Prelim Bits 05-03-2024 | UPSC Daily Current Affairs

Gangetic River Dolphin

Recently, National Dolphin Research Centre (NDRC) was inaugurated in Patna in Bihar.

- It is *India's 1st centre for research* on conserving the Gangetic river dolphin.
  - **Scientific name** – Platanista gangetica gangetica
  - **Common name** – Susu, Shushak, Side-swimming Dolphin
- **Distribution** – They are ***endemic to River Ganga***.
- Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of *Nepal, India, and Bangladesh*.

Bihar has around 50% of the estimated 3,000 Gangetic dolphins in India.

- **Habitat** – O*nly freshwater* and prefer *deep water*, live in a zone of little or no current.

The Gangetic river dolphin is one of 4 freshwater dolphin species in the world. The other 3 are found in the Yangtze River in China (now extinct), the Indus River in Pakistan and the Amazon River in South America.

- **Features** – It is *functionally blind* and finds its way and prey in river waters through *echolocation*.
- Being a mammal, it *cannot breathe in water* so it surfaces above the water every 30-40 seconds to breathe with a slit similar to a blowhole on top of its head acts as a nostril.
- They are frequently found *alone or in small groups*, and generally a mother and calf travel together.
- Calves are chocolate brown at birth and then have *grey-brown smooth, hairless skin* as adults.
- Females are larger than males.
- **Major Threats** – Unintentional killing through entanglement in *fishing gear, pollution and overexploitation of prey*.
- *Poaching* for dolphin oil, used for medicinal purposes.
- *Habitat destruction* due to development projects like dams.
- **Protection status**
  - **IUCN** – Endangered
  - **Wild Life (Protection) Act, 1972** – Schedule I
  - **CITES** – Appendix I

Quick Facts

- **Gangetic River Dolphin** – It is *India's national aquatic animal*.
- It is *state aquatic animal of Uttar Pradesh*.
- It was recently *rescued in Jalaka River of Odisha*, which indicates that there is presence of more freshwater dolphins in the river.
- *Project Gangetic Dolphin* was launched in 2016 for conserving it.

References

1. Down To Earth| India's 1st Gangetic Dolphin Research Centre
2. WII| Gangetic River Dolphin

Rajya Sabha Elections

In a recent ruling, the Supreme Court said that the elections to the Rajya Sabha required 'utmost protection' and the right to vote should be carried out freely without fear.

- **Rajya Sabha** –It is the *Upper House* of the Indian Parliament, also called as *Council of States*

  Article 80 *of the Constitution lays down the maximum strength of Rajya Sabha as 250, where 12 members are nominated by the President and 238 are representatives of the States and of the 3 Union Territories.*

- **Qualification** – ***Article 84*** of the Constitution lays down that
  - He/ She must be a citizen of India
  - He/ She must be not less than 30 years of age
  - He/ She must possess such other qualifications as may be prescribed in that behalf by or under any law made by Parliament.
- **Election** – Members are elected by the method of *indirect election* in accordance with the system of *proportional representation by means of the single transferable vote*.
- **Electoral College** – *Elected members* of the Legislative Assembly of all the States.
- Elected members of the legislative assembly of *UT of Puducherry, Jammu & Kashmir and National Capital Territory of Delhi*.

  Rajya Sabha being a permanent house is not subject to dissolution. However one-third Members retire after every 2nd year. A member who is elected for a full term serves for a period of 6 years and on the expiration of this term retires from the membership.

- **Biennial/Bye-election** – It is the election, to fill a *vacancy arising otherwise than by*

retirement of a member.
- Vacancy may be due to either *resignation or death or disqualification* of members under the 10th Schedule.
- A member elected in a bye-election remains a member *only for the remainder of the term* of the member.
- **Supreme Court** – It declared that Rajya Sabha elections are within the remit of Article 194(2) of the Constitution, clarifying its 2006 Kuldip Nayar judgment.

*In **2006 kuldip Nayar case**, Supreme Court ruled that Rajya Sabha elections were not proceedings of the legislature within the meaning of Article 194 but a mere exercise of franchise.*

- Parliamentary privileges under ***Articles 105(2) and 194(2)*** extends to other powers of elected members taking place in the legislative body even when the house is not in session.
- Thus the members of parliament and legislative assemblies *cannot claim immunity* from prosecution *on charges of bribery related to votes or speeches* in the legislature.

Rajya Sabha Provisions	Borrowed from the Constitution of
Elections	South Africa
Nomination of Members by President	Ireland

References

1. The Hindu| Extension of Parliamentary privileges in Voting
2. Livelaw| Supreme Court on Rajya Sabha Elections
3. Sansad| Elections to Rajya Sabha

Office of a Judge of a High Court

A sitting judge of a Calcutta High court announced his resignation in order to join politics reflects the challenges associated with independence of Judiciary.

- ***Article 217*** in Constitution of India mentions about the appointment and conditions of the office of a Judge of a High Court.
- **Qualification** – A person shall not be qualified for appointment as a Judge of a High Court unless he is a citizen of India and
  - Has for at least 10 years held a judicial office in the territory of India or has for at least 10 years been an advocate of a High Court or of 2 or more such Courts in succession
- **Appointed by** – *The President*, by warrant under his hand and seal.
- **Tenure** – Until he attains ***62 years of age***.
- If any question arises regarding the age, it shall be decided by the President after consultation with the Chief Justice of India and the decision of the President shall be final.

- **Vacation of seats** – A Judge can *resign* by writing under his hand a letter addressed to the President.
- A Judge may be *removed* from his office by the President in the manner provided in clause (4) of article 124 for the removal of a Judge of the Supreme Court.
- In case of being appointed by the President to be a *Judge of the Supreme Court* or by his being *transferred* by the President to any other High Court within the territory of India.
- **Post-retirement appointments** – Under ***Article 224A*** of the Constitution, the Chief Justice of a High Court may at any time, with the previous consent of the President, request any person who has held the office of a Judge of that court or of any other High Court to sit and act as an *Ad-hoc judge of the High Court* of that State.
- **Concerns** – Out of 28 judges who have retired in the last half-decade, 6 judges have been granted constitutional or statutory appointments.

> *The practice of placing retired Supreme Court judges started with 1st Chief Justice of India, Saiyyad Faizal Ali, being appointed as governor of Orissa after his stint as an ad-hoc judge under Article 128 of the constitution.*

- In 2023, Supreme Court Dismissed the PIL Seeking 2 Years' Cooling Off Period For Retired Judges' Post-Retirement Appointments.

> *The 14th Law Commission Report (1958) recommended that judges should be barred from accepting employment with the Union or the state, as a post retirement job.*

References

1. The Indian Express| Resignation by Judge of the Constitutional Court
2. Department of Justice| Office of High Court Judge
3. The Wire| Sunset Jobs for Retired Judges

Volcanic winter

Researchers from NASA used advanced computer modelling to simulate super-eruptions like the Toba event and found that volcanic winter would probably not exceed 1.5 degrees Celsius.

> *To qualify as **a super eruption**, a volcano must release more than 1,000 cubic kms of magma. These eruptions are extremely powerful and rare. The most recent one was around 22,000 years ago in New Zealand.*

- **Volcanic winter** – A *climatic cooling effect* caused by large-scale volcanic eruptions.

- Previous studies agreed that some planet-wide cooling would occur and estimates have ranged from 2 to 8 degrees Celsius.
- **Occurrence** – A massive volcanic eruption can deposit enormous amounts of ascending light coloured *volcanic ash and sulphur aerosols above the troposphere* and into the lower stratosphere.
- **Global cooling** – These erupted particles *reflect incoming solar radiation*, resulting in cooler temperatures on the earth below.
- They can remain there for *2 years causing global cooling*.
- The air between the troposphere and the stratosphere eventually mixes causing these particles to fall into the troposphere and *wash down on the earth through precipitation*.



One of the most severe volcanic winters occurred between 74,000 and 71,000 years ago following the eruption of the Mount Toba volcano on the island of Sumatra.

- **Challenges** – The ash produced from the eruption of Mount Etna in 44 B.C. was described to have dimmed the Sun's rays and the resulting *cooling caused crops to shrivel and produce famine* in ancient Rome and Egypt.

Stratospheric Aerosols Injection (SAI) involves spraying large quantities of tiny particles like Sulphur dioxides or finely powdered calcium carbonate into the earth's stratosphere to reflect sunlight and thereby reducing Earth's temperature.

Reference

India Today| Effectiveness of Volcanic Winter

Zombie Deer Disease

Zombie deer disease is spreading and rising in USA and scientists are concerned that it could jump to humans.

- It is a *contagious degenerative disease*, also known as ***chronic wasting disease*** (CWD).

The 1st case of chronic wasting disease (CWD) was discovered in Colorado in 1967.

- **Caused by** – *A prion.*

Prions *are misfolded proteins that can cause normal proteins in the brain to misfold as well, leading to neurological degeneration.*

- As the degeneration continues, the afflicted animal's brain cells die, ultimately resulting in its death.
- **Vulnerable species** – deer, elk, reindeer, sika deer, and moose.
- **Spread** – So far in Canada, the US, Norway, Sweden and South Korea.
- **Transmission** – They are reportedly spread via bodily fluids like saliva, urine, blood, or feces.
- **Symptoms** – It is characterised by myriad symptoms, such as drooling, lethargy, stumbling and a vacant gaze.
- It *progressively deteriorates the brains* of these animals, leading to dementia-like symptoms and eventual death.
- **Diagnosis** – It can only be confirmed by testing brain or lymph node samples from dead animals.
- There is *no reliable test for live animals* yet.
- **Prevention** – By *reducing the contact and transmission* of prions among cervids and their environment.
- **Treatment** – There are *no treatments or vaccines* available.
- **Challenges** – Prions can *persist in the environment* for extended periods and are resisting traditional disinfection methods such as formaldehyde, radiation and incineration at extreme temperatures.
- **In Humans** – While there is *no conclusive evidence that CWD can directly infect humans*, the possibility remains a point of concern.

Quick Facts

- Prion diseases, such as Creutzfeldt-Jakob disease (CJD) in humans and “mad cow disease” in cattle, have shown that they can cross the species barrier with devastating consequences.
- The outbreak of mad cow disease in Britain, for instance, resulted in the slaughter of millions of cattle and led to 178 human deaths attributed to the human variant of the disease since 1995.

References

1. Hindustan Times| Rapid spreading of Zombie Deer Disease
2. Times of India| Zombie Deer Disease

Other Important Topics

Digital Intelligence Platform (DIP)

Minister of Communications recently launched the Digital Intelligence Platform (DIP) and 'Chakshu' facility on Sanchar Saathi portal.

• DIP is a secure and integrated platform for real time intelligence sharing, information exchange and coordination among the stakeholders and is not accessible to citizens.

• **Stake holders -** Telecom Service Providers (tsps), Law enforcement agencies (leas), Banks and financial institutions (fis), Social media platforms, Identity document issuing authorities etc.

• It is developed by the ***Department of Telecommunications***.

• The portal also contains information regarding the cases detected as misuse of telecom resources.

PROJECT SEABIRD

• The Project Seabird is a naval infrastructure project that involves a ***naval base in Karwar, Karnataka***.

• The project was originally conceived by ***Admiral OS Dawson***, the Chief of Naval Staff in the early 1980s.

• The 1st phase of this project was commissioned in 2005 and the 2nd phase is yet to be completed.

• Once completed, it will be the largest naval base in the Asia.

Abortion in France

• French lawmakers recently approved a bill to enshrine *abortion rights in France's constitution*.

• France is the only country to explicitly guarantee a woman's right to voluntarily terminate a pregnancy.

Single use plastics in Odisha

• Odisha Forest and Environment Department recently ordered prohibition of single-use plastic inside sanctuaries, national park, tiger reserves and ecotourism area.

Eenthu Pana (Cycas circinalis)

Eenthu Pana in Kerala is on the verge of extinction after being hit by an unknown and fast spreading plant disease.

• Eenthu Pana, also known as Cycas circinalis or queen sago palm, is a palm-like tree that is native to the Indian subcontinent.

• It is commonly found in **Kerala**, especially in the Malabar region.

• The seeds of the Eenthu Pana are edible and are a rich source of protein and carbohydrates, have medicinal properties and a dietary supplement for diabetics.

• **Conservation Status**
  - IUCN – Critically endangered.

India's 1st Green Hydrogen plant in stainless steel sector

Union Minister for Steel and Civil Aviation recently inaugurated India's 1st Green Hydrogen Plant in Stainless Steel Sector in Haryana.

• It will be the world's 1st off-grid Green Hydrogen plant for the stainless-steel industry and the world's 1st Green Hydrogen plant with rooftop & floating solar.

• This project's target is to reduce carbon emissions by around 2,700 Metric Tonnes per annum and 54,000 tons of CO2 emissions over next 2 decades.

• Green hydrogen refers to hydrogen produced from water electrolysis, splitting water into hydrogen and oxygen by using renewable energy-powered electrolysers.

Carl Gustaf Weapon System

Swedish defence company SAAB has announced its plans to manufacture the iconic Carl-Gustaf M4 weapon systems in Haryana.
• SAAB will be the 1st foreign fully-owned defence production facility in India.
• The Carl-Gustaf is a multi-purpose, man-portable, recoilless weapon system.
• The Carl-Gustaf has a range of ammunition with varying ranges, with a maximum range of ***upto 1500m***. The anti-tank ammunition has a range of ***500m.***

C4IR

The World Economic Forum's (WEF) Centre for the 4th Industrial Revolution (C4IR) was recently launched in Hyderabad.
• It is the 1st thematic centre focused on healthcare and life sciences in Telangana.
• The C4IR focuses on 3 key areas - real-world evidence, healthcare analytics and informatics, and software as a medical device.

Serengeti ecosystem

• The Serengeti ecosystem is a protected area in Africa that stretches from North Tanzania to southwestern Kenya.
• The Serengeti is composed of the Serengeti National Park, the Maasai Mara in Kenya, and several smaller protected areas.
• It's a tropical savanna dominated by grass.
• Thorny acacia trees are sparsely scattered in the grassland.
• The region hosts the largest mammal migration in the world.

Alaskapox virus

The first known fatality from the recently discovered Alaska pox virus has been reported in Alaska.
• Alaskapox belongs to a family of *brick-shaped viruses* that can infect animals and humans.
• These bugs, known as orthopoxviruses, tend to cause lesions, or pox, on the skin.
• Smallpox is perhaps the most famous of the lot, but other family members include camelpox, cowpox, horsepox and mpox — formerly known as monkeypox.
• Alaskapox virus has been confirmed in 2 specific species previously - red-backed voles and shrews.
• Human-to-human transmission of AKPV has ***not yet been*** observed.

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