JULY CURRENT AFFAIRS

SENNA SPECTABILIS

Why in News?

The Kerala Forest Department has partnered with Kerala Paper Products Limited (KPPL) to remove invasive species like Senna spectabilis from the Wayanad Wildlife Sanctuary.

About Senna Spectabilis:

- Senna spectabilis is a plant species of the legume family (Fabaceae) in the subfamily Caesalpinioideae **native to South and Central America.**
- They are **often grown as an ornamental in front yards, parks, gardens, buildings etc**. due to their bright yellow flowers that bloom during the summer months.
- They are **also known as golden wonder tree, American cassia, popcorn tree, Cassia excelsa, golden shower tree or Archibald's cassia**.
- The **plant has become an invasive alien species in parts of Africa such as Kenya, Malawi, Tanzania and Uganda, and also in South-India**, after it was introduced for resources such as firewood as well as to help combat deteriorating ecosystems affected by deforestation and desertification.
- Currently, S. spectabilis is overtaking native tree species of forestry ecosystems around the world because of its ability to grow quickly.
- Senna spectabilis is a **shrub or deciduous tree that can grow anywhere from 15 to 20 ft in height and 15–20 ft in width.**
- S. spectabilis **have a rounded vase-shaped crown**, which is dense and symmetrical.
- S. spectabilis is **pollinated by bees and has a very fast growth rate.**

- Thick foliage inhibits the growth of native trees and grasses, leading to food shortages for wildlife, particularly herbivores. Disrupts germination and growth of native plant species.
- Senna Spectabilis was introduced in between 1970s and 1980s in Wayanad Wildlife Sanctuary to promote social forestry. Now it covers around 35% of Wayanad Wildlife Sanctuary, inhibiting the growth of native species.
- It decreases the availability of host plants for butterflies and food for other herbivores.
- **It decreases the availability of non-timer forest produce**.
- IUCN Red List: Least Concern

AI WASHING

- "AI washing," a term popularized by the US Securities and Exchange Commission (SEC), **refers to companies exaggerating their use of AI to appeal to consumers**.
- This phenomenon has surged following the release of OpenAI's ChatGPT in 2022, leading to a **significant rise in startups and companies claiming to use AI**.
- The term AI washing is derived from "greenwashing," where companies exaggerate their environmental friendliness to attract customers.
- It involves **businesses claiming to have integrated sophisticated AI into their products while using much less advanced technology**.
- However, only a small percentage actually integrate AI into their operations.
- This is **done to capitalize on the growing interest in AI and make their offerings appear more advanced and cutting-edge** than they actually are.
- Notable examples include Google's misrepresented AI demonstrations and Amazon's cashier-less checkout systems that relied on manual oversight.

- Examples: A company might claim that their chatbot is "powered by the latest AI technology" when it merely matches keywords with pre-written responses.
- The **consequences of AI washing** are substantial.
  - It can <u>divert resources from genuine AI innovation</u>, **complicate decision-making for businesses seeking real AI solutions,** and <u>pose data security risks to consumers.</u>
  - It can lead to **overpaying for technology and services that do not deliver the expected benefits**, failing to achieve operational objectives that genuine AI could help with.
  - It makes it **difficult to identify genuinely innovative companies**, potentially leading to misinformed investment decisions.

NEW CRIMINAL LAWS

Why in News?

Three new criminal laws—Bharatiya Nyaya Sanhita, Bharatiya Nagarik Suraksha Sanhita, and Bharatiya Sakshya Adhiniyam—replacing colonial-era laws, **came into effect on July 1, 2024.**

<u>About:</u>

- **Bharatiya Nyaya Sanhita 2023** will replace <u>Indian Penal Code,1860</u>; **Bharatiya Nagarik Suraksha Sanhita 2023** will replace <u>Criminal Procedure Code, 1973</u> and **Bharatiya Sakshya Adhiniyam 2023** will replace <u>Indian Evidence Act, 1872.</u>

- Section **106(2) of the Bharatiya Nyaya Sanhita (BNS),** which provides for punishment in hit and run cases**, has been put on hold.**

- New offences **include terrorism, mob lynching, organized crime**, and <u>enhanced punishments for crimes against women and children.</u>

- States are free to bring in their own amendments to some provisions of the Bharatiya Nagrik Suraksha Sanhita (BNSS).
- The Bharatiya Nyaya Sanhita (BNS) may also be amended soon to incorporate a section on sexual crimes against men and transgender persons.
- For the time being **police officers are being asked to invoke other allied sections under the BNS,** such as wrongful confinement and physical hurt, if they get such complaints until an amendment is brought to correct this anomaly.
- The **IPC and CrPC will run concurrently along with the new laws** as several cases are still pending in courts and **some crimes that took place before 1st July 2024 that are reported later will have to be registered under the IPC.**
- Key points of the bill:
- ➢ The Bharatiya Nyaya Sanhita (BNS) **retains most offences from the IPC.**
- ➢ It **adds community service as a form of punishment.**
- ➢ **Sedition is no longer an offence**. Instead, there is a new offence for acts endangering the sovereignty, unity and integrity of India.
- ➢ The BNS **adds terrorism as an offence**.
- ➢ A terrorist act defined as one intending or likely to threaten India's unity, integrity, sovereignty, security, or economic security, or acts intended or likely to strike terror among the people.
- ➢ **Mob lynching now punishable by death or life imprisonment** if committed by five or more on grounds such as race, caste, community, sex, place of birth, language, personal belief.
- ➢ **Organised crime has been added as an offence**. It includes crimes such as kidnapping, extortion and cyber-crime committed on behalf of a crime syndicate.
- ➢ There will be trial in absentia of fugitive criminals.
- ➢ **Summary trials now cover cases where the punishment is up to 3 years**, aiming to resolve more than 40% of cases in sessions courts.
- ➢ **Videography compulsory during search and seizure**. No charge sheet valid without such recording.
- ➢ A first-time offender who has served a third of the jail term will be released on bail by the court.
- ➢ **Forensic experts should be used in every case where the punishment includes seven or more years in jail.**

SNOWBLIND MALWARE

Why in News?

A new **banking malware called 'Snowblind'** is targeting Android users to steal banking credentials

About Snowblind:

- Snowblind is a new Android malware that **targets banking credentials by exploiting a built-in Android security feature called 'seccomp'** (secure computing), part of the Linux kernel and Android OS.
- Snowblind malware was **discovered by security firm Promon.**
- This malware **repackages apps to avoid detection of accessibility features** that can extract sensitive information like login credentials and gain remote access to the app.
- Snowblind **exploits a feature called 'seccomp', which stands for 'secure computing'** and is part of the Linux kernel and Android OS.
- This malware injects code that activates before seccomp's anti-tampering measures, bypassing security mechanisms and disabling biometric and two-factor authentication.
- Snowblind **can remotely view the victim's screen** by using accessibility services.
- Snowblind typically infects users who install apps from untrusted sources.
- It is **most active in Southeast Asia.**
- Google confirmed that no apps on the Play Store are infected, suggesting users are safe if they stick to Play Store apps.
- Security Implications Snowblind poses a significant threat to banking app users by circumventing advanced security measures.
- **Users are advised to avoid installing apps from untrusted sources** and to remain vigilant about app permissions and behaviors.

MEGAFAUNA

Why in News?

A **41,000-year-old ostrich nest was discovered by archaeologists in Andhra Pradesh**, providing significant insights into the extinction of megafauna in India.

It is the **world's oldest known ostrich nest** with 9-10 feet wide and is originally capable of holding 9-11 eggs with the capacity for 30-40 eggs.

About Megafauna:

- These are the **animals generally weighing more than 50 kg.**
- It was first used by Alfred Russel Wallace in 1876.
- Megafauna can be **classified into three categories** such as mega-herbivores, mega-carnivores and mega-omnivores.
- **Ostriches are mega-omnivores** with the weight of 90-140 kg and standing 7-9 feet tall.
- Historical Evidence:**Presence of ostriches in southern India 41,000 years ago.** Earliest evidence by Richard Lydekker in 1884 in Upper Siwalik Hills (Pakistan).
- Megafauna species have **considerable effects on their local environment**, including the suppression of the growth of woody vegetation, and a consequent reduction in wildfire frequency.
- Megafauna also **play a role in regulating and stabilizing the abundance of smaller animals.**
- In 1989, S A Sali found ostrich eggshell beads in Patne, Maharashtra.
- In 2017, Centre for Cellular and Molecular Biology (CCMB) researchers found fossilised eggshells in Rajasthan, Madhya Pradesh and Gujarat which date backs to 25,000 years.
- **Ostriches in India due to Gondwanaland's continental drift**.

- In 2020, a study by Yale University and Smithsonian's National Museum of Natural History linked <u>large animal extinction in India to human arrival around 30,000 years ago.</u>
- The discovery supports research on the reasons behind megafauna extinction in India, such as the arrival of humans around 30,000 years ago and the <u>co-evolution hypothesis, which suggests that geographic isolation and abiotic factors accelerated their extinction.</u>

COLOMBO PROCESS

Why in News?

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

<u>About Colombo Process:</u>

- Established in 2003, the **Colombo Process fosters dialogue** among countries of origin in Asia **to improve migration management.**
- It is a **regional consultative forum comprising 12 Asian member states** and aims <u>to share best practices related to overseas employment for South and Southeast Asian countries that send migrant workers abroad</u>.

- The member states include **Afghanistan, Bangladesh, Cambodia, China, India, Indonesia, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand, and Vietnam**.
- The forum, founded by 10 of these states, makes non-binding decisions by consensus.
- <u>Objectives of Colombo Process</u>:
  - Share experiences, lessons learned and best practices in labour migration management

- o Consult on issues faced by migrants, countries of origin and countries of destination, and propose practical solutions for the well-being of overseas workers
- o Optimize development benefits from organized overseas employment and enhance dialogues with countries of destination
- o Review and monitor the implementation of the recommendations and identify further steps of action
- **India's chairmanship aims to strengthen cooperation for safe and orderly migration**, benefiting both migrant workers and regional stability.
- India's agenda includes
  - o Reconfiguring technical collaborations
  - o Broadening membership and observers
  - o Reviewing financial sustainability
  - o Implementing structured chairmanship rotation
  - o Engaging with regional dialogues
  - o Conducting a regional review of the Global Compact for Migration.

MAITREE EXERCISE

Why in News?

- The Maitree Exercise, a **joint military exercise between the Indian Army and the Royal Thai Army,** kicks off at Fort Vachiraprakan in Tak Province, Thailand.
- Maitree Exercise is a bilateral exercise between the Royal Thai Army and the Indian Army.
- It **was started in 2006.** It has annually been conducted since 2006.

- It is an annual event between the **troops of the armies of both countries of India and Thailand.**
- It is **also referred to as the Indo-Thailand Joint Exercise**.
- Exercise MAITREE was scheduled to be conducted from 1st to 15th July 2024 at Fort Vachiraprakan in Tak Province of Thailand.
- The Indian Army contingent comprising 76 personnel is being represented mainly by a Battalion of the LADAKH SCOUTS along with personnel from other arms and services.
- The Royal Thailand Army contingent also comprises 76 personnel mainly from 1st Battalion, 14 Infantry Regiment of 4 Division.
- Aim of Exercise MAITREE is to **foster Military Cooperation between India and Thailand.**
- The Exercise will **enhance combined capabilities in executing Joint Counter Insurgency/ Terrorist Operations in Jungle**and **Urban Environment**under Chapter VII of United Nations Charter.
- The Exercise **will focus on high degree of physical fitness, joint planning and joint tactical drills.**
- Exercise MAITREE will **enable the two sides to share their best practices in Tactics, Techniques and Procedures for conduct of joint operations.**
- The Exercise will facilitate developing inter-operability, bonhomie and camaraderie between soldiers of both the countries.

DIGITAL INDIA INITIATIVE

Why in News?

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

About Digital India Initiative:

- Digital India Initiative (DII) was **launched in 2015.**
- Digital India Initiative (DII) **aims to transform India into a digitally empowered society and knowledge economy.**

- It <u>covers various projects from Central Ministries, Departments, and States/UTs.</u>
- Key focus areas include:
  - o Digital infrastructure
  - o Governance
  - o Services on demand
  - o Digital empowerment of citizens
- The **initiative encompasses nine pillars of growth,** with the Department of Electronics and Information Technology (DeitY) as the main coordination agency, along with other ministries and a monitoring committee led by the Prime Minister.

9 pillars of growth for Digital India:

1. Broadband Highways
2. Universal Access to Mobile Connectivity
3. Public Internet Access Programme
4. e-Governance: Reforming Government through Technology
5. e-Kranti - Electronic Delivery of Services
6. Information for All
7. Electronics Manufacturing
8. IT for Jobs
9. Early Harvest Programmes

Impact of Digital India Programme:

- **Bridging the rural-urban divide**: Digital India focuses strongly on expanding digital infrastructure and access to rural areas through initiatives like BharatNet for internet This helps bridge the technology access gap.
- **Accessible digital services**: Digital locker, eSign frameworks, and online registration platforms make government services more easily accessible for citizens by simplifying processes.

- **Financial inclusion**: Mobile and Aadhaar-linked payment systems, DBT schemes under Digital India are enabling cashless transactions, direct benefit transfers and preventing leakage. This is expanding digital financial inclusion. More than 40% of all payments done in India are digital.

- **Universal digital literacy**: Digital Saksharta Abhiyan initiatives under Digital India aim to make at least one person e-literate in every household and help promote adoption at the grassroots. Initiatives like "SWAYAM," offering online courses, and the "National Digital Library," providing access to a vast collection of academic resources.

- **Mobile Connectivity and Mobile Apps**: The initiative has promoted the development of mobile apps for various government services, enhancing accessibility and convenience for citizens. g. UMANG app.

- **Job opportunities**: Digital infrastructure enhancement and digital skill development are helping create employment and entrepreneurship opportunities including in smaller towns.

Limitations of the Digital India programme:

- ➢ **Digital Divide**: Despite progress, the digital divide persists, with rural areas having limited access to the internet and technology. Around 50% of the population is still not online.

- ➢ **Rural infrastructure gaps**: Issues like inadequate electricity, and broadband connectivity obstruct rural adoption even as urban pivots to 5G and fiberization.

- ➢ **Lack of customization**: High diversity in adoption readiness and pace across different parts of the country demands flexibility in implementation design rather than one size fits all.

- ➢ **Affordability barriers**: High costs of devices, and data plans restrict sustainable adoption for economically weaker segments even if infrastructure exists.

- ➢ **Variable success of digital skilling**: Digital literacy-focused initiatives are not uniformly successful due to a lack of qualified trainers, customized vernacular content and monitoring mechanisms.

ABHAY MUDRA

Why in News?

In his first speech as Leader of Opposition in Lok Sabha, Rahul Gandhi invoked the abhaya mudra, the gesture of the raised open palm that is commonly understood as conveying reassurance and a freedom from fear.

About Abhay Mudra:

- **Abhaya mudra, the motif of an open palm** (gesturing to stop), is prevalent across many South Asian religions, including Hinduism, Buddhism, Jainism, and Sikhism.
- Known as the **'fearlessness gesture'**, 'abhaya' in Sanskrit means fearlessness. **The gesture symbolizes protection and peace.**
- In yoga circles, the abhaya mudra is **believed to promote courage and reduce fear and anxiety.**
- While common across many religions, the abhaya mudra is most prominently featured in Buddhism, especially in Thailand and Laos, where it is associated with images of the walking Buddha.
- In Sanskrit, the term mudra could mean a seal, mark, sign, or currency, but in the Buddhist context, it refers to "hand and arm gestures made during the course of ritual practice or depicted in images of buddhas, bodhisattvas, tantric deities, and other Buddhist images.
- **In Buddhism, the abhaya mudra is linked to a legend involving Devadatta**, a cousin of the Buddha, who tried to murder the Buddha by losing a rampaging elephant into his path.
- The Buddha calmed the elephant by displaying the abhaya mudra, indicating appeasement of the senses and the absence of fear.
- The gesture is popularly pronounced in Buddhist cultures, symbolizing fearlessness and peace.

- **Mudras are most commonly associated with visual depictions of the Buddha** (or Buddharupa), with different gestures conveying different moods and meanings, signifying the subtle manifestations of the Buddha's states of realisation.
- In the earliest depictions of Buddharupa, four mudras can be found:
  - ➢ the **abhaya mudra**, or "gesture of fearlessness";
  - ➢ the **bhumisparsha mudra**, or "Earth-touching gesture";
  - ➢ the **dharmachakra mudra**, or "gesture of the wheel of dharma"; and
  - ➢ the **dhyana mudra**, or "gesture of meditation".

CONSTITUTIONAL RIGHT TO SPEEDY TRIAL

Why in News?

A bench comprising justices JB Pardiwala and Ujjal Bhuyan underscored the constitutional right to a speedy trial under Article 21 of the Indian Constitution.

About:

- The bench stressed that the right to a speedy trial applies regardless of the crime's severity, criticizing the NIA for repeated delays in submitting its counter affidavit.

- The Supreme Court's decision highlighted the importance of a speedy trial, referencing past rulings such as Kartar Singh Vs State of Punjab (1994), Hussainara Khatoon (I) Vs Home Secretary, State of Bihar, and Abdul Rehman Antulay Vs RS Nayak (1992), which all recognized the right to a speedy trial as a fundamental right under Article 21.
- **Article 21: "Protection of Life and Personal Liberty: No person shall be deprived of his life or personal liberty except according to procedure established by law."**
- The Court gave a list of rights that Article 21 covers based on earlier judgments. Some of them are:

- o Right to privacy
- o Right to go abroad
- o Right to shelter
- o Right against solitary confinement
- o Right to social justice and economic empowerment
- o Right against handcuffing
- o Right against custodial death
- o Right against delayed execution
- o Doctors' assistance
- o Right against public hanging
- o Protection of cultural heritage
- o Right to pollution-free water and air
- o Right of every child to a full development
- o Right to health and medical aid
- o Right to education
- o Protection of under-trials

ORDER OF SAINT ANDREW THE APOSTLE

Why in News?

Prime Minister Narendra Modi received **Russia's highest civilian honor**, the Order of Saint Andrew the Apostle, during his visit to Russia.

This award was announced in 2019 for his **exceptional services in promoting the strategic partnership and friendly relations between Russia and India**.

About the Award:

- It is **Russia's highest civilian award** given for exceptional services to the Russian Federation.
- Eligibility:
    - o Awarded to prominent government and public figures.
    - o Military leaders and outstanding representatives in science, culture, art, and various sectors of the economy.
    - o **Heads of foreign states** for outstanding services to Russia.

- This award is **named after Saint Andrew, who is believed to be one of the apostles** or 12 original followers of Jesus.
- After Christ's crucifixion, the apostles are said to have travelled great distances to spread his message.
- Saint Andrew is believed to have **traveled to Russia, Greece, and other parts of Europe and Asia,** spreading the message of Jesus and founding the Church of Constantinople.
- **More than 90 million people follow the Church in Russia**, out of the country's population of around 140 million.
- The Russian Orthodox Church with more than 90 million followers in Russia traces its roots back to Saint Andrew.
- The **award was established by Tsar Peter the Great in 1698 .**
- The award chain consists of 17 alternating links, featuring a gilded image of the State Emblem of Russia, a double-headed eagle.
- It includes a badge, a star, and a light blue silk ribbon. For combat distinction, the badge and star are adorned with swords.
- It **was abolished in 1918** following the Russian Revolution and was **later re-established in 1998 by an Executive Order of the President of Russia.**
- This award **recognizes individuals who have significantly contributed to Russia's growth and its relations with other nations**, exemplified by PM Modi's efforts in strengthening the bond between India and Russia.
- Notable past recipients include Mikhail Kalashnikov (designer of the AK-47), author Sergey Mikhalkov, Mikhail Gorbachev (last leader of the Soviet Union), and Patriarch Alexy II and Kirill of the Russian Orthodox Church.
- Foreign leaders honoured include Chinese President Xi Jinping and former Kazakh President Nursultan Nazarbayev.

SEHER PROGRAMME

Why in News?

SEHER, a **credit education program**, was launched by the Women Entrepreneurship Platform (WEP) and TransUnion CIBIL.

About SEHER Programme:

- SEHER Program is **part of WEP's Financing Women Collaborative (FWC),** a first-of-its-kind initiative aimed at accelerating access to finance for women entrepreneurs

- It **will empower women entrepreneurs in India with financial literacy content and business skills,** helping them to access the financial tools they need to drive further growth and create employment in the country's economy.

- It **focuses on improving awareness about accessing and managing credit,** helping women entrepreneurs grow their businesses and contributing to economic development.

- It will **facilitate their access to financial tools** crucial for business growth and employment creation.

- **India has 63 million micro, small, and medium enterprises**, with 20% owned by women, employing 27 million people.

- The demand for business loans by women has grown 3.9 times in the last 5 years (FY 2019 - FY 2024).

- The share of women borrowers holding a business loan increased by 10% between FY 2019 and FY 2024.

- **38% of the 1.5 crore borrowers with a business loan in March 2024 were women**.

- The portfolio balance for business loans by women grew at 35% CAGR from March 2019 to March 2024.

- **Rural areas have a slightly higher share of women-owned enterprises (22.24%) compared to urban areas (18.42%).**
- Accelerating women's entrepreneurship could create over 30 million new women-owned enterprises and 150 to 170 million more jobs.
- The program includes personalized resources on financial literacy, emphasizing the importance of building a strong credit history and CIBIL score.

About WEP: Women Entrepreneurship Programme

➢ The Women Entrepreneurship Program (**WEP) is a public-private partnership platform incubated at Niti Aayog** and aims to create an enabling ecosystem for women entrepreneurs in India.

➢ The Women Entrepreneurship Platform (WEP) is a **unified access portal which brings together women from different regions of India**, across economies to realize their entrepreneurial aspirations.

➢ The **program is part of WEP's Financing Women Collaborative (FWC),** a first-of-its-kind initiative aimed at accelerating access to finance for women entrepreneurs.

➢ **The idea of the Platform was first mooted by Shri Amitabh Kant, CEO, NITI Aayog** who announced the setting-up of a Women Entrepreneurship Platform in NITI Aayog at the conclusion of the 8th Global Entrepreneurship Summit (GES) held in Hyderabad in 2017.

CHANDIPURA VIRUS

Why in News?

Recently, many children have died of suspected **Chandipura virus (CHPV) infection in Gujarat.**

About Chandipura Virus:

- **Chandipura vesiculovirus (CHPV)** is a member of the Rhabdoviridae family that is **associated with an encephalitic illness**, Chandipura encephalitis or Chandipura viral encephalitis, in humans.
- Chandipura virus (CHPV) **was first isolated in 1965 during a dengue/chikungunya outbreak in Maharashtra.**
- It was named after the village it was first identified in, Chandipura village in Maharashtra, India during an outbreak of encephalitis in 1965.
- Major outbreaks in **2003-04 in Maharashtra, northern Gujarat, and Andhra Pradesh resulted in over 300 child deaths**, with Gujarat reporting a 78% case fatality rate (CFR) in 2004 and Andhra Pradesh 55% in 2003.
- Further sporadic cases and deaths in children were observed in Gujarat state in 2004.
- It is **transmitted by several species of sandflies** (Phlebotomine sandflies, Phlebotomus papatasi) **and mosquitoes** (Aedes aegypti).
- CHPV infection occur through:
    - **Vector Transmission**: The virus resides in the salivary glands of these infected insects, particularly sandflies and mosquitoes.
    - **Bite Transmission**: When an infected sandfly or mosquito bites a human or another vertebrate host (such as domestic animals), the virus is transmitted through the insect's saliva during the feeding process.
- **Once transmitted, the virus enters the bloodstream and can subsequently invade the central nervous system**.
- CHPV infection can lead to serious complications such as encephalitis, which is characterised by inflammation of the brain's active tissues.
- This **inflammation can cause neurological symptoms** and, in severe cases, can be life-threatening.
- Symptoms of CHPV Infection includes:

- o **Flu-like symptoms** such as <u>acute fever, body aches, and headache</u>. It may lead to <u>altered sensorium, seizures, and encephalitis.</u> Additional Symptoms include <u>respiratory distress, bleeding tendencies, and anaemia.</u>
  - o It can lead to <u>mortality within 24-48 hours of hospitalization.</u>
  - o <u>It primarily affects children below 15 years.</u>
- The virus is <u>endemic to central India</u>, where CHPV-spreading sandflies and mosquitoes are prevalent.
- Outbreaks often occur in <u>rural, tribal, and peripheral areas, correlated with the prevalence of sandflies.</u>
- Outbreaks are <u>more frequent during the monsoon season.</u>
- The <u>use of cow dung paint in kutcha houses attracts sandflies</u>.
- Sandflies have been found at higher altitudes than usual.
- New centres for outbreaks have been identified in Gujarat, including tribal areas like Pavagadh, Khedbrahma, and Godhra.
- Currently, <u>there is no specific antiretroviral therapy or vaccine available for CHPV</u>, so **Symptomatic management is crucial**.
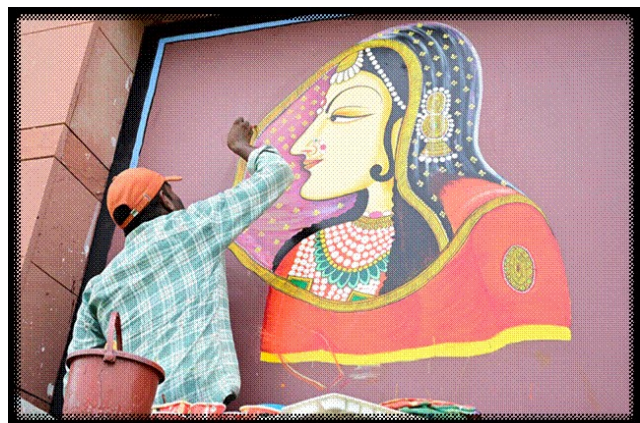
PROJECT PARI

Why in News?

Recently, Ministry **of Culture initiates Project PARI** for the 46th World Heritage Committee Meeting.

About PARI:

- Project PARI **(Public Art of India)**, an **initiative by the Ministry of Culture,** Government of India, being **executed by Lalit Kala Akademi and National Gallery of Modern Art** seeks to <u>bring forth public art that draws inspiration from millennia of artistic heritage</u> (lok kala/lok sanskriti) <u>while</u>

incorporating modern themes and techniques.

- These expressions underscore the intrinsic value that art holds in Indian society, serving as a testament to the nation's enduring commitment to creativity and artistic expression.

- The **first intervention under Project PARI is taking place in Delhi**.

- It coincides with the 46th session of the World Heritage Committee held in New Delhi, India between 21-31 July 2024.

- The representation of art in public spaces is particularly significant, reflecting the nation's rich and diverse cultural heritage.

- The democratization of art through public installations transforms urban landscapes into accessible galleries, where art transcends the confines of traditional venues such as museums and galleries.

- By integrating art into streets, parks, and transit hubs, these initiatives ensure that **artistic experiences are available to one and all**.

- This inclusive approach **fosters a shared cultural identity and enhances social cohesion,** inviting citizens to engage with art in their daily lives.

- **Project PARI aims at stimulating dialogue, reflection, and inspiration, contributing to the dynamic cultural fabric of the nation**.

- More than 150 visual artists from all over the country have come together to create the various wall paintings, murals, sculptures and installations being prepared under this project.

- The creative canvas includes but is not limited to artwork inspired by and /or drawn in styles of *Phad paintings (Rajasthan), Thangka painting (Sikkim/Ladakh), miniature painting (Himachal Pradesh), Gond art (Madhya Pradesh), Tanjore paintings (Tamil Nadu), Kalamkari (Andhra Pradesh), Alpona art (West Bengal), Cheriyal painting (Telangana), Pichhwai Painting (Rajasthan), Lanjia Saura (Odisha), Pattachitra (West Bengal), Bani Thani Painting (Rajasthan), Warli (Maharashtra), Pithora Art (Gujarat), Aipan (Uttarakhand), Kerala Murals (Kerala), Alpana art (Tripura)* and more.

- The proposed sculptures being created for Project PARI include wide ranging ideas that include but are not limited to paying tributes to nature, ideas inspired by the Natyashastra, Gandhi ji, toys of India, hospitality, ancient knowledge, Naad or Primeval Soun, Harmony of life, Kalpataru – the divine tree etc.
- **Women artists have been an integral part of Project PARI** and their participation in large numbers is a testimony of Bharat's NARI SHAKTI.
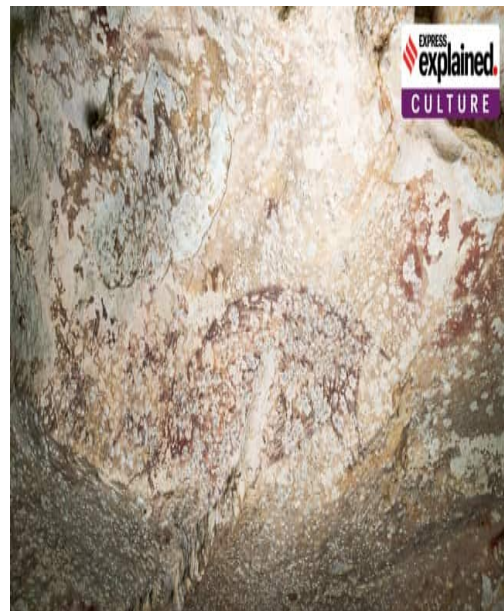
WORLD'S OLDEST CAVE PAINTING

Why in News?

Recent research has revealed that the **world's oldest known figurative cave painting is approximately 51,200 years old**, as determined by the use of a new dating technique.

The painting is located on the ceiling of a limestone cave in the Island of Sulawesi, Indonesia.

About:

- The **world's oldest-known cave painting has been discovered in** the limestone cave of Leang Karampuang, located in the Maros-Pangkep region of **Sulawesi, Indonesia**.
- These paintings provide the oldest evidence of storytelling, a fundamental aspect of human culture and identity.
- This **artwork depicts three human-like figures interacting with a wild pig**.
- The painting features a pig measuring 92 cm by 38 cm, painted in a single shade of dark red pigment. There are other images of pigs present in the cave.

- The depiction of a pig species that still inhabits Sulawesi links past and present wildlife on the island, highlighting the continuity of the natural environment over tens of thousands of years.

- The painting **was created at least 51,200 years ago.**
- Researchers **determined this age using a new scientific approach** that <u>**involves using a laser to date calcium carbonate crystals that formed naturally on top of the painting.**</u>
- The researchers interpret this artwork as a narrative scene, making it the oldest-known evidence of storytelling in art.

CLASSICAL STATUS FOR LANGUAGE

Why in News?

Recently, the Central government has decided <u>to modify the criteria for granting classical language status,</u> following <u>recommendations from the Linguistics Expert Committee of the Union Culture Ministry.</u>

<u>About Classical Languages of India:</u>

- The Indian classical languages, or the Shastriya Bhasha is an **umbrella term for the languages of India having high antiquity, and valuable, original and distinct literary heritage**.
- The Republic of **India officially recognises six languages** as the Classical languages of India.
- In 2004, the Government of India declared that languages that met certain strict criteria could be accorded the status of a "Classical Language" of India.
- It was instituted by the Ministry of Culture along with the Linguistic Experts' Committee.
- The committee was constituted by the Government of India to consider demands for the categorisation of languages as Classical languages.
- <u>Criterion to determine the eligibility of languages</u> to be considered for classification as a "Classical Language":

1. High antiquity of its early texts/**recorded history over a period of 1500–2000 years.**
2. **A body of ancient literature/texts**, which is considered a valuable heritage by generations of speakers
3. The **literary tradition be original** and not borrowed from another speech community.
4. The classical language and literature being distinct from modern, there may also be a **discontinuity between the classical language and its later forms** or its offshoots.

- The officialy recognized Classical Languages of India:
1. *Tamil (in 2004)*
2. *Sanskrit (in 2005)*
3. *Telegu (in 2008)*
4. *Kannada (in 2008)*
5. *Malayalam (in 2013)*
6. *Odia (in 2014)*

- **Once a language is declared classical**, it gets financial assistance for setting up a centre of excellence for the study of that language and also opens up an avenue for two major awards for scholars of eminence.
- Additionally, the University Grants Commission can be requested to establish professional chairs for scholars of classical languages, starting with central universities.
- The Central government has decided to modify the criteria for granting classical language status, following recommendations from the Linguistics Expert Committee of the Union Culture Ministry.
- The **Linguistics Expert Committee comprises representatives of the Union Ministries of Home, Culture and four to five linguistic experts at any given time**. It is **chaired by the president of the Sahitya Akademi**.
- The **new criteria will be officially notified once approved by the Union Cabinet**.
- It has delayed the consideration of languages like Marathi for classical status.
- There have been demands from other languages groups to classify their languages as classical language. For example Bengali, Tulu etc.
- According to National Education Policy-2020 works of literature of Pali, Persian, and Prakrit shall also be preserved.

GI TAG TO MAKHANA

Why in News?

The Bihar government has urged the Centre to declare the **Minimum Support Price (MSP) for makhana**, an aquatic crop cultivated across 10 districts in the state.
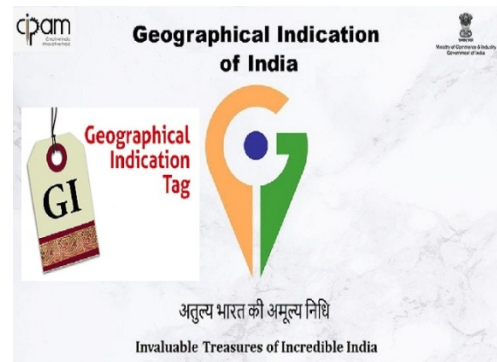
<u>About Makhana:</u>

- Makhanas are **also known as fox nuts, Euryale ferox, lotus seeds, gorgon nuts and phool makhana.**
- Botanical name : **Euryale ferox Salisb**
- Basically, it is an **aquatic crop,** belonging to the family of Nympheaceae.
- This plant, which is **grown commercially**, is often **found in stagnant water bodies** like ponds, swamps, oxbow lakes, ditches, and certain low-lying areas.
- It **thrives naturally in warm, tropical, and subtropical climates**.
- Farmers typically sow the seeds in shallow water, and the plants are allowed to grow until they flower and produce seeds.
- **Harvesting usually occurs during the summer months**.
- The <u>mature seeds are collected from the water, dried in the sun, and then roasted to remove the hard outer shell.</u>
- The process of roasting and popping is essential to convert the hard seeds into the light, crunchy, and edible form we recognize as makhana.
- Makhana plant or Euryale ferox Salisb is a **native of South-East Asia and China,** but is now distributed and exported to different parts of the world.
- In the initial years of commercial production, the plant's distribution was limited to tropical and sub-tropical regions of South-East and East Asia and other countries. This includes Japan, Korea, Russia, North America, Nepal, Bangladesh .

- **In India, the makhana seeds are distributed in different states** including West Bengal, Bihar, Manipur, Tripura, Assam, Jammu & Kashmir, Eastern Orissa, Madhya Pradesh, Rajasthan and Uttar Pradesh.
- **However, the commercial cultivation and processing is limited to North Bihar, Manipur, parts of West Bengal and Madhya Pradesh**.
- The state has raised concerns about the shortage of staff at the Darbhanga-based Indian Council of Agricultural Research - National Research Centre (ICAR-NRC) for Makhana.
- **Bihar produces about 85% of the country's makhana**, with approximately 10 lakh people directly or indirectly involved in its cultivation and production process.
- According to the Agriculture Ministry, The ICAR-NRC for Makhana in Darbhanga was approved by the Department of Agricultural Research & Education, Government of India, as a new scheme during the IX Five Year Plan period (1997–2002) for Conservation, Research & Development of the makhana crop.
- The NRC for Makhana started operating in February 2002, but in 2005 it was merged with the ICAR-Research Complex for Eastern Region (RCER) in Patna, resulting in the revocation of its "national" status.
- In May 2023, the Central government upgraded the Research Centre for Makhana, Darbhanga to "National Research Centre for Makhana, Darbhanga" and expanded its mandate to include other aquatic crops such as fish.
- The NRC for Makhana was transferred under the ICAR's Agricultural Engineering Division and attached to the Ludhiana-based ICAR-Central Institute of Post Harvest Engineering &Technology.

About GI (Geographical Indication) TAG:

- A geographical indication (GI) is a **name or sign used on products which corresponds to a specific geographical location or origin** (e.g., a town, region, or country).
- The use of a geographical indication, as an indication of the product's source, is **intended as a certification that the product**

Geographical Indication of India

possesses certain qualities, is made according to traditional methods, or enjoys a good reputation due to its geographical origin.

- It is governed and directed by the **WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).**
- GI tags are issued as per the **Geographical Indications of Goods (Registration and Protection) Act, 1999.**
- This tag is **issued by the Geographical Indication Registry** under the **Department of Industry Promotion and Internal Trade, Ministry of Commerce and Industry**.
- It is primarily an agricultural, natural or a manufactured product (handicrafts and industrial goods).
- This tag is **valid for a period of 10 years** following which **it can be renewed**.
- Once a product gets this tag, any person or company cannot sell a similar item under that name.
- GI registration of a product provides it legal protection and prevention against unauthorised use by others.
- GI tag helps in promoting the exports of the product.
- It also provides comfort to customers about the authenticity of that product.
- Some famous goods which carry this tag include Basmati rice, Darjeeling Tea, Chanderi Fabric, Mysore Silk, Kullu Shawl, Kangra Tea, Thanjavur Paintings, Allahabad Surkha, Farrukhabad Prints, Lucknow Zardozi, Kashmir Saffron and Kashmir Walnut Wood Carving.

MASHCO PIRO TRIBE

Why in News?

Recently, the previously **uncontacted Mashco Piro tribe emerged in Peru** due to encroachment and a search for food and safety.

About Mashco Piro tribe:

- The **Nomole or Cujareño people** or known incorrectly and derogatively as Mashco Piro ("Savage" Piro) are an **indigenous tribe of nomadic hunter-gatherers** who **inhabit the remote regions of the Amazon rainforest.**

- The Mashco Piro is the **largest uncontacted tribe globally,** with over 750 members.
- They live in Manú National Park in the Madre de Dios Region in Peru.
- They have actively avoided contact with non-native peoples.
- They occasionally interact with the Yine community, sharing ancestry and language, but these contacts pose health risks due to their lack of immunity to diseases.

- During the 1880s Rubber Boom, rubber barons invaded their territory, enslaving and subjecting them to severe atrocities.
- **In 2002, Perú established the Madre de Dios Territorial Reserve to protect them**, but it covers only a third of the proposed area.
- The Mashco Piro, who live deep in the Amazon rainforest of southeastern Peru, **are being pressured by logging activities close to their territory**.
- The Peruvian government has forbidden contact with the tribe to prevent disease transmission, but large parts of their land have been sold for logging.
- In 1998, the International Work Group for Indigenous Affairs (IWGIA) estimated their number to be around 100 to 250.
- This is an increase from the 1976 estimated population of 20 to 100.
- In **2024 their number was believed to be above 750**.
- The Nomole tribe **speaks a dialect of the Piro language**.
- Mashco (originally spelled "Maschcos") is a term which was first used by Padre Biedma in 1687 to refer to the Harakmbut people.
- It is considered a derogatory term, due to its meaning of 'savages' in the Piro language; Nomole is the name the people apply to themselves.

About Peru:

- Peru, officially the **Republic of Peru**, is a country in western South America.

- It is bordered in the **north by Ecuador and Colombia,** in the **east by Brazil**, in the **southeast by Bolivia**, in the **south by Chile**, and in the south and **west by the Pacific Ocean.**
- It is a **megadiverse country** with habitats ranging <u>from the Andes mountains to the Amazon Basin rainforest</u>.
- Peru has a **population of over 32 million**, and **its capital and largest city is Lima**.
- It is influenced by its tropical latitude, mountain ranges.
- **Major Producer: Lithium, lead, zinc, gold, copper, and silver.**

INDIA'S 1ST OVERSEAS JAN AUSHADHI KENDRA

Why in News?

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

About:

- This event highlights the <u>strong bilateral cooperation in the health sector between India and Mauritius</u>.
- The Jan Aushadi Kendra **aims to provide affordable generic medicines** to enhance public healthcare in Mauritius.
- **<u>Janaushadhi Kendras are centres that provide quality generic medicines to the public.</u>**
- **Supported by the Bureau of Pharma PSUs in India (BPPI**) under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP), these centres **aim to make affordable healthcare accessible.**

- The <u>government has set a target to increase the number of Janaushadhi Kendras to 10,500 by the end of March 2025</u>.

Pradhan Mantri Bharatiya Janaushadhi Pariyojana (PMBJP):

o Pradhan Mantri Bharatiya Janaushadhi Pariyojana **(PMBJP) is a campaign–public welfare scheme of Government of India.**

o It was **launched by the Department of Pharmaceuticals** to <u>provide quality medicines at affordable prices to the masses through special kendras</u> known as **Pradhan Mantri Bharatiya Janaushadhi Pariyojana Kendra (PMBJK).**

o The scheme's **centres have been set up to provide generic drugs, which are available at lesser prices but are equivalent to more expensive branded drugs in both quality and efficacy**.

o The <u>Bureau of Pharma Public Sector Undertakings of India (BPPI)</u> has been established under the Department of Pharmaceuticals, Govt. of India, with the support of all the CPSUs for co-ordinating procurement, supply and marketing of generic drugs through the centres.

o The <u>scheme was initially launched by the government in 2008</u>; and **relaunched by the Prime Minister of India, Narendra Modi in 2015.**

o The <u>campaign was undertaken through sale of generic medicines through exclusive outlets namely Jan Aushadhi Medical Store in various districts of the country.</u>

ARTICLE 361

Why in News?

➢ Recently, the **Supreme Court (SC) of India agreed to examine the question of immunity to Governors from any kind of criminal prosecution,** granted under Article 361 of the Constitution.

➢ The Supreme Court is examining a <u>petition filed by a contractual woman employee of the West Bengal Raj Bhavan, who has accused Governor C.V. Ananda Bose of sexual harassment and molestation.</u>

➢ The **petitioner argues that the "absolute immunity"** granted to the Governor under Article 361 of the Constitution **undermines her fundamental rights and the fairness of the legal process.**

About Article 361:

- Article **361 grants the President of India and governors of state immunity from legal proceedings over the duration of their term in office**.
- The article is an exception to Article 14 (right to equality) of the Constitution.
- **Non-Answerable to Courts:** Article 361(1) states that the President or the Governor of a State is not answerable to any court for the exercise of their powers and duties, or for any act done in the exercise of those powers and duties.
- **Protection from Criminal Proceedings:** Under Article 361(2), no criminal proceedings whatsoever shall be instituted or continued against the President, or the Governor of a State, in any court during his term of office.
- **No Arrest**: Under Article 361(3), no arrest or imprisonment processes can be issued against the President or Governor during their term of office.
- **Protection from Civil Proceedings**: Under Article 361(4), no civil lawsuits can be filed against the President or Governor of a State during their term of office for any personal acts until two months after giving written notice.
- The notice must include the nature of the proceedings, the cause of action, the party filing the lawsuit, and the relief being sought.

Governor of State:

- The Governor of State is the **highest office of the State under the constitutional framework of India.**
- **Part VI of the Constitution of India** deals with the state executive.
- The <u>state executive consists of the governor, the chief minister, the council of ministers and the advocate-general of the state</u>
- The office of the Governor of State has been envisaged as having **dual roles**:
  - o The Nominal Executive Head or Titular or Constitutional Head of the State Executive, as well as
  - o An agent of the Central Government.
- **Articles 153-167 in Part VI of the Indian Constitution** deal with the State Executive.
- The **Governor of State is appointed by the President of India** by warrant under his hand and seal.
  - o Thus, the Governor is neither directly elected by the people nor indirectly elected by a specially constituted electoral college as is the case with the President of India.
  - o **Usually, a Governor is appointed for each Indian State**. But, <u>as provided by the 7th Constitutional Amendment Act of 1956, the same person can be appointed as the Governor for two or more States.</u>
- The **oath of office to the governor is administered by the Chief Justice of the concerned High Court**.
- However, **his term is subjected to the pleasure of the President**
- The <u>constitution has not laid down any grounds for the removal of the governor by president</u>.
- A governor can also hold office beyond his term until his successor assumes charge.
- A governor must:
  - o Be a citizen of India.
  - o Be at least 35 years of age.
  - o Not be a member of the either house of the parliament or house of the state legislature.
  - o Not hold any office of profit.

- The term of governor's office is normally 5 years but it can be terminated earlier by:
  - **Dismissal by the President** on the advice of the council of minister headed by the prime minister of the country.
  - Dismissal of governors without a valid reason is not permitted.
  - However, it is the duty of the President to dismiss a governor whose acts are upheld by courts as unconstitutional and malafide.
  - Resignation by the governor.
- Conventions that have developed while appointing a governor.
  - He should be not from a state where he is appointed
  - While appointing the governor, the president is required to consult the CM of the state concerned.
- Immunity:
  - He enjoys **personal immunity from legal liability for his official acts**
  - **During his term of office, he is immune from any criminal proceedings, even in respect of his personal acts**. He cannot be arrested or imprisoned
  - However, **after giving two months' notice civil proceedings can be instituted against him during his term of office** in respect of his personal acts.
  - Article 361 does grant significant immunity to Governors, shielding them from criminal proceedings during their term. However, the immunity is not absolute.

PHLOGACANTHUS SUDHANSUSEKHARII

Why in News?

- Researchers from the Botanical Survey of India (BSI) have discovered a **new plant species from a wildlife sanctuary in Arunachal Pradesh.**
- 'Phlogacanthus Sudhansusekharii', the plant species recently **discovered from Itanagar Wildlife Sanctuary** in Papum Pare district, belongs to the family 'Acanthaceae' and the 'Phlogacanthus' genus.

- The species is **named to honour Dr Sudhansu Sekhar Dash**, a scientist at the BSI, for his "significant contribution" to plant and ecological research in the Indian Himalayan region.
- The genus 'Phlogacanthus' comprises 13 species in India and is spread over mainly the northeastern and eastern Himalayan states.
- "The newly described species is closely allied to Phlogacanthus Guttatus (Wall) Nees, but differ in various morphological characters, mainly in its shape and size of calyx, staminodes and strikingly different corona colour,"

ECONOMIC SURVERY

Why in News?

Union Finance Minister Nirmala Sitharaman Monday tabled the Economic Survey 2023-24, which projects a real GDP growth of 6.5 to 7 per cent.

About Economic Survey:

- The Economic Survey of India is an **annual document of the Ministry of Finance, Government of India**.
- The Department of Economic Affairs, Ministry of Finance presents the Survey in the Parliament every year, **just before the Union Budget.**
- It is **prepared under the guidance of**

the Chief Economic Adviser of India.

- This document is <u>presented to both Houses of Parliament during the Budget Session.</u>

- The <u>first Economic Survey of India was presented in 1950-51 as part of the Union Budget.</u>

- **After 1964 it was separated from the Budget and presented each year during the Budget Session before the presentation of the budget.**

- **The document is non-binding**. Nevertheless, is constructed and presented each year due to its significance.

- The document is the **Ministry's view on the state of the economy of the country**.

- This document of the Ministry, the Economic Survey of India **reviews the developments in the Indian economy over the past financial year,** summarizes the performance on major development programs, and highlights the policy initiatives of the government and the prospects of the economy in the short to medium term.

Major highlights from the Economic Survey 2023-24.

- **Resilient Economy**: The <u>Indian economy grew over 7% for the third consecutive year</u>, driven by <u>stable consumption and improving investment demand</u>.

- **Improved Current Account Deficit**: India's CAD improved to 0.7% of GDP in FY24, down from 2.0% in FY23.

- **Robust Forex Reserves**: At the end of March 2024, <u>India's forex reserves could cover more than 10 months of projected imports and 98% of external debt</u>.

- **Stable Banking Sector**: The banking sector showcased stellar performance with <u>double-digit credit growth, low NPAs, and improved asset quality</u>.

- **Core Inflation Falls**: <u>Retail inflation was maintained at 5.4%, the lowest since the pandemic,</u> due to effective policy interventions and RBI measures.

- **Positive Short-Term Inflation Outlook**: Inflation is expected to decline to 4.5% in FY25 and 4.1% in FY26, assuming normal monsoon and no external shocks.

- **Growth Strategy for New India**: The focus will be on <u>bottom-up reforms, job and skill creation, MSME development, green transition, and addressing inequality</u>.

- **FDI Inflows Slow**: <u>Net FDI inflows declined from $42 billion in FY23 to $26.5 billion in FY24</u>, with gross FDI inflows moderating slightly.

- **Growing Energy Needs**: India's energy needs are projected to grow 2 to 2.5 times by 2047, with significant progress in renewable energy and emissions reduction.
- **Sectoral Performance**: Agriculture grew at 4.18% annually over the past five years, industry grew at 9.5% in FY24, and the services sector contributed 55% to the economy in FY24.

NEW INVASIVE SPECIES

Why in News?

Zebra mussel larvae, an invasive species, have been discovered in the Colorado River near Grand Junction, Colorado.

About:

- Zebra mussels are **an invasive, fingernail-sized mollusk.**
- **Scientific Name: Dreissena polymorpha**
- The species originates from the lakes of southern Russia and Ukraine, but has **been accidentally introduced to numerous other areas** and **has become an invasive species in many countries worldwide.**
- Since the **1980s, the species has invaded the Great Lakes**, Hudson River, Lake Travis, Finger Lakes, Lake Bonaparte, and Lake Simcoe
- The **species was first described in 1769 by German zoologist Peter Simon Pallas** in the Ural, Volga, and Dnieper Rivers.
- **Zebra mussels get their name from a striped pattern commonly seen on their shells**, though it is not universally present.
- They **live underwater, attached to natural and manmade substrates** such as rocks, wood, plants, native mussels, pipes, docks, boat lifts, swim rafts, moored watercraft, and other debris.

- They are **easy to identify, with a distinct, flat-bottomed 'D' shape to their shells** that allows them to sit flat against a solid surface, and black, zigzag stripes against a cream background that earned them their name.
- **Zebra mussels are difficult to remove once established and can rapidly spread**, disrupting ecosystems by eliminating essential food sources and attaching to hard surfaces, leading to clogged pipes and damaged equipment.
- They are **usually about the size of a fingernail,** but can grow to a maximum length around 50 mm (2 in).
- Their **shells are D-shaped**, and attached to the substrate with strong byssal fibers, which come out of their umbo on the dorsal (hinged) side.
- The **lifespan of a zebra mussel is four to five years.**
- Zebra mussels **can be used to detect risks to humans from environmental hazards** and are considered effective indicators of environmental pollution.
- This **poses a severe threat to the river's ecosystem and infrastructure**.
- The adverse **effects of dreissenid mussels on freshwater systems** have led to their ranking as **one of the world's most invasive aquatic species.**
- **IUCN Status: Least Concern**

VISHNUPAD TEMPLE & MAHABODHI TEMPLE

Why in News?

Finance Minister announced during the Union Budget speech that **corridor projects will be built** for the Vishnupad Temple in Gaya and the Mahabodhi Temple in Bodh Gaya, Bihar.

About Vishnupad Temple:

- Vishnupad Temple is an **ancient Hindu temple dedicated to Lord Vishnu in Gaya, Bihar, India.**
- It is **located on the banks of Phalgu river.**

- **Built in 1787 by Queen Ahilyabai Holkar**, it stands about 100 feet tall with 44 pillars
- It is **significant during pitra paksh**, a period for rituals to remember ancestors.
- The temple is believed to be built upon the site where Vishnu had purportedly killed the demon Gayasura or **pinned him underground**.
- The temple features a 40-cm footprint purported to be of Lord Vishnu incised into a block of basalt, known **as Dharmasila** which was retained when the deity stepped on Gayasura's chest before pinning him underground.
- Atop the structure is a 50-kilo gold flag, donated by a devotee, Gayapal Panda Bal Govind Sen.
- The Vishnupad temple is the center for Shraddha rites in Gaya.
- The **footprint consists of nine different symbols** including Shankam, Chakram and Gadham. These are believed to be weapons of the lord.

About Mahabodhi Temple:

- The Mahabodhi Temple (literally: "Great Awakening Temple"), is an **ancient, but restored Buddhist temple in Bodh Gaya, Bihar, India**.
- It **marks the location where the Buddha is said to have attained enlightenment.**
- The Mahabodhi Temple is located in Bodh Gaya, central Bihar, **on the banks of the Niranjana River.**
- It has been a **major pilgrimage**

destination of Buddhists for over two thousand years.

- The temple complex includes two large straight-sided shikhara towers, the largest over 55 metres (180 feet) high.
- **Originally built by Emperor Ashoka in the 3rd century B.C.**, the present structure dates back to the 5th-6th centuries and is one of the earliest brick Buddhist temples.
- It is **one of the earliest Buddhist temples built entirely in brick from the late Gupta period.**
- This temple is considered to have had significant influence on the development of brick architecture over the centuries.
- The Mahabodhi Temple was **recognized as a UNESCO World Heritage Site in 2002.**

U-WIN

Why in News?

The U-WIN portal, the **digital platform to record vaccinations**, is poised for a nationwide launch by the end of August.

About U-WIN:

> - **U-WIN is part of India's Universal Immunisation Programme (UIP),** which falls under the Reproductive and Child Health (RCH) Program of the National Health Mission (NHM).
> - During the interim Budget for 2024-2025 in February, Finance Minister Nirmala Sitharaman emphasised the expeditious rollout of the newly designed U-WIN platform to manage immunisations and support Mission Indradhanush.

Key Features of U-WIN:

➢ **Electronic Registry**: Captures every vaccination event for pregnant women and children, ensuring accurate and complete records.

➢ **Digital Vaccination Certificates**: Generates QR-based, digitally verifiable e-vaccination certificates accessible anytime by citizens.

➢ **Self-Registration and Scheduling:** Citizens can self-register via the U-WIN web portal or mobile app, select vaccination centers, and schedule appointments.

➢ **Automated Alerts:** Sends SMS alerts for registration confirmations, dose administration, and reminders for upcoming doses.

➢ **Frontline Worker Support**: Enables frontline workers to digitally record vaccination events, facilitating accurate and easy record maintenance.

➢ **Ayushman Bharat Health Account (ABHA) IDs**: Aids in creating ABHA IDs for comprehensive health record maintenance.

➢ **Reducing Zero-Dose and Left-Out Children**: Uses a name-based tracking mechanism to ensure no child is left unvaccinated, particularly benefiting migratory populations.

How U-WIN Works?

➢ **Registration:** Children up to the age of six years and pregnant mothers are registered using government ID like Aadhaar and their mobile phone numbers.

➢ **Vaccination Records**: Records of all 25 shots given to a child and two given to pregnant mothers are added. The platform generates a checkered vaccination certificate that color-codes all vaccines.

➢ **Vaccination Tracking**: After each shot is administered and recorded on U-WIN, its date gets added to the card, showing the due date for the next set of vaccines.

➢ **Reminder System:** SMS reminders are sent to parents before their children are due for the next dose.

➢ **Portability:** The digital vaccine certificate can be downloaded by parents using their registered mobile numbers, allowing for vaccination anywhere in the country.

➢ **Health Worker Support**: The platform can automatically generate a due-list of children in their respective areas, allowing health workers to track and ensure vaccination compliance.

- ➢ **Data Integration**: U-WIN will eventually connect all digital records through ABHA (Ayushman Bharat Health Account) ID, integrating data from various government programs.
- ➢ The U-WIN platform is **currently in a pilot phase in 64 districts**.
- ➢ ASHA workers and other community health workers have been instrumental in its implementation, going door-to-door to collect data and register children and pregnant women on the portal.
- ➢ Feedback indicates that while the portal is beneficial, challenges such as lack of vaccine storage facilities and patchy internet connectivity remain.
- ➢ **Physical registers are maintained as a backup**, and workers have requested to extend the data entry window from 24 hours to 48 hours.

DARK OXYGEN

Why in News?

Scientists have discovered **"dark oxygen" being produced in the deep ocean by metallic nodules on the seafloor**, challenging the belief that oxygen production requires sunlight.

About Dark Oxygen:

- "Dark oxygen" is oxygen produced in the deep ocean, independent of sunlight, by **metallic nodules on the seafloor.**
- Polymetallic nodules, which are **naturally occurring mineral masses found on the ocean floor**, play a crucial role in this newly discovered process.
- These **nodules, made up of metals like manganese, iron, cobalt, nickel, copper, and lithium, can generate oxygen through electrochemical activity** even in the absence of light.

- **They act like batteries**, <u>generating electric currents that split seawater (H2O) into hydrogen and oxygen.</u>
- Until now, **we believed that all oxygen came from photosynthetic organisms** (plants and algae).
- <u>Dark oxygen challenges this notion, suggesting that there might be alternative oxygen sources.</u>
- Scientists discovered dark oxygen at a depth of 4,000 meters (about 13,000 feet) below the ocean's surface, **specifically from the pacific ocean's Clarion-Clipperton Zone (CCZ).**
- The Clarion-Clipperton Zone, where the discovery was made, is a site already <u>being explored by a number of seabed mining companies, which are developing technology to collect the nodules and bring them to a ship at the surface</u>
- The fact **that it's produced without sunlight implies that life might have existed before photosynthesis emerged.**
- It <u>raises intriguing questions about the origins of life on Earth</u>.
- <u>Several mining companies have plans to collect these nodules</u>, which marine scientists fear could disrupt the newly discovered process - and damage any marine life that depends on the oxygen they make.
- Applications:
  - <u>Support for Deep-Sea Life</u>: Provides oxygen for marine organisms in deep-sea environments.
  - <u>Potential Extraterrestrial Insights</u>: Suggests similar oxygen production could occur on other planets and moons, possibly supporting life.
- Concerns:
  - Environmental Impact: Deep-sea mining for these nodules <u>could disrupt oxygen production and harm marine life.</u>
  - Ecosystem Destruction: Mining activities <u>may destroy unknown and poorly understood deep-sea ecosystems.</u>
  - Regulatory Oversight: Ensuring <u>environmentally friendly mining practices is crucial to mitigate damage.</u>

PM JANJATIYA UNNAT GRAM ABHIYAAN

- Finance Minister announced the launch of the **PM Janjatiya Unnat Gram Abhiyaan**.
- The scheme is **aimed at providing basic facilities to five crore Scheduled Tribe families** across 63,000 villages in tribal-majority and aspirational districts.
- This scheme is designed after PM-JANMAN for Particularly Vulnerable Tribal Groups.
- The 2024-25 budget **allocated ₹13,000 crore for the Ministry of Tribal Affairs**, with a significant portion going to Eklavya Model Residential Schools.

SANGHAMESHWAR TEMPLE

Why in News?

The ancient **Sangameshwar Temple has submerged** in more than 10-feet deep waterafter gates of Mahi Dam were opened to release water in Banswara district, Rajasthan.

About Sanghameshwar Temple:

- The Sangameswara temple is a **Hindu temple in** the Nandyal district, **Andhra Pradesh, India**.
- It is located near Muchumarri at the **confluence of the Krishna and Bhavanasi rivers**, in the foreshore of the Srisailam reservoir, where it is submerged for part of the time,

surfacing when the water level recedes to a sufficient degree.

- It was **first submerged after the Srisailam Dam was constructed in 1981**, and first surfaced in 2003.
- The **temple's wooden Lingam, Sangameshwaram, is believed to have been installed by Dharmaraja, the eldest of the Pandavas**, after their visit to Srisailam Mallikarjuna temple.
- The <u>temple is considered a place of religious sanctity due to **being built at the confluence of seven rivers**</u> and remain visible for two months.
- *Bhavanasi, Krishna River* **and five rivers that merge into it** beforehand, namely, *Veni, Tunga, Bhadra, Bheemarathi and Malapaharini*.
- It is **dedicated to Lord Shiva**.
- It was **originally built in 740 AD by Chalukya ruler Pulakesi II.**
- Initially located at the confluence of the Tungabhadra and Krishna Rivers, 10 km from its current site.
- The temple was dismantled and reassembled rock-by-rock at its present location in 1979 due to submergence caused by the Srisailam Dam construction.
- It is **built in the Nagara style**. It has elevated platform with a fortified wall surrounding the temple.
- It has a **large hall supported by 12 pillars leading to the sanctum**.
- It has also a circumambulatory path around the sanctum for performing pradakshinas (ritual circumambulation).
- The ceiling features a large relief of Nagaraja, characteristic of Chalukya temples.
- Pillars in the hall are adorned with intricate engravings of Lord Vishnu, Brahma, Kumaraswamy, and celestial couples. Each corner of the temple features carvings of crocodiles.

WORLD MANGROVE DAY

Why in News?

- ➤ **26 July, is marked as the International Day for Conservation of Mangrove Ecosystems** as <u>declared by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in 2015.</u>

➤ The day is marked **to raise awareness towards mangrove ecosystems** as "a unique, special and vulnerable ecosystem" and to promote solutions for their sustainable management, conservation and uses.

About Mangroves:

- A mangrove is a **shrub or tree that grows mainly in coastal saline or brackish water.**

- Mangroves **grow in an equatorial climate,** typically along coastlines and tidal rivers.

- They have **special adaptations to take in extra oxygen and to remove salt,** which allow them to tolerate conditions that would kill most plants.

- Mangroves are **taxonomically diverse,** as a result of convergent evolution in several plant families.

- **They occur worldwide in the tropics and subtropics and even some temperate coastal areas,** mainly between latitudes 30° N and 30° S, with the greatest mangrove area within 5° of the equator.

- Mangroves are **salt-tolerant trees, shrubs and ferns also called halophytes**, and are adapted to live in harsh coastal conditions.

- They are **adapted to the low-oxygen conditions of waterlogged mud**, but are most likely to thrive in the upper half of the intertidal zone.

- The **International Day for the Conservation of the Mangrove Ecosystem is celebrated every year on 26 July**.

- Mangroves are **often called 'sentinels of the coast**' given their ability to protect shorelines, absorb impacts of storms and cyclones, support fish nurseries, lock up carbon and nutrients, provide a gene pool, and offer a host of other benefits.

- The **extent of mangroves in the country has increased from 4,046 square kilometre (sq km) in 1987 to 4,992 sq km in 2019,** according to biennial assessments published by the Forest Survey of India.

- The **Global Mangrove Alliance,** which maintains consistent global datasets on mangrove cover, has estimated that worldwide, since 1996, there has been a net global loss of mangrove cover by 3.4 per cent, with the losses having occurred globally at rates twice the gains.
- **India is one of the few countries with positive trends in mangrove cover**. This success is attributed to immense efforts in mangrove plantations based on localised models, community engagement in their protection and upkeep and strengthening coastal zone regulation architecture.
- **States like Maharashtra have established a separate Mangrove Cell** to ensure a consistent focus on the conservation and management of these ecosystems.

Challenges with mangrove conservation in India:

- **Decline in Natural Coastal Wetlands** : The National Decadal Wetland Change Atlas reports a decline in natural coastal wetlands from 3.69 million hectares in 2006 to 3.62 million hectares in 2018.
- **Loss of Intertidal Mudflats** : Intertidal mudflats, important for migratory birds and carbon storage, have been reduced due to mangrove plantations and other causes. Changing these mudflats to mangrove areas leads to a loss of their vital functions.
- **Restoration Challenge** : Mangrove restoration usually involves planting propagules, a method popular after the 2004 Indian Ocean Tsunami. However, these efforts face low survival rates and may not tackle the root causes of mangrove loss.
- **Accommodation Space** : Mangroves need space to adjust to rising sea levels and accumulating sediments. In cities like Mumbai, where development encroaches on mangroves, the lack of this space can hinder their ability to adapt to climate change.
- **Threats to Mangroves** : Mangroves are threatened by over-harvesting, pollution, land conversion, and development.
- **Impact of Climate Change** : Climate change affects mangroves with rising sea levels, higher temperatures, and more frequent storms. While warmer temperatures could promote growth, increased storms and sea level rise are major challenges.

Way Forward:

- India's 2030 vision of becoming a five trillion economy rests on ten elements — one of which is the blue economy — the economy sustained by coasts and oceans.
- Ensuring that our sentinels of the coast are conserved and effectively managed is critical to this goal.
- And this would require that mangrove conservation efforts incorporate major policy and programming shifts.
- **Policy Planning:** Development of a comprehensive plan for the conservation and management of the mangrove forest, taking into account the local community's needs and concerns.
- **Engaging Local Community in Conservation**: Involving and enabling local communities is critical for long-term success.
- In Gujarat and Odisha, results have shown that engaging local communities as stewards of their ecosystems, creating incentives and fostering a collaborative approach among government officials and restoration programmes can yield positive results.
- Develop standardized metrics for mangrove conditions, identify local drivers of change, and evaluate policy and management measures' effectiveness.
- **Pollution Abatement:** Implement measures to reduce threats to the mangrove forest, such as controlling pollution, preventing illegal logging, and reducing coastal erosion.
- **Afforestation:** Plantation of new mangrove trees to increase the forest's size and improve its health.
- Reducing mangrove deforestation rates would elevate the carbon benefit from climate change by 55–61%.
- **Strict Monitoring**: Proper and strict monitoring the effectiveness of conservation efforts using data such as satellite imagery, water quality tests, and biodiversity surveys.
- **Limiting Human Activities**: Human activities such should be limited around the mangrove forests.
- People who use mangroves for livelihoods should adopt sustainable approaches toward fisheries.

- **Awareness:** Refine knowledge of species benefiting and impacted by mangrove degradation and loss to understand the impact of mangrove change on local biodiversity and develop effective conservation and recovery plans.

PRALAY MISSILE

Why in News?

Armenia's reported interest in acquiring India's Pralay missile represents a significant opportunity for India.

This potential deal would enhance India's reputation as a missile exporter, following the success of the Brahmos missile export.

About Pralay Missile:

- Pralay is a **canisterised surface-to-surface, short-range ballistic missile (SRBM) for battlefield use**.
- The missile has been developed by the Defence Research and Development Organisation (DRDO) to meet the country's defence requirements along the Line of Actual Control (LAC) and Line of Control (LoC).
- It has a **range of 350-500 km** and has a **payload capacity of 500-1,000 kg** and is **powered by solid propellant rocket motor**.
- The Pralay missile includes a jet vane system for thrust vector control, allowing it to perform evasive maneuvers in the terminal phase of flight.
- The **missile is designed with two sets of small fins to reduce its radar signature**.
- The **Pralay missile never leaves the atmosphere** and follows a flat trajectory.
- The **missile navigates to its target using inertial guidance** and **can be controlled throughout its flight.**

- The **Pralay missile can be equipped with different types of warheads**, including pre-fragmented (PF), monolithic penetration cum blast (PCB), and submunition penetration cum blast (PCB) warheads.
- For terminal guidance, **it features a radio frequency Digital Scene-Matching Area Correlation (DSMAC)** seeker.
- The <u>missile is equipped with an indigenously developed Fused Silica Radar Dome (RADOME).</u>

OROPOUCHE FEVER

Why in News?

Brazil has reported its first-ever deaths from Oropouche fever.

About Oropoche Fever:

- Oropouche fever is a **tropical viral infection** <u>transmitted by biting midges and mosquitoes</u> from the blood of sloths to humans.
- This <u>disease is named after the region where it was first discovered</u> and isolated at the Trinidad Regional Virus Laboratory in 1955, **by the Oropouche River in Trinidad and Tobago.**
- Oropouche fever is **caused by a specific arbovirus, the Oropouche virus (OROV), of the Bunyaviridae**
- It is a <u>mosquito-borne disease with symptoms similar to dengue,</u> but severe cases are rare.
- The virus has spread to Latin America, the Caribbean, and recently to Europe, with Italy reporting its first case in June 2024.
- The <u>disease is transmitted to humans through the bite of an infected midge,</u> particularly the Culicoides paraensis midge, or sometimes through mosquitoes.

- **Urbanization, deforestation, and climate change increase the number of these insects,** raising the risk of transmission.
- There is **no evidence that Oropouche fever spreads from person to person.**
- Oropouche fever **symptoms start between four and eight days** after the bite, including fever, headaches, pain, and sometimes nausea.
- Most patients recover in about seven days, and **there is no vaccine or specific treatment.**
- **Treatment focuses on managing symptoms** and aiding recovery rather than curing the disease.
- The disease's spread may be influenced by climate and environmental factors such as deforestation, but much about its transmission remains understudied.
- The World Health Organization (WHO) reported the first-ever outbreak in Cuba on June 11, 2024, with approximately 70 confirmed cases.

GLOBAL WATERTECH AWARD 2024

Why in News?

The **Central Water Commission (CWC) has been honoured with the GEEF Global WaterTech Award** under the category 'Water Department of the Year' at the prestigious Global Water Tech Summit -2024 organized by the Global Energy and Environment Foundation (GEEF) in New Delhi.

<u>About:</u>

- The Global WaterTech award <u>acknowledges significant achievements in the water sector,</u> **focusing on innovation, technology, conservation, and sustainable development.**
- The **GEEF acknowledged CWC's crucial role** in:
  - Hydro-Meteorological Data Collection
  - Flood Forecasting
  - Reservoir Storage Monitoring
  - Water Quality Monitoring
  - Coastal Area Management
  - Water Resources Project Appraisal and Monitoring

- o Resolution of Inter-State Water Issues
- **CWC's new initiatives** were also recognized, including:
  - o Enhanced Synergy with State/UT Water Resources/Irrigation/Jal Shakti Departments
  - o Urban Hydrology Capacity Building for State Officials
  - o Extended Hydrological Prediction (EHP) Development
  - o Mobile App 'Floodwatch India' for Public Flood Information Dissemination.

About Center Water Commission:

- Central Water Commission (CWC) is a premier **Technical Organization of India in the field of Water Resources** and is <u>presently functioning as an attached office of the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India.</u>
- The Commission is **entrusted with the general responsibilities** of initiating, coordinating and furthering in consultation of the State Governments concerned, schemes for control, conservation and utilization of water resources throughout the country, for purpose of Flood Control, Irrigation, Navigation, Drinking Water Supply and Hydro Power Development.
- It **also undertakes the investigations, construction and execution of any such schemes** as required.
- CWC is **headed by a Chairman, with the status of Ex-Officio Secretary to the Government of India.**
- The work of the Commission is divided among three wings namely, *Designs and Research (D&R) Wing, River Management (RM) Wing and Water Planning and Projects (WP&P) Wing.*

- Each wing is placed under the charge of a full-time Member with the status of Ex-Officio Additional Secretary to the Government of India and comprising a number of organizations responsible for the disposal of tasks and duties falling within their assigned scope of functions.

Ideas4LiFE

Why in News?

The Union Minister for Environment, Forest and Climate Changehas recently launched the **Ideas4LiFE portal at IIT Delhi.**

About:

- The portal **invites innovative ideas to promote environment-friendly behaviours and lifestyles,** encouraging students, researchers, faculty, and innovators to contribute to the global initiative of Mission LiFE.
- It also seeks to invite ideas related to products and services that **promote behavioral changes towards environmentally friendly lifestyles.**
- It provides a significant opportunity for inspired minds to participate in a global movement dedicated to environmental sustainability.
- The **Ideas4LiFE initiative supports Mission LiFE's seven themes**:
    1) Saving water,
    2) Saving energy,
    3) Reducing waste and e-waste,
    4) Rejecting single-use plastics,
    5) Adopting sustainable food systems, and
    6) Healthy lifestyles.
- The initiative is supported by educational institutions and partners like UNICEF YuWaah.

About MISSION LiFE:

- LiFE was **introduced by Prime Minister Narendra Modi**—at **COP26 in Glasgow on 1 November 2021**—as a mass movement for "mindful and deliberate utilization, instead of mindless and destructive consumption" to protect and preserve the environment.

- It <u>aims to nudge individuals and communities to practice a lifestyle that is synchronous with nature and does not harm it.</u>

- Mission LiFE seeks to translate the vision of LiFE into measurable impact.

- It **aims to mobilize one billion Indians and people in other countries to adopt sustainable lifestyles.**

- It **promotes the P3 model**, which stands for <u>Pro Planet People.</u>

- Within India, <u>at least 80 percent of all villages and urban local bodies are aimed to become environment-friendly by 2028.</u>