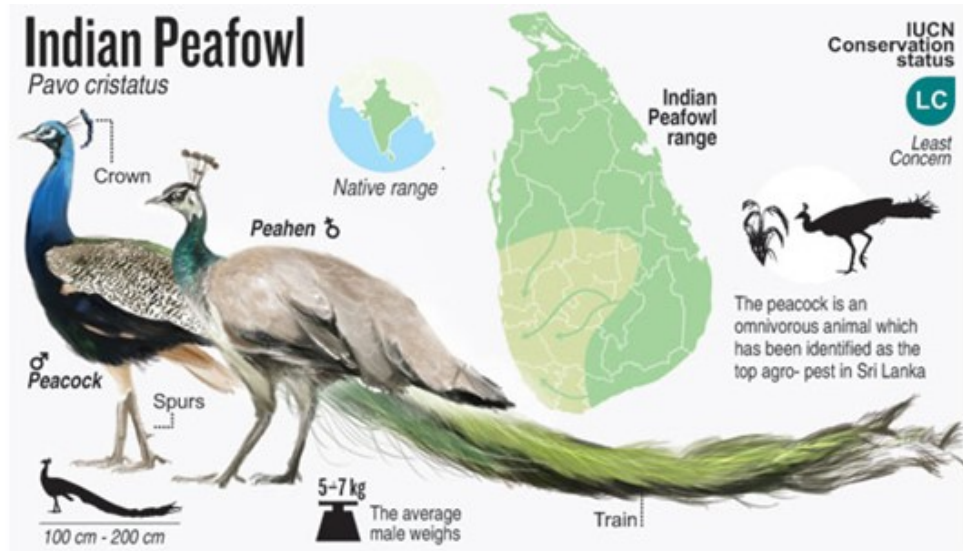


## UPSC Daily Current Affairs | Prelim Bits 23-11-2024

### Indian Peafowl

Recently, scientists from the Salim Ali Centre for Ornithology and Natural History (SACON) indicated an exponential rise in the population of peafowl in Tamil Nadu.

- Indian peafowl are a species in a group of birds called ***pheasants***.
- **Scientific Name** - Pavo cristatus.
- **Family** -Phasianidae.
- It is known as the ***common peafowl or blue peafowl***.
- **Sex - Male** - It is a Peacock.
  - **Appearance** - Blue-coloured head with a fan-shaped crest and is best known for its long train.
  - **Size** - Tail length of 100-230 cm to the end of a fully grown train.
- **Female** - It is a Peahen.
  - **Appearance** - Brown in color, with a white face and iridescent green lower neck, and ***lacks the elaborate train***.
  - **Size** - Tail length around 38 cm.
- Together, they are peafowl.
- **Habitat** - Scrub forests and forest edges, which prefer moist, dry deciduous and semi-arid habitats.
- **Distribution** - Indian peafowl are native to India and Sri Lanka, in South Asia.
- **Diet** - It is ***omnivorous*** and feeds on grass, seeds, flower buds, fruits, insects, small reptiles and snakes, and on a wide range of crops in cultivated areas.
- **Breeding** - It spread out over the entire year and is more common during the monsoon months of June to August.
- **Conservation Status**
  - **Wildlife Protection Act, 1972** - Schedule-I.
  - **CITES** - Appendix III.
  - **IUCN** - Least Concern.
- **Threats** - Pesticide poisoning, electrocution, and vehicular accidents were the top causes of peafowl mortality.



## Reference

[The Hindu| Indian Peafowl](#)

## **Raorchestes asakgrensis**

Recently, scientists from the Salim Ali Centre for Ornithology and Natural History (SACON) discovered a new frog species, *Raorchestes asakgrensis*.

- It is a newly discovered frog species in **Meghalaya**.
- **Family** - Rhacophoridae.
- It is also known as ***Asakgre bush frog***.
- **Nomenclature** - It is named after the *Eman Asakgre Community Reserve*, where it was discovered.
- It is a *nocturnal individual of bush frogs*, which are most active at night.
- **Features** - Found at an elevation of 174 meters in Eman Asakgre, this small arboreal frog is distinctive for its pointed snout and ***visible tympanum***.
- **Size - Male** - It measures about 20.49 mm in snout-vent length.
  - **Female** - It slightly has a larger snout at 22.8 mm.
- **Calls** - Males call from shrubs at dusk, perched 1.5 meters or higher, with calling activity peaking after the first monsoon rains.



- **Distribution** - Found at the sites of Garo Hills and Khasi Hills of Meghalaya, New Delhi and Bangladesh.
- **Other species - Raorchestes garo** - Found in Daribokgre Community Reserve, Meghalaya.
  - **Appearance** - It has orange-hued hind limbs and externally visible tympanum
- **Raorchestes kempiae** - Found in Mikadogre Community Reserve, Meghalaya.
  - **Appearance** - It has concealed tympanum and yellow-spotted ventral colour.
- **Conservation Status** - It has not yet been concluded.

#### Salim Ali Centre for Ornithology and Natural History (SACON)

- **Location** - Anaikatti in the Western Ghats, Coimbatore.
- **Established by** - The Ministry of Environment and Forest and Bombay Natural History Society.
- It is an ideal place for researchers to study more about the multiple ecosystems in this area.
- It has 402 species of flowering plants, 177 species of birds and 107 species of butterflies.

#### References

1. [The New Indian Express| Raorchestes asakgensis](#)
2. [Miami Herald| Raorchestes asakgensis](#)
3. [Hubnews| Raorchestes asakgensis](#)

#### Saiga Antelope

Recently, the International Union for Conservation of Nature (IUCN) Red List updated the status for the Saiga Antelope from critically endangered to near threatened category.

- It is an ancient species with a ***distinctive oversized nose***.
- **Scientific name** - Saiga tatarica.
- It is a medium-sized ***hoofed mammal*** that lives in herds in treeless steppe country.
- **Unique Feature** - Swollen snout with ***downward-directed nostrils***.
- This peculiar bulbous nose helps it endure the harsh conditions and extreme seasonal

temperature fluctuations of its native habitat.

- It act as air filters, keeping out dust while cooling the blood during the scorching, dry summers.
- It also functions like radiators, warming the frigid air before reaches the lungs during winter.
- The saiga also adapts to the seasons with a dense winter coat, which it sheds as the temperatures rise.



- **Native** - Steppes and semi-arid regions of Central Asia, has roamed the Earth since the Ice Age.
- **Distribution** - Kazakhstan, Mongolia, the Russian Federation, Turkmenistan, and Uzbekistan.
- **Diet** - Graze in semi-deserts, steppes, grasslands, and possibly open woodlands, eating several species of plants, including some that are poisonous to other animals.
- **Breeding** - Females give birth in late April and May.
- **Conservation Status**
  - **IUCN** - Near Threatened.
  - **CITES** - Appendix II.
- **Threats** - Climatic variability, Hunting, poaching and blood diseases.

## References

1. [Times of India| Saiga Antelope](#)
2. [Britannica| Saiga Antelope](#)

## WOH G64

*European Southern Observatory's Very Large Telescope Interferometer (ESO's VLTI) recently observed WOH G64, which revealed some crucial details about its activity and surrounding layers.*

- The WOH 64 is a giant star that dwells in the Large Magellanic Cloud, a dwarf or satellite galaxy that orbits Milky Way.
- **Discovered by** - Bengt Westerlunds, Olander, and Hedin in the 1970s.
- Incidentally, the WOH in its name is the acronym for the names of its three discoverers.
- The star is believed to be around ***1,60,000 light years away*** from Earth.
- **Size** - The star is classified as a ***red supergiant*** owing to its size, which is roughly 2,000 times that of the Sun.
- In 2005 and 2007, the team reportedly used European Southern Observatory's Very Large Telescope Interferometer (ESO's VLTI) in the Atacama Desert of Chile to ascertain the features of the star.
- To get an accurate image, the team had to wait for the development of GRAVITY, a set of VLTI's second-generation instruments.
- Red super-giants like WOH G64 shed their outer layers, which are mainly gas and dust, in the final stages of their lifecycles.
- This process can continue for thousands of years.
- This star is one of the most extreme of its kind, and any drastic change may bring it closer to an explosive end.
- According to the team, the materials that are being shed could be responsible for the dimming of the star and the unusual shape of the dust cocoon around it.

## Reference

[Indian Express | WOH G64](#)

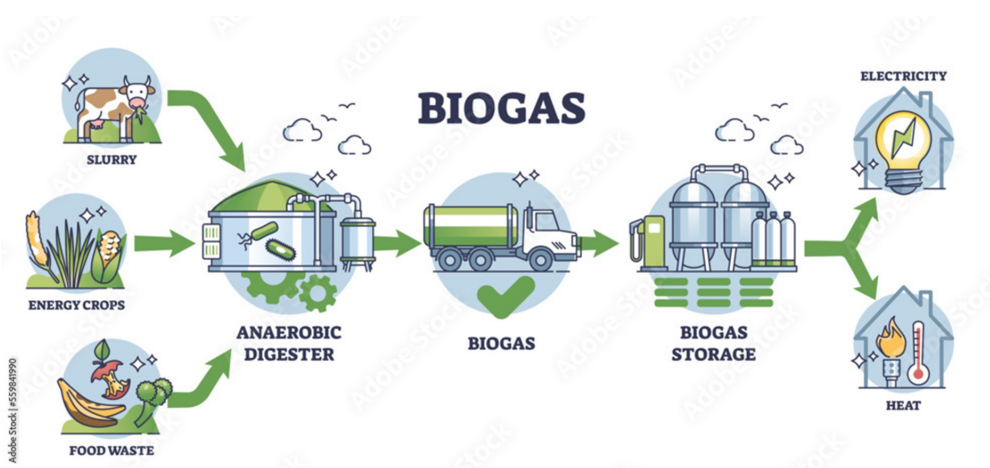
## Compressed Biogas (CBG) Plant

*Recently, the Prime Minister inaugurated new 100 tons per day cattle dung based Compressed Bio-Gas (CBG) plant in Gwalior.*

- **Compressed Biogas (CBG)** - It is produced by ***anaerobic digestion of biomass and waste sources*** like agricultural residue, cattle dung, sugarcane press mud, municipal solid waste, sewage treatment plant waste, etc.
- **Consists** - Mainly methane more than 90% and other gasses like carbon dioxide less than 4%.
- **Compressed Biogas (CBG) Plant** - It is India's first modern, self-sufficient gaushala that houses a state-of-the-art Compressed Biogas (CBG) plant.
- It is the ***first CBG plant in Madhya Pradesh***.
- **Vision** - Waste to Wealth initiative.
- **Ministry** - Ministry of Housing & Urban Affairs
- **Location** - Adarsh Gaushala, Laltipara, Gwalior.
- It is the ***Gwalior's largest cowshed over 10,000 cattle live here***.
- **Operated by** - Gwalior Municipal Corporation.
- **Plant Mechanism** - The biogas will be prepared from cattle dung and garbage such as vegetable and fruit waste materials collected from mandis and homes.
- It transforms cow dung, an often-underutilized resource, into Bio CNG and organic

manure.

- It will generate 2 tons of compressed Biogas daily from 100 tons of cattle dung.
- It produces 10-15 tons of dry bio-manure daily, a valuable by-product for organic farming and also produces 2-3 tons of Bio-CNG daily.
- It promoting sustainable practices while reducing carbon emissions.
- **Significance** - It providing a cleaner, eco-friendly alternative to fossil fuels and helping reduce carbon emissions.
- It helps curb carbon emissions, a potent greenhouse gas, making a valuable contribution to climate change mitigation.
- It also creates employment opportunities for locals, boosting the economy while promoting skills in green energy and sustainable practices.



## Reference

[PIB| Compressed Biogas \(CBG\) Plant](#)