Current Affairs Update (June 1-6)

National

Law Commission of India

The Law Commission is functioning without a Chairperson. The Commission, constituted for a term of three years, has not released any report after the tenure of the last Chairperson, Justice B.S. Chauhan, ended in August 2018.

The **22nd Law Commission** was constituted by the Government on February 21, 2020. However, no progress has been made in the appointments till date.

About the law commission of India:

It is **an executive body established by an order of the Government of India. Originally formed in 1955,** the commission is reconstituted every three years and so far, 277 reports have been submitted to the government. The last Law Commission, under **Justice B.S. Chauhan (retd.),** had submitted reports and working papers on key issues such as **simultaneous elections to the Lok Sabha and the Assemblies and a uniform civil code.**

Bhil Pradesh

- It is a demand for **a separate state for tribal people in western India.**
- **The demand is to carve out a separate state from 39 districts spread over four states:** 16 in Gujarat, 10 in Rajasthan, seven in Madhya Pradesh, and six in Maharashtra.
- Bhil social reformer and spiritual leader **Govind Guru first raised the demand for a separate state for tribals** back in 1913 after the Mangarh massacre.

The Mangarh massacre: The massacre, which took place six years before Jallianwalla Bagh and is sometimes referred to as the "Adivasi Jallianwala", saw hundreds of Bhil tribals being killed by British forces on November 17, 1913 in the hills of Mangarh on the border of Rajasthan and Gujarat.

Who was Anangpal II?

1. Belonged to **the Tomar dynasty** that ruled parts of present-day Delhi and Haryana between the 8th and 12th centuries.

2. He was **succeeded by his grandson Prithviraj Chauhan,** who was defeated by **the Ghurid forces in the Battle of Tarain (present-day Haryana)** after which the Delhi Sultanate was established in 1192.

3. The Tomar dynasty **shifted its capital in the 8th century), to Dhillikapuri (Delhi)** during the reign of Anangpal II.

4. The **Vishnu Garud Dhwaj (iron pillar)** in the Qutub complex was also brought by King Anangpal Tomar II.

Abhilasha Barak

Captain Abhilasha Barak has become the first woman to join the Army Aviation Corps as combat aviator after completion of a six-month combat Army aviation course. **The Army Aviation Corps,** the youngest Corps of the Army, was formed on November 1, 1986.

Cultural significance of PM Modi's gifts for his Quad colleagues

At the recent **Quad Summit held at Tokyo,** PM Modi carried with him gifts for leaders of the US, Australia and Japan showcasing India's rich cultural heritage and art forms.

The gifts and their cultural significance:

Sanjhi Art form:

Sanjhi panel gifted to US President Joe Biden is based on the theme of **Thakurani Ghat** (It is one of the most famous ghats on the banks of the holy river of Yamuna in Gokul). This art form originated out of **the cult of Krishna.**

It involves **creating stencils based on incidents from the life of the deity and then hand-cutting these on thin sheets of paper using scissors.** Sanjhi was popularised in **the 15th and 16th centuries by the Vaishnava temples** and was **practiced by Brahmin priests.**

Gond art painting for Australian PM Anthony Albanese:

The gift depicts a popular motif in Gond art — **the Tree of Life,** with intricate patterns and lines that are a trademark of Gond art.

Rogan painting:

PM Modi gifted the Japanese PM a hand-carved deep brown wooden box with a gold and white **Rogan painting** on a green cloth as its central motif.

Rogan is a form of **cloth painting** that is considered to be more than four centuries old and is primarily practised in Kutch district of **Gujarat.** The word **'rogan'** comes from Persian, meaning **varnish or oil.**

The craft uses **paint made from boiled oil and vegetable dyes.** Usually, **only half the fabric is painted** and it is folded to create a mirror image.

Project Vartak

Border Road Organisation (BRO) has completed the excavation work of the Nechiphu Tunnel, in Arunachal Pradesh on 20th May 2022. This tunnel is being built by BRO under Project Vartak. The Nechiphu Tunnel is located at an altitude of 5,700 feet. This is a 500-metre-long tunnel that is "D-shaped" and will have a single tube double lane on the Balipara-Charduar-Tawang (BCT) Road, West Kameng District, Arunachal Pradesh. The tunnel will be equipped with modern safety facilities and modern lightning and will also accommodate two-way traffic.

Operation Namkeen

- Under Operation Namkeen, **the Directorate of Revenue Intelligence (DRI)** has recovered 52 kg of cocaine, estimated to be valued at over Rs 500 crore in the international illicit market.
- In order to interdict the narcotic drugs, "Operation Namkeen" was launched by DRI.
- DRI, under the Central Board of Indirect Taxes and Customs (CBIC), Department of Revenue, Ministry of Finance, Government of India, is the apex agency of the Indian Customs in the field of anti-smuggling in India.

International

Collective Security Treaty Organization

- It is **an intergovernmental military alliance** (six countries) that came into effect in 2002.
- Its origin can be traced to **the Collective Security Treaty, 1992 (Tashkent Treaty).**
- The headquarters is located in the Russian capital of Moscow.
- **The objectives of the CSTO is** to strengthen peace, international and regional security including cybersecurity and stability, the protection on a collective basis of the independence, territorial integrity and sovereignty of the member states.

Composition: Current CSTO members are Armenia, Belarus, Kazakhstan, Kyrgyzstan, the Russian Federation and Tajikistan.

UN Habitat

- The United Nations Human Settlements Programme (UN–Habitat) is the **United Nations agency for human settlements and sustainable urban development**.
- It was established in 1978 as **an outcome of the First UN Conference on Human Settlements and Sustainable Urban Development (Habitat I) held in Vancouver, Canada in 1976**.
- It is mandated by the United Nations General Assembly **to promote socially and environmentally sustainable towns and cities** with the goal of providing adequate shelter for all.
- It is **a member of the United Nations Development Group.**

- UN-Habitat reports to the United Nations General Assembly.
- It has its **headquarters in Nairobi, Kenya.**

Why in news? UN-Habitat has identified various pressing issues posing challenges for urban planners of Jaipur City.

Issues highlighted include:

1. Rapid expansion of cities.

2. Weak urban mobility.

3. Extreme levels of drought during summer and also urban floods.

International Booker Prize

"Tomb of Sand' has become **the first book written in an Indian language to be awarded the International Booker Prize.** The book was originally published in Hindi as **Ret Samadhi.**

It is written by Author Geetanjali Shree and translated into English by Daisy Rockwell.

The International Booker Prize: It is awarded annually for a single book, translated into English and published in the UK or Ireland.

Science-Tech & Environment

What are community forest rights?

The Chhattisgarh government has become only the second state in the country to recognise Community Forest Resource (CFR) rights of a village inside a national park. The CFR rights of tribals living in Gudiyapadar, a hamlet inside **the Kanger Ghati National Park** in Bastar district, were recognised, giving the community power to formulate rules for forest use. CFR rights were first recognized in **Simlipal national park**, Odisha.

What is a community forest resource?

- It is the common forest land that has been traditionally protected and conserved for sustainable use by a particular community.

- The community uses it to access resources available within the traditional and customary boundary of the village; and for seasonal use of landscape in case of pastoralist communities.

Community Forest Resource rights:

These rights are recognised under **Section 3(1)(i) of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (commonly referred to as the Forest Rights Act or the FRA)**.

- They provide for recognition of the right to "protect, regenerate or conserve or manage" the community forest resource.

- These rights allow the community to formulate rules for forest use by itself and others and thereby discharge its responsibilities under Section 5 of the FRA.

Significance of these rights and their recognition:

- CFR rights, along with Community Rights (CRs) which include **nistar rights and rights over non-timber forest products,** ensure sustainable livelihoods of the community.

- **These rights give the authority to the Gram Sabha** to adopt local traditional practices of forest conservation and management within the community forest resource boundary.

- It also underlines **the integral role that forest dwellers play in sustainability of forests and in conservation of biodiversity.**

First Movers Coalition

- **India recently joined** a **global public-private partnership initiative** called the First Movers Coalition.
- The initiative was **launched by President of the USA Joe Biden and the World Economic Forum (WEF)** at COP26.
- The coalition seeks **to decarbonise the heavy industry** and long-distance transport sectors that are responsible for 30 percent of global emissions.

People's Biodiversity Register

Kolkata has become **the first major metropolitan city to prepare a detailed register of biodiversity i.e. PBR.** PBR contains comprehensive information on locally available Bio-resources including landscape and demography of a particular area or village.

Need for:

- **The Biological Diversity Act 2002** has made it mandatory for every local self-governing institution in rural and urban areas to constitute **Biodiversity Management Committees** within their area of jurisdiction.
- Once constituted, BMC must prepare a PBR in consultation with local people.

Param Porul Super Computer

PARAM PORUL, **a state-of-the-art Supercomputer** was inaugurated at NIT Tiruchirappalli recently. It has been established under Phase 2 of **the National Supercomputing Mission (NSM).**

National Supercomputing Mission (NSM) is being implemented and steered jointly by **the Department of Science and Technology (DST) and Department of Electronics and Information Technology (DeitY).** Implemented by **the Centre for Development of Advanced Computing (C-DAC), Pune and the Indian Institute of Science (IISc), Bengaluru.**

 The Mission envisages empowering national academic and R&D institutions spread over the country by installing a vast supercomputing grid comprising of more than 70 high-performance computing facilities.

PARAM ANANTA

- **PARAM ANANTA** is India's latest super computer.
- It has **838 TeraFlops** supercomputing capability.
- It was commissioned at **IIT Gandhinagar** under **National Supercomputing Mission (NSM)**
- It has been developed jointly by **the Centre for Development of Advanced Computing (C-DAC) and the Indian Institute of Technology, Gandhinagar.**

Bongosagar

It is **a naval exercise between India and Bangladesh.** The **third edition of the exercise** was recently held at Port Mongla, Bangladesh.
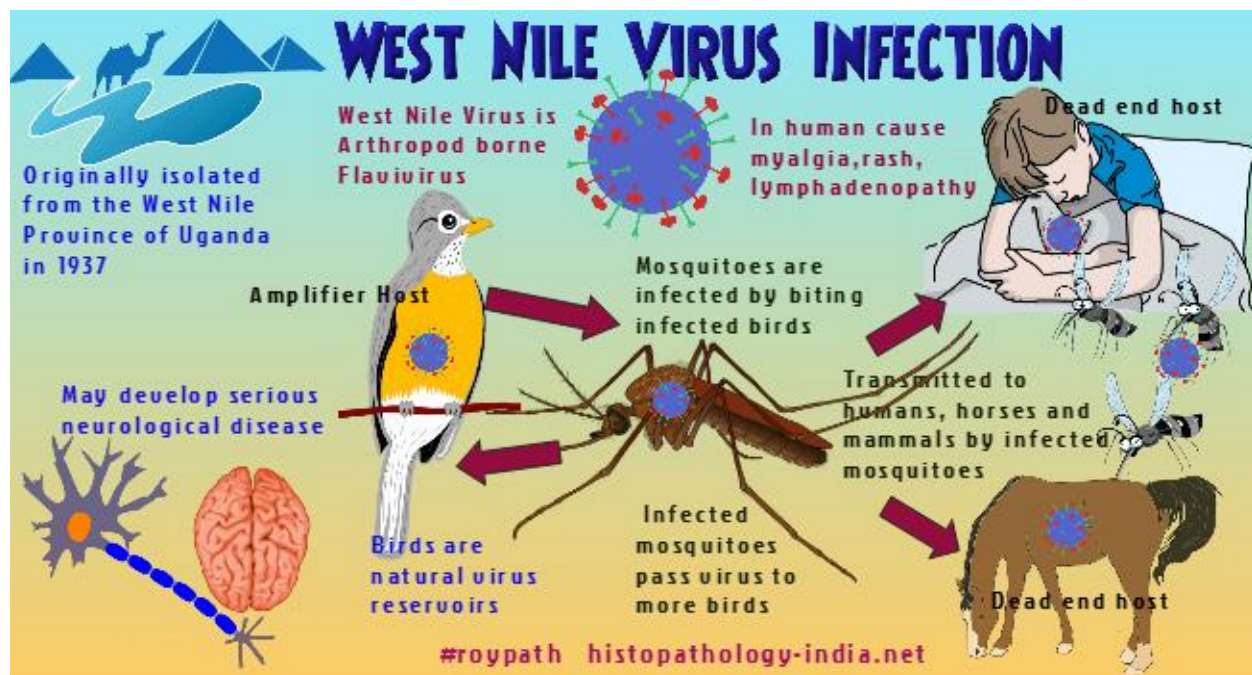
Hasdeo forest

- Chhattisgarh Government is caught in a controversy for allowing coal mining in the **Hasdeo forest.**
- Hasdeo Arand forest is **located in northern part of Chhattisgarh.**
- It is known for its biodiversity and also its coal deposits.
- **The Hasdeo river, a tributary of Mahanadi,** flows through it.
- It is **the "largest un-fragmented forests in Central India consisting of pristine Sal (Shorea robusta) and teak forests."**

State of Global Climate Report 2021

The State of the Global Climate Report 2021 has been released by the World Meteorological Organization (WMO). According to the report, four key climate change indicators which are **sea-level rise, greenhouse gas concentrations, ocean acidification, and ocean heat** set new records in 2021. This shows that human activities are causing planetary level changes in the ocean, land, and the atmosphere, with long-lasting and harmful effects on ecosystems and sustainable development.

West Nile Virus

- It is **a member of the flavivirus genus** and belongs to **the Japanese encephalitis antigenic complex** of the family
- **Genetic material:** It is **a single-stranded RNA virus.**
- **Vector:** Culex species of mosquitoes act as the principal vectors for transmission.
- **History & Nomenclature:** It was first **isolated in a woman in the West Nile district of Uganda in 1937.**
- **Endemic regions:** It is commonly found in **Africa, Europe, the Middle East, North America and West Asia.**
- **Target group:** Older people, children and those with weakened immune systems are most at risk.
- **Transmission:** It **spreads from birds to humans** with the bite of an infected **Culex mosquito.** WNV can also spread through blood transfusion, from an infected mother to her child, or through exposure to the virus in laboratories.
- **Symptoms:** fever, headache, fatigue, body aches, nausea, rash, and swollen glands.
- **Diagnosis:** ELISA, RT-PCR
- **Why in news?** A man who was undergoing treatment for West Nile fever in Kerala's Thrissur succumbed to it recently. The virus was first reported in the Alappuzha district of the state in 2006 and then in Ernakulam in 2011.

WEST NILE VIRUS INFECTION

Originally isolated from the West Nile Province of Uganda in 1937

West Nile Virus is Arthropod borne Flavivirus

In human cause myalgia, rash, lymphadenopathy

Dead end host

Amplifier Host

Mosquitoes are infected by biting infected birds

May develop serious neurological disease

Transmitted to humans, horses and mammals by infected mosquitoes

Birds are natural virus reservoirs

Infected mosquitoes pass virus to more birds

Dead end host

#roypath   histopathology-india.net

Cheetah reintroduction project

- India will release **cheetahs from South Africa and Namibia** into the wild at **Kuno Palpur in Sheopur district of Madhya Pradesh,** possibly by the end of this year. To begin with, there will be 12 cheetahs from South Africa and eight from Namibia. More would follow in subsequent years.
- The project to translocate cheetahs from Africa to India is being implemented by the environment ministry with the help of **the Wildlife Institute of India.**
- **The Supreme Court had appointed an expert panel,** which approved Kuno Palpur as the possible location for cheetah relocation.
- **African Cheetah** is listed as **vulnerable in IUCN red listed species.**
- The Asiatic cheetah is classified as **a "critically endangered" species** by the IUCN Red List, and is believed to survive only in Iran.

Economics

General Anti-avoidance Rule (GAAR)

Recently, the Department of Revenue under the Ministry of Finance started investigations under the General Anti-avoidance Rule (GAAR) into firms misusing the law. Many firms have been using creative methods to avoid paying taxes to the government.

GAAR is an anti-tax avoidance law, whose provisions come under the Income Tax Act, of 1961. GAAR was first proposed in the Direct Tax Code 2009 and but the Direct Tax Code was not yet implemented in the country. GAAR was introduced in 2012 by the then Finance Minister during the Budget session. However, its implementation was delayed and it became applicable from the financial year 2018-19. The Vodafone case is one of the main reasons for the framework of GAAR.

US becomes India's biggest trading partner in FY22

- The US has surpassed China to become India's top trading partner in 2021-22.
- In 2021-22, the bilateral trade between the US and India stood at $119.42 billion as against $80.51 billion in 2020-21.
- The US is one of the few countries with which **India has a trade surplus.**
- In 2021-22, **the UAE with $72.9 billion, was the third largest trading partner of India.** It was followed by Saudi Arabia ($42,85 billion), Iraq ($34.33 billion) and Singapore ($30 billion).

Jal Jeevan Mission

- JJM envisages supply of **55 litres of water per person per day to every rural household** through **Functional Household Tap Connections (FHTC) by 2024.**
- It is under **the Ministry of Jal Shakti.**

- It was launched in 2019.
- 50% of rural households in India have now been covered under **the Jal Jeevan Mission.**

Top sugar producing States

- In 2021-22, **Maharashtra has overtaken Uttar Pradesh (UP)** to regain its position as **India's top sugar producer.**
- Also, **India is the largest producer of sugar in the world** but also consumes most of the sweetener it produces.
- **Brazil, Thailand and India** are the world's top sugar exporters.

Current Affairs Update (June 6-13)

National

The Surrogacy Act, 2021
It came into effect in January this year.

- It allows **'altruistic surrogacy'** — wherein only the medical expenses and insurance coverage is provided by the couple to the surrogate mother during pregnancy.
- Creates **a national board** to lay down and implement a code of conduct for people working at IVF clinics.
- It intends to make **genetic testing of the embryo mandatory before implantation** for the benefit of the child born through ART.
- It also seeks to streamline **the cryo-preservation processes for sperm,** oocytes and embryos.
- It also proposes to **constitute a national registry** and registration authority to maintain a central database and assist the national board in its functioning.

Eligibility conditions to make use of the services of a surrogate mother:

- Any couple that has 'proven infertility'.
- The couple should be Indian citizens who have been married for at least five years.
- The female must be between 23 to 50 years and the male, 26 to 55 years.
- They cannot have any surviving children (biological, adopted or surrogate); However, this would not include a 'child who is mentally or physically challenged or suffers from life threatening disorder or fatal illness.'

Who can be a surrogate mother?

Only a close relative of the couple can be a surrogate mother, one who is able to provide a medical fitness certificate. She should have been married, with a child of her own, and must be between 25 and 35 years, but can be a surrogate mother only once.

Draft amendments to IT Rules, 2021
The **Ministry of Electronics and Information Technology (MeitY)** has published a fresh draft of amendments to the Information Technology Rules, 2021.

What are IT Rules, 2021?

1. **Significant social media firms** have to appoint **a chief compliance officer** and have **a nodal contact person** who can be in touch with law enforcement agencies 24/7.

2. **A grievance officer:** Social media platforms will also have to name **a grievance officer** who shall register the grievance within 24 hours.

3. **Removal of content:** If there are complaints against the dignity of users, particularly women – about exposed private parts of individuals or nudity or sexual act or impersonation etc – social media platforms will be required to remove that within 24 hours after a complaint is made.

4. **A monthly report:** They also will have to publish a monthly report about the number of complaints received and the status of redressal.

Latest amendments:

1. **Appeal committees:** Government-appointed appeal committees will be created that will be able to veto content-moderation decisions taken by social media intermediaries like Facebook, Twitter and YouTube.

2. **Composition of Appeal committees:** Appellate Committees shall consist of a Chairperson and such other Members, as the Central Government may, by notification in the Official Gazette, appoint.

3. **Additional responsibilities will be placed on grievance officers** appointed by social media companies. **Grievance officers** will now have to expeditiously dispose the complaints within 72 hours (Earlier, it was 15 days).

National air sports policy

The Union ministry of civil aviation (MoCA) announced **the country's first national air sports policy (NASP 2022).**

Objective: It has been launched **to improve the state of aero sports in India, with a vision to make India a hub for air sports in the world by 2030.** It aims **to provide a safe, affordable, accessible, and sustainable air sports ecosystem in India.**

Highlights of the Policy:

Four-tier governance structure: The air sports in India will be under a four-tier governance structure. This includes: 1) Air Sports Federation of India (ASFI) as the apex governing body, 2) National associations for individual air sports or a set of air sports, 3) Regional or state and union territory level units of the national air sports associations and 4) District-level air sports associations.

Rules and Functions of Each air sports association: Lay down its safety standards for equipment, infrastructure, personnel and training, and specify the disciplinary actions to be taken in case of non-compliance. Inability to do so may lead to penal action by the ASFI.

Coverage: It will cover 13 air sports activities like aerobatics, aeromodelling, amateur-built and experimental aircraft, ballooning, drones, gliding, hang gliding, paragliding, microlighting, paramotoring, skydiving, and vintage aircraft.

About ASFI: The ASFI will be **an autonomous body under the Ministry of Civil Aviation** and will represent India at the Lausanne-headquartered Fédération Aéronaautique Internationale (FAI) and other global platforms related to air sports. It will be **chaired by the Secretary, Ministry of Civil Aviation.**

SHRESHTA Scheme

Ministry of social Justice and empowerment has launched **the Scheme "SHRESHTA"-Scheme for residential education for students in High school in Targeted Areas.** The Scheme will be beneficial for SC students who could not reach for higher quality education.

It provides for high quality education for meritorious but poor SC students in CBSE-affiliated reputed residential schools across the country.

Eligibility: The students belonging to Scheduled Castes, studying in class 8th and 10th in the current academic year and students belonging to marginalized income group within the SC community, whose parental annual income is upto Rs.2.5 Lakh are eligible.

Selection: They are selected through a transparent mechanism through a National Entrance Test for SHRESHTA (NETS), which is conducted by **the National Testing Agency (NTA)** for admission in class 9th and 11th.

Etalin hydel

- Wildlife scientists and conservationists in **Arunachal Pradesh** have flagged threats to local biodiversity from the proposed **Etalin hydroelectric project.**
- The dam is located in **Arunachal Pradesh's Dibang Valley.**
- It is proposed to be developed as a combination of two run-of-the-river schemes and involves the construction of concrete gravity dams on **the Tangon and Dri rivers.**
- The project area falls under **the "richest bio-geographical province of the Himalayan zone" and "one of the mega biodiversity hotspots of the world".**

International

Türkiye

The United Nations has agreed to **a formal request for the name change from Turkey.** Turkey will now be known as **Türkiye.** Domestically, citizens refer to the land as **Turkiye,** but its anglicised version 'Turkey' was adopted internationally.

Issues with the word – 'Turkey'?

Turkey government was not pleased with the Google search results that came up for the word 'Turkey'. Some of these results included **the large bird that is served for Thanksgiving and Christmas meals in North America.** According to Cambridge Dictionary's definition, **the term "turkey" means "something that fails badly" or "a stupid or silly person".**

Why stability of Afghanistan matters?

- **Can have spill over to Neighbouring central Asian countries** like Tajikistan, Uzbekiatan etc
- Taliban resurgence will **revive extremism in the region** and the region can become a safe sanctuary for Let,ISIS etc.
- Civil war in Afghanistan will lead to a **refugee crisis** in Central Asia and beyond.
- Afghanistan's stability will help the Central Asian countries with the shortest **access to the seaports of the Indian Ocean.**
- Afghanistan has been an important link in the regional trade, cultural, playing the role of a connecting **bridge for Central and the rest of the world.**

Israel, UAE sign free trade deal, first with an Arab country

- Israel and the United Arab Emirates have signed **a free trade agreement.**
- This is **the first of its kind that Israel has concluded with an Arab country.**
- The deal scraps customs duties on 96% of all products traded.
- The UAE was the first Gulf country to normalise ties with Israel and only the third Arab nation to do so after Egypt and Jordan.

Science-Tech & Environment

Norovirus

- **Cases of norovirus infection have been found in Kerala.**
- Norovirus is a highly contagious virus that is also sometimes referred to as the **'stomach flu' or the 'winter vomiting bug'**.

- It can be transmitted through **contaminated food, water, and surfaces**. The primary route is oral-fecal.
- It is similar to diarrhoea-inducing rotavirus and infects people across age groups. Disease outbreaks typically occur aboard cruise ships, in nursing homes, dormitories, and other closed spaces.

Why Neptune and Uranus appear in different colours?

Neptune and Uranus have a lot in common, such as similar masses, sizes, and atmospheric components, but their **colours are very different.** Neptune is a rich, deep azure colour at visible wavelengths, while Uranus is a notably light shade of blue. Astronomers have now found the explanation for this.

- **The cloud around Uranus is thicker than around Neptune,** which explains why.
- **Uranus seems lighter in tone than Neptune** because of its lethargic, sluggish atmosphere.
- **If there was no haze** in Neptune's and Uranus' atmospheres, **the blue light scattered in their atmospheres would make both appear nearly identically blue.**

Barcodes vs radio-frequency identification tags

Radio Frequency Identification is a wireless tracking system that **consists of tags and readers.** Radio waves are used to communicate information/identity of objects or people. The tags can carry encrypted information, serial numbers and short descriptions.

A **barcode** is a printed series of parallel bars or lines of varying width used for entering data into a computer system. The bars are black on a white background and vary in width and quantity depending on the application. The bars represent the binary digits zero and one, which represent the digits zero to nine processed by a digital computer.

Differences between RFID and Barcode:

1. RFID uses **radio waves to communicate that do not require line of sight in order to obtain the data;** barcodes use light to read the black-and-white pattern printed on the sticky tag.

2. An RFID tag can communicate with a powered reader even when the tag is not powered.

3. When printed on paper or sticky labels, barcodes are more susceptible to wear and breakage, which can affect their readability. RFID tags are more durable than barcodes.

4. In contrast to barcode scanners, RFID scanners can process dozens of tags in a single second.

5. Barcodes are simple and easy to copy or counterfeit, whereas RFID is more complicated and difficult to replicate or counterfeit.

6. RFID tags are expensive compared to barcodes.

Parameters	RFID	BARCODE
Line of sight	Not required	Required
Read Range	Passive UHF: Up to 40 feet (fixed readers) Up to 20 feet (handheld readers) Active UHF - Up to 100's of feet or more	Several inches up to several feet
Read Rate	10's, 100's or 1000's simultaneously	Only one at a time
Identification	Can uniquely identify each item/asset tagged.	Most barcodes only identify the type of item (UPC Code) but not uniquely.
Read/Write	Many RFID tags are Read/Write	Read only
Technology	RF (Radio Frequency)	Optical (Laser)
Interference	Like the TSA (Transportation Security Administration), some RFID frequencies don't like Metal and Liquids. They can interfere with some RF Frequencies.	Obstructed barcodes cannot be read (dirt covering barcode, torn barcode, etc.)
Automation	Most "fixed" readers don't require human involvement to collect data (automated)	Most barcode scanners require a human to operate (labor intensive)

Direct-To-Mobile' (D2M) technology

The Department of Telecommunications (DoT), in association with public service broadcaster Prasar Bharat, is exploring the feasibility of a Direct-To-Mobile' (D2M) technology.

What is Direct-to-mobile (D2M) technology?

- The D2M technology allows to broadcast video and other multimedia content directly to mobile phones, without active internet connection.
- It is based on the convergence of broadband and broadcast. Using this technology, mobile phones will be able to receive terrestrial digital TV.

- It is similar FM radio on mobile phones, in which phone can tap into radio frequencies.
- It improves utilisation of spectrum and consumption of broadband.

What are the uses of D2M technology?

- This technology can be used to directly broadcast content related to citizen-centric information.
- It will help in countering fake news, issuing emergency alerts as well as offering assistance in disaster management.
- It can also be used to broadcast live sports and news on mobile phones.

Significance of the D2M technology

- Through the D2M technology, consumers would be able to access multimedia content from Over The Top (OTT) or Video on Demand (VoD) content platforms without exhausting mobile data.
- This service would be provided at a nominal rate. It will also allow people from rural areas, where internet access is not present or is limited, to watch video content.
- D2M technology will also enable the telecom service providers to offload video traffic for businesses for their mobile network on the broadcast network. It will thus help them in decongesting valuable mobile spectrum.
- The technology would improve usage of mobile spectrum and free up bandwidth, thus reducing the call drops and increasing data speeds etc.

Eco-sensitive Zones (ESZs)

The **Supreme Court** has directed that every protected forest, national park and wildlife sanctuary across the country should have **a mandatory eco-sensitive zone (ESZ) of a minimum one km starting from their demarcated boundaries.**

Directions by the Court:

1. In case any national park or protected forest already has a buffer zone extending beyond one km, that would prevail.

2. In case the question of the extent of buffer zone was pending a statutory decision, then the court's direction to maintain the one-km safety zone would be applicable until a final decision is arrived at under the law.

3. Mining within the national parks and wildlife sanctuaries shall not be permitted.

4. The Principal Chief Conservator of Forests and Home Secretaries of States responsible for the compliance of the judgment.

About ESZs:

1. Eco-Sensitive Zones (ESZs) or Ecologically Fragile Areas (EFAs) are areas notified by the MoEFCC around Protected Areas, National Parks and Wildlife Sanctuaries.

2. The purpose of declaring ESZs is to create some kind of "shock absorbers" to the protected areas by regulating and managing the activities around such areas.

3. They also act as a transition zone from areas of high protection to areas involving lesser protection.

4. The Environment (Protection) Act, 1986 does not mention the word "Eco-Sensitive Zones".

5. An ESZ could go up to 10 kilometres around a protected area as provided in the Wildlife Conservation Strategy, 2002.

6. Moreover, in the case where sensitive corridors, connectivity and ecologically important patches, crucial for landscape linkage, are beyond 10 km width, these should be included in the ESZs.

Leadership Group for Industry Transition (LeadIT)

India and Sweden recently hosted the Industry Transition Dialogue in Stockholm, as a part of their joint initiative i.e. **Leadership for Industry Transition (LeadIT).**

About LeadIT:

- **The Leadership Group for Industry Transition (LeadIT)** gathers countries and companies that are committed to action to achieve **the Paris Agreement.**
- It was **launched by the governments of Sweden and India at the UN Climate Action Summit in September 2019** and is supported by **the World Economic Forum.**
- **Purpose:** LeadIT members subscribe to the notion that energy-intensive industry can and must progress on low-carbon pathways, **aiming to achieve net-zero carbon emissions by 2050.**
- **The Management Board** is made up of representatives from Sweden, India, and the World Economic Forum.
- **The Secretariat** is responsible for managing the work of the Leadership Group and is hosted by Stockholm Environment Institute (SEI).

Members: Currently, the Group has a membership of 16 countries and 19 companies including Dalmia Cement, Mahindra Group and SpiceJet from India.

What is the significance of the LeadIT Initiative?

Industry sectors together contribute about 30% of the total CO_2 emissions. Hence, initiatives like LeadIT to drive low carbon development pathways in the industry sector are critical for achieving the goals of the Paris Agreement.

Lifestyle for the Environment (LiFE) Movement
- Launched by India on the occasion of World Environment Day (5th June).
- The idea of LiFE was introduced by the Prime Minister Modi during **the 26th United Nations Climate Change Conference of the Parties (COP26) in Glasgow in 2021.**
- The idea promotes an environment-conscious lifestyle that focuses on 'mindful and deliberate utilisation' instead of 'mindless and destructive consumption'.
- The Movement aims to utilise the power of collective action and nudge individuals across the world to undertake simple climate-friendly actions in their daily lives.

'Pro-Planet People' (P3): The Mission plans to create and nurture a global network of individuals, namely 'Pro-Planet People' (P3). P3 will have a shared commitment to adopt and promote environmentally friendly lifestyles

Environmental Performance Index 2022
- 2022 Environmental Performance Index (EPI) was released recently, ranking 180 countries on 40 performance indicators in 11 issue categories of climate change performance, ecosystem vitality and environmental health.
- In the index, India has been ranked at 180th position, bottom of the 2022 Index. India has scored lowest among 180 countries.
- Analysis of the environmental performance of these countries for the Index is being done by the researchers at Columbia University and Earth Institute of Yale.
- In the Index 2022, Denmark has been ranked 1st with EPI score of 77.90. It is followed by United Kingdom with score of 77.70. Finland is ranked 3rd, followed by Malta and Sweden.

What are 'green jobs'?
- They are a class of jobs that directly have a positive impact on the planet, and contribute to the overall environmental welfare.

- They're aimed at reducing the negative environmental impact of economic sectors and furthering the process of creating a low-carbon economy.

Jobs involving renewable energy, conservation of resources, ensuring energy efficient means are categorised under the same.

Significance: For India 'green jobs' can prove immensely useful to the country with sectors like renewable energy, waste management, green transport and urban farming all having great potential to employ a trained workforce.

What are carbon bombs?

Definition by the Guardian: It is "an oil or gas project that will result in at least a billion tonnes of CO_2 emissions over its lifetime."

In total, around 195 such projects have been identified world over, including in the US, Russia, West Asia, Australia and India. According to the report, they will collectively overshoot the limit of emissions that had been agreed to in the Paris Agreement of 2015.

What is the plan for 'defusing' carbon bombs?

- The network working towards this goal is called **Leave It In the Ground Initiative (LINGO).**
- Its mission is to "leave fossil fuels in the ground and learn to live without them."
- It believes the root of climate change is the burning of fossil fuels, and the 100% use of renewable energy sources is the solution.
- LINGO aims to organise ground support for protesting such projects, challenge them through litigation, and conduct analysis and studies for the same.

International Liquid Mirror Telescope (ILMT)

- It is located at an altitude of 2,450 metres on **the Devasthal Observatory campus of the Aryabhata Research Institute of Observational Sciences (ARIES) in Nainital district,** an autonomous institute under the Department of Science and Technology, Government of India.
- It is **the only liquid-mirror telescope operational anywhere in the world.**
- It will also hold the unique tag of being **the maiden liquid-telescope globally to be designed exclusively for astronomical purposes.**
- This international telescope facility is the result of collaborative work between astronomers from Canada, Belgium and India.

Ethanol Blending Programme

Ethanol Blended Petrol (EBP) programme was launched in January, 2003. The programme sought to **promote** the use of alternative and environment-friendly fuels and to reduce import dependency for energy requirements.

Ethanol is an agro-based product, mainly produced from a by-product of the sugar industry, namely molasses.

Why in news? Indian Prime Minister briefed, that India has achieved 10% ethanol blending ahead of the deadline.

Significance of Ethanol blending: Mixing 20 percent ethanol in petrol holds multiple attractions for India.

- First, it can potentially **reduce the auto fuel import bill** by a yearly $4 billion, or Rs30,000 crore.
- Second, it also provides for **farmers to earn extra income** if they grow produce that helps in ethanol production.
- Third, is the fact that **ethanol is less polluting** than other fuels and, per the NITI Aayog paper, "offers equivalent efficiency at a lower cost than petrol".
- Use of ethanol-blended petrol **decreases emissions** such as carbon monoxide (CO), hydrocarbons (HC), and nitrogen oxides (NOx), the expert committee noted. Higher reductions in CO emissions were observed with E20 fuel — 50 per cent lower in two-wheelers and 30 percent lower in four-wheelers.

eVTOL

- As the acronym suggests, an **electric vertical take-off and landing (eVTOL)** aircraft is one that uses electric power to hover, take off, and land vertically.
- Most eVTOLs also use what is called as distributed electric propulsion technology which means integrating a complex propulsion system with the airframe.
- This is a technology that has grown on account of successes in electric propulsion based on progress in motor, battery, fuel cell, and electronic controller technologies and also fuelled by the need for new vehicle technology that ensures **urban air mobility (UAM).**

Challenges associated

- As the technology so far is a mix of unpiloted and piloted aircraft, the areas in focus include "crash prevention systems".
- There are also issues such as **ensuring safety** in case of powerplant or rotor failure.
- Aircraft protection from **cyberattacks** is another area of focus.

World's first fishing cat census done at Chilika

- The **fishing cat** (*Prionailurus viverrinus*) is a medium-sized wild cat of South and Southeast Asia, listed as **Vulnerable** on the IUCN Red List. Fishing cat populations are threatened by the destruction of wetlands and have declined severely over the last decade.
- The **fishing cat is the state animal of West Bengal.**
- According to a census conducted by **Chilika Development Authority (CDA) in collaboration with The Fishing Cat Project (TFCP)** the Chilika Lake, Asia's largest brackish water lagoon, **has 176 fishing cats**.

Blue Duke: State butterfly of Sikkim

- During the celebration of World Environment Day 2022; the Chief Minister of Sikkim, P.S. Golay, declared Blue Duke as "State Butterfly of Sikkim".

- Blue Duke is a native butterfly species of Sikkim. It represents Sikkim with its two unique colours. Blue colour represents sky while white colour depicts snow clad mountains of Himalayas. The butterfly is befitting to Sikkim and its unique identity.
- It is found in Himalayas, at an altitude below 1,500 metres. Places where it is commonly found include Pakyong, Hee-Gyathang and Pssingdong in Dzongu, Yangsum in West Sikkim and Lingee in South Sikkim.
- Blue Duke is listed in Schedule 2 of Wildlife Protection Act, 1972. It is a highly protected species of butterfly in the Himalayas.

Economics

National Asset Reconstruction Company Ltd. (NARCL)

- The **National Asset Reconstruction Company Ltd. (NARCL),** set up to take over large bad loans of more than ₹500 crore from banks, will pick up the first set of such non-performing assets (NPAs) in July.
- Setting up of NARCL, **the proposed bad bank for taking over stressed assets of lenders,** was announced in the Budget for 2021-22.
- The plan is to create a bad bank to house bad loans of ₹500 crore and above, in a structure that will contain **an asset reconstruction company (ARC) and an asset management company (AMC)** to manage and recover dud assets.
- The new entity is being created in collaboration with both public and private sector banks. **Majority-owned by state-owned banks,** the NARCL will be assisted by the India Debt Resolution Company Ltd (IDRCL), in turn majority-owned by private banks, in resolution process in the form of a Principal-Agent basis.

What is a 'Fat finger Trade'?

Recently, the National Stock Exchange of India witnessed a freak trade in weekly Nifty 50 options contact. It led to a loss of around Rs 200 crore for traders. Such freak trades are called as Fat finger Trade.

A fat-finger trade is a human error, when an order is punched. Such error can include entering a wrong value with respect to price or quantity or selection of wrong execution action like buy or sell. When the freak trade is executed, the price hits an abnormal level for some second but later returns to the level where it should actually be. For instance, in the recent freak trade, trader executed a sell order at Rs 0.15, in Nifty 14,500 call option.

Impact of Fat-finger trade

Freak trades or fat-finger trade not only result in a loss to trader punching the order. But it also results in loss for others who may have placed a Stop Loss order to their open positions, because Stop Losses may have got triggered due to abnormal price movement.

Sports GK

French Open Tournament 2022

Rafael Nadal won the 14th French Open. With this win, his record extended to 22nd Grand Slam title. He became the oldest male champion at Roland Garros.

French Open is also known as Roland-Garros. It is a major tennis tournament, which is held for two weeks at Stade Roland Garros in Paris, France. It starts in late May, every year. This tournament has been named after French aviator Roland Garros. French Open is the premier clay court championship. It is the only Grand Slam tournament that is held on this surface. It is the second tournament of four annual Grand Slam tournaments. Other three tournaments include Australian Open, The US Open and Wimbledon.

Current Affairs Update (June 14-20)

National

What is Contempt?

While the basic idea of a contempt law is to punish those who do not respect the orders of the courts, in the Indian context, contempt is also used to punish speech that lowers the dignity of the court and interferes with the administration of justice.

Contempt of court can be of two kinds:

1. **Civil**, that is the willful disobedience of a court order or judgment or willful breach of an undertaking given to a court.

2. **Criminal**, that is written or spoken words or any act that scandalises the court or lowers its authority or prejudices or interferes with the due course of a judicial proceeding or interferes/obstructs the administration of justice.

Relevant provisions:

- **Article 129 and 215 of the Constitution** of India empowers the Supreme Court and High Court respectively to punish people for their respective contempt.
- **Section 10 of The Contempt of Courts Act of 1971** defines the power of the High Court to punish contempts of its subordinate courts.
- The Constitution also includes contempt of court as **a reasonable restriction to the freedom of speech and expression under Article 19,** along with elements like public order and defamation.

 Trafficking in Persons (Prevention, Care and Rehabilitation) Bill, 2021

Highlights of the Bill:

1. **The bill proposes stringent punishments** for offenders, including hefty fines and seizing of their properties.

2. The Bill also extends beyond the protection of women and children as victims to now **include transgenders as well as any person who may be a victim of trafficking**.

3. The draft also does away with the provision that a victim necessarily needs to be transported from one place to another to be defined as a victim.

4. **Exploitation has been defined to include,** at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation including pornography, any act of physical exploitation, forced labour or services, slavery or practices similar to slavery, servitude or forced removal of organs etc.

Constitutional & legislative provisions related to Trafficking in India:

1. Trafficking in Human Beings or Persons is prohibited under the Constitution of India under **Article 23 (1).**

2. The **Immoral Traffic (Prevention) Act, 1956 (ITPA)** is the premier legislation for prevention of trafficking for commercial sexual exploitation.

3. **Criminal Law (amendment) Act 2013** has come into force wherein **Section 370 of the Indian Penal Code has been substituted with Section 370 and 370A IPC** which provide for comprehensive measures to counter the menace of human trafficking.

Constitutional provisions regarding President

- **Part V of the Constitution (The Union)** under Chapter I (The Executive) lists out the qualification, election and impeachment of the President of India.
- The President of India is the head of state of the Republic of India.
- The President is the formal **head of the executive, legislature and judiciary of India and is also the commander-in-chief of the Indian Armed Forces.**
- **Article 54**: Election of President
- **Article 55:** Manner of election of President.
- **Article 56**:Term of office of President
- **Article 57**: Eligibility for re-election.
- **Article 58:** Qualifications for election as President

How is the President elected?

- The Indian President is elected through an electoral college system, wherein the votes are cast by national and State-level lawmakers.
- The elections are conducted and overseen by the **Election Commission (EC) of India.**
- The **electoral college** is made up of:

    o All the **elected members** of the Upper and Lower Houses of Parliament (Rajya Sabha and Lok Sabha MPs)

    o **Elected Members** of the Legislative Assemblies of States and Union Territories (MLAs).

Article 300A

- It states that no person shall be deprived of his property save by the authority of law.
- It protects an individual from interference by the State and dispossesses a person of the property unless it is in accordance with the procedure established by law.
- Right to Property is no longer a fundamental right, rather it is a Constitutional Right and now exists in Article 300A.
- Article 300A was inserted shortly after the Emergency Through the Constitution *44th Amendment Act of1978.*
- In *T Plantation Pvt. Ltd. Vs. State of Karnataka, 2011* the SC held that public purpose was a precondition for deprivation of a person of his property under Article 300A of the Constitution and the right to claim compensation was also inbuilt in that Article.
- The right to property under Article 300A is a human right(former Supreme Court judge)

Census postponed

- Normally, before every Census, states are required to provide information on changes in the number of notified districts, villages, towns and other administrative units such as tehsils, talukas and police stations to the **Registrar General of India (RGI)**. After this RGI freezes the administrative boundaries so that census tasks can begin.
- However, this time, RGI has **extended the deadline for freezing administrative boundaries to December 31, 2022.** Since the Census can only begin a few months after the administrative boundaries are frozen, the possibility of a Census in 2022 is ruled out.
- The population census is a **Union subject under Article 246 of** India Constitution. It is listed as serial number 69 of the **seventh schedule of the constitution.**
- **First Non-synchronous Census: It was conducted in India in 1872 during the reign of Governor-General Lord Mayo.**

What is the Agnipath scheme?

Under the new scheme, **around 45,000 to 50,000 soldiers** (will be called '**Agniveers'**) will be recruited annually (for a short period**,** and most will leave the service in just four years. Of the total annual recruits, only **25 per cent** will be allowed to continue for another 15 years under permanent commission.

Eligibility: Aspirants between the ages of **17.5 years and 21 years** will be eligible to apply. The scheme is only applicable to personnel below officer ranks.

Recruitment: **Twice** a year through rallies. The recruitment will be done on **"all India, all class"** recruitment to the services (from any caste, region, class or religious background). Currently, recruitment is based on **'regiment system'** based on region and caste bases.

Training period: 6 months + deployment for three and a half years.

Salary and Benefits:

- Recruits will get starting salary of Rs 30,000, along with additional benefits which will go up to Rs 40,000 by the end of the four-year service.
- During this period, **30 per cent of their salary** will be set aside under a **Seva Nidhi programme**, and the government will contribute an equal amount every month, and it will also accrue interest. At the end of the four-year period, each soldier will get Rs 11.71 lakh as a lump sum amount, **which will be tax-free**.
- For 25% of soldiers, who are re-selected, the **initial four-year period** will not be considered for **retirement benefits**.

Benefits

- **Make the armed forces much leaner and younger**: For India's over 13-lakh strong armed forces, the current average age profile is **32 years**. It is envisaged it will come down by about 4-5 years by implementation of this scheme

- **Reduce the defence pension bill**: The government has either allocated or paid more than Rs. 3.3 lakh crore in defence pension since 2020.

- **Create "future-ready" soldiers**: A youthful armed forces will allow them to be easily trained for new technologies.

- **Increased employment opportunities and higher skilled workforce**

Concerns regarding the scheme:

- **Present benefits and security of jobs will be lost**.

- **Doubt about training**

- **Erosion of loyalty:** "All India, all class" recruitment to the services may lead to the erosion of the loyalty that a soldier has for his regiment.

International

Australia –India water Security initiative (AIWASI)
- **AIWASI** is a project Under **South Asia Water Security Initiative (SAWASI)** of Department of Foreign Affairs and Trade (DFAT), Australia.
- It aims to work towards **the Water Sensitive City vision** which is based on holistic management of the integrated water cycle.

- It will **undertake investments** that provide urban water services support to disadvantaged communities to access reliable, safe water and sanitation services.
- AIWASI project is also **a 'living laboratory'** with multiple educational, social and environmental benefits like water literacy of students and the community, creation of green spaces etc.
- The **Ministry of Housing and Urban Affairs(MoHUA)** and **the Government of Australia** have signed an MoU for Technical Cooperation in **urban water management.**

First country in Asia to decriminalise cannabis

- **Thailand** has become the first country in Asia to decriminalize Marijuana which is also known as Cannabis.
- It has decriminalized Marijuana with the aim of boosting its agriculture and tourism sectors.
- Under decriminalization, it is no longer a crime in Thailand to grow and trade marijuana and hemp products, or use parts of the plant to treat illnesses.
- **In 2018, Canada became the first G20 country to legalize the recreational use of cannabis. Uruguay** legalized the recreational use of marijuana for all adults above the age of 18 in 2013.

Why is BIMSTEC important for India?

June 6 marked the completion of 25 years since the 1997 Bangkok Declaration launched a modest grouping (of Bangladesh, India, Sri Lanka and Thailand), with the acronym, **BIST-EC.** Three countries (Nepal, Bhutan and Myanmar) joined it later to make it the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation **(BIMSTEC)**.

As the region's largest economy, India has a lot at stake.

- BIMSTEC connects not only South and Southeast Asia, but also the ecologies of the Great Himalayas and the Bay of Bengal.
- For India, it is a natural platform to fulfil our key foreign policy priorities of 'Neighborhood First' and 'Act East'.
- For New Delhi, one key reason for engagement is in the vast potential that is unlocked with stronger connectivity. Almost 300 million people, or roughly one-quarter of India's population, live in the four coastal states adjacent to the Bay of Bengal (Andhra Pradesh, Orissa, Tamil Nadu, and West Bengal).
- From the strategic perspective, the Bay of Bengal, a funnel to the Malacca straits, has emerged a key theatre for an increasingly assertive China in maintaining its access route to the Indian Ocean.
- As China mounts assertive activities in the Bay of Bengal region, with increased submarine movement and ship visits in the Indian Ocean, it is in India's interest to consolidate its internal engagement among the BIMSTEC countries.

UNGA: India-sponsored Resolution on Multilingualism

The United Nations General Assembly (UNGA) adopted an India-led resolution on multilingualism mentioning Hindi language for the first time. This resolution encourages United Nations to continue disseminating important communications and messages in official and non-official languages, including Hindi. UN resolution also mentions Urdu and Bangla for the very first time

Multilingualism is significant for United Nations, because it is factor in harmonious communication among people. It is an enabler of multilateral diplomacy. Multilingualism at this forum ensures effective participation of all in the work of organisation, greater efficiencies and transparency.

The latest official languages of UN include- Arabic, English, Spanish, Chinese, Russian and French. English and French are the working languages of United Nations Secretariat.

European Parliament Ban on Petrol and Diesel Cars

- Members of the European Parliament recently voted to ban the sale of new petrol and diesel cars by 2035.
- This voting was held on an amendment, that would have allowed some auto emissions through new vehicles after 2035. This amendment was rejected by Members of Parliament.
- European Union assembly voted in Strasbourg, France for requiring the automakers to cut 100 percent carbon-dioxide emissions by the middle of next decade.
- This would have amount to restrictions on the sale of new cars powered by gasoline or diesel, in 27-nation of European Union.
- To weaken the target to cut CO2 by 90% by 2035 were rejected by some lawmakers.

Why this happened?

Europe seeks to ban the sale with the aim of stepping up the fight against climate change by faster development of electric vehicles.

I2U2 summit

The US President will host a virtual summit with the Prime Minister of India, Israel Prime Minister and UAE President during his visit to West Asia from July 13 to 16. The new grouping will be called "**I2U2**" — "**I" for India and Israel and "U" for the US and UAE.**

Previously called, the **'International Forum for Economic Cooperation,** the group is already being dubbed the **'New Quad' or the 'Middle-Eastern Quad' along the lines of the Quadrilateral Security Dialogue (QSD).**

Science-Tech & Environment

Commission for Air Quality Management (CAQM)

- The Commission was first formed by an ordinance in October 2020.
- The erstwhile **Environment Pollution (Prevention and Control) Authority or EPCA** had been dissolved to make way for the Commission.
- The Commission will be **a statutory authority.**
- The Commission will supersede bodies such as the central and state pollution control boards of Delhi, Punjab, Haryana, UP and Rajasthan.
- In 2021, the Parliament approved **the Commission for Air Quality Management in National Capital Region and Adjoining Areas Bill.**

Composition:

Chairperson: To be chaired by a government official of the rank of Secretary or Chief Secretary.

- The chairperson will hold the post for three years or until s/he attains the age of 70 years.
- It will have members from several Ministries as well as representatives from the stakeholder States.
- It will have experts from the **Central Pollution Control Board (CPCB)**, **Indian Space Research Organisation (ISRO)** and Civil Society.

Powers and functions:

1. It will have the powers to issue directions to these state governments on issues pertaining to air pollution.

2. It will entertain complaints as it deems necessary for the purpose of protecting and improving the quality of the air in the NCR and adjoining areas.

3. It will also lay down parameters for control of air pollution.

4. It will also be in charge of identifying violators, monitoring factories and industries and any other polluting unit in the region, and will have the powers to shut down such units.

5. It will also have the powers to overrule directives issued by the state governments in the region, that may be in violation of pollution norms.

What are FRBs?

FRBs are **bright flashes of light that appear for a few milliseconds and then vanish.** The first FRB was discovered in 2007. Since then 140 more were discovered until June 2021.

How are they produced?

The astronomers have suggested that the candidates for the sources of FRBs are **the superdense neutron stars left over after a supernova, or magnetars** (neutron stars with ultra-strong magnetic fields).

What are Magnetars?

A magnetar is **a type of neutron star.** They are the most powerful magnets in the cosmos. Their magnetic fields are 5,000 trillion times more powerful than that of the Earth.

Ramsay Hunt Syndrome

- **Ramsay Hunt Syndrome –** a viral disease has temporarily paralysed one side of Pop sensation Justin Bieber's face.
- Ramsay Hunt Syndrome is neurological disease in which a virus – **Varicella Zoster –** causes inflammation of the nerves involved in facial movements.
- **The Varicella Zoster Virus (VZV)** is the same virus that causes chickenpox and shingles.
- When the nerves get inflamed, they lose their ability to function, leading to temporary facial palsy or paralysis.
- **The symptoms include** painful, red rash and blisters in and around the ear, and facial paralysis on the same side.
- It is treated using anti-viral drugs, steroids and physiotherapy.

Chelonoidis phantasticus: Giant Tortoise species

A giant tortoise, which was found alive in 2019, has now been confirmed to belong to a Galapagos species long believed extinct. The giant species has been named Fernanda, because Fernandina Island is home to species. Fernandina Island is the third largest as well as youngest island of the Galapagos Islands. These islands are a part of Republic of Ecuador and are an archipelago of volcanic islands.

Chelonoidis phantasticus means "fantastic giant tortoise". It is commonly called as Fernandina Island Galapagos giant tortoise. The species was discovered in 1906 and thought extinct. But a single female was discovered on Fernandina Island in February 2019. In May 2021, a genetic test carried to confirm that the single tortoise is from a subspecies Chelonoidis niger phantasticus.

LaMDA

Google's LaMDA (or Language Model for Dialogue Applications)-a language model created by google AI has achieved the an ability to engage in a free-flowing conversation. Google believes that LaMDA has become a **sentient program** meaning it has started **reasoning like a human being**.

Web 1.0, Web 2.0 and Web 3.0

- Web 1.0 is the "read-only Web," Web 2.0 is the "participative social Web," and Web 3.0 is the "read, write, execute Web."
- Web 1.0. Web 1.0 was all about reading, and getting information.
- Web 2.0 was all about reading, writing, and creating. So, users joined social platforms, and these platforms got big because of this created content.
- Web 3.0 is all about reading, writing and owning. So, builders and creators can now own a piece of their own community, through NFTs, tokens etc.

What is Web 5.0?

- Being developed by Dorsey's Bitcoin business unit, The Block Head (TBH).
- Simply put, **Web 5.0 is Web 2.0 plus Web 3.0 that will allow users to 'own their identity'** on the Internet and 'control their data'.
- **Both Web 3.0 and Web 5.0 envision an Internet without threat of censorship –** from governments or big tech, and without fear of significant outages.

Anocovax

- The Ministry of Agriculture unveiled India's first Covid-19 vaccine "Anocovax" for animals.
- Vaccine has been developed by Hisar-based National Research Centre on Equines.
- It can protect animals against Delta and Omicron variants of coronavirus.
- The vaccine can be used in dogs, leopards, mice, lions, and rabbits.
- It is an inactivated vaccine, that has been developed using an infectious part of the Delta variant.
- Apart from that, the vaccine uses Alhydrogel as an adjuvant to boost immune response.
- This is the first Covid-19 vaccine developed in India, for animals.

Economics

State Food Safety Index

Food Safety and Standards Authority of India (FSSAI)'s 4th **State Food Safety Index (SFSI)** was released on the occasion of **World Food Safety Day (June 7)**. It seeks to measure the performance of States across five parameters of **food safety.**

The index was developed by **FSSAI (Food Safety and Standards Authority of India)** in 2018-19 to measure the performance of states on five significant parameters of Food Safety. **The parameters include** Human Resources and Institutional Data, Compliance, Food Testing – Infrastructure and Surveillance, Training & Capacity Building and Consumer Empowerment.

Performance of various states:

- **Tamil Nadu topped** the State Food Safety Index followed by Gujarat and Maharashtra.
- Among Smaller States, Goa stood first, followed by Manipur and Sikkim.
- Among UTs, Jammu and Kashmir, Delhi and Chandigarh secured first, second and third ranks.

India 7th in FDI inflows: Unctad

The United Nations Conference on Trade and Development's (Unctad) has released **the annual World Investment Report.**

Highlights of the Report:

1. India is ranked seventh despite a 30% decline in foreign direct investment (FDI) into the country.

2. The United States ($367 billion) remained the top recipient of FDI.

3. China ($181 billion) and Hong Kong ($141 billion) also retained second and third position respectively.

4. Among the top 10 host economies, only India saw a decline in its inflows.

5. However, outward FDI from India rose 43 per cent to $15.5 billion in 2021.

About Unctad:

- It is **a permanent intergovernmental body established by the United NationsGeneral Assembly in 1964.**
- It is **part of the UN Secretariat.**
- It **reports to the UN General Assembly and the Economic and Social Council,** but **has its own membership, leadership, and budget.**
- It is also **a part of the United Nations Development Group.**

The concerns raised by India at WTO

- **On issues of Fisheries and E-commerce**: Revmoval of subsidies will hurt fishermen. So, India demanded to make extensive exceptions on a 20-year negotiation to cur harmful government fishery subsidies. India is seeking broad exemptions for its fishing industry, including a **25-year phase-in period** and a **200-nautical-mile exclusion** for its artisanal anglers.

- **On E-commerce:** India fears that new rules could provide the pretext for unfair mandatory market access to foreign companies. This will hurt the rapidly growing domestic e-commerce sector, which is still developing in India.
- **On Food:** WTO should renegotiate subsidy rules for government-backed food purchasing programs aimed at feeding poor citizens in developing and poor countries. India wants assurances that its **public stock-holding program**, which buys exclusively from the nation's farmers and has exported in the past, cannot be challenged at the WTO as illegal.
- **On vaccines**: India wants to waive IP rights for vaccines and extend the WTO ban on digital duties
- **Special and differential treatment (S&D) must continue,** as such treatment has been a treaty-embedded and non-negotiable right for all developing members
- **Principles are sacrosanct**: Ensure that multilateral rule-making processes are neither bypassed nor diluted. The principles of **non-discrimination, predictability, transparency** and most importantly, the tradition of decision-making by consensus need to remain sacrosanct.

Current Affairs Update (June 21-25)

National

Inter-State Council (ISC)
It is a mechanism that was constituted "**to support Centre-State and Inter-State coordination and cooperation in India**".

Established: Under **Article 263** of the Constitution, which states that the **President** may constitute such a body if a need is felt for it.

Function: inquiring into and advising on disputes between states, investigating and discussing subjects in which two states or states and the Union have a common interest, and making recommendations for the better coordination of policy and action.

Members: PM (chairman), Chief Ministers of all states and UTs with legislative assemblies, and Administrators of other UTs. Six Ministers of Cabinet rank in the Centre's Council of Ministers, nominated by the Prime Minister, are also its members.

Last month ISC was reconstituted: The body will now have **10 Union Ministers** as permanent invitees, and the standing committee of the Council has been reconstituted with Home Minister Amit Shah as Chairman. The Finance minister and the Chief Ministers of Maharashtra, UP, and Gujarat are some of the other standing committee members

Why in news? Tamil Nadu Chief Minister M K Stalin wrote to Prime Minister, asking that **at least three meetings** of the Inter-State Council should be held every year to "**strengthen the spirit of cooperative federalism**".

Anti-defection law
- The *Tenth Schedule* – popularly known as the Anti-Defection Act – was included in the Constitution via the *52nd Amendment Act, 1985* and sets the provisions for disqualification of elected members on the grounds of defection to another political party.
- It was a response to the toppling of multiple state governments by party-hopping MLAs after the general elections of 1967.
- However, it allows a group of MP/MLAs to join (i.e. merge with) another political party without inviting the penalty for defection. (*At least two-thirds of the members of a party have to be in favour of a "merger" for it to have validity in the eyes of the law).*
- It does not penalize political parties for encouraging or accepting defecting legislators.

- The decision on questions as to disqualification on the ground of defection is referred to the Chairman or the Speaker of such House, which is subject to 'Judicial review'.

Election Commission wants people to run from one seat

- The *Election Commission* has made a fresh push for amending the law to bar people from contesting more than one seat. It said that if it cannot be done, then a hefty fine should be imposed on those vacating one of the constituencies and forcing a bypoll.
- As per *Section 33(7) of the RPA (Representation of the People Act), 1951, one candidate can contest from a maximum of two constituencies.*

Issues:

- *One-Act Negates another*: Since no Candidate can represent two Constituencies, the idea of this system appears to be illogical and ironic.
- *By-election Strains Public Exchequer:* After sacrificing one of the Constituencies, a by-election is automatically triggered immediately after the general election.
- *Voters Lose Interest:* Repeated elections are not only unnecessary and costly, but they will also cause voters to lose interest in the electoral process.

Judicial Review vs Judicial Overreach

Judicial Review: It is the power exerted by the courts of a country to examine the actions of the legislatures, and executive and administrative arms of government and to ensure that such actions conform to the provisions of the nation's Constitution.

Judicial Overreach: In simpler terms, it is when the judiciary starts interfering with the proper functioning of the legislative or executive organs of the government. Judicial Overreach is **undesirable in a democracy** as it breaches the principle of **separation of powers**.

PM e Vidya

Central Institute of Educational Technology (CIET), a constituent unit of NCERT, gets UNESCO recognition for use of ICT in school education. It has won **UNESCO's King Hamad Bin Isa Al-Khalifa Prize** for the year 2021.

Pradhan Mantri e-VIDYA (launched in 2020) is a programme that will provide multimode access to digital education. It consists of many educational TV channels, radio podcasts, and e-learning content.

ONORC Scheme

With the adoption of "**One Nation One Ration Card (ONORC)** in Assam, this scheme has become operational in entire India. The ONORC scheme is nationalising of ration card, basically. Under the scheme, ration cards have been nationalised using Aadhaar seeding. This enables the beneficiary to

purchase food grains from any fair price shop across the country. Thus, the scheme assures the claim to food security irrespective of residence of beneficiary. This scheme was launched in August 2019.

International

West Seti project

India will be taking over an ambitious hydropower project in Nepal **West Seti** nearly four years after China withdrew from it, ending a six-year engagement between 2012 and 2018. India's National Hydro Power Corporation has already begun preliminary engagement of the site in far-western Nepal following Indian Prime Minister Narendra Modi's visit to Lumbini

The proposed 750-megawatt West Seti Hydropower Project is to be built on the **Seti river in far-western Nepal.** West Seti and Seti river, a joint project, has the capacity to generate 1200 MW of electricity.

Afghanistan Earthquake

- **Deadliest Afghanistan quake** in decades kills over 1,000 people. The quake originated near the **city of Khost**, which is close to the country's border with Pakistan and about 160 kilometres (100 miles) south of the Afghan capital, Kabul.
- Afghanistan is earthquake-prone because it's located in the mountainous Hindu Kush region, which is part of the **Alpide belt — the second most seismically active region in the world after the Pacific Ring of Fire.**
- Slow **collisions between the Indian subcontinent and the Eurasian tectonic plate** are thought to be the cause of the extremely-common earthquakes in this region.

Sanctions under the UN Security Council Resolution 1267

- India and US proposal to designate **Abdul Rehman Makki** (brother-in-law of Hafiz Saeed, founder of Lashkar-e-Toiba) under the **UN Security Council Resolution 1267** were put on 'technical hold' by China.
- Beijing's "technical hold", which means the proposal cannot come up **for another six months. China's double standards**: Its technical hold shows China is having "double standards" on terrorism and related activities.
- **Resolution 1267** provides for sanctions against individuals and entities that **support or finance the acts or activities of ISIL, Al-Qaida, associated individuals**, groups, undertakings and entities. **LeT, JuD, Hafiz Saeed, Jaish-e-Mohammed** and it's head **Masood Azhar**are listed under 1267.

Western Sahara Dispute

Algeria announced to suspend its treaty of "friendship, good neighbourliness, and co-operation", that it signed with Spain 20 years ago. This deal was signed in 2002, for promoting dialogue and cooperation on economic, political, financial, defence and education issues.

Spain has now changed its position to support UN-sponsored referendum to settle the decolonization in region. The country considers autonomy initiative as basis, realistic and credible to resolve the dispute. Autonomy initiative was presented by Morocco in 2007.

History:

- The Western Sahara dispute was started in 1884, with colonisation of this region by Spain. In 1975, Spain decided to withdraw from Western Sahara. following this, the region descended into a conflict between Morocco, Mauritania and Polisario Front. All of them were trying to control the region.
- Polisario Front decided to establish Sahrawi Arab Democratic Republic (SADR) in Western Sahara. However, SADR did not get Western recognition.
- In 1975, this matter came to International Court of Justice. Court decided that, neither Morocco nor Mauritania could claim sovereignty on Western Sahara region. Thus, it called for decolonization of the region.

Massive Wild Fires in Spain and Germany

- Germany, Spain, and Greece have been facing worst of Europe's extraordinary heat wave. Apart from that, wildfires have also ravaged the three countries.
- The Sierra de la Culebra Mountain range in Spain is affected. Fires have destroyed almost 25,000 hectares. This had led to evacuation of residents of 18 municipalities.
- Wildfires are also raging in Tarragona, Lleida, and Garraf in north-eastern region of Catalonia.
- Wildfire is a major fire which breaks out unpredictably in combustible environments like dry bush or forests. They often burn uncontrollably across a large area and length of time. Forest fires are triggered by natural factors like prolonged dry and hot weather, or lightning strikes, or human carelessness. They require fuel, oxygen and heat to grow and spread. They can be extinguished when at least one element is removed.

14th BRICS Summit

- 14th BRICS Summit will be held in virtual mode, on June 23, 2022.
- Summit will bring together Xi Jinping, Russian President Vladimir Putin, Prime Minister Narendra Modi, President of South Africa Cyril Ramaphosa and President of Brazil Jair Bolsonaro.
- BRICS Summit 2022 will be held under the theme of "Foster High-Quality BRICS Partnership, Usher in a New Era for Global Development."

- During the meeting, heads of state will discuss intra-BRICS cooperation in areas like trade, counter-terrorism, traditional medicine, health, environment, reform of multilateral institutions and combating covid-19 pandemic.

Science-Tech & Environment

GSAT-24 satellite

- India launched its GSAT-24 satellite, that has been built by ISRO for NewSpace India Limited (NSIL)
- **Launch site:** Kourou in French Guiana, in South America
- **Launch vehicle:** Ariane 5 space launch vehicle, by French company Arianespace
- **Nature of satellite:** Communication satellite
- **Application:** The satellite will provide coverage to pan-India, to meet DTH application needs.
- The GSAT-24 satellite was launched on French rocket Ariane 5, because currently India does not have space-launch rocket which can lift a satellite weighing over 4 tons into geostationary orbit. India's most powerful rocket GSLV MK3 is capable of lifting a maximum of 4 tons into geostationary orbit. It is not enough to life a satellite over 4 ton like GSAT-24 (4180 kg satellite).

India Ranks Third in Renewable Energy Installations in 2021

India ranked **third in renewable energy installations in 2021**, after China and Russia, according to a Renewable 2022 Global status report published by REN21 (Renewable Energy Policy Network for the 21st Century).

REN21 is the only global renewable energy community of actors from science, governments, NGOs and industry that keep track of global development in renewable sector.

India installed **15.4 gigawatts (GW)** of renewable energy projects in 2021. India ranked **fourth** in total solar installations (60.4 GW) for the year – overtaking Germany (59.2 GW) for the first time.

On world: Overall countries added around 3,146 GW of total installed renewable power capacity in 2021 – a rise of 11% from the previous year.

BG-2 RRF

- Haryana government has issued a no-objection certificate (NOC) to seed major Mahyco to conduct field trials on **BG-2 RRF**, a herbicide-tolerant and insect-resistant variety of **BT cotton**. BG-2 RRF can provide protection against devastating pest attacks such as American Bollworm.
- India has allowed commercial use of BG-1 and BG-2 GM cotton in the country while the approval for the BG-2 RRF has been pending at various stages.

- Central government had for the **first time exempted certain types of genome-edited crops** from the stringent regulations applicable on genetically modified or GM crops, paving the way for further R&D on them.

Banning single-use plastic

The Centre has banned the use of **'single-use-plastic'** from **July 1** and now defined a list of single-use plastic items that will be banned from this date.

As per MoEFCC: The manufacture, import, stocking, distribution, sale and use of following single-use plastic, including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the 1st July, 2022.

Single-use-plastic refers to plastic items that are used once and discarded. E.g., plastics used in packaging of items, bottles (shampoo, detergents, cosmetics), polythene bags, face masks, coffee cups, cling film, trash bags, food packaging etc.

What are the items being banned?

- **Central Pollution Control Board (CPCB) have announced a ban on –** earbuds; balloon sticks; candy and ice-cream sticks; cutlery items including plates, cups, glasses, forks, spoons, knives, trays; sweet boxes; invitation cards; cigarette packs; PVC banners measuring under 100 microns; and polystyrene for decoration.
- **Polythene bag:** The Ministry had already banned polythene bags **under 75 microns** in September 2021, expanding the limit from the earlier 50 microns. From December 2022, the ban will be extended to polythene bags **under 120 micron**
- **Sachets**: According to the **Plastic Waste Management Rules, 2016**, there is also a complete ban on sachets using plastic material for storing, packing or selling gutkha, tobacco and pan masala.

How are other countries dealing with single-use plastic?

- **Consensus on SUP in UN**: This year, 124 countries, parties to the United Nations Environment Assembly, including India, signed a resolution to draw up an agreement which will in the future make it **legally binding for the signatories to address the full life of plastics from production to disposal**, to end plastic pollution. **68 countries** have plastic bag bans with varying degrees of enforcement

- **Bangladesh**: Bangladesh became the first country to **ban thin plastic bags** in 2002.

- **China**: China issued a ban on plastic bags in 2020 with a phased implementation.

- **EU**: EU bans certain single-use plastics for which alternatives are available.

Giant Stingray

- Scientists have caught the world's largest recorded freshwater fish, named giant stingray, in the Mekong River of Cambodia.
- It measured almost four metres from snout to tail while weighed under 300kg.
- Giant Stingray was captured under "Wonders of the Mekong" project, which is a joint Cambodian-US research project.
- Stingrays are a group of sea rays. They are cartilaginous fish related to sharks
- The earlier record for a freshwater fish was a 293kg Mekong giant catfish. It was discovered in 2005, in Thailand.

Economics

Document 'Payments Vision 2025'

As part of its Vision 2025, the RBI will attempt

- Regulation of big tech and fintech in the payments space
- Explore guidelines on payments that involve BNPL(buy now pay later) services
- Work towards the introduction of CBDC (central bank digital currency)
- Seek inclusion of rupee in continuous linked settlement (CLS) (CLS provides protection for cross-currency settlement in 18 currencies)

Why the need for such regulation?

- **To avoid systemic concerns:** Big Tech's play in lending activities using customer data and sophisticated algorithms can lead to "systemic concerns" like **over-leverage and inadequate quality assessment of borrowers.**

- **Other Concerns:** The entry of firms like Google, Amazon and Meta, which are referred to as Big Tech, also poses concerns related to **competition, data sharing, data protection and operational resilience** of critical services in situations where banks and NBFCs utilise their services.

- **Last year's Financial Stability Report**, had raised some broad concerns, including about such companies' products **accepting deposits for some regulated financial sector entities**.

- **Sensitive user data**: Big-tech and fintech companies offer sophisticated services which use sensitive data from various sources to issue loans to users, including those not having collateral or credit history.

- **Issues of lending through digital channels, including mobile apps:** Issues related to unfair practices, data privacy, documentation, transparency, and breach of licensing conditions.

- **Multiple regulators**: The fintechs' require multiple regulators to work together because a single technology like blockchain or de-centralised finance (DeFi) can have multiple uses coming under different watchdogs' ambit.

- **Anonymity**: DeFi poses unique challenges to regulators as it is anonymous. The lack of a centralised governance body and legal uncertainties can make the traditional approach to regulation somewhat ineffective.

WTO strikes global trade deals

The World Trade Organization's164 members (12th Ministerial Conference) in a historic step approved a series of trade agreements including commitments on fish, a partial waiver of intellectual property (IP) rights for COVID-19 vaccines, and pledges on health and food security.

Important Deals struck:

- **On Fisheries:** prohibited certain forms of fisheries subsidies that contribute to overcapacity and overfishing, and eliminates subsidies that contribute to IUU-fishing **recognizing that appropriate and effective special and differential treatment for developing country Members and least developed countries.**

  - The accord to curb fishing subsidies is only the **second multilateral agreement setting new global trading rules struck in the WTO's 27-year history** and is far more ambitious than the first, which was designed to cut red tape.

  - The fishing subsidies deal has the potential to reverse collapsing fish stocks

- **On partial IP waiver**: Allowed the developing countries to produce and export Covid vaccines

- **Maintaining a moratorium on e-commerce tariffs:** It is considered vital to allow the free flow of data worldwide.

Google tax

India's equalization levy, or the so-called Google tax on offshore digital economy firms, is set to stay **beyond 2023**, as a global tax deal for digital economy taxation and a plan for a minimum global corporate tax rate of 15% has faced implementation challenges.

Equalisation Levy is **a direct tax, which is withheld at the time of payment by the service recipient**. India introduced 'Equalisation Levy 2.0' (EL 2.0) vide Finance Act 2020, beginning 1 April 2020. The levy

applies **to non-resident e-commerce operators (ECO) for consideration received from the supply of goods or services**

India: Fourth in Global Gold Recycling

- According to a report by World Gold Council (WGC), India has become the fourth largest gold recycler worldwide. In 2021, it has recycled 75 tonnes of gold.
- In the report, China was ranked first in global gold recycling chart after recycling 168 tonnes of gold in 2021.
- It is followed by Italy at second position, with recycling of 80 tonnes gold and US at third position, with recycling of 78 tonnes in 2021.

Fiscal deficit & current account deficit

Fiscal deficit: The fiscal deficit is essentially the **amount of money that the government has to borrow in any year to fill the gap between its expenditures and revenues**.

Higher levels of fiscal deficit typically imply the **government takes money from the market**, thus leaving less money for private sector for its own investment needs (also called **crowding out** effect)

CAD: It has two parts:

- **Trade account (Import and Export of goods):** If a country imports more goods than it exports, it is said to have a trade account deficit.

- **Invisible account (Import and export of services)**

If the net effect of a trade account and the invisibles account is a deficit, then it is called a **current account deficit or CAD**. A widening CAD tends to weaken the domestic currency because a CAD implies more dollars (or foreign currencies) are being demanded than rupees.

Why in news? RBI in its **'Monthly Economic Review'** report highlighted two key areas of concern for the Indian economy: **the fiscal deficit and the current account deficit (or CAD).**

Hybrid Securities

A hybrid security is **a single financial security that combines two or more different financial instruments**. Hybrid securities are securities that have a **combination of debt and equity characteristics**. The original hybrid security was preferred stock, representing ownership in a company (like equity) but having fixed payments (like bonds). E.g., Convertible Bonds

The Securities and Exchange Board of India (SEBI) has set up an advisory committee on hybrid securities, to make recommendations for the growth of hybrid securities. It is a 20-member committee, chaired by K V Kamath. K V Kamath is the Chairperson of National Bank for Financing Infrastructure and Development.

Dutch disease

Dutch Disease in economics refers to **a phenomenon wherein a country witnesses uneven growth across sectors due to the discovery of natural resources, especially large oil reserves**

Phenomenon: When a country discovers natural resources and starts exporting them to the rest of the world, it causes the **exchange rate of the currency to appreciate** significantly and this, in turn, **discourages the exports** from other sectors while encouraging the import of **cheaper alternatives**.

eg., the Netherlands (1960s) discovered **gas reserves in the North Sea**. The subsequent export of oil and the appreciation of the Dutch currency made Dutch exports of all non-oil products less competitive on the world market. Unemployment rose **from 1.1% to 5.1%** and capital investment in the country dropped. Following this, over the years, the country witnessed a **downfall in the industrial sector**.

Sports GK

Chess Olympiad Games

For the first time, this year, **India is also going to host the Chess Olympiad games**. The event was originally scheduled in Russia

History of Chess: India is considered the birthplace of chess. Its origin can be traced back nearly 1500 years to its earliest known predecessor, called chaturanga, in India. From India, it spread to Persia. The game evolved roughly into its current form by about 1500 CE.

Current Affairs Update (June 26-30)

National

Regulating misleading advertisements

The Central Consumer Protection Authority has come up with the **Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements, 2022.**

1.Bait advertising: It means **enticing consumers to buy the product at a lower price**.

High Tech:-Computers and other high-tech items are easy to bait and switch because many people don't understand the technology. So, when a salesperson claims that the only difference between this model and the one advertised is that the manufacturers are different, the consumer believes it. They are regulated in India.

2.Surrogate advertisements: They refer to any advertisement that promotes regulated products, like **cigarettes and alcohol**, in the **disguise of another product.**

The guidelines **prohibit** the use of surrogate advertising.

3.Free advertisements: The advertising method that helps brands get free promotion and boost online presence without any high price tags**.** eg. Do a free product giveaway or contests; answer quora questions.

4.Advertisements targeted at children and youth: The guidelines **prohibit the advertisement of such products that will harm kids in any way**.

The guidelines also **prohibit advertisements that can develop a negative image of the body** in the minds of the children**. E.g** Fairness cream etc. Advertisements also **cannot give the impression that a product is better than the traditional food that children usually consume at home. E.g** Maggi, Yippee noodles, etc.

Penalty (derived from the Consumer Protection Act): It prescribes **monetary penalties to the tune of Rs 10 lakh for the first offence, which can go up to Rs 50 lakh for subsequent offences,** and imprisonment of up to two years under Section 89 of the Act.

LGBTIQ+

LGBTQ is an acronym for lesbian, gay, bisexual, transgender and queer or questioning. These terms are used to describe a person's sexual orientation or gender identity.

Difficulties Faced by LGBTIQ+ Community:

- **Heterosexuality**: They are experiencing intolerance, discrimination, harassment, and the threat of violence due to their sexual orientation than those that identify themselves as heterosexual.

- **In-equality & Violence:** They face inequality and violence in every place around the world. They face torture from people who mock them and make them realize that they are different from others.

- **Deprived in Rights:** In many countries, the rights enjoyed by opposite-sex couples are not enjoyed by same-sex couples. They are prohibited from those rights.

- **Isolation from society:** They gradually develop low self-esteem and low self-confidence and become isolated from friends and family.

- **Conflict in Family itself:** Lack of communication between LGBT children and their parents often leads to conflict in the family. Many LGBT youths are placed in foster care or end up in juvenile detention or on the streets.

- **Racial Discrimination**: Additionally, lesbian, gay, bisexual and transgender people face poverty and racism daily. They suffer from social and economic inequalities due to continuous discrimination in the workplace.

Uranium deposit in Rajasthan

- Huge reserves of uranium was found at Rohil (Khandela Tehsil) in Sikar district, which is over 120 km from the state capital Jaipur.
- **Status**: After **Jharkhand and Andhra Pradesh**, Rajasthan is the third state where uranium — which is considered one of the rare minerals in the world — has been found.
- **World**: The largest producers of uranium in the world are **Kazakhstan, Canada and Australia** India imports uranium mostly from **Kazakhstan and Canada**
- **Use**: Uranium is mainly used for generating electricity and also for nuclear energy, medicines, defence equipment and photography

International

Partners in the Blue Pacific

The US and its allies — **Australia, New Zealand, Japan and the United Kingdom** — have launched a new initiative called '**Partners in the Blue Pacific' for "effective and efficient cooperation**" with the region's small island nations.

The PBP is a five-nation "**informal mechanism**" to support Pacific islands and boost diplomatic, and economic ties in the region.

Aim: To enhance "**prosperity, resilience, and security**" in the Pacific through closer cooperation. Through the PBP, these counties will direct more resources here to **counter China's aggressive outreach.**

How is China trying to transform its ties in the Pacific?

- **China signed a security pact with the Solomon Islands**: It raised serious concerns about the Chinese **military getting a base** in the southern Pacific, close to the US island territory of **Guam**, and right next to Australia and New Zealand.

- **Common Development Vision:** It is an agreement between **10 Pacific nations**, which will help China to work with "**traditional and non-traditional security**," and expand law enforcement cooperation with these countries.

Why is the Pacific region strategically important?

- **US Department of Defence Report (2019):** It called the Indo-Pacific the "**single most consequential region for America's future".**

- **Huge geography**: Spanning a vast stretch of the globe from the west coast of the United States to the western shores of India

- **Huge population:** the region is home to the world's most populous state (China), most populous democracy (India), and largest Muslim-majority state (Indonesia), and includes over half of the earth's population.

- **Military importance**: Among the 10 largest standing armies in the world, 7 reside in the Indo-Pacific; and 6 countries in the region possess nuclear weapons.

- **Trading power:** Nine of the **world's 10 busiest seaports** are in the region, and **60 per cent of global maritime trade** transits through Asia, with roughly one-third of global shipping passing through the South China Sea alone.

U.S. Supreme Court overturns abortion right

In a significant curtailment of women's rights, the U.S Supreme Court overturned *Roe v. Wade, a 1973* landmark decision giving women in America the right to have an abortion before the foetus is viable outside the womb — before the 24-28week mark. Abortion rights, which have been available to women for over two generations — *will now be determined by individual States.*

Ethical issues with women:

- **Health: Both physical and mental health** gets impacted because of unwanted pregnancy.

- **Rights and freedom:** No woman who voluntarily chose to get pregnant is likely to seek abortion unless there are some serious compelling circumstances.

- **Bodily autonomy:** Apart from losing reproductive choices, restrictions on abortion might lead to illegal and unsafe abortions. This goes **against Right to Privacy** (Puttaswamy vs Union of India Judgement).

Ethical issues with the Family:

- **Husband's/In-laws choices**: As both parents conceive a child, abortion **might have choices of both the parents involved.**

- **Conservative vs liberal values** followed in a family have differing opinions regarding abortions.

Ethical issues with respect to fetus:

- **Right to life**: Abortion amounts to the **murder of a living being**.

- **Motherly care:** it is a unique unspoken bond shared between two lives, which cannot be questioned or regulated by laws.

Ethical issues with respect to society in general

- **Valuing life**: State has the responsibility of valuing each life**.**

- **Inclusion of all: Abortion** should not become a mechanism of social control for avoiding the appearance of differences or disabilities.

- **Provide better life for existing children:** Many times parents want abortion to be able to give **a good life to existing children** instead of dividing their meager resources into more children.

Global Liveability Index

- According to **Global Liveability Index** released by **The Economist** annually, the cities in India have **fared poorly** in the list of the world's most liveable cities.

- **New Delhi** has been ranked 112th, while **Mumbai** is ranked at 117th position.
- **Austrian capital Vienna** has once again topped the list of most liveable cities in the world in the list of 140 cities.
- The Pakistani city of **Karachi and Bangladesh's capital Dhaka** are among the least liveable cities in the world.

Ogiek

African court orders Kenya to pay $1.3 million as reparations to indigenous Ogiek people. Since independence, and indeed prior to it, Ogiek have been **routinely subjected to arbitrary forced evictions from their ancestral lands by the Kenyan government**, without consultation or compensation

The Ogiek are thus among **some of the most marginalised of all indigenous peoples** and **minorities in Kenya.** Traditionally honey-gatherers, they survive mainly on wild fruits and roots, game hunting, and traditional beekeeping. Having inhabited the Mau Forest for many centuries, their unique way of life is closely tied to its rich biodiversity and natural resources: in fact, the term '**Ogiek' literally means 'caretaker of all plants and wild animals**'.

Nigeria's latest lithium find

- High-grade lithium has been discovered **in Nigeria.**
- Lithium is a **soft, silvery metal. It** has the lowest density of all metals. It reacts vigorously with water. Lithium and most lithium minerals are mined along with other high-value metallic minerals such as tin, niobium-tantalum, and uranium.
- **Greenbushes mine in Western Australia** is the largest hard-rock lithium mine in the world. Global lithium mine **production hit a record high of 100,000 tonnes in 2021**, a 21 per cent increase over 2020 (82,500 tonnes).
- Globally, the demand for Lithium has been increasing because of its vast application mainly as a **Lithium-ion battery.**
- Lithium-ion batteries are generally more expensive but have better performance and are becoming the preferred technology.

2022 Resilient Democracies Statement (RDS)

India has signed the '2022 Resilient Democracies Statement (RDS)' along with G7 countries

The statement calls for:

- Guarding the **freedom, independence and diversity of civil society** actors and protecting the freedom of expression and opinion online and offline

- India will work towards **equitable, inclusive and sustainable solutions** to global challenges and reaffirm **the rules-based International order**.

- It is in line with the **2021 Carbin Bay open societies statement**.

Partnership for Global Infrastructure and Investment (PGII) scheme

- President Biden and **G7 Leaders Formally Launched** the Partnership for Global Infrastructure and Investment.
- It is a plan to mobilise **$600bn in funding** for the **developing world** in a move seen as a counter to China's Belt and Road plan.
- The initiative will be geared towards tackling climate change, improving global health, achieving gender equity and building digital infrastructure.
- **Background**: The infrastructure plan was **first unveiled at the 2021 G7** summit in Britain. Called the **Build Back Better World at the time,** the US-driven plan faltered from a lack of progress, and the project was renamed to PGII before being resuscitated at the 2022 summit.

Science-Tech & Environment

Largest bacterium ever found

The bacteria was discovered in the **mangroves of the Guadeloupe archipelago in the Caribbean**. Named *Thiomargarita Magnifica*, they **live by oxidizing sulfur and are 50 times bigger than any other known bacteria**

Central to the bacterium is its vacuole — an inert, fluid-filled membrane. Around the edge of this are membrane-bound structures, **which the authors call "pepins"** and describe as being similar to the organelles found mostly in eukaryotic cells. The "pepins" collectively host up to 700,000 copies of the genome.

Oceans Great Dying 2.0

Scientists from Stanford University, warn of imminent **mass annihilation of marine species** similar to the Permian extinction (250 million years ago) that wiped out most lives in oceans

What is Permian extinction?

- Permian extinction (or the "Great Dying") was caused by **global warming that left ocean animals unable to breathe**. Roughly **96 per cent of marine species** and **70 per cent of land species** went extinct.

- **Permian Era:** During this period, land masses collided to form the **supercontinent Pangaea**. The supercontinent was arid; only a few parts received rainfall round the year. However, the large **Panthalassic Ocean**, which covered much of Earth, was home to many marine species.

What led to extinction?

- **Volcanic eruption:** Towards the end of the era, a series of **volcanic eruptions occurred in central Siberia**, injecting massive amounts of greenhouse gases (GHG) into the atmosphere. Then, as of now, the **uncontrolled GHG emissions triggered climatic changes**.

Why the studies are important now?

- **Earth is undergoing a similar phase of warming:** The studies predict a 2-10 degree C warming lead to many species getting extinct while other species may migrate from the tropics into polar waters.
- **Ocean importance:** Oceans are the **planet's largest ecosystem** accounting for **95 per cent** of all spaces available for life and hosting **90 per cent of the planet's total species.**

Cosmic cannibalism

Astronomers have observed for the first time a phenomenon, called, "**cosmic cannibalism,**" a dead star (white dwarf) is sucking in debris from both the inner and outer reaches of its planetary system.

White Dwarf: A white dwarf is formed when a low-mass star like our sun exhausts most of its nuclear fuel. It is usually very dense, dim and about the size of a planet. It is the last observable stage of evolution for **low- and medium-mass stars.**

Hermit

- **Hermit** is new **spyware** with the capability to affect both Android and iOS devices.
- Spyware is **malicious software that enters a user's computer, gathers data from the device and user, and sends it to third parties without their consent**.

Eco-Sensitive Zones

As per the National Wildlife Action Plan (2002-2016): Land within **10 km of the boundaries** of national parks and wildlife sanctuaries is to be notified as eco-fragile zones or Eco-Sensitive Zones (ESZ). Sometimes this 10km boundary can be increased or decreased.

Importance: ESZs are created as **"shock absorbers" as well as the transition zone**, for the protected areas, to minimize the negative impact on the "**fragile ecosystems**" by certain human activities taking place nearby

Committee for ESZ: Gadgil Committee and Kasturirangan Committee

UN Ocean Conference 2022

The United Nations Ocean Conference 2022 was started from June 27, 2022 and will conclude on July 1, 2022.

Host of the conference

The Ocean Conference is being co-hosted by Governments of Kenya and Portugal.

Significance of the conference

This conference is being organised at a time when world is struggling to address the many deep-rooted problems that are laid bare by the COVID-19 pandemic. These problems will require common shared solutions and major structural transformations mentioned in the Sustainable Development Goals (SDGs).

India at Ocean conference

From India, Minister of Earth Sciences, Dr Jitendra Singh will attend the conference. He will speak on the **theme**– "Scaling up ocean action based on science and innovation for the implementation of goal 14: stocktaking, partnerships and solutions". India will provide science and innovation-based solutions for implementing Goal 14.

Living Lands Charter

- **Adopted by:** Commonwealth
- All 54 Commonwealth members have agreed to **voluntarily dedicate a 'living land'** in their respective countries to future generations, in line with the strategy set for the United Nations Decade on Ecosystem Restoration.
- The **non-binding** 'Living Lands Charter' mandates that **member countries** will safeguard global land resources and arrest land degradation while acting against climate change, biodiversity loss and sustainable management.
- The charter recognizes the "**critical guardianship**" provided by indigenous peoples and local communities in protecting land and vital ecosystem services.

Economics

Card on File Tokenisation (CoFT)

- **RBI has moved to introduce card-on-file tokenisation (CoFT)**
- The word tokenisation refers to **the replacement of an actual card number with an alternative code which will be converted into a token**.
- It is considered **safer** as the actual card details are not shared with the merchant during transaction processing.
- **Card-on-File**: A CoF transaction is a transaction where a **cardholder has authorised a merchant to store the cardholder's Mastercard or Visa payment details** e.g. e-commerce companies, and hotels generally do it.

National Conference on Millets

- MoS for M/o Food Processing Industries, inaugurates the National Conference on Millets on the theme '**The Future Super Food for India'**.
- **Millets** are a group of highly variable small-seeded grasses, widely grown around the world as cereal crops or **grains for fodder and human food**.
- **Millets in India**: jowar (sorghum), bajra (pearl millet) and ragi (finger millet) and varities of small millets like kodo, kutki, chenna and sanwa.
- **Major producers**: Rajasthan, Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Maharashtra, Gujarat and Haryana.
- **Superfood**: Millets are low cost and are rich in iron, calcium, magnesium, and antioxidants (e.g. Ragi is known to have the highest calcium content) among all the food grains.
- **Climate Resilient**: They are also harder and drought-resistant crops with a short growing season and lower water requirement.

Status of Salt sector in India

- **Central control:** Salt is under the Union List of the 7th schedule
- **India is the world's third-largest** producer of salt, after US and China.
- Salt is mainly produced through a **solar-evaporation process of seawater**.
- **Nodal Agency**: Salt Commissioner's Organisation (an attached Office under the Ministry of Commerce & Industry)
- **Occupational Health hazards related to salt**: Chronic dermatitis (skin ulcers), vision loss
- **States**: Gujarat accounts for almost 80% of the country's production, followed by Tamil Nadu, Rajasthan (through mining), Andhra Pradesh, Maharashtra, Odisha and Himachal Pradesh (through mining).

Current account deficit

The current account deficit is a measurement of a country's trade where the value of the goods and services it imports exceeds the value of the products it exports. The current account represents a country's foreign transactions and, like the capital account, is a component of a country's **balance of payments (BOP)**

CAD includes a nation's **net trade-in products and services**, its **net earnings** on cross-border investments including **interest and dividends**, and its **net transfer payments** such as remittances and foreign aid. A current account deficit (CAD) means the value of goods and services imported exceeds the value of exports.

CAD in India decreased to **1.5%** of gross domestic product (GDP) from **2.6%** of GDP in Q3 FY 2021-22.

Reasons for lowering India's CAD?

- Robust performance by computer and business services, **net service receipts rose.**
- **Remittances by Indians** abroad also rose.
- **Moderation of India's trade deficit** in the quarter mentioned.
- **Merchandise export overcame higher import bills**: Geopolitical tensions and supply chain disruptions led to crude oil and commodity prices soaring. A rise in prices of coal, natural gas, fertilizers, and edible oils has added to the pressure on the trade deficit.

State GK (Himachal Pradesh)

Single-Use Plastic Buy Back Scheme

Central government is all set to ban the use of single-use plastic from July 1, 2022. In line with centre's decision, Himachal Pradesh launched the "Single-Use Plastic Buy Back Scheme".

Single-Use Plastic Buy Back Scheme

- Under the Single-Use Plastic Buy Back Scheme, Himachal Pradesh government would purchase the single-use plastic items from students of schools and colleges.
- This move will instil a sense of environment preservation among them, by 'catching them young'.
- Under it, students will be encouraged to bring single-use plastic items from home and deposit it with schools. For this, government will pay Rs 75 per kg to students.
- Scheme was launched with the aim of inculcating habit among youngsters towards environment protection.