

# 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  $2^{nd}$  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

- $\circ~$  Surface-to-surface and surface-to-air missiles
- $\circ\,$  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 15B Visakhapatnam class
INS Delhi INS Mysore INS Mumbai	INS Koikata 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 19<sup>th</sup>, 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 machinelearning 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. <u>The Hindu Deepfake Technology</u>
- 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  $4^{th}$  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 4<sup>th</sup> 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. <u>Indian Express - What was the problem in Panini's Ashtadhyayi?</u>

#### 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?

