in wheat is currently above 12% even as the government has taken multiple steps such as banning exports to conducting open market operations.

Hence, that's why FCI has suggested the government to remove import duty on wheat till February 2024.

This is because Russian wheat is cheaper and can be imported. Harvest season in Russia is currently going on and this is the peak time for exporters to sign contracts.

Note: The current import duty on wheat is 40% and has been at this level since April 2019.

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53. Lok Sabha passes Inter-Services Organisation (Command, Control & Discipline) Bill – 2023

Source: The post is based on the article **"Lok Sabha passes Inter-Services Organisation (Command, Control & Discipline) Bill – 2023"** published in **PIB on 4th August 2023.**

What is the News?

Lok Sabha has passed the Inter-Services Organisation (Command, Control & Discipline) Bill – 2023.

What is the need of the Inter-Services Organisation (Command, Control & Discipline) Bill – 2023?

Currently, members of the armed forces are governed by three separate laws: the Army Act of 1950, the Air Force Act of 1950 and the Navy Act of 1957.Only officers from the same service have the authority to discipline those who fall under their respective Acts.

This creates challenges in maintaining command, control, and discipline within groups that consist of members from different services.

To fix this problem, this bill is being brought. Its goal is to make things simpler and faster. It aims to maintain discipline and resolve cases more quickly, saving time and money for everyone involved.

Importantly, the bill seeks to achieve these goals without disrupting the unique service conditions or amending the existing service Acts.

What are the key provisions of Inter-Services Organisation (Command, Control & Discipline) Bill – 2023?

Central government will have the power to create new Inter-Services Organizations(ISOs) through official notification.

The head of these organizations will be the commander-in-chief or the officer-in-command. The central government will be responsible for these inter-services organizations and will have the authority to issue directions on matters related to national security or general administration.

The commander-in-chief, the officer-in-command or any other official explicitly empowered by the central government will have full disciplinary and administrative powers over individuals serving or connected to an existing or prospective inter-services organization.

The personnel serving in or attached to an inter-services organization will continue to be governed by their respective service Acts.

What is the significance of this bill?

The bill has various tangible benefits such as maintenance of effective discipline in inter-services establishments by the Heads of ISOs, no requirement of reverting personnel under disciplinary proceedings to their parent Service units, expeditious disposal of cases of misdemeanour or indiscipline and saving of public money & time by avoiding multiple proceedings.

The Bill would also pave the way for much greater integration and jointness amongst the three Services. It will also lay a strong foundation for creation of Joint Structures in times to come and further improve the functioning of the Armed Forces.

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54. A Rare Ureilite Meteorite Possibly Created Madhya Pradesh's Famous Dhala Impact Crater, New Study Suggests

Source: The post is based on the article **"A Rare Ureilite Meteorite Possibly Created Madhya Pradesh's Famous Dhala Impact Crater, New Study Suggests"** published in **Hindustan Times on 23rd July 2023**

What is the News?

A team of scientists have found that the Dhala crater formed when an extraordinarily rare and ancient meteorite known as **Ureilite** crashed into India.

Note: In India, there are three meteor impact craters found. These are 1) Ramgarh in Rajasthan 2) Lonar in Maharashtra and 3) Dhala in MP

What is Dhala Crater?

Dhala crater is located in Madhya Pradesh. It has a diameter of 11 kilometers.

It is Asia's largest and world's seventh-largest impact crater.

What are Ureilites?

Ureilites belong to a scarce class of primitive meteorites, making up only a small fraction of all meteorites found on Earth. Comprising mostly olivine and pyroxene silicate rocks.

Ureilites also contain less than 10% of carbon (either in the form of diamond or graphite), metal sulphides and a few fine-grained silicates.

How was Dhala Crater formed?

Dhala crater was formed from an ancient meteorite known as Ureilite. The Ureilite was approximately one kilometre in diameter and crashed into Earth's atmosphere at an extraordinary speed of 15 km/s about 2500 to 1700 million years ago.

Significance: With these findings, scientists hope to learn more about the rare meteorite crater and its potential role in Earth's early history, including its impact on bringing water to the planet and the development of life.

55. Forest Conservation Bill: An encompassing green

Source: The post is based on the article "**Forest Conservation Bill: An encompassing green**" published in The Indian express on 7th August 2023.

Syllabus Topic: Environment Conservation, environmental pollution and degradation, environmental impact assessment

News: In this article author discusses the Forest (Conservation) Amendment Bill, 2023, passed by the Indian Parliament. The Bill, committed to sustainable development, seeks to integrate tribal people living in forests into mainstream development, enhance green cover, provide basic amenities to forest dwellers, and ensure secure borders by enabling infrastructure development in border areas.

Evolution of Forest (Conservation) Amendment Bill, 2023

The origin of the Forest (Conservation) Amendment Bill, 2023, traces back to **the Forest (Conservation) Act, 1980.** This Act aimed to control the use of forest land for non-forest purposes.

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However, issues arose when the Act's provisions were interpreted differently across states, especially regarding government-recorded forest lands and private plantations.

The Supreme Court's 1996 orders in the Godavarman case expanded the Act's applicability. The court stated the Act applies not only to notified forest land but also to lands resembling forests.

Post Godavarman case, the Act started applying to areas even if they weren't government-recorded forests. This led to fears among private plantation owners and slowed afforestation outside forests.

This uncertainty was a hindrance in enhancing green cover to meet **the Nationally Determined Contribution** targets, aiming to create **a carbon sink of 2.5 to 3.0 billion tons of CO2 equivalent**.

To address these issues, the Forest (Conservation) Amendment Bill, 2023 was introduced, providing clear guidelines and removing the ambiguities, thereby streamlining the conservation and development of forest lands.

What are the benefits of Forest (Conservation) Amendment Bill, 2023?

Inclusive Development: The Bill helps tribal people, especially those in deep forests, join India's development journey, enhancing their living conditions.

Enhancing Green Cover: As per the **2021 India State of Forest Report, forest cover is 21.71% of India's area.** The Bill encourages afforestation outside forests, contributing to further increase in cover.

Regulated Land Use: The Bill offers minor exemptions for forest land diversion, without giving blanket permission, ensuring all conservation concerns are addressed.

Border Security: It allows infrastructure development in border areas, facilitating swift deployment of forces, improving national security.

Education and Health Access: The Bill paves the way for tribal children and elderly people to access education and healthcare facilities.

Conservation Efforts: It promotes activities like ecotourism, increasing local communities' commitment to conservation.

Climate Mitigation: By regulating forest management, the Bill contributes to mitigating the impact of climate change.

Boosting Livelihoods: It provides new livelihood sources to local communities, further connecting them with mainstream development.

What are the concerns of Forest (Conservation) Amendment Bill, 2023?

Read here: What are the concerns with the Forest (Conservation) Amendment Bill?

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56. Four years after Article 370 abrogation: The unanswered, uncomfortable questions about India's federalism

Source: The post is based on the article "**Four years after Article 370 abrogation: The unanswered, uncomfortable questions about India's federalism**" published in "The Indian express" on 7th August 2023.

Syllabus: issues and challenges pertaining to the federal structure,

News: The author discusses concerns about India's federalism due to the repeal of Article 370, including the unclear meaning of statehood, the issue of local people's says in governance, and whether this action sets a dangerous precedent.

About India's federalism

The Supreme Court of India acknowledged federalism as a basic feature of the Constitution in the S R Bommai v Union of India case (1994).

India practices "asymmetrical federalism", meaning states have different relationships with the Union.

This unique model is a result of both design and historical events.

Asymmetrical federalism has helped India remain united despite various secessionist movements.

Articles 371-A to 371-J demonstrate that a uniform approach to federalism isn't suitable for India, highlighting the need for local adaptations.

What are the major concerns for India's federalism due to the repeal of Article 370?

Statehood Meaning: The repeal of Article 370 has led to the "downgrading" of Jammu & Kashmir from a full state to a Union Territory. It prompts questions about what statehood within the Union of India signifies. It's the first instance where a full state has been demoted to a Union Territory.

People's Voice: The action raised concerns about whether residents of a state should have a say in how they're governed. Previously, changes in a state's status were often made with the approval of that state's legislative assembly, a convention that wasn't followed in this case.

Setting a Precedent: The removal of Article 370 might set a precedent for the unilateral revocation of special provisions made for other states. This could destabilize the unique asymmetrical federalism India has cultivated to accommodate different needs across its states.

Delay in Restoration: Four years after the revocation, there's no timeline for restoring Jammu & Kashmir's statehood. This could negatively affect the region's governance and societal harmony.

Centralization Concerns: The action appears to centralize power, contrasting with the trend of decentralization to strengthen the Union. It raises questions about the future direction of India's federalism.

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57. On government direction on Indian drug standards: A partial remedy

Source: The post is based on the article "**Express View on government direction on Indian drug standards: A partial remedy**" published in "The Indian express" on 7th August 2023.

Syllabus: Issues relating to development and management of Social Sector/Services relating to Health.

News: A much-needed action was taken last week when the government issued a directive requesting that drug producers adhere to WHO guidelines.

What are the recent incidents that have dented the country's reputation as a reliable source of inexpensive generics?

In October 2022, over **60 children in Gambia died due to kidney complications from cough syrups** made by Haryana-based Maiden Pharmaceuticals.

Within three months, another cold remedy by Marion Biotech in Noida was blamed for **19 children's deaths in Uzbekistan.**

In March 2023, **Cameroon authorities associated a batch of cough medicines from an Indore-based firm with at least 12 fatalities.**

The World Health Organization found toxic content in seven Indian-made cough syrups.

Surveys by Indian authorities have also revealed serious shortcomings in at least 160 pharma units.

What are the reasons for such incidents?

Lack of WHO certification: Less than 20% of Indian pharma units are WHO-certified, indicating poor quality control.

Outsourcing to MSMEs: Large companies often outsource production to small and medium-sized enterprises where quality might be compromised for cost reduction.

Inadequate regulatory staffing: For instance, Haryana's drug monitoring department had less than 40% of its required staff during the Maiden Pharma case investigation.

Misallocation of inspectors' duties: Inspectors often handle administrative work related to licenses, causing a neglect in drug safety and efficacy checks.

Limited testing facilities: India only has 31 government-run drug testing labs, which is not sufficient.

Lack of transparency and public information: There is limited information about inspection procedures and violations that could warn regulatory authorities, doctors, and healthcare institutions.

What should be done?

Implement WHO standards: The government should require all pharmaceutical manufacturers to adhere to these global norms.

Improve regulatory oversight: This includes hiring more staff for drug monitoring and focusing their work on drug safety checks.

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Enhance testing facilities: Increase the number of state and central drug testing laboratories.

Create a violation database: This would alert authorities, healthcare institutions, and doctors about inspections and violations.

Increase transparency: Publicly share information about procedures followed during investigations and manufacturing standards.

58. Vikram S Mehta writes on the climate crisis: The global way out

Source: The post is based on the article "**Vikram S Mehta writes on the climate crisis: The global way out**" published in "The Indian express" on 7th August 2023.

Syllabus: Environment Conservation, environmental pollution and degradation, environmental impact assessment & Disaster and disaster management.

News: In this article discusses the growing global warming crisis and the challenges in addressing it due to political and social divisions. They mention a book by Duhaime suggesting the human brain can be conditioned for pro-environment actions. The author believes that, like the global response to Covid19, collaboration is key.

What are the challenges in addressing growing global warming crisis?

Political and Social Divisions:

The world is divided geopolitically, especially between the US and China.

Escalating tensions and economic nationalism hinder global cooperation.

The US Inflation Reduction Act and Europe's Carbon Border Adjustment Mechanism (CBAM) show a swing towards economic nationalism.

Economic Implications:

Former US Secretary Henry Paulson warns against only focusing on solar and wind.

Solar facilities can destroy forests.

Mining can harm sensitive areas.

Wind turbines have caused one million bird deaths.

Environmental Warnings:

The World Meteorological Organization **says July was the "hottest week on record".**

One year between 2024-2027 will exceed the 1.5 C temperature rise limit set at COP 21.

Xinjiang saw a high of 52.2 C.

Phoenix faced 19 straight days of above 43 C.

Forest fires are increasing in southern Europe.

Natural Tipping Points:

The North Atlantic Gulf stream is at risk of collapsing by the 2050s.

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Such a collapse would drastically change global climates.

What should be done?

Limit Global Warming: Ensure global temperatures don't exceed 1.5 C above pre-industrial levels, as set in COP 21.

Renewable Energy: Increase the share of renewables in the energy mix, as suggested by the president of COP28, Sultan Ahmed Al Jaber.

Innovate: Scale up technologies like green hydrogen and carbon capture.

Financial Commitments: Governments should meet their financial pledges towards climate action.

Holistic Solutions: Avoid singular solutions like solely focusing on solar and wind, as they can have unintended environmental consequences. For example, solar facilities on forested land or wind turbines causing bird deaths.

Global Cooperation: Collaborate internationally to address the crisis, as done during the Covid19 pandemic.

Brain Conditioning: Leverage the "plasticity" of the human brain, as mentioned in Duhaime's book, to encourage pro-environment policies.

Avoid Destruction: Refrain from projects that harm nature, such as mining in sensitive areas.

59. 5% of birds in India are endemic, says Zoological Survey of India publication

Source: The post is based on the article **"5% of birds in India are endemic, says Zoological Survey of India publication"** published in **The Hindu on 7th August 2023.**

What is the News?

Zoological Survey of India (ZSI) has released a publication titled "*75 Endemic Birds of India*".

What are the key highlights from the publication "*75 Endemic Birds of India*"?

Endemic birds: India is home to 1,353 bird species, which represents approximately 12.40% of global bird diversity. Out of these bird species, 78 (5%) are endemic to the country.

The highest number of endemic species have been recorded in the **Western Ghats,** with 28 bird species.

– Some of the species recorded in the Western Ghats are the Malabar Grey Hornbill, Malabar Parakeet, Ashambu Laughing Thrush and White-bellied Sholakili.

Endemic bird species not sighted in last few decades: Of the 78 species, three species have not been recorded in the last few decades.They are:

– **Manipur Bush Quail** (Perdicula manipurensis), listed as 'Endangered' in IUCN Red List with its last recorded sighting in 1907;

– **Himalayan Quail** (Ophrysia superciliosa), listed as 'Critically Endangered' with its last recorded sighting in 1876 and

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– **Jerdon's Courser** (Rhinoptilus bitorquatus), listed as 'Critically Endangered' with its last confirmed sighting in 2009.

Threatened Endemic Bird species of India: Of the 78 endemic species, 25 are classified as 'Threatened' by the IUCN.

– Three species (Bugun Liocichla or Liocichla bugunorum; Himalayan Quail or Ophrysia Superciliosa and Jerdon's Courser or Rhinoptilus bitorquatus) are listed as 'Critically Endangered'.

– Five of the endemic birds are categorized as 'Endangered', and 17 as 'Vulnerable', while 11 are categorized as 'Near Threatened' on the IUCN Red List.

60. North India's first River Rejuvenation Project Devika is nearing completion

Source: The post is based on the article **"North India's first River Rejuvenation Project Devika is nearing completion"** published in **PIB on 6th August 2023.**

What is the News?

The Union Minister has said that North India's first River Rejuvenation **Project Devika** is nearing completion.

What is Project Devika?

Project Devika aims to rejuvenate Devika River. It is North India's first river rejuvenation project.

It was launched in 2019 under the National River Conservation Plan (NRCP).

Under the project, bathing "ghats" (places) on the banks of the Devika River will be developed, encroachments will be removed, natural water bodies will be restored and catchment areas will be developed along with cremation ground.

The project also includes the construction of three sewage treatment plants, development of two cremation ghats, protection fencing and landscaping, small hydropower plants and three solar power plants.

On completion of the project, the rivers will see reduction in pollution and improvement in water quality.

What is River Devika?

Devika river originates from the hilly Suddha Mahadev temple in the Udhampur district of Jammu and Kashmir and flows down towards western Punjab (now in Pakistan) where it merges with the Ravi river.

The river holds religious significance as it is revered by Hindus as the sister of river Ganga.

In 2020, Devika Bridge was inaugurated in Udhampur. Apart from taking care of traffic congestion, the Devika Bridge was also meant to help smooth passage of Army convoys and vehicles.

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61. India launches 'Neerakshi' – Autonomous Underwater Vehicle for mine detection

Source: The post is based on the article **"India launches 'Neerakshi' – Autonomous Underwater Vehicle for mine detection"** published in **Hindustan Times on 29th July 2023.**

What is the News?

India has launched an Autonomous Underwater Vehicle called 'Neerakshi' for detecting underwater mines.

What is Neerakshi?

Neerakshi is an autonomous underwater vehicle (AUV) designed to detect mines.

Developed by: It is a collaboration of Garden Reach Shipbuilders and Engineers (GRSE) Ltd and Aerospace Engineering Private Ltd (AEPL).

Functions: It can be used for a variety of functions ranging from mine detection to mine disposal to underwater survey.

– It has an endurance of nearly 4 hours, and is capable of operating up to a depth of 300m.

Significance: It is the first of its kind in India and will be tested by the Navy, Coast Guard, and Army before being available commercially.

– It is part of GRSE's broader ambitions to create autonomous sea surface vehicles, sea-based drones and explore green propulsion technologies.

62. Musk's Starlink: why the new sovereign of low-earth orbit is bad news?

Source: The post is based on the article **"Musk's Starlink: why the new sovereign of low-earth orbit is bad news?"** published in **The Hindu on 7th August 2023.**

What is the News?

In January 2023, pictures of a Ukrainian drone with a modified Starlink satellite dish circulated on Russian Telegram channels. This raised concerns about using the dish for controlling the drone remotely and for military purposes.

Later, Starlink Elon Musk tweeted that Starlink will not be used for long-range drone strikes.

With this, the world was informed that Elon Musk billionaire had effectively changed the rules of engagement for the Russia-Ukraine war.

How does Starlink work?

Starlink is a satellite constellation that comprises thousands of small satellites in low-Earth orbit. SpaceX first began sending them into space in 2019 and currently, there are more than 3,000 of these satellites that send internet signals to designated ground receivers.

Unlike traditional internet providers, Starlink doesn't require any ground infrastructure. One just needs to have a small satellite dish or a receiver device to access high-speed internet, much like satellite TV.

The company also has a mobile application for Android and iOS that uses augmented reality to help customers choose the ideal location and position for their receivers.

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Hence, currently, Starlink service is the undisputed king of the section of space called low-earth orbit (LEO).

Starlink's role in Russia-Ukraine war:

Starlink has emerged as a crucial communication tool for Ukraine's armed forces because their own mediums of communication were compromised by Russian hackers.

Ukrainian soldiers are using Starlink internet to upload pictures of probable Russian targets. These images are subsequently evaluated by the commanders and they then decide whether to bomb the target and if so, from where.

Moreover, Starlink has made drone warfare much easier. A report has suggested that Ukraine used the internet service to successfully attack Sevastopol — the Crimean headquarters of Russia's Black Sea Fleet.

Why does China fear Starlink?

Starlink has been vital to Ukraine's war effort. The system is also hard to jam.

From the perspective of China, this not only puts its friend Russia at a disadvantage, it also raises concerns about Taiwan, the self-governing island that China claims. If Taiwan were given access to Starlink, it would make a Chinese invasion that much more difficult.

Moreover, China is also fearful that the US, through Starlink, is covering up territory in low-Earth orbit. China, too, wants to be a power in this domain.

What are the concerns raised by analysts?

Despite Starlink's manifold advantages and uses for Ukraine, experts have cautioned against Elon Musk's formidable dominance in the launch market and satellite-internet operations.

They also point out that Elon Musk is an unaccountable single individual and has other business interests that might influence his decisions.

The obvious solution to this is that we need more LEO satellite constellations – government, private or some combination of the two – that provide Internet access.

63. 18th Century Tamil manuscripts found in monastery in Italy

Source: The post is based on the article **"18th Century Tamil manuscripts found in monastery in Italy"** published in **The Hindu on 7th August 2023.**

What is the News?

Palm manuscripts from the 18th Century titled **Gnanamuyarchi** have been found in an Armenian monastery in Northern Italy.

What is Gnanamuyarchi?

Gnanamuyarchi are Tamil manuscripts found in an Armenian monastery in Northern Italy.

The manuscript could be a copy of the **first Tamil translation of *Spiritual Exercise*,** written by St. Ignatius of Loyola in the 16th century.

The translation was mostly done by **Michele Bertoldi,** known in Tamil as Gnanaprakasasamy.

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The manuscript was initially misclassified as 'Indian Papyrus Lamulic Language–XIII Century,' unaware that they were written in Tamil.

The monastery authorities think the manuscripts might have been brought to Italy by Armenians in Chennai.

64. Revised manufacturing rules for drug firms: what changes, and why

Source: The post is based on the article **"Revised manufacturing rules for drug firms: what changes, and why"** published in **Indian Express on 7th August 2023.**

What is the News?

The Government of India has directed all pharmaceutical companies in the country to implement the revised Good Manufacturing Practices (GMP), bringing their processes at par with global standards.

What are Good Manufacturing Practices (GMP)?

Click Here to read

What is the need of these GMP Standards for pharmaceutical companies?

One, implementation of these GMP norms will bring the Indian industry on par with global standards.

Two, there have been a string of incidents where other countries have reported alleged contamination in India-manufactured syrups, eye-drops, and eye ointments. The deaths of Children in the Gambia, Uzbekistan and the United States have been linked to these products.

Three, a risk-based inspection of 162 manufacturing units by the government found several deficiencies — incoming raw materials not being tested before use, product quality not being reviewed , infrastructure deficiency to prevent cross-contamination, faulty design of manufacturing and testing areas, missing qualified professionals and poor documentation.

Fourth, GMP standards are also important as only 2,000 of the 10,500 drug manufacturing units in the country at present meet global standards being WHO-GMP certified.

Fifth, implementation of the revised good manufacturing practices (GMP) standards are also listed in the 2018 draft schedule M of the drugs and cosmetics rules.

What are the major changes GMP standards will bring?

The revised GMP guidelines focus on quality control measures, proper documentation, and IT backing to maintain quality of medicines produced.

It also introduces pharmaceutical quality systems, quality risk management, product quality review and validation of equipment.

This will mean companies will have to carry out regular quality reviews of all its products, verify consistency of the quality and the processes, thorough investigation of any deviation or suspected defect and implementation of any preventive actions.

It also suggests a change control system to evaluate all changes that may affect the production or quality of the product.

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The guidelines also state that companies should have **GMP-related computerized systems,** which ensure that there is no tampering of data related to the processes.

How will these changes help?

Instituting the same quality across the industry will give confidence to regulators from other countries. In addition, it will improve the quality of drugs in the domestic markets.

65. Money Bills vs Finance Bills: What are the differences, what the court has ruled

Source: The post is based on the article **"Money Bills vs Finance Bills: What are the differences, what the court has ruled"** published in **Indian Express on 4th August 2023.**

What is the News?

The Parliamentary Affairs Minister has said that the Digital Personal Data Protection (DPDP) Bill, 2023 is an ordinary Bill and not a money bill.

Earlier, it was reported that the Bill was being introduced under Article 117 of the Constitution, which deals with special provisions for Financial Bills.

What are Financial Bills?

A Financial Bill is any Bill that relates to revenue or expenditure is a financial Bill.

A Money Bill is also a specific type of financial Bill, that must deal only with matters specified in Article 110 (1) (a) to (g).

Article 117 of the Constitution deals with the special provisions relating to financial Bills.

Financial bills are responsible for fiscal matters such as government spending or revenue.It specifies the amount of money to be spent by the government and the way it is to be spent.

The two prerequisites for any financial Bill to become a Money Bill are: **First,** it must only be introduced in the Lok Sabha and not the Rajya Sabha.**Secondly,** these bills can only be introduced on the President's recommendation.

What are the different types of Financial Bills?

Financial Bill I: Article 117 (1) indicates that a Bill that makes provision for any of the matters specified in clauses (a) to (f) of Article 110 (1) can be introduced or moved only on the President's recommendation and cannot be introduced in the Rajya Sabha.

– Examples of this first category of Financial Bills are Money Bills and other Financial Bills originating solely in the Lok Sabha.

Financial Bill II: Article 117 (3) of the Constitution deals with the second category of Financial Bill.

Such Bills are more like ordinary Bills. The difference between this kind of Financial Bill and an ordinary Bill is that if the former is enacted, it will involve expenditure from the Consolidated Fund of India and cannot be passed by either House unless the President has recommended its consideration.

In other respects, such Financial Bills are just like ordinary Bills and can even be introduced in the Rajya Sabha, amended by it, or be subjected to deliberation by both Houses in a joint sitting.

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What is a Money Bill?

Article 110 defines a "Money Bill" as one containing provisions dealing with taxes, regulation of the government's borrowing of money, and expenditure or receipt of money from the Consolidated Fund of India, among others.

Article 109 delineates the procedure for the passage of such a Bill and confers an overriding authority on the Lok Sabha in the passage of Money Bills.

The Speaker certifies a Bill as a Money Bill..

What is the key difference between a Financial Bill and a Money Bill?

The Financial Bill has the provision of including the Rajya Sabha's (Upper House) recommendations but the Money bill does not make their inclusion mandatory.

The Lok Sabha has the right to reject the Rajya Sabha's recommendations when it comes to Money Bills.

What are the Supreme Court's views on the Money Bill and Financial Bill?

Finance Act 2017: In 2019, a Constitution Bench struck down amendments to the 2017 Finance Act, which was passed as a Money Bill, altering the structure and functioning of various tribunals.

– However, the Supreme Court referred the matter of whether the 2017 Finance Act amendments could have been passed as a Money Bill to a seven-judge bench, indicating uncertainty about their classification.

– In this case, the court also expressed its doubts over the correctness of the Constitution Bench's 2018 verdict upholding the 2016 Aadhaar Act, which was passed as a Money Bill too.

66. Samudrayaan: Three-member team to explore depths of the ocean in first manned ocean mission

Source: The post is based on the article **"Samudrayaan: Three-member team to explore depths of the ocean in first manned ocean mission"** published i**n CNBC on 7th August 2023.**

What is the News?

Samudrayaan project is set to send three personnel to a depth of 6000 meters in the ocean in a submersible vehicle**.**

What is the Samudrayaan Mission?

Samudrayaan is India's first manned ocean mission. It is a part of the Deep Ocean Mission.

Objective: It is designed to study deep-sea resources and conduct biodiversity assessments.

Features: The mission aims to send 3 people to a depth of 6,000 meters in the sea in a manned submersible vehicle called **MATSYA 6000.**

– The submersible will allow scientific personnel to observe and understand unexplored deep sea areas by direct interventions. Further, it will enhance the capability for deep sea man rated vehicle development.

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Implementation: The National Institute of Ocean Technology (NIOT) in Chennai is designing and developing the Samudrayan project and it is likely to be ready by 2026.

Significance: The mission is significant as it will allow scientific personnel to observe and understand unexplored deep-sea areas through direct intervention.

— It also aligns with the Government of India's vision of 'New India', highlighting the Blue Economy as one of the ten core dimensions of growth.

67. PM to launch revamp of 508 railway stations at ₹24,470 crore

Source: The post is based on the article "**PM to launch revamp of 508 railway stations at ₹24,470 crore**" published in **The Hindu on 7th August 2023.**

What is the News?

The Prime Minister will lay the foundation stone for the redevelopment of 508 railway stations spread across the country.

These stations were part of the **Amrit Bharat Stations scheme** in which almost 1300 prime railway stations in the country will be redeveloped.

What is the Amrit Bharat Stations scheme?

Launched by: Ministry of Railways

Objective: To develop railway stations on a continuous basis with a long-term approach.

Key Features of the scheme: The scheme is based on preparing Master Planning for long term and implementation of the same as per needs and demand of the station to station.

– It aims to improve the amenities at the stations like improvement of station access, circulating areas, waiting halls, toils, lift/escalators necessary, cleanliness, free Wi-Fi, Kiosks for local products through schemes like 'One Station One Product', better passenger information systems among others.,

– The scheme also envisages improvement of building, integrating the station with both sides of the city, amenities for Divyangjans, sustainable and environment friendly solutions, provision of ballastless tracks, 'Roof Plazas' as per necessity, phasing and feasibility and creation of city centers at the station in the long term.

Railway Stations covered: Under the scheme, almost 1300 prime railway stations in the country will be redeveloped.

What are the other steps taken by the government of India in the Railways sector?

In the last 9 years more than 2200 km dedicated freight corridors have been constructed leading to a reduction in the travel time of the goods train. Now goods reach western ports from Delhi-NCR in 24 hours, a task that used to take 72 hours.

LED lights have been installed in about 70,000 coaches and the number of bio-toilets in trains has increased 28 times as compared to 2014.

By 2030, India will be a country whose railway network will run on net zero emissions.

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68. Centre to look into 'Havana Syndrome': What it means and the term's history

Source: The post is based on the article **"Centre to look into 'Havana Syndrome': What it means and the term's history"** published in **Indian Express on 8th August 2023.**

What is the News?

The Central government has told the Karnataka High Court that it will look into the matter of the 'Havana Syndrome' in India.

A petitioner had approached the court requesting a writ of mandamus for an enquiry on Syndrome in India and the prevention of high-frequency microwave transmission in India.

What is Havana Syndrome?

MEDICAL SYMPTOMS RESULT OF ESPIONAGE WARS?

WHAT IS HAVANA SYNDROME?

Havana syndrome is a set of medical signs and symptoms first reported in late 2016 by American and Canadian embassy staff in Havana, Cuba, and subsequently in other countries including the US, Austria, Germany, and now India

The apartments in Guangzhou where US diplomats developed the symptoms

WHAT DO US INTEL AGENCIES SAY?

The US intel services have not reached a consensus on a formal determination of the cause of the Havana syndrom though unnamed sources in intelligence and in two presidential administrations have expressed suspicions to the press that Russian militar intelligence is responsible

WHEN WAS IT FIRST DETECTED?

➤ In 2016, a number of Canadians and Americans living in Havana complained of **concussion-like symptoms, including headaches, dizziness, nausea and difficulty in concentrating.** Some described hearing buzzing or high-pitched sounds before falling sick

➤ In 2018, US diplomats in China reported problems similar to those reported

in Cuba, as did undercover CIA agents working in other countries with partner agencies on missions aimed at countering Russian covert operations

➤ Last month, US vice-president Kamala Harris was delayed for three hours as she was about to fly to Hanoi, Vietnam, after a US official in Vietnam reported Havana syndrome symptoms

Source: National Academy of Sciences & media reports

WHAT DO EXPERTS SAY?

While there is no expert consensus on the exact cause, a National Academies of Sciences Engineering, and Medicine expert committee concluded in December 2020 that microwave energy (especially directed radi frequency energy) 'appears to be the most plausible mechanism in explaining these cases among those that the committee considered' but that 'each possible cause remains speculative'. The Biden admin has started calling them 'unexplained health incidents (UHIs)'

Source: TOI

It refers to a set of mental health symptoms that are said to be experienced by United States intelligence and embassy officials in various countries.

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It typically involves symptoms such as hearing certain sounds without any outside noise, nausea, vertigo and headaches, memory loss and balance issues.

This syndrome was first experienced by US State Department personnel in Cuba's Havana in late 2016 and hence, the name Havana Syndrome.

What is the cause of Havana Syndrome?

The exact cause is uncertain, but it was initially suspected to be a deliberate act by Cuban authorities due to strained relations. It was initially called a "sonic attack.

However, later research suggested that the victims might have been exposed to powerful microwaves, which could damage the nervous system and create a sensation of sound. Prolonged exposure to such microwaves can affect balance, memory, and even cause permanent brain damage.

Despite extensive research, experiments, and medical examinations of victims, the US has not found concrete evidence to confirm the existence of the "microwave weapon" responsible for Syndrome.

What do we know about Havana Syndrome in India?

In India, the first case was reported in 2021 when a US intelligence officer traveling to New Delhi with a CIA director reported its symptoms.

69. Steps taken for sustainable groundwater management in the country

Source: The post is based on the article **'Steps taken for sustainable groundwater management in the country"** published in **PIB on 8th August 2023.**

What is the News?

Minister of State for Jal Shakti has informed Lok Sabha about the steps taken for sustainable groundwater management in the country.

Groundwater Level in the country:

The Central Ground Water Board(CGWB) periodically monitors groundwater levels throughout the Country on a regional scale, through a network of monitoring wells.

Analysis of water level data collected by CGWB during November 2022 in comparison with the decadal mean of November (2012-2021) has revealed that about 61.1% of the wells monitored have registered rise in ground water level whereas about 38.9 % wells have registered fall in water level.

Steps taken for sustainable groundwater management in the country:

National Aquifer Mapping and Management (NAQUIM) programme

The Master Plan for Artificial Recharge to Groundwater – 2020 has been prepared with respective State counterparts.The master plan includes artificial recharge in both rural and urban areas including water scarce cities.

Jal Shakti Abhiyan (JSA): It was launched in 2019 in water stressed blocks of 256 districts in the country with the primary aim to effectively harvest the monsoon rainfall through creation of

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artificial recharge structures, watershed management, recharge and reuse structures, intensive afforestation and awareness generation etc.

– Further, to emphasize the importance of sustainability of groundwater for drinking water supply schemes, Jal Shakti Abhiyan: Catch the Rain 2023 is targeting "Source sustainability for drinking water" for source strengthening/ sources stabilization of rural drinking water supply schemes.

Atal Bhujal Yojana: It was launched in collaboration with States in certain water stressed areas of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.

– The primary aim of the scheme is demand side management through scientific means involving the local communities at village levels leading to sustainable groundwater management in the targeted areas.

70. Meri LiFE, Mera Swachh Seher Campaign

Source: The post is based on the article **"Meri LiFE, Mera Swachh Seher Campaign "** published in **PIB on 8th August 2023.**

What is the News?

The Minister of State for Housing & Urban Affairs has informed Rajya Sabha about the 'Meri LiFE, Mera Swachh Shehar' campaign.

What is the Meri LiFE, Mera Swachh Shehar campaign?

Launched by: Ministry of Housing and Urban Affairs (MoHUA) in collaboration with the Ministry of Environment, Forest and Climate Change (MoEFCC).

Aim: To spread awareness regarding Mission LiFE and to nudge behaviour change of citizens to minimize waste generation, promote resource conservation and contribute to a cleaner and greener environment by adopting 'Reduce, Reuse, Recycle' (RRR) in their everyday life.

Features: The campaign focused on empowering Urban Local Bodies (ULBs) to set up 'Reduce, Reuse, Recycle' (RRR) Centres as a one-stop solution for citizens, institutions, commercial enterprises etc. to deposit unused or used plastic items, clothes, footwear, books and toys.

Duration of the campaign: The campaign was launched on 15th May 2023 for the period of 3 weeks till World Environment Day 2023 on 5th June, 2023.

– Note: The campaign is not a scheme.It is a public outreach and mass engagement campaign being implemented by ULBs under Swachh Bharat Mission – Urban (SBM-U) 2.0.No separate organizations have been formed by Government of India for this campaign.

71. Ministry of Tourism has formulated a National Strategy and Roadmap for Medical and Wellness Tourism to boost Medical Tourism

Source: The post is based on the article **"Ministry of Tourism has formulated a National Strategy and Roadmap for Medical and Wellness Tourism to boost Medical Tourism "** published in **PIB on 8th August 2023.**

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What is the News?

The Ministry of Tourism in order to boost Medical Tourism in the country has formulated a National Strategy and Roadmap for Medical and Wellness Tourism.

What is the National Strategy and Roadmap for Medical and Wellness Tourism?

Aim: To provide an institutional framework, strengthening the ecosystem for medical and wellness tourism, developing a brand and ensuring quality assurance.

Key Pillars: The Strategy has identified the following key pillars to promote India as a destination for medical value travel and wellness tourism.These are:

– Develop a brand for India as a wellness destination

– Strengthen the ecosystem for medical and wellness tourism

– Enable digitalization by setting up Online Medical Value Travel (MVT) Portal

– Enhancement of accessibility for Medical Value Travel

– Promoting Wellness Tourism

– Governance and Institutional Framework

What are the ongoing activities going on to promote Medical Tourism in India?

Firstly, the Ministry of Tourism releases global print, electronic and online media campaigns in important and potential markets overseas, under the 'Incredible India' brand-line, to promote various tourism destinations and products of the country.

– Digital promotions are also regularly undertaken on the theme of Medical Tourism.

Secondly, in the case of e-Medical Visa and for e-Medical Attendant Visa, triple entry is permitted and extension may be granted up to 6 months on case to case basis on merits of each case by the Foreigners Regional Registration Officers (FRRO)/Foreigners Registration Officer (FRO) concerned.

Thirdly, the Union Ministry of Health is coordinating with other Ministries and stakeholders viz. Hospitals, Medical Value Travel (MVT) facilitators, Insurance Companies, NABH etc to promote medical value travel in the country.

72. In Jaisalmer fossils, scientists find a new dinosaur species, name it after Thar desert

Source: The post is based on the article **"In Jaisalmer fossils, scientists find a new dinosaur species, name it after Thar desert"** published in **TOI n 8th August 2023.**

What is the News?

Scientists from IIT-Roorkee and Geological Survey of India(GSI) have discovered the oldest fossil remains of a dinosaur species in Jaisalmer.They have named it 'Tharosaurus indicus'.

What is Tharosaurus indicus?

Tharosaurus indicus is the name given to the fossil remains of a long-necked, plant-eating dicraeosaurid dinosaur found in Jaisalmer, Rajasthan.

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It has been named 'Tharosaurus indicus' as the first name refers to the 'Thar desert' where the fossils were found and the second after its country of origin.

Why is this finding significant?

First Time found in India: The dicraeosaurid dinosaurs have been found previously in North and South Americas, Africa and China. But such fossils were not known from India. This is the first time it has been discovered in India.

Oldest known diplodocoid dinosaur: The rocks in which the fossils of Tharosaurus indicus were found are dated to be around 167 million years old, which makes this new Indian sauropod not only the oldest known dicraeosaurid dinosaur but also globally the oldest diplodocoid (broader group which includes dicraeosaurids and other closely related sauropods).

Note: Theories so far had suggested that the oldest dicraeosaurid was from China (about 166-164 million years old).

73. Indian-made syrup found contaminated in Iraq, alerts WHO

Source: The post is based on the article **"Indian-made syrup found contaminated in Iraq, alerts WHO"** published in **The Hindu on 8th August 2023.**

What is the News?

The World Health Organisation has raised an alert against an India-manufactured contaminated syrup sold in Iraq.

What is the alert WHO has issued?

Paracetamol syrup Cold Out is manufactured by Chennai-headquartered Fourrts Laboratories.

This syrup was found to contain 0.25% diethylene glycol (DG) and 2.1% ethylene glycol (EG), the WHO alert said.

The acceptable limit for both contaminants in medical products is not more than 0.10 per cent.

WHO has issued an alert warning people against consuming the syrup as contaminants in these syrups are known to cause abdominal pain, vomiting, diarrhoea, headache, altered mental status, inability to pass urine, acute kidney injury and death.

Why is this a concern for India?

Atleast five of the syrups under scrutiny by WHO involves Indian manufacturers.

The contaminated India-made syrups have been linked to deaths of children in the Gambia, Uzbekistan and Cameroon. The most likely source of contaminants are solvents like propylene glycol, glycerine used for syrups.

There have also been reports of bacterial contaminants in eye drops and ointments from the United States and Sri Lanka.

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74. Indian Army Inducts Swathi Mk2 Radar For Mountain Surveillance

Source: The post is based on the article **"Indian Army Inducts Swathi Mk2 Radar For Mountain Surveillance"** published in **The Republic on 8th August 2023.**

What is the News?

Indian Army has inducted the lighter and more compact version of the indigenously developed Weapon Locating Radar(WLR-M) called "Swathi Mountains."

What is Swathi Mk2 Radar or Swati Mountains?

Swati Mountains is an indigenously developed Weapon Locating Radar(WLR).

It is an advanced electronically scanned phased array radar, specifically designed for operations in mountainous and high-altitude areas.

It was developed by Bharat Electronics Limited (BEL) in Bengaluru.

What is Weapon Locating Radar(WLR)?

The Weapon Locating Radar(WLR) is a crucial tool for modern armies.

It uses advanced signal processing techniques to autonomously detect and track hostile artillery, mortars, and rocket launchers.

It even tracks friendly fire trajectories, enabling precise calculations for more accurate artillery strikes.

The radar is impressive because it can spot small flying objects in different conditions and predict where they will land.

One of its strengths is that it can quickly move and set up, adapting to different needs.It can also scan different places without needing to move physically.

What are the different variants of Swati Radar?

The Swathi radar comes in two versions:

Swathi Plains version: It is primarily designed to locate hostile guns, mortars, and rockets, and it can also track the fall of shot from friendly weapons for corrective measures on flat terrains like Plains, as the name of the version suggests.

Swathi Mountains version: It is a compact and mobile radar designed for use in mountainous areas.It can detect mortar shells, rockets and other projectiles while ignoring false signals like birds or aircraft.It also predicts the trajectory and impact point of incoming objects, correcting for altitude to improve accuracy.The radar stores data and communicates with higher-level units for better coordination.

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75. Why no disaggregated data on tribal populations, asks House panel

Source: The post is based on the article **"Why no disaggregated data on tribal populations, asks House panel"** published in **The Hindu on 9th August 2023.**

What is the News?

A parliamentary committee on the empowerment of women has submitted a report on Health conditions of the Tribal population.

What did the Parliamentary committee said on the health conditions of Tribal Population?

In tribal areas, there's a growing occurrence of genetic issues like sickle cell disease and G6PD (Glucose-6-phosphate dehydrogenase deficiency) deficiency.

Around 1.5 crore tribal individuals were tested for sickle cell disease in specific districts, revealing that 10.5 lakh people are carriers of the condition, and about 50,000 have been diagnosed with the disease.

Over half of tribal women in their reproductive years suffer from anemia.

Hypertension is also quite common among tribals along with a higher rate of communicable diseases such as leprosy, tuberculosis, and cholera when compared to other social groups.

What are the concerns raised by the Parliamentary committee?

Parliamentary committee has pulled up the Union government for lacking detailed health data about tribal populations.

The committee found it puzzling how the Ministries could create effective policies or action plans for the health of tribal mothers and infants without accurate maternal mortality ratio data.

On this, the Tribal Affairs Ministry informed the committee that they were working on establishing a central database for monitoring tribal health and had partnered with a non-profit organization, Piramal Swasthya to gather data for 117 tribal districts.

What are the recommendations given by the Parliamentary committee on tribal health?

Firstly, the Ministry of Tribal Affairs should work with the Ministry of Health and Family Welfare to generate tribal health data with separate classifications like girl children, adolescent girls, women of various age groups and women senior citizens to help in evolving custom-made health interventions.'

Secondly, community influencer groups and tribal leaders must also be engaged to instill behavioral changes among the tribal community for better health and nutrition outcomes.

Thirdly, the government should complete the screening of all tribals for sickle cell disease in a time-bound manner so that the next generation of the tribal people are free from this disease.

Fourthly, make use of Pradhan Mantri Gram Sadak Yojana (PMGSY) in coordination with the Ministry of Rural Development for building all-weather roads in tribal areas so that the tribal population, including pregnant women, can access healthcare facilities in time.

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76. [More students using smartphones for entertainment than study: survey](#)

Source: The post is based on the article **"More students using smartphones for entertainment than study: survey"** published in **The Hindu on 9th August 2023.**

What is the News?

The Union Education Minister has released the State of Elementary Education in Rural India report.

What is the State of Elementary Education in Rural India Report?

The report is based on a survey conducted by the Development Intelligence Unit(DIU), a collaboration between Transform Rural India and Sambodhi Research and Communications.

The survey was conducted on 6,229 parents of schoolchildren aged six to 16 in rural communities across 21 States.

What are the key findings of the report?

Increased access to smartphones: Around 49.3% of students in rural India have access to smartphones.

– However, a significant portion, 76.7% of these students primarily use their phones for entertainment purposes, such as playing video games and watching movies.

– Only 34% of smartphone-accessible students use their devices for study-related downloads, while 18% access online learning through tutorials.

Higher Education: At least 78% of the parents of girls and 82% of the parents of boys wanted to educate their children to the level of graduation or above.

Reasons for dropout and out-of-school children: Among the parents of 56 students who dropped out of school, 36.8 percent mentioned that their daughters' dropout was due to the need to contribute to the family's earnings.

– For boys, the primary reason cited for dropping out was lack of interest in studies.

Learning environment at home: The survey revealed that 40% of parents have age-appropriate reading materials available at home, beyond school books. Additionally, only 40% of parents engage in daily conversations with their children about their school learning, while 32% have such discussions a few days a week.

Parental participation: A positive aspect observed was that 84% of parents regularly attend parent-teacher meetings, demonstrating their active involvement in their children's education.

77. [What is the Jan Vishwas Bill, 2023 proposed by Centre?](#)

Source: The post is based on the article **"What is the Jan Vishwas Bill, 2023 proposed by Centre?"** published in **The Hindu on 9th August 2023.**

What is the News?

The Jan Vishwas (Amendment of Provisions) Bill, 2023 has been passed in Parliament.

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What is Jan Vishwas (Amendment of Provisions) Bill, 2023?

Jan Vishwas (Amendment of Provisions) Bill, 2023 amends 42 laws, across multiple sectors, including agriculture, environment, and media and publication and health.

The Bill converts several fines to penalties, meaning that court prosecution is not necessary to administer punishments. It also removes imprisonment as a punishment for many offences.

The changes proposed to the **Drugs and Cosmetics Act,1940** have caused the most controversy. This act governs the import, production, distribution, and sale of drugs and cosmetics in the country.

Currently, the Act defines four types of offenses — adulterated drugs, spurious drugs, mislabeled drugs, and Not of Standard Quality drugs (NSQs) — each carrying varying degrees of punishment (combining imprisonment and fines) depending on the severity of the offense.

How is the Jan Vishwas (Amendment of Provisions) Bill detrimental to the public health sector?

The Bill has two main drawbacks for public health:

Firstly, it lets makers of substandard drugs (NSQ drugs) avoid serious penalties, even though these drugs can harm patients. For instance, drugs lacking proper active ingredients or failing to dissolve won't effectively treat the intended illness, leading to poor patient outcomes.

Secondly, the Bill also lowers penalties for pharmacy owners who breach their licensing terms.

What did the government said about the concerns raised against the bill?

In response to concerns about the Bill being seen as favoring industries, the Health Minister stated that India is the pharmacy of the world. It aims to provide high-quality medicines while also supporting business growth.

Hence, rationalizing laws, eliminating barriers and bolstering growth of businesses are important.

78. ISRO transfers satellite bus technology to private firm

Source: The post is based on the article **"ISRO transfers satellite bus technology to private firm"** published in **Economic Times on 5th August 2023.**

What is the News?

The Indian Space Research Organisation (ISRO) has begun transferring IMS-1 Satellite Bus technology to Alpha Design Technologies, a Bengaluru-based private company.

The transfer was facilitated by ISRO's commercial arm NewSpace India Limited (NSIL) through an agreement.

What is the IMS-1 satellite bus?

The IMS-1 satellite bus was developed by the UR Rao Satellite Centre.

Purpose: It is a small satellite platform designed to enable low-cost access to space.

– The bus can serve as a dedicated vehicle for many different payloads, facilitating Earth imaging, ocean and atmospheric studies, microwave remote sensing and space science missions.

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Features: The bus weighs about 100 kilograms and can carry a 30-kilogram payload. The solar arrays onboard generate 330 watts of power.

– It comes with four reaction wheels with a 1 Newton thruster that is good for pointing accuracy with an accuracy threshold of 0.1 Degrees.

Used in: The bus was used in previous ISRO missions like IMS-1, Youthsat and Microsat-2D.

79. [Trial done in India shows nutrition support prevents TB, related deaths](#)

Source: The post is based on the article **"Trial done in India shows nutrition support prevents TB, related deaths"** published in **The Hindu on 9th August 2023.**

What is the News?

A trial conducted in India highlights the importance of nutritional supplementation in significantly reducing the incidence of tuberculosis (TB) among household contacts of TB patients and lowering mortality rates in those diagnosed with active pulmonary TB.

What is the importance of nutrition in tuberculosis (TB)?

Undernutrition accounts for more than 40% of new TB cases annually surpassing other risk factors like diabetes, HIV infection, smoking and alcohol.

For example, research by the National Institute for Research in Tuberculosis (NIRT) demonstrated that TB patients weighing under 35 kg had four times higher mortality than those weighing over 45 kg.

What is the study conducted by researchers to highlight the importance of nutrition in tuberculosis (TB)?

The study was conducted on two groups: household contacts of TB patients and patients diagnosed with active pulmonary TB.

In a controlled trial with family members of TB patients, providing nutritional support resulted in a 39-48% decrease in TB cases compared to those without support.

The researchers also provided nutritional supplementation to 2,800 **individuals undergoing treatment for active pulmonary TB.**

– Treatment success rate was nearly 94% among TB patients, with only about 4% deaths during the six-month follow-up.

– Early weight gain in the first two months was linked to a 60% lower risk of TB-related mortality.

80. [Row over Select Committee for Delhi Services Bill: What is this body, did Raghav Chadha flout rules?](#)

Source: The post is based on the article **"Row over Select Committee for Delhi Services Bill: What is this body, did Raghav Chadha flout rules?"** published in **Indian Express on 9th August 2023.**

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What is the News?

At least four MPs have complained that their names had been included in a proposed Select Committee for the Delhi Services Bill without their consent. As a result, Rajya Sabha Deputy Chairman has announced a probe.

What is a Select Committee?

India's Parliament has several types of committees which discharge different functions.

There are 12 **Standing Committees** that are permanent in nature, with their members nominated from time to time by the Chairman.

Then there are **ad hoc or temporary committees** which are set up for a specific purpose, such as examining a particular Bill, and are dissolved once that purpose has been served.A **Select Committee** belongs to this category.

Procedure to be followed for a Select committee: A Select Committee is temporary in nature and it follows the procedure laid down in the Rules of Procedure.

– Under Rule 125 of the Rajya Sabha Rules and Procedures, any member may move an amendment that a Bill be referred to a Select Committee.

– This means that the motion to refer a Bill to a Select Committee can either be moved by the member in-charge of the Bill, or by any other MP.

How are Select committee members selected?

The members of the Select Committee on a Bill are appointed by the House when the motion that the Bill be referred to a Select Committee is made.

– No member is appointed to a Select Committee if he is not willing to serve on the Committee.

– The mover has to ascertain whether the member proposed by him is willing to serve on the Committee.

– The rules do say that a proposed member's consent has to be taken before he can serve on a Select Committee.

– However, they do not specifically mention collecting signatures of those whose names have been proposed.

What is the actual number of members in a Select Committee?

The actual number of membership of the Select Committee is not fixed; it varies from Committee to Committee.

– If it is a Joint Committee, the proportion of members from the Rajya Sabha and the Lok Sabha is 1:2.

– The Chairman of the Committee is appointed by the Chairman of the Rajya Sabha from among the members of the Committee.

– The member or Minister in-charge of the Bill is generally included as a member of the Committee.

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How does the Select committee work?

The quorum for each sitting needs to be one-third of the total number of members of the committee.

– In case of equality of votes on any matter, the chairman (or any other person presiding) will have a second or casting vote.

– A select committee may appoint a sub-committee to examine any special points connected with the Bill.

What are the functions of the Select Committee?

The main functions of a Select Committee are:

– Detailed Examination: The Committee carefully reviews the Bill, going through each part.

– Ensuring Clarity: It ensures that the Bill accurately represents the intended purpose and goals.

– Gathering Input: The Committee can request opinions from experts, individuals, and groups, either in writing or through discussions.

– Understanding Policy: It may ask Government officials to explain the Bill's intentions and provide necessary information.

– Formulating Conclusions: After hearing evidence, the Committee reaches conclusions and might make changes to the Bill's clauses.

What happens once a Select Committee's report is submitted?

The report of the committee is of a recommendatory nature. The government can choose to accept or reject its recommendations.

A Select Committee can also include its version of the Bill. If they do so, the minister in charge of that particular Bill can move for the committee's version of the Bill to be discussed and passed in the House.

81. National Dental Commission Bill, 2023 Passed by the Parliament to Elevate Dental Education and Healthcare Standards

Source: The post is based on the article **"National Dental Commission Bill, 2023 Passed by the Parliament to Elevate Dental Education and Healthcare Standards"** published in **PIB on 8th August 2023.**

What is the News?

The National Dental Commission Bill, 2023 has been passed by the Parliament. The bill seeks to repeal the Dentists Act, 1948,

What is the National Dental Commission Act, 2023?

The National Dental Commission Act envisions a complete overhaul of the dental education and profession landscape to bring it on par with international benchmarks.

Key features include:

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Constitution of National Dental Commission and State Dental Councils: The Act establishes the National Dental Commission and mandates the formation of State Dental Councils or Joint Dental Councils. This structure aims to decentralize authority and enhance effective regulation.

Three Autonomous Boards: The Act will empower three distinct Autonomous Boards: the Under-Graduate and Postgraduate Dental Education Board, the Dental Assessment and Rating Board (DARB), and the Ethics and Dental Registration Board (EDRB). These boards will carry out specific functions, contributing to a comprehensive regulatory framework.

Fixed Tenure and Professional Development: The Act will introduce a fixed tenure for the Chairperson, Members, and Secretary of the Commission, with no possibility of reappointment.

Online National Register and Dental Advisory Council: The Act will provide for maintaining an online and live National Register of licensed dentists and dental auxiliaries.

– Furthermore, it establishes a Dental Advisory Council with representation from all States/Union Territories to ensure comprehensive insights and guidance.

Collaborative Approaches: The Act will facilitate joint sittings with relevant statutory bodies, including the National Medical Commission, Pharmacy Council of India, Indian Nursing Council, National Commission for Indian System of Medicine among others.

Fee Regulation and Constitutions: The Act will empower the Commission to frame guidelines for fee determination for fifty percent of seats in private dental colleges and deemed Universities.

82. Unleashing Limitless Energy: US Scientists Repeat Nuclear Fusion Breakthrough

Source: The post is based on the article **"Unleashing Limitless Energy: US Scientists Repeat Nuclear Fusion Breakthrough"** published in **News18 on 7th August 2023.**

What is the News?

Scientists in the US have successfully conducted a second nuclear fusion reaction experiment that resulted in a net energy gain.

What is Nuclear Fusion?

Nuclear fusion is the process which gives the Sun its energy.

Scientists from more than 50 countries have been trying to recreate it on Earth since the 1960s.

They hope it could eventually provide huge quantities of clean energy for the world.

In nuclear fusion, pairs of tiny particles called atoms are heated and forced together to make one heavier one.

It is the opposite of nuclear fission, in which heavy atoms are split apart. Nuclear power stations currently use nuclear fission to generate electricity.

Why is nuclear fusion so important?

Nuclear fission produces radioactive waste, which can be dangerous and must be stored safely – potentially for hundreds of years.

The waste produced by nuclear fusion is less radioactive and decays much more quickly.

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Nuclear fusion doesn't need fossil fuels like oil or gas. It also doesn't generate greenhouse gases, which trap the Sun's heat and are responsible for climate change.

Most fusion experiments use hydrogen, which can be extracted cheaply from seawater and lithium, meaning fuel supplies could last for millions of years.

It has been described as the "**holy grail" of energy production.**

How does Nuclear Fusion work?

When two atoms of a light element such as hydrogen are heated and combine to form a single heavier element such as helium, the nuclear reaction produces massive amounts of energy which can be captured.

But getting two identical elements to combine is actually very hard.

Because they have the same positive charge they naturally repel each other. A lot of energy is needed to overcome this resistance.

In the Sun, this happens thanks to extremely high temperatures of around ten million degrees Celsius, and significant pressure – more than 100 billion times that of the Earth's atmosphere.

On Earth, scientists have used various different techniques to attempt to recreate these conditions. But it has proved very difficult to maintain the high temperature and pressure needed for long enough.

What have the scientists achieved now?

In 2022, scientists in the US first achieved a net energy gain in a fusion experiment using lasers. That experiment briefly achieved what's known as fusion ignition by generating 3.15 megajoules of energy output after the laser delivered 2.05 megajoules to the target.

In other words, it produced more energy from fusion than the laser energy used to drive it.

The scientists have successfully conducted this nuclear fusion reaction experiment for a second time that resulted in a net energy gain.

83. How a WTO provision became a tool for nations to curb imports

Source: The post is based on the article **"How a WTO provision became a tool for nations to curb imports"** published in **Business Standard on 9th August 2023.**

What is the News?

The Government of India has recently imposed restrictions on the import of laptops, tablets, and personal computers.

The new regulations mandate Companies to obtain licences from the Directorate General of Foreign Trade to import these items.

India has imposed these restrictions in accordance with the Agreement on Import Licensing Procedures under the World Trade Organization(WTO).

Note: In 2020 also, India had imposed restrictions on imports of pneumatic tyres used for cars, buses, lorries, scooters, and motorcycles,

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What is Agreement on Import Licensing Procedures?

The WTO Agreement on Import Licensing Procedures says import licensing should be simple, transparent and predictable so as not to become an obstacle to trade.

For example, the agreement requires governments to publish sufficient information for traders to know how and why the licences are granted.

It also describes how countries should notify the WTO when they introduce new import licensing procedures or change existing procedures.

What does the WTO reports say on Import Licensing?

As per Agreement on Import Licensing Procedures, all WTO members are required to notify their laws, rules and procedures on import licensing as well as changes to these regulations

But the WTO trade-monitoring reports have identified import licensing as one of the main trade-restricting measures introduced by governments with 13 WTO members not submitting any notification on this as of end-2022.

In 2022, the WTO members raised several new and recurring specific trade concerns regarding import curbs.

The European Union(EU) and the United States questioned Angola's import-licensing requirements, Egypt's import licensing for certain agricultural products and Indonesia's commodity-balancing mechanism.

During India's latest Trade Policy Review in 2020, South Korea complained the import a licensing requirement by India for pneumatic tyres was causing "serious damage" to some firms doing business in India.

84. Steps taken by Government of India to improve Women's Health

Source: The post is based on the article **"Steps taken by Government of India to improve Women's Health"** published in **PIB on 8th August 2023.**

What is the News?

The Union Minister of State for Health and Family Welfare has informed Lok Sabha about the steps taken to improve Women's Health.

What are the steps taken by the Government of India to improve women's health?

Comprehensive Primary Health Care(CPHC) through Ayushman Bharat- Health and Wellness Centres (HWCs): In 2018, the Government of India announced 1,50,000 Ayushman Bharat- Health and Wellness Centres (AB-HWCs) to be established across the country by December 2022.

– The existing Sub- Health Centres (SHC), Primary Health Centres (PHC) and Urban Primary Health Centres (UPHC) are transformed into AB-HWCs to deliver Comprehensive Primary Health Care (CPHC) that includes preventive, promotive, curative, palliative and rehabilitative services which are universal, free, and closer to the community.

National Free Drugs Initiative: States/UTs are supported to provide essential drugs based on the level of public health facilities free of cost to all who access these facilities.

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Surakshit Matritva Aashwasan (SUMAN)

Janani Suraksha Yojana (JSY): It is a demand promotion and conditional cash transfer scheme.It was launched in 2005 with the objective of reducing Maternal and Infant Mortality by promoting institutional delivery among pregnant women.

Janani Shishu Suraksha Karyakram (JSSK): It aims to eliminate out-of-pocket expenses for pregnant women and sick infants by entitling them to free delivery including caesarean section, free transport, diagnostics, medicines, other consumables, diet and blood in public health institutions.

Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA): It was launched in 2016.It provides pregnant women fixed day, free of cost assured and quality Antenatal Care on the 9th day of every month.

Pradhan Mantri Matru Vandana Yojana (PMMVY): It came into effect from 2017.It is a direct benefit transfer (DBT) scheme under which cash benefits are provided to pregnant women in their bank account directly to meet enhanced nutritional needs and partially compensate for wage loss.

Labour Room Quality Improvement Initiative (LaQshya): It was launched in 2017.It aims to improve the quality of care in labour room and maternity operation theatres to ensure that pregnant women receive respectful and quality care during delivery and immediate post-partum period.

85. Defence Ministry to switch to locally built OS Maya amid threats

Source: The post is based on the article **"Defence Ministry to switch to locally built OS Maya amid threats"** published in **The Hindu on 8th August 2023.**

What is the News?

The Defence Ministry has decided to replace the Microsoft Operating System (OS) in all computers connected to the Internet with the Maya Operating System(OS).

What is Maya Operating System(OS)?

Maya OS is a new operating system that is based on Ubuntu, a popular Linux distribution that uses free and open-source software.

Developed by: Ministry of Defence Ministry with the help of various government agencies, including the Defence Research and Development Organisation (DRDO), the Centre for Development of Advanced Computing (C-DAC), and the National Informatics Centre (NIC).

Advantages: One of the main advantages of Maya OS is that it has a similar interface and functionality as Windows, making it easy for users to adapt to it.

– It also has a feature called **Chakravyuh** which is an end-point anti-malware and antivirus software that creates a virtual layer between the user and the internet, blocking hackers from accessing sensitive data.

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What is Ubuntu?

Ubuntu is a popular Linux operating system known for its strong security. It's considered more secure than Windows because it has fewer vulnerabilities and malware issues.

Ubuntu is also distributed as free and open-source software, which means that anyone can inspect, modify, and improve its code. This allows Ubuntu to benefit from the collective efforts of thousands of developers and users who contribute to its development and security.

It also has built-in security features like a firewall, strict user permissions, and regular updates to guard against threats.

What is the significance of using Maya OS?

India's critical infrastructure has seen numerous cyberattacks and security breaches in recent years. Some of the most notable incidents include the cyberattack on Kudankulum Nuclear Power Plant (KKNPP) in 2019, the Mumbai Power Grid outage in 2020, the ransomware attacks on Oil India Limited and Spice Jet servers in 2022, and the Goa Flood Monitoring System hack.

Hence, using an indigenous operating system could not only be a promising step towards securing India's vital computer systems from malicious actors, but also reduce the country's reliance on foreign software and enhance its cyber resilience.

86. Story of the Assam Rifles, against whom Manipur Police have filed an FIR

Source: The post is based on the article "**Story of the Assam Rifles, against whom Manipur Police have filed an FIR**" published in **Indian Express on 10th August 2023.**

What is the News?

Manipur Police have registered a criminal case against the Assam Rifles for obstruction of duty and criminal intimidation.

The police have accused the personnel of the Assam Rifles of the arrogant act of giving a chance to the accused Kuki militants to escape freely to a safe zone.

What are Assam Rifles?

The Assam Rifles are a central armed police force. It is one of the six central armed police forces(CAPFs) under the administrative control of the Ministry of Home Affairs (MHA).

The other five forces are the Central Reserve Police Force (CRPF), Border Security Force (BSF), Indo-Tibetan Border Police (ITBP), Central Industrial Security Force (CISF) and Sashastra Seema Bal (SSB).

Role: Assam Rifles are tasked with maintaining law and order in the Northeast along with the Indian Army. It also guards the Indo-Myanmar border.

Historical Background: Assam Rifles is India's oldest paramilitary force. It was formed in 1835 as a militia called the 'Cachar Levy' to primarily protect British Tea estates and their settlements against tribal raids.

Contributions: Since its formation in 1835, Assam Rifles has gone on to fight in two World Wars, the Sino-Indian war of 1962.

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– The Post-Independence role of the Assam Rifles continued to evolve ranging from conventional combat role during Sino-India War 1962, operating in foreign land as part of the Indian Peace Keeping Force (IPKF) to Sri Lanka in 1987 (Op Pawan) to peacekeeping role in the North-Eastern areas of India.

– Hence, it remains the most awarded paramilitary force in both pre- and post-independent India.

Dual Control: Assam Rifles is the only paramilitary force with a dual control structure. While the administrative control of the force is with the Ministry of Home Affairs(MHA). But its operational control is with the Indian Army, which is under the Ministry of Defence (MoD).

– This means that salaries and infrastructure for the force is provided by the MHA, but the deployment, posting, transfers, and deputation of AR personnel is decided by the Army. All its senior ranks, from DG to IG and sector headquarters are manned by officers from the Army. The force is commanded by a Lieutenant General of the Indian Army.

Demand of Assam Rifles: A large section within the Assam Rifles wants to be under the administrative control of the MoD as that would mean perks and retirement benefits that are far better than those enjoyed by the CAPFs under MHA. However, Army personnel retire early — at age 35 — while the retirement age of CAPFs is 60 years.

87. How National Green Hydrogen Mission seeks to Reduce Cost of Green Hydrogen

Source: The post is based on the article **"How National Green Hydrogen Mission seeks to Reduce Cost of Green Hydrogen"** published in **PIB on 9th August 2023.**

What is the News?

The Union Minister for New & Renewable Energy has informed Lok Sabha about the steps taken to promote Green Hydrogen.

How is Green Hydrogen produced?

Green Hydrogen can be produced through electrolysis of water using renewable electricity, and from biomass through thermochemical and biochemical routes.

The costs of the electrolysers and input renewable energy are the two major components of Green Hydrogen production cost.

At present, there is very limited production of Hydrogen through renewable sources in the country.

Several entities have announced plans to set up production facilities for Green Hydrogen/Green Ammonia in India. However, these are still at a preliminary stage.

What is the National Green Hydrogen Mission?

Aim: To make India a Global Hub for production, usage and export of Green Hydrogen and its derivatives.

Components: The following components have been announced as part of the Mission:

– Facilitating demand creation through exports and domestic utilization;

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– Strategic Interventions for Green Hydrogen Transition (SIGHT) programme. The programme comprises two distinct financial incentive mechanisms to support domestic manufacturing of electrolysers and production of Green Hydrogen;

– Pilot Projects for green steel, mobility, shipping, decentralized energy applications, hydrogen production from biomass, hydrogen storage, etc.;

– Development of Green Hydrogen Hubs; Support for infrastructure development;

— Establishing a robust framework of regulations and standards; Research & Development programme; Skill development programme; and Public awareness and outreach programme.

What are the expected benefits of the National Green Hydrogen Mission?

Firstly, it is expected to lead to development of 5 MMT (Million Metric Tonne) Green Hydrogen production capacity per annum by 2030, contributing to reduction in dependence on import of fossil fuels.

Secondly, achievement of Mission targets is expected to reduce a cumulative ₹ 1 lakh crore worth of fossil fuel imports by 2030.This is likely to leverage over ₹8 lakh crore in total investments and create over 6 lakh jobs.

Thirdly, nearly 50 MMT per annum of CO2 emissions are expected to be averted through production and use of the targeted quantum of Green Hydrogen.

88. Coastal Aquaculture Authority (Amendment) Bill, 2023 clear by both Houses of Parliament of India

Source: The post is based on the article **"Coastal Aquaculture Authority (Amendment) Bill, 2023 cleared by both Houses of Parliament of India"** published in **PIB on 9th August 2023.**

What is the News?

The Coastal Aquaculture Authority (Amendment) Bill, 2023 has been passed by both Houses of the Parliament of India.

What is the Coastal Aquaculture Authority (Amendment) Bill,2023?

The Bill amends the Coastal Aquaculture Authority Act, 2005.

The bill seeks to expand the scope, remove regulatory gaps and reduce the compliance burden without diluting environmental protection rules in the coastal areas.

What are the key provisions of the bill?

Regulation of allied activities: The Act regulates coastal aquaculture farms. This includes culturing shrimp, prawn fish or other aquatic life in a controlled environment along coastal areas in saline or brackish water.

– The Bill allows regulation of allied activities such as nucleus breeding centres and hatcheries.

– **Note**: Nucleus breeding centres are those where fish/shrimp are cultivated at the larvae stage of their life cycle.

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Some Allied activities in protected areas: The Act prohibits coastal aquaculture in certain areas, such as 200 metres within the High Tide Line and in creeks/backwaters within the CRZ.

– The Bill amends this to allow some allied activities in protected areas. For instance: (i) activities like nucleus breeding centers will be permitted to operate in no development zones, and (ii) activities like seaweed culture will be permitted in creeks/backwaters within the CRZ.

Coastal Aquaculture Authority: Under the Act, functions of the Authority include: (i) regulating construction and operation of aquaculture farms, (ii) registering coastal aquaculture farms, and (iii) demolishing polluting farms.

– The Bill adds that the Authority shall: (i) fix standards for inputs and discharge of effluents from aquaculture units, (ii) prohibit the use of certain inputs to prevent harm to the environment, and (iii) monitor and regulate units, inputs, and emissions.

Penalties: The Act penalizes unregistered farms or farms in prohibited areas, with imprisonment up to three years and/or a fine of one lakh rupees.

– The Bill replaces this and specifies that if coastal aquaculture is carried out illegally: (i) the activity may be suspended, (ii) structure may be removed, (iii) crop may be destroyed, (iv) the registration may be canceled, and/or (v) a penalty may be imposed.

89. Scientists design first-ever 2D composite quantum material useful for spintronic devices like transistors & diodes

Source: The post is based on the article **"Scientists design first-ever 2D composite quantum material useful for spintronic devices like transistors & diodes"** published on **Department of Science and Technology's website.**

What is the News?

A group of scientists has used computer simulations to design a new type of quantum material. This material has a unique property called **Rashba splitting,** which is important for spintronic devices.

What is Spintronics?

Spintronics is one of the emerging fields for the next-generation nanoelectronic devices to reduce their power consumption and to increase their memory and processing capabilities.

Such devices take advantage of electron spin, a quantum property of electrons, to achieve higher performance.

Some of the examples of spintronic devices are spin transistors, spin diodes, and spin filters.

What have the researchers developed?

Researchers have created composite 2-D quantum materials showing two different quantum properties, **Rashba effect** (a momentum-dependent splitting of spin bands) and nonlinear **anomalous Hall effect** (arising from anomalous velocity of the electrons) in the same material.

The designed material could help overcome limitations in current spintronic devices and lead to better performance in areas like quantum computing and communication.

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90. Number of elephants in Karnataka goes up by 364 from last count, touches 6,395

Source: The post is based on the article **"Number of elephants in Karnataka goes up by 364 from last count, touches 6,395"** published in **The Hindu on 10th August 2023.**

What is the News?

Karnataka Minister of Forests has released an interim report on Asian Elephant Population and Demography Estimates, 2023.

The report has been prepared after a synchronized elephant census was conducted by the Forest Department in collaboration with neighboring Kerala, Tamil Nadu, Andhra Pradesh, Maharashtra and Goa.

What are the key findings of the Asian Elephant Population and Demography Estimates, 2023?

Number of elephants: The number of wild elephants in Karnataka has increased to 6,395 this year from 6,049 in 2017.

– In 2010, the projected number was 5,740.It stood at 6,072 in 2012 before the dip in 2017.

– However, out of the total 6,395 elephants estimated, around 161 were within private lands like coffee estates which pose conservation challenges.

Elephant density: Karnataka has an average elephant density of 0.34 per sq. km.

– Bandipur Tiger Reserve with 1,116 elephants accounted for the highest density of 0.96 per sq. km followed by Nagarahole Tiger Reserve that has 831 elephants with a density of 0.93.

91. House panel tells govt. to ensure fertilizer availability, increase local production

Source: The post is based on the article **"House panel tells govt. to ensure fertilizer availability, increase local production"** published in **The Hindu on 9th August 2023.**

What is the News?

The Standing Committee of Parliament on Chemicals and Fertilizers has posed questions on the availability of fertilizers and a subsidy policy.

What are the suggestions given by the Standing Committee of Parliament on Chemicals and Fertilizers?

Firstly, the committee has highlighted concerns about India's reliance on imported fertilizers like urea, DAP, MOP, NPK, and others.

– The production of these fertilizers was 281.83 lakh metric tonnes but the consumption was higher at 401.46 LMT resulting in a deficit of 119.63 LMT which is worrisome.

Secondly, the committee wants the Department of Fertilizers to investigate fertilizer shortages in some states and ensure availability across all states.

– They suggest reviewing the nutrient-based subsidy (NBS) policy that currently excludes urea. This means that urea remains under price control whereas technically there is no price control in other fertilisers, causing disincentives for other fertilizers.

Thirdly, the committee also pointed out the discrepancy in GST rates, with fertilizers at 5% and raw materials like sulphuric acid and ammonia at 18%.

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– They recommend lowering the GST on raw materials and including natural gas in the GST to avoid double taxation.

Fourthly, to counter international price fluctuations, the committee proposes purchase policy reforms and long-term import contracts for various fertilizers and raw materials.

92. Launch of Indian Web Browser Development Challenge (IWBDC)

Source: The post is based on the article **"Launch of Indian Web Browser Development Challenge (IWBDC)"** published in **PIB on 9th August 2023.**

What is the News?

The Ministry of Electronics & Information Technology (MeitY) has launched the Indian Web Browser Development Challenge (IWBDC).

What is the Indian Web Browser Development Challenge (IWBDC)?

IWBDC is an open challenge competition that seeks to inspire and empower technology enthusiasts, innovators, and developers from all corners of the country to create an indigenous web browser.

The competition offers cash prizes totaling ₹3.4 crore to developers who create an indigenous web browser.

However, there is a condition that the browser ideas must trust the Indian government's Controller of Certifying Authorities (CCA), which handles digital signatures and SSL certificates.

What are SSL Certificates?

SSL certificates are used to encrypt websites and to make sure that browsers know that a website is not being modified or impersonated by attackers.

Browsers trust these certificates if they are issued by a certifying authority that is in turn trusted by a 'root certifying authority'.

India does not have a root certifying authority trusted by major browsers such as Google Chrome, Mozilla Firefox and Microsoft Edge.

This has led to a situation where the government operates a root certifying authority that is legally valid under Indian law — the Root Certifying Authority of India, set up in 2000 under the CCA — but the certificates issued under its purview are largely not recognised by Web browsers.

Due to this, Indian government and private websites need to purchase SSL certificates from foreign certifying authorities.

93. Plight of the vaquita forces International Whaling Commission to issue first extinction alert

Source: The post is based on the article **"Plight of the vaquita forces International Whaling Commission to issue first extinction alert"** published in **Down to Earth on 7th August 2023.**

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What is the News?

The International Whaling Commission(IWC) has issued its first 'extinction alert' on the **Vaquita Porpoise.**

What is Vaquita Porpoise?

Vaquita Porpoise is the world's smallest cetacean. It is also known as the **"panda of the sea"** for the distinctive black circles around its eyes, along with a proportionally large dorsal fin.

The vaquita is unique among the porpoises as it is the **only species of that family found in warm waters.**

A **dark ring around the eyes i**s its most striking feature, along with a proportionally large dorsal fin.

Found in: It is only found in the northern-most part of the Gulf of California, Mexico.

IUCN Status: Critically Endangered

CITES: Appendix I

Declining population: The vaquita population has been declining continuously for decades due to bycatch in gillnet set to catch shrimp and fish including totoaba.

– Its numbers have fallen from a population of approximately 570 in 1997 to around 10 animals in 2018.

What are Porpoises?

Porpoises are among the smallest members of the cetacean family (whales, porpoises and dolphins).

They are only distant relatives of dolphins (they last had a common ancestor roughly 15 million years ago).There are only seven species of porpoise; the most popular being the widely distributed harbour porpoise.

94. Centre's new Bill on Election Commission members' appointments: How it plans to amend the process

Source: The post is based on the article **"Centre's new Bill on Election Commission members' appointments: How it plans to amend the process"** published in **Indian Express on 11th August 2023.**

What is the News?

The Union Government has introduced the Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023 in Rajya Sabha.

The bill has been brought in after the judgment of the Constitution Bench of the Supreme Court on the appointment of Election Commissioners.

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What is the Supreme Court verdict on the appointment of Election Commissioners?

The constitution bench of the Supreme Court had ruled that election commissioners should be appointed by the President based on advice from a committee comprising the prime minister, the leader of opposition in the Lok Sabha and the chief justice of India (CJI).

The court said that since there is no parliamentary law in place to lay down the selection procedure for election commissioners, its order was meant to fill this constitutional vacuum.

Click Here to read more

What is the process mentioned in the bill for the appointment of Election Commissioners?

Currently, the Law Minister suggests a pool of suitable candidates to the Prime Minister for consideration. The President makes the appointment on the advice of the PM.

As per the Bill, a Search Committee headed by the Cabinet Secretary and comprising two other members not below the rank of Secretary to the government having knowledge and experience in matters relating to elections shall prepare a panel of five persons who can be considered for appointment.

Then the Selection Committee consisting of the Prime Minister, the Leader of Opposition (LoP) in the Lok Sabha, and a Union Cabinet Minister to be nominated by the Prime Minister will appoint the CEC and other ECs.

In case there is no LoP in the Lower House of Parliament, the leader of the single largest Opposition party would be considered the LoP.

What are the criticisms raised by opposition against this bill?

Firstly, this Bill will override the Supreme Court Constitution Bench's judgment regarding the appointment of the CEC and other Election Commissioners.

Secondly, this will put a question mark on the neutrality of the Election Commission (EC) as the selection panel would effectively have two members of the ruling party – the Prime Minister and the Cabinet Minister.

Can the Parliament undo the decision of the Supreme Court?

Parliament has the power to nullify the effect of a Court ruling by addressing the concerns flagged in the judgment. The law cannot simply be contradictory to the ruling.

In this case, the arrangement prescribed by the Supreme Court was specifically because the Court noted that there was a "legislative vacuum".Filling that vacuum is well within the purview of the Parliament.

However, the idea of an independent body that conducts elections permeates through the judgment. The Court repeatedly stated that to be the objective of the framers of the Constitution.

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95. House panel wants judges to mandatorily declare asset

Source: The post is based on the article **"House panel wants judges to mandatorily declare assets"** published in **Hindustan Times on 9th August 2023.**

What is the News?

The Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice has submitted in the Parliament a report titled "Judicial Processes and their reform".

What are the recommendations given in the Judicial Processes and their reform report?

Declaration of assets: In 2009, the full bench of the Supreme Court (comprising all judges) had decided to declare their assets on a voluntary basis on the Supreme Court's website. Till date, it contains data with respect to 55 former Chief Justices of India and judges of the Supreme Court. The data was last updated on March 31, 2018.

– As regards high courts, only five high courts share data of assets on their website and that too by only a few judges.

– Hence, that's why the committee has recommended the center to bring in a law making it compulsory for judges of the Supreme Court and high courts to declare their assets on an annual basis.

– Declaration of assets by the judges of the higher judiciary will bring "more trust and credibility" into the system.

Do away with Long vacations of courts: The committee has recommended doing away with long Court vacations.

– The Committee felt that vacations in the judiciary are a 'colonial legacy' that causes inconvenience to litigants.

Social diversity in courts: The Committee has also stressed on social diversity among judges of the higher judiciary. It recommended an adequate number of women and candidates from the marginalized sections of the society including minorities to be considered for appointment to high courts and Supreme Court by the respective Collegiums in the high court and Supreme Court.

– This provision should be clearly mentioned in the Memorandum of Procedure (MoP), which is presently under finalization.

Increase retirement age: The Constitution of India can be amended to increase the retirement age of judges of high court (presently 62) and Supreme Court (presently 65) .

Regional benches: The committee has recommended setting up regional Supreme Court benches. The interpretation of Constitution and Constitutional matters may be dealt at Delhi and the regional benches may decide appellate matters. However, the appellate benches may not be made as another layer of the judiciary by treating their decisions as final.

Annual reports: Currently, the Supreme Court is publishing its Annual Report also depicting the work done by all High Courts of the Country. But only few High Courts are publishing their Annual Report.

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– The Committee recommends the Department of Justice to approach the Supreme Court of India requesting them to issue necessary directions to all the High Courts to prepare and publish their Annual Reports regularly, on their respective websites.

96. Flood Management Measures

Source: The post is based on the article **"Flood Management Measures"** published in **PIB on 10th August 2023.**

What is the News?

Minister of State for Jal Shakti in Lok Sabha has informed about the Flood Management measures taken by the government of India.

What are measures taken by the government of India to manage floods?

Jurisdiction over flood management: Flood management including erosion control falls within the purview of the States. Flood management and anti-erosion projects are formulated and implemented by concerned State Governments from their own resources as per their priority.

– The Union Government supplements the efforts of the States by providing technical guidance and also promotional financial assistance for management of floods in critical areas.

Structural measures of flood management: The Ministry of Jal Shakti introduced the Flood Management Programme (FMP) during the XI and XII Plans. This program aimed to provide financial support to states for various flood management, erosion control, drainage development, and anti-sea erosion projects.

This program later became part of the "Flood Management and Border Areas Programme" (FMBAP) from 2017-18 to 2020-21, extended until September 2022 with a limited budget.

Non Structural measures of flood management: The Central Water Commission (CWC) is responsible for predicting and giving early warnings about floods in India. They use a system of 338 forecasting stations across 20 major river basins in 23 States and 2 Union Territories. This helps local authorities prepare for evacuations and take necessary actions.

– To improve the time available for planning, CWC has created flood forecasting models for each basin. These models use rainfall and runoff data to predict floods up to 5 days in advance and provide advice to the forecasting stations.

Committee to create strategy for Flood management: NITI Aayog has formed a committee under the chairmanship of Vice Chairman, NITI Aayog and members from various government departments, experts and state officials to create strategies for flood management and river activities in border areas.

The committee's key recommendations from their January 2021 report, include:

– Improve collection of hydro-meteorological data and simplify sharing policies, especially for rivers crossing borders between states.

– Focus on scientific research to develop models that predict flash floods earlier, reducing their impact.

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– Develop and update reservoir operation rules based on changing rainfall patterns and growing population, urbanization, and industry.

– Construct large storage reservoirs to control floods by managing water release schedules.

– Prevent encroachment on natural flood areas and restore them for flood control.

– Implement river interlinking projects to divert flood waters to water-deficient regions within a set timeframe.

– Stop reclaiming existing wetlands or natural depressions and create plans to use them for flood moderation instead.

97. Belem Declaration: Amazon countries fail to agree on protection goals

Source: The post is based on the article **"Belem Declaration: Amazon countries fail to agree on protection goals"** published in **Down To Earth on 9th August 2023.**

What is the News?

At the Amazon Summit, leaders from the eight countries across the Amazon have adopted the **Belem Declaration.**

The summit was organized by the Amazon Cooperation Treaty Organization (ACTO).

What is the Amazon Cooperation Treaty Organization(ACTO)?

Amazon Cooperation Treaty Organization(ACTO) is an intergovernmental organization signed in 1978 and created in 1995.

Aim: To promote the harmonious development of the Amazonian territories in such a way that the joint actions of the Amazonian countries produce equitable and mutually beneficial results in achieving the sustainable development of the Amazon Region

Member countries: Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela.

Secretariat: Brasilia, Brazil

What is the Belem Declaration?

The Balem Declaration was adopted at the Amazon Summit.

The declaration recognises Indigenous knowledge as a condition for biodiversity conservation and calls for ensuring full and effective participation of Indigenous Peoples in decision-making and public policy formulation processes.

The declaration created an alliance for combatting forest destruction, with countries left to pursue their individual deforestation goals.

It also created a science body for annual reports on Amazon rainforest like the UN's Climate Change Panel.

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98. CBI Academy joins Interpol Global Academy Network

Source: The post is based on the article **"CBI Academy joins Interpol Global Academy Network"** published in **The Hindu on 9th August 2023.**

What is the News?

The Central Bureau of Investigation (CBI) Academy has joined the Interpol Global Academy Network.

What is the Interpol Global Academy Network?

INTERPOL Global Academy Network was launched in 2019 by INTERPOL.

Aim: It is a network of trusted law enforcement national or regional education institutions providing a global approach to law enforcement training.

The members of the network help INTERPOL by providing specialized training, ongoing education, creating new programs and collaborating on research. This boosts skill development for law enforcement globally.

What is CBI Academy?

The CBI Academy was established in 1996 by CBI.

It is a premier training institution in the fields of crime investigation, prosecution and vigilance functioning.

CBI which is the nodal body for all matters related to Interpol also conducts several international training programmes through this academy.

Located in: Ghaziabad, Uttar Pradesh.

– It has also established three Regional Training Centres (RTCs) at Kolkata, Chennai, and Mumbai to expand its training infrastructure and outreach.

99. Will the Federal fund hike impact developing country debt?

Source: The post is based on the article **"Will the Federal fund hike impact developing country debt?"** published in **The Hindu on 11th August 2023.**

What is the News?

The US Federal Reserve has raised the targeted federal funds rate to 5.25-5.5%, a 25 basis points increase. This puts the rate at a 21-year high, surpassing the levels seen in 2001.

What is the Federal Funds Rate?

The Federal Funds Rate plays a crucial role in the economy as it determines lending rates among banks.

Following the global financial crisis, rates were near zero until 2015. However, since March 2022, there has been a steady increase in the rate, leading to concerns about the world economy's ability to withstand such a sharp rise.

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Why is the US Fed increasing interest rates?

Globally economies are in a recession due to high inflationary pressure. To combat this, the Fed, which is the central bank of the US, is taking aggressive steps such as an increase in interest rates (something which was not seen since the 1990s) to reduce the money supply flow in the economy.

How does Federal Funds Rate impact India?

Impact on Foreign capital: US Federal Funds rate strongly influences the foreign capital inflow in India.

When the Fed raises rates, foreign investors pull money away from emerging markets as higher rates give a boost to the dollar which erodes the shine of riskier equities.

Impact on rupee: FPIs pulling money out of the equity and bond markets could weaken the rupee even as the dollar gets stronger with the rate hike.

Highest Cost of Fund Mobilization from Overseas Markets: The rise in rates also means a higher cost of funds, and fund mobilization in overseas markets will be costly. The increase in the cost of funds may not only increase the cost of capital expenditure for India but will also strain the profit margins of companies.

Impact on Inflation: India's inflation rate may accelerate as a result of the Fed rate hike. Depreciation of the rupee will increase the rupee cost of imported goods such as crude oil, chemicals and fertilizers, active pharmaceutical ingredients and electronics.

100. Malabar 2023 naval exercise to begin in Sydney, Australia

Source: The post is based on the article **"Malabar 2023 naval exercise to begin in Sydney, Australia"** published in **PIB on 10th August 2023.**

What is the News?

Malabar 2023 Naval exercise will begin at Sydney in Australia.

What is Malabar Exercise?

Exercise Malabar began in 1992 as a bilateral exercise featuring the maritime forces of the US and India.

In 2014, the en-try of the Japan Navy made it a trilateral exercise. In 2020, the Royal Australian Navy (RAN) also joined Malabar making it a quadrilateral exercise.

This year marks the 27th edition of MALABAR which is being hosted by Royal Australian Navy (RAN).

Malabar 2023 will happen in two phases: Harbour Phase and Sea Phase. During the Harbour Phase, there will be activities like visits, exchanges, and sports. The Sea Phase involves intense exercises covering warfare areas like surface, air, and submarine combat.

Significance of the exercise: The exercise provides an opportunity to the Indian Navy to enhance and demonstrate interoperability and also gain from the best practices in maritime security operations from its partner nations.

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Which Indian ships are participating in the exercise?

Indian Navy's indigenous frontline warships INS Sahyadri and INS Kolkata will participate in the exercise.

INS Sahyadri is the third ship of the indigenously designed and built Project-17 class multi-role stealth frigates.

INS Kolkata is the first ship of the indigenously designed and built Project-15A class destroyers.

Both ships have been built at Mazagon Dock Ltd, Mumbai.

101. New Soil Health Card Scheme

Source: The post is based on the article "**New Soil Health Card Scheme**" published in **PIB on 11th August 2023.**

What is the News?

The Union Minister of Agriculture and Farmers' Welfare has informed Lok Sabha about the Soil Health Cards (SHCs) Scheme.

What is a Soil Health Cards (SHCs) Scheme?

The Soil Health Cards (SHCs) Scheme was initiated in the fiscal year 2014-15 by the Ministry of Agriculture and Farmers Welfare.

Aim: To aid State Governments in distributing soil health cards to all farmers across the nation.

– These cards furnish farmers with information about their soil's nutrient composition, along with recommendations for applying the appropriate amount of nutrients to enhance soil health and fertility.

Features: Soil Health Card provides two sets of fertilizer recommendations for six crops including recommendations of organic manures.

– Farmers can also get recommendations for additional crops on demand. They can also print the card as their own from the SHC portal. SHC portal has a farmers database of both the cycles and is available in 21 languages for the benefit of the farmers.

What are the new changes made to the Soil Health Card Scheme?

Firstly, the scheme has been merged in Rashtriya Krishi Vikas Yojana (RKVY) cafeteria scheme as its one component under name 'Soil Health & Fertility' from the year 2022-23.

Secondly, the government has made some technological interventions in the Soil Health Card Scheme. The Soil Health Card portal has been revamped and integrated with a Geographic Information System (GIS) system so that all the test results are captured and seen on a map.

What is the significance of the Soil Health card scheme?

National Productivity Council (NPC) carried out a study on 'Soil Testing Infrastructure for Faster Delivery of Soil Health Card in India' in 2017. The study was conducted in 76 districts in 19 States. It was found that: –

– Application of fertilizer and micronutrients based on Soil Health Card (SHC) recommendations resulted in 8-10 % of savings.

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– Overall increase in the yield of crops to the tune of 5-6% reported by adopting the SHC recommendations.

102. Steps taken for Promotion of Generic Medicines

Source: The post is based on the article **"Steps taken for Promotion of Generic Medicines"** published in **PIB on 11th August 2023.**

What is the News?

The Union Minister of State for Health and Family Welfare has informed Lok Sabha about the steps taken by the Government for the promotion of Generic Medicines.

What are the steps taken by the government to promote Generic Medicines?

Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP): It is a program implemented by the Pharmaceuticals & Medical Devices Bureau of India (PMBI), which operates under the Department of Pharmaceuticals.

– The program aims to provide affordable and high-quality generic medicines to the public.

– It has established around 9,512 dedicated outlets called Pradhan Mantri Bhartiya Janaushadhi Kendras (PMBJKs).These centers offer quality generic medicines at affordable prices. Prices of medicines sold through these outlets are 50-90% less than that of branded medicine prices in the open market.

Janaushadhi Sugam: It is a mobile application that provides information to the public about the location of kendras, helps them search Janaushadhi medicines and compare the maximum retail price of Generic vs. Branded medicines, etc.

Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002: It prescribes that every physician should prescribe drugs with generic names legibly and preferably in capital letters.

Directorate General of Health Services has directed all Central Government hospitals to prescribe generic medicines only. Similar instructions also have been issued to 'prescribe drugs with generic name legibly' to all CGHS Doctors and Wellness Centres.

Under the free drug initiative of National Health Mission (NHM), support is provided for provision of essential generic drugs free of cost in public health facilities.

In order to ensure quality of the products, the Pharmaceuticals & Medical Devices Bureau of India (PMBI) procures medicines only from World Health Organization – Good Manufacturing Practices (WHO-GMP) certified suppliers.

– Apart from this, each batch of drug is tested at laboratories accredited by 'National Accreditation Board for Testing and Calibration Laboratories (NABL).Only after passing the quality tests, the medicines are dispatched to PMBJP Kendras.

The Ministry of Health & Family Welfare and the Central Drugs Standard Control Organization (CDSCO) have taken steps to ensure the quality of generic medicines:

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– To make sure medicines work effectively, the Drugs and Cosmetics Rules, 1945 were changed. Now, when applying for a license to make oral drugs, the applicant must include results from a bioequivalence study.

– The Principal/Health Secretaries of all States/UTs were directed to ensure that licenses for manufacturing drugs are granted or renewed using proper/generic names.

103.   Powerful sun storm knocks out radio transmissions across North America

Source: The post is based on the article **"Powerful sun storm knocks out radio transmissions across North America"** published on **Space.com on 8th August 2023.**

What is the News?

A powerful solar flare disrupted radio and navigation signals across North America.

What are Solar Flares?

Solar flares are energetic flashes of radiation that explode from magnetically dense, cool regions on the sun's surface known as sunspots.

Traveling at the speed of light, the photons from these flares arrive at our planet in eight minutes.

As the radiation from the flares interacts with particles in Earth's ionosphere, the region of the atmosphere at altitudes between 50 and 400 miles (80 and 650 kilometers), it supercharges them. These changes then affect radio and satellite signals that pass through this region.

What are Geomagnetic Storms?

A geomagnetic storm refers to the disruptions to the Earth's magnetic field caused by solar emissions.

When a Coronal Mass Ejection (CME) or a high-speed solar stream reaches our planet, it slams into the magnetosphere. The Earth's magnetosphere is created by our magnetic fields and it usually protects us from the particles emitted by the Sun.

When a CME or a high-speed stream arrives at Earth, it peels open the planet's magnetosphere, kind of like an onion. This allows energetic solar wind particles to stream down and hit our atmosphere over the poles.

Solar weather events like this can also supercharge auroras, sometimes making them visible in places where they wouldn't have been otherwise.

104.   Kerala govt to launch 'Athidhi Portal' on Monday for registration of migrant workers

Source: The post is based on the article **"Kerala govt to launch 'Athidhi Portal' on Monday for registration of migrant workers"** published in **Economic Times on 7th August 2023.**

What is the News?

Kerala Government will be launching the Athidhi Portal.

What is Athidhi Portal?

Launched by: Kerala Government

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Purpose: It is a user-friendly web portal to expedite the registration for migrant workers in Kerala.

Key Features: Contractors, who bring migrant workers to the state and employers can register the workers in the portal. It also allows workers to register themselves individually as well.

– The enrolling officer will examine the details entered in the portal and issue a unique ID to each worker.

– The portal will also ensure that they have social security,

Significance of the portal: The portal has been launched in the wake of two recent sexual crimes against children, which were allegedly carried out by migrant workers.

105. Centre to overhaul British-era IPC, CrPC, Evidence Act

Source: The post is based on the article "**Centre to overhaul British-era IPC, CrPC, Evidence Act**" published in **The Hindu on 11th August 2023.**

What is the News?

The Union Home Minister has introduced three Bills in the Lok Sabha to repeal the British-era Indian Penal Code, the Indian Evidence Act and the Code of Criminal Procedure.

Background:

The Ministry of Home Affairs in 2020 had constituted a committee to review the three codes of criminal law. It was headed by Prof. (Dr.) Ranbir Singh, former Vice Chancellor of National Law University (NLU), Delhi.

The mandate of the committee was to 'recommend reforms in the criminal laws of the country in a principled, effective and efficient manner.

What are the three bills introduced to repeal the IPC, CrPC, Evidence Act?

Bhartiya Nagrik Suraksha Sanhita Bill 2023 will replace Code of Criminal Procedure(CRPC), 1898

Bhartiya Nyay Sanhita Bill 2023 will replace the Indian Penal Code(IPC),1860

Bhartiya Sakshya Bill 2023 will replace the Evidence Act 1872

These bills have been brought to provide speedy justice and create a legal system that keeps contemporary needs and aspirations of the people.

What are the key provisions of these bills?

– Separate provision for Mob Lynching, punishable with 7 years or life imprisonment or death penalty;

– Formal provision for 'Zero FIR'- this will enable citizens to lodge a FIR with any police station, no matter their jurisdiction;

– 'Deemed Sanction' to prosecute civil servants, police officer accused of criminal offences in case of authority's failure to respond within 120 days days of application;

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– Digitization of complete process starting from registration of FIR to maintenance of Case Diary to filing of Charge sheet and delivery of Judgment;

– -Separate provisions penalizing rape of woman under false pretext of marriage, job, etc.

– Complete trial, including Cross-examination, appeal, to be facilitated via Video conferencing;

– Videography while recording statement of victims of sexual crimes mandatory;

– Punishment for all types of Gang Rape- 20 yrs or life imprisonment;

– Charge sheet to be mandatorily filed within 90 days of FIR.Court may extend such time by further 90 days, taking the total maximum period for winding up investigation to 180 days;

– Courts to finish framing of charges within 60 days of receiving charge sheet;

– Judgment to be mandatorily delivered within 30 days after conclusion of hearing.

What will happen now to these bills?

The bills have now been referred to a Parliamentary Standing Committee. The committee will discuss the bills, clause by clause.

After it has sufficiently deliberated on the Bills, the Committee will deliver a comprehensive report to the government and provide recommendations. These recommendations are not binding on the government.

After the committee sends in its recommendation, the government will decide whether to incorporate them, and which specific recommendations to incorporate.

If there are not many recommendations to be incorporated, the government simply introduces changes to original bills through amendments. After the bills, in their final form, are back in the Lok Sabha, they will be up for debate and passed in both the houses.

106.   Chinese military ship docks at Colombo Port for a 'formal' visit

Source: The post is based on the article **"Chinese military ship docks at Colombo Port for a 'formal' visit"** published in **The Hindu on 12th August 2023.**

What is the News?

A Chinese warship, the Hai Yang 24 Hao, has arrived in Sri Lanka and will be docked at the Colombo Port.

This visit comes after India-Sri Lanka ties had witnessed tensions in the wake of the Chinese warship's visit to Hambantota Port in 2022. India and the U.S had voiced concern over the ship's visit.

Why is India concerned with the Chinese Ship in Sri Lanka?

Firstly, Chinese Ship in Sri Lanka means that several ports in Kerala, Tamil Nadu, and Andhra Pradesh could be on China's radar. Reports have claimed that several vital installations in South India could be under threat of being snooped upon.

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Secondly, Chinese ship in the Colombo Port fits right into China's 'string of pearls' strategy to surround India in the Indian Ocean through increasing land and maritime footprint.

What has been China's response to India's concerns?

China had reacted strongly following concerns voiced by India. It has said that

Firstly, Sri Lanka is a transportation hub in the Indian Ocean. Scientific research vessels from various countries including China have made port calls in Sri Lanka for replenishment.

Second, Sri Lanka is a sovereign country. It has the right to develop relations with other countries based on its development interests. To have normal cooperation is the independent choice made by our two countries. It serves the shared interests of both sides and does not target any third party.

107.   GI tag to Mushkbudji will transform farmers of Sagam into entrepreneurs

Source: The post is based on the article **"GI tag to Mushkbudji will transform farmers of Sagam into entrepreneurs"** published in **Greater Kashmir on 12th August 2023.**

What is the News?

Mushkbudji Rice received the Geographical Indication (GI) tag.

What is Mushkbudji Rice?

Mushkbudji Rice is short, bold aromatic rice grown in the higher reaches of Kashmir valley.

The cooked rice is unique and possesses a harmonious blend of taste, aroma and rich organoleptic properties.

The consumption of aromatic rice in Kashmir has now been limited to special occasions, marriages, and festivals.

In 2007, the government announced a revival program of the Mushkbudji rice variety in Sagam village of Kokernag. This precious and aromatic variety had fallen out of cultivation in the 1970s due to blast disease.

108.   Lok Sabha suspends Congress's Adhir Ranjan Chowdhury: How Privileges Committee works

Source: The post is based on the article **"Lok Sabha suspends Congress's Adhir Ranjan Chowdhury: How Privileges Committee works"** published in **Indian Express on 13th August 2023.**

What is the News?

Lok Sabha has moved a motion to refer the gross, deliberate and repeated misconduct of an MP to the Privileges Committee for further examination.

What are Parliamentary Privileges?

Parliament and its Members (MPs) have certain rights and immunities that enable them to function effectively in their legislative roles. These are called parliamentary privileges.

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When the Constitution was enacted, it provided that the Parliamentary privileges would be defined by a law made by our Parliament. Until that law is made, the rights would be the same as those of the House of Commons in the UK.

In 1978, our Parliament removed the reference to the UK's House of Commons by a constitutional amendment. But, so far, our Parliament hasn't made a law to specify parliamentary privileges.

Therefore, currently parliamentary privileges are a mix of provisions in the Constitution, statutes, House procedures and conventions.

For example, the Constitution specifies that MPs have freedom of speech and immunity from judicial proceedings against anything they say or votes they cast in Parliament.

The Code of Civil Procedure also protects MPs from arrest and detention under civil cases during a parliamentary session, and for a specified period before it begins and after it ends.

How does Parliament act on breach of privilege?

Each House of Parliament is the guardian of its privileges. Lok Sabha and Rajya Sabha have the authority to take suitable action against anyone who breaches the privileges of its members or commits contempt of the House.

There are two mechanisms by which Parliament takes up these matters:

First, a member can raise the issue in the House, and the House decides on it. Usually, the matter is sent to a Privileges Committee for a thorough look. The committee recommends to the House a course of action which is then accepted by it.

Second is MPs can bring matters of breach of privilege to the notice of the presiding officers of their respective Houses. The presiding officers can then decide whether or not to send the case to the committee of privileges.

What does the committee decide in breach of privilege cases against MPs?

The Committee of Privileges has the power to recommend to the House for its consideration the issuance of admonitions, reprimands, suspension and, in rare cases, expulsion from the House.

The convention followed by the committee of both Houses is that if the MP against whom a privilege matter is raised gives an unqualified apology, then the issue is allowed to rest, and it recommends no further action.

109. Bunch of new Placenta in chip devices can help making pregnancies safe

Source: The post is based on the article **"Bunch of new Placenta in chip devices can help making pregnancies safe"** published in **Department of Science and Technology's website.**

What is the News?

Researchers have developed a device called placenta-on-a-chip (POC).This device mimics the placenta at various stages of pregnancy.

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What is Placenta?

The placenta is an organ that develops in the uterus during pregnancy. It performs duties for most of the foetus's organs while they are still forming, such as providing oxygen while the lungs develop and nutrition while the gut is forming.

Placenta shields the baby from harmful drugs and chemicals. But some can still cross this barrier and cause harm to the baby in the womb. Thus, pregnant women are not given most medications and they continue to suffer.

Determining which medicines can be given during pregnancy that would not cross the placenta is a daunting task. Animal studies (mostly on mice) don't provide definitive answers due to differences between human and mouse placentas.

As a result, the number of medicines declared safe for pregnant women is low and marking new medicines that come into the market as "pregnancy safe" is a challenge.

What have the researchers developed?

Researchers have developed a device called placenta-on-a-chip(POC).This device imitates different stages of pregnancy such as blood flow and cell interactions.

This can help in studying various stages of pregnancy which in turn can help in drug discovery, study of toxicity of chemicals like caffeine and understanding the effects of conditions such as preeclampsia and diabetes mellitus during pregnancy.

110. SC proposes 'permanent security units' for all courts

Source: The post is based on the article **"SC proposes 'permanent security units' for all courts"** published in **The Hindu on 14th August 2023.**

What is the News?

The Supreme Court has issued several directions to guard court complexes across the country.

These directions were issued due to recent incidents of firing inside court complexes.

What are the directions issued by the Supreme court to guard court complexes?

Security Plan: The Supreme Court has asked the High Courts to prepare "security plans" in consultation with the Principal Home Secretaries, Directors-General of Police and Police Commissioners to protect the courts.

– The security plan may include a proposal for setting up of **permanent court security unit(s)** in each complex.

– The security plan should indicate the strength and source of manpower for these security units, including armed and unarmed personnel and supervisory officers for each unit, the minimum term and mode of deployment of manpower, their list of duties and additional financial benefits, special modules for training and sensitizing personnel in matters of court security and so on.

CCTV Cameras: The court has also directed the high courts to indicate what steps have been put in place to install CCTV cameras, where they are absent, for security within court premises.

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Digitisation of judicial infrastructure: The court has also stressed on the need for digitisation of judicial infrastructure, particularly at the district level.

111. Unique star discovered that challenges previous understanding of star formation processes

Source: The post is based on the article **"Unique star discovered that challenges previous understanding of star formation processes"** published in **Department of Science and Technology's website.**

What is the News?

Scientists at the Indian Institute of Astrophysics (IIA, Bangalore) have discovered a unique star named HE 1005-1439.This star has been classified as a carbon-enhanced metal-poor (CEMP) star.

What are Carbon-enhanced metal-poor (CEMP) Stars?

CEMP Stars are primarily characterized by diverse heavy elements and abundance patterns. They were formed from the ejected material of the first stars that formed after the Big Bang.

These stars are primarily classified into four groups, based on which groups of heavy elements are more abundant. These are mostly dwarf stars, subgiant stars or giant stars.

At the evolutionary stages in which the stars exist, they are not expected to produce heavy elements.

However, the surface chemical composition of these stars exhibit abundances of heavy elements those are about 100 to 1000 times higher than that of the Sun.

What is HE 1005-1439?

HE 1005-1439 is classified as a carbon-enhanced metal-poor (CEMP) star.This star challenges previous ideas about star formation.

This star shows signs of being formed through a combination of two different processes called neutron-capture processes – the slow (s-) process and the intermediate (i-) process.

The iron content of the star is thousand times less than that of the sun and it is heavily enriched with neutron-capture elements.

Significance: This is the first time scientists have come across an object with a surface chemical composition that exhibits contributions from both slow(s) and intermediate (i) neutron-capture nucleosynthesis. The observed abundance pattern is quite unique and has never been observed before in any CEMP stars.

112. Yelagiri hut shelters 200 years of hill tribe history

Source: The post is based on the article **"Yelagiri hut shelters 200 years of hill tribe history"** published in **The Hindu on 14th August 2023.**

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What is the News?

Over 200 years ago, the Malaiyali tribe settled on Yelagiri hill in Tamil Nadu, building clay huts for various purposes.

Today, only one old hut remains as a symbol of their transition from foraging to a more modern lifestyle.

What is Maliyali Tribe?

The Malaiyali tribe — *malai* meaning "hill" and *yali* meaning "people" — is spread across Tamil Nadu's hilly region.

Unique Lifestyle of Maliyali Tribe:

Red clay played a pivotal role in building huts, burying the dead and sustaining the tribe's lifecycle from birth to death.

Huts were constructed with red clay on teak wood frames, embodying the tribe's connection to nature.

The roof of the huts were made of dry bamboo leaves and cow dung, preventing leaks during monsoons.

Despite its deceivingly small exterior, the hut accommodates eight people and includes an attic (paran) for storage.

Originally built for living, the hut later served as a seed storage space after harvest.

The hut stands on a stilt-like structure made of teakwood. This holds the house two feet above the ground to keep rodents at bay and to prevent the house from flooding during torrential rain.

There was a dedicated space for the grains. That is how precious agriculture was to them.

Significance of the Lifestyle of Maliyali Tribe: Despite changes over time, the huts remain a significant part of the tribe's history.

Currently only one hut stands as a testament to their culture. Tourists appreciate this traditional structure, giving them a glimpse of the tribe's past.

113. Why is India's Defence Ministry ditching Microsoft Windows for Maya OS?

Source: The post is based on the article **"Why is India's Defence Ministry ditching Microsoft Windows for Maya OS?"** published in **The Hindu on 12th August 2023.**

What is the News?

The Ministry of Defence has decided to replace the Microsoft Operating System (OS) in all its computers that can connect to the Internet with Maya, an Ubuntu-based OS built locally.

What is Maya OS?

Click Here to read

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What are the key features of Maya OS?

Maya OS offers a number of features such as cloud storage integration, full disk encryption, digital signature, biometric authentication, and a feature named "**Chakravyuh".**

Chakaravyuh serves as a robust endpoint solution for anti-malware and antivirus protection. It acts as a safeguarding barrier that shields users from online threats by blocking cybercriminals' attempts of breach.

Why has India shifted to Maya OS?

Cyberthreat: India's critical infrastructure has seen numerous cyberattacks and security breaches in recent years.

– Some of the most notable incidents include the cyberattack on Kudankulum Nuclear Power Plant (KKNPP) in 2019, the Mumbai Power Grid outage in 2020, the ransomware attacks on Oil India Limited and Spice Jet servers in 2022, and the Goa Flood Monitoring System hack.

– Hence, using an indigenous operating system could not only be a promising step towards securing India's vital computer systems from malicious actors, but also reduce the country's reliance on foreign software and enhance its cyber resilience.

IT Modernisation: This will help in IT modernisation efforts that are underway — like digitizing government services and making them interoperable.

114. DPIIT and Ministry of Rural Development jointly launch 'One District One Product' Wall at SARAS Ajeevika Store

Source: The post is based on the article **"DPIIT and Ministry of Rural Development jointly launch 'One District One Product' Wall at SARAS Ajeevika Store"** published in **PIB on 12th August 2023.**

What is the News?

Department for Promotion of Industry and Internal Trade(DPIIT), Ministry of Commerce & Industry has collaborated with the Ministry of Rural Development to launch One District One Product (ODOP) Wall.

What is One District One Product (ODOP) Wall?

ODOP Wall is a collaboration between One District One Product (ODOP) initiative and SARAS Aajeevika.

This collaboration aims to drive consumers towards boosting sales and increasing the visibility of SARAS products.This will help in promoting indigenous crafts and artisans of rural SHGs women.

What is SARAS Aajeevika?

SARAS Mela is an initiative by the Deendayal Antyodaya Yojana-National Rural Livelihoods Mission [DAY-NRLM], Ministry of Rural Development (MoRD).

Aim: To bring the rural women SHG members formed under DAY NRLM under one platform to showcase their skills, sell and build linkages with potential market players at a fair price.

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What is One District One Product (ODOP) initiative?

One District One Product(ODOP) is an initiative of the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry.

It is aimed at fostering balanced regional development across all districts of the country.The initiative aims to select, brand, and promote at least One Product from each District (One District – One Product) of the country for enabling holistic socioeconomic growth across all regions.

The ODOP Initiative has identified a total of 1102 products from 761 districts across the country.

115. Investor Education and Protection Fund Authority (IEPFA) and Common Service Centre (CSC) launches "Niveshak Sarathi

Source: The post is based on the article **"Investor Education and Protection Fund Authority (IEPFA) and Common Service Centre (CSC) launches "Niveshak Sarathi"** published in **PIB on 11th August 2023.**

What is the News?

The Investor Education and Protection Fund Authority (IEPFA) and Common Service Centre (CSC) have jointly launched "Niveshak Sarathi" Vans in Delhi-NCR as part of the Azadi ka Amrit Mahotsav celebrations.

What is Niveshak Sarathi?

Niveshak Sarathi initiative aims to enhance financial literacy and awareness about fraudulent schemes.

The vans are equipped with a TV screen showcasing investor awareness movies, a public address system, and informative brochures.

The initiative included sessions conducted by Village Level Entrepreneurs (VLEs) from IEPFA at key locations.Common Service Centre served as the knowledge partner for this campaign.

What is the Investor Education and Protection Fund Authority(IEPFA)?

IEPFA was established by the Ministry of Corporate Affairs to manage the Investor Education and Protection Fund.

It focuses on refunding shares, unclaimed dividends, matured deposits, and debentures to investors, among other responsibilities.

What are Common Service Centres(CSC)?

Click Here to read

116. Metagenome sequencing is transforming pathogen surveillance

Source: The post is based on the article **"Metagenome sequencing is transforming pathogen surveillance**" published in **The Hindu** on **16th August 2023**.

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What is the news?

Genome sequencing technologies have been useful in detecting the SARS-CoV-2 as the causative agent of COVID-19 as well as other diseases.

What is Genome Sequencing?

Click Here to Read

Genome sequencing allows scientists to rapidly and accurately detect pathogens from various sources like wastewater, air, soil, and animals.

What are the different genome sequencing technologies that help in surveillance of COVID-19 and other diseases?

Metagenomics rapidly studies the virus's genetic information, without prior knowledge of the infectious agent. It helped in the detection of SARS-CoV-2 without going into the time-consuming microbiology route with the samples.

In Nigeria, the technique helped in finding 13 viruses causing illness, discovered human blood-associated dicistrovirus 2, and linked pegivirus C to Lassa fever severity.

CovidSeq assay is another genome sequencing technology developed by scientists.

GISAID is an online repository on which scientists can store the genetic information of the SARS-CoV-2 virus. This shows that scientists are using high-throughput genome surveillance activities.

Note: *High throughput refers to sequencing techniques that can process a lot of DNAs simultaneously, even an entire genome all at once.*

What are other areas of application of genome sequencing?

Genome sequencing helped scientists to control the mpox virus and it is now helping with avian influenza surveillance.

Recently, experts have applied genome sequencing to quickly **detect lumpy skin disease in cattle and the rise of drug-resistant tuberculosis**, along with other applications. Similar efforts have been suggested for Zika and dengue.

117. Not Just Moon: Isro's Aditya-L1, India's first Solar mission, reaches spaceport

Source: The post is based on the article **"Not Just Moon: Isro's Aditya-L1, India's first Solar mission, reaches spaceport"** published in **The Times of India** on **16th August 2023**.

What is the news?

India's first solar mission, Aditya-L1 is expected to be launched by late August or early September.

About Aditya – L1 Mission

Read Here: India's first mission to study the sun and Objectives and importance of ISRO'S Aditya-L1 mission

-It is the first space-based Indian observatory to study the Sun.

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-Aditya-L1 will be positioned 1.5 million kilometers away from Earth in a halo orbit around the L1 point. This location offers a significant advantage for observing solar activities and their impact on space weather in real time.

Payloads: The spacecraft carries **seven payloads** for studying the photosphere, chromosphere, and outer layers of the Sun (known as the corona) by using electromagnetic and particle and magnetic field detectors.

-Out of seven payloads, four payloads will directly view the Sun and the remaining three payloads will carry out in-situ studies of particles and fields at L1.

118. Scientists detect 'microplastics' in human heart for first time: Report

Source: The post is based on the article **"Scientists detect 'microplastics' in human heart for first time: Report"** published in **Hindustan Times** on **16th August 2023**.

What is the news?

Scientists at Beijing Anzhen Hospital in China found microplastics in the heart tissues of patients who had heart surgery.

They also found Polyethylene terephthalate, commonly used in clothing and food containers, as well as polyvinyl chloride (PVC), which is commonly used in window frames, drainage pipes, paint, and other applications.

What are the issues with the findings?

Microplastics have been suggested to have an indirect role in conditions such as obesity, diabetes, and chronic liver disease by affecting the gastrointestinal tract.

Hence, the discovery of microplastics in heart tissues is concerning. Further research is needed to understand how these microplastics enter the heart tissues and their long-term impact on health after heart surgery.

What are Microplastics?

Click Here to Read

President Murmu pays tribute to Matangini Hazra, Kanaklata Barua: Who were these freedom fighters

Source: The post is based on the article **"President Murmu pays tribute to Matangini Hazra, Kanaklata Barua: Who were these freedom fighters"** published in **The Indian Express** on **16th August 2023**.

What is the news?

President Droupadi Murmu, in her speech on the eve of Independence Day, honored two women freedom fighters – Matangini Hazra and Kanaklata Barua.

Who was Matangini Hazra?

-She was born in 1869 in a village named Hogla, near Tamluk, West Bengal. She was the daughter of a poor farmer. She got married at the age of 12 and became a divorcee at the age of 18. She did not have any children.

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-She followed the path of Mahatma Gandhi. Due to her love for Gandhi, she became to be known as **Gandhiburi** (the old Gandhian woman).

-She was arrested at the age of 61 for joining the Civil Disobedience Movement in 1930 and Gandhi's Salt March. During this period, she became an active member of the Indian National Congress and began spinning khadi, following Gandhi's footsteps.

-She became more deeply engaged in the freedom movement during Gandhi's Quit India Movement in August 1942.

-In September 1942, at 73 years old, Hazra led 6,000 mainly women protestors to take over Tamluk police station from the British. She clashed with the police, got shot three times, and fell, chanting 'Vande Mataram'.

-Due to her sacrifice for the nation, in 1977, the first statue in the Kolkata Maidan was dedicated to Matangini Hazra. Several schools and streets in West Bengal have been named after her.

Who was Kanaklata Barua?

-She belonged to Assam. She was one of the youngest martyrs of the Quit India Movement.

-At the age of 17, she became the leader of a group of freedom fighters known as the "**Mrityu Bahini**". She guided the group to hoist the Tricolour at Gohpur police station on September 20, 1942.

-This led to clashes between the protestors and the police. The police firing took the life of Barua.

-Despite being shot, Barua held onto the flag to prevent it from touching the ground. Mukunda Kakoty, another volunteer, also got shot while trying to support the flag.

-In 2020, the Coast Guard honored her memory by naming a Fast Patrol Vessel (FPV) after her, known as the **ICGS Kanaklata Barua**.

119.   PM announces new housing scheme for urban poor; low interest rate loans on offer

Source: The post is based on the article **"PM announces new housing scheme for urban poor; low interest rate loans on offer"** published in **The Hindu on 16th August 2023.**

What is the News?

The Prime Minister has said that the government would soon launch a new scheme to help those living in rented houses in cities to build their own homes.

Under this scheme, they will receive relief in interest rates and loans taken from banks to construct their houses.

What is the existing scheme for housing shortage for urban poor?

Government already has a scheme to address the housing shortage for the urban poor called the **Pradhan Mantri Awas Yojana Urban (PMAY-U).**

PMAY-U was launched in 2015 by the Ministry of Housing and Urban Affairs.

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The mission aims to address the urban housing shortage among the economically backward sections, including the slum dwellers by ensuring a *pucca* house to all eligible urban households by 2022.

The scheme period though now has been extended up to December 2024 to complete all the houses sanctioned.

Progress of PMAY-U Scheme: A total of 75.51 lakh houses have been completed out of which 71.39 lakh have been occupied till now under the PMAY-U.

– Uttar Pradesh had the largest number of houses followed by Gujarat and Andhra Pradesh.

What are the other schemes announced by the Prime Minister?

The Prime Minister has also announced that the **Vishwakarma scheme** will also be launched soon.

Aim of the scheme: To improve the quality, scale and reach of products and services of artisans and craftspeople and to integrate them with the domestic and global value chain.

– This would result in the economic empowerment of such workers, especially those belonging to the Scheduled Castes, Scheduled Tribes, Other Backward Communities, women, transgender and other weaker sections of the society.

120.   Russia's Luna-25 sends back first images from space

Source: The post is based on the article **"Russia's Luna-25 sends back first images from space"** published in **Indian Express on 16th August 2023.**

What is the News?

Russia's Luna-25 spacecraft has successfully captured and transmitted its first images from space.

Even though the Luna-25 was launched weeks after **Chandrayaan-3,** it could land on the Moon two days earlier.

What is the Luna 25 Mission?

Launched by: Russia

Aim: To execute a pinpoint landing near the moon's south pole, a region that has garnered scientific interest due to its potential for revealing critical insights into the moon's geological composition.

Objectives: To collect geological samples which will give scientists the opportunity to study this unexplored region of the moon.

– To find water or at least its building blocks which could aid in establishing human colonies in the near future.

Significance: Russia's Luna-25 mission is a bid to reclaim some of its prestige back as one of the leaders in space exploration.

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– The last successful lunar mission was the Luna-24 probe launched by the Soviet space programme in 1976.This mission returned with geographical samples which showed the presence of water on the moon.

– Since the dissolution of the Soviet Union, Russia has tried to launch two landing missions to Mars–Mars-96 in 1996 and the Phobos Grunt in 2011.Both missions ended with the spacecraft crash-landing into the Pacific Ocean.

How could Luna-25 reach the Moon before Chandrayaan-3?

Chandrayaan-3 was launched weeks before Russia's Luna-25 and yet the Russian spacecraft could land on Moon earlier.

The reasons for that are:

Firstly, Luna-25 weighs much less than Chandrayaan-3, so that it can travel faster. Compared to Chandrayaan-3 weighing 3,900 kg, Luna-25 weighs just 1,750 kg.

Secondly, Luna-25 can store more fuel, so it does not have any fuel efficiency concerns.

How is Luna-25 different from Chandrayaan-3?

Rover: Apart from being lighter than the Indian mission, Luna-25 does not carry a rover. Chandrayaan-3 has a rover capable of moving around 500 meters.

Mission duration: The India mission is built to last only one lunar day or 14 earth days.This is because it does not have a heating mechanism to keep the electronics safe from the extreme cold temperatures during the lunar night.

– The Russian mission, on the other hand, will work for a year, meaning it has a heating mechanism as well as a power source other than just solar panels.

121. Kerala likely to face drought due to deficit monsoon

Source: The post is based on the article **"Kerala likely to face drought due to deficit monsoon"** published in **The Hindu on 16th August 2023.**

What is the News?

Kerala is facing a potential drought-like condition with the monsoon deficit widening.

Why does Kerala might face a potential drought-like condition?

Lack of Monsoon Rainfall: The southwest monsoon has been much weaker than expected, with only 56% of the normal rainfall received between June and August. This has raised concerns about water scarcity, especially considering low reservoir levels.

– Kerala has witnessed deficient monsoon only 14 times since 1901, with the last one in 2016.

Low Reservoir Levels: Reservoirs managed by the Kerala State Electricity Board are at only 37% of their total capacity, far lower than the previous year.

Impact of El Nino: El Niño, a climate phenomenon, is contributing to the poor monsoon.Sea surface temperatures in the tropical Pacific are exceeding El Niño thresholds which is likely to continue until early 2024.

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– Additionally, the Indian Ocean Dipole (IOD) is currently neutral, further impacting monsoon conditions in Kerala.

– Among the 15 El Niño years India witnessed since 1951, only five El Niño years (1965, 1972, 1987, 2002, and 2015) affected the State.

122. India accounts for 35% of cargo handled by Russia's Arctic Murmansk port this year

Source: The post is based on the article "**India accounts for 35% of cargo handled by Russia's Arctic Murmansk port this year**" published in **The Hindu on 16th August 2023.**

What is the News?

India's connection with Russia's Arctic region has been growing, with a significant portion of cargo handled by the Murmansk port.

In the first seven months of 2023, Murmansk port handled 8 million tonnes of cargo, and 35% of this was from India, primarily coal destined for India's east coast.

Where is Murmansk port?

Murmansk port is one of the largest ice-free ports in Russia. It is located on the Kola Peninsula at the coast of Barents Sea.

The port ranks fourth in Russia in terms of processed goods and is the second-largest port in northwest Russia (after the port of St. Petersburg).

Where is the Kola Peninsula?

Kola Peninsula is a peninsula in the extreme northwest of Russia and one of the largest peninsulas of Europe.

The peninsula lies almost completely inside the Arctic Circle and is bordered by the Barents Sea to the north and by the White Sea to the east and southeast.

Where is the Barents Sea?

Barents Sea is a marginal sea of the Arctic Ocean. It is located off the northern coasts of Norway and Russia and divided between Norwegian and Russian territorial waters.

Where is the Northern Sea Route(NSR)?

The Northern Sea Route (NSR) connects the eastern and western parts of the Arctic Ocean.

It is the shortest shipping route connecting the western part of Eurasia and the Asia-Pacific region.

For instance, Suez Canal route between Europe and Asia has a distance of 21,000 kilometres, the NSR has a distance of 13,000 kilometers, reducing the to and fro sailing time from one month to less than two weeks between Europe and Asia.

But there are challenges in navigating the NSR. The route includes the seas of the Arctic Ocean [Kara, Laptev, East Siberian and Chukchi] which remain icebound during most parts of the year.

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123.   275 bird species counted during survey at Corbett Tiger Reserve

Source: The post is based on the article **"275 bird species counted during survey at Corbett Tiger Reserve"** published in **The Hindu on 16th August 2023.**

What is the News?

The findings of the survey conducted at Corbett Tiger Reserve has been released.

Who conducted the survey at the Corbett Tiger Reserve?

The survey was conducted by a team consisting of ornithologists, conservationists, volunteers from World Wide Fund (WWF) India, Tiger Conservation Foundation and Village Volunteer Protection Force.

Aim: To provide insights into the diverse bird species inhabiting at Corbett Tiger Reserve.

What are the key findings of the survey?

About 275 bird species were counted during the survey.

Two species namely **White-rumped vulture and Red-headed vulture considered Critically Endangered** by the IUCN have been documented in the survey.

Two endangered species — Pallas's fish-eagle, Egyptian vulture were also counted by the researchers in the survey.

Four vulnerable bird species — great hornbill, great slaty woodpecker, grey-crowned prinia and river tern — have also been counted in the survey.

Around 10 near-threatened bird species — river lapwing, red-breasted parakeet, oriental darter, lesser fish-eagle, Himalayan griffon, great thick-knee, gray-headed fish-eagle, black-necked stork, Asian woolly-necked stork and Alexandrine parakeet — have also been found at the reserve.

124.   WHO and the Ministry of Ayush to host the first-ever Global Summit on Traditional Medicine

Source: The post is based on the article **"WHO and the Ministry of Ayush to host the first-ever Global Summit on Traditional Medicine"** published in **PIB on 14th August 2023.**

What is the News?

The first WHO Traditional Medicine Global Summit will take place in Gandhinagar, Gujarat.

About First WHO Traditional Medicine Global Summit:

Organized by: World Health Organization (WHO) and co-hosted by the Ministry of Ayush.

Aim: To bring together various stakeholders, such as traditional medicine practitioners, policymakers, academics, and others on a common platform to share best practices, evidence and innovation related to how traditional medicine contributes to health and sustainable development.

Significance: Traditional and complementary medicine has been vital for health in communities for centuries and has influenced modern medical knowledge.

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– About 40% of today's medicines have natural origins, including well-known drugs like aspirin and artemisinin.

– Currently, 170 countries have informed WHO about their use of traditional medicine, seeking evidence and data to guide safe, cost-effective, and fair policies and regulations.

About WHO Global Centre for Traditional Medicine:

In 2022, WHO with the support of the Government of India established the Global Centre for Traditional Medicine in Jamnagar, Gujarat.

Mandate: The centre provides leadership on all global health matters related to traditional medicine as well as extending support to member countries in shaping various policies related to traditional medicine research, practices and public health.

Significance: It is the first and only global outpost for traditional medicine across the globe.

125.   MeitY Secretary launches the 'Graphene-Aurora Program'

Source: The post is based on the article **"MeitY Secretary launches the 'Graphene-Aurora Program'"** published in **PIB on 14th August 2023.**

What is the News?

The Ministry of Electronics & Information Technology(MeitY) Secretary has launched the 'Graphene-Aurora program' at a function in **Maker Village** Kochi, Kerala.

The program shall be implemented by Digital University Kerala with joint funding from MeitY and Government of Kerala and Industry partners.

What is the India Graphene Engineering and Innovation Centre (I-GEIC)?

To be established in: Kerala

Purpose: The centre shall fill the gap between R&D and commercialization by providing a complete facility to startup and industry.

– It shall also nurture the deep/emerging Graphene technology & innovation ecosystem that can guide, develop, implement and support SMEs and startups to commercialize developed graphene technologies for scale adoption.

What is a Maker Village?

Maker Village is a pioneering startup initiative of the Ministry of Electronics and Information Technology, Government of India with Indian Institute of Information Technology, Trivandrum as the implementation agency and Kerala Startup Mission as the supporting partner.

It is India's largest electronic hardware incubator and ESDM (Electronics System Design & Manufacturing) facility.

What is Graphene?

Graphene is often referred to as a wonder material for its extraordinary electrical and electronic properties.

Graphene was discovered in 2004 by Andre Geim and Konstantin Novoselov, who received the Nobel Prize in Physics for this in 2010.

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Features: It is stronger than steel, very stretchable and can be used as a flexible conductor.Its thermal conductivity is much higher than that of silver.

Applications: It can be used in touch screens, light panels and solar cells.

– It has a lot of additional applications such as: anti-corrosion coatings and paints, efficient and precise sensors, faster and efficient electronics, flexible displays, efficient solar panels, faster DNA sequencing, drug delivery and more.

126.   SC plans expansion of infra; e-Courts to offer national link

Source: The post is based on the article **"SC plans expansion of infra; e-Courts to offer national link"** published in **The Hindu on 16th August 2023.**

What is the News?

The Chief Justice of India has announced a plan to expand the Supreme Court with 27 additional courts and 51 judges' chambers.

Currently, the Supreme Court has 17 courtrooms and two registrar courts. Its judicial strength is 32 now.

Judicial Infrastructure in India:

Judicial infrastructure broadly includes dimensions such as **physical infrastructure** (courtrooms, lawyers' chambers, and residential accommodation for judicial officers and their support staff), **digital infrastructure** which includes video-conferencing devices and internet connectivity and **Human resources.**

Physical Infrastructure of Judiciary: According to data from the National Judicial Data Grid:

– The sanctioned strength of judges is 24,280.At present, however, there are only 20,143 court halls available, of which 620 are rented.

– Only 2% of the lower and subordinate courts provide tactile pathways for the visually impaired, 20% have guide maps and 45% have help desks.

– Further, a large 68% of lower courts do not have dedicated rooms for record-keeping, and nearly half of them do not have a library.

According to an in-depth report by the legal think tank Vidhi, a majority of lower court complexes in Gujarat, Sikkim, and Tripura are not accessible through public transport.

Less than half of the district and subordinate courtrooms surveyed (40 percent or 266 out of 665 court complexes) had washrooms that were fully functioning.

Digital Infrastructure: A 2021 survey by the CJI office found that nearly 72% of lower court complexes had digital display boards, and only 41% of them had a studio-based video conferencing (VC) facility.

– The same survey found only 38 percent of lower court complexes had video linkages with jails and 14 percent had video linkages with medical officers.

The Vidhi survey found evidence of a digital divide among the country's states and regions.For example, all lower court complexes in Chandigarh and Delhi had websites that were more helpful

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to users, compared to those of court complexes in Andaman and Nicobar Islands, Arunachal Pradesh, and Nagaland.

Human Resources: According to India Justice Report (IJR) 2022, India has about 20,076 judges for a population of 1.4 billion, indicating a vacancy of 22 per cent among the sanctioned posts. Among high courts, there is a 30 per cent vacancy of judges.

What are the steps taken by the government to address judicial infrastructure?

Government of India has been implementing a **Centrally Sponsored Scheme (CSS) for the Development of Infrastructure Facilitie**s for Judiciary since 1993-94.

The current fund-sharing pattern of the scheme stands at 60:40 (Centre: State) and 90:10 for the eight northeastern and three Himalayan States. The Union Territories get 100% funding.

However, the funds allocated under this scheme are severely underutilized, since it was introduced.

e-Courts project

127.   Less than 1% mitigation & adaptation funding went to world's indigenous groups despite more commitment: Report

Source: The post is based on the article "**Less than 1% mitigation & adaptation funding went to world's indigenous groups despite more commitment: Report**" published in **Down To Earth on 11th August 2023**.

What is the News?

A report has been released on the initial phase of the Inclusive Conservation Initiative (ICI).

The report highlights that even though funding commitments have risen for Indigenous Peoples and local communities (IP and LC) to improve conservation.But their overall funding situation hasn't really improved.

For instance, donors have given Indigenous Peoples and local communities less than 1% of the funds for addressing climate change impacts and adaptations.

What is the Inclusive Conservation Initiative (ICI)?

The Inclusive Conservation Initiative (ICI) was endorsed by Global Environment Facility (GEF) in 2022.

Aim: To enhance Indigenous Peoples' and Local Communities' (IPs and LCs) efforts to protect land, waters and natural resources to deliver global environmental benefits.

– The initiative will support enhanced Indigenous and community stewardship across 7.5 million hectares of landscapes, seascapes, and territories with high biodiversity and irreplaceable ecosystems.

Technical support and supervision by: Conservation International and the International Union for Conservation of Nature (IUCN).

Significance: Indigenous Peoples and local communities make up just 5% of the world's population. But they steward 25% of land and 40% of intact ecosystems on Earth. Yet, many

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have lacked financial support to improve and scale their sustainable management of these territories.

– This initiative will provide financial support to these Indigenous and locally-led initiatives.

128.   To remove gender stereotypes from the law, a new SC handbook

Source: The post is based on the article **"To remove gender stereotypes from the law, a new SC handbook"** published in **The Hindu 17th August 2023.**

What is the News?

The Supreme Court has launched a handbook titled "Handbook on Combating Gender Stereotypes".

What is the purpose of the "Handbook on Combating Gender Stereotypes"?

Aim: To free the judiciary and the legal community from the mechanical application of gender stereotypical language in judgments, orders, and court pleadings.

– To assist judges and the legal community in identifying, understanding and combating stereotypes about women.

Key details of the handbook:

Importance of Language used by judges: The language a judge uses reflects not only their interpretation of the law, but their perception of society as well.

– Even when the use of stereotypes does not alter the outcome of a case, stereotypical language may reinforce ideas contrary to our constitutional ethos.

– Language is critical to the life of the law. Words are the vehicle through which the values of the law are communicated. Words transmit the ultimate intention of the lawmaker or the judge to the nation.

Stereotypical words used in judgements: The handbook identifies common stereotypical words and phrases used about women, many of them routinely found in judgements.

– **For example:** In the 2017 SC ruling awarding the death penalty for the convicts in the Delhi gang-rape case, the verdict repeatedly uses the word "ravished" to say raped.

– The 2017 judgment of the Kerala High Court had said "A girl aged 24 years is weak and vulnerable, capable of being exploited in many ways".

Alternative words to be used: The handbook also contains a glossary of gender unjust terms and suggests alternative words and phrases which may be used. **For example:**

– Instead of using words like "seductress", "whore" or "woman of loose morals", the word "woman" has to be used.

– The handbook also prohibits use of words like "hooker" and "prostitute" and said the term "sex worker" be used instead.

– The word "eve-teasing" will now be termed as "street sexual harassment" and "housewife" will now become "homemaker" for judicial discourses.

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False assumptions: The handbook also deals with the "so-called inherent characteristics" of women.

– One of the identified stereotypes is the idea that women are overly emotional, illogical, and cannot take decisions. The reality is that a person's gender does not determine or influence their capacity for rational thought.

– It also refers to assumptions made about a woman's character based on her expressive choices, such as the clothes she wears, and her sexual history.

– Such assumptions may impact the judicial assessment of her actions and statements in a case involving sexual violence. For instance, they diminish the importance of consent in sexual relationships.

129.   Vishwakarma scheme will aid 30 lakh artisan families

Source: The post is based on the article **"'Vishwakarma scheme will aid 30 lakh artisan families"** published in **The Hindu on 17th August 2023.**

What is the News?

The Cabinet Committee on Economic Affairs has approved a new Scheme named "PM Vishwakarma".

What is the PM Vishwakarma Scheme?

Type: Central Sector Scheme

Aim: To strengthen and nurture the Guru-Shishya parampara or family-based practice of traditional skills by artisans and craftspeople working with their hands and tools.

– To improve the quality, as well as the reach of products and services of artisans and craftspeople and to ensure that the Vishwakarmas are integrated with the domestic and global value chains.

Coverage: The scheme will provide support to artisans and craftspeople of rural and urban areas across India.

– Eighteen traditional trades will be covered under the scheme. These include carpenter, boat maker, armourer, blacksmith, hammer and tool kit maker, locksmith, goldsmith, potter, sculptor, stone breaker, cobbler, mason, basket/mat/broom maker/coir weaver, traditional doll and toy maker, barber, garland maker, washerman, tailor and fishing net maker.

Duration of the scheme: Five years (FY 2023-24 to FY 2027-28).

Key Features of the scheme: Artisans and craftspeople will be provided a recognition through PM Vishwakarma certificate and ID card.

– The scheme has a provision of credit support of up to ₹1 lakh (first tranche) and ₹2 lakh (second tranche) with a concessional interest rate of 5%.

– It also has a provision to provide skill upgradation, incentive for toolkit as well as digital transactions and marketing support.

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– Skilling programmes will take place at both basic and advanced types. Participants will get a stipend of ₹500 per day while undergoing training.

– Beneficiaries will also receive up to ₹15,000 to buy modern tools.

130. Cabinet approves "PM-eBus Sewa" for augmenting city bus operations; priority to cities having no organized bus service

Source: The post is based on the article **"Cabinet approves "PM-eBus Sewa" for augmenting city bus operations; priority to cities having no organized bus service"** published in **PIB on 16th August 2023**

What is the News?

The Union Cabinet has approved PM-eBus Sewa to improve urban mobility and decarbonise public transport in cities.

What is an e-Bus?

An e-bus is any bus whose propulsion and accessory systems are powered exclusively by a zero-emissions electricity source.

What is the PM-eBus Sewa Scheme?

Aim: To enhance green mobility in the cities.

Coverage: The scheme will cover cities of Three lakh and above population as per census 2011 including all the Capital cities of Union Territories, North Eastern Region and Hill States.

– Under this scheme priority will be given to cities having no organized bus service.

Segments: The scheme has two segments:

Segment 1: In 169 cities, 10,000 e-buses will be deployed using a public-private partnership (PPP) model.

– Infrastructure will also be developed or upgraded to support the new e-buses, including the creation of behind-the-meter power infrastructure like substations.

Segment 2: In 181 other cities, infrastructure will be upgraded under the green urban mobility initiatives

– Initiatives will focus on bus priority, infrastructure, multimodal interchange facilities, automated fare collection systems and charging infrastructure.

Support for operation: States or cities will be responsible for running the bus services and making payments to the bus operators.

– The Central government will support these bus operations by providing subsidies to the extent specified in the scheme.

Benefits of the Scheme: Around 45,000 to 55,000 direct jobs are expected to be generated via the scheme.

– The adoption of electric mobility services will help reduce noise and air pollution in Indian cities and also curb carbon emissions.

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– The scheme is also expected to bring in economies of scale for the procurement of electric buses through aggregation.

131. Meet 'Pibot,' the humanoid robot that can safely pilot an airplane better than a human

Source: The post is based on the article "**Meet 'Pibot,' the humanoid robot that can safely pilot an airplane better than a human**" published on **Euronews.com on 15th August.**

What is the News?

A team of engineers and researchers from the Korea Advanced Institute of Science & Technology (KAIST) is currently developing a humanoid robot named 'Pibot' that can fly an aircraft without needing to modify the cockpit.

What is Pibot?

Pibot is the world's first humanoid pilot.

It can fly an aero plane just like a human pilot by manipulating all the single controls in the cockpit, which is designed for humans.

Key Features: It uses artificial intelligence and robotics to understand flight manuals and control the plane in real-time.

– Pibot's arms and fingers can control flight instruments even during turbulence.It has cameras to monitor the aircraft and manage controls.

– It remembers global flight charts for accurate navigation and can handle emergencies.

– Pibot communicates with air traffic controllers and humans using voice synthesis, acting as a pilot or first officer.

132. Scientists solve Manipur salamander 'puzzle'

Source: The post is based on the article **"Scientists solve Manipur salamander 'puzzle'"** published in **The Hindu on 16th August 2023.**

What is the News?

In 2022, scientists explored the Khongtheng mountain range in Manipur to study Tylototriton verrucosus, also known as the crocodile newt.

While exploring, they discovered a new salamander species named **Tylototriton zaimeng** in Zaimeng Lake.

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What is Tylototriton zaimeng?

Source: The Hindu

Tylototriton zaimeng is a salamander species in the Zaimeng Lake of Manipur.

– Note: Salamanders are a group of amphibians typically characterized by their lizard-like appearance, with slender bodies, blunt snouts, short limbs projecting at right angles to the body, and the presence of a tail in both larvae and adults.

Named after: Tylototriton zaimeng has been named after Zaimeng, a mountain lake located atop the Khongtheng mountain range in Kangpokpi district of Manipur.

– Zaimeng is the dialect spoken by the Liangmai people, a Naga tribe residing both in Nagaland and Manipur. Zaimeng in the Liangmai dialect means "puzzle" or "mystery".

Habitat: The habitat of Tylototriton zaimeng is confined to the Khongtheng mountain range in Manipur.

Features: Tylototriton zaimeng — was mistaken for its close relatives T. himalayanus and T. verrucosus until now.

– However, researchers found that it had distinct characteristics that set it apart from its close relatives.

– It was found to be a medium-sized salamander unlike any other. Its head is massive and wide, with a rounded snout and protruding supratemporal bony ridges, while a well-developed sagittal ridge adorns its crown.

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Recommended conservation status: Due to its isolation and limited distribution, the scientists have advocated inclusion of the new species in the IUCN (International Union for Conservation of Nature) Red List as a Vulnerable (VU) species.

133. INCOIS launches 'SAMUDRA' mobile app for seafarers and fishing community

Source: The post is based on the article **"INCOIS launches 'SAMUDRA' mobile app for seafarers and fishing community"** published in **The Hindu on 14th August 2023.**

What is the News?

Indian National Centre for Ocean Information Services(INCOIS) has launched a new mobile application named 'SAMUDRA'.

What is the SAMUDRA app?

Full Form: SAMUDRA stands for Smart Access to Marine Users for Ocean Data Resources and Advisories.

Purpose: To offer comprehensive information on all ocean related services, useful for both seafarers and the fishing community.

Features: The app empowers users with real-time updates and critical alerts on oceanic disasters such as tsunamis, storm surges, high waves, and swell surge alerts, for the individuals and communities to stay informed and take necessary precautions towards the protection of lives and property.

Significance: The app will be especially beneficial to the fishing community as it disseminates Potential Fishing Zone (PFZ) advisories which will guide them to the probable fish aggregation locations.

134. The importance of the Sulina Channel to Ukraine grain trade

Source: The post is based on the article **"The importance of the Sulina Channel to Ukraine grain trade"** published in **Indian Express on 17th August 2023.**

What is the News?

Sulina Channel has provided Ukraine with an alternative passage for its grain after Russia withdrew from the Black Sea grain deal.

What is the Danube River?

Danube is the second-longest river in Europe, after the Volga in Russia.

It flows through much of Central and Southeastern Europe, from the Black Forest into the Black Sea.

Near Romania, the river begins to spread out into its delta which has three major channels – Chilia, Sulina and St George.

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What is Sulina Channel?

Source: New York Times

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Sulina Channel is a 63 km long distributary of the Danube. It lies completely within the borders of Romania.

Of the three major channels of the Danube river, the Sulina Channel is the only one deep and wide enough for freight transport.

It is a sort of a riverine 'expressway' – crucial for transport of goods from inland to the Black Sea.

How can the Sulina Channel be used for transporting Ukraine grain?

Sulina Channel connects major Ukrainian ports on the river to the Black Sea.

Hence, ships carrying grain from Ukraine leave from Ukrainian ports such as Izmail and Reni on the mainstream (or the Chilia Channel) and head to the port of Sulina, at the mouth of the Sulina Channel.

From there, they head to Constanta, Romania's biggest seaport. Here the cargo is transferred to bigger ships that carry it out of the Black Sea into the Mediterranean through the Bosphorus straits. This route is under constant surveillance and protection of NATO.

135. Centre and WHO to launch Global Initiative on Digital Health

Source: The post is based on the article **"Centre and WHO to launch Global Initiative on Digital Health"** published in **The Hindu on 17th August 2023.**

What is the News?

India in collaboration with the World Health Organization (WHO) will launch the Global Initiative on Digital Health.

What is the Global Initiative on Digital Health?

Launched by: India in collaboration with the World Health Organization (WHO)

Aim: The initiative is aimed at data convergence, interface of health platforms and investments in the digital health space around the globe.

Features: The initiative will include a digital platform which will consist of an investment tracker, an ask tracker (to understand who needs what kind of products and services) and a library of existing digital health platforms.

Significance: The initiative would aid universal health convergence and improve healthcare service delivery.

136. Flood forecast app launched by Water Commission

Source: The post is based on the article **"Flood forecast app launched by Water Commission"** published in **The Hindu on 18th August 2023.**

What is the News?

The Central Water Commission(CWC) has launched an app, called 'Floodwatch'.

What is Floodwatch App?

Purpose: To forecast the chances of floods a day in advance.

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– To provide a seven-day advisory on the chances of floods at various stations in the country where the CWC maintains its measurement gauges.

Source of data: The app utilizes advanced technologies such as satellite data analysis, mathematical modeling and real-time monitoring to deliver accurate and timely flood forecasts.

Features: The app has a map of India with coloured circles at water stations across the country indicating the current risk of flooding.

– A 'green' circle indicates 'normal'; yellow, above normal; orange, 'severe'; and red, 'extreme'.

– Clicking on the circle shows the water level at the station, the danger level and warning level. The warnings are in English or Hindi with an option for a voice-enabled prompt.

– The app will also provide State-wise/basin-wide flood forecast up to 24 hours or flood advisory up to seven days, that can be accessed via selecting specific stations.

Significance: The app marks a significant step towards utilizing smartphones to provide the public with up-to-date flood situation data and accurate forecasts spanning seven days.

137.   Now, drones to monitor MGNREGA worksites

Source: The post is based on the article **"Now, drones to monitor MGNREGA worksites"** published in **The Hindu on 18th August 2023.**

What is the News?

The Union Ministry of Rural Development has asked States to use drones to monitor worksites under the Mahatma Gandhi National Rural Employment Guarantee Act(MGNREGA) scheme.

How can drones be helpful in monitoring MGNREGA Scheme?

Drones will be helpful in addressing complaints about corruption in MNREGA works.

These complaints vary from machines being used in place of the workers, many receiving wages without doing work, or works beyond the approved list being undertaken and so on.

Drones will be especially helpful in such cases for real-time monitoring and for garnering evidence.

How is the government planning to deploy drones to monitor MGNREGA works?

Drones will be used for four types of monitoring: surveying the ongoing works, inspecting the completed works, impact assessment and special inspection in case of complaints.

Drones will be used by the ombudsperson. According to the MGNREGA Act, there should be one ombudsperson per district who is responsible for registering suo moto complaints and disposing of them within 30 days.

State governments will provide the drones to ombudspersons as needed.

However, the Union government will not be providing the States with any extra funds to deploy these drones.

State governments are expected to draw the necessary funds from the administrative head, which is roughly 10% of a State's MGNREGA budget.

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Instead of buying drones, States can hire drone-specializing agencies.

Government has also planned to form a centralized dashboard to store the videos and photos collected from the drones, for data analysis and reporting purposes.

What is the significance of these measures?

This will be the second big technological intervention introduced to keep a check on MGNREGA workers.

From May 2022, the Union government has made it mandatory to capture attendance at all worksites using a specially-developed mobile-based application

138. Rising methane could be a sign that Earth's climate is part-way through a 'termination-level transition'

Source: The post is based on the article **"Rising methane could be a sign that Earth's climate is part-way through a 'termination-level transition"** published in **Down To Earth** on **16th August 2023.**

What is the News?

Since 2006, the levels of heat-trapping methane in the Earth's atmosphere have been increasing rapidly.

Unlike the rise in carbon dioxide, this increase in methane appears to be due to biological sources rather than fossil fuel burning.

This could be due to natural climate cycles like El Niño, or it might indicate a significant shift in the Earth's climate.

What is Methane?

Click Here to read

Rise in Methane Levels:

Methane is a much more potent greenhouse gas than CO_2 but it lasts slightly less than a decade in the atmosphere compared with centuries for CO_2.

The rate at which methane is increasing in the atmosphere has accelerated recently.

Methane had risen fast in the 19th and 20th centuries but plateaued by the end of the 1990s. This rise was driven by fossil fuel emissions, especially from gasfields and coal mines.

Then in late 2006, the amount of methane in the air climbed fast. During the 2020s the growth rate has become yet faster, faster even than during the peak of gas industry leaks in the 1980s.

This growth seems to be driven by new emissions from wetlands, especially near the equator.

This is a result of climate change: increasing rainfall has made wetlands wetter and bigger while rising temperatures have boosted plant growth, providing more decomposing matter and so more methane.

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What are Climate Terminations?

Climate terminations refer to periods of significant and often rapid climate change that mark the transition between glacial (cold) and interglacial (warmer) periods in Earth's history.

These transitions involve substantial shifts in temperature, ice sheet extent, sea level, and other climate-related factors.

During glacial periods, large ice sheets cover extensive areas of the Earth's surface, and global temperatures are lower. Interglacial periods, on the other hand, are characterized by warmer conditions, with reduced ice coverage and higher sea levels.

Past climate terminations have been identified and numbered using Roman numerals (e.g., Termination I, Termination II), with higher numbers indicating more ancient events.

Methane and Climate Terminations:

Methane spike marked shift in past Climate Terminations.

It is worth noting that the methane levels have surged since 2006. There are also ongoing climate changes driven by human activities, particularly the emission of greenhouse gases like carbon dioxide.

This human-induced climate change is leading to shifts in temperature, sea levels, and weather patterns that have significant implications for ecosystems, societies, and economies worldwide.

This may be a signal that a great transition in Earth's climate has begun.

139. A software solution for preventing attacks on 5G networks

Source: The post is based on the article **"A software solution for preventing attacks on 5G networks"** published in **PIB on 17th August 2023.**

What is the News?

IITM Pravartak Technologies Foundation at IIT Madras has developed a new indigenous software technology solution that can proactively detect and prevent zero-day vulnerability attacks in the 5G networks.

Why is 5G Technology vulnerable to zero day attack?

Traditional telecom networks were built using hardware components such as switches. But around 90% of the 5G technology is implemented in software.

A 5G network incorporates several software-based technologies such as NFV, SDN, and control plane/user plane segregation.

Due to this, the attack surface area is increased multifold in this process and is impossible to manage manually. Automating the whole testing process and continuous monitoring is the only sustainable solution.

What have the researchers developed?

Researchers are developing an indigenous security testing solution for 5G core network functions and Radio Access Network (RAN) software.

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This technology solution can automatically identify zero-day vulnerabilities in the network in advance by using techniques such as fuzzing and test oracles.

Reducing zero-day vulnerabilities will reduce attack surface area, which in turn will reduce the need to pay ransom and also decrease network downtime of 5G networks which are crucial for communication.

What are Zero Day Attacks?

Zero-day is a term used in the cybersecurity world. It refers to an unknown vulnerability that can be exploited by any malicious hacker with sufficient know-how.

Zero-day attacks take place when hackers exploit the vulnerability before the software developer has a chance to patch the flaw.

They can be devastating, since only the hacker knows about them and can even sell this valuable information on the darknet, or 'simply wait to strike at an opportune moment.

140. No more bulk SIM cards as government steps in to curb fraud

Source: The post is based on the article **"No more bulk SIM cards as government steps in to curb fraud"** published in **The Hindu on 18th August 2023.**

What is the News?

The Department of Telecommunications (DoT) has announced several steps to combat the issue of fraudulent SIM cards.

What are the steps announced by the government to combat the issue of fraudulent SIM cards?

Mandatory registration of SIM dealers: Telecom operators will do mandatory registration of franchisees, point of sale (PoS) agents and distributors. This will help in eliminating the rogue PoS who by fraudulent practices issue SIMs to anti-social/anti-national elements.

The PoS registration process includes indisputable verification by telcos.The process mandates-Written agreement between the PoS and the licensees. If a PoS indulges in any illegal activities, it will be terminated and blacklisted for a period of three years.

All the existing PoS will be registered as per this process by licensees within 12 months.

Bulk SIMs to companies discontinued: The facility to provide SIM connections in bulk to companies is being discontinued.

– The existing bulk system requires companies to preserve records of individual subscribers.

– Instead a " new business" system is being put in place where each corporate subscriber has to undertake KYC ('Know Your Customer') when a SIM is being issued to them.

– Physical Aadhaar printouts or cards provided as identity or address proof will also have to be verified by scanning the QR code to reduce fraud.

What are the other steps taken by the government?

Government of India has launched the **Sanchar Saathi portal.** The portal allows citizens to: 1) Check the connections registered on their names, 2) Report fraudulent or unrequired connections, 3) Block the mobile phones which are stolen/lost and 4) Check IMEI genuineness

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before buying a mobile phone.

141. Indian scientist develops novel method to improve accuracy and precision of nanomechanical testing technology

Source: The post is based on the article **"Indian scientist develops novel method to improve accuracy and precision of nanomechanical testing technology"** published in **PIB on 17th August 2023.**

What is the News?

An Indian researcher has developed a new method to test nanomechanical properties of materials at very minute scales with high precision and accuracy.

This new method significantly improves the precision and accuracy of **Nanoindentation Technique.**

What is Nanoindentation Technique?

Nanoindentation is a materials testing technique used to measure mechanical properties such as hardness, elastic modulus and other material responses at very small scales, often on the order of nanometers.

The technique involves applying a controlled and localized force to a material's surface using a sharp indenter, typically a diamond tip, and then measuring the resulting depth of penetration.

The nanoindentation technique is particularly valuable for studying materials at the micro- and nanoscale, where traditional macro-scale mechanical testing methods are not suitable or accurate.

Applications: Nanoindentation is used in a wide range of applications, including characterizing thin films, coatings, biomaterials, ceramics, polymers, metals and composites.

– It is also employed in research related to microelectronics, material development, quality control and failure analysis.

142. President launches indigenously built warship Vindhyagiri

Source: The post is based on the article **"President launches indigenously built warship Vindhyagiri"** published in **The Hindu on 18th August 2023.**

What is the News?

The President has launched the sixth vessel of the Project 17 Alpha Frigates, '**Vindhyagiri',** a stealth ship of the Indian Navy.

What is INS Vindhyagiri?

INS Vindhyagiri is the sixth stealth frigate constructed under Project-17 Alpha.

Built by: Garden Reach Shipbuilders and Engineers Ltd (GRSE) facility at Kolkata.

Named after: The ship is named after the Vindhyagiri hills in Karnataka.

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Significance: Vindhyagiri pays a befitting tribute to the distinguished service of its predecessor, the erstwhile INS Vindhyagiri, the Leander Class ASW Frigate.

– The old Vindhyagiri in its nearly 31 years of service from 1981 to 2012 had witnessed various challenging operations.

What is Project-17 Alpha?

Project-17 Alpha is also known as the Nilgiri class frigate project. The project was launched by the Indian Navy in 2019.

It involves the construction of seven new-generation stealth frigates for the Indian Navy using advanced technologies.

These frigates are being built by two state-run shipyards:

– **Mazagon Docks Limited(MDL)** is responsible for manufacturing four frigates — INS Nilgiri, Udaygiri, Taragiri and Mahendragiri.

– **Garden Reach Shipbuilders and Engineers Ltd (GRSE)** will manufacture the remaining three frigates, INS Himgiri, Dunagiri and Vindhyagiri.

These ships are follow-on versions of the three Project-17 vessels, also known as the **Shivalik class frigates** in the Indian Navy.

Features: The P17A ships are advanced missile frigates measuring 149 meters in length, weighing about 6,670 tonnes, and can travel at a speed of 28 knots.

– These are capable of neutralizing threats in all three dimensions of air, surface and subsurface.

– They are being built using a special stealth design that has radar-absorbent coatings and is low-observable, making it possible for them to approach without being seen by adversaries.

– Around 75% of the equipment and systems for these ships are sourced from local companies, including small and medium enterprises (MSMEs).

143. Kanniyakumari's Matti is distinct with fragrance and honey-like taste

Source: The post is based on the article **"Kanniyakumari's Matti is distinct with fragrance and honey-like taste"** published in **The Hindu on 18th August 2023.**

What is the News?

The Matti banana variety, native to Kanniyakumari district in Tamil Nadu was recently granted the Geographical Indication (GI) tag.

What is the Matti Banana variety?

Matti banana is a variety of banana native to Kanniyakumari district in Tamil Nadu

It is also known as 'Baby Banana' owing to its nipple-like appearance.

Unlike typical banana bunches that grow straight, the Matti's fingers exhibit a distinct wind-blown appearance.

This banana has a sweet fragrance and honey-like taste.

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Local marriages are incomplete without this banana variety, mixed with payasam served in the feast.

These bananas have low total soluble solids content (TSSC) which makes it suitable for a baby food.

The corm extract from the fruit is also used as a jaundice cure.

Varieties of Matti Banana: 1) Nal Matti boasts a yellowish-orange colour and fine aroma **2) Theyn [honey] Matti's** pulp tastes like honey **3) Kal Matti** gets its name from the calcium oxalate crystals forming in its pulp and black dots on the skin **4) Nei Matti** exudes the aroma of ghee and **5) Sundari Matti** is facing extinction.

144. RBI launches web portal for searching unclaimed deposits

Source: The post is based on the article **"RBI launches web portal for searching unclaimed deposits"** published in **Indian Express on 18th August 2023.**

What is the News?

The Reserve Bank of India(RBI) has launched the UDGAM Portal.

What is UDGAM Portal?

UDGAM stands for Unclaimed Deposits – Gateway to Access information.

Purpose: To aid users to identify their unclaimed deposits/ accounts and enable them to either claim the deposit amount or make their deposit accounts operative at their respective banks.

Developed by: Reserve Bank Information Technology Pvt Ltd (ReBIT), Indian Financial Technology & Allied Services (IFTAS) and participating banks.

Coverage: Initially, users would be able to access the details of their unclaimed deposits in respect of seven banks presently available on the portal.

– The search facility for remaining banks on the portal would be made available in a phased manner.

145. 9 more supercomputers to be added under National Supercomputing Mission, list of four current fastest machines in India

Source: The post is based on the article **"9 more supercomputers to be added under National Supercomputing Mission, list of four current fastest machines in India"** published in **TOI on 19th August 2023**

What is the News?

The Union Cabinet has recently approved an extension of the Digital India programme.

The programme also proposes nine more supercomputers to be added under the National Supercomputing Mission.

What is the National Supercomputing Mission?

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Which are the fastest Supercomputers in India?

India's fastest supercomputers are AIRAWAT, PARAM Siddhi, Pratyush and Mihir.

AIRAWAT: It is installed at the Center for Development of Advanced Computing (C-DAC), Pune.

– It stands as India's largest and fastest AI supercomputing system, with a remarkable speed of 13,170 teraflops (Rpeak).

– It has been manufactured by Netweb Technologies.

– It ranked number 75 at the International Supercomputing Conference in Germany and was listed as such in the 61st edition of the Top 500 Global Supercomputing list.

PARAM Siddhi-AI: It is installed at Center for Development of Advanced Computing (C-DAC), Pune.It is ranked at No. 131 position:

– It aims to serve as AI / HPC specific Cloud Computing Infrastructure for INDIA subsuming academia, R&D institutes and start-ups.

Pratyush supercomputer: This supercomputer is installed at the Indian Institute of Tropical Meteorology. It is a Cray XC40 machine.It is ranked at No.169 position.

Mihir supercomputer: It is installed at the National Centre for Medium Range Weather Forecasting in Noida.It is also a Cray XC40 machine.It is ranked at No.316.

146. India's first 3D-printed post office inaugurated in Bengaluru: How does 3D printing work?

Source: The post is based on the article **"India's first 3D-printed post office inaugurated in Bengaluru: How does 3D printing work?"** published in **Indian Express on 19th August 2023**

What is the News?

India's first 3D-printed post office was inaugurated in Bengaluru's Cambridge Layout.

Multinational company Larsen & Toubro Limited built the post office with technological support from IIT Madras.

What is 3D Printing?

3D printing, also known as additive manufacturing, is a process that uses computer-created design to make three-dimensional objects layer by layer.

It is an additive process, in which layers of a material like plastic, composites or bio-materials are built up to construct objects that range in shape, size, rigidity and color.

How is 3D printing done?

To carry out 3D printing, one needs a personal computer connected to a 3D printer. All they need to do is design a 3D model of the required object on computer-aid design (CAD) software and press 'print'.The 3D printer does the rest of the job.

3D printers construct the desired object by using a layering method, which is the complete opposite of the subtractive manufacturing processes.

These machines are capable of printing anything from ordinary objects like a ball or a spoon to complex moving parts like hinges and wheels.

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What are some of the notable examples of 3D Printing?

3D printing is being used in a host of different industries like healthcare, automobile and aerospace.

In May 2023, aerospace manufacturing company Relativity Space launched a test rocket made entirely from 3D-printed parts, measuring 100 feet tall and 7.5 feet wide.However, shortly after its take off, it suffered a failure.

At the peak of the Covid-19 pandemic in 2020, the healthcare industry used 3D printers to make much-needed medical equipment, like swabs, face shields, and masks, as well as the parts to fix their ventilator.

147.   Number of Jan Dhan Accounts Cross 50 Crore

Source: The post is based on the article **"Number of Jan Dhan Accounts Cross 50 Crore"** published in **PIB on 19th August 2023**

What is the News?

The total number of Jan Dhan accounts have crossed 50 crore as on 9th August 2023.

What is Pradhan Mantri Jan Dhan Yojana(PMJDY)?

National Mission on Financial Inclusion popularly known as Pradhan Mantri Jan Dhan Yojana (PMJDY) was launched in 2014.It has completed almost 9 years.

It offers multiple advantages to account holders such as a bank account without requirement of minimum balance, free of cost RuPay debit cards with inbuilt accident insurance of Rs. 2 lakh and overdraft facility of up to Rs. 10,000.

Significance: The scheme has been successful in changing the financial landscape of the country and has brought near saturation in bank accounts for adults.

– The success of PMJDY also lies in the comprehensive nature of the scheme with an attempt to connect the last mile with the formal banking system through technology, collaboration and innovation.

Click Here to read more

What are the achievements of Pradhan Mantri Jan Dhan Yojana(PMJDY)?

As per the latest reports submitted by banks, the total number of Jan Dhan accounts have crossed 50 crore as on 9th August 2023.

Out of these accounts 56% accounts belong to women and 67% accounts have been opened in Rural / Semi-urban areas.

The deposits in these accounts are above Rs. 2.03 lakh crore and about 34 crore RuPay cards have been issued in these accounts free of cost.

The average balance in PMJDY accounts is Rs. 4,076 and more than 5.5 crore PMJDY accounts are receiving DBT benefits.

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148. Why the RBI has directed lenders not to levy penal interest on borrowers

Source: The post is based on the article **"Why the RBI has directed lenders not to levy penal interest on borrowers"** published in **Indian Express on 19th August 2023**

What is the News?

The Reserve Bank of India (RBI) has issued a fresh set of guidelines for banks and other regulated entities (REs) on the imposition of penal charges on loan borrowers.

These guidelines have been issued after it was reported that many banks use penal rates of interest over and above the applicable interest rates in case of defaults / non-compliance by the borrower with the terms on which credit facilities were sanctioned.

What do RBI guidelines say?

According to RBI guidelines, penalties charged for default on interest payments or non-compliance of material terms and conditions of loan contract by the borrower would now be accrued as 'penal charges' instead of 'penal interest'.

To put it simply, lending entities would not be able to levy an ad-hoc additional penal rate of interest over and above the applicable rate of interest.

For perspective about penal interest: say the borrower's EMI payment for the month of April is Rs 1,000 at 10% interest rate.They default on making a timely EMI payment which subjects them to an additional interest payment of 24% per annum (or 2% per month) over and above the interest component (at 10% of principal amount) already payable that month.

RBI guidelines direct that 'penal interest' (at 2% p.a. in the example) be replaced with an 'penal charge', with no additional component to the rate of interest.

There shall be no capitalisation of penal charges, that is, it shall be levied separately and not be added to the principal outstanding amount.

The quantum of penal charges must be proportional to the defaults or non-compliance of material terms and conditions of a loan contract up to a certain threshold.

This is to be determined by the lending entities themselves and must not be discriminatory within a particular loan/product category.

What will be the impact of these guidelines on consumers?

Supervisory reviews have indicated divergent practices amongst the regulated entities(REs) with regard to levy of penal interest/charges leading to customer grievances and disputes.

Now, REs will have to disclose the quantum and reason for penal charges clearly to the customers in the loan agreement and most important terms and conditions/Key Fact Statement (KFS).

These will also be displayed on the website of REs under interest rates and service charges section.

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149. Revolutionizing Animal Feed: TDB-DST partners with Chemlife Innovations for Innovative Bio-Trace Minerals Project

Source: The post is based on the article **"Revolutionizing Animal Feed: TDB-DST partners with Chemlife Innovations for Innovative Bio-Trace Minerals Project"** published in **PIB on 19th August 2023**

What is the News?

The Technology Development Board (TDB), part of the Department of Science & Technology (DST) has partnered with Chemlife Innovations Pvt. Ltd to launch **Innovative Bio-Trace Minerals Project.**

What is the Innovative Bio-Trace Minerals Project?

Aim: The project aims to revolutionize the manufacturing of bio-trace minerals for animal feed particularly targeting the livestock and poultry/dairy sectors.These minerals are essential for animals' health.

Financial Support: TDB is giving ₹84 lakh to this project which is a big part of the total cost.

Technology used: Chemlife Innovations is using new technology called 'Accelerated Natural Bio Transformation' (ANBioT) to make these special minerals.

– The project also utilizes pupa proteins which are rich in hydroxy amino acids.This will be an economical alternative to imported ligands like yeast hydrolysate and Methionine hydroxy analogue (MHA).

– The project also contributes to the circular economy by repurposing silkworm pupae meal, reducing waste from the silk industry.

Significance: This project aligns harmoniously with the **National Livestock Mission.**The mission aims to enhance livestock productivity, optimize feed and fodder resources and infuse technology into livestock management.

150. Amid trade slump, signs of investment pick-up

Source: The post is based on the article **"Amid trade slump, signs of investment pick-up"** published in **The Hindu on 19th August 2023**

What is the News?

India's merchandise exports have faced a decline.But the growth in imports of electronics and machinery suggests domestic demand and investments are picking up.

India's Trade and Investment Figures:

Decline in exports: India's exports fell by 15.9%.This decline in exports appears broad-based and the slowdown in demand is not just stemming from the West, but also from emerging markets, especially the Asia-Pacific, India's largest regional export destination.

Imports Growth: India's exports has fallen.But the imports of electronics and machinery has hit a record high at $4.7 billion.This suggests increased domestic demand and private investments.

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– For instance, five out of fifteen key import categories saw growth. Electronics grew by 14.9%, and machinery reached a record monthly import of $4.7 billion.

Trade Deficit: The trade deficit in July rose to $20.7 billion.Some economists caution that the trade deficit could grow more in the future due to rising commodity prices and export restrictions on agricultural products.

151.   Bills seeking to replace IPC, CrPC, Indian Evidence Act referred to Standing Committee

Source: The post is based on the article **"Bills seeking to replace IPC, CrPC, Indian Evidence Act referred to Standing Committee"** published in **The Hindu on 19th August 2023**

What is the News?

The Bharatiya Nyaya Sanhita Bill, 2023, Bharatiya Nagarik Suraksha Sanhita Bill, 2023, and Bharatiya Sakhshya Bill, 2023 have been referred to the Standing Committee on Home Affairs.

These bills seek to replace the Indian Penal Code,1860; Criminal Procedure Code, 1898 and the Indian Evidence Act,1872.

What are the key highlights of the three bills?

Bharatiya Nyaya Sanhita Bill, 2023:

The bill seeks to replace the IPC by repealing 22 of its provisions, proposes changes to 175 existing provisions and introduces eight new sections. It contains a total of 356 provisions.

The punishment for all types of gang rape will now include 20 years of imprisonment or life imprisonment.

The punishment for the rape of a minor will include the imposition of the death penalty. Various offences have also been made gender neutral.

For the first time capital punishment has been introduced for the offence of mob lynching apart from the offence being made punishable with 7 years of imprisonment or life imprisonment.

The bill repeals the offense of sedition, which was widely criticized as a colonial relic that curbed free speech and dissent.However, upon closer inspection, it can be seen that the provision has been introduced under a new name and with a more expansive definition for the offence.

The bill introduces community service as a form of punishment for specific crimes, which can help in reforming offenders and reducing overcrowding in prisons.

The Bill also criminalizes sexual intercourse under the false pretext of marriage or by deceitful means.A maximum of 10-year imprisonment has been proposed for the offence.

The provision for the offence of adultery has also been omitted.This is in line with the Supreme Court's ruling in 2018 in the case of *Joseph Shine v. Union of India*, where Section 497 of the IPC, which criminalized adultery, was held to be unconstitutional.

The provision legalising marital rape has however been retained.

Bharatiya Nagarik Suraksha Sanhita Bill, 2023:

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The Bill will replace the CrPC by repealing nine of its provisions.It proposes changes to 160 provisions and introduces nine new provisions.It contains a total of 533 sections.

Section 230 has been introduced to ensure that a copy of the FIR is made available to the accused and the victim free of cost and within fourteen days from the date of production or appearance of the accused.

The Bill also permits the filing of a zero FIR from any part of the country.It also allows the facility for an accused person to be examined through electronic means, like video conferencing.

Bharatiya Sakshya Bill, 2023:

The bill will replace the Indian Evidence Act.It proposes changes to 23 provisions and introduces one new provision.It contains 170 sections in total.

The Bill permits the admissibility of an electronic or digital record as evidence and will have legal validity as documentary evidence.

The ambit of what constitutes secondary evidence has also been expanded in the bill.

152.   Govt planning skill training for 2 crore women under 'Lakhpati Didi' scheme

Source: The post is based on the article **"Govt planning skill training for 2 crore women under 'Lakhpati Didi' scheme"** published in **The Hindu on 19th August 2023**

What is the News?

Government is planning skill development training for two crore women under the 'Lakhpati Didi' scheme.

What is the Lakhpati Didi Scheme?

Aim: To provide skill development training to women to encourage them to establish micro-enterprises so that they can earn at least Rs 1 lakh annually.

Target: Government's goal is to create two crore "lakhpati didis" (prosperous sisters) in villages through women self-help groups(SHGs).

Skills covered: The women would be trained in skills like plumbing, LED bulb making and operating and repairing drones among others.

– Initially women in around 15,000 self-help groups (SHGs) would be trained to fly and repair drones.

– This training will not only create new avenues for income generation but also equip women with cutting-edge skills.

What are Self-Help Groups(SHGs)?

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153. WHO South-East Asia Region commits to further enhance efforts to end TB, adopt Gandhinagar Declaration

Source: The post is based on the article **"WHO South-East Asia Region commits to further enhance efforts to end TB, adopt Gandhinagar Declaration"** published in **DD News on 19th August 2023**

What is the News?

The WHO South-East Asia Region has committed to further accelerate efforts to end tuberculosis by 2030 with member countries adopting the **Gandhinagar Declaration.**

What is the Gandhinagar Declaration?

The Gandhinagar Declaration was adopted by the WHO South-East Asia Region member countries at the meeting held to follow up on the progress made to end Tuberculosis(TB) in the region.

The declaration calls for the establishment of high-level multisectoral commissions in each country to coordinate efforts and monitor progress toward ending TB and other diseases. These commissions can also strengthen health systems and universal health coverage.

It also emphasizes the use of science and technology to provide equitable TB services accessible to everyone, regardless of social, cultural, or demographic differences.

It underscores the need for resources to meet TB coverage goals and address underlying social factors.

The declaration also urges WHO to continue prioritizing TB and providing leadership and technical assistance for sustained progress.

About TB Cases in WHO South-East Asia (SEA) Region:

The WHO South-East Asia Region has 11 Member States – Bangladesh, Bhutan, Democratic People's Republic of Korea, **India,** Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste.

This region is home to 26% of the world's population.**But about 43% of all TB cases in the world are in this region (according to the WHO Global TB Report 2021).**

In 2020, around 4.3 million people got sick with TB and about 700,000 died because of it.This is more than half of all the TB deaths globally, which were about 1.3 million in that year.

TB deaths have been increasing for more than ten years and are now close to what they were in 2015.

154. What is RBI's new pilot for frictionless credit?

Source: The post is based on the article "**What is RBI's new pilot for frictionless credit?"** published in **The Hindu on 21st August 2023.**

What is the News?

The Reserve Bank of India (RBI) has launched a pilot project in the form of a "Public Tech Platform for Frictionless Credit".

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The project seeks to give digital information to lenders to expedite access to credit or loans.

What is Frictionless credit?

Frictionless credit is a borrowing approach that seeks to streamline the lending process for consumers.

Unlike the traditional credit systems, where individuals need to go through extensive paperwork, credit checks and lengthy approval procedures, frictionless credit promises a smoother and faster experience.

Why Frictionless credit needed?

Before granting a loan, there's a crucial process called **credit appraisal.** This process assesses the borrower's ability to repay the loan and stick to the loan agreement. It's especially important for banks because it affects their interest income and balance sheet.

RBI has noticed that the information needed for this process is scattered among different entities like governments, banks, credit agencies, and digital identity authorities. This separation creates hindrances in frictionless and timely delivery of rule-based lending.

To solve this, a new platform called "**Public Tech Platform for Frictionless Credit**" is being developed by Reserve Bank Innovation Hub, a wholly-owned subsidiary of RBI. This platform aims to make the lending process smooth and quick.

As a step towards this, a **pilot project for digitizing Kisan Credit Card (KCC) loans** under ₹1.6 lakh was started in 2022.It tests a fully digital lending process without paperwork, even allowing loans to be given at people's doorsteps.

What are the expected benefits of this platform?

Getting formal loans often involves multiple visits to the bank and lots of paperwork. This adds to the lender's operational expenses, which can then be passed on to borrowers. According to an RBI survey, processing farm loans used to take two to four weeks and cost about 6% of the loan amount.

This platform will help in making this lending process smooth and quick. It will help in reducing costs, speed up the loan process, and make it scalable.

155. Ministry of Tourism launches a wedding tourism campaign to unlock the potential of India's huge wedding industry

Source: The post is based on the article **"Ministry of Tourism launches a wedding tourism campaign to unlock the potential of India's huge wedding industry"** published in **PIB on 19th August 2023.**

What is the News?

The Ministry of Tourism has launched a **Wedding Tourism Campaign** to showcase India as a premier wedding destination globally. This campaign was launched as part of Incredible India Initiative.

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The campaign aims to establish India as the foremost choice for couples seeking an extraordinary wedding experience while bolstering the growth of the wedding industry and overall tourism in India.

What is the Incredible India campaign?

Incredible India campaign was launched by the Ministry of Tourism in the year 2002 to promote tourism in India to other countries' populations.

The purpose of the campaign was to make a brand out of India that depicted its history, diversity, religious beliefs, and spirituality, all in all, it showed India as the melting pot of cultures that it was and is to this date.

In 2017, 'Incredible India 2.0' campaign was launched.It marks a shift from generic promotions undertaken across the world to market-specific promotional plans and content creation.

The campaign focuses on digital and social media and the promotion of Niche tourism products, including yoga, wellness, luxury, cuisine and wildlife.

156.   Gabon announces $500 million debt-for-nature swap deal for marine conservation

Source: The post is based on the article **"Gabon announces $500 million debt-for-nature swap deal for marine conservation"** published in **Down To Earth on 18th August 2023.**

What is the News?

Gabon has announced a $500 million debt-for-nature swap.

In Africa, it is the largest such deal signed by any country to refinance its debt and conserve marine resources.

What is Debt-for-nature swap?

Debt-for-nature swaps allow heavily indebted developing countries to seek help from financial institutions in the developed world with paying off their debt if they agree to spend on conservation of natural resources.

Usually banks in developed countries buy the debts of such countries and replace them with new loans which mature later. These have lower interest rates.

How do debt-for-nature swaps work?

A debt-for-nature swap can be **multi-party or bilateral.**

The most common form of multi-party debt-for-nature deal is when a third-party institution – usually an international non-governmental organization such as Conservation International – buys part of a country's external debt from the institution that had bought it initially often at a discount. That organization then agrees to let the debtor country pay the debt off by investing a certain amount of local currency – usually significantly less than the face value of the original debt – in a biodiversity conservation plan.

In a bilateral deal, a country which owns some of another country's debt agrees to discount it in exchange for the debtor country investing an agreed amount in a conservation plan.This frees the indebted country from having to pay off some of its debt and it can instead invest its own resources to preserve its biodiversity.

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What is the significance of Gabon's debt for nature swap?

Gabon's debt for nature swap is the world's second-largest debt-for-nature swap.

In May 2023, the world's first and largest debt swap to conserve oceans was signed by Ecuador.

How debt for nature swap could help South Asia?

The debt crisis in the Global South has raised the need for new solutions, and one promising approach is debt-for-nature swaps.

These swaps are seen as important because developing countries face two interconnected challenges. **Firstly,** they need to borrow money from international creditors to support their development plans. **Secondly,** they must adapt to the growing impacts of climate change and biodiversity loss.

South Asia, in particular, faces significant challenges in this regard. Sri Lanka is still grappling with the consequences of poor financial management. Pakistan's economy, burdened with debt, is struggling to recover from the 2022 floods.

The Maldives, Nepal, and Bangladesh are all dealing with rising food and housing costs, while India's economic growth has slowed considerably.

157. Pacific islands face risk of drowning as sea levels rising faster than expected

Source: The post is based on the article **"Pacific islands face risk of drowning as sea levels rising faster than expected"** published in **India Today on 18th August 2023.**

What is the News?

The World Meteorological Organization (WMO) has released a report titled "State of Climate in the South-West Pacific, 2022".

What are the key findings of the report?

Rising Sea Levels: The report has issued a warning about rising sea levels in the Pacific Islands. They report that sea levels in this region are increasing at a rate of about 4 mm per year, which is slightly higher than the global average.

– This poses a significant threat to low-lying islands like Tuvalu and the Solomon Islands, as it could lead to destructive floods, damaging agricultural lands and habitable areas.

Marine Heatwaves: The report highlights the occurrence of long-lasting marine heatwaves in the area northeast of Australia and south of Papua New Guinea. These heat waves have had adverse effects on marine life and the livelihoods of local communities.

Disasters: The number of disasters reported in the region in 2022 decreased by around 39 per cent compared to 2021.

– The region reported 35 natural hazards compared to 57 in 2021, but the overall economic damages were 53% more than the loss in 2021.

– Nearly 98% of the economic loss has been due to floods. The economic losses associated with flooding in 2022 were more than four times the average over the past 20 years (2002-2021).

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158. India announces definition of Green Hydrogen

Source: The post is based on the article **"India announces definition of Green Hydrogen"** published in **PIB on 19th August 2023.**

What is the News?

The Ministry of New and Renewable Energy has notified the green hydrogen standard for India.

What is the definition of Green Hydrogen given by the Ministry of New and Renewable Energy?

Green hydrogen is the hydrogen derived from renewable energy sources, either via electrolysis or biomass conversion.

The definition also encompasses green energy preserved in energy storage systems.

What are the emission thresholds that must be met in order for hydrogen produced to be classified as 'Green'?

The emission thresholds for production of hydrogen to be classified as 'green' are: Green hydrogen having a well-to-gate emission of not more than two kg carbon dioxide (CO_2) equivalent per kg hydrogen(H_2).

The well-to-gate emission includes water treatment, electrolysis, gas purification, drying and compression of hydrogen.

The scope of these standards encompasses both electrolysis-based and biomass-based hydrogen production methods.

Who will certify Green Hydrogen projects?

The Bureau of Energy Efficiency (BEE) under the Ministry of Power will be the nodal authority for accreditation of agencies for the monitoring, verification and certification for green hydrogen production projects.

159. Luna 25, Russia's first lunar mission in 47 years, crashes into the moon

Source: The post is based on the article **"Luna 25, Russia's first lunar mission in 47 years, crashes into the moon"** published in **The Hindu on 21st August 2023.**

What is the News?

Russia's Luna-25 spacecraft has crashed on the Moon's surface after it went into an uncontrolled orbit.

What is Luna 25?

Click Here to read

Why did Luna 25 crash?

Luna 25 was supposed to land in the moon's south pole region, where scientists believe there might be valuable frozen water and precious elements.

But the spacecraft went into an uncontrolled orbit. As a result, the spacecraft moved unpredictably and ultimately collided with the moon's surface.

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What are the implications of the failure of Luna 25 for Russia?

Luna 25 was Russia's first mission to the Moon since 1976, when it was part of the Soviet Union.

Only three governments have managed successful moon landings: the Soviet Union, the U.S., and China.

The failure of Luna 25 underscores the decline of Russia's space power status, from a time when it was the first country to launch an artificial satellite and launched the first human, both to earth orbit.

160. Cabinet approves signing of MoU between India and Suriname in the field of the regulation of medicines

Source: The post is based on the article **"Cabinet approves signing of MoU between India and Suriname in the field of the regulation of medicines"** published in **PIB on 16th August 2023.**

What is the News?

A Memorandum of Understanding (MoU) has been signed between the Indian Pharmacopoeia Commission(IPC) and the Ministry of Health of Suriname, aiming to recognize the Indian Pharmacopoeia (IP) as a standard for medicines in Suriname.

What is the Indian Pharmacopoeia Commission(IPC)?

Indian Pharmacopoeia Commission (IPC) is an autonomous institution of the Ministry of Health and Family Welfare.

IPC is created to set standards of drugs in the country. Its basic function is to regularly update the standards of drugs commonly required for treatment of diseases prevailing in this region.

It publishes official documents for improving Quality of Medicines by way of adding new and updating existing monographs in the form of **Indian Pharmacopoeia (IP).**

It further promotes rational use of generic medicines by publishing **National Formulary of India.**

It also provides **IP Reference Substances (IPRS)** which act as a fingerprint for identification of an article under test and its purity as prescribed in IP.

What are the benefits of International recognition of the Indian pharmacopeia Standards?

Firstly, it would boost the export of Indian pharmaceutical products to these countries as it would remove double regulation, duplication in testing and post importation checks. Indian drug exporters would thus gain a competitive edge and trade would become more remunerative.

Secondly, importing nations would gain access to quality Indian medical products at affordable prices.

Thirdly, manufacturers in importing countries would have better scope for development of generic medicines contributing to availability of affordable medicines to their citizens.

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161. What are Acoustic Side Channel Attacks and how is AI used to increase its accuracy?

Source: The post is based on the article **"What are Acoustic Side Channel Attacks and how is AI used to increase its accuracy?"** published in **The Hindu on 21st August 2023.**

What is the News?

A research paper titled "A Practical Deep Learning-Based Acoustic Side Channel Attack on Keyboards" has shown how accurate Acoustic Side Channel Attacks (ASCA) can be when advanced deep learning models are used to recognize laptop keystrokes.

What are Side Channel Attacks(SCA's)?

Side Channel Attacks(SCAs) are a method of hacking a cryptographic algorithm based on the analysis of auxiliary systems used in the encryption method.

These can be performed using a collection of signals emitted by devices including electromagnetic waves, power consumption, mobile sensors as well as sound from keyboards and printers to target devices.

Once collected, these signals are used to interpret signals that can be then used to compromise the security of a device.

What are Acoustic Side Channel Attacks(ASCA)?

Acoustic Side Channel Attacks(ASCA) uses the sound of clicks generated by a keyboard to analyze keystrokes and interpret what is being typed to leak sensitive information.

These attacks are particularly dangerous as the acoustic sounds from a keyboard are not only readily available but also because their misuse is underestimated by users.

The use of laptops has increased the scope of ASCAs as laptop models have the same keyboard making it easier for AI-enabled deep learning models to pick up and interpret the acoustics.

What does the study say about Acoustic Side Channel Attacks(ASCA)?

The study has found that the advancement of AI and deep learning has heightened the risks associated with ASCAs.

For instance, it found that when the AI model was made to recognise keystrokes using audio captured through a smartphone microphone, it was able to achieve 95% accuracy.

The study emphasizes that users can adopt defence strategies such as altering typing techniques, using touch-based typing, employing stronger passwords with varied cases and avoiding easily predictable phrases to mitigate the threat of ASCAs.

162. Department of Animal Husbandry & Dairying will receive 25 million USD grant under Pandemic Fund for strengthening Animal Health System of India

Source: The post is based on the article **"Department of Animal Husbandry & Dairying will receive 25 million USD grant under Pandemic Fund for strengthening Animal Health System of India"** published in **PIB on 21st August 2023.**

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What is the News?

The G20 Pandemic Fund has granted $25 million to India's Department of Animal Husbandry & Dairying to aid pandemic preparedness and response.

What is the G20 Pandemic Fund?

The G20 Pandemic Fund was established under Indonesia's G20 Presidency.

Purpose: To finance critical investments to strengthen pandemic prevention, preparedness, and response capacities at national, regional, and global levels, focusing on low- and middle-income countries.

Hosted by: The fund is hosted by the World Bank with WHO as technical lead.

How does the Pandemic Fund work?

The pandemic Fund secures money from donors to be distributed to low and middle-income countries for various purposes.

This includes disease surveillance, capacity building for critical health workforce, establishment of laboratories and emergency communication.

An intermediary agent will distribute these funds and also implement projects. These implementing agencies include regional development banks such as Asia Development Bank, African Development Bank, and other international organizations.

The World Bank, WHO and a governing body consisting of countries, philanthropic foundations and civil society organizations manage the pandemic fund collectively.

Membership within the governing body includes both donors and recipients to ensure inclusiveness and maintain equal decision-making power between states.

163. India, ASEAN agree to review goods trade pact by 2025 to fix 'asymmetry'

Source: The post is based on the article **"India, ASEAN agree to review goods trade pact by 2025 to fix asymmetry"** published in **The Hindu on 22nd August 2023.**

What is the News?

India and the Association of Southeast Asian Nations(ASEAN) have agreed to conclude the review of the ASEAN-India Trade in Goods Agreement(AITIGA) by 2025.

What is ASEAN-India Trade in Goods Agreement (AITIGA)?

ASEAN-India Trade in Goods Agreement is a trade deal signed in 2009.

The agreement covers trade in physical goods and products. It does not apply to trade in services.

ASEAN and India signed a separate ASEAN-India Trade in Services Agreement in 2014.Along with ASEAN-India Investment Agreement, the three agreements collectively form the ASEAN-India Free Trade Area.

Why is there a need to review the ASEAN-India Trade in Goods Agreement(AITIGA)?

Trade Deficit: In 2022-23, India's exports to ASEAN increased to $44 billion from $42.32 billion in 2021-22.

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– However, imports grew faster as it jumped to $87.57 billion in 2022-23 against $68 billion a year ago.

– The trade deficit widened to $43.57 billion in the last financial year, from $25.76 billion in 2021-22. It was just $5 billion in 2010-11.

– In this context, India's Commerce and Industry minister had said the trade agreement with ASEAN was an "ill-conceived" agreement and unfair to the Indian industry.

Other concerns of India: India has been worried about the routing of goods from third countries in India through ASEAN countries members by taking the duty advantages of the agreement.

164. Chandrayaan-3 | ISRO releases images of the far side area of the moon

Source: The post is based on the article **"Chandrayaan-3 | ISRO releases images of the far side area of the moon"** published in **The Hindu on 22nd August 2023.**

What is the News?

Indian Space Research Organisation (ISRO) has released images of the far side of the Moon.

The images were captured by the Lander Hazard Detection and Avoidance Camera (LHDAC) which is onboard the Chandrayaan-3 Lander.

What is the Far Side of the Moon?

The far side is also known as the dark side area of the moon as it is always hidden from the earth.

Why is it called Far Side of the Moon?

Over billions of years, Earth's gravitational pull has brought the Moon's spin into sync with its orbit.

It takes exactly 28 days for the Moon to complete one rotation, and the same time to make one orbit around Earth. This leads to a phenomenon called "tidal locking".

With the Moon's rotation and orbit keeping it forever in step with the Earth, only one part of it is visible from Earth at any time. The unseen part is called "far side of the Moon" also known as the dark side area of the moon.

Note: The term "dark side" can be misleading because it doesn't necessarily mean that this side is always in darkness. It experiences day and night like the near side but is not visible to us from Earth.

What is the significance of Far Side of the Moon?

Because the far side of the Moon is shielded from radio transmissions from the Earth, it is considered a good location for placing radio telescopes for use by astronomers.

165. Hangul population in J&K sees uptick, wildlife dept elated

Source: The post is based on the article "**Hangul population in J&K sees uptick, wildlife dept elated**" published in **Hindustan Times on 19th August 2023.**

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What is the News?

Hangul, the unique Kashmir stag and the state animal of Jammu and Kashmir has experienced a slight increase in its population after a period of two years.

What is Hangul?

Hangul is the state animal of Jammu & Kashmir. It is subspecies of Central Asian red deer endemic to Kashmir and surrounding areas.

The last viable population of Hangul in the Indian sub-continent exists only in the protected Dachigam National Park, a vast mountainous 141 sq km sanctuary on the outskirts of Srinagar.

IUCN Status: Critically Endangered

Indian Wildlife Protection Act: Schedule I

Census: A population census of Hangul species is conducted every two years.

Threats: Habitat fragmentation and poaching, livestock grazing, predation, ecological threats and disturbed corridors and landscapes.

What is the population of Hangul according to the latest census?

The population of Hangul species has increased to 289 in 2023 from 261 in 2021, a 10% increase.

The major factors which led to stabilization of the population of the Hangul are: One is the protection of its habitat in the form of Dachigam and another is the restricting of human movement inside the core area of the park to almost zero.

166. India-USA announces 1st Joint Call for proposal under MeitY-NSF research collaboration

Source: The post is based on the article **"India-USA announces 1st Joint Call for proposal under MeitY-NSF research collaboration"** published in **PIB on 21st August 2023.**

What is the News?

The Ministry of Electronics and Information Technology(MeitY) has announced its 1st Joint Call for proposals under the MeitY- National Science Foundation (NSF) research collaboration.

What is the National Science Foundation (NSF)?

The National Science Foundation is an independent agency of the US government that supports fundamental research and education in all the non-medical fields of science and engineering.

Its medical counterpart is the National Institutes of Health.

What is the MeitY- National Science Foundation (NSF) research collaboration?

MeitY-National Science Foundation (NSF) has signed an Implementation Arrangement (IA) on Research Collaboration in May 2023.

This MeitY – NSF collaborative research opportunity focuses specifically upon discoveries and innovations in areas of mutual interest such as semiconductor research, next generation communication systems, cyber-security, sustainability and green technologies and intelligent transportation systems.

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Through this research agency partnership, U.S. researchers may receive funding from NSF and India researchers may receive funding from MeitY.

167. SC panel flags loss of essential documents of people in Manipur

Source: The post is based on the article **"SC panel flags loss of essential documents of people in Manipur"** published in **The Hindu on 22nd August 2023.**

What is the News?

A committee led by former Jammu and Kashmir High Court Chief Justice **Gita Mittal** appointed by the Supreme Court has submitted three reports regarding the situation in Manipur following recent violence.

About the committee on Manipur Violence:

The Supreme Court had set up a committee comprising three woman judges — J&K High Court's former Chief Justice Gita Mittal, Bombay High Court's retired judge Shalini Phansalkar Joshi and Delhi High Court's former judge Asha Menon.

It had tasked the committee with collecting information related to violence against women in Manipur as well as monitoring the conditions at relief camps and deciding on compensation to victims.

The committee has been entrusted with the payment of compensation and helping the victims of violence.

It has been mandated to submit its updated status report on a fortnightly basis directly to the Supreme Court.

What are the three reports submitted by the committee on Manipur?

The first report highlighted the loss of documents of Manipur citizens in the riots. This report calls for assistance in reconstruction of important documents such as Aadhaar cards etc for such citizens.

The second report called for the Manipur Victim Compensation scheme to be improved and updated bearing in mind the NALSA scheme.

— For instance, the Manipur Victim Compensation Scheme states that if benefits under other schemes have been received by a victim, no benefit shall be provided to such a person under the Manipur Victim Scheme.

The third report proposed the appointment of domain experts to facilitate its functioning.

168. Gondia, Gadchiroli to host Maha's 1st elephant reserve

Source: The post is based on the article "**Gondia, Gadchiroli to host Maha's 1st elephant reserve"** published in **TOI on 22nd August 2023,**

What is the News?

The Maharashtra state wildlife department has proposed creating the Navegaon Elephant Reserve in an area in Gondia and Gadchiroli districts.

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This move aims to conserve wild elephants in the region, where around 23-25 elephants have been residing.

What is the significance of this proposal?

At present, there are 33 elephant reserves in the country. If approved, Navegaon Elephant Reserve could become the 34th elephant reserve in India and the 5th largest in terms of area.

Elephant Conservation in India:

Elephant has been recognised as a national heritage animal of India.

India has the largest population of Asian elephants with nearly 30,000 wild and about 3,600 captive ones.

Government of India had launched Project Elephant in 1991-92. The project was intended to provide financial and technical support to the elephant range states for the protection of elephants, their habitats, and corridors and address the issue of human-animal conflict. It also sought to promote the welfare of captive elephants.

IUCN Red List: Endangered

CITES: Appendix I

Wildlife (Protection) Act, 1972: Schedule I

Concerns: According to the Wildlife (Protection) Act (WLPA) 1972, a 'protected area' can be one of a 'national park', a 'wildlife sanctuary', a 'conservation reserve' or a 'community reserve'.

– Hence, in the eyes of the law, an elephant reserve is no different from forest land or revenue land.

– The activities that are prohibited in protected areas – including mining, oil- and gas-drilling, dams, etc. – are permissible in an elephant reserve.

169. ICSSR to develop Indianised research methodology tools

Source: The post is based on the article **"ICSSR to develop Indianised research methodology tools"** published in **The Hindu on 22nd August 2023.**

What is the News?

The Indian Council of Social Science Research(ICSSR) will soon announce the results of the research award proposals it had invited to study the impact of various schemes and public policy initiatives of the Union government.

About 500 researchers will get funding for the studies based on fieldwork focused on a specific geographical region.

What is the study conducted by ICSSR on the impact of the various government schemes?

The Indian Council of Social Science Research had recently given a special call for short term research proposals to assess the reach and socioeconomic impact of 31 government schemes, including Ujjwala Yojana, Awas Yojana, Ayushman Bharat, New Education Policy, Mudra Yojana and Start up India among others.

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Purpose behind the research: The idea behind this research is to independently assess the impact of various government schemes and to understand the bottlenecks being seen in their implementation at the ground level.

– **For example,** take the Ujjawala scheme.It will be important to assess how it has impacted the life of women. What is the continuity of the usage cylinders distributed under the scheme and if there are any bottlenecks.

– Similarly, in the Mudra scheme of financial inclusion, we have some government data, but it would be interesting to actually go to the ground and assess its impact on entrepreneurs.

Funding: Each selected project will be funded up to ₹6 lakh. For collaborative projects, the funding is fixed at up to ₹30 lakh.

Eligibility: Research scholars from recognised institutions, civil servants, officers from defence services and other professionals with social science perspective having not less than 20 years of regular service will be eligible to apply,

170. UP, Gujarat among top 5 states in new investments; Kerala, Assam at bottom

Source: The post is based on the article **"UP, Gujarat among top 5 states in new investments; Kerala, Assam at bottom"** published in **Indian Express on 20th August 2023.**

What is the News?

According to a study by the Reserve Bank of India (RBI), five states accounted for more than half of the total bank-assisted investment proposals made during the year 2022-23.

What are the key findings of the RBI study?

Overall investment plans shot up by 79.50% with a capital outlay of around 3.5 lakh- the highest since 2014-15.

– Significantly, this rise in new investments has happened at a time when the RBI hiked the repo rate.

– Pick-up in investments is largely due to the capital expenditure plans of the government.

State wise distribution of investments: Five states accounted for more than half of the total bank-assisted investment proposals made during the year 2022-23

– These five states are- Uttar Pradesh, Gujarat, Odisha, Maharashtra, and Karnataka.

– On the other hand, Kerala, Goa and Assam were at the bottom of the table in getting the lowest number of new investments.

Sectors which received investment: The investment in green field (new) projects accounted for the largest share of 93.1% in the total cost of projects financed by banks and Financial institutions(FIs) during 2022-23.

– Infrastructure sector comprising power, telecom, ports and airports, storage and water management, special economic zone (SEZ), industrial, biotech and IT park, and roads & bridges, remained the major sector accounting for 60% share in the total cost of projects during 2022-23

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171.   Bharat NCAP: India gets its own car crash testing programme

Source: The post is based on the article **"Bharat NCAP: India gets its own car crash testing programme"** published in **The Hindu on 23rd August 2023.**

What is the News?

The Union Minister of Road Transport and Highways has launched the Bharat New Car Assessment Programme (Bharat NCAP).

What is Bharat New Car Assessment Programme (Bharat NCAP)?

Bharat New Car Assessment Programme (Bharat NCAP) is a novel safety assessment initiative introduced by the Ministry of Road Transport and Highways.

Aim: To provide a tool to the car customers to make a comparative assessment of crash safety of motor vehicles available in the market.

The programme is modeled on the Global New Car Assessment Programme (Global NCAP), a project of the Towards Zero Foundation which is a U.K.-registered charity that promotes the universal adoption of the United Nation's most important motor vehicle safety standards worldwide.

Applicable to: The programme will be applicable to passenger vehicles with not more than eight seats in addition to the driver's seat with gross vehicle weight not exceeding 3,500 kg.

– The programme will be based on the soon-to-be published Automotive Industry Standard 197, which lays down testing protocols.

Rating: A rating from one star to five stars will be assigned to a vehicle after an evaluation of three parameters — adult occupant protection, child occupant protection, and safety assist technologies present in the car.

Voluntary programme: The programme is voluntary except in certain cases such as a base variant of a popular vehicle model (minimum clocked sale of 30,000 units), or when the Ministry recommends a model for testing based on market feedback or in the interest of public safety.

What is the significance of Bharat NCAP Programme?

Bharat NCAP serves as a consumer-centric platform enabling car buyers to make safer choices based on the star ratings of vehicles.

It also encourages healthy competition among original equipment manufacturers (OEMs) in India to produce safer vehicles.

Globally, road traffic injuries are a leading cause of death, particularly among individuals aged 15 to 49 years. Annually, approximately 1.3 million lives are lost due to road traffic accidents.

The program aims to address this issue, given that over 90% of these fatalities occur in low and middle-income countries. India holds a significant portion of these fatalities accounting for about 11% of global road traffic deaths.

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172.   G20 countries gave record $1.4 trillion to support fossil fuels in 2022: report

Source: The post is based on the article **"G20 countries gave record $1.4 trillion to support fossil fuels in 2022: report"** published in **Indian Express on 23rd August 2023.**

What is the News?

International Institute for Sustainable Development (IISD) and partners has released a study titled "Fanning the Flames: G20 Provides Record Financial Support for Fossil Fuels".

What are the key findings of the study?

G20 members provided a record $1.4 trillion (approximately Rs 116 lakh crore) in public money to support fossil fuels in 2022.

This support includes fossil fuel subsidies ($1 trillion), investments by state-owned enterprises ($322 billion) and lending from public financial institutions ($50 billion).

While much of this was support for consumers, around one third (USD 440 billion) was driving investment in new fossil fuel production.

What are the concerns raised by the study?

G20 members' financial support for fossil fuels in 2022 is more than double the pre-Covid-19 and pre-energy crisis levels of 2019.

– This support also perpetuates the world's reliance on fossil fuels, paving the way for yet more energy crises due to market volatility and geopolitical security risks.

– It also severely limits the possibilities of achieving climate objectives set by the Paris Agreement by incentivizing greenhouse gas (GHG) emissions while undermining the cost-competitiveness of clean energy.

What are the recommendations given by the study?

– Stop providing public funds to fossil fuels, except for ensuring energy access for the poorest.

– Wealthier G20 nations, with higher historical emissions, should take the lead.

– Encourage consumers and investors to move away from fossil fuels by setting minimum carbon taxes (between $25 and $75 per tonne of CO2) based on a country's income.

– Use the revenues from cutting subsidies and carbon pricing to help low-income households and promote clean energy.

– Support developing countries through flows of finance, knowledge, capacity and technology to ensure smooth transition towards clean energy.

173.   Hubble Space Telescope captures image of irregular galaxy ESO 300-16

Source: The post is based on the article **"Hubble Space Telescope captures image of irregular galaxy ESO 300-16"** published in **News9 on 22nd August 2023.**

What is the News?

The Hubble Space Telescope captured an image of the irregular galaxy named ESO 300-16.

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What is ESO 300-16?

ESO 300-16 is an irregular galaxy. It is located at a distance of 28.7 million lightyears in the southern constellation of Eridanus.

It is made of many tiny stars all clumped together, surrounded in a diffuse light. In the central, brightest part there is a bubble of blue gas.

The galaxy is surrounded by mostly very small and faint objects, though there are bright stars above and to the left of it, and a string of galaxies nearby.

What is an Irregular Galaxy?

An irregular galaxy is a galaxy that does not have a distinct regular shape, unlike a spiral or an elliptical galaxy.

Irregular galaxies have unusual shapes, like toothpicks, rings, or even little groupings of stars.

They range from dwarf irregular galaxies with 100 million times the Sun's mass to large ones weighing 10 billion solar masses.

Irregular galaxies may hold significant amounts of gas and dust – essential ingredients for making new stars.

Formation: Astronomers think these galaxies' odd shapes are sometimes the result of interactions with others.

– **For example,** one spiral galaxy passing another with a stronger gravitational pull could lose some of its material, become distorted, and morph into a new shape. Some, like gas-rich dwarf galaxies, may be new, formed by material pulled from such encounters **(or)**

– When galaxies collide, they create a larger, oddly shaped mashup. Some scientists theorize that some large irregular galaxies could represent an intermediate step between spiral and elliptical galaxies.

What is the Hubble Space Telescope?

Click Here to read

174. Price hike on some food items transitory, elevated inflation warrants greater vigil: FinMin

Source: The post is based on the article **"Price hike on some food items transitory, elevated inflation warrants greater vigil: FinMin"** published in **Indian Express on 23rd August 2023.**

What is the News?

The Finance Ministry has released its monthly economic review for July,2023.

What are the key observations made by the Finance Ministry?

Food Prices: Food prices had recently gone up but it's expected to be temporary. Global factors, like Russia terminating the Black Sea Grain deal and domestic factors such as white fly disease and uneven monsoons influenced food prices.

– But the government has already taken steps to control food prices, and with new supplies coming in, prices should go down soon.

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– For example, tomato prices should drop by the end of August or early September, and importing more tur dal should help with pulse prices.

– However, inflation might still be a concern because of global uncertainty and local issues. The Government and the Reserve Bank of India need to keep a close eye on it.

Capital Expenditure: Capital expenditure measures taken by Centre have led to states also increasing their capex spending with states' capex rising by 74.3% year-on-year in Q1 FY24 and Centre's capex increasing by 59.1% in the same quarter.

– Enhanced provision for capital expenditure by the government is now leading to crowding in of private investment as seen in various economic indicators and industry reports.

Future Projections: Domestic consumption and investment demand are expected to continue driving growth.

– Government has been making various attempts to raise investment by the private sector.

– PLI and new-age sectors (such as green hydrogen, semiconductors, wearables and solar modules) are expected to account for nearly 17 percent of the capex between FY13 and FY27.

175.   BRICS has become a platform for Global South: PM

Source: The post is based on the article **"BRICS has become a platform for Global South: PM"** published in **The Hindu on 23rd August 2023.**

What is the News?

The Indian Prime Minister is in South Africa for the 15th BRICS Summit to be held in Johannesburg.

What is BRICS?

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What is the theme of the 15th BRICS Summit?

Theme: "BRICS and Africa: Partnership for mutually accelerated growth, sustainable development and inclusive multilateralism"

Significance: The 15th BRICS summit is the first in-person meet since 2019 and the COVID-19 pandemic and the first since the Russian war in Ukraine.

What is the BRICS agenda for 2023?

Expansion of BRICS is one of the key agenda of the 15th BRICS Summit. All the bloc members first need to agree on new criteria new members need to meet.

– More than twenty countries have formally expressed an interest in joining the grouping, including Saudi Arabia and Iran.

The group will also discuss reducing the dollar's dominance and several BRICS nations have already begun their trade in local currencies.

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Why is this BRICS summit important for India?

Firstly, this BRICS summit carries special importance for India. This is the first in-person summit since the military standoff with China at the Line of Actual Control began in 2020.At the BRICS meet, Indian Prime Minister will come face to face with the Chinese President.

– This meeting would be significant in terms of resolving the LAC situation, where an estimated 1 lakh soldiers stand at the boundary on either side.

Secondly, for India, the platform could be a means of establishing its larger efforts to represent the Global South.

176.   Researchers unveil 'demon particle' that can lead to making superconductors

Source: The post is based on the article **"Researchers unveil 'demon particle' that can lead to making superconductors"** published in **Business Standard on 16th August 2023.**

What is the News?

Researchers at the University of Illinois have discovered a **Demon Particle** that could lead to the making of superconductors that can operate at room temperature.

What is a Demon Particle?

Demon is a "composite" particle made up of a combination of electrons, in a solid

The Demon Particle was first theorized by **David Pines in 1956.**

Pines predicted that electrons in a solid can do something strange. While they normally have a mass and an electric charge, Pines asserted that they can combine to form a composite particle that is **massless, neutral, and does not interact with light**. He called this particle a "**demon.**"

Physicists have speculated that demon particle could play an important role in the characteristics of many metals. But they have never been able to confirm its existence until now.

The researchers at the University of Illinois have now discovered a Demon Particle.

What is the significance of this discovery?

Superconductors, which can conduct electricity without resistance, currently require extremely low temperatures, often below 100 degrees Fahrenheit.

This discovery of the Demon Particle could lead to the making of superconductors that can operate at room temperature.

177.   Brazil found the last survivors of an Amazon tribe. Now what?

Source: The post is based on the article **"Brazil found the last survivors of an Amazon tribe. Now what?"** published in **New York Times on 19th August 2023.**

What is the News?

Recently, the last survivors of an Amazon rainforest tribe called Piripkura were found in Brazil.

What is the Piripkura Tribe?

The Piripkura tribe is a small and indigenous tribe from the Mato Grasso region of Brazil.

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The tribe is known for their extreme isolation and efforts to maintain its traditional way of life.

Their land lies within the Amazon rainforest, an area that is rich in biodiversity and crucial for the ecological balance of the region.

Population of Piripkura Tribe:

The Piripkura tribe's population is estimated to **consist of merely three individuals.**

Conducting an accurate census is complicated due to their isolation and unique circumstances.

The Piripkura tribe people have faced significant challenges due to encroachment on their land by illegal logging, mining and other forms of land exploitation.

What are the other indigenous tribes residing in the Amazon Rainforest?

Yanomami Tribe: They are a group of around 35,000 people who live in the northern part of the Amazon Basin in Brazil and Venezuela. They have a rich culture and deep spiritual connection to the forest, which is central to their daily life.

Kayapo Tribe: They live in the central part of the Amazon Basin in Brazil. They are known for their elaborate body painting and beadwork.

Awa Tribe: It is a tribe that resides in the northern Amazon Basin of Brazil. They are known for their musical traditions and vibrant dances.

178. Developers, financiers will have to take 'haircuts': Committee on stalled housing projects suggests

Source: The post is based on the article **"Developers, financiers will have to take 'haircuts': Committee on stalled housing projects suggests"** published in **Indian Express on 22nd August 2023.**

What is the News?

A committee formed by the Union Housing and Urban Affairs Ministry to suggest ways to revive stalled real estate projects has submitted its report.

About the committee to examine stalled Real Estate projects:

The committee was chaired by former NITI Aayog CEO and India's G20 Sherpa, Amitabh Kant.

Mandate: To examine stalled real estate projects and recommend ways to complete them.

What is the status of housing projects?

The committee cited the Indian Banks' Association (IBA) as estimating that 4.12 lakh dwelling units of Rs.4.08 lakh crore were "stressed" and about 2.40 lakh (44%) of these were in the National Capital Region.

Another 21% of the units were in the Mumbai Metropolitan Region.

The committee concluded that the main reason for the stress in these projects was the "**lack of financial viability**", which had led to cost overruns and time delays.

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What are the recommendations given by the committee?

In order to make the projects viable, encourage stakeholders — that is the developers, financiers, land authorities etc to take a "haircut" or accept less than what is due to them.

Delink the grant of registration or sub-lease by the land authorities to the homebuyers from the recovery of dues from developers. About 1 lakh homebuyers would benefit from this.

Expedite the issuance of no-objection and completion certificates for projects that are substantially complete but face administrative obstacles.

Recommend state governments establish a rehabilitation package to revive stalled projects with a commitment from developers to complete them within three years.

Reserve judicial interventions like using the Insolvency and Bankruptcy Code as a last resort.

Suggest a "Zero Period" for two years, starting from the onset of the COVID-19 pandemic in 2020, where interest and penalties on developers are waived.

Developers should be allowed to get a "co-developer" on board to complete the work.

Propose a "partial surrender policy" where developers can return unused land to authorities in exchange for a waiver of dues on that land.

Who will implement these recommendations?

Land is a state subject. Hence, most of the recommendations of the committee fall within the purview of the respective state governments.

The Ministry of Housing and Urban Affairs will send the recommendations of the committee to all states, who will decide on if and what they want to implement.

179.   A revived trilateral- Japan and South Korea are shoring up security

Source: The post is based on the article "A revived trilateral- Japan and South Korea are shoring up security" published in "Business Standard" on 23rd August 2023.

Syllabus: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News: This article discusses how Japan, South Korea, and the US held a significant summit at Camp David, reinforcing ties to address security and economic concerns in the Indo-Pacific. These efforts are influenced by historical factors, China's actions, and shifts in global partnerships.

About Trilateral Summit at Camp David:

Japan, South Korea, and the US met to deepen cooperation.

The summit aimed at addressing security and economic concerns in the Indo-Pacific.

Prompted by historical grievances, South Korean President Yoon Suk Yeol took initiatives to mend ties.

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Resulted in both nations lifting export controls and resuming high-level defence and economic talks.

How has the relationship between Japan and South Korea evolved?

Historical:

The relationship was strained due to the Japanese occupation of Korea.

A significant issue was Korean women forced into prostitution during this occupation.

Recent Changes:

South Korean President Yoon Suk Yeol proposed a compromise on historical grievances.

He made the first visit to Tokyo by a Korean leader in 12 years.

Both countries lifted export controls against each other.

They resumed high-level defence and economic talks, indicating improved ties and cooperation.

What are the impacts of these summits?

Indo-Pacific Security:

The trilateral summit between Japan, South Korea, and the US can enhance security in the Indo-Pacific against potential threats.

Japan desires greater engagement with the North Atlantic Treaty Organization (NATO).

South Korea's arms export industry grew rapidly between 2017 and 2021, emphasizing its role in regional defense.

Impacts on India and Quad:

Questions arise about India's capability and willingness to partner with the West.

As the Quad prioritizes development, other regions are forming alternative, security-centric alliances.

Economic Security:

Countries aim to diversify from China-centric supply chains for stability.

Japanese and South Korean companies express concerns about their supply chain vulnerabilities intersecting with both the West and China.

These corporations believe that a trilateral partnership can protect them against US protectionist policies and other geopolitical risks.

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180. National Curriculum Framework proposes Board exams twice a year

Source: The post is based on the article **"National Curriculum Framework proposes Board exams twice a year"** published in **The Hindu on 24th August 2023.**

What is the News?

The Union Minister for Education has released the National Curriculum Framework for School Education (NCF-SE).

What is the National Curriculum Framework(NCF)?

Click Here to read

What is the National Curriculum Framework for School Education (NCF-SE)?

The National Curriculum Framework for School Education (NCF-SE) is the curriculum framework for the 5+3+3+4 design of schooling as proposed by the National Education Policy 2020 (NEP 2020).

The framework ensures that it covers all stages of schooling. It sets clear learning standards and competencies, enabling teachers to foster critical thinking, creativity, and genuine understanding.

The framework also empowers educators, encourages engaging pedagogies and emphasizes the importance of school culture and values.

Note: It's important to note that the National Education Policy(NEP) 2020 and the NCFs, based on the education policy, **are not binding on the states**.

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What are the key recommendations given in the framework?

NEW NATIONAL CURRICULUM

The education ministry has announced a new National Curriculum Framework for school education, which promises to usher in greater curricular flexibility and choice for students. There will be a greater focus on Indian languages. Education minister Dharmendra Pradhan in a tweet said that all efforts will be made to bring out NCF 2023 aligned textbooks by the next academic session. There will be a choice of appearing in two board exams, which will be introduced later. ET takes a look:

The Big Shift

- Board exams twice a year
- Two languages compulsory in classes 11 and 12 instead of the current one language
- The 5+3+3+4 curricular and pedagogical structure
- Semester-based classes 11 & 12 with more subject choice
- Thematic approach to social science in classes 6-8
- To be 'deeply-rooted in India'

Mind Your Language

The politically sensitive three-language formula holds fort

The curriculum aims at developing linguistic proficiency for academic use in three languages by age 15 (class 10). At least two out of these three languages should be languages native to the student

Compulsory for class 11 and 12 students to take up two languages, including one Indian language. At least one language native to India will be studied at the 'literature level'

Long term:

In 10 years, Boards of Examination should be prepared to offer certification through modular examinations

Boards

All board examinations must move towards becoming 'easier' without any compromise on assessing genuine learning, by testing basic concepts and competencies across subjects, rather than rote learning, says the NCF.

Board examinations to be offered at least twice a year for students to perform well

Comprehensive test item bank aided with software will be available

Subject Wise

Proposes social science in class 6-8 (middle stage) be organised in a thematic manner and through an integrated view of history, geography, political science, economics, and other relevant disciplines, such as psychology, philosophy, anthropology, and sociology. The curriculum to have 20% local content, 30% regional and 30% national content. The remaining 20% will be global content with focus on Japan, South Africa and the US

In class 11 and 12, students can choose to do an in-depth study from a range of social science disciplines

Students from class 9 onwards will study history, geography, political science and economic life as separate units

The secondary stage has now been divided into two phases – Classes 9 and 10, and Classes 11 and 12. In 10 years, all school systems should move to a single secondary stage, where students have choice and flexibility right from class 9, says the NCF

CLASSES 9, 10, 11 & 12

a) The secondary stage will be divided into two phases:

i) Broad Curricular Areas (e.g., science, social science, humanities) in classes 9 and 10

ii) Disciplines (e.g., history, physics, and language) within each curricular area will be in classes 11 and 12

b) **To complete class 10,** students will complete two essential courses from each of the eight curricular areas available. Art education, physical education, and vocation education would have local assessments with board certification

c) **For Classes 11 & 12:** The same set of eight curricular areas will be there but choice-based courses will be designed. This phase would be divided into semesters. To get a class 12 certificate, the students should pass a total of six exams – two examinations in languages and four examinations from at least two curricular groups (with one additional optional exam)

Mathematics & Stem

Focus on fighting the 'fear of mathematics' with new and interactive pedagogy and assessment; interlinking mathematics with other disciplines. The rich history of mathematics and science in India to be incorporated in the curriculum.

Current system of study in annual and two-year patterns to move towards a semester and/or annual design for greater flexibility in course design and course options for students

Source: Economic Times

Languages: Students in Classes 9 and 10 will need to learn three languages, of which at least two will be native to India.

– In Classes 11 and 12, students will learn two languages, including one of Indian origin.

– Currently, students in Classes 9 and 10 study two languages, and students in Class 11 and 12 study one language.

Board Exams: All students will be allowed to take Board exams on at least two occasions during any given school year, with only the best score being retained.

No stream restrictions: For grades 11 and 12, the previously followed system of science, commerce and humanities streams has been eliminated.

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– Instead, the NCF says that the students will be offered "choice-based courses" that will enable flexibility and remove hard separations between disciplines and academic areas.

Mandatory Subjects: So far, the students from Classes 9 to 12 studied five mandatory subjects, with an option of adding one more subject. Now, the number of mandatory subjects for Classes 9 and 10 is seven and it's six for Classes 11 and 12.

Semester system: In the long term, all Boards should change to semester or term-based systems, where students can be tested in a subject as soon as they have completed the subject, which would reduce the content load being tested in any one examination.

Classes 6 to 8: NCF states that 20% content would be from the local level for the Social Science curriculum, 30% content would be from the regional level, 30% would be from the national level and 20% content would be global.

Environmental Education is given due emphasis across all stages of schooling, culminating in a separate area of study in the Secondary Stage.

181. India welcomes consensus-based approach to expand BRICS: PM

Source: The post is based on the article **"India welcomes consensus-based approach to expand BRICS: PM"** published in **The Hindu on 24th August 2023.**

What is the News?

At the 15th BRICS summit in South Africa, India has affirmed its endorsement for the BRICS expansion based on consensus.

Current BRICS members include Brazil, Russia, India, China, and South Africa, whose names make up the group's acronym.

What are the key highlights from PM's address at the 15th BRICS summit?

5 Point Agenda To Boost BRICS Ties: The PM has outlined a comprehensive 5-point agenda to strengthen relationships between BRICS member nations. These are:

Space Exploration Collaboration: PM suggested establishing the BRICS Research Exploration Consilium to advance space research, monitoring, and global cooperation in this arena.

Education, Skill Development, and Technology Sharing: PM emphasized the need for future-ready societies.

– He highlighted India's achievements in accessible education through the DIKSHA platform, Atal Tinkering labs for innovation, and AI-based language solutions. He offers these platforms for sharing with BRICS nations.

Skill Mapping and Mutual Growth: PM proposed utilizing skill-mapping to identify and leverage each nation's strengths, fostering growth and development through collaborative efforts.

Collective Initiative for Big Cats Conservation: Given the rich diversity of big cat populations in BRICS countries, the Prime Minister suggested collective initiatives under the umbrella of International Big Cats conservation to protect these majestic species.

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Traditional Medicine Repository: Acknowledging the unique traditional practices and ecosystems of BRICS nations, PM proposed joint efforts to develop a repository for traditional medicines.

182.   Chandrayaan-3 | India lights up the dark side of the moon

Source: The post is based on the article **"Chandrayaan-3 | India lights up the dark side of the moon"** published in **The Hindu on 24th August 2023.**

What is the News?

The Lander Module (LM) of the Chandrayaan-3 Mission has made a successful landing on the Moon's surface.

With this, India became the first country to land near the Moon's south pole and the fourth country after the erstwhile USSR, the U.S. and China to make a soft landing on the lunar surface.

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What is Chandrayaan-3?

Chandrayaan 3

The lander and rover together have six payloads to study the local properties of the area near moon's South pole

Landing site: Near lunar South pole

100km polar orbit

Vikram Lander

Solar panel

Door/ramp

Landing skid

Pragyan Rover
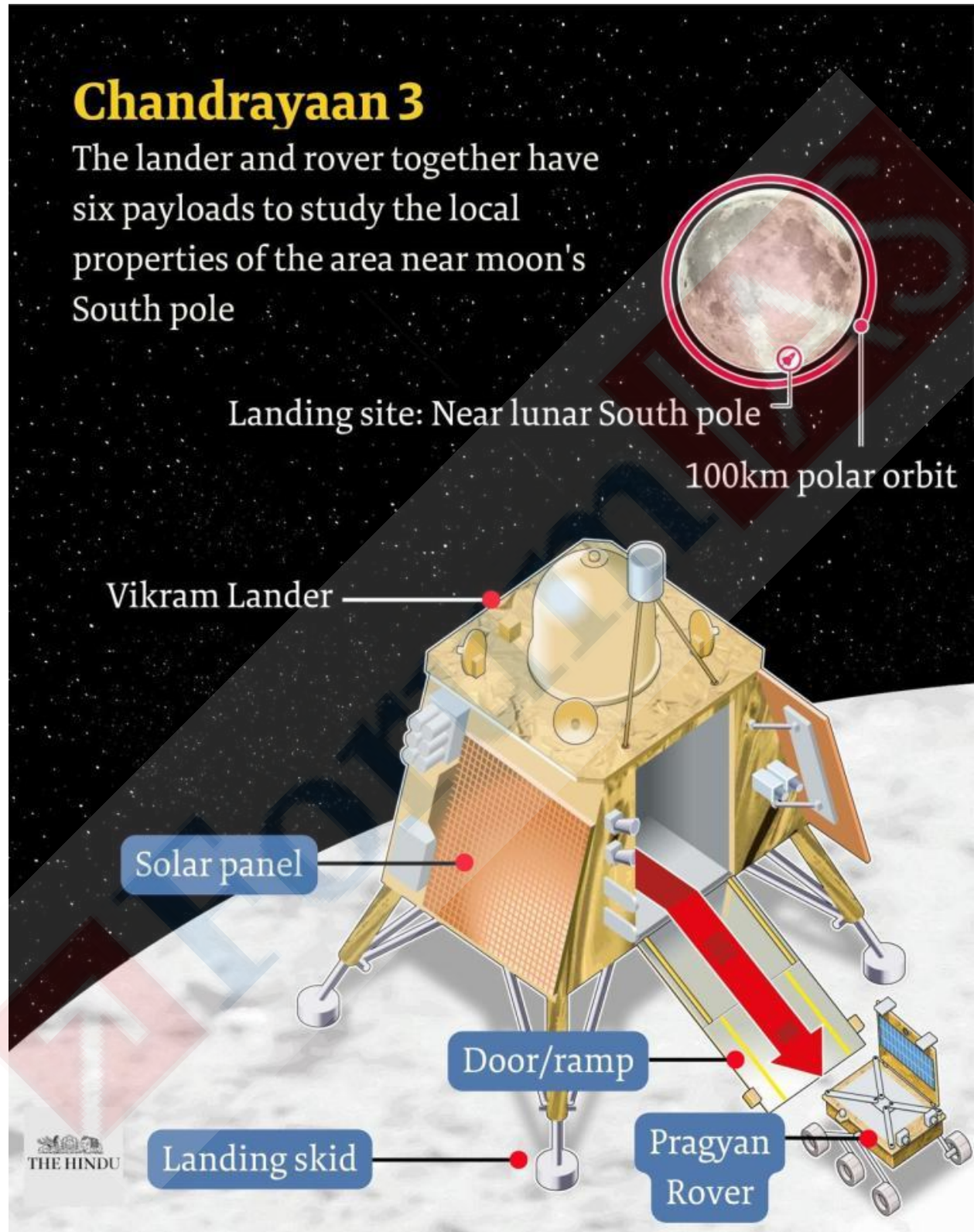
THE HINDU

Source: The Hindu

Click Here to read

What is Soft Landing?

Soft landing refers to the controlled descent and subsequent touchdown of a spacecraft on the lunar surface without causing significant damage to either the craft or its scientific instruments.

It is achieved by reducing the spacecraft's speed gradually, allowing it to touch down gently.

Such landings ensure a gentle interaction with the Moon's rugged terrain, enabling the collection of valuable data, exploration, and potentially serving as a precursor to human missions.

The landing site is near the south pole of the moon at 70 degrees latitude.

Why does ISRO want to explore the South Pole?

Click Here to read

What happens after Chandrayaan 3 successfully lands on the moon?

Spacecraft are often carrying certain instruments and experiments with them (called payloads) that observe and record what is happening in Space. This information is then relayed to Earth for scientists to analyze and study.

The six payloads on the Vikram lander and rover Pragyan remain the same as the previous mission.

There will be **four scientific payloads on the lander** to study lunar quakes, thermal properties of the lunar surface, changes in the plasma near the surface, and a passive experiment to help accurately measure the distance between Earth and the Moon. **The fourth payload comes from NASA.**

There are **two payloads on the Rover,** designed to study the chemical and mineral composition of the lunar surface and to determine the composition of elements such as magnesium, aluminum and iron in the lunar soil and rocks.

183.   Meta launches multilingual AI translation model for 100 languages

Source: The post is based on the article "**Meta launches multilingual AI translation model for 100 languages**" published in **India TV on 23rd August 2023.**

What is the News?

Meta, the technology company formerly known as Facebook has launched an advanced multilingual multimodal AI translation and transcription model named **'SeamlessM4T.'**

What is SeamlessM4T?

SeamlessM4T is the first all-in-one multilingual multimodal AI translation and transcription model.

Aim: To allow people to communicate effortlessly through speech and text across different languages.

Features:

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It is capable of **performing various tasks** including speech-to-text, speech-to-speech, text-to-speech and text-to-text translations.

– For instance, it has speech recognition for nearly 100 languages and speech-to-text translation for nearly 100 input and output languages. It also supports speech-to-speech translation in around 100 input languages and around 35 output languages including English.

It **performs the entire translation task in one go,** unlike other large translation models that divide translation across different systems.

It has the **ability to recognize when a speaker is code-switching** or when someone moves between two or more languages in one sentence.

It also **recognizes gender bias in languages** and said the model can quantify gender bias in translations.

184. After Chandrayaan-3's landing, the experiments: lunar quakes and water-ice on Moon

Source: The post is based on the article **"After Chandrayaan-3's landing, the experiments: lunar quakes and water-ice on Moon"** published in **Indian Express on 24th August 2023.**

What is the News?

India's Moon mission Chandrayaan-3 scripted history by successfully landing on the lunar surface.

What is Chandrayaan-3?

Click Here to read

The Chandrayaan-3 payloads will further the science learnings of the two predecessor missions by studying lunar quakes, mineral compositions, and the electrons and ions near the surface of the Moon.

The mission will attempt to study water-ice, the presence of which was detected by Chandrayaan-1.

Payloads of Chandrayaan-3:

Lander: The lander has four experiments on board:

– Radio Anatomy of Moon Bound Hypersensitive ionosphere and Atmosphere(RAMBHA): It will study the electrons and ions near the surface of the moon and how they change over time.

– Chandra's Surface Thermo Physical Experiment (ChaSTE): It will study the thermal properties of the lunar surface near the polar region. Chandrayaan-3 has landed around 70 degree south latitude, the closest that any spacecraft has reached to the lunar south pole.

– Instrument for Lunar Seismic Activity (ILSA): It will measure the lunar quakes near the landing site and study the composition of the Moon's crust and mantle.

– LASER Retroreflector Array (LRA): It is a passive experiment sent by NASA that acts as a target for lasers for very accurate measurements for future missions.

Rover: There are two scientific experiments on the rover:

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– LASER Induced Breakdown Spectroscope (LIBS): It will determine the chemical and mineral composition of the lunar surface.

– Alpha Particle X-ray Spectrometer (APXS): It will determine the composition of elements such as magnesium, aluminum, silicon, potassium, calcium, titanium, and iron in the lunar soil and rocks.

What are the key discoveries made by Chandrayaan 1 and Chandrayaan 2 Missions?

Water on the Moon: Chandrayaan-1 discovered water and hydroxyl molecules in the Moon's atmosphere and on its surface. Mini-SAR and Moon Mineralogy Mapper (M3) helped detect water-ice in lunar craters.

Lava Tubes: The missions found an underground lava tube, potentially suitable for human habitation, providing protection from radiation, meteor impacts, temperature extremes, and dust storms.

Magma Ocean Theory: Chandrayaan-1's M3 payload found crystals on the Moon's surface that suggest it was once molten, supporting the magma ocean hypothesis.

Dynamic Moon: Contrary to the belief that the Moon was dormant, evidence of recent volcanic activity, including volcanic vents and lava channels, was discovered.The Moon's interaction with the exosphere was observed, even without meteor impacts.

Solar Flares: Chandrayaan-2's Solar X-Ray Monitor observed solar microflares and studied the Sun's corona, providing insights into the mystery of coronal heating.

Mineral Mapping: The CLASS X-ray Fluorescence experiment mapped 95% of the lunar surface in X-rays, significantly more than previous missions, offering valuable data for future exploration.

185.   LCA Tejas successfully test-fires Astra Beyond Visual Range air-to-air missile

Source: The post is based on the article **"LCA Tejas successfully test-fires Astra Beyond Visual Range air-to-air missile"** published in **The Hindu on 24th August 2023.**

What is the News?

The Light Combat Aircraft (LCA) Tejas has successfully test fired the Astra indigenous Beyond Visual Range (BVR) air-to-air missile.

What is Astra?

ASTRA is a state-of-the-art Beyond Visual Range (BVR) air-to-air missile.

Purpose: To engage and destroy highly maneuvering supersonic aerial targets.

Developed by: Defence Research and Development Laboratory (DRDL), Research Centre Imarat (RCI) and other laboratories of the DRDO.

Features: Astra has a range of over 70 km and can fly towards its target at a speed of over 5,555 km per hour. The missile has all-weather day and night capability.

What is Astra Mk-1 Missile?

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What is Light Combat Aircraft (LCA) Tejas?

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186. Now, a bacteria that can eat methane. Can it reduce global warming? Researchers say it's possible

Source: The post is based on the article **"Now, a bacteria that can eat methane. Can it reduce global warming? Researchers say it's possible"** published in **Down To Earth on 22nd August 2023.**

What is the News?

A study has found that a specific bacteria named **Methylotuvimicrobium buryatense 5GB1C** could help reduce methane emissions from places like landfills and oil wells.

Background:

The rapid increase of the methane in the atmosphere creates great urgency to develop and deploy technologies for methane mitigation.

One approach to removing methane is to use bacteria called **methanotrophs** for which methane is their carbon and energy source.

Methanotrophs naturally convert methane to CO2 and biomass, a value-added product and a co-benefit of methane removal.

But methanotrophs grow best when the methane concentration is around 5,000-10,000 parts per million (ppm).

However, methane levels in key emission sites are around 500 ppm. So the researchers screened a range of existing methanotrophs to identify those that consume such low methane (500 ppm) at significantly higher rates.

They found that **Methylotuvimicrobium buryatense 5GB1C** performed the best at 500 ppm.

What is Methylotuvimicrobium buryatense 5GB1C?

Methylotuvimicrobium buryatense 5GB1C is a bacterial strain that consumes methane.

It can grow at low methane concentrations ranging from 200-1,000 ppm. These features make this strain a promising candidate for methane removal technology.

Significance: Methane is a significant contributor to global warming, It is over 85 times more potent than carbon dioxide (CO2) on a 20-year timescale. It is responsible for nearly 30 percent of the total global warming.

– Hence, this bacteria, if used on a large scale, could prevent 240 million tonnes of methane from entering the atmosphere by 2050.

– It can also help reduce the global temperature rise by about 0.21-0.22 degrees Celsius by 2050 by removing a substantial amount of methane.

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187.   Central Vigilance Commission reconstitutes advisory board on bank frauds

Source: The post is based on the article **"Central Vigilance Commission reconstitutes advisory board on bank frauds"** published in **The Hindu Business Line on 21st August 2023.**

What is the News?

The Central Vigilance Commission(CVC) has reconstituted the advisory board on Banking and Financial Frauds (ABBFF).

What is the Advisory board on Banking and Financial Frauds(ABBFF)?

Constituted by: Central Vigilance Commission(CVC)

Purpose: To conduct the first level examination of bank frauds before recommendations or references are made to investigative agencies such as the Central Bureau of Investigation (CBI).

Composition: It consists of the Chairman and four other members and the tenure of the Chairman/ Members would be for two years.

Functions of the board: To examine the role of officials/ wholetime directors (including ex-officials/ ex-wholetime directors) in public sector banks, public sector insurance companies; and public sector financial institutions in case of frauds amounting to ₹ 3 crore and above.

– To periodically carry out frauds analysis in the financial system and give inputs, if any, for policy formulation related to the frauds, to RBI and CVC.

– CVC or CBI may also refer any case/technical matter to the ABBFF for its advice.

– To provide advice within a month of receiving initial references from the Ministry, Department, CVC, or investigative agencies.

Headquarters: New Delhi

188.   Next mission to Moon is with Japanese, more of Chandrayaan

Source: The post is based on the article **"Next mission to Moon is with Japanese, more of Chandrayaan"** published in **Indian Express on 24th August 2023.**

What is the News?

ISRO is preparing for one more lunar mission. This one will be in collaboration with Japanese space agency, JAXA. This mission will be called **LUPEX or Lunar Polar Exploration Mission.**

What is the LUPEX Mission?

LUPEX is a joint mission of Japan Aerospace Exploration Agency (JAXA) and Indian Space Research Organisation (ISRO).

Aim: 1) To explore lunar polar region suitability for establishing a base on the Moon for sustainable activities **2)** obtain knowledge regarding the availability of lunar water-ice resources and **3)** demonstrate lunar and planetary surface exploration technologies such as vehicular transport and overnight survival.

To be Launched in: 2024-25

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Contributions: For the LUPEX mission, the launch vehicle and rover are supposed to be contributed by the Japanese agency while the lander will come from ISRO.

Proposed Instruments of LUPEX:

Permittivity and Thermo-physical investigation for Moon's Aquatic Scout (PRATHIMA): It aims to detect and quantify water-ice mixed with lunar soil, achieving in-situ detection and measurement of water content.

Lunar Electrostatic Dust EXperiment (LEDEX): It aims to detect the presence of charged dust particles and to confirm the dust levitation process in the volatile-rich polar region, and to estimate approximate dust size and flux of charged, levitated dust particles/

189. National Judicial Data Grid : a database of orders, judgments and case details created as an online platform under the eCourts Project

Source: The post is based on the article **"National Judicial Data Grid : a database of orders, judgments and case details created as an online platform under the eCourts Project"** published in **PIB on 23rd August 2023.**

What is the News?

This article provides information about the National Judicial Data Grid.

What is the National Judicial Data Grid?

National Judicial Data Grid (NJDG) is a database of orders, judgments and case details of 18,735 District & Subordinate Courts and High Courts.

It was created as an online platform under the eCourts Project.

Features: Data is updated on the grid on a near real-time basis by the connected District and Taluka courts.

– The grid provides data relating to judicial proceedings/decisions of all computerized district and subordinate courts of the country.

– Case data is available for both civil and criminal cases with the ability to perform drill-down analysis based on the age of the case as well as the State and District.

Significance of the platform: NJDG works as a monitoring tool to identify, manage and reduce pendency of cases.

– It helps in providing timely inputs for making policy decisions to reduce delays in disposing of cases and helps in reducing case pendency.

– It also facilitates better monitoring of court performance and systemic bottlenecks, and, thus, serves as an efficient resource management tool.

Recognition: The World Bank has praised the National Judicial Data Grid in the Ease of Doing Business report for 2018.It has said that the grid has made it possible to generate case management reports, thereby making it easier to enforce contracts.

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190.   BRICS now a non-Western grouping with the induction of six more member nations

Source: The post is based on the article **"BRICS now a non-Western grouping with the induction of six more member nations"** published in **The Hindu on 25th August 2023.**

What is the News?

At the 15th BRICS summit in Johannesburg (South Africa), BRICS (Brazil, Russia, India, China, and South Africa) has invited six more countries to join the group.

Which are the six countries invited by BRICS to become members?

The six countries are: Iran, the United Arab Emirates, Saudi Arabia, Argentina, Egypt and Ethiopia. Their membership will begin in January,2024.

What is the significance of BRICS expansion?

The expansion of BRICS is significant for several reasons which are:

Increased Representation: Adding new members increases the group's diversity and representation. This expansion brings in nations from different regions of the world, strengthening BRICS as a spokesperson for the developing world.

Demographic and Economic Powerhouse: BRICS already represents a substantial portion of the world's population and GDP. With these additions, it will encompass an even larger share, nearly half of the world's population. This strengthens its collective economic and demographic clout on the global stage.

Diverse Resource Base: The inclusion of Saudi Arabia, the UAE, and Iran, three major oil-producing nations adds a new dimension to BRICS. This diversifies the group's resource base and potentially enhances its influence in global energy markets.

Geopolitical Significance: The expansion reflects China's drive to make BRICS a more prominent international forum. It also highlights the growing influence of China and Russia in shaping global geopolitics, especially in regions where the West has had significant influence.

Multipolarity and Solidarity: There is a growing desire for multipolarity in international relations. BRICS provides a platform for countries from the Global South to express their solidarity and assert their influence in global affairs. This is especially important as an alternative to Western-dominated institutions.

Anti-West Sentiment: There is a perception of anti-US sentiment in the world, and some countries are looking for groupings where they can collectively challenge Western dominance. BRICS, with its diverse membership, can serve as a counterbalance to Western-centric international organizations.

Signaling Power: For Russia and Iran, BRICS membership serves as a signal to the West that they still have global partners and are not isolated. It can be a diplomatic tool to strengthen their positions in international negotiations.

Economic Assistance: Countries like Argentina, which are facing economic crises, may hope to receive financial aid or support from BRICS members.

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What BRICS expansion means for India?

India, while participating in various international forums, continues to attach importance to BRICS as a platform for non-Western cooperation.

It sees BRICS as a means to promote multipolarity and solidarity among countries of the Global South.

However, concerns have been raised that the group could become more pro-China and sideline India's voice and interests.

191.   Know your rover pragyan

Source: The post is based on the article **"Know your rover pragyan "** published in **The Hindu on 25th August 2023.**

What is the News?

ISRO has released the much-anticipated video of the Pragyan rover ramping down from the Vikram lander and walking on the lunar surface.

What is a Rover?

A rover is simply a vehicle for exploring the surface of a planet or moon.

What is Pragyan Rover?

Source: The Hindu

ISRO has deployed its lunar rover, named Pragyan as part of the Chandrayaan-3 mission. The rover's name 'Pragyan' is Sanskrit for wisdom.

Pragyan has been assigned the task of carrying out a chemical analysis of the lunar surface in situ as it moves about in the highlands near the Moon's south pole.

It is equipped with two payloads: APXS or 'Alpha Particle X-Ray Spectrometer' and the LIBS or 'Laser Induced Breakdown Spectroscope'.

– APXS will be engaged in deriving the elemental composition of the lunar surface; while LIBS will carry out experiments to determine the elemental composition of chemical elements such magnesium and aluminum etc. of lunar soil and rocks around the lunar landing site.

Cameras: Pragyan Rover has two Navigation cameras fitted in the front of the rover to navigate the Rover in the lunar terrain.

– NAVCAM-Left & NAVCAM -Right. These cameras help in path planning and obstacle avoidance, to ensure that there is no rock, there is no obstacle, there is no pit etc. in the path.

– It is like a human being or robot having eyes, so wherever the rover is going to move there is a path planning which is done based on the stereo images from Navcams.

Lifespan: Pragyan has a mission life of 1 lunar day, approximately equal to 14 Earth days. This will be the period over which the rover will try to fulfill its objectives.

Why does the Pragyan rover have a short lifespan? When the sun sets on the moon, an area will become dark and very cold. This can damage the battery and other electronics components. When the sun rises again, after 14 days, the rover can 'return' to life if the components have survived. But this is highly unlikely.

192.   The Fujiwhara effect: When cyclones 'dance'

Source: The post is based on the article **"The Fujiwhara effect: When cyclones 'dance'"** published in **Indian Express on 24th August 2023.**

What is the News?

The western coast of the United States recently experienced Hurricane Hilary, which transformed into a sub-tropical storm upon reaching the US.

This event led to the National Hurricane Centre (NHC) issuing its inaugural tropical storm watch for certain areas of Southern California.

California had an exceptionally wet winter with multiple 'atmospheric river' storms, and the area also witnessed the intriguing phenomenon of the 'Fujiwhara effect' during one of these storms, where two low-pressure areas interacted in an unexpected manner.

What is the Fujiwhara effect?

As per the National Weather Service (NWS), when two hurricanes or cyclones spinning in the same direction are brought close together, they begin 'an intense dance around their common center' – this interaction between two cyclones is called the **Fujiwhara effect.**

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Fujiwhara effect was **identified by Sakuhei Fujiwhara,** a Japanese meteorologist whose first paper recognising the Fujiwhara cases was published in 1921.

The first known instance of the effect was in 1964 in the western Pacific Ocean when typhoons Marie and Kathy merged.

What happens in the Fujiwhara effect?

According to the National Weather Service, one of three things happen when the storms come near each other:

– If one hurricane is a lot stronger than the other, the smaller one will orbit it and eventually come crashing into its vortex to be absorbed **(or)**

– If the two storms are close to the same size, they can gravitate toward each other until they reach a common point where they either merge or they spin each other around for a while before they spin off in different directions **(or)**

– If the two hurricanes are intense enough, they may merge with one another, leading to the formation of a mega cyclone capable of wreaking havoc along coastlines.

193.   PM seeks level playing field for smaller e-com companies

Source: The post is based on the article **"PM seeks level playing field for smaller e-com companies"** published in **The Hindu on 25th August 2023.**

What is the News?

The Indian Prime Minister addressed the G20 Trade and Investment Ministerial summit.

What are the key takeaways from the PM's address at the G20 Trade Summit?

Rebuild Confidence: COVID-19 pandemic and geopolitical tensions have challenged the world economy.PM called on the G20 countries to work together to restore confidence in international trade and investment.

– He proposed creating a Generic Framework for Mapping Global Value Chains to assess vulnerabilities, minimize risks, and enhance resilience.

MSMEs: Micro, Small and Medium Enterprises (MSMEs) account for 60% to 70% of employment and 50% of the global gross domestic product(GDP).

– The proposed **'Jaipur Initiative'** that seeks to foster seamless flow of information to MSMEs will address the challenge of inadequate access to market and business-related information faced by MSMEs.

Challenges in e-commerce: PM highlighted the challenges posed by global cross-border e-commerce, particularly for smaller businesses and consumers.

– He called for collective efforts to ensure fair competition between large and small sellers and to address issues related to fair pricing and grievance handling.

– He also mentioned the importance of digitization in expanding market access through e-commerce.

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194. NMC puts on hold rules for doctors to prescribe only generic medicines

Source: The post is based on the article "**NMC puts on hold rules for doctors to prescribe only generic medicines**" published in **Indian Express on 25th August 2023.**

What is the News?

The National Medical Commission (NMC) has put on hold its new guidelines that made it mandatory for doctors to only prescribe generic drugs.

What were the guidelines issued by the National Medical Commission(NMC)?

NMC had imposed a directive mandating doctors to prescribe generic drugs instead of branded equivalents.

In case of non-compliance, they can be penalized. For breaches, doctors could also receive warnings and mandatory participation in workshops and training sessions.

Persistent violations of the directive could further lead to the suspension of their licenses.

Click Here to read more

Why did the NMC issued these guidelines on generic drugs?

The NMC had justified the guidelines saying generic medicines on average are cheaper than branded ones, and may thus improve access to quality care.

Why are doctors opposing NMC guidelines on generic drugs?

Powers of Civil Court: Doctors and pharma experts pointed out that guidelines gave the NMC and the state medical councils powers equivalent to a civil court. This could only be done by Parliament and not through regulations.

Difference in quality: Doctors pointed out that while firms manufacturing branded generics (out-of-patent drugs that are sold with a brand name) usually spend on research and follow US FDA-level processes. But many smaller firms making non-branded generics do not comply even with India's more-relaxed 'Schedule M' norm.

Prescribing only generic drugs will prompt pharmacies to sell generic drugs at high-profit margins, disincentivizing firms that manufacture quality branded generics.

195. Indian Ocean Dipole turns positive, may prove too late for monsoon

Source: The post is based on the article **"Indian Ocean Dipole turns positive, may prove too late for monsoon"** published in **Hindu Business Line on 23rd August 2023.**

What is the News?

A report by the Australian Bureau of Meteorology said that the Indian Ocean Dipole(IOD) index has risen beyond the positive threshold.

What is the Indian Ocean Dipole(IOD)?

Click Here to read

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What is the impact of the Indian Ocean Dipole(IOD)?

A positive IOD helps rainfall along the African coastline and also over the Indian sub-continent while suppressing rainfall over Indonesia, southeast Asia and Australia. The impacts are opposite during a negative IOD event.

How much rainfall has India recorded this year till now?

India has collectively recorded 824 mm precipitation since the start of the southwest monsoon period on June 1, suffering a 19% deficit compared to its rainfall average for the period so far (1016.1 mm).

Can positive IOD help the Indian Monsoon now?

Most models indicate that the positive IOD will likely take hold from September through November. But by this time, India's southwest monsoon season would have tragically withdrawn from the subcontinent.

However, the northeast monsoon season that reigns over South India from October to December could receive a boost in the initial rains if the positive IOD continues to stick around during that time.

What will be the impact of Positive IOD on Australia?

In Australia, when a positive Indian Ocean Dipole (IOD) event occurs, it typically leads to: 1) Low rainfall from October to December 2) A delayed start to the monsoon season and 3) Reduced tropical cyclone activity.

If an El Niño event were to also happen in 2023 alongside a positive IOD, these effects could become even more severe and potentially extend into the wet season.

196.   To enhance IAF efficiency, govt. to buy weapons locally

Source: The post is based on the article **"To enhance IAF efficiency, govt. to buy weapons locally"** published in **The Hindu on 25th August 2023.**

What is the News?

Defense Acquisition Council(DAC) has recently approved capital acquisition proposals worth around ₹7,800 crore.

What are the projects approved by the Defense Acquisition Council (DAC)?

Electronic Warfare(EW) Suite: The DAC approved the procurement and installation of an Electronic Warfare Suite for Mi-17 V5 Helicopters. This will enhance the helicopters' survivability. The EW suite will be procured from Bharat Electronics Ltd.

Ground-Based Autonomous Systems: These systems will be used by mechanized infantry and armored regiments for tasks like unmanned surveillance, delivering supplies, and evacuating casualties on the battlefield.

Light Machine Guns (LMG): The induction of LMGs will strengthen the capabilities of infantry forces.

Bridge-Laying Tanks (BLT): They will enable faster movement for mechanized forces.

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Rugged Laptops and Tablets: The DAC approved the procurement of rugged laptops and tablets for the Army under Project Shakti. These will be sourced domestically.

Weapons for MH-60R Helicopters: To enhance the operational capabilities of the Navy's MH-60R helicopters, the DAC approved the procurement of weapons for these helicopters.

197. New technology developed to transport of radio frequency (RF) through optical methods could improve digital & satellite communication

Source: The post is based on the article **"New technology developed to transport of radio frequency (RF) through optical methods could improve digital & satellite communication"** published in **PIB on 24th August 2023.**

What is the News?

Researchers at IIT Madras have developed a prototype in the Next-Generation Photonic Analog-to-Digital Converters (NG-PADC) project.

What is Next-Generation Photonic Analog-to-Digital Converters (NG-PADC)?

NG-PADC prototypes have the capability to instantly measure, generate, and transmit Radio Frequency (RF) using optical methods.

This could bring significant changes to various sectors, including faster digital communication, improved satellite communication, better medical imaging, and advanced photonic radars.

What are the limitations of traditional electronic Analog-to-digital converters (ADCs)?

Analog-to-digital converters (ADCs) are crucial for developing advanced digital receivers.

But the traditional electronic ADCs(EADCs) have limitations, especially in maintaining vertical resolution at high bandwidths.

Photonics offers two potential solutions to overcome this limitation:

Stretching RF Signals: RF signals can be modulated onto a spectrally rich optical pulsed source and then stretched in the optical domain through a dispersive medium.This transformation converts high-frequency RF signals into effectively lower-frequency signals.As a result, the input bandwidth requirements for the backend ADC are significantly reduced.

Stable Optical Clocks: Photonics can utilize optical clocks generated by short-pulsed lasers. These optical clocks have much smaller timing fluctuations (timing jitter) compared to electronic clocks.

–When high-bandwidth RF signals are sampled using stable optical clocks, it leads to a much higher effective number of bits (ENOB) compared to electronic clocks.This enables the digitization of signals with much greater precision.

How can NG-PADC help in this?

NG-PADC incorporates a time-stretched photonic ADC with an effective bandwidth 12 times higher than a corresponding EADC. This enables the sampling of higher bandwidth signals using lower bandwidth EADCs.

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These advancements are particularly beneficial for digital coherent communication with high-bandwidth signals.

198. PLFS data elucidates a burgeoning trend of youth and individuals from varied age groups actively embracing the workforce

Source: The post is based on the article **"PLFS data elucidates a burgeoning trend of youth and individuals from varied age groups actively embracing the workforce"** published in **PIB on 24th August 2023.**

What is the News?

According to the Centre for Monitoring Indian Economy (CMIE), there has been a noticeable shift in India's workforce over the past seven years, with the workforce aging and concerns arising about reduced job opportunities across different age groups.

However, the Periodic Labour Force Survey (PLFS) conducted by the Ministry of Statistics and Programme Implementation (MoSPI) shows a completely different picture.

What does the Centre for Monitoring Indian Economy (CMIE) say about India's workforce?

Click Here to read

What does the Periodic Labour Force Survey (PLFS) say about India's labor market?

According to PLFS, India's labor market is expanding. The data indicates a positive trend in the participation of various age groups in the workforce. For instance:

Youth Participation: The engagement of individuals aged 15 to 29 in the workforce increased from 31.4 percent in 2017-18 to 36.8 percent in 2021-22.

Middle aged group: Individuals aged 30-34 saw their participation rate rise from 61.1 percent to 66.5 percent.

– Further, individuals aged 35-39 and 40-44 experienced increased participation, with rates reaching 71.1 percent and 73.7 percent in 2021-22, respectively.

Even the senior age brackets demonstrated heightened workforce involvement.

Overall, participation of individuals aged 15 and above in usual employment **rose from 46.8 percent in 2017-18 to 52.9 percent in 2021-22.**

199. What is India's new car safety rating protocol

Source: The post is based on the article **"What is India's new car safety rating protocol"** published in **Indian Express on 25th August 2023.**

What is the news?

The Union Minister of Road Transport and Highways has recently launched the Bharat New Car Assessment Programme (Bharat NCAP).
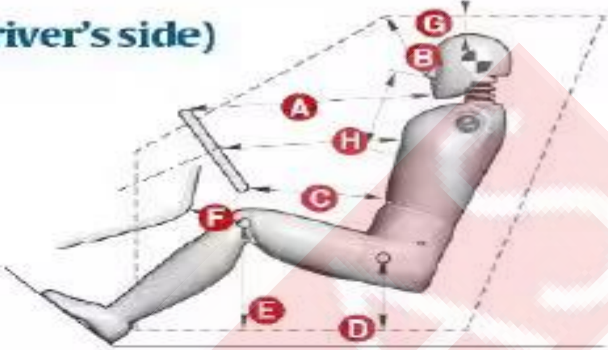
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What is Bharat New Car Assessment Programme (Bharat NCAP)?

TESTING PROTOCOL

Dummy measurements (driver's side)

A Chin to top of rim
B Nose to top edge of glass
C Stomach to rim
D H-point to top of sill
E Knee bolt to top edge of sill
F Knee bolt to top edge of bolster
G Head to roof surface
H Nose to webbing (vertically)

Source: Draft AIS 197

Frontal Impact Test

FOR THE most common type of crash that causes serious injuries, severely tests integrity and stability of passenger compartment and performance of restraint system of belts and airbags.

USED TO gauge impact of a frontal crash on head, neck, chest, abdomen, knee, femur and pelvis, lower leg, foot and ankle. Contact between dummies (of adult driver and front-seat passenger) and intruding parts of compartment is taken into account, as is knee contact with stiff structures in lower part of dashboard, footwell intrusion, pedal movement.

IN TEST, driver's head should predictably remain protected by airbag during dummy's forward movement. Airbag should not bottom out, its deployment should not pose risk of facial injury to occupants of any size.

TEST AIMS to identify poorly designed restraint systems that lead to neck injuries. Rib compression is used as main guide to chest injury risk; impact of crash on body's lower extremities are also gauged.

Side & Pole Impact

FOCUS is on detecting incorrect airbag deployment, and seat position in side impact.

Door Opening
(Front, Side & Pole Impact)

INTENTION is to ensure that structural integrity is maintained. Underlying principle is to minimise risk of ejection from vehicle.

Source: Indian Express

Under the Bharat NCAP, cars voluntarily nominated by automobile manufacturers will be crash tested as per protocols laid down in the soon-to-be-published Automotive Industry Standard 197.

The programme is applicable to passenger vehicles with not more than eight seats in addition to the driver's seat with gross vehicle weight not exceeding 3,500 kgs. Only the base model of a particular variant will be tested.

Cars will be assigned a rating between one star to five stars after being evaluated on three parameters — adult occupant protection, child occupant protection and safety assist technologies present in the car.

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How has Bharat NCAP evolved?

The testing protocols adopted by the Bharat NCAP are modelled on the **Global NCAP,** which is a project of the U.K.-based NGO, Towards Zero Foundation.

It serves as a platform for cooperation among new car assessment programmes worldwide, including countries such as the U.S. which has the world's oldest crash testing regime since 1978.

The NGO launched a **Safer Cars for India campaign** in 2014 when it released the country's first independent crash tests covering the Suzuki-Maruti Alto 800, the Tata Nano, Ford Figo, Hyundai i10 and Volkswagen Polo. All but one of the five models failed the test.

Why does car testing matter?

Car Testing is important for several reasons:

Safety: Testing ensures that cars meet safety standards and perform well in crash scenarios. This helps protect the lives of both passengers and pedestrians.

Export Potential: Testing helps determine the export-worthiness of cars.When cars pass rigorous tests, it makes them more attractive to international markets, boosting the country's automotive exports.

Consumer Confidence: Consumers can make informed choices when purchasing vehicles based on test results. Knowing that a car has undergone safety and quality tests can increase consumer confidence.

Road Safety: In countries with high rates of road accidents, like India, car testing is crucial for improving road safety. Testing helps identify and promote the production of safer vehicles.

Global Commitments: Under the Stockholm Declaration, India has committed to reducing the number of road traffic deaths and injuries by 50 per cent by 2030.

200.   India and Greece pledge to upgrade ties to become strategic partners

Source: The post is based on the article **"India and Greece pledge to upgrade ties to become strategic partners"** published in **The Hindu on 26th August 2023.**

What is the News?

The Prime Minister of India made an official visit to Greece. This was the first visit by an Indian Prime Minister to Greece in 40 years.

What are the key takeaways from the Indian PMs visit to Greece?

Grand Cross of the Order of Honour: Indian PM was honored with the Grand Cross of the Order of Honour by the President of Greece, making him the first foreign Head of Government to receive this award.

PM visited the Tomb of the Unknown Soldier in Athens: The Tomb of the Unknown Soldier is a war memorial located in Syntagma Square in Athens, in front of the Old Royal Palace. It is a cenotaph dedicated to the Greek soldiers killed during various wars.

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Upgrade to Strategic Partnership: Both countries decided to elevate Greek-Indian bilateral ties to a "Strategic Partnership" level, focusing on expanding cooperation in political, security, and economic domains.

Doubling Bilateral Trade: Acknowledging the growth in bilateral trade, the leaders set a goal to double bilateral trade by 2030.

– The two-way trade between India and Greece has grown from $507 million in 2016-17 to $1.94 billion in 2022-23.

Institutional Dialogue Framework: They agreed to establish an institutional dialogue framework at the level of National Security Advisers to enhance collaboration in defense and security matters.

Agricultural Cooperation: An MOU was signed to facilitate sectoral cooperation in agriculture, including the creation of a Hellenic-Indian Joint Sub-committee on Agriculture.

Mobility and Migration Partnership Agreement (MMPA): Both leaders agreed the early finalization of a mobility and migration partnership agreement will be mutually beneficial, facilitating the free movement of workforce between the two countries.

201.   Why did Chandrayaan-3 land on the near side of the moon?

Source: The post is based on the article **"Why did Chandrayaan-3 land on the near side of the moon?"** published in **The Hindu on 26th August 2023.**

What is the News?

The controlled descent of the Vikram lander of Chandrayaan-3 made it one of the closest approaches of a lunar mission to the moon's South Pole.

However, like most of the lunar-landing missions before, Vikram too landed on the near side of the moon.

Hence, China's Chang'e 4 mission is the only lunar mission to have successfully landed on the far side of the moon.

What are the moon's 'near' and 'far sides'?

Near Side: It refers to the portion of the moon — about 60% — that is visible to us. It is always the same side that is visible from Earth because the moon takes the same time to rotate about its axis as it does to circle around the Earth

Far Side: It is also known as the dark side area of the moon. It is called the dark side as it is facing away from the Earth. In reality it is no darker than any other part of the Moon's surface as sunlight does in fact fall equally on all sides of the Moon.

– It is only 'dark' to us, as that hemisphere can never be viewed from Earth due to a phenomenon known as 'Tidal Locking'.

– The 'dark side' was mysterious and its various topographical features were hidden until the Soviet spacecraft Luna 3 in 1959 photographed it and the Soviet Academy of Sciences released an Atlas of these images.

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– Astronauts aboard the Apollo 8 mission of 1968 were the first humans to see the far side of the moon.

Is the dark side very different from the near side?

Firstly, the near side is smoother and has more large volcanic plains called 'Maria' compared to the far side. On the far side, there are large craters, likely from asteroid impacts.

Secondly, the near side has a thinner crust, which allows volcanic lava to flow and fill up craters over millions of years, creating flat plains. These plains make it easier for space missions as they offer a more even terrain for landers and rovers.

What is special about Chandrayaan-3 landing?

The Chandrayaan-3 mission, while still on the near side, has managed to land Vikram the closest ever to the lunar South Pole. The coordinates of Chandrayaan-3 at 69.36 S and 32.34 E make it about 600 km away from the South Pole.

The choice of being as close as possible to the South Pole was to get closer to a "permanently shadowed region" or where no sunlight ever reaches.

This would mean increasing the chances of encountering frozen water-ice along with several "interesting deposits" that can reveal more about the moon and its harvestable resources.

202. China-Bhutan hold first meeting on 'delimitation' of disputed boundary

Source: The post is based on the article **"China-Bhutan hold first meeting on 'delimitation' of disputed boundary"** published i**n The Hindu on 26th August 2023.**

What is the News?

China and Bhutan held the first meeting of the newly set-up joint technical team on the delimitation of their disputed boundary.

What is the Bhutan China Border Dispute?

China claims certain territories from Bhutan:

In the north: Pasamlung and Jakarlung valleys; Both of these places are culturally vital for Bhutan.

In the west: Doklam, Dramana, and Shakhatoe, Yak Chu and Charithang Chu, and Sinchulungpa and Langmarpo valleys. These places are pasture-rich and strategically located in the Bhutan-India-China trijunction, lying close to India's Siliguri Corridor.

In 2020, China made new claims on Bhutan's East in the **Sakteng sanctuary.**

What has been the history of boundary talks between China and Bhutan?

The boundary talks between Bhutan and China began in 1984, and the 24th round was held in 2016.

The talks have largely focused on disputed areas to Bhutan's north, and to its west, abutting the Doklam plateau.However, these have been stalled since 2016, especially after the 2017 Doklam stand-off.

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In 2021, Bhutan and China signed an MoU on the Three-Step Roadmap for Expediting the China-Bhutan Boundary Negotiations.

What has happened now?

China and Bhutan has agreed to expedite and take simultaneous steps to implement the Three-Step Road Map" signed in 2021.

The two sides also agreed to hold the 14th Expert Group Meeting on the China-Bhutan Boundary Issues as soon as possible and maintain communication on holding the 25th Round of China-Bhutan Boundary Talk.

203. Indore best city, M.P. top State in Smart Cities contest

Source: The post is based on the article **"Indore best city, M.P. top State in Smart Cities contest"** published in **The Hindu on 26th August 2023.**

What is the News?

The President of India will present the India Smart Cities Award Contest (ISAC), 2022.

What is the India Smart Cities Award Contest (ISAC)?

India Smart Cities Award Contest (ISAC) is organized by the Ministry of Housing and Urban Affairs.

Aim: To recognize and reward cities, projects and innovative ideas that are promoting sustainable development across the 100 smart cities as well as stimulating inclusive, equitable, safe, healthy and collaborative cities leading to a better quality of life for all.

The ISAC award had a two-stage submission process consisting of 'Qualifying Stage', which involved overall assessment of the city's performance, and the 'Proposal Stage' which required the smart cities to submit their nominations for six award categories.

This is the fourth edition of the ISAC awards with the previous ones held in 2018, 2019, and 2020.There were no awards in 2021 due to the COVID-19 pandemic.

What are the key takeaways from ISAC 2022?

Indore has been named as the best Smart City. Surat and Agra are the second and third place winners among cities.

Madhya Pradesh has been chosen as the top state. Tamil Nadu is the second in State category followed by Rajasthan and Uttar Pradesh.

The award for the best Union Territory has gone to Chandigarh.

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204. Committee of Experts to 'Onshoring the Indian Innovation to GIFT IFSC'

Source: The post is based on the article **"Committee of Experts to 'Onshoring the Indian Innovation to GIFT IFSC"** published in **PIB on 25th August 2023.**

What is the News?

The Committee of Experts appointed by the International Financial Services Centres Authority (IFSCA) to explore 'Onshoring the Indian Innovation to Gujarat International Finance Tec-city International Financial Services Centre (GIFT IFSC)' has submitted its report.

About Committee of Experts to Onshoring the Indian Innovation to GIFT IFSC:

Chaired by: G. Padmanabhan, former executive director of the RBI

Mandate: To understand the reasons for shifting of Indian startups outside India and suggestions to avoid externalization of startups in the future and also to persuade startups that are presently externalized to redomicile back.

What are the recommendations given by the committee?

The committee has identified challenges and recommended measures for the development of the **International Innovation Hub** at GIFT IFSC.

It has recommended **aligning the tax and regulatory laws within the IFSC with international best practices** to create an environment that actively incentivizes and supports holding company structures.

205. New brain-computer interface device gives voice to paralysed

Source: The post is based on the article **"New brain-computer interface device gives voice to paralysed"** published in **Deccan Herald on 25th August 2023.**

What is the News?

Researchers have developed a brain-computer interface (BCI) that has enabled a woman with severe paralysis from a brainstem stroke to speak through a digital avatar.

It is the first time that either speech or facial expressions have been synthesized from brain signals.

What is Brain-Computer Interface(BCI)?

A Brain-Computer Interface (BCI), also known as a Brain-Machine Interface (BMI), is a technology that establishes a direct communication pathway between the human brain and external devices or computers.

BCIs are designed to enable individuals to interact with and control these external devices using only their brain activity, bypassing traditional routes such as muscle movements or physical inputs.

What are the potential applications of Brain-Computer Interface(BCI)?

Assistive Technology: BCIs can empower individuals with paralysis or motor disabilities to regain communication and control over their environment.

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Neurorehabilitation: They are used in therapy and rehabilitation programs to help patients recover lost motor functions after injuries or strokes.

Research: BCIs play a crucial role in neuroscience research, allowing scientists to study brain activity patterns and understand the brain's functions better.

Enhanced Control: BCIs have applications in fields like gaming, allowing players to control characters or devices using their thoughts.

What are the concerns related to Brain-Computer Interface(BCI)?

Some researchers have noted some concerns related to BCIs. For example, BCIs could be vulnerable to cyberattacks that expose brain data or interfere with a device's function.

Reported costs of wearable BCIs range from hundreds to thousands of dollars, which may result in unequal access.

Further, translation of brain signals to speech by a BCI could cause harm if it is not accurate. For example, inaccurate translation might indicate legal or medical consent that the person did not intend to give.

206. National Action for Mechanised Sanitation Ecosystem (NAMASTE)

Source: The post is based on the article **""National Action for Mechanised Sanitation Ecosystem (NAMASTE)"** published in **PIB on 25th August 2023.**

What is the News?

The Government of India is implementing the National Action for Mechanised Sanitation Ecosystem (NAMASTE) scheme to stop deaths of Sewers and Septic Tank Workers (SSWs) and to promote mechanization of cleaning operations with a vision to reduce hazardous cleaning and ensure safety of sanitation workers.

What is the National Action for Mechanised Sanitation Ecosystem (NAMASTE) Scheme?

Launched by: Ministry of Social Justice and Empowerment (MoSJE) and Ministry of Housing and Urban Affairs (MoHUA)

Aim: To eliminate hazardous cleaning, stop deaths of sewer and septic tank workers and ensure their safety and dignity.

Type: Central Sector Scheme

Replaced by: The scheme has replaced the Self-Employment Scheme for the Rehabilitation of Manual Scavengers (SRMS), which was started in 2007.

Coverage: The scheme is to be implemented in all 4800+ Urban Local Bodies (ULBs) of the country, during the three years upto 2025-26.

Objectives of the scheme: Zero fatalities in sanitation work in India

– All sanitation work is performed by skilled workers

– No sanitation workers come in direct contact with human faecal matter

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– Sanitation workers are collectivized into SHGs and are empowered to run sanitation enterprise

– All Sewer and Septic tank sanitation workers (SSWs) have access to alternative livelihoods

– Strengthened supervisory and monitoring systems at national, state and ULB levels to ensure enforcement and monitoring of safe sanitation work.

What are the key features of the Scheme to be Implemented in all ULBs?

Identification: NAMASTE envisages identifying the Sewer/Septic Tank Workers (SSWs).

Occupational Training and distribution of PPE Kits to SSWs.

Assistance for Safety Devices to Sanitation Response Units (SRUs).

Extending Health Insurance Scheme Benefits to identified SSWs and their families under the Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana (AB-PMJAY).

Livelihood Assistance: The Action Plan will promote mechanization and enterprise development by providing funding support and subsidy (capital +interest) to the sanitation workers, to procure sanitation related equipment.

IEC (Information Education and Communication) Campaign: Massive campaigns would be undertaken jointly by the ULBs & NSKFDC (National Safai Karamcharis Finance & Development Corporation) to spread awareness about the interventions of NAMASTE.

207. Tele-Law 2.0 unveiled by Law Minister

Source: The post is based on the article **"Tele-Law 2.0 unveiled by Law Minister"** published in **PIB on 25th August 2023.**

What is the News?

The Union Law Minister has launched the Tele-Law 2.0 initiative.

What is the Tele Law Initiative?

Click Here to read

What is the Tele-Law 2.0 initiative?

Tele-Law 2.0 entails the fusion of Tele-Law Services with Nyaya Bandhu pro bono legal services to improve citizen access to legal aid.

This merger is seen as a significant step in making legal services more accessible to people throughout India, contributing to the democratization of legal assistance.

What is the Nyaya Bandhu Initiative?

Nyaya Bandhu's (Pro Bono Legal Services) initiative was launched by the Minister for Law & Justice.

Aim: To establish a framework for dispensation of pro bono legal services across the country.

Under Nyaya Bandhu, practicing advocates, interested to volunteer their time and services, are connected, via mobile technology, with eligible marginalized beneficiaries.

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Who qualifies to be a beneficiary for Legal help under Nyaya Bandhu Initiative?

Beneficiaries or Applicants, in order to avail the benefits under this programme must belong to one of the categories mentioned under Section 12 of The Legal Services Authority Act of 1987. These include: **1)** Member of a Scheduled Caste **2)** Member of a Scheduled Tribe **3)** Victim of trafficking in human beings or begar as referred in article 23 of the Constitution **4)** Woman or a Child **5)** Person with disability **6)** Person in custody **7)** An industrial workman **8)** Victim of a mass disaster, ethnic violence, caste atrocity, flood, drought, earthquake or industrial disaster; **9)** Person with annual income less than as specified under law and Others.

208. NIAS launches pilot project involving GEOAI and random forest tech to monitor air pollution in Bengaluru

Source: The post is based on the article **"NIAS launches pilot project involving GEOAI and random forest tech to monitor air pollution in Bengaluru"** published in **Indian Express on 25th August 2023.**

What is the News?

At the India Clean Air Summit (ICAS), National Institute of Advanced Studies (NIAS), informed that it has launched a pilot project to monitor and predict the city's air quality.

What is the India Clean Air Summit(ICAS)?

India Clean Air Summit(ICAS) is India's premier event on air pollution.

Organized by: Centre for Air Pollution Studies (CAPS) at the Center for Study of Science, Technology and Policy (CSTEP).

Aim: To understand the impact of climate change on air pollution in the light of Sustainable Development Goals (SDGs) and the actions required to deal with it.

What is the National Institute of Advanced Studies(NIAS)?

National Institute of Advanced Studies(NIAS) is a premier institute in India engaged in interdisciplinary and multidisciplinary research in natural sciences, social sciences, arts and humanities.It was founded by J. R. D. Tata in 1988.

Located in: Bangalore

What is the project launched by NIAS to monitor and predict the city's air quality?

The pilot project has been launched in Bangalore. It combines geospatial artificial intelligence (GeoAI) and random forest technology to monitor and predict air quality in the city.

The random forest algorithm combines data from various air quality monitoring stations to predict the Air Quality Index.

GeoAI uses technology like artificial intelligence, satellite imagery, and mobile data to identify sources of air pollution.

This project will soon be launched in cities like Delhi, Mumbai, Chennai, and Kolkata.

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209. Centre approves Rajasthan's fifth tiger reserve in Dholpur-Karauli

Source: The post is based on the article **"Centre approves Rajasthan's fifth tiger reserve in Dholpur-Karauli"** published in **Hindustan Times on 22nd August 2023.**

What is the News?

The National Tiger Conservation Authority (NTCA) has approved the **Dholpur-Karauli Tiger Reserve** in Rajasthan.

This is India's 54th tiger reserve and Rajasthan's fifth tiger reserve after Ranthambore, Sariska, Mukundra Hills and Ramgarh Vishdhari.

How are Tiger Reserves notified?

Tiger Reserves are notified by State Governments as per provisions of Section 38V of the Wildlife (Protection) Act, 1972 on advice of the National Tiger Conservation Authority.

Can tiger reserves be altered and denotified?

These processes are governed by Section 38W of the Wildlife (Protection) Act, 1972 whose provisions are as follows:

Section 38 W(1) says that "No alteration in the boundaries of a tiger reserve shall be made except on a recommendation of the Tiger Conservation Authority and the approval of the National Board for Wild Life".

Section 38 W (2) says "No State Government shall de-notify a tiger reserve, except in public interest with the approval of the Tiger Conservation Authority and the National Board for Wild Life".

What is the status of tiger population in India?

The number of tigers in India has increased from 2,967 in 2018 to 3,682 in 2022, an annual rise of 6%.

Madhya Pradesh has the maximum number of tigers in the country (785), followed by Karnataka (563), Uttarakhand (560), and Maharashtra (444).

The number of tigers in Rajasthan has increased from 32 in 2006 to 88 in 2022.

210. Express View on Jadavpur University student death: End ragging

Source: The post is based on the article "**Express View on Jadavpur University student death: End ragging**" published in **The Indian Express** on **26th August 2023**.

Syllabus topic: Issues relating to development and management of Social Sector/Services relating to Education.

News: An 18-year-old student from Jadavpur University (JU) possibly died due to ragging. His family claims he faced abuse from senior students. The university and police are investigating, and 12 people have been arrested.

Why Ragging been a long-standing issue?

Tradition and Misguided Rituals: Ragging is often seen as a coming-of-age ritual on campuses.

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Lack of Oversight: Universities sometimes fail to ensure the safety and well-being of new students. For example, reports suggest that even long-graduated students at JU still occupy hostels and intimidate freshers.

Deep-rooted Hierarchies: Seniority often mixes with caste, class, and gender privileges, worsening bullying.

Ineffective Implementation: Despite two Supreme Court verdicts against ragging, many institutions don't adhere to guidelines. For instance, 25 students have committed suicide since 2018 due to ragging, as per UGC data.

What have courts said before?

2001 Directive: The Supreme Court instructed higher educational institutions (HEIs) to establish proctorial committees to address ragging complaints.

2009 Committee Formation: After the death of a 19-year-old medical student due to ragging, the Supreme Court formed a committee led by former CBI director R K Raghavan.

UGC's Role: The same year, UGC accepted the committee's recommendations and instructed HEIs to establish internal anti-ragging committees and promote positive interaction between new and senior students.

What should be done to overcome the issue of Ragging?

Strict Implementation: Universities must strictly enforce anti-ragging guidelines. Past negligence led to tragic outcomes, like the JU student's death.

Increased Oversight: Campuses should monitor senior students and alumni, especially those wrongfully occupying hostels, as seen at JU.

Promote Positive Interaction: As the UGC advised, institutions should foster healthy interactions between newcomers and senior students.

Transparent Reporting Mechanisms: Create efficient internal mechanisms for ragging complaints, in line with the Supreme Court's 2001 directive.

Regular Audits: Institutions should undergo periodic checks to ensure adherence to anti-ragging rules, addressing gaps like JU's inadequate response on preventive measures.

211. Dengue vaccines in India: A look at the ongoing trials and development

Source: The post is based on the article **"Dengue vaccines in India: A look at the ongoing trials and development"** published in **Indian Express on 28th August 2023**

What is the News?

Several efforts are ongoing in India to develop an effective vaccine against the Dengue.

What is Dengue?

Click Here to read

Dengue cases in India:

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Dengue in India has spread from just eight states and union territories in 2001 to all states by 2022.

There have been 31,464 cases and 36 deaths due to dengue reported across the country till the end of July this year, as per the latest available data.

There are several efforts ongoing within the country to develop an effective vaccine against the mosquito-borne disease that can lead to internal bleeding, circulatory shock, and death.

Challenges in developing dengue vaccine: Dengue virus comes in four varieties known as serotypes.

– Due to this, one of the main challenges of developing a dengue vaccine is antibody-dependent enhancement (ADE) — a person with low levels of antibodies against one serotype of dengue, may end up getting a more severe infection with another serotype of dengue.

What are Dengue vaccines in the Human Trials stage in India?

Panacea Biotec's Vaccine: The vaccine is based on live weakened versions of all four dengue serotypes.It has been developed by the National Institute of Allergy and Infectious Diseases in the United States.It has shown promise in phase I/II trials in adults and is moving toward a larger phase III trial.

Serum Institute of India's Vaccine: It also uses weakened virus strains from the United States. Phase I trials have been completed and plans for phase II and large-scale studies in children are in progress.

Indian Immunologicals Limited's Vaccine: It also uses the same weakened virus technology.It has started phase I clinical trials in adults.

What are the two indigenous dengue vaccines in early development stages?

ICGEB's Vaccine: This vaccine utilizes specific parts of the dengue virus envelope protein to create Virus-Like Particles. It has shown promising results in animal tests and is yet to be tested in humans.

Tata Institute of Fundamental Research's Vaccine: It is a DNA vaccine that incorporates all four serotypes.It is currently undergoing optimization and testing in mice.

212. New specie, genus of snakes discovered in Western Ghats

Source: The post is based on the article **"New specie, genus of snakes discovered in Western Ghats"** published in **Hindustan Times on 25th August 2023**

What is the News?

A team of researchers has recently discovered a new genus and species of colubrid snakes in Western Ghats. They have named it '**Sahyadriophis uttaraghati'.**

What is Sahyadriophis uttaraghati?

Sahyadriophis uttaraghati is a new genus and species of colubrid snakes.

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– Note: The Colubrid is the largest snake family.It contains approximately 2000 species.Many colubrids are technically considered venomous but very few are considered dangerous to humans.

Named after: It has been named Sahyadriophis, a combination of the Sanskrit word for the Western Ghats 'Sahyadri' and the Greek word for snakes 'Ophis'.

Found in: It is found in the northern parts of the Western Ghats.

Features: These snakes are mostly active during monsoons and are often found near streams.

– Their diet primarily consists of frogs and their eggs.They are gentle in nature and rarely bite when handled.

– The juveniles bear a big blotch or a collar mark on the nape, which distempers as the animal grows.

– They can be differentiated from its southern counterpart—Sahyadriophis beddomei (Beddome's Sahyadri keelback)—by a longer tail and higher number of scales on the tail's underside, known as subcaudals.

213. SVAMITVA Scheme of Ministry of Panchayati Raj wins the National Award for e-Governance 2023 (Gold) for Application of Emerging Technologies for Providing Citizen Centric Services

Source: The post is based on the article **"SVAMITVA Scheme of Ministry of Panchayati Raj wins the National Award for e-Governance 2023 (Gold) for Application of Emerging Technologies for Providing Citizen Centric Services"** published in **PIB on 27th August 2023**

What is the News?

SVAMITVA Scheme of Ministry of Panchayati Raj has been conferred with the prestigious National Award for e-Governance 2023.

What is the SWAMITVA Scheme?

Nodal Ministry: Ministry of Panchayati Raj

Type: Central Sector Scheme

Aim: To provide the 'Record of Rights' to village household owners possessing houses in inhabited areas (Abadi) in villages.

Objectives of the scheme: To create accurate land records for rural planning and reduce property related disputes.

– To bring financial stability to the citizens in rural India by enabling them to use their property as a financial asset for taking loans and other financial benefits.

– Determination of property tax, which would accrue to the GPs directly in States where it is devolved or else, add to the State exchequer.

– Creation of survey infrastructure and GIS maps that can be leveraged by any department for their use.

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– To support the preparation of a better-quality Gram Panchayat Development Plan (GPDP) by making use of GIS maps.

Ministries involved: The scheme is being implemented with the collaborative efforts of the Ministry of Panchayati Raj, Survey of India (SoI), State Revenue Department, State Panchayati Raj Department and National Informatics Centre.

Under the scheme, the land parcels in rural inhabited areas of all the villages are surveyed using drone technology.

Target: The scheme aims to cover 6.62 lakh villages in the country from Financial Year 2020-21 to Financial Year 2024-25.

214. 7th GEF Assembly: Global Biodiversity Framework Fund ratified

Source: The post is based on the article **"7th GEF Assembly: Global Biodiversity Framework Fund ratified"** published in **Down To Earth on 25th August 2023**

What is the News?

The Global Biodiversity Framework Fund (GBFF) was finally ratified and launched at the Seventh Assembly of the Global Environment Facility (GEF) in Vancouver, Canada.

What is the Global Biodiversity Framework Fund (GBFF)?

Aim: To directly support global efforts to halt and reverse biodiversity loss by 2030, a goal agreed to by 196 countries as part of the Global Biodiversity Framework established at COP15.

Hosted by: Global Environment Facility (GEF)

Funding: Governments, non-profits, and the private sector can now contribute their funds to GBFF.

Fund allocations: 20% will be allocated to Indigenous Peoples and local communities (IPLCs)

– 36% of the fund's resources are aimed to support the most vulnerable people, small island developing states.

– 3% to LDCs (Least Developed Countries)

– About 25% of the fund will be delivered through selected international financial institutions to increase resources through private sector involvement and ensure policies are streamlined.

Note: This is the first time there would be funds channeled to non-state actors like the indigenous communities.

First meeting: The first GBFF Council meeting will be held in January 2024.

What is the Global Environment Facility (GEF)?

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215. Start-up AR4 Tech, Sodium tie up to make sodium ion battery packs

Source: The post is based on the article **"Start-up AR4 Tech, Sodium tie up to make sodium ion battery packs"** published in **The Hindu on 28th August 2023**

What is the News?

AR4 Tech, a start-up in Coimbatore, has partnered Sodium Energy of Singapore to make sodium ion battery packs for domestic and export markets

What is a Sodium ion battery?

The sodium-ion battery (NIB or SIB) is a type of rechargeable battery that uses sodium ions (Na+) as its charge carriers.

They have a similar design to their lithium-ion counterparts and can be manufactured using related methods.

Both battery types generate electricity through a chemical reaction and are made up of an anode, cathode, separator and an electrolyte.

But in a sodium-ion battery, lithium ions are replaced with sodium ions in the battery's cathode, and lithium salts swapped for sodium salts in the electrolyte.

What are the advantages of Sodium ion batteries?

Lower Global Warming Potential: SIBs have 45% less global warming potential compared to lithium iron phosphate (LFP) batteries.

Operational Safety: SIBs have higher operational safety than lithium-ion batteries (LIB) with their operable temperature ranging from -30°C-60°C, making their temperature endurance higher than other battery chemistries.

Zero Volt Discharge: They can be discharged to zero volts, reducing transportation costs and accidents.

What are the challenges related to Sodium ion batteries?

SIBs face challenges due to the instability of their cathode materials, especially when exposed to moisture. This lack of stability negatively impacts the electrochemical performance of SIBs.

Why are Sodium ion batteries important for India?

India's abundance of sodium sources makes the Na-ion battery system particularly crucial in the local context, offering a readily available and abundant resource for Na-ion battery production.

216. How a fire prevention zone saved a community from wildfire

Source: The post is based on the article **"How a fire prevention zone saved a community from wildfire"** published in **Indian Express on 26th August 2023**

What is the News?

A well-constructed fire prevention zone created by a local Indigenous logging company played an important role in protecting a community from a wildfire in Canada.

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What happened in Canada?

A wildfire threatened a Canadian tourist spot in British Columbia with a large population.

The fire advanced for 19 days, consuming a significant area of forest but was slowed down at the suburban fringes by a **Fire prevention zone** created by a local Indigenous logging company.

What is a Fire Prevention Zone?

Fire Prevention Zones are designated areas that have been carefully managed and modified to reduce the risk of wildfires spreading and causing damage.

These zones are typically created in or around communities, especially those located in wildfire-prone areas.

The primary goal of Fire Prevention Zones is to create a buffer or barrier that hinders the advance of wildfires, protecting lives, property, and natural ecosystems.

How did the Indigenous logging company in Canada create a Fire Prevention Zone?

Indigenous logging company in Canada named Ntityix Development, created a fire prevention zone using traditional Indigenous forestry practices such as thinning the forest; cleaning up debris on the floor; and burning the debris and ground cover in a controlled way to prevent it from becoming fuel for wildfires.

What is the significance of these measures?

This highlights the importance of proactive measures like fire prevention zones particularly in the face of worsening wildfire seasons driven by climate change.They can play a crucial role in protecting communities from the devastating impact of wildfires.

217.   Participation of Indian Air Force in Exercise Bright Star-23 at Cairo,Egypt

Source: The post is based on the article **"Participation of Indian Air Force in Exercise Bright Star-23 at Cairo, Egypt"** published in **PIB on 27th August 2023**

What is the News?

Indian Air Force(IAF) is participating in Exercise BRIGHT STAR-23.

What is Exercise BRIGHT STAR-23?

Exercise BRIGHT STAR is a biennial multilateral tri-service exercise being held in Cairo, Egypt.

Aim: To practice joint operations planning and execution, fostering bonds between nations and enhancing strategic relations.

Participating countries: India, United States of America, Saudi Arabia, Greece and Qatar.

Significance: This is for the first time that the Indian Air Force(IAF) is participating in the exercise.

What are the other exercises between India and Egypt?

Exercise Cyclone-I: It Is a bilateral exercise between the special forces of the Indian Army and the Egyptian Army.The first edition of the exercise was held in Jaisalmer, Rajasthan in January 2023.

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218. Government imposes restrictions on export of Basmati rice

Source: The post is based on the article **"Government imposes restrictions on export of Basmati rice"** published in **The Hindu on 28th August 2023**

What is the News?

The Indian government has halted the export of Basmati rice valued at less than $1,200 per tonne.

Why has the government imposed restrictions on export of Basmati rice?

This has been done to prevent the possible "illegal" shipment of plain white rice by wrongly classifying it as Basmati rice.

Note: In July 2023, the export of non-Basmati white rice was prohibited.

Why has India banned the export of non-basmati white rice?

India's reasons were domestic — rising food prices, high inflation and fear of rice shortage due to El Nino disruptions as the country heads into a festive season and elections.

Why is India crucial to the global rice trade?

India accounts for more than 40% of global rice exports, which amounted to 55.4 million metric tons in 2022.

India's rice shipments in 2022 were more than the combined shipments of Thailand, Vietnam, Pakistan and the US, the next four big exporters of the grain.

Over 140 countries are net importers of India non-basmati rice. Benin, Bangladesh, Angola, Cameroon, Djibouti, Guinea, Ivory Coast, Kenya and Nepal, having rice a staple food, are key buyers of non-basmati Indian rice

219. How bees can monitor pollution for us — everything from toxic metals to antimicrobial resistance

Source: The post is based on the article **"How bees can monitor pollution for us — everything from toxic metals to antimicrobial resistance"** published in **Down To Earth on 26th August 2023**

What is the News?

Two new studies have used honey bees as biomonitoring tools to track contamination in urban environments.

How can bees be used to track contamination and antimicrobial resistance?

Cities are complex places with multiple activities, making it challenging to monitor the spread of contaminants, which poses health concerns.

There's increasing evidence that many chemicals used in daily life have no "safe" exposure limit, raising concerns about contamination's impact on food, water, and human health.

To measure this contamination, Honey Bees can help us. Honey bees constantly pick up contaminants from their environment while foraging.

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Analyzing their chemical composition offers insights into contamination levels in their foraging area.

Moreover, bees can also help in assessing the spread of antimicrobial resistance genes, which can be ingested from water bodies.

What are the several studies where bees were used to track contamination and antimicrobial resistance?

Case in Nouméa: Honey bees were used to map the impact of a local nickel smelter in Nouméa. Bees near the smelter showed elevated levels of metals associated with it, providing a sensitive marker of smelter contamination.

Sydney Study: Bees in Sydney were used to map trace metals and identify factors contributing to metal pollution.

Antimicrobial Resistance (AMR): Bees helped study the spread of antimicrobial resistance (AMR) genes in Sydney.

Hence, using honey bees as biomonitoring tools can help track contamination in urban environments, identify pollution patterns and contribute to more effective responses to environmental health challenges.

220.   Chinese navy is testing the most powerful coil gun ever built

Source: The post is based on the article **"Chinese navy is testing the most powerful coil gun ever built"** published in **Business Standard on 26th August 2023**

What is the News?

The Chinese navy is reportedly testing the planet's most powerful Coil Gun.

What is a Coil Gun?

Coil guns are also known as Gauss guns or magnetic accelerators.

The weapon features a series of coils arranged along the barrel of the gun, each one constituting a "stage".

Each coil is energized one after another to create a magnetic field that can levitate and propel a projectile forward.

The projectile typically stays suspended in the centre of the coil during launch, which helps to keep it on a straight course and prevent it from touching the wall of the barrel.

It can be fired repeatedly and rapidly without causing wear on components.

The larger a coil gun, the better its ability to fire projectiles similar to those fired by traditional artillery.

Advantages of Coil Guns: The coil gun has a number of advantages over traditional artillery including higher launch speeds, lower launch costs and shorter preparation time.

Applications: Coil guns could have applications in areas such as weapon systems, near-earth satellites and high-speed missile launches.

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221.   ISRO's Aditya-L1 to be launched on September 2: With feet on the Moon, the space agency eyes the Sun

Source: The post is based on the article **"ISRO's Aditya-L1 to be launched on September 2: With feet on the Moon, the space agency eyes the Sun"** published in **Indian Express on 29th August 2023**

What is the News?

ISRO has announced that the Aditya-L1 mission will be launched on September 2 from Sriharikota, Andhra Pradesh.

What is Aditya-L1 Mission?

Aditya-L1 is the first Indian mission dedicated to observe the Sun.It is scheduled to be launched aboard a Polar Satellite Launch Vehicle(PSLV).

Objectives of the Mission: Study of Solar upper atmospheric (chromosphere and corona) dynamics.

– Study of chromospheric and coronal heating, physics of the partially ionized plasma, initiation of the coronal mass ejections and flares

– Observe the in-situ particle and plasma environment providing data for the study of particle dynamics from the Sun.

– Physics of solar corona and its heating mechanism.

– Development, dynamics and origin of coronal mass ejection (CME).

– Magnetic field topology and magnetic field measurements in the solar corona .

Lagrange Point: There are five Lagrange points, L1 to L5, between any two celestial bodies. These points can act as parking spots in space where the gravitational pull of the celestial objects equals the centripetal force required to keep a satellite in orbit.

– This means satellites placed at Lagrange points do not need to expend a lot of fuel to remain in position.

– Aditya L1 shall be placed at L1.A satellite placed in the halo orbit around the L1 point has the major advantage of continuously viewing the Sun without any occultation/eclipses.

– This will provide a greater advantage of observing the solar activities and its effect on space weather in real time.

What are the payloads of Aditya L1 Mission?

The spacecraft carries seven payloads to observe the photosphere, chromosphere and the outermost layers of the Sun (the corona) using electromagnetic and particle and magnetic field detectors.

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Type	Sl. No.	Payload	Capability
Remote Sensing Payloads	1	Visible Emission Line Coronagraph(VELC)	Corona/Imaging & Spectroscopy
	2	Solar Ultraviolet Imaging Telescope (SUIT)	Photosphere and Chromosphere Imaging- Narrow & Broadband
	3	Solar Low Energy X-ray Spectrometer (SoLEXS)	Soft X-ray spectrometer: Sun-as-a-star observation
	4	High Energy L1 Orbiting X-ray Spectrometer(HEL1OS)	Hard X-ray spectrometer: Sun-as-a-star observation
In-situ Payloads	5	Aditya Solar wind Particle Experiment(ASPEX)	Solar wind/Particle Analyzer Protons & Heavier Ions with directions
	6	Plasma Analyser Package For Aditya (PAPA)	Solar wind/Particle Analyzer Electrons & Heavier Ions with directions
	7	Advanced Tri-axial High Resolution Digital Magnetometers	In-situ magnetic field (Bx, By and Bz).

Source: ISRO

Why should we study the Sun?

Firstly, the Sun is our closest star, allowing for detailed examination.This research not only enhances our knowledge of the Sun but also sheds light on other stars.

Secondly, while the Sun sustains life on Earth, it also produces explosive events that can harm satellites and communication systems.Monitoring the Sun can offer early warnings for such disruptions.

Thirdly, the Sun exhibits extreme thermal and magnetic phenomena that serve as a natural laboratory for scientific exploration.These phenomena can't be adequately studied in a controlled lab environment.

Lastly, it is important to study the Sun from space because the Earth's atmosphere and the magnetic field act as protective shields that block out harmful radiations, such as UV light.This means studying the Sun from the Earth can't provide a complete picture.

222.   Govt Warns Citizens About Smishing Scam: How To Protect Against This Online Threat

Source: The post is based on the article **"Govt Warns Citizens About Smishing Scam: How To Protect Against This Online Threat"** published in **Zee News on 27th August 2023**

What is the News?

The Indian government has warned people against a new scam called 'Smishing'.

What is Smishing?

"Smishing" is a short form of "SMS" (Short Message Service) and "phishing."

It refers to a type of cyber attack or scam where fraudsters send deceptive text messages to trick individuals into revealing personal information, such as login credentials, credit card numbers, or other sensitive data.

Smishing messages often contain links that lead to fake websites or phone numbers that direct victims to call and provide information.

Common smishing tactics include posing as a trusted organization, like a bank or a government agency, and claiming that urgent action is required or that there's a problem with the recipient's account.

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– The goal is to create a sense of urgency and manipulate the recipient into responding with their confidential information.

How to protect yourself against smishing attacks?

To protect yourself from smishing attacks, be cautious when receiving unsolicited text messages, especially if they request personal information or contain suspicious links.

Verify the legitimacy of the sender or organization independently, and never click on links or provide sensitive information in response to unsolicited messages.

223. Pradhan Mantri Jan Dhan Yojana (PMJDY) – National Mission for Financial Inclusion, completes nine years of successful implementation

Source: The post is based on the article **"Pradhan Mantri Jan Dhan Yojana (PMJDY) – National Mission for Financial Inclusion, completes nine years of successful implementation"** published in **PIB on 28th August 2023**

What is the News?

The Pradhan Mantri Jan Dhan Yojana (PMJDY) – the National Mission for Financial Inclusion – has completed nine years of successful implementation.

What is Pradhan Mantri Jan Dhan Yojana(PMJDY)?

Click Here to read

What is the impact of PMJDY?

PMJDY has been the foundation stone for people-centric economic initiatives.Whether it is direct benefit transfers, COVID-19 assistance, PM-KISAN, wages under MGNREGA, the first step of all these initiatives is to provide every adult with a bank account, which PMJDY has nearly completed.

One in 2 accounts opened between March 2014 to March 2020 was a PMJDY account.

Within 10 days of nationwide lockdown more than about 20 crore women PMJDY accounts were credited with financial assistance of Rs 500 per month for three months through DBT in each women PMJDY account.

What are the achievements of PMJDY?

Number of total PMJDY Accounts: 50.09 crore.Of which 55.6% account holders are women and 66.7% accounts are in rural and semi-urban areas.

Deposits: Deposits have increased about 13 times.

Average deposit per account has increased over 3.8 times.Increase in average deposit is another indication of increased usage of accounts and inculcation of saving habits among account holders.

DBT transactions: About 6.26 crore PMJDY account holders receive direct benefit transfer (DBT) from the Government under various schemes.

Digital transactions in India have experienced remarkable growth due to various initiatives:

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– The issuance of over 33.98 crore RuPay debit cards through the Pradhan Mantri Jan-Dhan Yojana (PMJDY).

– The installation of 79.61 lakh Point of Sale (PoS) and mobile Point of Sale (mPoS) machines.

– The introduction of mobile-based payment systems like UPI (Unified Payments Interface).

– Due to these initiatives, the growth is evident in the total number of digital transactions, which has surged from 1,471 crore in FY 17-18 to 11,394 crore in FY 22-23.

– Specifically, UPI financial transactions have seen substantial growth, increasing from 92 crore in FY 2017-18 to 8,371 crore in FY 2022-23.

– Similarly, the total number of RuPay card transactions at PoS and in e-commerce has risen from 67 crore in FY 2017-18 to 126 crore in FY 2022-23.

What is Jan Dhan Darshak App (JDD App)?

JDD App is a mobile application which provides a citizen centric platform for locating banking touch points such as bank branches, ATMs, Banking Correspondents (BCs), Indian Post Payment Banks etc in the country.

The app is also being used for identification of villages which are yet to be covered by banking outlets within a 5 km radius.

These identified villages are allocated to various banks by concerned SLBCs for opening of banking outlets.The efforts have resulted in a significant decrease in the number of uncovered villages.

224. Somatic genetic variants: A genomic revolution hiding inside our cells

Source: The post is based on the article **"Somatic genetic variants: A genomic revolution hiding inside our cells"** published in **The Hindu on 28th August 2023**

What is the News?

Scientists have been aware of **Somatic Genetic Variations** for quite some time but there has been a recent surge in the volume of data related to these variations.

What are Somatic Cells?

Somatic cells are the cells in the body other than sperm and egg cells (which are called germ cells).

In humans, somatic cells are diploid, meaning they contain two sets of chromosomes, one inherited from each parent.

DNA mutations in somatic cells can affect an individual, but they cannot be passed on to their offspring.

What is Somatic Genetic Mutations?

Humans have **23 pairs of chromosomes,** one from each parent, which carry our genetic information or blueprint.

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After fertilization, a single cell with 23 chromosomes begins dividing, ultimately creating nearly a trillion cells in the human body.

During cell division, DNA is accurately copied thanks to error-correcting proteins, but there's still a very low error rate (0.64-0.78 mutations per billion base pairs per division).

An error that occurs in the DNA after birth but during development is called a **Somatic Genetic Mutation.**

This occurrence of mutation is driven by the repeated 'copy-pasting' of the genome – which means **there will be more somatic genetic mutations the older an individual is and the higher the turnover of the tissue.** Turnover is the replacement of old cells with new ones.

Sometimes, a somatic genetic mutation can render a cell fitter than others, which lead to the formation of tumours. These mutations are called ***driver* mutations.**

What is the importance of Somatic genetic variants?

Cancer signatures: Somatic genetic variants play an important role in the development of cancers. We now know that somatic changes can cause a cancer to develop and that cancers can accelerate the development of somatic changes. So they can help with early detection, diagnosis, and prognosis.

Development of Genetic Diseases: Many genetic conditions arise from somatic genetic variants. Obviously, these conditions are not inherited from either parent but are due to new genetic variations that have arisen during development. So the severity and distribution of the disease depends on how early or late during development the corresponding mutation occurred.

Beneficial in some cases: In some instances, somatic changes can be beneficial in a genetic disease – by changing a deleterious change to a normal one, a phenomenon known as **revertant mosaicism.**

– For example, around 10% of cases of **Wiskott-Aldrich syndrome,** a rare genetic immuno-deficiency, have been found to have revertant mosaicism, as a result alleviating the severity of the disease in many individuals.

What is Somatic Mosaicism across Human Tissues(SMaHT) Network?

Launched by: U.S. National Institutes of Health

Aim: To discover somatic variants, develop tools for study, and improve analysis for biological and clinical insights.

Investment: The U.S. government has invested $140 million to study somatic variants in post-mortem samples.

225. China releases new map showing territorial claims

Source: The post is based on the article "China releases new map showing territorial claims" published in The Hindu on 27th August 2023

What is the News?

The Chinese government has released the "2023 edition of the standard map of China".

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What does the "2023 edition of the standard map of China" show?

The map shows Arunachal Pradesh which China claims as South Tibet and Aksai Chin occupied by it in the 1962 war as part of its territory.

The map also incorporates China's claims over the nine-dash line thus laying claim to a large part of the South China Sea.

The map also adds a "tenth dash" east of Taiwan to assert its claims over the island.

Why has China released this 2023 map?

China's release of the 2023 map comes after it announced in April,2023 its intention to standardize the names of 11 places in Arunachal Pradesh, including one near the capital Itanagar.

This was the third such list "renaming" places in Arunachal Pradesh.

This is seen by observers as a response to India holding events in the lead-up to the G-20 summit in Arunachal Pradesh which China had opposed.

226. What Is Magic Rice? What Is Special About This Rice That It Got GI Tag

Source: The post is based on the article **"What Is Magic Rice? What Is Special About This Rice That It Got GI Tag"** published in **TOI on 28th August 2023**

What is the News?

Chokuwa rice has received a GI (Geographical Indication) tag due to its exceptional quality and uniqueness.

What is Chokuwa Rice?

Chokuwa rice is also known as Magic rice.It is grown in Assam.

It has a significant role in Assam's culinary history and was a staple food for the Ahom dynasty.

Cultivated in: This healthy rice is mainly cultivated along the Brahmaputra River in places like Tinsukia, Dhemaji, and Dibrugarh.

Characteristics: Chokuwa rice is basically a semi-glutinous winter rice, known as Sali rice.The sticky and glutinous variety is categorized as Bora and Chokuwa based on their amylose concentration.

– The low amylose Chokuwa rice variants are used to make soft rice, which is known as Komal Chaul or soft rice.

– This whole grain can be consumed after soaking the rice in cold or lukewarm water.

– This unique rice variety is consumed with curd, sugar, jaggery, bananas to name a few.

– This rice is also used in making several Assamese delights like Pithe and other local dishes.

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227.   ISRO-developed device for fishers' safety successfully tested at Neendakara

Source: The post is based on the articl**e "ISRO-developed device for fishers' safety successfully tested at Neendakara"** published in **The Hindu on 27th August 2023**

What is the News?

ISRO-Space Applications Centre (Ahmedabad) has successfully tested a device called 'Nabhmitra'.

What is Nabhmitra?

Nabhmitra is a device developed by ISRO-Space Applications Centre (Ahmedabad) for the safety of fishermen.

This device uses satellite communication to allow two-way messaging between boats and authorities at sea.

The authorities can communicate weather and cyclone warnings with the boats.In turn, the fisherman can also send distress messages to the authorities.

In emergencies like capsizing or fires, fishermen can press a button on the device to contact the control center.

The control center will receive the alert with the boat's location and the boat's crew will receive a response message from the control center.

Apart from providing information about shipping channels and maritime boundaries, the device will also help to identify fishing fields.

228.   State of birds report 2023: Most species show dip, Indian Peafowl among those flourishing

Source: The post is based on the article **"State of birds: Most species show dip, Indian Peafowl among those flourishing"** published in **Indian Express on 28th August 2023**

What is the News?

The State of India's Birds, 2023 has been released.

What is the State of India's Birds Report, 2023?

State of India's Birds Report is an assessment of the distribution range, trends in abundance and conservation status of 942 of India's 1,200 bird species.

Published by: State of India's Birds Partnership, a group of 13 governments (including SACON, WII, ZSI) and non-governmental organizations.

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What are the key findings of the State of India's Birds, 2023?

Source: Hindustan Times

Decline in birds: Of the 338 species that had enough data to assess for long-term trends, 60% of the species showed long-term declines.

– Birds that feed on vertebrates and carrion (including raptors and vultures) have declined greatly, suggesting harmful pollutants in their food resources, a decline in prey availability, or both.

Endemic Birds: Birds endemic to the Western Ghats and Sri Lanka biodiversity hotspots have rapidly declined in India over the past few decades. India is home to 232 endemic species, found nowhere else in the world.

Birds that live in open habitats are severely impacted: Open habitats in India have been severely compromised by the spread of invasive, drought tolerant woody plants, as well as wind turbines and power lines, impacting several bird species. Of particular note is the Great Grey Shrike, which has suffered a worrisome long-term decline of more than 80%.

Three Indian Bustard species face imminent extinction: The three bustard species that breed in India – the Great Indian Bustard, Lesser Florican and Bengal Florican – face imminent extinction.

Migratory birds under greater threat than resident species: Birds face many dangers during migration, from extreme weather events, to predation, starvation, and hunting/illegal killing.

Long-distance migrants have declined the most, by over 50% followed by short-distance migrants.

Some bird species are in abundance: Several species like the Indian Peafowl, Rock Pigeon, Asian Koel, and House Crow are thriving and increasing in both abundance and distribution.

– For instance, there has been a 150% increase in the abundance of peafowl across the country over the past decades.

What are the major threats to birds in India highlighted in the report?

The major threats are: Climate Change, Urbanization, Monocultures, Energy Infrastructure, ecosystem degradation and environmental pollutants.

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229. Strategic Initiatives by Coal Ministry increase Availability of Domestic Coking Coal for Steel Production, Reduce Imports

Source: The post is based on the article **"Strategic Initiatives by Coal Ministry increase Availability of Domestic Coking Coal for Steel Production, Reduce Imports"** published in **PIB on 29th August 2023**

What is the News?

The Ministry of Steel and the Ministry of Coal are taking up collaborative efforts to enhance domestic Coking Coal availability and minimize import reliance.

What is Coking Coal and why is it imported?

Coking coal also known as metallurgical coal is mainly used in manufacturing of steel through blast furnace route.

Domestic coking coal is high ash coal (mostly between 18% – 49%) and is not suitable for direct use in the blast furnace.

Therefore, coking coal is washed to reduce the ash percentage and is blended with imported coking coal (<9% ash) before utilization in the blast furnace.

About 50 MT coking coal is imported by the country on an annual basis and the value of coking coal imported in FY 2020-21 was Rs. 45435 crore.

Thus, increasing the supply of domestic coking coal would not only help in reducing the coking coal imports but also help in saving the forex and fortifying our foreign exchange reserves.

What is Mission Coking Coal?

Government of India has launched 'Mission Coking Coal' in August, 2021 to suggest a roadmap to augment the production and utilization of domestic coking coal in India by 2030.

The mission envisions significantly reducing Coking Coal imports through a transformative measures under the "Atmanirbhar Bharat" initiative.

These measures encompass exploration, enhanced production, technological adoption, private sector involvement in coking coal blocks, establishment of new washeries, increased R&D activities, and quality enhancement.

What are the measures taken to increase production of Coking Coal?

Auction of Coking Coal Blocks: The Ministry of Coal achieved a significant milestone with the allocation of 16 Coking Coal Blocks.Out of which, 4 blocks were auctioned in 2022-23.This effort is projected to contribute a substantial 1.54 MT to Coking Coal production.

Revitalizing Abandoned Mines: Bharat Coking Coal Limited (BCCL) has opened new avenues by inviting agencies and companies to undertake Coking Coal extraction from abandoned or discontinued BCCL-owned mines.

Strategic Collaboration with SAIL: Steel Authority of India Limited (SAIL) and BCCL have signed an MoU for supply of 1.8 MT of washed Coking Coal to increase the availability of Coking Coal.

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Innovative Greenfield Washeries: The Ministry of Coal encourages the establishment of greenfield washeries or refurbishment of existing BCCL washeries to increase Coking Coal availability.

230.   Indian Army contingent leaves for exercise BRIGHT STAR

Source: The post is based on the article **"Indian Army contingent leaves for exercise BRIGHT STAR"** published in **PIB on 29th August 2023**

What is the News?

Indian Army contingent comprising 137 personnel has departed to Egypt to participate in Exercise BRIGHT STAR- 23.

What is Exercise BRIGHT STAR?

Exercise BRIGHT STAR is a multinational tri-services joint military exercise that will be led by **US CENTCOM and the Egyptian Army.**

The exercise was **initially started as a bilateral training event between the US and Egypt**, dating back to the Camp David Accord in 1977.The first exercise took place in 1980. Since 1995, other countries have also joined in.

The previous Exercise BRIGHT STAR in 2021 involved the armed forces of 21 countries.

Exercise BRIGHT STAR 2023 will include the participation of 34 countries, making it the largest-ever joint military drill in the Middle East and North Africa region.

This is also the **first time that Indian Armed Forces will be participating** in the exercise.

What is the objective of Exercise BRIGHT STAR 23?

The exercise will consist of a large number of training activities focused on combating emerging unconventional threats and enhancing regional partnerships amongst participating nations aimed at maintaining world peace.

In addition, the exercise will also include a combined arms live firing exercise based on a tactical setting.

Further, a panel discussion on contemporary topics is also planned to be conducted on Cyber Security for which the **Indian Armed Forces are the lead force.**

231.   World's first prototype of the BS 6 Stage II 'Electrified Flex fuel vehicle' launched

Source: The post is based on the article **"World's first prototype of the BS 6 Stage II 'Electrified Flex fuel vehicle' launched"** published in **PIB on 29th August 2023**

What is the News?

The Union Road Transport Minister has launched the world's first-ever prototype of the BS-VI Stage-II Electrified Flex Fuel Vehicle in New Delhi.

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What is an Electrified Flex Fuel Vehicle?

Developed by: Toyota Kirloskar Motor

It is the **world's first BS 6 (Stage II) Electrified Flex Fuel vehicle** prototype.

The vehicle uses a mixture of fuel to drive the car. It includes ethanol, a biofuel produced from energy crops like sugarcane, maize and rice and an electric power.

What is the significance of Electrified Flex Fuel Vehicle?

Firstly, Electrified Flex Fuel Vehicle has both a Flexi Fuel engine and an electric power train. This gives it the ability to provide dual benefit of higher ethanol use and much higher fuel efficiency as is in case of a Strong Hybrid Electric Vehicle (SHEV), which can provide 30-50% higher Fuel Efficiency as it can run 40-60% in EV mode with engine shut off.

Secondly, it uses minimal advanced chemistry batteries. So, it also guards against possible Geo-political risks of battery raw material supplies.

What is the status of Ethanol Blending in India?

Currently, India imports over 85% of its oil to fulfill its domestic demand, amounting to nearly Rs 16 lakh crore.

By introducing ethanol blends with higher levels of fossil fuel, the government aims to cut this dependency on imports.

Ethanol blending in India has increased by over 8 times. It has increased from 1.53 % in 2014 to around 11.5 % (March 2023) leading to savings in the import bills and also lowering of carbon emissions.

The central government has set the target to achieve a 20% ethanol blend pan-India by 2025, which is expected to save Rs 35,000 crore annually in the oil import bill.

232. ISRO all set to launch first Sun mission

Source: The post is based on the article **"ISRO all set to launch first Sun mission"** published in **PIB on 29th August 2023**

What is the News?

The Indian Space Research Organisation (ISRO) has announced that the Aditya-L1 mission, the first space-based Indian observatory to study the Sun, will be launched on September 2 from Sriharikota.

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What is Aditya L1 Mission?
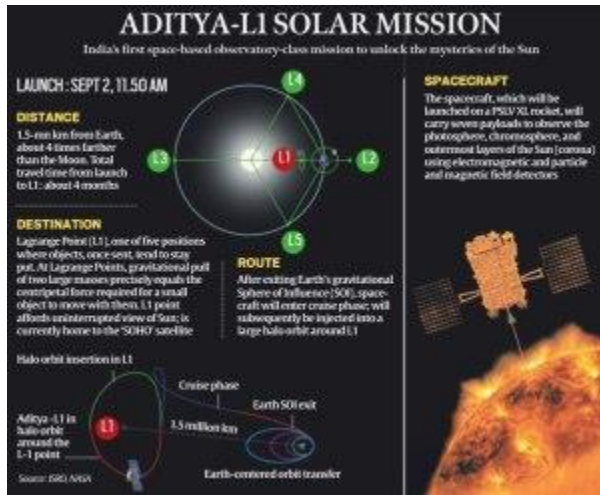
Source: Indian Express

Click Here to read

What are the objectives of Aditya L1 Mission?

Dynamics of the Solar Atmosphere: One of the primary goals of the mission is to study the dynamics of the solar atmosphere, including the chromosphere and corona. By observing these regions, scientists hope to gain insights into the processes involved in coronal heating, coronal mass ejections, and solar flares.

Understanding Coronal Heating: The Sun's corona, with its temperature exceeding 1 million degrees Celsius, has long puzzled scientists. Aditya L1 aims to investigate the physics behind coronal heating, shedding light on the mechanisms responsible for this extreme temperature difference between the Sun's lower and upper atmosphere.

Probing the Solar Wind: The solar wind, a stream of charged particles emitted by the Sun, plays a crucial role in space weather and impacts Earth's environment. Aditya L1 will provide in-situ observations of the solar wind, contributing to our understanding of its composition, dynamics, and origin.

Exploring Coronal Mass Ejections (CMEs): Coronal mass ejections are colossal eruptions of plasma and magnetic fields from the Sun's corona. Aditya L1 will investigate the initiation, evolution, and propagation of CMEs, enabling scientists to better predict and understand these powerful solar events.

Magnetic Field Measurements: The mission will focus on studying the magnetic field topology and variations in the solar corona. Accurate measurements of the magnetic field strength and structure are essential for understanding the Sun's influence on space weather and Earth's magnetosphere.

Solar Climate Connection: Aditya L1 will contribute to our knowledge of the Sun's impact on Earth's climate. By studying the Sun's emissions and their effects on Earth's atmosphere, scientists aim to unravel the connection between solar activity and climate variations.

What is the significance of the Aditya L1 Mission?

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Advancing Solar Science: By studying the Sun's atmosphere, Aditya L1 will contribute to significant advancements in solar physics and our understanding of stellar dynamics. This will help unravel long-standing mysteries surrounding the Sun's behavior and its impact on space weather.

Enhancing Space Weather Forecasting: Solar activity, such as coronal mass ejections and solar flares, can have a profound impact on Earth's technological infrastructure and space-based assets.

– Aditya L1's observations will enhance our ability to forecast and mitigate the effects of space weather events, safeguarding critical systems like satellites, communication networks, and power grids.

Investigating Climate Connections: The Sun's emissions play a vital role in Earth's climate dynamics. Aditya L1's research into the connection between solar activity and climate variations will contribute to our understanding of long-term climate change and aid in refining climate models.

Indigenous Technological Advancements: The development and execution of the Aditya L1 mission demonstrate India's growing expertise in space technology.

233. Cyclone frequency may rise over Indian coast from the warming of Pacific: study

Source: The post is based on the article **"Cyclone frequency may rise over Indian coast from the warming of Pacific: study"** published in **The Hindu on 30th August 2023**

What is the News?

According to a study, the intensity and frequency of tropical cyclones are expected to increase in the north Indian Ocean.

What does the study say about the Tropical Cyclones?

Tropical cyclones do not form easily near the equator. The number of equatorial-origin cyclones was 43% less in the period from 1981 to 2010 compared with 1951 to 1980.

This happened because Pacific Decadal Oscillation(PDO) was in a 'warmer' or positive phase.

However, in 2019, the PDO entered a cooler, negative phase. This could mean more tropical cyclones in the post-monsoon months that originate near the equator.

This means more cyclones will be forming closer to India's Peninsular coast for the North Indian Ocean region.

What is Pacific Decadal Oscillation(PDO)?

The Pacific Decadal Oscillation (PDO) is a long-term climate pattern that affects the temperature of the Pacific Ocean and the weather patterns around it.

The PDO is a naturally occurring phenomenon that shifts between warm and cool phases, with each phase lasting around 20-30 years.

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The PDO has positive and negative phases.**El Nino Southern Oscillation (ENSO)** with a positive PDO is generally not good for India but when linked with a negative PDO, it brings more rain to India.

What is the difference between PDO and El Nino Southern Oscillation (ENSO)?

Firstly, the most obvious difference between the PDO and ENSO is the time scale.The El Nino Southern Oscillation (ENSO) phenomenon repeats in the Pacific over two to seven years.But the Pacific Decadal Oscillation (PDO) has a longer cycle as it repeats every 20 to 30 years.

Secondly, El Nino, often corresponds to reduced rainfall over India whereas La Nina, is linked to excessive rainfall over India.

– But unlike an ENSO whose stage can be determined any year, a 'positive' or 'warmer phase' of a PDO can be known only after several years of measuring ocean temperatures and their interaction with the atmosphere.

234.   Ministry of Jal Shakti Releases the 6th Census Report On Minor Irrigation (MI) Schemes

Source: The post is based on the article **"Ministry of Jal Shakti Releases the 6th Census Report On Minor Irrigation (MI) Schemes"** published in **PIB on 28th August 2023**

What is the News?

The Ministry of Jal Shakti has released the 6th Census Report on Minor Irrigation (MI) Schemes.

What are Minor irrigation(MI) schemes?

Minor irrigation (MI) schemes are defined as those structures either in ground water or in surface water category having Culturable Command Area (CCA) up to 2,000 ha.

Minor irrigation schemes are categorized into six types: (1) Dug wells/dug-cum-bore wells (2) Shallow Tube wells (3) Medium Tube wells and (4) Deep tube wells comes under the category of Ground water schemes whereas (5) Surface flow schemes and (6) Surface lift schemes comes under the category of Surface water schemes.

What is the Census Report on Minor Irrigation (MI) Schemes?

The Government of India has been conducting census of minor irrigation schemes. So far, five censuses have been conducted with reference year 1986-87, 1993-94, 2000-01, 2006-07 and 2013-14 respectively.

The census is conducted under the centrally sponsored scheme "Irrigation Census".

The 6th minor irrigation census with reference year 2017-18 was completed in 32 States/ UTs. For the first time, information about the gender of the owner of the MI scheme was also collected in case of individual ownership.

What are the key findings of the 6th Census Report on Minor Irrigation (MI) Schemes?

Minor irrigation schemes: There are 23.14 million minor irrigation schemes in India spread over 695 districts. Of these 21.93 million (94.8%) are groundwater and 1.21 million (5.2%) are surface water schemes.

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– Dug wells have the highest share in MI schemes followed by shallow tube wells, medium tube wells and deep tube wells.

State wise: Uttar Pradesh possesses the largest number of MI schemes in the country (17.2%) followed by Maharashtra (15.4%), Madhya Pradesh (9.9%) and Tamil Nadu (9.1%).

Increase in MI Schemes: There has been an increase of about 1.42 million in MI schemes with their number standing at 23.14 million during 6th MI Census as compared to 21.7 million in 5th Census.

Ownership of minor irrigation schemes: 96.6% of minor irrigation schemes are under private ownership whereas 3.4% are under public ownership. Therefore, most minor irrigation schemes are owned by individuals or groups of farmers.

The most notable finding was that 18.1% of minor irrigation schemes are owned by women.

235. Artistes breathe a new life into Seethakali folk art

Source: The post is based on the article **"Artistes breathe a new life into Seethakali folk art"** published in **The Hindu on 28th August 2023**

What is the News?

The Perinad Seethakali Sangham, a group of artists from diverse backgrounds, revived the dying Seethakali folk art form in 2017.

This group is now set to perform outside Kerala for the first time

What is Seethakali folk art?

Seethakali is a traditional folk-dance drama from Desinganad, Kerala.It is primarily performed during the Onam festivities.

Performed by: The performance is carried out by Dalit artists belonging to the Veda and Pulaya communities.

Based on: The art form is based on certain episodes taken from the epic Ramayana.

– The performance portrays the tale of Sita's journey, from vanayatra (exile to the forest) to Sita's andardhanam (descend into the earth).

Key Features: The art form is a blend of songs, storytelling and fast movements.It is accompanied by instruments such as ganjira, manikatta, chiratta and kaimani.

– The costumes and the make-up are loud and eye-catching.The characters of Rama and Laxmana appear in green since the color is used to represent gods and goddesses in Kathakali.

Reason for decline: Seethakali songs were orally transmitted from one generation to the next, which led to a pause in the tradition.

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236. Global Fund secures deal to slash HIV treatment price; to benefit over 19 million

Source: The post is based on the article **"Global Fund secures deal to slash HIV treatment price; to benefit over 19 million"** published in **The Hindu on 31st August 2023**

What is the News?

The Global Fund has reached an agreement with generic drug manufacturers to significantly reduce the price of an advanced HIV medication called TLD.

This deal will make TLD available for under $45 per person per year, marking a 25% reduction in price.

What is TLD?

TLD is a three-in-one pill consisting of tenofovir disoproxil fumarate, lamivudine and dolutegravir.

It is recommended by the World Health Organization as the preferred first-line HIV treatment for adults and adolescents.

This drug rapidly suppresses the virus that causes AIDS. It also has fewer side effects and is easy to take.

The price reduction of the drug will help resource-limited countries enhance treatment programs, prevention efforts and ultimately save more lives while reducing new infections.

What is a Global Fund?

Established in: 2002

Purpose: It is an international financing and partnership organization that aims to attract, leverage and invest additional resources to end the epidemics of HIV/AIDS, tuberculosis and malaria to support attainment of the Sustainable Development Goals established by the United Nations.

Secretariat: Geneva, Switzerland.

237. WCS-India report flags illegal trade of red sand boa

Source: The post is based on the article **"WCS-India report flags illegal trade of red sand boa"** published in **The Hindu on 31st August 2023**

What is the News?

Wildlife Conservation Society (WCS)-India has released a report titled '*Illegal Trade of Red Sand Boa in India 2016-2021*'.

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What is Red Sand Boa?

Source: TOI

Red Sand Boa commonly called the Indian Sand Boa is a non-venomous snake found throughout the dry parts of the Indian subcontinent.

It is a primarily reddish-brown and thick-set snake that grows to an average length of 75 cm.

Unlike most snakes, the tail is almost as thick as the body and gives the reptile the appearance of being "double-headed".

Important Facts about Red Sand Boa: 1) Largest of the sand boas in the world 2) Non-venomous and 3) Nocturnal and spends the majority of its time under the ground.

Ecologically important: Like other snake species, the Red Sand Boa also plays a significant role in the ecosystem by maintaining a healthy population between prey and predator. It feeds on rodents, lizards, and even other snakes.

IUCN: Near Threatened

Wildlife (Protection) Act, 1972: Schedule IV

CITES: Appendix II

What does the Wildlife Conservation Society (WCS)-India report say on Red Sand Boa?

Red sand boa is now acknowledged as one of the most traded reptile species in the illegal trade market due to its demand in the pet trade, as well as for use in black magic.

Around 172 incidents of illegal red sand boa trade were reported between the years 2016-2021.

The highest number was recorded in Maharashtra often from urban areas.

The report also highlights the role of social media in the illegal trade of the species. For instance, YouTube serves as a buyer-seller-interface for red sand boas in India, and sometimes acts as a gateway to facilitate trade via WhatsApp.

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238.   Curtain Raiser: Launch of Y – 12654 (Mahendragiri)

Source: The post is based on the article "**Curtain Raiser: Launch of Y – 12654 (Mahendragiri)**" published in **PIB on 30th August 2023**

What is the News?

India's latest warship, Mahendragiri will be launched at the Mazagon Dock Shipbuilders in Mumbai.

What is Mahendragiri?

Mahendragiri is the seventh and last stealth frigate of Project 17A.

Named after: Mahendragiri is named after a mountain peak in Eastern Ghats located in the state of Orissa.

Developed by: Mazagon Dock Shipbuilders Limited

Features: It has been incorporated with improved stealth features, advanced weapons and sensors and platform management systems.

What is Project 17A?

Project 17A is a follow-on of the Project 17 Shivalik-class frigate for the Indian Navy.

A total of seven ships were built under Project 17-A.These are 1) INS Nilgiri 2) INS Himgiri 3) INS Udaygiri 4) INS Dunagiri 5) INS Taragiri 6) INS Vindhyagiri and 7) INS Mahendragiri.

The warships have been designed in-house by Indian Navy's Warship Design Bureau

The four warships were built at Mazagon Dock Shipbuilders Limited.The remaining three were developed at Garden Reach Shipbuilders & Engineers (GRSE).

Around 75% of warship equipment has been ordered from indigenous firms, including Micro, Small, and Medium Enterprises (MSMEs) adhering to Prime Minister's 'Make in India' call.

239.   CSIR-CMERI Developed Compact Electric Tractor- CSIR PRIMA ET11

Source: The post is based on the article **"CSIR-CMERI Developed Compact Electric Tractor-CSIR PRIMA ET11"** published in **PIB on 30th August 2023**

What is the News?

Central Mechanical Engineering Research Institute (CSIR-CMERI) has developed a compact electric tractor called **CSIR PRIMA ET11.**

Why was there a need to shift to Electric Tractors?

Agriculture is the main livelihood for 55% of India's population, contributing significantly to the GDP and feeding 1.3 billion people.

Tractors are vital for increasing agricultural productivity through mechanization.

CSIR CMERI has a history of designing and developing tractors, starting with SWARAJ in 1965, Sonalika tractor in 2000 and Krishishakti in 2009 for small farmers.

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The shift towards electric tractors is crucial due to the environmental impact of traditional diesel tractors, which consume 7.4% of India's annual diesel and emit pollutants.

Electrification of tractors supports India's commitment to reduce carbon emissions and achieve Net Zero emissions by 2070, as announced at COP26.

What is CSIR PRIMA ET11?

CSIR PRIMA ET11 is an indigenously designed and developed Electric Tractor mainly to cater small and marginal farmers of India.

Developed by: Central Mechanical Engineering Research Institute (CSIR-CMERI)

Key Features: Made entirely with indigenous components and technologies.

– Designed for agriculture with a focus on women-friendly features. For eg: All the levers, switches etc have been placed for easy approach to the women.

– Can be charged using a home socket, providing more than 4 hours of field operation.

– Equipped with efficient transmission, robust design, and hydraulic system for various tasks.

– Utilizes state-of-the-art Lithium-ion batteries with deep discharge capability.

– Features a V2L port for using tractor battery power for secondary application.

240.   India will host 1st edition of 'Global IndiaAI 2023 ' in October

Source: The post is based on the article **"India will host 1st edition of 'Global IndiaAI 2023 ' in October"** published in **PIB on 30th August 2023**

What is the News?

The Ministry of Electronics and Information Technology will be organizing the Global IndiaAI 2023.

What is Global IndiaAI 2023?

Organized by: Ministry of Electronics and Information Technology

Aim: To bring together the best and brightest in AI from India and around the world.

Topics: The conference is poised to cover a wide spectrum of topics including Next Generation Learning and Foundational AI models, AI's applications in healthcare, governance, and next-gen electric vehicles, future AI research trends, AI computing systems, investment opportunities and nurturing AI talent.

– The conference will also serve as a showcase for the vibrant IndiaAI ecosystem that comprises key initiatives such as DI Bhashini, India Datasets Program, IndiaAI Future Design program for startups and IndiaAI FutureSkills program dedicated to nurturing world-class AI.

Significance: The success of the past two editions of the SemiconIndia conference has put India on the global semicon map.This has enabled India to become a catalyst for investments and growth within the semiconductor sector.

– The Global IndiaAI summit will also catalyze India's AI landscape and innovation ecosystem

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241. Aatmanirbhar Bharat Rozgar Yojana (ABRY) Surpasses Employment Generation Target

Source: The post is based on the article **"Aatmanirbhar Bharat Rozgar Yojana (ABRY) Surpasses Employment Generation Target"** published in **PIB on 30th August 2023**

What is the News?

Aatmanirbhar Bharat Rozgar Yojana(ABRY) has exceeded its initial employment generation goals showcasing its success in fostering job creation and recovery during the COVID-19 pandemic.

What is Aatmanirbhar Bharat Rozgar Yojana(ABRY)?

Launched on: 1st October, 2020

Aim: To incentivize employers for creation of new employment and restoration of loss of employment during Covid-19 pandemic.

Benefits under the scheme: Under the scheme, the government of India for a period of two years, is crediting both the employee' share (12% of wages) and employer's share (12% of wages) of contribution for establishments with up to 1000 employees.

– For establishments with over 1000 employees, only the employee's EPF contributions (12% of wages) were covered in respect of new employees.

Eligibility for benefits: An employee drawing a monthly wage of less than Rs. 15000/- who was not working in any establishment registered with the Employees' Provident Fund Organization (EPFO) before 1st October, 2020.

– The employees who lost their job during Covid-19 pandemic and did not join any EPF covered establishment upto 30.09.2020.

Duration of the scheme: The scheme commenced from 1st October 2020 and registration was open for eligible employers and new employees upto 31st March, 2022.

Achievements of the scheme: The scheme had set a target to benefit approximately 7.18 million employees across India.

– As of July 31, 2023, the ABRY has already achieved an enrolment of over 7.58 million new employees, surpassing its initial employment generation target.

242. In India, 74% can't afford a healthy diet: UN agency report

Source: The post is based on the article "**In India, 74% can't afford a healthy diet: UN agency report**" published in **The Hindu on 31st August 2023**

What is the News?

The 'State of Food Security and Nutrition in the World' (SOFI) 2023 report has been released with the **theme** "Urbanization, agrifood systems transformation, and healthy diets across the rural-urban continuum".

What is the State of Food Security and Nutrition in the World(SOFI) Report?

SOFI is an annual flagship report jointly prepared by: Food and Agriculture Organisation of the United Nations (FAO), International Fund for Agricultural Development (IFAD), United

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Nations Children's Fund (UNICEF), World Food Programme (WFP) and World Health Organisation (WHO).
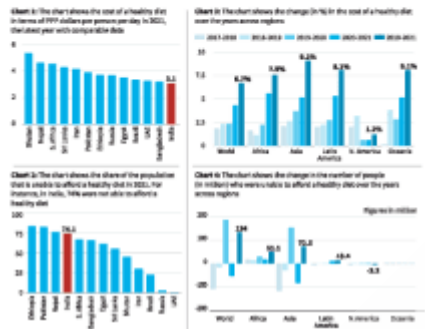
Aim: To inform on progress towards ending hunger, achieving food security and improving nutrition and to provide an in-depth analysis of key challenges for achieving this goal in the context of the SDG.

What are the key findings of the SOFI 2023 related to India?

Source: The Hindu

Healthy diet: India has the lowest cost of a healthy diet among BRICS nations and neighboring countries.However, a significant portion of the population can't afford it due to stagnant or decreasing incomes.

– For instance, meal costs in Mumbai increased by 65% in five years, while salaries/wages only grew by 28%-37%.

Healthy diet in terms of Purchasing Power Parity(PPP): In India, a healthy diet costs 3.066 PPP dollars per person per day, the lowest among the countries considered.

– PPP stands for 'Purchasing Power Parity'.In simple terms, 1 PPP dollar in the United States should buy the same amount of goods and services as 1 PPP dollar in, say, India or Brazil.

Share of the population that is unable to afford a healthy diet in 2021: In India, 74% were not able to afford a healthy diet, the fourth highest share among the nations considered.

Change in the cost of a healthy diet over the years across regions: Between 2019 (before the COVID-19 pandemic) and 2021, the expense of maintaining a healthy diet increased by almost 9% in Asia — the highest across regions.

Change in the number of people unable to afford a healthy diet over time across regions: Between 2019 and 2021, Asia and Africa saw the highest growth in the number of people who could not afford a healthy diet.

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– In Asia, South Asia had the highest number of people (1.4 billion) and the highest share (72%) who could not afford a healthy diet.

243. What are the changes to the process for sale of SIM cards?

Source: The post is based on the article **"What are the changes to the process for sale of SIM cards?"** published in **The Hindu on 31st August 2023**

What is the News?

The Union Minister for Telecommunications has introduced two reforms to tackle the menace of cybercrimes and financial fraud.

These reforms are meant to strengthen the Sanchar Saathi Portal.

What is Sanchar Saathi Portal?

Click Here to read

What are the two reforms introduced to tackle the menace of cybercrimes and financial fraud?

Reform on Point of Sale (PoS):

Franchisees, agents, and distributors of SIM cards (Point of Sale or PoS) must now be registered with telecom network operators.

Operators are responsible for verifying the PoS and conducting mandatory police verification of dealers.

Existing SIM card providers have 12 months to comply with these registration requirements.

If a PoS is involved in illegal activities, their agreement will be terminated, they will be blacklisted for three years, and they will face a penalty of ₹10 lakh.

Bulk SIM Cards Reform:

The reforms replaced the system of 'bulk procurement' of SIM cards (by businesses, corporates or those meant for specific events) with a system of entailing 'business' connections — sizeable procurement by a registered business entity or enterprise.

This means that businesses can procure any number of connections.But it would be subject to completing KYC requirements for all end-users.In other words, the final user— the executive who would be holding the connection — would have to undergo the KYC procedure.

In order to prevent the misuse of printed Aadhaar, the provisions mandate that demographic details would be required by scanning the QR code of the printed Aadhaar.

Further, in case of disconnection of a mobile number, it would not be allocated to any other customer for 90 days.

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244. Reroute rail track through gibbon sanctuary

Source: The post is based on the article **"Reroute rail track through gibbon sanctuary"** published in **The Hindu on 31st August 2023**

What is the News?

Wildlife Institute of India (WII) has proposed a solution to address the problems caused due to the route of the 1.65-km long railway track in eastern Assam.

This railway track has divided a **Hollongapar Gibbon Sanctuary** into two unequal parts.Due to this, hoolock gibbons are facing habitat fragmentation as the track separated gibbon populations on either side.

Hence, that's why scientists at WII have suggested constructing an artificial canopy bridge to enable the gibbons to move across the railway line.This would help them maintain their genetic diversity.

What is Hollongapar Gibbon Sanctuary?

The Hollongapar Gibbon Sanctuary formerly known as the Gibbon Wildlife Sanctuary or Hollongapar Reserved Forest is an isolated protected area of evergreen forest located in Assam.

The sanctuary was officially constituted and renamed in 1997.

The sanctuary contains India's only gibbons – the hoolock gibbons and North-eastern India's only nocturnal primate – the Bengal slow loris.

What are Hoolock Gibbons?

Click Here to read

245. ASI to launch "Adopt a Heritage 2.0 programme" and Indian Heritage app

Source: The post is based on the article **"ASI to launch "Adopt a Heritage 2.0 programme" and Indian Heritage app"** published in **PIB 1st September 2023**

What is the News?

The Archaeological Survey of India(ASI) is set to launch the "Adopt a Heritage 2.0" programme and Indian Heritage app.

What is Adopt a Heritage 2.0 Programme?

The programme is a revamped version of the Adopt a Heritage scheme launched in 2017.

Aim: To safeguard India's diverse cultural heritage by inviting corporate stakeholders to enhance the amenities at over 3,600 monuments spread throughout the country.

– These monuments not only showcase India's rich cultural history but also contribute significantly to economic growth.

Under the programme, corporate stakeholders can utilize their Corporate Social Responsibility (CSR) funds to enhance the amenities at the historical sites.

– This revamped version emphasizes the amenities required for different monuments, as defined by the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act ,1958.

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– Interested stakeholders can apply to adopt a monument or specific amenities through a dedicated web portal.

– The process for selection will be carried out after due-diligence and discussions with various stakeholders.

– The selected stakeholders will develop, provide and/or maintain amenities in hygiene, accessibility, safety and knowledge categories.

– The term of the appointment will be for a period of five years initially, which may be further extended up to five years.

What is an Indian Heritage app?

Indian Heritage is a user-friendly mobile app.It will showcase the heritage monuments of India.

The app will feature state-wise details of monuments along with photographs, list of public amenities available, geo-tagged location and feedback mechanism for citizens.

246. Omission of disability-related questions from NFHS-6 shows that disability remains misunderstood

Source: The post is based on the article **"Omission of disability-related questions from NFHS-6 shows that disability remains misunderstood"** published in **Indian Express 1st September 2023**

What is the News?

The Government of India has decided to omit disability-related questions from the sixth round of the National Family Health Survey (NFHS-6).

What is the National Family Health Survey(NFHS)?

Click Here to read

When was disability related questions included in the NFHS Survey?

The questions on disability were included for the first time in the NFHS-5 which was carried out during 2019-21.

Based on the NFHS-5 report, it was observed that disability prevalence was only 1% for rural areas and 0.9% for urban areas.

However, National Sample Survey Office (NSSO) estimates for the year 2018 showed 2.3% for rural areas and 2% for urban areas.

Why has NFHS-6 decided to omit disability-related questions?

According to the Ministry of Health, the disability related questions are not included in NFHS-6 as the disability data will not change very fast and there is no reason to collect this data every time.

This decision has been criticized as the persons with disabilities make up around 2.21% of India's population, totaling about 2.68 crore people according to the 2011 Census.

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The Census data does not fully represent the current disabled population due to population growth over the past decade and the limited categories of disabilities recognized in the Census.

What are the other issues faced by disabled people in government policy making?

Limited Understanding of Disability: Ministry of Statistics and Programme Implementation) report on 'Persons with Disabilities (Divyangjan) in India — A Statistical Profile: 2021' refers to only eight categories of disabilities.

– It fails to acknowledge and account for the 21 categories of disabilities recognised in law after the enactment of the Rights of Persons with Disabilities Act, 2016 (RPWDA).

Invisible disability not acknowledged: Niti Aayog's visionary blueprint, 'Strategy for New India @ 75', which delineates the government's goals for 2022-23, recognises the challenges posed due to a lack of detailed data in drafting policies for persons with disabilities.

– However, the document lacks measures for those with invisible disabilities such as mental health conditions.

247. Combined Index of Eight Core Industries increases by 8.0% (provisional) in July 2023 as compared to the Index of July 2022

Source: The post is based on the article **"Combined Index of Eight Core Industries increases by 8.0% (provisional) in July 2023 as compared to the Index of July 2022"** published in **PIB 1st September 2023**

What is the News?

The combined Index of Eight Core Industries (ICI) has increased by 8.0% (provisional) in July 2023 as compared to the Index of July 2022.

The production of Coal, Steel, Natural Gas, Cement, Electricity, Refinery Products, Fertilizers and Crude Oil increased in July 2023 over the corresponding month of last year.

What is the Index of Eight Core Industries(ICI)?

Index of Eight Core Industries(ICI) measures combined and individual performance of production of eight core industries viz. Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizers, Steel, Cement and Electricity.

These Eight Core Industries comprise 40.27% of the weight of items included in the Index of Industrial Production (IIP).

What is the Index of Industrial Production (IIP)?

Index of Industrial Production is an index that measures growth of industrial production in India.

This index classifies industries into the mining, manufacturing and electricity sector.

IIP index is currently calculated using 2011-2012 as the base year.

IIP data is compiled and released every month by the Central Statistical Organization (CSO).

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248. 40 per cent elephant corridors report increase in use

Source: The post is based on the article **"40 per cent elephant corridors report increase in use"** published in **New Indian Express 31st August 2023**

What is the News?

Elephant Corridors of India 2023 report has been released.

The report has been prepared by Project Elephant with technical support from the Wildlife Institute of India.

What are Elephant Corridors?

Elephant corridors are linear, narrow, natural habitat linkages that allow elephants to move between secure habitats without being disturbed by humans.

What are the key findings of the Elephant Corridors of India 2023 report?

150 elephant corridors have been identified in 15 elephant-ranging states.

40% of elephant corridors of India have reported an increase in use by the elephants.

Around 29 corridors – constituting 19% of the total – have recorded a decline in use by the elephants over the years.

These corridors are primarily affected by encroachment, mining activities, development of linear infrastructure such as roads and railway tracks and other human interventions.

Further, around 10% of the elephant corridors have become impaired over the years.

West Bengal has the highest number (26) of identified elephant corridors in India.

There are six transnational corridors between India and Nepal.

Recommendations: The report has recommended following measures to safeguard corridors.These measures are: Habitat enrichment, accurate demarcation, measures to check human interventions, and legal protection under appropriate laws at the state level.

249. Govt panel to study simultaneous polls

Source: The post is based on the article **"Govt panel to study simultaneous polls"** published in **Livemint on 2nd September 2023**

What is the News?

The Government of India has constituted a committee headed by former president of India Ram Nath Kovind to explore the possibility of "One nation, One election".

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What is 'one nation, one election'?

Source: Hindustan Times

The concept of "one nation, one election" refers to holding simultaneous elections across the country.

It implies that elections for the Lok Sabha and state assemblies across India will be held simultaneously — with voting presumably taking place around the same time.

What is the history of 'one nation, one election'?

Simultaneous elections for the Lok Sabha and state assemblies were a norm in India till 1967. The Lok Sabha and state legislatures went to elections together in 1952 and 1957.

In 1959, this cycle was first broken in Kerala when the government of Jawaharlal Nehru used Article 356 of the Constitution to dismiss the government of Chief Minister E M S Namboodiripad.

In the 1967 elections, the Congress party suffered defeat in many states. But the governments were unstable, and many of these Assemblies were dissolved before their terms were over, resulting in the separation of the election cycles of many states from that of the Lok Sabha.

How has matters moved on One Nation One Election since this government came in power?

Parliamentary Standing committee report: In 2015, the Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice, headed by E M Sudarsana Natchiappan, compiled a report on 'Feasibility of Holding Simultaneous Elections to House of People (Lok Sabha) and State Legislative Assemblies'.

– The committee said that holding simultaneous elections to Lok Sabha and state assemblies would reduce: (i) the massive expenditure that is currently incurred for the conduct of separate elections; (ii) the policy paralysis that results from the imposition of the Model Code of Conduct during election time; (iii) impact on delivery of essential services and (iv) burden on crucial manpower that is deployed during election time.

What are the arguments against One Nation One Election?

The arguments against One Nation One Election include: complexity of such an exercise, the widely held view that simultaneous polls would benefit the nationally dominant party at the cost

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of regional players and the complications that would arise if any of the governments were to collapse before completing its term.

What did the Law Commission say on the One Nation One Election?

In a draft report in 2018, the Law Commission headed by Justice B S Chauhan held that simultaneous elections could not be held within the existing framework of the Constitution.

These could be held together through appropriate amendments to the Constitution, the Representation of the People Act 1951, and the Rules of Procedure of Lok Sabha and state Assemblies.At least 50% of the states may ratify the constitutional amendments.

The Commission recommended that all elections due in a calendar year be conducted together.

Since a no-confidence motion, if passed, may curtail the term of Lok Sabha or an Assembly, the Law Commission recommended replacing the "no-confidence motion" with a "constructive vote of no-confidence" through appropriate amendments — a government may only be removed if there is confidence in an alternative government.

250.   PM congratulates RBI Governor for being rated "A+" in the Global Finance Central Banker Report Cards 2023

Source: The post is based on the article **"PM congratulates RBI Governor for being rated "A+" in the Global Finance Central Banker Report Cards 2023"** published in **PIB on 2nd September 2023**

What is the News?

The Prime Minister has congratulated RBI Governor Shri Shaktikanta Das for being rated "A+" in the Global Finance Central Banker Report Cards 2023.

What is Global Finance Central Banker Report Cards 2023?

The Central Banker Report Cards has been published annually by Global Finance since 1994.

Purpose: It grades the central bank governors of 101 key countries, territories and districts, including the European Union, the Eastern Caribbean Central Bank, the Bank of Central African States and the Central Bank of West African States.

Parameters: The grades are based on a scale from A to F for success in inflation control, economic growth goals, currency stability, and interest rate management, according to a statement by Global Finance magazine.

– An 'A' represents an excellent performance and an 'F' stands for an outright failure.

Note: Recently, RBI Governor Shaktikanta Das was also awarded the "Governor of the Year" at the Central Banking Awards 2023 in London.

– Central Banking is a London-based international economic research journal.

– Shaktikanta Das is the second RBI governor to receive this award after Raghuram Rajan, who was given the title in 2015.

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251.   From Magna Carta to Ashtadhyayi: artefacts to grace G-20 corridor

Source: The post is based on the article **"From Magna Carta to Ashtadhyayi: artefacts to grace G-20 corridor "** published in **The Hindu on 2nd September 2023**

What is the News?

Several objects of cultural significance will be displayed at the special Culture Corridor which will be set up at the venue of the G-20 summit in New Delhi.

What is a G20 Culture Corridor?

The Ministry of Culture has conceptualized the Culture Corridor – G20 Digital Museum to represent and celebrate the shared heritage of G20 members and invitee countries.

This project is based on India's G20 theme Vasudhaiva Kutumbakam' and the Culture Working Group's (CWG) hallmark campaign 'Culture Unites All".

The Culture Corridor will incorporate iconic and notable cultural objects and heritage of the G20 members and 9 invitee countries.

For this, submissions were requested from G-20 countries and nine guest nations under five categories: **1)** Object of Cultural Significance (as a physical display) **2)** Iconic Cultural Masterpiece (as a digital display) **3)** Intangible Cultural Heritage (digital display) **4)** Natural Heritage (digital display) and **5)** Artefact Related to Democratic Practices (physical or digital display)

What will be displayed at the Culture Corridor being set up at the venue of the G-20 summit in New Delhi?

India: The Rig Veda manuscript will be exhibited with a special emphasis on the shloka that encourages humanity to come together.

– Ancient text Ashtadhyayi authored by Sanskrit philologist and scholar Panini will also be displayed.

– In the intangible heritage category, India will be displaying yoga, the Kumbh Mela, Vedic chanting, the lost wax bronze casting method, and the double ikkat weaving Patan Patola of Gujarat.

– In the natural heritage category, India will display the Himalayas, the Ganges, the Indian Ocean, the Living Root Bridge of Meghalaya and the Royal Bengal Tiger.

Other Countries: 1) 'Mrs Ples'– a 2.5-million-year-old fossil cranium from South Africa **2)** 18th century Fahua lidded porcelain jay of China **3)** copy of the Magna Carta issued by the King of England

4) copy of the Charters of Freedom (Declaration of Independence, Constitution, and Bill of Rights 1776-1791) of the US **5)** copy of Declaration of the Rights of Man and of the Citizen National Assembly (France, 1789) **6)** poster of the first democratic general election of Republic of Korea held in May 1948 among others.

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252. Children from void marriages entitled to parents' share in property, says SC

Source: The post is based on the article **"Children from void marriages entitled to parents' share in property, says SC"** published in **The Hindu on 2nd September 2023**

What is the News?

The Supreme Court held that a child born of a void or voidable marriage can inherit their parents' share in a joint Hindu family property governed by the Mitakshara law.

However, the court clarified that such a child would not be entitled to rights in or to the property of any other person in the family.

What is a Voidable Marriage?

A voidable marriage is one that is made invalid by the husband or wife through a decree. A void marriage is invalid at its very inception.

What is Mitakshara law?

There are mainly two schools in Hindu law, the **Mitakshara** & the **Dayabhaga** which concern the law of inheritance.

Mitakshara school is practiced in all of India except in the state of West Bengal and Assam.In this school of inheritance, property is inherited by the successors (coparceners) only if they were born in the family of the property owners.

Dayabhaga is mainly practiced in Assam & West Bengal.In this school of inheritance, the property goes to the successors (coparceners) only when the property owner is dead.

Under the Dayabhaga, a partition of the coparcenary property can be imposed by any adult coparcener whether male or female.

But under the Mitakshara, as it existed before the 2005 amendment of the Hindu Succession Act, a female could not at all be a coparcener and was therefore not entitled to partition.But after the amendment, a woman may also be a coparcener today.

What did the Supreme Court say on inheritance for children born from void marriages?

Section 16 of the Hindu Marriage Act grants legitimacy to children born from void or voidable marriages.

The court said that the intent of granting legitimacy to such children in the Hindu Marriage Act should also be reflected in the Hindu Succession Act, which governs inheritance.

This is because children born from void or voidable marriages come within the ambit of "legitimate kinship" and cannot be regarded as illegitimate by the Hindu Succession Act when it comes to inheritance.

The court also noted that after the enactment of the Hindu Succession (Amendment) Act, 2005, the share of a deceased person in a joint Hindu family governed by Mitakashara law can be devolved to his heirs by testamentary or intestate succession.

Prior to the amendment, the devolution was only through survivorship.Besides, the amendment gave equal rights of succession to women as well as men.

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253. PM asks the citizens to participate in Meri Maati Mera Desh campaign

Source: The post is based on the article **"PM asks the citizens to participate in Meri Maati Mera Desh campaign"** published in **PIB on 2nd September 2023**

What is the News?

The Prime Minister has asked the citizens to participate in the Meri Mati Mera Desh campaign.

What is the Meri Mati Mera Desh campaign?

The Meri Mati Mera Desh campaign is being organized nationwide as the closing program of Azadi ka Amrit Mahotsav festivities.

The campaign is a tribute to the Veers and Veeranganas who have made the supreme sacrifice for the country.

The campaign comprises of many activities such as:

Dedication of Shilaphalakam (Memorial): A memorial will be built on which the names of the bravehearts shall be inscribed.

– These shall include freedom fighters, defense personnel, personnel of Central Armed Police Forces and State Police who laid down their lives in the line of duty.

– The memorial shall be erected locally within Panchayats/Villages as well as urban sites—likely near Amrit Sarovars or local schools or other prominent locations.

'Panch Pran' Pledge: At the memorial site, people will take a solemn pledge covering Panch Pran affirming their commitment to the country.

– The pledge is: 1) Make India developed and self-reliant by 2047 2) Remove any trace of colonial mindset 3) Celebrate our heritage 4) Strengthen unity and respect those who protect the country and 5) Perform the duties of a citizen.

Vasudha Vandhan: Panchayats/villages/urban local bodies will replenish Mother Earth by planting 75 saplings of indigenous species and develop the 'Amrit Vatika'.

Veeron Ka Vandan: Felicitation ceremonies shall be held for honouring the freedom fighters and the families of deceased freedom fighters.

These ceremonies shall also honour retired personnel from Defence, CAPF and State Police and the families of the bravehearts of these forces who have sacrificed their lives in the line of duty.

Rashtragaan: Hoisting of the National Flag and singing of Rashtragaan shall be undertaken at the sites.

254. NPS withdrawal options set to be eased, says PFRDA

Source: The post is based on the article **"NPS withdrawal options set to be eased, says PFRDA"** published in **The Hindu on 2nd September 2023**

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What is the News?

Several state governments have opted out of the National Pension System (NPS) and switched back to the Old Pension Scheme which guarantees a monthly pension of 50% of the final salary for their employees.However, still these states continue to contribute to the NPS corpus.

Currently, under NPS, State government employees account for the largest chunk of the savings pool.

What is the National Pension System(NPS)?

National Pension System (NPS) is being administered and regulated by Pension Fund Regulatory and Development Authority (PFRDA) set up under PFRDA Act, 2013.

NPS is a market linked, defined contribution product.Under NPS, a unique Permanent Retirement Account Number (PRAN) is generated and maintained by the Central Recordkeeping Agency (CRA) for individual subscribers.

NPS offers two types of accounts, namely Tier-I and Tier-II: Tier-I account is the pension account having restricted withdrawals.

– Tier-II is a voluntary account which offers liquidity of investments and withdrawals.It is allowed only when there is an active Tier-I account in the name of the subscriber.The contributions accumulate over a period of time till retirement grows with market linked returns.

– On exit/retirement/superannuation, a minimum of 40% of the corpus is mandatorily utilized to procure a pension for life by purchasing an annuity from a life insurance company and the balance corpus is paid as lump sum.

NPS platform offers different models to suit the different segments of users. These include :

The Government model for the Central and State Government Employees: NPS is mandatorily applicable on Central Government employees (except Armed Forces) recruited on or after 01.01.2004. Subsequently, all State Governments except a few states have also adopted NPS for their employees.

– Govt. employees make a monthly contribution at the rate of 10% of their salary and a matching contribution is paid by the Govt.For central Govt. employees, the employer's contribution rate has been enhanced to 14% from 01.04.2019.

The Corporate Model: Companies can adopt NPS for their employees with contribution rates as per the employment conditions.

The All Citizens Model: The All Citizens Model of the NPS allows all citizens of India aged between 18 – 65 years to join NPS on a voluntary basis.

What are the changes PFRDA is planning to bring to NPS?

Presently, on superannuation, members have to purchase an annuity with 40% of their accumulated retirement savings and withdraw the balance.

Now, PFRDA is planning to allow members to opt for a systematic withdrawal plan for 60% of the corpus, by which they can choose to receive a fixed sum from their savings on a monthly, quarterly or half-yearly basis.

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Moreover, for the mandatory annuity purchases, members would be able to opt for a mix of schemes rather than a single scheme.

255. Union Minister for Education announces NCERT as Deemed-to-be-University

Source: The post is based on the article **"Union Minister for Education announces NCERT as Deemed-to-be-University"** published in **PIB on 2nd September 2023**

What is the News?

The Union Minister for Education has announced that the National Council of Educational Research and Training (NCERT) has been given the status of a Deemed-to-be-University.

What is 'Deemed-to-be-university' status?

The Central Government on the advice of the University Grants Commission (UGC) can declare an Institution of Higher Education other than universities working at a very high standard in a specific area of study as an Institution 'Deemed-to-be-university'.

Institutions that are 'deemed-to-be-university' enjoy the academic status and privileges of a university.

Deemed to be universities like other universities have the autonomy of offering various courses and therefore, preparing students for various examinations and awards.

These institutions can also design their own syllabus and courses to prepare the students to foray into diverse fields after the completion of their study.

What is NCERT?

NCERT is an autonomous organization set up in 1961 by the Government of India to assist and advise the Central and State Governments on policies and programmes for qualitative improvement in school education.

The Executive Committee (EC) is the highest decision-making body of NCERT and is chaired by the Education Minister.

256. Special session of Parliament: How it will work

Source: The post is based on the article **"Special session of Parliament: How it will work"** published in **Indian Express on 2nd September 2023**

What is the News?

The Union Minister for Parliamentary Affairs has announced that a "special session" of Parliament would be held from September 18 to 22,2023.

When does Parliament meet?

India's Parliament has no fixed calendar of sittings.The Government determines the date and duration of parliamentary sessions.

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The Cabinet Committee on Parliamentary Affairs takes this decision. It currently has ten Ministers, including those for Defence, Home, Finance, Agriculture, Tribal Affairs, Parliamentary Affairs, and Information and Broadcasting.

The Law Minister and the Minister of State for External Affairs are special invitees to the Committee.

The President is informed about the Committee's decision who then summons Members of Parliament to meet for the session.

What does the Constitution say on Parliamentary sessions?

The Constitution specifies that six months should not elapse between two parliamentary sessions.

This provision was borrowed from the Government of India Act of 1935.It allowed the British Governor General to call a session of the central legislature at his discretion, requiring that the gap between two sessions should not be more than 12 months.

The Constituent Assembly reduced the gap between sessions to six months.

What were Constituent Assembly views on Parliamentary sessions?

Some members of the Constituent Assembly wanted Parliament to meet throughout the year with breaks in between.Others wanted Parliament to sit for longer durations and cited the examples of the British and American legislatures meeting for more than 100 days a year.

However, Dr. Ambedkar disagreed with these suggestions.He expressed concerns that if the sessions are too frequent and lengthy, even the legislators themselves might become tired of them.So, he advocated holding regular parliamentary sessions.

How often do Lok Sabha and Rajya Sabha meet?

Before independence, the central assembly met for a little more than 60 days a year. This number increased to 120 days a year in the first 20 years after Independence.Since then, the sitting days of the national legislature have declined.

Between 2002 and 2021, Lok Sabha averaged 67 working days.The situation in state legislatures is much worse. In 2022, 28 state Assemblies met for 21 days on average.In 2023, Parliament has met for 42 days so far.

On multiple occasions, the Conference of presiding officers has recommended that Parliament should meet for more than 100 days.The National Commission to Review the Working of the Constitution set up in 2000 made a similar recommendation.

What is a special session of Parliament?

The Constitution does not use the term "special session".The term sometimes refers to sessions the government has convened for specific occasions like commemorating parliamentary or national milestones.

However, Article 352 (Proclamation of Emergency) of the Constitution does refer to a "special sitting of the House".

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Parliament added the part relating to the special sitting through the Constitution (Forty-fourth Amendment) Act, 1978.Its purpose was to add safeguards to the power of proclaiming Emergency in the country.

It specifies that if a Proclamation of Emergency is issued and Parliament is not in session, then one-tenth of Lok Sabha MPs can ask the President to convene a special meeting to disapprove the Emergency.

257. Researchers finds seven new species of leaf insects

Source: The post is based on the article **"Researchers finds seven new species of leaf insects?"** published in **The Print on 1st September 2023**

What is the News?

An international research team has identified seven previously unknown species of leaf insects, also known as walking leaves.

What are Walking Leaves?

Source: SciTechDaily

Walking leaves are part of the phasmatodea order.They are also referred to as **"phasmids" or "stick and leaf insects."**

They are known for their unusual appearance as they look confusingly **similar to parts of plants** such as twigs, bark or in the case of leaf insects as leaves.

They **feed on plants** and typically inhabit densely vegetated areas.

Range: Their natural range extends from islands in the Indian Ocean, across parts of mainland South Asia and Southeast Asia, to Papua New Guinea and Australia in the western Pacific.

They are also largely nocturnal, resulting in a relative lack of movement during the day that makes locating them quite difficult in the wild.

Significance: There are around 3,500 known species of stick and leaf insects.But there are currently just over 100 described species of leaf insect.

– Hence, they only make up a small fraction of this diverse family of insects but their spectacular and unexpected appearance makes them unique.

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258.   Court allows stem cell therapy for two autistic kids: What is this treatment? Can it be used to treat autism?

Source: The post is based on the article **"Court allows stem cell therapy for two autistic kids: What is this treatment? Can it be used to treat autism?"** published i**n Indian Express on 2nd September 2023**

What is the News?

The Delhi High Court has permitted two children with autism spectrum disorder (ASD) to undergo stem cell therapy for treatment of their condition.

What are Stem Cells?

Stem cells are a unique type of cell in the human body that have the remarkable ability to develop into many different cell types with specific functions.

They are characterized by two key properties:

Self-renewal: Stem cells can divide and make exact copies of themselves. This ability allows them to maintain a constant population of stem cells in the body.

Differentiation: Stem cells can also differentiate into specialized cell types with distinct functions. For example, they can become blood cells, nerve cells, muscle cells, or any other type of cell found in the body.

What are the different types of Stem Cells?

Embryonic Stem Cells (ESCs): These stem cells are derived from embryos, typically at the blastocyst stage (a very early stage of embryonic development). Embryonic stem cells have the potential to become any type of cell in the body and are considered pluripotent.

Adult Stem Cells: These stem cells are found in various tissues and organs throughout the body. They play a role in tissue maintenance, repair, and regeneration.

– Adult stem cells are typically multipotent, meaning they can differentiate into a limited range of cell types specific to the tissue or organ where they are located.

Induced Pluripotent Stem Cells (iPSCs): iPSCs are adult cells that have been reprogrammed to return to a pluripotent state similar to embryonic stem cells.This reprogramming is usually achieved through genetic manipulation.

How are stem cells used in medicine?

For several years, stem cells that are used to treat disease are hematopoietic stem cells.These are the blood cell-forming adult stem cells found in bone marrow.

These cells help people with cancer make new blood cells after their own hematopoietic stem cells have been killed by radiation therapy and chemotherapy.

What is autism spectrum disorder(ASD)?

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Can stem cell treatment be used for ASD?

Autism spectrum disorder(ASD) has potential to be a good candidate for stem cell therapy because evidence exists that some types of stem cells, given intravenously, can improve the overall regulation of the immune system and the neural connectivity in the brain.

However, stem cell therapy is not typically used for treating ASD yet as initial clinical trials have shown mixed results.

Currently, the treatment is very much in an experimental stage and there is simply not enough data to make definitive claims.

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