

CORBET TIGER RESERVE

The Supreme Court recently banned all construction activities in the core areas of tiger reserves national parks and wildlife sanctuaries.



Why in news?

- A Supreme court-appointed panel noticed that illegal constructions for the establishment of a tiger safari were being done within the buffer area of Corbett Tiger Reserve in Uttarakhand.

Key facts about the Corbet Tiger Reserve

- It is located in the Nainital district of Uttarakhand. This reserve encompasses the Patli Dun valley.
- The **Ramganga, Sonanadi, Palain and Mandal, and Kosi** rivers form the prominent hydrological resource for the Corbett.
- The core area of the reserve contains **the Corbett National Park and the Sonanadi Wildlife Sanctuary** is part of its buffer area.
- **Flora:** The trees which contribute to the Flora of Corbett consist of evergreen Sal and its combined trees, the Sheesham, and the Kanju found extensively on the ridges.
- **Fauna:** Tiger, Leopard, Elephant, Hog deer, spotted deer, Samber etc.

BIO-HYBRID ROBOT

Recently, scientists at Tel Aviv University developed a bio-hybrid robot.



Why in news?

- A new sniffing robot equipped with a **biological sensor** that uses the antennae of locusts could help advance disease diagnosis and improve security checks.
- The robot uses the antennae of a locust to diagnose disease and improve security checks.

- Locusts smell with their antennae. The scientists will use the locust's antennae to hone the computer's scent detection abilities.

Key facts about the Bio-hybrid robot

- Bio-hybrid robots are those that combine **biological and artificial components**, such as electronics and mechanics.
- Using biological components can provide benefits such as increased dexterity, adaptability, and energy efficiency.
- These rebuilt biological functions in mechanical systems will give a better **understanding of biological designs**.

WHAT IS THE QUICK REACTION SURFACE TO AIR MISSILE (QRSAM)?

The indigenous Quick Reaction Surface to Air Missile (QRSAM) being developed by the Defence Research and Development Organisation (DRDO) is set to be tested again with some changes suggested by the Army.

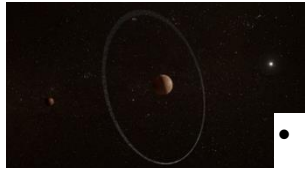


About Quick Reaction Surface to Air Missile (QRSAM):

- QRSAM is a **Short Range Surface to Air Missile** system designed to **protect moving armoured columns from aerial attacks**.
- It was designed and developed by the **Defence Research and Development Organisation (DRDO)**.
- The entire weapon system is **configured on highly mobile platforms** and is capable of **providing air defence on the move**.
- **Range: 30 km**
- It is **propelled by Single Stage Solid Rocket Motor**.
- It can **engage 6 targets simultaneously**.

QUAOAR

Astronomers have recently spotted a ring around a Pluto-sized dwarf planet called Quaoar in the outer reaches of the solar system.



Key facts about Quaoar:

- Quaoar is a **dwarf planet** that's located in the **Kuiper Belt** at the solar system's edge.
- It is about **697 miles wide** (1,121 kilometers).
- It is roughly **one-twelfth the diameter of Earth**, one-third the diameter of the Moon, and **half the size of Pluto**.
- Quaoar is **greater in volume than all known asteroids combined**.
- Quaoar has its **own moon**, the 100-mile-wide (160 km) **Weywot**.
- Its surface is **moderately red** and **composed of low-density ices mixed with rock**.
- It takes about **288 years** for Quaoar to go **once around the sun** in a roughly **circular orbit**.

What is Kuiper Belt?

- Kuiper belt, also called the **Edgeworth-Kuiper belt**, is a **flat ring of small icy bodies** that revolve around the Sun beyond the orbit of the planet Neptune.
- There are millions of these **icy objects**, collectively referred to as **Kuiper Belt objects (KBOs)** or **trans-Neptunian objects (TNOs)**, in this belt.
- The Kuiper Belt is a **region of leftovers from the solar system's early history**.
- It is thought to be the **source of most of the observed short-period comets**, particularly those that orbit the Sun in less than 20 years.

WHAT IS THE VIKAS ENGINE?

The Indian Space Research Organisation (ISRO) has successfully tested the throttling of Vikas, its workhorse launch-vehicle engine.

About Vikas Engine:



- VIKAS (an acronym for Vikram Ambalal Sarabhai) engine is a family of **liquid-fuelled rocket engines** conceptualized and designed by the **Liquid Propulsion Systems Centre** of ISRO in the **1970s**.
- The **early productions** involved imported **French components**, which were later replaced by **domestically produced equivalents**.
- These engines are deployed for ISRO's **Polar Satellite Launch Vehicle (PSLV)** and the **Geosynchronous Satellite Launch Vehicle (GSLV)** series of expendable launch vehicles for space launch use.
- The **fuel load** of the Vikas engine is **40 tonnes** for the PSLV, **GSLV Mark I and II**, and **55 tonnes** for the **GSLV Mark III**.

Liquid Propulsion Systems Centre (LPSC):

- The LPSC is a **research and development** center functioning **under ISRO**.
- It is the center for the **design, development**, and realization of **liquid propulsion stages** for **ISRO's Launch Vehicles**.
- LPSC activities and facilities are spread across its **two campuses**: LPSC, **Valiamala, Thiruvananthapuram**, and LPSC, **Bengaluru, Karnataka**.

WHAT IS SKYE UTM?

Union Minister for Road Transport and Highways recently unveiled Skye UTM (Unmanned Traffic Management), touted as the world's most cutting-edge unmanned traffic management system.



Skye UTM is a **Cloud-based aerial traffic management system** that **integrates unmanned air traffic with manned aviation airspace**.

- **Purpose:** It has been built towards providing **situational awareness, autonomous navigation, risk assessment, and traffic management** to all drone/other aerial mobility operators across the airspace.
- **Operation:**



CROSS & CLIMB ROHTAK



- It captures more than **255+** parameters of **Unmanned Aerial Vehicle (UAV)** movements and stores them into its 'Blackbox,' a published systematic description of the entire flight.
- The platform offers the **first 3-Dimensional view of the drone airspace** along with operations and regulations **mapping servers** which provide the latest airspace status, verified paths and **display real-time UAV movements**.
- It **connects and communicates with all types of drones**, from survey drones to delivery drones to aerial taxis.
- It can **handle more than 4000 flights per hour**.
- The platform offers **regulatory access to Air Traffic Controllers and other regulatory authorities**, allowing them to have real-time drone traffic movement information, pilot information, and other necessary data for evaluation and coordination.

[EARTHQUAKE PREPAREDNESS: HOW SAFE IS DELHI IN THE EVENT OF AN EARTHQUAKE?](#)

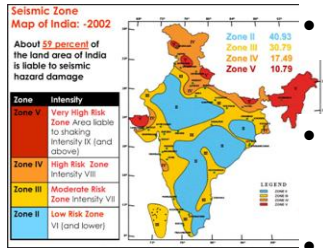
What's in News?

- After the Turkey earthquake, there is the need to review earthquake preparedness in vulnerable regions in India like Delhi, though a major earthquake may not have affected the city in over 200 years.
- According to the seismologists, it is a long time considering that the Indian (tectonic) plate is colliding with the Eurasian plate and we have plate boundary and Himalayas.

Why is Delhi Vulnerable?

- The country is classified into **four seismic zones**, zone-V being the most active seismically and zone-II being the least active.
 - Delhi lies in **seismic zone-IV** going by seismic zonation map of the Bureau of Indian Standards (BIS).
- The problem with Delhi is that it is in the **Gangetic plain and is built on alluvium**.

- As energy passes through soft alluvium, it gets amplified. **For example**, the Bhuj earthquake resulted in the collapse of buildings in Ahmedabad since it was located in the Sabarmati basin.



What Steps are being Taken?

- **The Unified Building Bye-Laws for Delhi** mention the BIS standards for structural safety and earthquake protection.
- **The seismic microzonation of Delhi** was done by the National Centre for Seismology, Ministry of Earth Sciences, and released in 2016 .
- **The National Disaster Management Authority (NDMA)** said a national mitigation programme on earthquakes is being drafted.
- **Seismic Vulnerability Assessment of Buildings Types in India:** The work for preparation of catalogue of different building types in various parts of India and development of vulnerability functions has been awarded to IIT Bombay.
- **Preparation of Upgraded earthquake Hazards Maps:** NDMA has undertaken a project through Building Materials Technology Promotion Council (BMTPC) for upgradation of Earthquake Hazards Maps for the country.

What is the National Earthquake Risk Mitigation Project (Preparatory Phase)?

- NERMP has been approved as a **Centrally Sponsored Plan Scheme** with an outlay of Rs.24.87 crore, to be implemented **within a period of two years (2013-15)**.
- The project is to be implemented by **NDMA** in coordination with the State Governments/UT that lie in seismic **zones IV and V** in the country.
- **The major components of NERMP:**
 - Adoption, enforcement and updation of Techno-legal Regime
 - Institutional Strengthening which involves Capacity Building through education and research in colleges and institutes
 - Public Awareness and Sensitization at National level and all vulnerable States, etc.

What more Needs to be Done?

- The government needs to invest in **educating people and checking which buildings are vulnerable.**
 - Heritage structures will have to be
 - Follow the 2002 BIS standards for earthquake resistant design of structures.
-

WHAT ARE ‘UNPARLIAMENTARY WORDS’ UNFIT FOR THE HOUSE, AND HOW ARE THEY COMPILED?

Why in News?

- Portions of Congress leader Rahul Gandhi’s speech delivered in Lok Sabha on February 7 have been expunged — or removed — from the records of Parliament by the orders of the Speaker.
- The expunging of certain words, sentences, or portions of a speech from the records is fairly routine procedure, and is carried out in accordance with laid down rules.

What are the rules on expunging from the record?

- Under **Article 105(2)** of the Constitution, “no Member of Parliament shall be liable to any proceedings in any court in respect of anything said...in Parliament or any committee thereof”.
 - However, MPs don’t enjoy the freedom to say whatever they want inside the House.
- The speech of MPs is subject to the discipline of the **Rules of Parliament, “good sense” of its Members, and the control of proceedings by the Speaker.**
- These checks ensure that MPs cannot use “defamatory or indecent or undignified or unparliamentary words” inside the House.
- Rule 380 (“**Expunction**”) of the Rules of Procedure and Conduct of Business in Lok Sabha says –
 - “If the Speaker is of opinion that words have been used in debate which are defamatory or indecent or unparliamentary or undignified, the Speaker may, while exercising discretion order that such words be expunged from the proceedings of the House.”
- Rule 381 says –

- “The portion of the proceedings of the House so expunged shall be marked by asterisks and an explanatory footnote shall be inserted in the proceedings as follows: ‘Expunged as ordered by the Chair’.”

What are considered as “unparliamentary” expressions?

- Over the years, a huge number of words, both in English and other Indian languages, have been found to be “unparliamentary” by the Presiding Officers.
- These unparliamentary expressions are kept out of Parliament’s records.
- The Lok Sabha Secretariat has brought out a bulky volume of ‘Unparliamentary Expressions’.
- This book contains words or expressions that would likely be considered rude or offensive in most cultures. But it also contains content that would appear to be fairly harmless and innocuous.
- **State legislatures too are guided mainly by the same book of unparliamentary expressions.**

How is the decision to expunge a word (or portion of a speech) taken?

- When a member uses a word that could be unparliamentary, the head of the reporting section sends it to the Presiding Officer citing relevant rules and precedence with a recommendation to expunge them.
- **The Presiding Officer has the discretion under Rule 380 to expunge the word or usage.**
- Once the Presiding Officer expunges the word or usage, it comes back to the reporting section which removes the word from the records and mentions in the proceedings as “expunged as ordered by the chair”.

What happens after a word has been expunged?

- Expunged portions of the proceedings **cease to exist in the records of Parliament**, and they can no longer be reported by media houses.