

## Great Barrier Reef

### ❖ Context

- Australia's Great Barrier Reef should be added to a **list of "in danger" World Heritage sites**, according to UN experts who warned the fading wonder has been "significantly impacted" by climate change.

### Key Highlights

- A UNESCO-tasks report said **warming seas and agricultural pollution** had put the reef at risk and that its resilience had been "substantially compromised."
- The World Heritage in Danger List is **compiled by UNESCO**.
- The **List contains world heritage sites that are threatened** by various conditions such as natural disasters, armed conflicts, wars, pollution, unchecked urbanisation, poaching, and uninhibited tourist development.
- Inscribing a site on the List of World Heritage in Danger **allows the World Heritage Committee to allocate immediate assistance** from the **World Heritage Fund** to the endangered property.

### Great Barrier Reef (GBF)

- The GBF is the **world's largest coral reef system** composed of over **2,900 individual reefs** and 900 islands stretching for over 2,300 kilometers.
- The reef is **located in the Coral Sea**, off the coast of Queensland, Australia.
- It was **world heritage listed in 1981 by UNESCO** as the most extensive and spectacular coral reef ecosystem on the planet.
- Since 1985, the Great Barrier Reef has **lost more than two-thirds of its corals**.

### Major Coral Protection Initiatives

- Global Coral Reef Alliance (GCRA)
- Global Coral Reef Monitoring Network
- The Global Coral Reef R&D Accelerator Platform
- International Coral Reef Initiative (ICRI)

### Coral Ecosystem

- **Coral polyps** are tiny and fleshy sea anemones that live in **tropical and subtropical oceans and seas**.
- Corals have a **symbiotic relationship** with microscopic algae called **zooxanthellae** that live in their tissues.
- It assists the coral in **nutrient production** through its **photosynthetic activities**.
- The **host coral polyp** in return provides its zooxanthellae with a **protected environment to live within**, and a steady supply of carbon dioxide for its photosynthetic processes.
- The corals can feed by day through photosynthesis and by night through predation.
- **Corals are highly susceptible to quick changes**. They grow in regions where **climate is significantly stable for a long period of time**.

### Coral Bleaching

- When the **symbiotic relationship becomes stressed** due to increased ocean temperature or pollution, the algae leave the coral's tissue.
- Coral is left bleached and vulnerable.
- Without the algae, the coral loses its major source of food, turns white or very pale, and is more susceptible to disease.
- The leading cause of coral bleaching is **rising water temperatures**.

## State of Global Water Resources 2021

### ❖ Context

- The **World Meteorological Organisation (WMO)** released its first State of Global Water Resources 2021.

### Key Highlights

- The report assesses the effects of climate, environmental and societal change on the Earth's water resources.
- The report focuses on three major areas:
  - **Streamflow**, the volume of water flowing through a river channel at any given time.
  - **Terrestrial water storage (TWS)** — all water on the land surface and in the sub-surface.
- Major Indian river basins (the Brahmaputra, Ganges and Indus), as well as other important river basins in Asia (Huang He, also known as Yellow, and Mekong), exhibit a **gradual decline in TWS** over the period 2002-2021.
- Several **hotspots with a negative trend** in terrestrial water storage include Brazil's Rio São Francisco basin, Patagonia, the Ganga and Indus headwaters, as well as south-western US.



- **The cryosphere (frozen water).**

### Major Findings

- Large areas of the globe recorded drier-than-normal conditions in 2021.
- The **area with below-average streamflow was approximately two times** larger than the above-average area.
- Southern and northern China (the Amur river basin) were characterised by above-average discharge, similar to some basins in northern India.

- **Indo-Gangetic Plain (IGP)** recorded more water flowing in the river channels even as their total water storage declined in 2021.

- The glacial melt was primarily to blame for the trend.

### About WMO

- It is a **specialised agency** of the United Nations (UN).
- It is an **intergovernmental organisation** with 193 member states.
- It was **established by the ratification of the WMO Convention in 1950.**
- Its supreme body is the **World Meteorological Congress.**
- Its secretariat is located in Geneva.

## Maternal Mortality Ratio

### ❖ Context

➤ A special bulletin has been released by the office of the Registrar General of India.

### Key Highlights

- According to it, the Maternal Mortality Ratio (MMR) has **declined from 130 per lakh live births in 2014-16 to 97 per lakh live births in 2018-20.**
- **Assam** has the highest Maternal Mortality Ratio (MMR) of 195 followed by **Madhya Pradesh** with MMR of 173 per lakh live births and **Uttar Pradesh** (167).
- **Kerala** has the lowest of 19 per lakh live births.
- **Target 3.1 of the Sustainable Development Goals** set by the United Nations aims at reducing the global maternal mortality ratio to **less than 70** per 1,00,000 live births.

### Maternal Mortality Ratio

- It is defined as the number of maternal deaths during a given time period **per 1,00,000 live births** during the same period.

### Maternal Mortality Rate

- This is calculated as maternal deaths of women aged 15-49 per lakh of women in that age group.

### What is Maternal Death?

- According to the World Health Organization (WHO), maternal death is the death of a woman **while pregnant or within 42 days of termination of pregnancy**, irrespective of the duration and site of the pregnancy, **from any cause related to or aggravated by the pregnancy or its management** but not from accidental or incidental causes.

### About Sample Registration System

- The **Office of the Registrar General of India under the Ministry of Home Affairs**, apart from conducting the Population Census and monitoring the implementation of the Registration of Births and Deaths Act in the country, has been giving estimates on fertility and mortality using the Sample Registration System.
- SRS is the **largest demographic sample survey** in the country that among other indicators provide direct estimates of maternal mortality through a nationally representative sample.

## News in Between the Lines

### ❖ Context

➤ **India-Australia Economic Cooperation and Trade Agreement (Ind-Aus ECTA)** will enter into force on December 29.

### ❖ Key Highlights

- **Duties on 100 per cent tariff lines** are to be eliminated by Australia under the agreement.
- It is expected that with this agreement, the **total bilateral trade will cross USD 45-50 billion in 5 years** from the current USD 31 billion.
- It is estimated that an **additional 10 lakh jobs** would be created in India under ECTA.

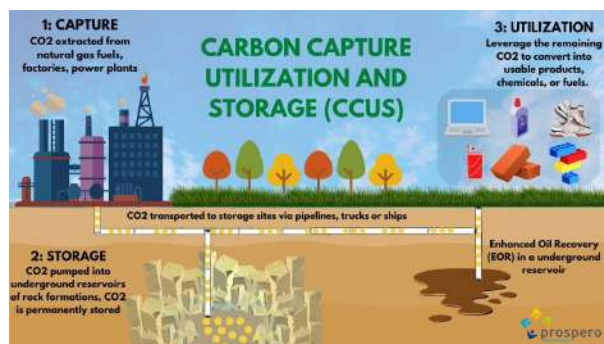


## India-Australia Economic Cooperation and Trade Agreement (Ind-Aus ECTA)



- **Indian Yoga teachers and chefs** are set to gain with the **annual visa quota**.
- Over **1 lakh Indian students** would benefit from **post-study work visas** under the ECTA.
- Under the agreement, Indian graduates from **STEM (Science, Technology, Engineering and Mathematics)** will be granted extended post-study work visas.
- Australian service suppliers will benefit from full or partial access across more than 85 Indian services sectors and subsectors.
- ECTA will **support tourism and workforce** needs in regional Australia by making 1000 Work and Holiday Program places available to young adventurous Indians.
- This was the **third** such agreement signed by **India, after Mauritius** and the **United Arab Emirates (UAE)** trade pacts.
- **Significance of the Ind-Aus ECTA**
  - It will further cement the already deep, close and strategic relations between the two countries..
  - It will significantly enhance bilateral trade in goods and services, create new employment opportunities, and raise living standards.

## Carbon Capture Utilisation and Storage (CCUS) Policy Framework



### ❖ Context

- Recently NITI Aayog published a report, titled “**carbon capture utilisation and storage (CCUS) policy framework and its Deployment Mechanism in India**”.

### ❖ Key Highlights

- CCUS is the process of **capturing carbon dioxide emissions** and either using them to make things such as building materials (utilization) or permanently **storing them** thousands of feet below the surface (storage).
- CCUS is the **technology for decarbonising carbon dioxide (CO2) from high polluting sectors** such as steel, cement, oil, gas, petrochemicals, chemicals and fertilisers.
- It has a **critical role to play** for the country to cut about **750 mtpa of carbon capture by 2050**.
- The role of CCUS becomes **important as reduction strategy** to achieve net zero goal by 2070
- The report indicates that CCUS can provide a wide variety of opportunities to convert the captured CO2 to different value-added products like-
  - Green urea, food and beverage form application.
  - Building materials (concrete and aggregates), chemicals (methanol and ethanol), polymers (including bio-plastics) and enhanced oil recovery (EOR) with wide market opportunities in India, thus contributing substantially to a circular economy.

## Global Minority Index



### ❖ Context

- Patna-based research institute **Centre for Policy Analysis (CPA)** has released the ‘global minority index’, tabulating 110 countries.

### ❖ Key highlights

- **India is at the top followed by South Korea, Japan, Panama and the US.**
- The grading of countries was done on the basis of the approach of the State towards minority religions, and the extent of their inclusiveness.
- **Maldives, Afghanistan and Somalia figure** at the bottom of the list, while the UK is ranked 54, and the UAE 61.



## Binturong



### ❖ Context

- Police and forest officials in Manipur's Ukhrul town have been scanning "gambling dens" following reports of wild animals — dead or alive — being offered as prizes for raffle draws.
- Apart from wild boars and deer, animals such as **binturong (an arboreal mammal also known as bearcat)**, squirrels and flying foxes (bats) have been found to be on offer.

### ❖ Key Highlights

- The binturong (*Arctictis binturong*) also known as the bearcat, is a viverrid native to **South and Southeast Asia**.
- The binturong is the **only living species in the genus Arctictis**.
- **Characteristic**
  - It has long shaggy hair, tufted ears, and a long, bushy, **prehensile tail**. The colour generally is black with a sprinkling of whitish hairs.
  - It is found most often among the trees, **using its prehensile tail as an aid in climbing**.
- **Distribution**
  - The binturong occurs from India, Nepal, Bangladesh, Bhutan, Myanmar, Thailand, and Malaysia to Laos, Cambodia, Vietnam and Yunnan in China, and Sumatra, Kalimantan and Java in Indonesia to Palawan in the Philippines.
- **Habitat**
  - It is confined to tall forest. In Assam, it is common in foothills and hills with good tree cover, but less so in the forested plains.
- **Diet**
  - The binturong is omnivorous, feeding on small mammals, birds, fish, earthworms, insects and fruits. It also preys on rodents.
- **Threat**
  - Habitat loss and degradation of forests.
- **Conservation Status**
  - **IUCN Red List**- Vulnerable.
  - **CITES**- Appendix III.
  - **Wild Life Protection Act 1972**- Schedule I.

## Additional Judge of High Court



### ❖ Context

- The Union Law Ministry notified the appointment of two lawyers as Additional judges of the Bombay High Court.

### ❖ Key highlights

- According to **Article 224 (1)** of the Constitution, the **President** can appoint duly qualified persons to be additional judges for a period, **not exceeding two years**.
- The additional judges are appointed when there is any temporary increase in the business of a High Court or by reason of arrears of work therein.
- According to the Department of Justice's Memorandum of Procedure, **the State Government should first obtain the sanction of the Central Government for the creation of such additional posts**.
- After the post is sanctioned the procedure to be followed for making the appointment is the same as for the appointment of a permanent Judge of a High Court.
- The appointment is made after consultation with -



## Tribal Development Report 2022



- **The High Court collegium** - The Chief Justice of the High Court along with two senior-most judges of the High Court.
- **The Supreme Court collegium** - The Chief Justice of India along with two senior-most judges of the Supreme Court.
- **The Governor of the state** who is bound by the advice of the Chief Minister heading the Council of Ministers

### ❖ Context

- The Tribal Development Report 2022 was launched by the **Bharat Rural Livelihood Foundation (BRLF)**.

### ❖ Key highlights

- The BRLF was set up as an **independent society**, through a Union Cabinet decision in 2013, under the **Union Ministry of Rural Development** to scale up civil society action in partnership with central and state governments.
- It claims the report to be the first of its kind since 1947.
- The report stated that indigenous communities of India have been pushed farther away from alluvial plains and fertile river basins into the harshest ecological regions of the country like hills, forests, and drylands.
- Of the **257 Scheduled Tribe districts, 230 (90 per cent) are either forested or hilly or dry**. They account for **80 per cent of India's tribal population**.
- India's tribal communities form 8.6 per cent of the country's population according to the 2011 Census.
- **Central India is home to 80% of the tribal communities in the country.**

## Rht13



### ❖ Context

- Scientists have discovered a new 'reduced height' or semi-dwarf gene called Rht13.

### ❖ Key highlights

- Since the 1960s and the Green Revolution, reduced height genes have increased global wheat yields because the **short-stemmed wheat** they produce puts more investment into the grains rather than into the stems and has improved standing ability.
- However, they produce **optimum yields under high-fertility irrigated conditions**. These genes when bred into wheat do not work in drought-like conditions due to **reduced seedling emergence**.
- The newly discovered gene overcomes this problem of seedling emergence.
- The study said varieties of wheat with the Rht13 gene could be rapidly bred into wheat varieties to enable farmers to grow **reduced-height wheat in drier soil conditions**.
- **Seeds can be planted deeper in the soil**, giving access to moisture, without the adverse effect on seedling emergence seen with existing wheat varieties.

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