

## Prelim Bits 11-03-2024 | UPSC Daily Current Affairs

### Super Emitter Events

Scientists have revealed that a drilling incident took place in Kazakhstan in 2023 was possibly the 2<sup>nd</sup> biggest man-made methane leak ever in history.

- **Incident** - The drilling incident took place at an exploration well in the Mangistau region of southwestern Kazakhstan in 2023.



- It caused a fire that raged and released **127,000 tonnes** of methane into the atmosphere.

*Super emitter' events refer to instances where a site gushes significant amounts of methane into the atmosphere.*

### Methane

- Methane is the **2<sup>nd</sup> most abundant greenhouse gas** in the atmosphere, after carbon dioxide (CO<sub>2</sub>).

Greenhouse Gas	GWP	Lifetime (y)
Carbon Dioxide (CO <sub>2</sub> )	1	variable
Methane (CH <sub>4</sub> )	21	12.2
Nitrous Oxide (NO <sub>2</sub> )	206	120
Hydrofluorocarbons (HFC)	140-11700	1.5-264
Perfluorocarbons (PFC)	6500-9200	3200-50000
Sulfur Hexafluoride (SF <sub>6</sub> )	23000	3200
Chlorofluorocarbons (CFC)	12000-16000	

- **Potential** - It is a potent Green House Gas (GHG) which traps heat in the atmosphere and adds to global warming.
- **Life time** - Methane has a much *shorter atmospheric lifetime* (12 years) but it is 80 times more potent greenhouse gas than CO<sub>2</sub> over a period of 20 years.
- Methane is the primary contributor to the formation of ground-level ozone, a hazardous air pollutant.

Sources of Methane	
Natural Sources	Man-made Sources
Contribute to 40% of methane emissions	Contribute to 60% of methane emissions
<b>Examples</b> <ul style="list-style-type: none"> <li>• Wetlands</li> <li>• Oceans</li> <li>• Cows' digestive systems</li> <li>• Digestive processes of termites</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>• Landfills &amp; Coal mining</li> <li>• Agricultural activities</li> <li>• Wastewater treatment</li> <li>• Certain industrial processes</li> <li>• Oil and natural gas systems (largest)</li> </ul>

*Global Methane Pledge* was signed by more than 150 countries in 2021, to cut their collective methane emissions by at least 30% from 2020 levels by 2030.

## Reference

1. [The Indian Express | Super Emitter Events](#)

## Asiatic Lions

The International Union for Conservation of Nature (IUCN) recently recategorized the Asiatic lion status as **vulnerable** from endangered indicating a positive shift in its conservation status.

## Nomenclature change

- Due to genetic similarity between Central African, West African and Asiatic Lions, IUCN has clubbed all three under ***Panthera leo leo***.
- Earlier, the Asiatic lions were classified as *Panthera leo persica*.

## Asiatic Lions

- **About** - The Asiatic lion is a subspecies of lion, slightly smaller than African lions.
- They are also known as ***Persian lions or Indian lions***.
- **Scientific Name** - *Panthera leo leo*.
- **Family** - Felidae.
- **Distribution** - They used to range from Turkey, across Asia, to eastern India.
- **Habitat** - At present ***Gir National Park, Gujarat*** is the only abode of the Asiatic lion.
- They are one of the 5 [big cats](#) found in India and are better known as 'the king of beasts'.

Conservation Status	
IUCN	Vulnerable
WPA	Schedule I of Wildlife (Protection) Act 1972
CITES	Appendix I

## Project Lion

- The Project Lion envisages landscape ecology-based conservation of the Asiatic Lion in Gujarat by integrating conservation and eco-development.
- The Project is being implemented in the ***Gir landscape in Gujarat*** which is the last home of the Asiatic lion.
- **Implementation** - The State Government of Gujarat and other stakeholders like Central Zoo Authority.

## References

1. [Times of India | Lions 19 Times Safer In Gujarat Than In Africa](#)
2. [WWF India | Asiatic lion](#)
3. [National Geographic | Asiatic Lion](#)

## Lokpal

*Former Supreme Court Judge Ajay Manikrao Khanwilkar was administered the oath of office as the Lokpal chairperson by the President recently.*

- The Lokpal is an ***independent statutory body***, or body of ombudsman, that has jurisdiction over the ***central government to investigate allegations of corruption against public officials*** including the Prime Minister.

*Ombudsman is a swedish term which means a person who is authorised to act for someone else.*

- The Lokpal was recommended by the Administrative Reforms Commission (ARC) of India, established under the ***Lokpal and Lokayuktas Act 2013***.

LokPal	Lokayukta
It has jurisdiction to investigate public officials in Union level	It has jurisdiction to investigate public officials in state level.

- **Appointment** - Lokpal would be appointed by the ***President*** after consultation with the *Chief Justice of India*, the *Speaker of Lok Sabha* and the *Chairman of the Rajya Sabha*.
- **Members** - The Lokpal to consist of a Chairperson with a maximum of **8 members** of which ***50% shall be judicial members***.
- **Power** - The Lokpal will have the power of superintendence and direction over any investigating agency, including the CBI, for cases referred to them by the Lokpal.
- **Report** - The Lokpal is required to present ***annually to the President*** a report on the work done by it, which is caused to be laid in ***both the Houses*** of the Parliament.

## Reference

1. [NDTV | AM Khanwilkar Administered Oath As Lokpal Chairperson](#)

## 2. [LokPal | LokPal](#)

### Sela Tunnel

*Prime Minister Narendra Modi recently inaugurated the world's longest twin-lane tunnel 'Sela Tunnel' in Arunachal Pradesh.*

- The Sela Tunnel is an all-weather connectivity tunnel.
- It connects **Guwahati to the strategic Tawang sector bordering china** across Sela Pass.
- It aids faster military movement to the Line of Actual Control (LAC).
- It is built by the **Border Roads Organisation (BRO)**.
- The project comprises **2 tunnels**
  - 1<sup>st</sup> tunnel is a single-tube tunnel,
  - 2<sup>nd</sup> tunnel serves as an emergency escape route.
- The tunnel has been designed to reduce the traffic density with achieving a maximum speed of vehicles at 80 kmph.

*Sela Pass is a high-altitude pass connecting Tawang with the rest of India.*



### References

1. [Hindustan Times | Sela Tunnel](#)
2. [India Today | Sela Tunnel](#)
3. [Indian Express | Sela Tunnel](#)

### Statue of Valour

*Prime Minister recently unveiled a 125-foot bronze statue of 'Ahom general' Lachit Borphukan in Assam's Jorhat.*

## Lachit Borphukan

- Lachit Borphukan was a legendary army commander of the Ahom kingdom (1228-1826).
- Borphukan ascended through the military hierarchy to attain the highest leadership position, having served in esteemed roles such as
  - **Ghora Barua** - Overseeing the royal horses,
  - **Dolaksharia Barua** - Commanding the royal household guards.
  - **Soladhara Barua** - He later became the Commander of the Simulgarh Fort and appointed as the Chief of the Ahom army by King Chakradhwaj, following his tenure as the monarch's Private Secretary, known as ***Soladhara Barua***.
- **Battles** - In 1669, Aurangzeb dispatched the ***Rajput Raja Ram Singh I*** to recapture territories won back by the Ahoms in previous battles.
- **Battle of Alaboi** - The ***Battle of Alaboi*** was fought the Alaboi Hills in North Guwahati between the Ahoms and Mughals in which the Ahoms suffered severe reverses.
- **Battle of Saraighat** - In the ***Battle of Saraighat (Naval battle)*** in 1671 on the River Brahmaputra, he thwarted an invasion by the Mughal Forces under the command of Ramsingh I.
- Employing guerrilla tactics and strategic terrain selection, he guided the Ahom army to a conclusive triumph.
- He was buried at the 'maidam' burial grounds for Ahom royals and nobles at Hollongapar, after passing away a year after the battle at the age of 49 due to illness.
- **Lachit Diwas** - It is celebrated every year on 24<sup>th</sup> November Assam to commemorate the heroism of Lachit Borphukan and the victory of the Assamese army at the Battle of Saraighat.

## References

1. [The Hindu Business Line | Statue of Valour](#)
2. [Indian Express | Lachit Borphukan](#)
3. [NDTV | Lachit Borphukan](#)
4. [India TV News | Lachit Borphukan](#)