

Current Affairs Update (Aug 28-Sep 4)

National

Appointment of Supreme Court Judges

- **Nine new Supreme Court judges** were administered their oaths of office by Chief Justice NV Ramana. **It is for the first time in the history of Supreme Court that nine judges took oath of office at one go.**
- With the swearing-in of the nine new judges, **the strength of the Supreme Court has now increased to 33**, including the CJI, out of the sanctioned strength of 34.
- Three of them were women judges. One of them, Justice B.V. Nagarathna, is slated to be Chief Justice of India in 2027. With this addition, the apex court will have four women judges for the first time.
- It was the first time the **Supreme Court allowed a live telecast of the ceremony.**

Related Constitutional Provision:

Article 124(2) of the Indian Constitution provides that the Judges of the Supreme Court are appointed by the President after consultation with such a number of the Judges of the Supreme Court and of the High Courts in the States as the President may deem necessary for the purpose.

Renovated Jallianwala Bagh Complex

Prime Minister Narendra Modi virtually inaugurated the renovated Jallianwala Bagh complex in Amritsar on August 28, 2021.

History: The monument was first opened by then President Dr Rajendra Prasad on April 13, 1961, as a tribute to the victims of the massacre on April 13, 1919. The central government set up the **Jallianwala Bagh National Memorial Trust** on May 1, 1951. The Prime Minister is the chairman, and permanent members include the president of Indian National Congress, Chief Minister of Punjab, Governor of Punjab, Union Minister in charge of Culture, and Leader of Opposition in the Lok Sabha.

Controversy regarding the latest revamp:

- The **Jallianwala Bagh has undergone several repairs and touch-up** over the years. But the narrow passage leading to the Bagh, had remained untouched for almost 100 years. While many other things changed, the thin entrance made of **Nanakshahi bricks** through which Dyer's soldiers marched into the Bagh, continued to evoke the horrors of that day. In July 2020, it was rebuilt into a gallery with murals, leaving no trace of the old passage.

- The famous ‘**Shahidi Khu’ or Martyrs Well**, into which people jumped to escape the hail of bullets, is now enclosed in a glass shield — the decision has been criticised since it is perceived to restrict the view.

Avani, Sumit lead India’s gold hunt at Tokyo Paralympics

- Debutant Sumit Antil smashed his own world record multiple times for the F64 class gold, while veteran Devendra Jhajharia’s F46 category silver cemented his status of being India’s greatest para-athlete as javelin throwers led the country’s track-and-field medal rush at the Paralympic
- Another javelin thrower Sundar Singh Gurjar picked up bronze in Jhajharia’s event
- Avani Lekhara became the first woman to win gold for India in shooting in the 10m rifle competition

Bharat series (BH-series)

Government of India has introduced a new registration mark under the Bharat Series (BH-Series) for new vehicles. New registration mark was launched in order to facilitate seamless transfer of vehicles.

Ministry of Road Transport and Highways launched the BH-series to facilitate seamless transfer of vehicles. Vehicle with this registration mark will not require assignment of any new registration mark when owner of the vehicle shifts from one state to other.

Need: Government as well as private sector employees undergo station relocation. Such movements create unease for the employees with respect to the transfer of registration from parent state to another state. This is so because, section 47 of the Motor Vehicles Act, 1988 provides that a person cannot keep the vehicle for more than 12 months in any state other than the state where vehicle is registered. Instead, a new registration can be made with the new state- registering authority within 12 months. Considering this difficulty, new BH-series were launched.

MP: Second State to implement NEP 2020

Madhya Pradesh government implemented the National Education Policy-2020 (NEP-2020) in the state on August 26, 2021. MP became the second state in India to implement NEP-2020 following Karnataka.

International

Resolution 2593 of the United Nations Security Council (UNSC)

- The United Nations Security Council, under the current Presidency of India, on August 30, 2021, adopted a **resolution on the situation in Afghanistan, demanding that the war-torn country not be used to threaten or attack any nation or shelter terrorists.**

- The resolution was put forward by the US, the UK, France. It was adopted after 13 Council members voted in favour, while permanent members Russia and China abstained from the voting.

To contain food prices, Sri Lanka declares economic emergency

President of Sri Lanka declared an economic emergency on account to contain inflation which saw a huge spike after a steep fall in valuation of its currency caused a spike in food prices

What precipitated this unprecedented move?

- Since November 2019, the value of Sri Lankan rupee has eroded by about 20%.
- High global market price due to the pandemic has escalated the prices of essential items
- Hoarding by traders has also contributed to Sri Lanka taking this emergency route to combat the crisis
- Tourism which happens to be one of the main businesses of Sri Lanka has suffered due to the travel restrictions placed owing to the pandemic. Sri Lanka's economy shrank by a record 3.6% last year.

Ramon Magsaysay award

- Bangladeshi vaccine scientist and a microfinance pioneer from Pakistan were among the five recipients of this year's Ramon Magsaysay Award — regarded as the Asian version of the Nobel Prize
- Apart from **Firdausi Qadri** from Bangladesh and **Muhammad Amjad Saqib** from Pakistan, the other winners are Filipino fisher and community environmentalist **Roberto Ballon**, American **Steven Muncy** for humanitarian work and refugee assistance and Indonesian torch bearer for investigative journalism, **Watchdoc**.
- The **Ramon Magsaysay Award** is an annual award established to perpetuate **former Philippine President Ramon Magsaysay's** example of **integrity in governance, courageous service to the people, and pragmatic idealism within a democratic society**
- **Vinoba Bhave** was the 1st Magsaysay Award winner when the award was instituted in 1958

What are hurricanes and how do they form?

- Tropical cyclones or hurricanes **use warm, moist air as fuel**, and therefore **form over warm ocean waters near the equator**.
- As NASA describes it, when the warm, moist air rises upward from the surface of the ocean, it creates an area of low air pressure below.
- Air from the surrounding areas rushes to fill this place, eventually rising when it becomes warm and moist too.

- When **the warm air rises and cools off, the moisture forms clouds**. This system of clouds and winds continues to grow and spin, fuelled by the ocean's heat and the water that evaporates from its surface.
- As such storm systems rotate faster and faster, **an eye forms in the centre**.
- Storms that form towards the north of the equator rotate **counterclockwise**, while those that form to the south spin **clockwise** because of the rotation of the Earth.

Why in news? Hurricane Ida made landfall in Louisiana on Sunday. It is an extremely dangerous Category 4 storm, forcing those who did not flee to brace themselves for the toughest

Algeria cuts Diplomatic Ties with Morocco

Algeria has cut its diplomatic ties with Morocco due to hostile actions after months of resurgent tensions between both the countries. Both the countries have been accusing one another of supporting opposition movements as proxies.

Western Sahara conflict: It is the conflict between Polisario Front and Kingdom of Morocco. Polisario Front is the national liberation movement of Sahrawi tribe who seek to end the Moroccan presence in Western Sahara. Under the Madrid Accords of 1975 with Mauritania & Morocco, Spain left the region in 1976. Until its exit, Spanish Governor-General administer the territory, with the help of two Mauritanian and Moroccan Deputy Governors. But Polisario Front opposed these agreements. Thus, Mauritania and Morocco sent their troops to claim the Western Sahara region.

Science-Tech & Environment

Degradation of Assam's Deepor Beel due to anthropogenic forces

Deepor Beel is a **Ramsar site** and a part of it is also wildlife sanctuary (Rani Reserve forest) in Guwahati, Assam. Deepor Beel is a permanent freshwater lake, in an earlier channel of the **Brahmaputra River**, to the south of the main river.

Human activities which have caused this destruction– dumping of garbage, construction of roads and railways, construction of warehouses, tourism activities. This degradation has caused death of **elephants in railway accidents**, fewer elephants visiting the wetland due to deteriorating quality of water due garbage dumping, reduction in the number of fishes available for fishermen etc

Raptors MOU

- The CMS **Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia** (Raptors MOU) aims to promote internationally coordinated actions to

achieve the favourable conservation status of migratory birds of prey throughout their range in the African-Eurasian region, and to reverse their decline when and where appropriate.

- The Raptors MOU is one of several instruments **operating under the Convention on the Conservation of Migratory Species of Wild Animals (CMS)**.
- The MoU seeks willingness of the signatory range states for working for conservation of the raptor species and their habitats.
- **India signed Raptor MOU in 2016.**
- Raptor MoU is also in conformity with the provisions of the existing Wild Life (Protection) Act, 1972

Concern area: Around 30 per cent of the 557 raptor species around the world are threatened by extinction to some degree, according to a new study. The Philippine eagle, the hooded vulture and the Annobonscops-owl were among the 166 species facing some degree of threat, the study found.

The new **analysis by International Union for the Conservation of Nature (IUCN) and BirdLife International**, a global initiative to protect birds and wildlife by non-profits, was published in the journal Proceedings of the National Academy of Sciences.

Ladakh adopts State animal and bird

- Ladakh adopted two endangered species, **snow leopard and black-necked crane**, as State animal and State bird
- Black-necked cranes are only found in **Ladakh's Changthang region**. The bird is classified as **Near-Threatened**, as per the IUCN classification; whereas Snow leopard has been classified as 'vulnerable'

100years of BCG vaccine

- **Bacillus Calmette–Guérin (BCG) vaccine** is a vaccine **primarily used against tuberculosis (TB)**.
- BCG was developed by **modifying a strain of Mycobacterium bovis** (that causes TB in cattle). It was first used in humans in 1921.
- Currently, **BCG is the only licensed vaccine available for the prevention of TB**. It is the world's most widely used vaccine with about 120 million doses every year and has an excellent safety record.
- In India, BCG was first introduced in a limited scale in 1948 and became a part of the **National TB Control Programme** in 1962.
- In children, BCG provides strong protection against severe forms of TB. This protective effect is far more variable in adolescents and adults, ranging from 0–80%.

Leaded petrol eradicated, says UNEP

- The use of leaded petrol has been eradicated from the globe as per the observation made by **UNEP**

- Achieving of this milestone will prevent more than 1.2 million premature deaths and save world economies over \$2.4 trillion annually
- Algeria — the last country to use the fuel — exhausted its supplies last month.
- India banned leaded petrol in **March 2000**

Harmful effects of leaded petrol: Lead exposure can have serious consequences for the health of children. At high levels of exposure, lead attacks the brain and central nervous system to cause coma, convulsions and even death. Children who survive severe lead poisoning may be left with mental retardation and behavioral disorders.

Merger of three jumbo black holes spotted

- A rare merging of three supermassive **black holes** has been spotted by a team of astrophysicists in India. All three merging black holes were part of galaxies in the Toucan constellation.
- The discovery was made using data from **the Ultraviolet Imaging Telescope (UVIT)** onboard the first Indian space observatory **ASTROSAT**, the European integral field optical telescope called **MUSE** mounted on **the Very Large Telescope (VLT)** in Chile and **infrared images from the optical telescope (IRSF)** in South Africa.

Important learning from this discovery: Presence of third black hole solves the final parsec problem. If two galaxies collide, their black hole will also come closer by transferring the kinetic energy to the surrounding gas. The distance between the blackholes decreases with time until the separation is around a parsec (3.26 light-years). The two black holes are then unable to lose any further kinetic energy to get even closer and merge. This is known as **the final parsec problem**.

The Malabar Exercise 2021

Navies of the four member nations of the Quadrilateral Security Dialogue, or the **Quad — India, the United States, Japan, and Australia** — are participating in **the 25th edition of the Malabar Exercise**, which began off the coast of Guam in the Pacific Ocean on August 26.

New COVID variant 'Mu'

Mu Variant' of the coronavirus was first identified in **Colombia** in January 2021. Now, the World Health Organization (WHO) is monitoring this **variant of interest**. Mu variant is also known as lineage B.1.621 or VUI-21JUL-1. Cases of the Mu variant were reported in South America and Europe.

What is scrub typhus?

Scrub typhus is a re-emerging Rickettsial infection. This vector-borne disease has been earlier reported in India and other South Asian countries. This disease is marked by fever and rashes. It also affects the central nervous system, cardiovascular system, respiratory system, renal system and gastrointestinal systems.

Nomenclature: This disease has been named “scrub” after the type of vegetation that harbours the vector. Typhus is a Greek word with meaning “fever with stupor” or smoke.

History: This disease took the form of an epidemic during World War II in some countries while during the Second World War, it emerged as the most dreaded disease among soldiers of the Far East. In India, this fever out in an epidemic form during Second World War in Assam and West Bengal.

Causative agent: Scrub typhus fever is caused by a bacterium called *Orientia tsutsugamushi*. The name of the bacterium is of Japanese origin. The word “tsutsuga” means illness and “mushi” means insect. This disease spreads through bites of infected chiggers or larval mites

Why in news? Scrub typhus was reported mainly from Firozabad, Agra, Mainpuri, Etah and Kasganj districts of Uttar Pradesh.

QSim- India’s first Quantum Computer Simulator Toolkit

- Ministry of Electronics and Information Technology (MeitY) has launched the India’s first ‘Quantum Computer Simulator (QSim) Toolkit’.
- It meant to be a vital tool of learning and understanding the practical aspects of programming with the help of Quantum Computers. It will thus bring about a new era of Quantum Computing research in India.
- This toolkit has been developed jointly by scientists of IIT Roorkee, C-DAC and IISc Bangalore.

Economics

What is a core sector?

The Eight Core Industries **comprise 40.27 per cent of the weight of items included in the Index of Industrial Production (IIP)**. The eight core industries are: Coal, Crude oil, Natural Gas, Refinery products, fertilizers, steel, cement and electricity.

IIP: The Index of Industrial Production (IIP) is an index which details out the growth of various sectors in an economy such as mining, electricity and manufacturing. The all India IIP is a composite indicator that measures the **short-term changes** in the volume of production of a basket of industrial products during a given period with respect to that in a chosen base period. It is compiled and published **monthly by the Central Statistical Organisation (CSO)** six weeks after the reference month ends.

Why in news? Output from India’s eight **core sectors** grew by 9.4% in July.

What is National Mission on Edible Oil-Oil Palm?

Prime Minister Narendra Modi has announced this new national initiative on palm oil production to help increase farm incomes. The scheme involves investment of over Rs 11,000 crore.

Aims and Objectives of the scheme:

- Achieve self-reliance in edible oil.
- Harness domestic edible oil prices that are dictated by expensive palm oil imports.
- To raise the domestic production of palm oil by three times to 11 lakh MT by 2025-26.

Key features of the scheme:

- The special emphasis of the scheme will be in India's north-eastern states and the Andaman and Nicobar Islands due to the conducive weather conditions in the regions.
- Under the scheme, oil palm farmers will be provided financial assistance and will get remuneration under a price and viability formula.

Concerns about scheme:

- The concerns are primarily expressed on the ground that **promotion of oil palm cultivation will further result in environmental degradation (oil palm is an invasive species) of the pristine ecosystem** already threatened by various other threats
- **Other concerns expressed include**– impact on community ownership of tribal lands, oil palm cultivation is a water-intensive task, monoculture cropping with a long gestation period will be unsuitable for small farmers, endangering wildlife etc

CBDC Scheme

- Central banks in Australia, Singapore, Malaysia and South Africa launched a Central Bank Digital Currencies (CBDC) Scheme.
- CBDC scheme is a cross border payments trial that uses different central bank digital currencies (CBDC) in order to assess if this allows transactions to be settled in a cheap and easy manner.
- Many governments and central banks across the world are exploring the use of CBDCs.
- CBDCs are digital forms of existing currencies.

Current Affairs Update (Sep 26-30)

National

Cyclone 'Gulab'

- **Cyclone 'Gulab'** has hit east coast of India. It was formed in the Bay of Bengal Region.
- The name Gulab was suggested by Pakistan.
- Cyclones are **formed over the oceanic water in the tropical region**. In this region, the sunlight is highest which results in warming of land and water surface. Due to warming of the surface, the warm moist air over the ocean rises upwards following which cool air rushes in to fill the void, they too get warm and rise — the cycle continues.

India Meteorological Department Tropical Cyclone Intensity Scale	
Category	Sustained winds (3-min average)
Super Cyclonic Storm	>120 kt >222 km/h
Very Severe Cyclonic Storm	64–119 kt 118–221 km/h
Severe Cyclonic Storm	48–63 kt 88–117 km/h
Cyclonic Storm	34–47 kt 62–87 km/h
Deep Depression	28–33 kt 52–61 km/h
Depression	≤27 kt ≤51 km/h

State Food Safety Index (SFSI)

The Index is a dynamic quantitative and qualitative benchmarking model that provides an objective framework for evaluating food safety across all States/UTs. The first State Food Safety Index for the year 2018-19 was announced on the first-ever World Food Safety Day on 7th June 2019.

The index is developed by **FSSAI (Food Safety and Standards Authority of India)** to measure the performance of states on five significant parameters of Food Safety.

Highlights of the index:

- Among the larger states, Gujarat was the top ranking state, followed by Kerala and Tamil Nadu.
- Among the smaller states, Goa stood first followed by Meghalaya and Manipur.
- Among UTs, Jammu & Kashmir, Andaman & Nicobar Islands and New Delhi secured top ranks.

Ayushman Bharat PM-JAY

The world's largest healthcare scheme **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)** has completed three years. It was launched on September 23rd, 2018.

Key Features of PM-JAY:

1. The world's largest **health insurance/assurance** scheme fully financed by the government.
2. It provides cover of 5 lakhs per family per year, for secondary and tertiary care hospitalization across public and private empaneled hospitals in India.
3. Coverage: Over 10.74 crore poor and vulnerable entitled families (approximately 50 crore beneficiaries) are eligible for these benefits.
4. Provides cashless access to health care services for the beneficiary at the point of service.
5. **The National Health Authority (NHA)** is the nodal agency responsible for the nationwide roll-out and implementation of the AB-PMJAY scheme.
6. This scheme is a **Centrally sponsored scheme with some Central sector components**.

Ayushman Bharat Digital Mission

The Ayushman Bharat Digital Mission was recently launched by PM. The mission will provide a **digital health ID** to the people who will hold their health records. The pilot project of Ayushman Bharat Digital Mission was announced on August 15 last year. Currently, the programme is being implemented in the pilot phase in six union territories (Chandigarh, Ladakh, Dadra and Nagar Haveli and Daman and Diu, Puducherry, Andaman and Nicobar Islands and Lakshadweep).

Features of the Mission:

1. It is a digital health ecosystem under which **every Indian citizen will now have unique health IDs, digitised health records with identifiers for doctors and health facilities**.
2. The scheme will come under **the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana**.
3. It **comprises six key building blocks** — HealthID, DigiDoctor, Health Facility Registry, Personal Health Records, e-Pharmacy and Telemedicine.

4. The **National Health Authority** has been given the mandate to design, build, roll-out and implement the mission in the country.
5. **The core building blocks of the mission** is that the health ID, DigiDoctor and Health Facility Registry shall be owned, operated and maintained by the Government of India.
6. **Private stakeholders will have an equal opportunity** to integrate and create their own products for the market. The core activities and verifications, however, remain with the government.
7. Under the Mission, **every Indian will get a Health ID card** that will store all medical details of the person including prescriptions, treatment, diagnostic reports and discharge summaries.
8. **Health ID is a randomly generated 14 digit number** used for the purposes of uniquely identifying persons, authenticating them, and threading their health records (only with their informed consent) across multiple systems and stakeholders.
9. The **citizens will be able to give their doctors and health providers one-time access to this data** during visits to the hospital for consultation.

First woman Speaker of Gujarat Assembly

Veteran legislator Nimaben Acharya was unanimously elected the first woman Speaker of the Gujarat Assembly recently. **Article 93 for Lok Sabha and Article 178** for state Assemblies state that these Houses “shall, as soon as may be”, choose two of its members to be Speaker and Deputy Speaker. **In Lok Sabha and state legislatures**, the President/Governor sets a date for the election of the Speaker, and it is the Speaker who decides the date for the election of the Deputy Speaker.

The Tenth Schedule of the Indian Constitution

- Popularly known as **the anti-defection law**. It specifies the circumstances under which changing of political parties by legislators invites action under the law.
- It was added to the Constitution by **the 52nd Amendment Act**.
- It includes **situations in which an independent MLA, too, joins a party after the election**.

The law covers three scenarios with respect to shifting of political parties by an MP or an MLA. These include:

1. When a member elected on the ticket of a political party “voluntarily gives up” membership of such a party or votes in the House against the wishes of the party.
2. When a legislator who has won his or her seat as an independent candidate joins a political party after the election.

In the above two cases, **the legislator loses the seat in the legislature on changing (or joining) a party**.

3. Relates to nominated MPs. In their case, the law gives them six months to join a political party, after being nominated. If they join a party after such time, they stand to lose their seat in the House.

Elder Line

Ministry of Social Justice & Empowerment has launched India's First Pan-India helpline for Senior Citizens, called "Elder Line" having a Toll-Free No. 14567. This line will extend support to senior citizens in the challenges and problems they face.

It is expected that, India will have nearly 20% elderly population accounting for more than 300 million senior citizens by 2050. It is significant because many countries have a population less 300 million. Senior citizens are a basket of wisdom and untapped resource for overall economic and social growth. But this age group faces several mental, financial, emotional, legal and physical challenges. Thus, this helpline number was launched to extend them support.

Zojila tunnel

- Zojila tunnel will provide all-year connectivity between Srinagar valley and Leh.
- It is set to be **Asia's longest bi-directional tunnel**.
- It will connect Srinagar, Dras, Kargil and Leh via a tunnel through the famous Zojila Pass.
- Located at more than 11,500 feet above sea level, the all-weather Zojila tunnel will be **15 km long**.
- **Benefits:** It will make the travel on the 434-km Srinagar-Kargil-Leh Section of **NH-1** free from avalanches, enhance safety and reduce the travel time from more than 3 hours to just 15 minutes.
- **Why in news?** Government is pushing to complete the massive Zojila tunnel, its showpiece infra project in Kashmir and Ladakh, before Republic Day, 2024.

International

India's clean energy commitments at UN summit

- During the first leader-level meeting on energy, under the UN General Assembly, India has made commitments to increase the **renewable energy** installed capacity to **450 GW by 2030**.
- India has also committed to develop and implement a **National Hydrogen Energy Mission** in order to boost the annual green hydrogen production to **1 MT by 2030**.
- It also announced to start a **Production Linked Incentive Scheme** which will help in adding 10 GW solar PV manufacturing capacity by 2025.
- India also announced to establish a **15 MMT** production capacity of **compressed biogas by 2024** and achieve **20 per cent ethanol blending** in petrol by the year **2025-26**.

- The summit was aimed at boosting efforts towards reducing the ranks of about 800 million people living in energy poverty. It also seeks to set the world on a trajectory towards net-zero-emissions by 2050.

Switzerland legalises Same-sex Marriage

Voters in Switzerland decided to legalize same-sex marriage on September 26, 2021. It makes Switzerland one of the last countries in Western Europe to do so. Italy is the only country in Western Europe which does not allow marriage between same-sex couples. It only allows civil unions.

UNCTAD Digital Economy Report 2021

United Nations Conference on Trade and Development (UNCTAD) published its “UNCTAD Digital Economy Report 2021, recently.

Key Findings of report

- In its report, UNCTAD noted the Philippines as one among six countries that allows free flow of data across borders. Free flow of data is required to boost the digital economy.
- Other five countries allowing free-flow of data across border include- Canada, Australia, Mexico, Singapore and the United States. These countries use “light-touch approach” for data flow.

Counties following restrictive or Guarded approach

- The “restrictive” or “guarded” approach for cross-border data flows is followed by countries like India, China, Indonesia, Nigeria, Pakistan, Kazakhstan, Rwanda, Russian Federation, Turkey, Saudi Arabia and Vietnam.

Right Livelihood Award 2021

Right Livelihood Award 2021 was conferred to Delhi-based environmental organisation “**Legal Initiative for Forest and Environment (LIFE)**”. This award is also known as “**Sweden’s alternative Nobel Prize**”. LIFE has received the award for its “grassroots approach to empower vulnerable communities in protecting their livelihoods and claiming their right for a clean environment.”

2021 Yidan prize

- India-based Dr Rukmini Banerji was awarded with the 2021 Yidan prize. **Dr Rukmini Banerji** is the Chief Executive Officer of ‘Pratham Education Foundation’
- Apart from her, US-based Professor Eric Hanushek was also conferred with the prestigious Yidan Prize 2021.
- Both have been awarded the Yidan Prize for recognition of their ground-breaking work that addresses a crucial piece of education puzzle called “improving quality of education as well as outcomes for learners at scale”.

- Yidan prize was established by Yidan prize Foundation in 2016. Yidan Prize Foundation is a global philanthropic education foundation, inspiring progress and change in education.

Najla Bouden Romdhane

- Najla Bouden Romdhane has become the first female prime minister of Tunisia
- Tunisia is the northernmost country of Africa. It is bordered by Algeria, Libya and the Mediterranean Sea. It also comprises eastern end of the Atlas Mountains and northern reaches of the Sahara Desert.

Science-Tech & Environment

VIPER Mission

NASA has chosen a landing site for the Volatiles Investigating Polar Exploration Rover (VIPER). The site is on the western edge of **Nobile crater**, near the lunar south pole. The crater was named after Italian polar explorer **Umberto Nobile**.

VIPER is a mobile robot. It is **the first resource mapping mission on any other celestial body**. NASA's Commercial Lunar Payload Services (CLPS) will be providing the launch vehicle and lander for what's going to be a 100-day mission.

Objectives of the mission:

- To explore the Moon's South Pole region.
- Help create lunar resource maps.
- Evaluate the concentration of water as well as other potential resources on its surface.

Chang'e-5 probe

- It is an **unmanned spacecraft** by China. The probe is named after the mythical Chinese **moon goddess**.
- The rocket **comprises four parts**: an orbiter, a returner, an ascender and a lander.

The Chang'e-5 mission is expected to realize four "firsts" in China's space history:

1. The first time for a probe to take off from the surface of the Moon.
2. The first time to automatically sample the lunar surface.
3. The first time to conduct unmanned rendezvous and docking in lunar orbit.
4. The first time to return to Earth with lunar soil samples in escape velocity.

Landsat 9

- It is an **Earth monitoring satellite launched recently by NASA.**
- It is a joint mission of NASA and the US Geological Survey (USGS).
- Together with Landsat 8, it will collect images of Earth's surface. It takes 8 days to capture the whole Earth.
- It is the most technologically advanced satellite of its generation. It can see more colour shades with greater depths than the previous satellites, helping scientists capture more details about our ever-changing planet.

IMO urged to act on Black Carbon emissions

With Arctic summer ice reaching its 12th lowest ever extent, **the Clean Arctic Alliance** has called for urgent cuts to **black carbon** emissions from shipping, ahead of **the 77th Marine Environment Protection Committee (MEPC)** meeting (MEPC 77) at **the International Maritime Organization (IMO)** in November.

About the Marine Environment Protection Committee (MEPC):

In order to ensure that a proactive stance is taken by in order to protect and safeguard the interests of the marine environment and ecosystem, the IMO has established the Marine Environment Protection Committee (MEPC).

- The committee seeks to provide a solution for the problem of air pollution caused by the constant and heavy traffic of ships in the oceanic areas.
- The committee in its sessions also seeks to provide required revisions to the existing MARPOL stipulations and guidelines.
- The creation and enforcement of PSSAs (Particularly Sensitive Sea Areas) and other special oceanic zones is also an area that is looked into by the environment protection organisation.

What is black Carbon? What are the concerns?

Black carbon **results from the incomplete combustion of fossil fuels and biomass.** BC is **produced both naturally and by human activities** as a result of the incomplete combustion of fossil fuels, biofuels, and biomass.

Primary sources include emissions from diesel engines, cook stoves, wood burning and forest fires. It is a short-lived pollutant that is the second-largest contributor to warming the planet behind carbon dioxide (CO₂).

Samudra Shakti

Samudra Shakti is a bilateral exercise between the navies of **India and Indonesia** that was conceived in 2018. The exercise aims to strengthen the bilateral relationship, enhance mutual understanding and interoperability in maritime operations between the two navies.

Akash Prime

It is a newer version of Akash missile tested recently by DRDO. It was launched from the Integrated Test Range (ITR) of Chandipur, Odisha, In comparison with the existing Akash System; Akash Prime is equipped with an indigenous active RF (radio frequency) seeker for improved accuracy. Other improvements also ensure more reliable performance under low temperature environments, at higher altitudes.

What is dark energy?

- Recently, an international team of researchers made **the first direct detection of dark energy**. They noticed certain unexpected results in **the XENON1T experiment** and write that dark energy may be responsible for it.
- Dark Energy is a hypothetical form of energy that exerts a negative, repulsive pressure, behaving like the opposite of gravity.
- It is causing the rate of expansion of our universe to accelerate over time, rather than to slow down. That's contrary to what one might expect from a universe that began in a Big Bang.
- Everything we see – the planets, moons, massive galaxies – makes up less than 5% of the universe. **About 27% is dark matter and 68% is dark energy.**
- While **dark matter attracts and holds galaxies together, dark energy repels and causes the expansion of our universe.**
- **XENON1T experiment:** It is the world's most sensitive dark matter experiment and was operated deep underground at the INFN Laboratori Nazionali del Gran Sasso in Italy.

METAVERSE

Facebook Inc is set to invest \$50 million to partner with organizations in order to build metaverse, which is a digital world where people can use different devices to communicate and move in a virtual environment. Metaverse is a set of virtual spaces where one can create and explore with other people who aren't in same physical space. Using this virtual space, one would be able to hang out with friends, play, work, learn, shop and create. This space is not necessarily about spending more time online but is about making time one spends online more meaningful.

Antimalarial drug resistance

In recent years there is increasing evidence for the failure of **artemisinin-based combination therapy** for falciparum malaria either alone or with partner drugs.

A recent study has described the presence of two mutations responsible for artemisinin resistance in Northern Uganda. The current report of artemisinin resistance in East Africa is a matter of great concern as **this is the only drug that has saved several lives across the globe.**

National Action Plan for dog Mediated Rabies Elimination

On the occasion of **World Rabies Day**, central Government has unveiled the '**National Action Plan for dog Mediated Rabies Elimination**' (NAPRE) by 2030. The **National Centre for Disease Control (NCDC)** has drafted the action plan in consultation with the Ministry of Fisheries, Animal Husbandry and Dairying.

What is the Rabies?

- Rabies is a **fatal but preventable viral disease**. It can **spread to people and pets** if they are bitten or scratched by a rabid animal.
- Rabies is **mostly found in wild animals** like bats, raccoons, skunks, and foxes, dogs and most rabies deaths in people around the world are caused by dog bites.
- The **rabies virus infects the central nervous system**.
- If a **person does not receive the appropriate medical care** after a potential rabies exposure, the virus can cause disease in the brain, ultimately resulting in death.
- **Rabies can be prevented** by vaccinating pets, staying away from wildlife, and seeking medical care after potential exposures before symptoms start.



Economics

Ordnance Factory Board

The 220-year-old **Ordnance Factory Board** will be dissolved on October 1, and its units will be corporatised under seven PSUs.

Need for:

- Corporatisation will bring these entities under the purview of The Companies Act, would lead to improvements in efficiency, make products cost-competitive, and enhance their quality.
- It has been argued that OFB's monopoly has led to innovation drying up, apart from low productivity, high costs of production, and lack of flexibility at the higher managerial levels.
- Functioning directly under the Ministry of Defence, the OFB and its factories could not retain profits, and thus had no incentive to work towards increasing them.

Recommendations by various committees in this regard:

The restructuring of the Kolkata-headquartered OFB into corporate entities was recommended in one or the other form by at least three expert committees on defence reforms set up in the last two decades — **the TKS Nair Committee (2000), Vijay Kelkar Committee (2005), and Vice Admiral Raman Puri Committee (2015).** The **Shekatkar Committee** did not suggest corporatisation, but recommended regular audits of all ordnance units considering past performance.

India is Dubai's second biggest trade partner

India has emerged as the second biggest trading partner of Dubai, after China. India's overall volume, in the first half of 2021, is touching 38.5 billion dirhams. As per a statement of Dubai government, Dubai had a trade volume of 86.7 billion dirham with China in H1 (first half) of 2021. It is followed by India and the U.S. respectively at second and third positions.

PLI scheme for textiles works

The Government has launched the **Production-Linked Incentive (PLI) scheme** for the textiles sector worth Rs 10,683 crore.

Objective: The **PLI scheme for textiles** aims to promote the production of high value **Man-Made Fibre (MMF) fabrics, garments and technical textiles.**

Eligibility:

1. Any person or company willing to invest a minimum of Rs 300 crore in plant, machinery, equipment and civil works (excluding land and administrative building cost) to produce products

of MMF fabrics, garments and products of technical textiles will be eligible to participate in the first part of the scheme.

2. Investors willing to spend a minimum of Rs 100 crore under the same conditions shall be eligible to apply in the second part of the scheme.

Incentives:

1. Under PLI, the Centre will subsidise eligible manufacturers by paying incentives on incremental production.
2. Companies investing over Rs 300 crore in plant, machinery, equipment and civil works to produce the identified products will get an incentive of 15 percent of their turnover, which needs to be Rs 600 crore in the third year.
3. The companies investing between Rs 100 crore and Rs 300 crore will also be eligible to receive duty refunds and incentives (lower than 15 percent of their turnover).
4. The government expects to achieve “fresh investment of over Rs 19,000 crore and a cumulative turnover of more than Rs 3 lakh crore”.

Current Affairs Update (Sep 5-18)

National

Karbi Agreement

A **tripartite agreement** among five insurgent groups of **Assam, the Centre and the State government** was recently signed **to end years of violence in the Karbi Anglong region.**

The insurgent groups which signed the peace accord include:

1. Karbi Longri NC Hills Liberation Front (KLNLF),
2. People's Democratic Council of Karbi Longri (PDCK),
3. Kuki Liberation Front (KLF),
4. United People's Liberation Army (UPLA) and
5. Karbi People's Liberation Tiger (KPLT).

Highlights of the Agreement:

- Under the peace accord, **more than 1,000 armed cadres have abjured violence** and joined the mainstream.
- The agreement provides for their **rehabilitation.**
- The Centre will make available a **special development package of ₹1,000 crore over the next five years**, for the Assam government to undertake specific projects for the development of Karbi areas.
- The Assam **government will set up a Karbi Welfare Council** for focused development of Karbi people living outside the **'Karbi Anglong Autonomous Council' (KAAC) area.**

Who are Karbis?

A **major ethnic community of Assam— Karbis** are dotted by many factions, and marked by ethnic violence, killings, abductions, taxation since the late 1980s. Originally, they are one of Northeast India's tribal groups, **largely inhabiting the Karbi Anglong and Dima Hasao (formerly North Cachar) hills districts.**

The core demand of the Karbi outfits was the **formation of a separate state.**

The Karbi Anglong Autonomous Council (KAAC) is an **autonomous district council**, which is protected under **the Sixth Schedule of the Indian Constitution**.

Right to Sit

The Tamil Nadu government has tabled a Bill in the Legislative Assembly making it **mandatory for establishments to provide seating facilities for employees**. It is popularly being called the **“Right to Sit”**. It is aimed to benefit thousands of employees of large and small establishments, particularly those working in textile and jewelry showrooms.

National Company Law Tribunal (NCLT)

- It is a quasi-judicial body in India that adjudicates issues relating to companies in India.
- Established on 1st June, 2016 (Companies Act, 2013).
- Formed based on the recommendations of the Justice Eradi Committee.
- It deals with matters mainly related to companies law and the insolvency law.
- Term of members: Appointments will be for five years from the date of assumption of charge or till attaining the age of 65 or until further orders.

Income Tax Appellate Tribunal (ITAT)

- It deals with income tax matters.
- It is statutory body in the field of direct taxes and its orders are accepted as final, on findings of fact.
- ITAT was the first Tribunal to be created on 25th January, 1941 and is also known as ‘Mother Tribunal’.
- With a view to ensuring highest degree of independence of the ITAT, it functions under the Department of Legal Affairs in the Ministry of Law and Justice and is kept away from any kind of control by the Ministry of Finance.
- The orders passed by the ITAT can be subjected to appellate challenge, on substantial questions of law, before the respective High Court.

Eligibility to become a Supreme Court judge

The norms relating to the eligibility has been envisaged in the **Article 124 of the Indian Constitution**.

1. To become a judge of the Supreme court, an individual should be an Indian citizen.
2. In terms of age, a person should not exceed 65 years of age.
3. The person should serve as a judge of one high court or more (continuously), for at least five years or the person should be an advocate in the High court for at least 10 years or a distinguished jurist.

National Institute Ranking Framework

The Education Ministry recently launched **the sixth edition of the NIRF**. NIRF is the first-ever effort by the government to rank **higher education institutions (HEIs)** in the country. Launched in 2015.

Highlights of the sixth edition:

1. IIT-Madras, IISc-Bangalore, and IIT-Bombay have emerged as **the country's top three higher education institutions**.
2. Under the best college category, **Miranda House** has again topped the list this year.
3. **In the university category**, IISc Bengaluru was the best-ranked varsity.

Thamirabarani civilization

Thamirabarani (Porunai) is a river that originates in the Western Ghats (from the Agastyarkoodam peak of Pothigai hills) in the State and empties into the sea at the Gulf of Mannar after passing through Tirunelveli and Thoothukudi districts.

A US-based lab has carbon-dated the remaining discovered from this ancient civilization in Tamil Nadu to at least 3,200 years. This is the oldest civilization perhaps, older than the Vaigai civilization which is believed to be 2,600 years old.

Subansiri Hydroelectric Project (LSHP)

- Subansiri Lower Hydroelectric Project (SLHEP), is an under-construction gravity dam **on the Subansiri river along the border of Assam and Arunachal Pradesh**.
- Subansiri River (gold river), **originates in the Tibet Plateau** and enters India through **Miri hills in Arunachal Pradesh**.
- It is **the largest tributary of Brahmaputra River**.
- The project is being developed by the state-run **National Hydro Power Corporation (NHPC)**.
- It will be the single largest hydroelectric plant in India when completed. The project is expected to be completed in 2023.

Why the bill to scrap NEET?

The Tamil Nadu Assembly has passed a Bill to dispense with **the National Entrance cum Eligibility Test (NEET)**. The Assembly has passed this Bill based on the recommendation of the high-level committee led by retired judge AK Rajan.

The bill will allow admission to medical courses based on Class 12 marks to “ensure social justice”.

The state assembly says the National Eligibility-cum-Entrance Test is not a fair or equitable method of admission since it favoured the rich and elite sections of society who can afford coaching.

Can states refuse to implement Central laws?

Usually, **when a state wants to amend a Central law made under one of the items in the concurrent list, it needs the clearance of the Centre.** When a state law contradicts a Central law on the same subject, **the law passed by Parliament prevails.**

Article 131 of the Constitution provides exclusive jurisdiction to the Supreme Court to adjudicate matters between the states and the Centre.

Article 254 (2) of the Constitution empowers state governments to pass legislations which negate the Central acts in the matters enumerated under the Concurrent List.

National Engineer's day

Every year on **September 15, India along with Sri Lanka and Tanzania** celebrate **National Engineer's day** to recognise and honour the achievements of the great engineer **Mokshagundam Visvesvaraya.**

An expert in irrigation techniques and flood disaster management, Sir MV was not just a great civil engineer but also served as the 19th Diwan of Mysore from 1912 to 1919. While serving as the Diwan of Mysore, in 1915 **he was awarded 'Knight' as a commander of the British Indian Empire by King George V.**

Hindi Diwas

- Every year, 14th September is celebrated as Hindi Diwas in India.
- It aims to raise awareness about the language and also commemorate the event when it was adopted as one of the official languages of India.
- Hindi, written in the Devanagari script, was adopted as the official language of the Republic of India on 14th September, 1949.
- It is one of the 22 scheduled languages of the Republic of India.
- Besides Hindi, English is the other official language (Article 343 of the Constitution).
- Hindi is also an eighth schedule language.

'Project Udaan'

IIT-Bombay launched its "Project Udaan" on the occasion of Hindi Diwas on September 14, 2021. Project Udaan was launched with the aim of breaking the language barrier that many students face while joining the institutes of higher education. Project Udaan enables the translation of textbooks and other study material of the engineering and other streams from English to Hindi & other Indian Languages.

What is the 'Right to be Forgotten' in the Indian context?

- The Right to be Forgotten falls under the purview of an individual's right to privacy, which is governed by **the Personal Data Protection Bill** that is yet to be passed by Parliament.

- In 2017, **the Right to Privacy was declared a fundamental right (under Article 21)** by the Supreme Court in its landmark verdict (**Puttuswamy case**).
- The court said at the time that “the right to privacy is protected as an intrinsic part of the right to life and personal liberty under Article 21 and as a part of the freedoms guaranteed by Part III of the Constitution”.

National Commission for Minorities

- National Commission for Minorities (NCM) was set up under the **National Commission for Minorities Act, 1992**.
- It Monitor the **working of the safeguards for minorities** provided in the Constitution and in laws enacted by Parliament and the state legislatures.
- Setting up of the Minorities Commission (MC) was envisaged in the **Ministry of Home Affairs** Resolution In 1978.
- In 1984, the ‘Minorities Commission’ was **detached from the Ministry of Home Affairs and placed under the newly created Ministry of Welfare**.
- Former IPS officer Iqbal Singh Lalpura, has been chosen as **chairman of National Commission for Minorities**.

International

Logistics agreements

India is all set to conclude the bilateral logistics agreement with Russia (the Reciprocal Exchange of Logistics Agreement (RELOS)) soon while the agreement with the U.K. is in the final stages of conclusion.

Logistics agreements: The agreements are administrative arrangements facilitating access to military facilities for exchange of fuel and provisions on mutual agreement simplifying logistical support and increasing operational turnaround of the military when operating away from India.

India has signed several logistics agreements with all Quad countries, France, Singapore and South Korea beginning with **the Logistics Exchange Memorandum of Agreement (LEMOA)** with the U.S. in 2016.

Eastern Economic Forum

The Eastern Economic Forum was **established by decree of the President of the Russian Federation Vladimir Putin in 2015**.

- **It supports the economic development of Russia’s Far East** and to expand international cooperation in the Asia-Pacific region.
- **It takes place each year in Vladivostok**, a city in Russia.

- **It serves as a platform for the discussion of key issues** in the world economy, regional integration, and the development of new industrial and technological sectors, as well as of the global challenges facing Russia and other nations.
- Over the years, **it has emerged as an international platform** for discussing the strategy for developing **political, economic and cultural ties between Russia and Asia Pacific.**

About the FAR EAST:

- The Far East is the **easternmost part of Russia. It borders two oceans**, the Pacific and **the Arctic**, and **five countries** (China, Japan, Mongolia, the United States and the Democratic People's Republic of Korea (DPRK)).
- The **Far Eastern Federal District** covers more than a third of the country's territory.
- **The Far East is rich in natural resources** like diamonds, stannary, borax materials, 50 gold, tungsten, and fish and seafood. **About 1/3 of all coal reserves and hydro-engineering resources** of the country are here.
- Forests of the region comprise about **30% of the total forest area of Russia.**

Why in news? Prime Minister Narendra Modi delivered a video-address during the plenary session of the **6th Eastern Economic Forum (EEF) held in Vladivostok, Russia recently.**

13th BRICS Summit

The 13th BRICS Summit is going to be held **under India's Chairmanship in 2021.** It will be the **third time that India will be hosting the BRICS Summit** after 2012 and 2016. The Indian Chairship of BRICS this year coincides with the **fifteenth anniversary of BRICS**, as reflected in the theme for the Summit.

The theme for the Summit: 'BRICS@15: Intra-BRICS cooperation for continuity, consolidation and consensus.'

Priority areas under the Indian BRICS Chairmanship:

India had outlined **four priority areas for its Chairmanship.** These are Reform of the:

1. Multilateral System.
2. Counter Terrorism.
3. Using Digital and Technological Tools for achieving SDGs.
4. Enhancing People to People exchanges.

Houthis

Houthis are an armed rebel group belonging to the Zaidi Shia sect fighting against the government of Yemen. Traditionally, the Houthis have been concentrated in the northwestern Saada Province of Yemen.

AUKUS

US President Joe Biden administration has announced a new trilateral security partnership for the Indo-pacific. Security partnership was done between Australia, United Kingdom and United States.

The central feature of this partnership comprises of a trilateral 18-month effort in order to help Australia in acquiring nuclear powered submarines which are quieter, more capable as compared to their conventional counterparts.

AUKUS will also involve a new architecture of meeting and engagements between three countries. It also involves the cooperation across emerging technologies like AI, quantum technologies as well as undersea capabilities.

Science-Tech & Environment

Nipah

- **Category:** Zoonotic virus (it is transmitted from animals to humans).
- **Nomenclature:** Named after Malaysian village where first case was reported in 1998.
- **Natural reservoir:** Fruit bats. It first appeared in domestic pigs and has been found among several species of domestic animals including dogs, cats, goats, horses and sheep.
- **Spread:** The virus is transmitted to people from animals and can also be passed on through contaminated food or directly from person-to-person.
- **Symptoms:** acute encephalitis and respiratory illnesses.
- **Prevention:** Currently, there are no vaccines for both humans and animals.
- **Current outbreak:** Kozhikode district of Kerala

Manda buffalo

- The National Bureau of Animal Genetic Resources (NBAGR) has recognised the Manda buffalo as **the 19th unique breed of buffaloes found in India.**
- It is found in the Eastern Ghats and plateau of Koraput region of Odisha.
- The Manda are resistant to parasitic infections, less prone to diseases and can thrive on modest resources.

Chandigarh gets its first pollen calendar

The city of Chandigarh now has its first pollen calendar.

- Pollen calendars are graphical representations of the time dynamics of airborne pollen taxa in a certain geographic area. They are location-specific, with concentrations strongly tied to the flora found in the area.
- They provide easy-to-understand visual information on diverse airborne pollen species that are present throughout the year, as well as their seasonality, in a single image.

Significance:

- Pollens are considered major outdoor airborne allergens responsible for allergic rhinitis, asthma, and atopic dermatitis in humans.
- These calendars can identify potential allergy triggers and provide a clear understanding for clinicians as well as allergy sufferers about their causes to help limit their exposure during high pollen loads.

India's first Dugong conservation reserve:

- India's first Dugong conservation reserve will be built in Tamil Nadu. The reserve will spread over an area of 500 km in Palk Bay on the southeast coast of Tamil Nadu.
- Dugong is a marine animal that has been enlisted vulnerable to extinction on a global scale by the World Conservation Union (IUCN).
- It is the State animal of Andaman & Nicobar Islands.
- It is the only herbivorous mammal that is strictly marine, survive on seagrass

Findings of Chandrayaan-2

Presence of water molecules on moon: The mission has given the most precise information about the presence of H₂O molecules on the Moon till date.

Presence of Minor elements: Chromium, manganese and Sodium have been detected for the first time through remote sensing. The finding can lay the path for understanding magmatic evolution on the Moon and deeper insights into the nebular conditions as well as planetary differentiation.

Information about solar flares: A large number of microflares outside the active region have been observed for the first time, and according to ISRO, this "has great implications on the understanding of the mechanism behind heating of the solar corona", which has been an open problem for many decades.

Exploration of the permanently shadowed regions as well as craters and boulders underneath the regolith, the loose deposit comprising the top surface extending up to 3-4m in depth. This is expected to help scientists to zero in on future landing and drilling sites, including for human missions.

pgSIT

Researchers from California have developed **CRISPR-based system to safely restrain mosquito vectors via sterilization**. It is called the new **precision-guided sterile insect technique, or pgSIT**.

Working: pgSIT is a new scalable genetic control system that uses a CRISPR-based approach **to engineer deployable mosquitoes that can suppress populations**.

It alters genes linked to male fertility — creating sterile offspring — and female flight in *Aedes aegypti*, the mosquito species responsible for spreading wide-ranging diseases including **dengue fever, chikungunya, and Zika**.

pgSIT uses CRISPR to sterilize male mosquitoes and render female mosquitoes, which spread disease, as flightless.

Climate Action and Finance Mobilization Dialogue (CAFMD)

- This was one of the main tracks of **the U.S.-India Agenda 2030 Partnership** that President Joe Biden and Prime Minister Narendra Modi announced at **the Leaders Summit on Climate in April 2021**.
- It was launched recently.
- It will provide both India and the United States an opportunity to renew the collaborations on climate change while also addressing the financial aspects.
- It will deliver climate finance primarily as grants and concessional finance, as envisaged under **the Paris Agreement** for strengthening the climate action.

Economics

What is GST Appellate Tribunal?

- The GST Appellate Tribunal (GSTAT) is the second appeal forum under GST for any dissatisfactory order passed by the First Appellate Authorities.
- The National Appellate Tribunal is also the first common forum to resolve disputes between the centre and the states.
- It holds **the same powers as the court and is deemed Civil Court for trying a case**.
- **Section 109 of the GST Act** mandates the constitution of the Tribunal.

The GSTAT has the following structure:

1. National Bench: The National Appellate Tribunal is situated in New Delhi, constitutes a National President (Head) along with 2 Technical Members (1 from Centre and State each).

2. Regional Benches: On the recommendations of the GST Council, the government can constitute (by notification) Regional Benches, as required. As of now, there are 3 Regional Benches (situated in Mumbai, Kolkata and Hyderabad) in India.
3. State Bench and Area Bench.

What is MSP?

MSP is the rate at which the government buys grains from farmers. Currently, it fixes MSPs for 23 crops grown in both Kharif and Rabi seasons.

The Cabinet Committee on Economic Affairs (CCEA) has approved the increase in the **MSP for all mandated Rabi crops** for the Rabi Marketing Season 2022-23.

How is it calculated?

The MSP is the rate at which the government purchases crops from farmers, and is **based on a calculation of at least one-and-a-half times the cost of production incurred by the farmers.**

The Union Budget for 2018-19 had announced that MSP would be kept at levels of 1.5 the cost of production.

The MSP is fixed twice a year on the recommendations of the Commission for Agricultural Costs and Prices (CACP), which is a statutory body and submits separate reports recommending prices for kharif and rabi seasons.

Privatisation of Railways debate

Objectives of privatisation:

1. To introduce modern technology rolling stock with reduced maintenance.
2. Reduced transit time.
3. Boost job creation.
4. Provide enhanced safety.
5. Provide world-class travel experience to passengers.
6. Reduce demand-supply deficit in the passenger transportation sector.

Pros:

1. **Improved Infrastructure** – It will lead to better infrastructure which in turn would lead to improved amenities for travellers.

2. **Balancing Quality of Service with High Fares** – The move would foster competition and hence lead to overall betterment in the quality of services.
3. **Lesser Accidents** – Because private ownership is synonymous with better maintenance, supporters of privatisation feel that it will reduce the number of accidents, thus resulting in safe travel and higher monetary savings in the long run.

Cons:

Coverage Limited to Lucrative Sectors – An advantage of Indian Railways being government- owned is that it provides nation-wide connectivity irrespective of profit. This would not be possible with privatisation since routes which are less popular will be eliminated, thus having a negative impact on connectivity.

Fares – Given that a private enterprise runs on profit, it is but natural to assume that the easiest way of accruing profits in Indian Railways would be to hike fares, thus rendering the service out of reach for lower income groups. This will defeat the entire purpose of the system which is meant to serve the entire population of the country irrespective of the level of income.

Accountability – Private companies are unpredictable in their dealings and do not share their governance secrets with the world at large. In such a scenario it would be difficult to pin the accountability on a particular entity, should there be a discrepancy.

SC Garg Committee recommendations on Crypto currencies (2019)

1. Ban anybody who mines, hold, transact or deal with cryptocurrencies in any form.
2. It recommends a jail term of one to 10 years for exchange or trading in digital currency.
3. It proposed a monetary penalty of up to three times the loss caused to the exchequer or gains made by the cryptocurrency user whichever is higher.
4. However, the panel said that the government should keep an open mind on the potential issuance of cryptocurrencies by the Reserve Bank of India.

‘Shoonya’ Campaign

- NITI Aayog, in association with the RMI and RMI India, launched Shoonya campaign. Shoonya campaign is an initiative to work with consumers and industry in order to promote pollution-free delivery vehicles.
- This campaign was launched with the aim of accelerating the adoption of electric vehicles (EVs) in urban delivery segment and raise consumer awareness regarding the benefits of pollution-free delivery.

Current Affairs Update (Sep 19-25)

National

Shankhalipi script

Archeologists have found **'shankhalipi' inscriptions** on the stairs on an ancient temple dating back to **the Gupta period in Uttar Pradesh's Etah district**. The inscriptions mention **'Sri Mahendraditya'**, the title of **Kumaragupta I** of the Gupta dynasty

Significance: Two decorative pillars close to one another, with human figurines have been discovered at Bilsarh site. The discovery becomes significant since only two other structural temples from the Gupta age have been found so far — **Dashavatara Temple (Deogarh) and Bhitargaon Temple (Kanpur Dehat)**.

Shankhalipi or "shell-script" describe ornate spiral characters assumed to be Brahmi derivatives that look like conch shells or shankhas. They are found in inscriptions across north-central India and date to between the 4th and 8th centuries. The inscriptions consist of a small number of characters, suggesting that the shell inscriptions are names or auspicious symbols or a combination of the two.

Centre allowed IAS & IPS officers to retain gifts from Foreign Dignitaries

The Central Government has amended a 50-year-old rule and allowed IAS, IPS and IFoS officers to retain gifts they receive from foreign dignitaries while being members of the Indian delegation.

As per existing rules, these officers were allowed to accept gifts from their near relatives or from personal friends having no official dealings with them, on the occasions like weddings, funerals, anniversaries, and religious functions. However, they are required to make a report to the government if the value of such gift is more than Rs 25,000.

Gifts comprises of free transport, free lodging, free boarding, or any other service or pecuniary advantage provided by a person other than near relative or personal friend having no official dealings.

To be eligible for a 'National Political Party of India

1. It secures at least six percent of the valid votes polled in any four or more states, at a general election to the House of the People or, to the State Legislative Assembly.
2. In addition, it wins at least four seats in the House of the People from any State or States.
3. It wins at least two percent seats in the House of the People (i.e., 11 seats in the existing House having 543 members), and these members are elected from at least three different States.

To be eligible for a 'State Political Party

1. It secures at least six percent of the valid votes polled in the State at a general election, either to the House of the People or to the Legislative Assembly of the State concerned.
2. In addition, it wins at least two seats in the Legislative Assembly of the State concerned.
3. It wins at least three percent (3%) of the total number of seats in the Legislative Assembly of the State, or at least three seats in the Assembly, whichever is more.

Fortified Rice Kernels (FRK)

Centre government, for the first time issued uniform specifications for Fortified Rice Kernels (FRK) for grade A & Common Rice. The specifications have been issued by the Ministry of Consumer Affairs, Food and Public Distribution.

Food fortification is defined as the practice of adding vitamins and minerals to commonly consumed foods during processing to increase their nutritional value.

According to the Food Ministry, fortification of rice is a cost-effective and complementary strategy to increase vitamin and mineral content in diets. According to FSSAI norms, 1 kg fortified rice will contain iron (28 mg-42.5 mg), folic acid (75-125 microgram) and Vitamin B-12 (0.75-1.25 microgram). In addition, rice may also be fortified with micronutrients, singly or in combination, with zinc (10 mg-15 mg), Vitamin A (500-750 microgram RE), Vitamin B1 (1 mg-1.5 mg), Vitamin B2 (1.25 mg-1.75 mg), Vitamin B3 (12.5 mg-20 mg) and Vitamin B6 (1.5 mg-2.5 mg) per kg.

Char Dham

- Char Dham means Four Dhams i.e. Four religious places. Char Dham in Uttarakhand is a collective term used for religious circuit covering Holy hindu pilgrimage centres of Badarinath, Kedarnath, Gangotri and Yamunotri.
- All four temple shrines are located in Garhwal Himalayas range of Uttarakhand.
- This is considered as most sacred religious places to be visited by Hindus, to get rid of their sins and pave path to ultimate goal of human life – the Moksha.

Baijayant Panda Committee

It is a committee constituted by Ministry of Defence constituted a High Level Expert Committee for a comprehensive review of **National Cadet Corps (NCC)**.

Objectives of the Committee:

- Committee is to suggest measures to empower NCC cadets to contribute more effectively towards nation building.
- To propose ways for gainful engagement of NCC Alumni for betterment of the organization.

- To recommend best practices of similar international youth organisations for inclusion in NCC curriculum

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 headquarter 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.
- Afghanistan and Serbia hold observer status in the CSTO.

The SCO

- **The Shanghai Cooperation Organisation (SCO)** is a permanent intergovernmental international organization.
- The **creation of SCO** was announced **on 15 June 2001 in Shanghai (China)**.
- The **Shanghai Cooperation Organisation Charter** was signed during the **St.Petersburg SCO Heads of State** meeting in June 2002, and **entered into force on 19 September 2003**.
- It was preceded by the **Shanghai Five mechanism**.
- The **SCO's official languages** are **Russian and Chinese**.
- **SCO Headquarters:** Beijing, China
- **Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan** were members of the **Shanghai Five**, Prior to the creation of SCO in 2001.
- **Shanghai Five (1996)** emerged from a series of border demarcation and demilitarization talks which the four former Soviet republics held with China to ensure stability along the borders.
- **Uzbekistan joined the organisation in 2001**, following this the **Shanghai Five was renamed the Shanghai Cooperation Organisation (SCO)**.
- **India and Pakistan became members in 2017**.
- At the end of the 21st Summit of the Shanghai Cooperation Organisation (SCO), the leaders of the eight main members of the organisation agreed to change the membership of the **Islamic Republic of Iran** from an observer member to a full member

Global Innovation Index 2021

India has climbed two spots and **has been ranked 46th** by the **World Intellectual Property Organization (WIPO)** in the **Global Innovation Index 2021** rankings.

The Global Innovation Index (GII) is **an annual ranking of countries by their capacity for, and success in, innovation**. It is published by **Cornell University, INSEAD, and the World Intellectual Property Organization**, in partnership with other organisations and institutions. It is **based on both subjective and objective data** derived from several sources, including **the International Telecommunication Union, the World Bank and the World Economic Forum**.

Top Performers: Switzerland, Sweden, USA

SDG Progress Award

Bangladesh Prime Minister, **Sheikh Hasina**, has been conferred with the “SDG Progress Award” and was introduced as the “jewel in the crown of the day” at an event. Award was conferred by the UN-sponsored Sustainable Development Solutions Network (SDSN).

Science-Tech & Environment

What Is a Green Bond?

- A green bond is a **type of fixed-income instrument** that is specifically earmarked to raise money for climate and environmental projects.
- These bonds are **typically asset-linked and backed by the issuing entity’s balance sheet**, so they usually carry the same credit rating as their issuers’ other debt obligations.
- Green bonds may come with tax incentives to enhance their attractiveness to investors.
- The **World Bank is a major issuer of green bonds**. It has issued 164 such bonds since 2008, worth a combined \$14.4 billion. In 2020, the total issuance of green bonds was worth almost \$270 billion, according to the **Climate Bond Initiative**.

Green Bonds Vs Blue Bonds:

- **Blue bonds** are sustainability bonds to finance projects that **protect the ocean and related ecosystems**.
- This can include projects to support sustainable fisheries, protection of coral reefs and other fragile ecosystems, or reducing pollution and acidification.
- **All blue bonds are green bonds, but not all green bonds are blue bonds.**

EXERCISE SURYA KIRAN

15th Edition of **Indo – Nepal Joint Military Training**, Exercise Surya Kiran between Indian Army and Nepali Army is commencing at Pithoragarh (UK).

General Sherman

- The General Sherman tree is the world's largest in terms of volume and exists in the Giant Forest sequoia grove of the national park. As per recent estimates, General Sherman is about 2,200 years old.
- The tree stands at a height of 275 feet (taller than the leaning tower of Pisa) and has a diameter of 36 feet at the base.
- It is located in the U.S. state of California.

Why in News? The tree is threatened by California wildfires.

Lunar Crater Named After Matthew Henson

The International Astronomical Union (IAU) has named a Lunar crater at the south pole of the moon after the **Arctic explorer** Matthew Henson. Matthew Henson was a Black man who was one of the first people who stand at the very top of the world, in 1909. **Artemis Programme** was launched by NASA which aims to land the next slate of lunar explorers on the Henson Crater

Parker Solar Probe

Scientists using data from NASA's **Parker Solar Probe** have assembled the most complete picture yet of the inner structure and behavior of the large cloud of space dust, known as the zodiacal cloud, that swirls throughout the solar system.

What are zodiacal clouds?

- The sources of zodiacal clouds/interplanetary dust particles (IDPs) include at least: asteroid collisions, cometary activity and collisions in the inner Solar System, Kuiper belt collisions, and interstellar medium grains.
- It scatters sunlight in a way that can be seen with the naked eye, but only on very dark, clear nights, as moonlight or light from cities both easily outshine it.

5G

5G is the next generation of mobile broadband that will eventually replace, or at least augment 4G LTE connection.

Features and benefits of the 5G technology:

1. Operate in **the millimeter wave spectrum (30-300 GHz)** which have the advantage of sending large amounts of data at very high speeds.

2. Operate in **3 bands**, namely low, mid and high frequency spectrum.
3. **Reduced latency** will support new applications that leverage the power of 5G, the Internet of Things (IoT), and artificial intelligence.
4. **Increased capacity** on 5G networks can minimize the impact of load spikes, like those that take place during sporting events and news events.

Why in news? Vodafone Idea (Vi) claimed to have achieved a peak 5G data speed of 3.7Gbps on the mmWave spectrum band in a recent test conducted in Pune, Maharashtra. Peak download speeds of up to 1.5Gbps in the 3.5Ghz band 5G trial network in Gandhinagar and Pune.

Two more Indian beaches gets International Blue Flag certification

- Blue flag certification is an international eco-level tag. Beaches with Blue Flag certification are considered as the cleanest beaches across the world. It is one of the world's most recognised voluntary eco-labels that are awarded to beaches, marinas, as well as sustainable boating tourism operators.
- With the addition of two beaches, the total number of such beaches in India have reached to 10.
- Two beaches that received the certification in 2021 are **Kovalam** in Tamil Nadu and **Eden** in Puducherry.
- Blue Flag recertification was also done for eight nominated beaches namely, Shivrajpur in Gujarat, Ghoghla in Diu, Kasarkod & Padubidri in Karnataka, Kappad-Kerala, Rushikonda in Andhra Pradesh, Golden in Odisha and Radhanagar in Andaman & Nicobar. All these beaches were awarded this certificate in the year 2021.

Who gives this certification?

- The Blue Flag Certification Programme for beaches and marinas is run by the international, non-governmental & non-profit organisation called "**Foundation for Environmental Education (FEE)**". FEE was established in 1985 in France.



BEAMS program

The Ministry of Environment, Forest and Climate Change in its pursuit of “Sustainable Development” of the coastal regions of India embarked upon a highly acclaimed & flagship program Beach Environment & Aesthetics Management Services (BEAMS).

BEAMS is one of the initiatives under ‘Integrated coastal zone management’ (ICZM) approach that the MoEF&CC has undertaken for the sustainable development of coastal regions of India. The prime objective of ICZM approach is to protect and conserve the pristine coastal and marine ecosystems through holistic management of the resources.

The objective of BEAMS program is:

1. To abate pollution in coastal waters,
2. Promote sustainable development of beach facilities,
3. Protect & conserve coastal ecosystems & natural resources, and
4. Seriously challenge local authorities & stakeholders to strive and maintain high standards of cleanliness,
5. Hygiene & safety for beachgoers in accordance with coastal environment & regulations.

Nuclear submarine

Research into nuclear-based propulsion of marine vessels began in the 1940s with the dawn of the “nuclear age”. Since then, **only six nations** have owned and operated nuclear submarines: China, France, India, Russia, the UK and the US. The **US**, with over **70 operational nuclear submarines**, has more nuclear submarines than Russia (29), France (8) and UK (11) put together.

Working: Nuclear-powered submarine is not a nuclear weapon. On the surface, they look like any other submarine. The key difference lies in the way they are powered. Reactors in a nuclear-powered submarine are typically fuelled with uranium. For the reactor to work, the uranium fuel has to be “enriched” to contain the desired proportion of uranium-235. For submarines, this is typically about 50%.

Advantage: One huge advantage of nuclear-powered submarines is they do not require refuelling. When one of them enters into service, it will be commissioned with enough uranium fuel to last more than 30 years.

The high efficiency of nuclear power also enables these submarines to operate at high speed for longer periods than conventional diesel-electric submarines. What’s more, unlike conventional fuel combustion, nuclear reactions do not require air. That means nuclear submarines can stay submerged at deep depths for months at a time, giving them better stealth capabilities and allowing for longer, more remote deployments.

Disadvantage: The downside is the eye-watering cost. Each nuclear submarine typically costs several billion dollars to build, and requires a highly skilled workforce with expertise in nuclear science.

Why in news? The high point of AUKUS is that both the US and the UK will equip Australia to design and build up to eight nuclear-powered attack submarines (SSNs) to counter the rising threat of China in the Indo-Pacific.

African swine fever

- ASF is a **highly contagious and fatal animal disease** that infects domestic and wild pigs, typically resulting in an acute form of hemorrhagic fever.
- It was **first detected in Africa in the 1920s**.
- The mortality is close to 100 per cent, and since the fever has no cure, the only way to stop it spreading is by culling the animals.
- As of now, **there is no approved vaccine**, which is also a reason why animals are culled to prevent the spread of infection.
- **Why in news?** After Mizoram witnessed the ASF outbreak, cases have been reported in **Tripura**.

WHO global air pollution standards

The World Health Organization (WHO), in its **first-ever update since 2005**, has tightened global air pollution standards in recognition of the emerging science that the impact of air pollution on health is much more serious than earlier envisaged.

As per the latest standards:

1. The upper limit of annual PM2.5 as per the 2005 standards, which is what countries now follow, is 10 microgram per cubic metre. That has now been revised to five microgram per cubic metre.
2. The 24-hour ceiling used to be 25 microgram but has now dropped to 15.
3. The upper limit of PM10, or particulate matter of size exceeding 10 microgram, is 20 microgram and has now been revised to 15, whereas the 24-hour value has been revised from 50 to 45 microgram.

Economics

World Bank discontinues Doing Business ranking

- The World Bank Group has decided to discontinue publication of its **'Doing Business' rankings** of country business climates after a review of data irregularities in **the 2018 and 2020 reports**.
- The irregularities in Doing Business reports had affected four countries: China; Saudi Arabia; United Arab Emirates; and Azerbaijan.
- A probe of data irregularities cited "undue pressure" by top bank officials, including then-Chief Executive Kristalina Georgieva, to boost China's ranking in 2017. This raised ethical matters involving former bank staff and board officials.
- World Bank's annual report matters to several nations, especially developing ones, since it greatly influenced investor decisions by releasing a ranking of economies based on how easy it is to open up, and operate, a business. But while the report was hugely popular among investors, it was heavily criticized by many governments for its methodology that, leaders said, inaccurately captured the realities on the ground.

'Bad bank' to clear the NPA mess

- The government has set up **two new entities to acquire stressed assets from banks and then sell them in the market**.
- **The "National Asset Reconstruction Company Limited" (NARCL)** has already been incorporated under the Companies Act. It will acquire stressed assets worth about Rs 2 lakh crore from various commercial banks in different phases.

- **Another entity — India Debt Resolution Company Ltd (IDRCL)**, which has also been set up — will then try to sell the stressed assets in the market.
- **The NARCL-IDRCL structure is the new bad bank.** To make it work, the government has okayed the use of Rs 30,600 crore to be used as a guarantee.

Highlights:

- It will be a five-year guarantee for **the National Asset Reconstruction Company Limited (NARCL)**-issued security receipts to banks.
- Under the mechanism, the NARCL will acquire assets by making an offer to the lead bank.
- Private sector **asset reconstruction firms (ARCs)** may also be allowed to outbid the NARCL.
- Separately, public and private lenders would combine forces to set up an **India Debt Resolution Company (IDRC)** that would manage these assets and try to raise their value for final resolution.

G-33

- The G33 (or the Friends of Special Products in agriculture) is a coalition of developing countries, established prior to **the 2003 Cancun ministerial conference**, that have coordinated during **the Doha Round of World Trade Organization negotiations**, specifically in regard to agriculture.
- There are currently 47 members in the G33.
- The group has “defensive” concerns regarding agriculture in relation to WTO negotiations, and seeks to limit the degree of market opening required of developing countries.
- The group has advocated the creation of a “special products” exemption, which would allow developing countries to exempt certain products from tariff reductions, and also a “special safeguard mechanism” which would permit tariff increases in response to import surges.
- India is a member of this group.

What is an IPO grey market?

Generally, when companies wish to raise funds to fuel their growth, they sell a part of their stock on the stock market. This process is called **an initial public offering, or IPO.**

But, an IPO grey market is **an unofficial market** where IPO shares or applications are bought and sold **before they become available for trading on the stock market.** It is also termed a **parallel market or an over-the-counter market.**

Is it legal? How is it governed?

Since it's **unofficial**, inevitably, there are no regulations that govern it. **The Securities and Exchange Board of India (SEBI)**, stock exchanges, and brokers have no part to play in it. These **transactions are undertaken in cash on a one-on-one basis.**