

Air Quality Index (AQI)

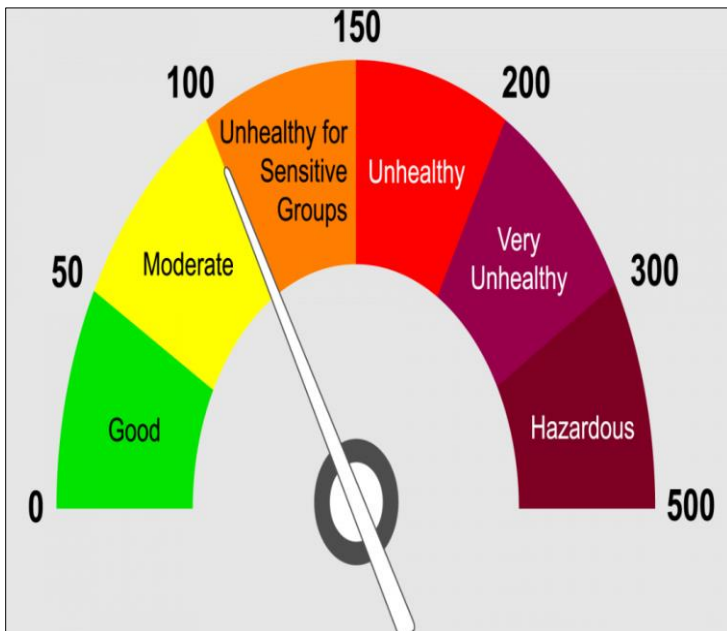
❖ Context

- Over the past few days, as the problem of **air pollution in Delhi-NCR** and surrounding areas has made its annual November-December appearance in policy debates and public discussion, the **Air Quality Index (AQI)** has been mentioned repeatedly.



❖ About AQI

- The **colour-coded AQI index** was **launched in India** in 2014.



- It has been **developed by the CPCB** in consultation with **IIT-Kanpur** and an **expert group** comprising medical and air-quality professionals.
- It is a **measure of how air pollution affects one's health** within a short time period.

- It **helps the public and the government understand the condition of the air** and what subsequent measures are to be taken to combat the situation, based on its severity.
- The Environmental Protection Agency (EPA) calculates the **AQI for 8 pollutants** : PM10, PM2.5, NO2, SO2, CO, O3 (Ozone), NH3 (Ammonia), and Pb (Lead)

• Air Quality Index Categories :

- **Good (0–50)** - Minimal Impact.
- **Satisfactory (51–100)** - May cause minor breathing difficulties in sensitive people.
- **Moderately polluted (101–200)** - May cause breathing difficulties in people with lung disease like asthma, and discomfort to people with heart disease, children and older adults.
- **Poor (201–300)** - May cause breathing difficulties in people on prolonged exposure, and discomfort to people with heart disease
- **Very Poor (301–400)** - May cause respiratory illness in people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases.
- **Severe (401-500)** - May cause respiratory issues in healthy people, and serious health issues in people with lung/heart disease. Difficulties may be experienced even during light physical activity.

Employees' Pension (Amendment) Scheme

❖ Context

- The Supreme Court upheld the **Employees' Pension (Amendment) Scheme, 2014** of the Employees' Provident Fund Organisation as "legal and valid" while reading down certain provisions.



❖ About the Scheme

- The **Employee's Pension Scheme (EPS)** was introduced in the year **1995** with the main aim of helping employees in the organised sector.
- All employees who are eligible for the Employees Provident Fund (EPF) scheme will also be eligible for EPS.
- The Employees' Provident Fund Organisation (EPFO) administers the system.
- It ensures that **employees receive a pension after they reach the age of 58**.
- The scheme's benefits are available to both existing and new EPF members.
- Both the employee and the employer contribute 12% of the employee's basic salary and Dearness Allowance (DA) to the EPF.
- While the employee's entire part goes to EPF, the employer's contribution goes to EPS at a rate of 8.33 percent.
- As per EPS rules, if an employee has worked for six months or more, his or her service tenure is counted as one year.
- It is governed under the Employees' Provident Funds and Miscellaneous Provisions Act, 1952.

- At that point of time, **maximum pensionable salary was Rs 5,000 per month** which was later raised to Rs 6,500. The **EPS amendment of August 22, 2014** had **raised the pensionable salary cap to Rs 15,000 a month** from Rs 6,500 a month.
- The Supreme Court used its extraordinary powers under **Article 142**, while issuing the judgement.

Extending the pension scheme

Some changes regarding EPS after the Supreme Court judgment

BEFORE:

- Pension coverage, extended in 2014 to employees drawing salary more than ₹15,000 per month, subject to

i) members contributing at the rate of 1.16% on salary exceeding ₹15,000 per month

ii) Employees should have exercised option within six months from September 1, 2014

AFTER:

- Requirement of additional contribution of 1.16% deemed incorrect. Implementation stayed for six months

▪ Entitlement not limited to employees who had already exercised an option under un-amended EPS. If an employer and employee jointly opt for enhanced pension coverage – if they had not done so prior to the 2014 amendment – they can do so by four months from today



Distinct Institutions

❖ Context

- The University Grants Commission invited stakeholder comments on its draft **UGC (Institutions Deemed to be Universities) Regulations, 2022**, which will replace the 2019 regulations.



❖ Key Highlights

- The draft regulations create a new category of institutions, known as “**distinct institutions**”.
- These are institutions with focus on :
 - Teaching and/or research in unique discipline(s) or
 - Addressing the strategic needs of the country or
 - Engaged in the preservation of Indian cultural heritage or
 - Preservation of environment or
 - Dedicated to skill development or
 - Dedicated to sports or languages or any other discipline(s).

- These institutions will be **exempted from eligibility criteria** laid down for other higher education institutions to receive “Deemed to be University” status.
- These include :
 - Valid accreditation by the National Assessment and Accreditation Council with at least 3.01 CGPA for three consecutive cycles, or
 - Ranking among top 50 or top 100 given by the National Institute Ranking Framework , or
 - Comply with the requirement of a teacher-student ratio of 1:20.
- The draft regulations also propose that the **UGC**, and not the Ministry of Education, **will now be the authority** for granting permission to a Deemed to be University to set up an **off-campus centre**.

UNESCO World Heritage Glaciers

❖ Context

- New UNESCO data highlight the accelerated melting of glaciers in World Heritage sites.



❖ World Heritage Sites Glaciers

- **50 UNESCO World Heritage sites** are home to glaciers.
- A total of **18,600 glaciers** have been identified in these 50 sites, covering around **10% of the Earth's total glacierized area**.

❖ Key Findings

- **Glaciers in a third of the 50 World Heritage sites are condemned to disappear by 2050**, regardless of efforts to limit temperature increases.

❖ Examples of Endangered Glaciers by Region

- **Africa** : Kilimanjaro National Park and Mount Kenya.
- **Asia** : **Three Parallel Rivers of Yunnan Protected Areas** (China) - **highest mass loss relative to 2000 (57.2%)** and also **the fastest melting glacier on the List**, Western Tien-Shan (Kazakhstan, Kyrgyzstan, Uzbekistan).
- **Europe**: Pyrenees Mont Perdu (France, Spain), the Dolomites (Italy).
- **Latin America** : *Los Alerces National Park (Argentina)* – **#2 highest mass loss relative to 2000 (45.6%)**, Huascarán National Park (Peru).
- **North America** : Yellowstone National Park (USA), Yosemite National Park (USA), Waterton Glacier International Peace Park (Canada, United States of America).
- **Oceania**: Te Wahipounamu - South West New Zealand (New Zealand).

Mirabehn

❖ Context

- A petition has been filed before the Bombay High Court seeking permission, under the Copyright Act, to translate a book - ‘**The Spirit's Pilgrimage**’ by Mahatma Gandhi's disciple Madeleine Slade from English to Hindi.

Key Highlights

- The book is an **autobiography of Mirabehn**, by the name of **Madeleine Slade**, who was the daughter of an English aristocratic family.
- Her aristocratic existence took a life-changing turn after she read **French novelist and essayist Romain Rolland's 1924 biography of Gandhi**.
- Slade reached India in **November 1925** and made India her home for the next 34 years.



- She became one of Gandhi's confidants and an ardent champion internationally for India's freedom from British rule.
- She was arrested multiple times, including during a period of civil disobedience in 1932–33 & in 1942.
- Following Gandhi's assassination in 1948, she stayed in India for 11 years, opened **Gopal Ashram in Bhilangana valley in Uttarakhand** to work on environmental issues.
- She left India in 1959 and died in Vienna in 1982. She was conferred with **Padma Vibhushan** in 1981.

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News in Between the Lines

“Net Zero Carbon Emission” Tourist Destination



❖ Context

- The UP government plans to make **Mathura-Vrindavan** a “net zero carbon emission” tourist destination by **2041**.

❖ Key Highlights

- To attain a net zero carbon emission status, greenhouse gas emissions must be reduced to as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere, by oceans and forests for instance.
- The idea is to form small circuits called **Parikrama Paths** which the pilgrim can undertake either on foot or using electric vehicles.
- The tourist vehicles will be banned from the entire Braj region, which includes famous pilgrim centres such as Vrindavan and Krishna Janmabhoomi.
- All 252 water bodies and 24 forests in the area will also be revived.

Bellairsia Gracilis



❖ Context

- A study in Nature finds a near-complete skeleton of an early reptile from the **Middle Jurassic period of Scotland**.

❖ Key Highlights

- The skeleton is of **Bellairsia gracilis**, a primitive squamate.
- **Squamates** are a group of reptiles that includes more than 10,000 living species descended from a shared common ancestor that lived 240 MYA.
- The fossil may improve our understanding of the anatomical transformations that led to the establishment of the body plan of reptiles such as modern lizards.

Ghaem 100

❖ Context

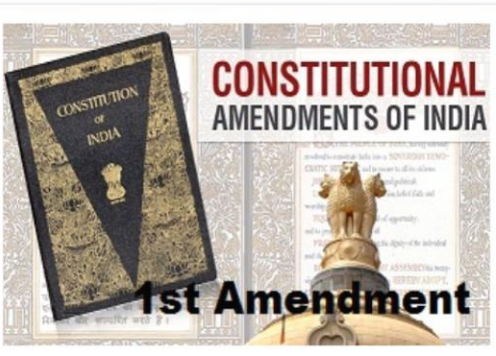
- Iran’s Revolutionary Guards tested a new satellite-carrying rocket.

❖ Key Highlights

- It is **Iran’s first three-stage launch vehicle**.
- It will be able to place satellites weighing 80 kg in an orbit of 500 km.



First Amendment to the Constitution



❖ Context

- Recently, The **Supreme Court** agreed to examine a plea challenging the expansion of **restrictions to the fundamental right to freedom of speech and expression** that was made by the **first amendment to the Constitution**.

❖ Key Highlights

- The petitioner argued that the amendment damages the basic structure doctrine.
- **The Constitution (First Amendment) Bill 1951** sought to make several consequential changes with regard to restrictions on the right to free speech.
 - **Article 19(1)(a)** in Part III of the Constitution guarantees the fundamental right to freedom of speech and expression.
 - This freedom is not absolute or unfettered. It is followed by **Article 19(2), which lists exceptions or “reasonable restrictions” on that right**.
 - First, The amendment introduced the qualification “reasonable” to the restrictions that Article 19(2) imposed.
 - Second, the amendment introduced into the **Constitution the specific terms “public order” and “incitement to an offence”**.

Malabar Exercise



❖ Context

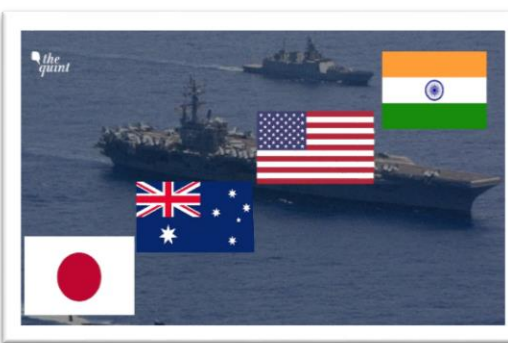
- This year marks **30 years of the Malabar exercise**.

❖ Key Highlights

- **Japan will host the 2022 edition** of the Malabar naval exercise in the second week of November.
- Navies of India, Japan, the US & Australia are going to participate in the exercise.
- The Malabar exercise will **witness high-tempo drills** between the participating platforms in multiple domains.
- Complex surface, sub-surface and air operations, including live firing drills, are scheduled during the exercise

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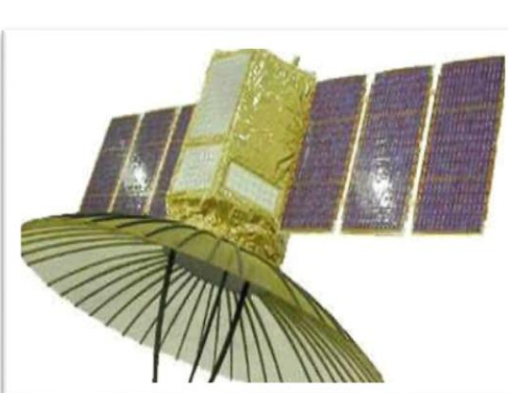




❖ About Malabar Exercise

- Malabar is a **multilateral war-gaming naval exercise** that was started in **1992**.
- It began as a bilateral exercise between the navies of India and the United States.
- Two more editions of the exercise were carried out in 1995 and 1996, after which there was a break until 2002 in the aftermath of India's nuclear tests.
- **From 2002 onward, the exercise has been conducted every year.**
- Japan and Australia first participated in 2007, and since 2014, India, the US and Japan have participated in the exercise every year.

RISAT-2 Satellite



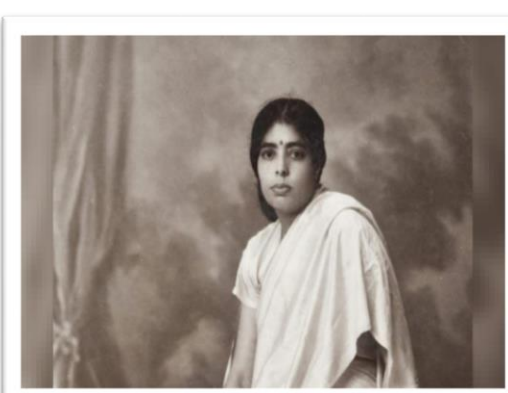
❖ Context

- Recently, **ISRO's RISAT-2 satellite**, has made an **uncontrolled re-entry** into the Earth's atmosphere.

❖ About RISAT-2 Satellite

- Risat-2 was built more quickly following the **2008 Mumbai terror attacks** due to delay with the indigenously developed C-band for Risat-1 satellite.
- RISAT-2 was **launched by the PSLV-C12 launch vehicle in 2009**.
- The initial designed life of the satellite was four years.
- **Technical Features :**
 - RISAT-2 was India's first satellite with a **synthetic-aperture radar (SAR)**.
 - It possess day-night as well as **all-weather monitoring capability**. Potential applications include tracking hostile ships at sea that are deemed a military threat to India. Media refer to it as a "**spy satellite**".

EK Janaki Ammal



❖ Context

- Recently, **125th birth anniversary of Edavalath Kakkat Janaki Ammal**, a pioneering botanist and the first Indian woman to be awarded a PhD in the botanical sciences, was celebrated.

❖ Key Highlights

- Born in **Thalassery in Kannur district** of Kerala in 1897.
- She **moved to Madras** (now Chennai) to obtain her Bachelors and Honors degrees at the Queen Mary's and Presidency College respectively.
- In **1925, at the University of Michigan** in the USA where she did **research on plant cytology** (which focuses on the structure and function of cells), Janaki Ammal obtained a Master's degree.
- She **worked on making several intergeneric and interspecific hybrids** involving sugarcane and related grass species. She is believed to have been **responsible for creating sugarcane hybrids that yielded sweeter sugar**.
- The range of roles she worked at included serving as the head of the **Central Botanical Laboratory** in Allahabad and as an **Officer of Special Duty at the Regional Research Laboratory** in Jammu and Kashmir.
- Her association with the **Save the Silent Valley movement** was well-known.
 - It was a campaign to stop a hydroelectric project from flooding the Silent Valley forest in Palakkad district of Kerala.

New Honeybee Species, Endemic To Western Ghats, Found



❖ Context

- Recently, a new species of **endemic honeybee** has been discovered in the Western Ghats.

❖ Key Highlights

- The new species has been named **Apis karinjodian** and given the common name **Indian black honeybee**.
- The distribution of **Apis karinjodian** ranges from the **central Western Ghats and Nilgiris to the southern Western Ghats**, covering the States of **Goa, Karnataka, Kerala and Tamil Nadu**.
- It is **after a gap of more than 200 years** that a new species of honeybee has been spotted in the Western Ghats. The last honeybee described from India was **Apis indica** in **1798 by Fabricius**.
- The species has been classified as near **threatened** in the State based on the **IUCN Red List Categories and Criteria**.

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