Prelim Bits 18-12-2022 & 19-12-2022 | UPSC Daily Current Affairs

Tal Chhapar Sanctuary

The Tal Chhapar sanctuary gets protection from a plan to reduce its size, through a suo motu public interest litigation by the Rajasthan High Court.

- The Tal Chhapar Sanctuary is located in the Churu district of Rajasthan.
- Before independence Tal Chappar was a Private Hunting Reserve of the Maharaja of Bikaner.
- **Forest** - Open grassland with spread all over Acacia and prosopis trees. It gives a look of a typical Savannah.
- A special type of grass called 'Mothiya' or pearl, is found here.
- Blackbucks have mothiya for their food as it has a very sweet taste.
- **Fauna** - The sanctuary is host to about 4,000 blackbucks and known as the home of blackbuck.
- It hosts several other wild animals including over 40 species of raptors and more than 300 species of resident and migratory birds.
- Large colonies of the only herbivorous lizard, the spiny-tailed lizard, exists here as the prey base for raptors.
- **Threats** - Hyper-aridity, grazing pressure, the invasive weed Prosopis juliflora and salt mines.
- The sanctuary's area is insufficient for its large blackbuck population.
- **Conservation** - A major project for the conservation of raptors in the sanctuary is taken up by World Wildlife Fund for Nature (WWF).

References

1. The Hindu - Tal Chhapar sanctuary gets protection
2. Rajasthan Wildlife Tourism - Tal Chhapar Sanctuary

INS Mormugao

The Missile destroyer INS Mormugao was commissioned at the naval dockyard in Mumbai.

- INS Mormugao is the 2nd warship of P15B class (2 of 4 Visakhapatnam Class destroyers).
- It is an indigenous (75%) stealth guided-missile destroyer.
- It was built by the Mazagon Dock Shipbuilders Limited (MDSL).
- It was indigenously designed by the Indian Navy's Warship Design Bureau.
- The ship is 163 m long and 17.4 m wide, with a displacement of 7,300 tonnes.
- It is equipped with state-of-the-art weapons and sensors such as

    - Surface-to-surface and surface-to-air missiles
    - Modern surveillance radar (to provide target data to weapon systems)
    - Indigenously-developed Rocket Launchers, Torpedo Launchers and the ASW helicopters.
- The warship has Total Atmospheric Control System (TACS) which offers protection and enables to fight under nuclear, biological and chemical warfare conditions.
- The warship is capable of anti-aircraft, anti-submarine and anti-surface operations.

Project 15 series

Project 15 Delhi Class	Project 15A Kolkata Class	Project 15B Visakhapatnam class
INS Delhi INS Mysore INS Mumbai	INS Kolkata INS Kochi INS Chennai	INS Visakhapatnam INS Mormugao INS Imphal INS Surat

INS Mormugao

Launched – 2016

Commenced sea trials - 2021 (60 years of Goa Liberation)

Commissioned - 2022 (a day before Goa Liberation day)

> ***'Operation Vijay'*** *was launched in 1961 to free Goa from Portuguese rule. On December 19th, 1961 Goa was liberated and the day is celebrated as Goa Liberation Day.*

References

1. The Hindu - INS Mormugao commissioned into Indian Navy
2. PIB - INS Mormugao commissioned by Defence Minister
3. Indian Express - Introducing INS Mormugao

Deepfake technology

China is rolling out new regulations to restrict the use of deep synthesis technology and curb disinformation.

- **Deep synthesis** – A term for the use of technologies, including deep learning and augmented reality, to generate text, images, audio and video to create virtual scenes.
- One of the most notorious applications of the technology is Deepfakes.
- **Deepfakes** - The term deepfake originated in 2017.
- They are a compilation of artificial images and audio put together with machine-learning algorithms.

- It is used to spread misinformation and replace a real person's appearance, voice, or both with similar artificial likenesses or voices.
- It can create people who do not exist and it can fake real people saying and doing things they did not say or do.



- **Usage** – Used for nefarious purposes like scams and hoaxes, celebrity pornography, election manipulation, social engineering, automated disinformation attacks, identity theft and financial fraud.
- **Issue** - Deepfakes are getting harder to detect with the advancement of technology.
- **Regulations** – Countries have started to formulate measures to stop the spread of disinformation through deepfakes.
- The European Union has Code of Practice which requires tech companies including Google, Meta, and Twitter to take measures in countering deepfakes and fake accounts on their platforms.
- The U.S. introduced the bipartisan Deepfake Task Force Act to assist the Department of Homeland Security (DHS) to counter deepfake technology.
- **India** - There are no legal rules in India against using deepfake technology.
- However, specific laws can be addressed for misusing the tech, which include Copyright Violation, Defamation and cyber felonies.

References

1. The Hindu - Deepfake Technology
2. Insider - What is a Deepfake?
3. DNA India - What is a 'Deepfake'?

Ashtadhyayi

An Indian PhD candidate at Cambridge University, claims to have solved a long-standing grammar problem in the Ashtadhyayi.

- The Ashtadhyayi is an eight-chapter ancient text written by the grammarian and scholar Daksiputra Panini towards the end of the 4th century BC.
- It deals on the phonetics, semantics (meanings), and syntax (arrangement of words) of classical Sanskrit.
- It treats the language as formulaic, rule-bound and engineered in a sense and set the standard for written and spoken Sanskrit.
- It also offers a 'language machine', where you can feed in the root and suffix of any Sanskrit word, and get grammatically correct words and sentences in return.
- To ensure this 'machine' was accurate, Panini wrote a set of 4,000 rules dictating its logic.
- **Commentaries** - Mahabhasya of Patanjali (2nd century BC) and the Kasika Vritti of Jayaditya and Vamana (7th century AD)

In a 2004, a stamp was issued by the Government of India honouring Panini, the 'father of linguistics'.

Daksiputra Panini

- Panini is hailed as the 'Father of Linguistics' in India.
- Panini (probably) lived in the 4th century BC, the age of the conquests of Alexander and the founding of the Mauryan Empire.
- He has also been dated to the 6th century BC, the age of The Buddha and Mahavira.
- He likely lived in Salatura (Gandhara), present day north-west Pakistan.
- He was probably associated with the great university at Taksasila, which also produced Kautilya and Charaka.

References

1. Indian Express - What was the problem in Panini's Ashtadhyayi?

Hooch

The death toll crossed 60 in hooch tragedy in the Saran district of Bihar, where alcohol is prohibited.

- Hooch is a commonly used term for poor quality alcohol.
- The word is derived from Hoochinoo, a native Alaskan tribe that was known to produce very strong liquor.
- Hooch is made in more crude settings without any quality control, unlike branded liquor which is produced in factories with sophisticated equipment.
- The incorrectly prepared hooch can kill the consumers.
- **Process hooch production**
    1. Fermentation – Heated yeast reacts with sugar (from grain, fruits, sugarcane, etc.) to ferment and produce a mixture containing alcohol.
    2. Distillation - The alcohol is physically separating from the rest of the mixture using evaporation and condensation.
    3. Repeated distillation is done in order to increase the alcohol content of the final product.
- **Adulterations** - With no temperature control, the process of distillation lacks the accuracy and the hooch is watered down.
- Various adulterants are added to increase the potency of the liquor.
- Some of the known ones include organic waste, battery acid, and industry grade methanol, all of which are highly toxic.

> ***Article 47 of the Indian Constitution*** *- The State shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health.*

References

1. Indian Express - Why can hooch be so deadly?



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