

Project Tiger

❖ Context

- The number of tigers in India has increased by **6.74 per cent** from **2,967 in 2018 to 3,167 in 2022**, according to the figures of the 5th cycle of India's Tiger Census



Key Highlights:

- It has been **50 years of Project Tiger**.
- The PM also released the government's vision for tiger conservation during 'Amrit Kaal', and launched the **International Big Cats Alliance (IBCA)**.
- IBCA will focus on the protection and conservation of seven major big cats of the world.
- It will include **tiger, lion, leopard, snow leopard, puma, jaguar and cheetah**, with membership of the range countries harbouring these species.
- Nearly 75 per cent of the world's tiger population can now be found in India & tiger reserves in the country.
- There are **54 tiger reserves across India**, spanning 75,000 sq km.
- The **Bengal Tiger** was declared a National animal of India in April 1973 under the initiative of Project Tiger.
- **Top 5 Tiger Reserves with Highest Tiger Population in India** : Jim Corbett National Park, Uttarakhand (Highest density of tigers) > Bandipur Tiger Reserve, Karnataka > Nagarhole Tiger Reserve, Karnataka > Mudumalai Tiger Reserve, Tamil Nadu > Kaziranga National Park, Assam.
- **Tigers in states (2018 Census) : Madhya Pradesh (526) > Karnataka(524) > Uttarakhand (442)**

❖ About Tiger:

- The tiger (*Panthera tigris*) is the largest living cat species and a member of the genus *Panthera*.
- Traditionally eight subspecies of tigers have been recognized, out of which **three are extinct (Caspian tiger, Javan tiger, Bali tiger)**.
- **Protection Status : IUCN Red List- Endangered**
 - **WPA 1972-** Schedule I
 - **CITES-** Appendix I

❖ Project Tiger:

- Project Tiger was launched by the Central government on **April 1, 1973**, in a bid to promote conservation of the tiger.
- It is an ongoing **Centrally Sponsored Scheme** of the Ministry of Environment, Forests and Climate Change.
- Project Tiger was launched at the Jim Corbett National Park.
- The programme was initially **started in nine tiger reserves** of different States as follows : Assam, Bihar, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Uttar Pradesh and West Bengal, covering over 14,000 sq km.
- Project Tiger didn't just focus on the conservation of the big cats.
 - It also ensured the preservation of their natural habitat as tigers are at the top of the food chain.
- The tiger reserves are constituted on a core/buffer strategy.
- The **core areas have the legal status of a national park** or a sanctuary, whereas the **buffer or peripheral areas are a mix of forest and non-forest land**, managed as a multiple-use area.
- ❖ **NTCA:**
 - **National Tiger Conservation Authority (NTCA)** is a **statutory body** under the Ministry of Environment, Forests and Climate Change.
 - It was **established in 2005** following the **recommendations of the Tiger Task Force**.
 - It was constituted under enabling provisions of the **Wildlife (Protection) Act, 1972, as amended in 2006**, for strengthening tiger conservation, as per powers and functions assigned to it.
 - It is the apex body that administers 'Project Tiger'.
 - The NTCA conducts a **country-level assessment of the status of tigers**, co-predators, prey, and habitat once **every four years**, using the Tiger Task Force-approved methodology

News in Between the Lines

Raccoon Stealer



❖ Context

- Recently, **Raccoon Stealer**, was used to **target eight Central government entities**, including central paramilitary forces and the Income Tax department.

❖ Raccoon Stealer:

- Raccoon Stealer is a classic example of **information-stealing malware**, which cybercriminals typically use to gain possession of sensitive data saved in users' browsers and cryptocurrency wallets.
- In the case of browsers, targeted data typically includes **cookies, saved login details, and saved credit card details**.
- In the case of cryptocurrency wallets (henceforth, 'crypto-wallets'), targeted data typically includes public keys, private keys, and seed phrases.
- Once sensitive browser and crypto-wallet data is in the hands of cybercriminals, it will likely be used to conduct harmful activities, such as **identity theft, cryptocurrency theft, and credit card fraud**.

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Miyawaki Forest



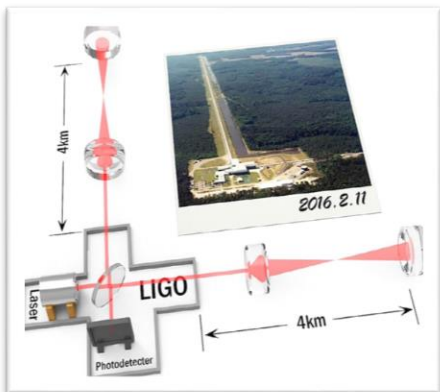
❖ Context

- To tackle climate change and pollution, the Mumbai BMC has started creating a Miyawaki forest at Deonar village in Govandi.

❖ About Miyawaki Forest:

- The forest has been developed using the technique pioneered by Japanese botanist Akira Miyawaki, which helps build dense, native forests in a short span of time.
- This involves planting two to four types of indigenous trees within every square metre.
- Through the Miyawaki method, a **forest can be developed in just two to three years** while it takes at least 20 to 30 years through the traditional method.
- The **growth of plants is ten times faster** using this method and as a result, the forest developed is thirty times denser.
- In this method, the trees become self-sustainable & grow to their full length within 3 years.
- The goals of a Miyawaki technique include **improving biodiversity, sequestering carbon**, increasing green cover, lowering air pollution, & preserving the water table.
- Miyawaki forests are viable solutions for cities looking to rapidly build climate resilience.

LIGO



❖ Context

- The **government has given the final go-ahead to India's Laser Interferometer Gravitational-Wave Observatory**, or LIGO, project.
- It will clear the way for the **construction of the country's biggest scientific facility** that will join the ongoing global project to probe the universe by detecting and **studying gravitational waves**.

❖ Key Highlights:

- LIGO is an **international network of laboratories** that detect the ripples in spacetime produced by the movement of large celestial objects like stars and planets.
- LIGO-India will be **located in Hingoli district of Maharashtra**, about 450 km east of Mumbai, and is scheduled to begin scientific runs from 2030.
- It is **built by the Department of Atomic Energy and the Department of Science and Technology** with an MoU with the U.S. National Science Foundation.
- LIGO-India would be the **fifth node of this international network** of gravitational wave observatories, and possibly the last.
- **Gravitational Waves** : Gravitational waves are 'ripples' in space-time caused by some of the most violent and energetic processes in the Universe.
 - Albert Einstein predicted the existence of gravitational waves in 1916 in his general theory of relativity.
- The first ever detection of a gravitational wave happened on September 14, 2015, by the two US-based LIGO detectors.
 - These gravitational waves were produced by the merger of two black holes 1.3 billion years ago.
 - This achievement was promptly rewarded with the Nobel Prize in 2017.
 - Since then, nine more gravitational wave events have been detected by the four observatories in the United States, Europe and Japan.

Comstock Act



❖ Context

- A 19th century "anti-vice" law, **Comstock Act** is at the center of a new court ruling that threatens access to the leading abortion drug in the US.
- Recently, a federal judge in Texas sided with Christian conservatives in ruling that the **Comstock Act prohibits sending the long-used drug through the mail**.

❖ Comstock Act:

- It was **originally passed in 1873** and named for an anti-vice crusader.
- The Comstock Act was intended to **prohibit the mailing of contraceptives**, "lewd" writings and any "instrument, substance, drug, medicine, or thing" that could be used in an abortion.
- The law's scope has been repeatedly narrowed by federal courts and Congress, which eliminated the reference to contraceptives in the 1970s. And the federal government hasn't enforced the law since the 1930s, according to legal experts.

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Tropospheric Emissions Monitoring of Pollution (TEMPO)



❖ Context

- A SpaceX Falcon 9 rocket successfully launched from Florida on Friday, carrying a new NASA device that can track air pollution over North America.

❖ Key Highlights:

- The **Tropospheric Emissions Monitoring of Pollution (TEMPO)** instrument will allow scientists to monitor air pollutants and their emission sources from space more comprehensively than ever before, down to the neighborhood level.
- TEMPO is about the size of a washing machine and has been described as a chemistry laboratory in space
- A unique feature of TEMPO is that **it will be hosted on an Intelsat communications satellite in geostationary orbit.**
- Existing pollution-monitoring satellites are in low Earth orbit, which means they can only provide observations once a day at a fixed time.
- TEMPO will be able to measure atmospheric pollution down to a spatial resolution of 4 square miles (10 square kilometers), or neighborhood level.
- In a geostationary orbit 22,236 miles (35,786 kilometers) above the equator, TEMPO will match the rotation of the Earth, meaning **it will stay over the same location - North America - at all times.**

Caltoris Bromus Sadasiva



❖ Context

- A group of lepidopterists has discovered a new butterfly subspecies, **Caltoris bromus sadasiva**, from the peripheries of **Akkulam and Vembanad lakes in Kerala.**

❖ Key Highlights:

- The discovery of Caltoris bromus sadasiva is significant as it increases the count of **skipper butterflies in the Western Ghats to 83** species and the number of butterfly species to 336.
- This species belongs to the Bromus swift butterfly (Caltoris bromus) which is a skipper butterfly from the Hesperiidae family of Lepidoptera found in the Western Ghats and Peninsular India.
- The Caltoris genus is Indo-Australian and has over 15 species distributed across Southeast Asia, and Caltoris bromus is one of them, with two other subspecies named **Caltoris bromus bromus and Caltoris bromus yanuca.**

❖ Vembanad Lake :

- Vembanad Lake is the longest lake in India and is located in the state of Kerala.
- It is also one of the largest lakes in India, covering an area of over 200 square kilometers.
- The lake is situated between the districts of Alappuzha, Kottayam, and Ernakulam and is fed by several rivers, including the Periyar, Muvattupuzha, and Achenkovil.
- Vallam Kali(Nehru Trophy Boat Race) is a Snake Boat Race held every year in August in Vembanad Lake.
- **The Kumarakom Bird Sanctuary** is located on the east coast of the lake.
- The Government of India has identified the Vembanad wetland under the National Wetlands Conservation Programme.

Lean Diabetes



❖ Context

- In Chhattisgarh, cases of lean diabetes are seen increasing among tribal communities.

❖ Key Highlights:

- Lean diabetes is a type of diabetes that affects individuals who have a **low BMI and are often impoverished and malnourished.**
- Regardless of its phenotype, diabetes can have severe long-term consequences. Patients with diabetes are at an **increased risk of retinopathy, nephropathy, neuropathy, foot infections, and cardiovascular diseases.**
- Diabetic neuropathy is a type of nerve damage that is associated with diabetes.
- Patients may experience a **tingling sensation and pain in their feet**, which can progress to complete loss of sensation and severe foot infections.
- The treatment for diabetes involves regular **monitoring of blood sugar levels**, a healthy diet, exercise, and medication.

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Finance Commission



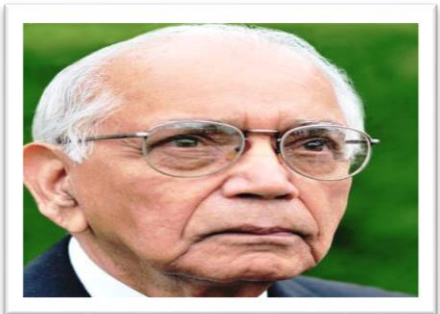
❖ Context

- The Union government is gearing up to constitute the **Sixteenth Finance Commission in November** this year to recommend the formula for sharing revenues between the Centre and the States for the five-year period beginning 2026-27.

❖ Key Highlights:

- The Finance Commission is a constitutional body established **under Article 280** of the Indian Constitution to make recommendations on the distribution of tax revenues **between the Union and State governments.**
- The commission is constituted every five years and its recommendations are taken into account by the central government when formulating the Union Budget.
- The Finance Commission comprises a **chairman and four other members appointed by the President of India.**
- The commission is responsible for recommending the distribution of tax revenues between **the Union and State governments**, taking into account factors such as **population, area, tax effort, and fiscal discipline.**
- The commission also makes recommendations on **grants-in-aid to states** from the Consolidated Fund of India.

2023 International Prize in Statistics



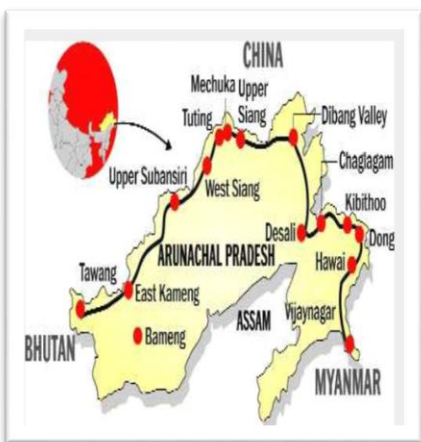
❖ Context

- Indian-American C.R. Rao wins Nobel Prize equivalent in statistics at the age of 102.

❖ Key Highlights:

- The International Prize in Statistics is awarded every two years by a collaboration among five leading **international statistics organisations.**
- The prize recognises a major achievement by an individual or team in the statistics field, particularly an **achievement of powerful and original ideas** that have led to practical applications and breakthroughs in other disciplines.
- Rao, in his research paper published in the Bulletin of **the Calcutta Mathematical Society in 1945**, had demonstrated three fundamental results that paved the way for the **modern field of statistics** and provided statistical tools heavily used in science today.

Vibrant Villages Programme



❖ Context

- Recently, Home Minister launched the 'Vibrant Villages Programme' in Kibithoo, a border village in the Anjaw district of Arunachal Pradesh.

❖ Key Highlights:

- The scheme announced in the Union Budget 2022-23 is aimed at developing the quality of life of people living in identified border villages on the northern border of India, covering the areas of **Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Sikkim, & Ladakh.**
- Under this scheme, Vibrant Village Action Plans will be created by the district administration with the help of **Gram Panchayats.**
- The objective of the scheme is to identify and develop economic drivers based on local, natural, human, and other resources of the border villages on the northern border.
- The scheme aims to : promote social entrepreneurship and empower youth and women through skill development and entrepreneurship,
 - leveraging tourism potential,
 - and developing sustainable eco-agri businesses on the concept of '**one village-one product**' through community-based organizations, cooperatives, and NGOs.

❖ About Kibithoo Village:

- The village is situated at an altitude of about 11,000 feet above sea level and is located close to the India-China border.
- Kibithoo is inhabited by the **Meyor community**, which is one of the oldest tribes in Arunachal Pradesh.
- It is also home to several species of wildlife, including the **musk deer, snow leopard, and red panda.**
- Due to its proximity to the border, Kibithoo is an important strategic location for the Indian military.

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