

Science and Technology

Nipah Virus

Why in News?

A boy infected with the Nipah virus has died in Kerala, a state already hit badly by Covid-19

About Nipah Virus(NiV) (Scientific name-Nipah henipavirus)

- It is a type of RNA zoonotic virus (it is transmitted from animals to humans) and can also be transmitted through contaminated food or directly between people.
- It is a member of the family Paramyxoviridae.
- Given that NiV is genetically related to Hendra virus, another henipavirus known to be carried by bats.
- The animal host reservoir for NiV is the fruit bat (genus Pteropus), also known as the flying fox.

Transmission

- Direct contact with infected animals, such as bats or pigs, or their body fluids (such as blood, urine or saliva)
- Consuming food products that have been contaminated by body fluids of infected animals (such as palm sap or fruit contaminated by an infected bat)
- Close contact with a person infected with NiV or their body fluids (including nasal or respiratory droplets, urine, or blood)

Symptoms

- In infected people, it causes a range of illnesses from asymptomatic (subclinical) infection to acute respiratory illness and fatal encephalitis.
- The virus can also cause severe disease in animals such as pigs, resulting in significant economic losses for farmers.

Diagnosis

- Nipah virus infection can be diagnosed with clinical history during the acute and convalescent phase of the disease.
- The main tests used are real time polymerase chain reaction (RT-PCR) from bodily fluids and antibody detection via enzyme-linked immunosorbent assay (ELISA).

- Other tests used include polymerase chain reaction (PCR) assay, and virus isolation by cell culture.

Treatment

- There are currently no drugs or vaccines specific for Nipah virus infection although WHO has identified Nipah as a priority disease for the WHO Research and Development Blueprint.
- Intensive supportive care is recommended to treat severe respiratory and neurologic complications.

Outbreak

- Nipah virus was first recognized in 1999 during an outbreak among pig farmers in, Malaysia. No new outbreaks have been reported in Malaysia since 1999.
- It was also recognized in Bangladesh in 2001, and nearly annual outbreaks have occurred in that country since.
- The disease has also been identified periodically in eastern India.

Doppler Weather Radar (DWR)

Why in News?

- Recently, the Union Minister of State (Independent Charge) Science & Technology inaugurated the latest **upgraded state-of-the-art Doppler Weather Radar (DWR) & Indigenous** GPS based Pilot Sonde at Indian Meteorological Office in Jammu.

What is Doppler Weather Radar (DWR)?

- It is a **specialized radar** that uses the **Doppler effect** to produce **velocity data** about **objects at a distance**.
- It is designed to **improve precision in long-range weather** forecasting and surveillance using a **parabolic dish antenna** and a **foam sandwich spherical radome**.
- It has the **equipment to measure rainfall intensity, wind shear and velocity** and **locate a storm centre** and the direction of a tornado or gust front.
- It provides **advanced information, enhancing the lead-time** so essential for saving lives and property, in the event of natural disaster associated with severe weather.
- **Division of Doppler Radars and their applications:** Doppler radar can be divided into several different categories according to the wavelength which are **L, S, C, X, K**.

‘AUSINDEX’ 2021

Why in News?

Navies from Australia and India have commenced the bilateral maritime exercise, codenamed Australia India (AUSINDEX) 2021 off Darwin.

- The maritime exercise, which started on 6th September 2021 will run until 10 September, focuses on developing deeper understanding and cooperation between the Indian Navy (IN) and the Royal Australian Navy (RAN).
- Indian Navy task group comprising vessels Shivalik and Kadmat are participate in the exercise alongside the RAN's Anzac-class frigate HMAS Warramunga.
- The fourth iteration of AUSINDEX exercise includes complex surface, sub-surface and air operations between ships, submarines, helicopters and long-range maritime patrol aircraft (MPA) of the two participating navies.
- The exercise is a representation of Joint Guidance signed by the Chief of the Naval Staff, IN and Chief of Navy, RAN on 18th August 2021. This important document is aligned to the '2020 Comprehensive Strategic Partnership' between the two nations and aims to further consolidate shared commitment to regional and global security challenges promoting peace, security and stability in the Indo-Pacific region.
- Commenced in 2015 as a bilateral IN-RAN maritime exercise, AUSINDEX has grown in complexity over the years and the 3rd edition of the exercise, held in 2019 in the Bay of Bengal, included anti-submarine drills for the first time.

Italian Grand Prix 2021

Why in News?

- Daniel Joseph Ricciardo (McLaren) an Australian-Italian racing driver has won the Italian Grand Prix 2021 held at Autodromo Nazionale Monza track, Italy on 12 September 2021.

Analysis: -

- This is the first victory for McLaren in 9 years.
- Lando Norris (McLaren) came second while Valtteri Bottas (Mercedes) came third in the F1 race.
- Lewis Hamilton and Max Verstappen crashed out of Italian Grand Prix 2021 due to collision.
- Max Verstappen has been handed a three-place grid penalty for the next GP event - Russian Grand Prix - after the stewards judged he was to blame for causing a collision with Lewis Hamilton.

C-295MW to replace ageing Avro Aircrafts

Why in News?

- On 8th September 2021, the Cabinet Committee on Security approved the procurement of fifty six C-295MW transport aircraft from M/s Airbus Defence and Space S.A., Spain for the Indian Air Force.

Analysis: -

- C-295MW aircraft is a transport aircraft of 5-10 Tonne capacity with contemporary technology that will replace the ageing Avro aircraft of IAF.
- The aircraft has a rear ramp door for quick reaction and para dropping of troops and cargo.
- Sixteen aircraft will be delivered in flyaway condition from Spain within 48 months of signing of the contract and forty aircraft will be manufactured in India by TATA Consortium within ten years of signing of the contract.
- This is the first project of its kind in which a military aircraft will be manufactured in India by a private company.
- All fifty six aircraft will be installed with indigenous Electronic Warfare Suite.

NH for Emergency Landing

Why in News?

On 9th September, 2021 an Emergency Landing Field (ELF) was inaugurated on NH-925 at Gandhav Bhakasar Section (NH-925) South of Barmer (Rajasthan).

- Also, the event was marked with touchdown exercises by various fighter aircrafts.
- This is the first time that National Highway will be used for emergency landing of aircrafts of IAF.
- NHAI had developed a 3.0 Km section of Satta-Gandhav stretch of NH-925A from Km. 41/430 to Km. 44/430 as an Emergency Landing Facility (ELF) for Indian Air Force, which is part of newly developed Two lane paved shoulder of Gagariya-Bakhasar & Satta-Gandhav Section having total length of 196.97 Km. under Bharatmala Pariyojana.
- This project will improve connectivity between villages of Barmer & Jalore districts located on international border. The stretch being located in the western border area will facilitate the vigilance of the Indian Army as well as strengthen the basic infrastructure of the country.
- Apart from this Emergency Landing Strip, 3 helipads (size 100 x 30 metres each) have been constructed in Kundanpura, Singhanian & Bakhasar villages in this project according to the requirements of the Air Force/Indian Army, which will be the basis for strengthening the Indian Army and security network on the western international border of the country.
- During normal time the ELF will be used for smooth flow of road traffic. But during the operations of ELF for Indian Air Force order, the service road will be used for smooth flow of road traffic. It has been constructed in 3.5 Km length. This Landing Strip will be able to facilitate landing of all types of Aircrafts of Indian Airforce.

Scrub Typhus

Why in News?

- Mathura in western Uttar Pradesh have reported cases of a mystery fever, which has been identified as **scrub typhus**.

About

- Scrub typhus, also known as bush typhus, is a disease **caused by a bacteria** called **Orientia tsutsugamushi**.
- It is spread to people through bites of **infected chiggers (larval mites)**.
 - Apart from India, cases of scrub typhus have been reported from rural areas of Indonesia, China, Japan and northern Australia.
- **Symptoms:**
 - The most common symptoms of scrub typhus include fever, headache, body aches, and sometimes rash. Most cases of scrub typhus occur in rural areas of Southeast Asia, Indonesia, China, Japan, India, and northern Australia. Anyone living in or travelling to areas where scrub typhus is found could get infected
- **Impact:**
 - The site where the chigger bites develop a dark, scab-like region, which is also known as eschar.
 - After contracting the infection, a person can experience mental changes, ranging from confusion to coma.
 - Some of the patients also develop joint pains, which is characteristic of **chikungunya**. The infection can lead to **respiratory distress, inflammation of the brain and the lungs, kidney failure** and then multi-organ failure, ultimately leading to death.
- **Prevention and Treatment:**
 - **No vaccine is available to prevent scrub typhus.** It suggested the risk of contracting the infection by avoiding contact with infected chiggers.
 - When travelling to regions where scrub typhus is common, people should avoid areas with lots of vegetation and brush where chiggers may be found.
 - If someone gets infected by scrub typhus then it should be **treated with the antibiotic doxycycline**.
 - Doxycycline can be used in persons of any age.
 - Antibiotics are most effective if given soon after symptoms begin.
 - People who are treated early with doxycycline usually recover quickly.
 - It has been advised to dress children in clothing that covers arms and legs, or cover crib, stroller, and baby carrier with mosquito netting in order to keep scrub typhus at bay.

Exercise ZAPAD 2021

Why in News?

- The Indian Army contingent will participate in the multinational military exercise named '**ZAPAD 2021**' at Nizhny in Russia.
- ZAPAD 2021 is a 13-day exercise.

About

- ZAPAD 2021 is one of the theatre level exercises of the Russian Armed Forces and will focus primarily on **operations against terrorists**.
- **Over a dozen countries** from the **Eurasian and South Asian Regions** will participate in this signature event.
- The NAGA Battalion group participating in the exercise will feature an all Arms combined task force.
 - The Indian Contingent has been put **through a strenuous training** schedule that encompasses all facets of conventional operations including mechanised, airborne & heliborne, counter-terrorism, combat conditioning and firing.
- **Aim:**
 - It is aimed at boosting anti-terror cooperation and enhancing military and strategic ties amongst the participating nations while they plan & execute this exercise.

INSPIRESat-1

Why in News?

- According to the Indian Institute of Space Science and Technology (IIST), **INSPIRESat-1** is set for launch.

About

- INSPIRESat-1 is a **collaborative effort** by the Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado Boulder in the U.S., the National Central University, Taiwan, and the Nanyang Technological University in Singapore, apart from the IIST.
- INSPIRESat-1 **CubeSat**, developed under the **International Satellite Program in Research and Education (INSPIRE)**.
 - A constellation of earth and space-weather observation satellites is envisaged under the INSPIRE programme.
- The INSPIRESat-1 mission was **originally planned for 2020** but was delayed due to the COVID-19 pandemic.
- The small satellite that **weighs less than 10 kg** will be launched aboard an upcoming **Polar Satellite Launch Vehicle (PSLV)** mission of the **Indian Space Research Organisation (ISRO)**.
- It is equipped with a Compact Ionosphere Probe for studying the earth's ionosphere.
- It has been fully integrated, tested and will be **placed in a low earth orbit**.
 - A **low Earth orbit (LEO)** is an orbit around Earth with an altitude above Earth's surface from **160 km to 2,000 kilometres**.

Polity and Social Issues

Two years of the National Register of Citizens (NRC) Draft

Why in News?

- The updation process of the **National Register of Citizens (NRC)** in Assam is caught in a logjam two years after the publication of the **supplementary list on August 31, 2019.**

Major Points

- The **Unique Identification Authority of India (UIDAI)** had collected the biometric details of **27.43 lakh people** who had been delisted from the initial complete draft published in 2018. Some 8.37 lakh of them made it to the NRC complete draft published eight months later.
- More than 19 lakh out of **3.3 crore applicants were left out of the complete draft** of Assam's National Register of Citizens (NRC) published on **August 31, 2019.**
 - But the stagnation of the **updating exercise** has cast a cloud of uncertainty over 8.37 lakh more people across the State.
 - They are struggling to get Aadhaar, and worry about benefits linked to it.
 - This is because the biometric details of people collected before the publication of the draft continue to be frozen.
 - **Background :**
 - The collection of biometrics followed a **Supreme Court-**approved **standard operating procedure (SOP)** in November 2018.
 - Fingerprints, retina scans and other details were collected during the **hearing of claims** for the excluded people to be included in the NRC and objections to the inclusion of people who may have figured in the citizens' list erroneously or through **alleged manipulation.**

What is the National Register of Citizens (NRC)?

- National Register of Citizens (NRC) is a **register prepared** after the conduct of the **Census of 1951** in **respect of each village**, showing the houses or holdings in serial order and indicating against **each house or holding** the number and names of persons staying therein.
- These registers **covered each and every person enumerated during the Census of 1951** and were kept in the offices of **Deputy Commissioners and Sub Divisional Officers** according to instructions issued by the Government of India in 1951. Later these registers were transferred to the Police in the early 1960s.

World Social Protection Report 2020-22

Why in News?

Recently, International Labour Organisation (ILO) released **World Social Protection Report 2020-22.**

Major Findings of the report

- **Coverage:** Currently, only **47 per cent of the global population** are effectively covered by at least one social protection benefit, while 4.1 billion people (53 per cent) obtain no **income security at all from their national social protection system**.
 - Over **half of all people in the world have no social protections**, even after the pandemic spurred countries to offer more services to their populations.
- **Impact of COVID-19 pandemic :** The COVID-19 pandemic has revealed and exacerbated the social protection gap between countries with high and low-income levels.
 - The pandemic **response was uneven and insufficient**, deepening the gap between countries with high and low-income levels and failing to afford the much-needed social protection that all human beings deserve.
- **Regional inequalities:** There are **significant regional inequalities** in social protection.
 - **Europe and Central Asia** have the **highest rates of coverage**, with 84 per cent of people being covered by at least one benefit.
 - The Americas are also above the global average, with 64.3 per cent. Asia and the Pacific (44 per cent), the Arab States (40 per cent) and Africa (17.4 per cent) have marked coverage gaps.
- **Government spending:** Government spending on social protection also varies significantly. On average, **countries spend 12.8 per cent of their gross domestic product (GDP)** on social protection (excluding health), however, high-income countries spend **16.4 per cent** and low-income countries only **1.1 per cent of their GDP on social protection**.
- **Suggestions**
 - The world community must recognize that effective and comprehensive social protection is not just essential for social justice and decent work but for creating a sustainable and resilient future too.
 - This is a pivotal moment to harness the **pandemic response to build a new generation of rights-based social protection systems**.
 - These can cushion people from future crises and give workers and businesses the security to tackle the multiple transitions ahead with confidence and with hope.
 - To guarantee at least **basic social protection coverage**, low-income countries **would need to invest an additional US\$77.9 billion** per year, lower-middle-income countries an additional US\$362.9 billion per year and upper-middle-income countries a further US\$750.8 billion per year.
 - That's equivalent to 15.9, 5.1 and 3.1 per cent of their GDP, respectively.

The World Social Protection Report 2020-22

- It gives a global overview of recent developments in social protection systems, including social protection floors, and covers the impact of the COVID-19 pandemic.
- Based on new data, it offers a broad range of global, regional and country data on social protection coverage, benefits and public expenditures.
- The report identifies protection gaps and sets out key policy recommendations, including in relation to the targets of the 2030 Agenda for Sustainable Development.

Pardoning Power of Governor

Why in News?

On 3rd August, 2021, the Supreme Court held that the Governor of a State can pardon prisoners; including death row ones, even before they have served a minimum 14 years of prison sentence.

What the Court Said?

- The Governor's power to pardon overrides a provision in the Code of Criminal Procedure — Section 433A —which mandates that a prisoner's sentence can be remitted only after 14 years of jail.
- The court noted that the sovereign power of a Governor to pardon a prisoner under Article 161 is actually exercised by the State government and not the Governor on his own.
- The action of commutation and release can thus be pursuant to a governmental decision and the order may be issued even without the Governor's approval.

Pardoning Power of the President and Governor

President

Under the Article 72, the President shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence -

- in all cases where the punishment or sentence is by a Court Martial;
- in all cases where the punishment or sentence is for an offence against any law relating to a matter to which the executive power of the Union extends;
- in all cases where the sentence is a sentence of death.

Governor

- Under the Article 161, the Governor of a State shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence against any law relating to a matter to which the executive power of the State extends.

Difference between Pardoning Powers of President and Governor

The power differs in the following two ways:

- (i) The power of the President to grant pardon extends in cases where the punishment or sentence is by a Court Martial but Article 161 does not provide any such power to the Governor.
- (ii) The President can grant pardon in all cases where the sentence given is sentence of death but pardoning power of Governor does not extend to death sentence cases.

Types of Pardoning Powers of the President

- **Pardon:** It removes both the sentence and the conviction and completely absolves the convict from all sentences, punishments and disqualifications.
- **Commutation:** It denotes the substitution of one form of punishment for a lighter form. For example, a death sentence may be commuted to rigorous imprisonment, which in turn may be commuted to a simple imprisonment.
- **Remission:** It implies reducing the period of sentence without changing its character. For example, a sentence of rigorous imprisonment for two years may be remitted to rigorous imprisonment for one year.
- **Respite:** It denotes awarding a lesser sentence in place of one originally awarded due to some special fact, such as the physical disability of a convict or the pregnancy of a woman offender.
- **Reprieve:** It implies a stay of the execution of a sentence (especially that of death) for a temporary period. Its purpose is to enable the convict to have time to seek pardon or commutation from the President.

Ramon Magsaysay Awards 2021

Why in News?

Asia's highest honour - Ramon Magsaysay Awards 2021 was announced on 31 August 2021.

- Five persons will receive this year's Ramon Magsaysay Award — regarded as the Asian version of the Nobel Prize.

Awardees and their Contribution

- **Muhammad Amjad Saqib (Pakistan):** He developed a “first-of-its-kind” interest-and-collateral-free microfinance programme, Akhuwat, which uses places of worship to disburse zero-interest loans, recording a phenomenal loan repayment rate of 99.9 per cent. Akhuwat has taken up a vast array of social support programmes in education, health services, “clothes bank”, anti-social discrimination and Covid-19 emergency aid.
- **Firdausi Qadri (Bangladesh):** A Bangladeshi scientist who has been instrumental in discovering vaccines that have saved millions of lives. She is credited with developing affordable oral cholera vaccine and the typhoid conjugate vaccine for

adults, children, and infants. Most of her work is focused in congested slum areas of developing countries.

- **Steven Muncy (Southeast Asia):** Steven Muncy, from the US, is being recognised for “his unshakable belief in the goodness of man that inspires in others the desire to serve; his life-long dedication to humanitarian work, refugee assistance, and peace building; and his unstinting pursuit of dignity, peace, and harmony for people in exceptionally difficult circumstances in Asia.”
- **WatchDoc (Indonesia):** A production house that ingeniously combines documentary filmmaking and alternative platforms to highlight underreported issues in Indonesia.
- **Roberto Ballon (Philippines):** Environmentalist from the Philippines is being recognised for “his inspiring determination in leading his fellow fisherfolk to revive a dying fishing industry by creating a sustainable marine environment for this generation and generations to come”.

About the Award

- Established in 1957, the Ramon Magsaysay Award is Asia’s highest honour.
- It celebrates the memory and leadership example of the seventh Philippine president - Ramon Magsaysay - after whom the award is named, and is given every year to individuals or organisations in Asia who manifest the same selfless service and transformative influence that ruled the life of the late and beloved Filipino leader.
- The Ramon Magsaysay awardees, annually selected by the Ramon Magsaysay Award Foundation (RMAF) board of trustees, are presented with a certificate and a medallion with an embossed image of Ramon Magsaysay facing right in profile.
- This year’s Magsaysay Award winners will be formally conferred the Magsaysay Award during formal presentation ceremony to be held on 28 November 2021, at the Ramon Magsaysay Center in Manila.

G. C. Murmu elected as the Chairman of ASOSAI

Why in News?

The Comptroller and Auditor General of India has been elected as the Chairman of Assembly of Asian Organization of Supreme Audit Institutions (ASOSAI) from 2024-2027 and India will host the 16th Assembly of ASOSAI in 2024.

Analysis: -

- The CAG, as the Chairman, will be the Chief Executive of ASOSAI and represent ASOSAI in its dealings with national and international organizations.

About ASOSAI

- The ASOSAI is one of the Regional Groups of the International Organization of Supreme Audit Institutions (INTOSAI) which aims to promote understanding and

cooperation among member institutions through the exchange of ideas and experiences in the field of public audit.

- Established in 1979 with 11 members, the membership of the ASOSAI consists of Charter Members, Members and Associate Members. The membership has since grown to 47 SAIs. The Assembly consists of all members of the Organization and meets once in three years.

Geography and Agriculture

Deputy Speaker of Lok Sabha

Why in News?

- Recently, the Delhi High Court asked Centre to explain its stand on **delay in appointment of Deputy Speaker** for Lok Sabha.

Background

- A petition was filed that claimed keeping the post of Deputy Speaker of the Lok Sabha vacant is a **violation of Article 93 of the Constitution**.
- The post of Deputy Speaker has been lying vacant since the Constitution of the **17th Lok Sabha in 2019**.
- **Previous such instance:** The longest time that this post had remained vacant was in the 12th Lok Sabha and even then on the 59th sitting of Parliament, election to the post was held.

Deputy Speaker

- **Article 93 of Constitution of India:**
 - The House of the People shall, as soon as may be, choose two members of the House to be **respective Speaker and Deputy Speaker** thereof and, so often as the office of Speaker or Deputy Speaker becomes vacant, the House shall choose another member to be Speaker or Deputy Speaker, as the case may be.
- **Election:**
 - In the Lok Sabha, the lower House of the Indian Parliament, both Presiding Officers - the Speaker and the Deputy Speaker are elected from **among its members by a simple majority of members** present and voting in the House.
- **Independent from Speaker:**
 - The Deputy Speaker is **independent of the Speaker, not subordinate to him**, as both are elected from among the members of the House.
 - When he presides over a sitting, he has all the powers of a Speaker.
- **Gaining importance:**
 - In addition to presiding over the House in the absence of the Speaker, the Deputy Speaker chaired committees both inside and outside of Parliament.
- **Ensures continuity of Speaker's office:**

- The Deputy Speaker ensures the continuity of the Speaker's office by acting as the Speaker when the office becomes vacant:
 - Illness, or
 - by death, or
 - because of resignation or
 - any other reason.
- When the Speaker's post falls vacant, it is the Deputy Speaker who assumes all the powers of the Speaker and exercises both legislative powers and administrative powers.
- **Presiding officer in specific cases:**
 - When a resolution for removal of the Speaker is up for discussion, the Constitution specifies that the Deputy Speaker presides over the proceedings of the House.
 - A Deputy Speaker is also the ex-officio chairman of some committees by virtue of his position.
- **From ruling party or opposition:**
 - In the case of the Deputy Speaker of Lok Sabha, the position has varied over the years.
 - Until the fourth Lok Sabha, the Congress held both the Speaker and Deputy Speaker's positions. In the fifth Lok Sabha, whose term was extended due to the Emergency, an independent member, Shri G G Swell, was elected the Deputy Speaker.
 - The **tradition** for the post of the Deputy Speaker **going to the Opposition** party **started** during the term of Prime Minister Morarji Desai's government.

Environment and biodiversity

NSS (77th Round) Findings

Why in News?

On 10th September 2021, the National Statistical Office (NSO), Ministry of Statistics and Programme Implementation released the 'All India Debt & Investment Survey 2019'.

- It was conducted during the period January – December, 2019 as a part of 77th round of National Sample Survey (NSS). Prior to this the survey was carried out in NSS 26th round (1971-72), 37th round (1981-82), 48th round (1992), 59th round (2003) and 70th round (2013).

Objective

- The main objective of the survey on Debt & Investment was to collect basic quantitative information on the assets and liabilities of the households as on 30.6.2018. Besides, the survey gathered information on the amount of capital

expenditure incurred by the households during the Agricultural Year 2018-19 (July-June), under different heads, like residential buildings, farm business and non-farm business.

The following indicators were generated from the survey of All India Debt & Investment:

- **Average value of Assets (AVA):** The average value of all the physical and financial assets owned per household as on 30.06.2018.
- **Incidence of Indebtedness (IOI):** The percentage of the indebted households as on 30.06.2018.
- **Average amount of Debt (AOD):** The average amount of cash dues as on 30.06.2018 per household.
- **Average Fixed Capital Expenditure** by the households during 01.07.2018 to 30.06.2019

Findings on Household Indebtedness

Incidence of Indebtedness (IOI) as on 30.06.2018

- Incidence of Indebtedness was about **35% in Rural India** (40.3% cultivator households, 28.2% non-cultivator households) compared to **22.4% in Urban India** (27.5% self-employed households, 20.6% other households).
- In Rural India, **17.8%** households were indebted to **institutional credit agencies** only (21.2% cultivator households, 13.5% non-cultivator households) against **14.5%** households in **Urban India** (18% self-employed households, 13.3% other households)
- About **10.2%** of the households were indebted to **non-institutional credit agencies** only in Rural India (10.3% cultivator households, 10% non-cultivator households) compared to 4.9% households in Urban India (5.2% self-employed households, 4.8% other households)
- About **7%** of the households were indebted to **both institutional credit agencies & non-institutional credit agencies** in Rural India (8.8% cultivator households, 4.7% non-cultivator households) against 3% households in Urban India (4.3% self-employed households, 2.5% other households)

Average amount of Debt (AOD) per Household

- **Rural Households:** Average amount of debt was **Rs. 59,748 among rural households** (Rs. 74,460 for cultivator households, Rs. 40,432 for non-cultivator households)
- **Urban Households:** Average amount of debt was **Rs. 1,20,336 among urban households** (Rs. 1,79,765 for self-employed households, Rs. 99,353 for other households)

- In Rural India, the share of outstanding cash debt from institutional credit agencies was 66% against 34% from non-institutional credit agencies. In Urban India, the share of outstanding cash debt from institutional credit agencies was 87% compared to 13% from non-institutional credit agencies.

Average amount of Debt per Indebted Household (AODL)

- **Rural India:** Average amount of debt was **Rs. 1,70,533** among indebted households in Rural India (Rs. 1,84,903 for cultivator households, Rs. 1,43,557 for non-cultivator households)
- **Urban India:** Average amount of debt was **Rs. 5,36,861** among indebted households in Urban India (Rs. 6,52,768 for self-employed households, Rs. 4,82,162 for other households)

India's First Dugong Conservation Reserve

Why in News?

Tamil Nadu state government has announced to set up India's first dugong conservation reserve at the northern part of the Palk Bay.

About Dugong

- The dugong (*Dugong dugon*), also called the sea cow, is herbivorous mammal.
- They can grow upto three meters long, weigh about 300 kilograms, and live for about 65 to 70 years.
- They graze on seagrass and come to the surface to breathe.
- They are found in over 30 countries and in India are seen in the Gulf of Mannar, Gulf of Kutch, Palk Bay, and the Andaman and Nicobar Islands.

Conservation Status

- Dugongs are listed as '**Vulnerable**' on the IUCN Red List of Threatened Species.
- Internationally, dugongs are listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which prohibits the trade of the species and its parts.
- Dugongs are protected in India under Schedule 1 of the Indian Wildlife Act 1972 which bans the killing and purchasing of dugong meat.

Threat

- The loss of 'seagrass' habitats, water pollution, and degradation of the coastal ecosystem due to developmental activities, have made life tough for these slow-moving animals.
- Dugongs are also victims of accidental entanglement in fishing nets and collision with boats, trawlers.

‘Orca’: World’s Largest CO₂ capturing Plant

Why in News?

The world's largest plant designed to suck carbon dioxide out of the air and turning it into rock started running on 8th September 2021 in Iceland.

- The plant, named Orca, after the Icelandic word "orka" meaning "energy".
- Constructed by Switzerland's Climeworks and Iceland's Carbfix, when operating at capacity the plant will draw 4,000 tonnes of carbon dioxide (CO₂) out of the air every year – equivalent to the emissions from about 870 cars.

Working Principle

- To collect the carbon dioxide, the plant uses fans to draw air into a collector, which has a filter material inside.
- Once the filter material is filled with CO₂, the collector is closed and the temperature is raised to release the CO₂ from the material after which the highly concentrated gas can be collected.
- The CO₂ is then mixed with the water before being injected at a depth of 1,000 metres into the nearby basalt rock where it is petrified.
- Proponents of so called carbon capture and storage (CCS) believe these technologies can become a major tool in the fight against climate change.

Taliban and Mexico Drug Cartels

Why in News?

- Taliban in Afghanistan may fuel the narcotic drug market in India and the world with help of Mexico Drug Cartels.

What are Narcotic Drugs?

- The World Health Organization (WHO) defines narcotics as any substance that modifies the consumer’s perception, behaviour and cognition, mood or motor functioning.
- As per an estimate, **currently, more than 35 million people globally** suffer from **drug disorders**.
- The illicit trafficking of drugs is becoming an issue including in India.

Background of the Speculations

- Afghanistan and Mexico might appear distant from one another on a world map and are also separated by major historical, sociological and religious differences.
- But there are a number of **similarities between Taliban and Mexican Drug Cartels** as listed below:
 - **Drugs as Source of Finances**

- They both are united by the fact that they are financially dependent on drug trafficking
- **Extreme Violence for Political Power and gaining Territory**
 - Further, they both use extreme violence to expand their political power and control of territory.
 - Ahead of the recent elections in Mexico in June, numerous opposition candidates were threatened and killed by the cartels.
 - Cartels were also reported to buy votes more openly than ever before.
- **Transnational Network**
 - Both have a transnational presence as “drug-trafficking organizations”, as highlighted by renowned experts in 2009 to the US Congress
 - The expert group has pointed out dangerous similarities that have only increased since 2009.

Golden Crescent

- Comprises Afghanistan, Iran, and Pakistan.
- Principal global site for opium production and distribution
- Affects Jammu and Kashmir, Punjab, Rajasthan and Gujarat due to
- Proximity with the Pakistan Border make these states as
- Potential Markets &
- Supply chain catalysts of Hashish and heroin.

Golden Triangle

- Comprises Laos, Myanmar and Thailand at the confluence of Mekong and Ruak.
- second spot after Afghanistan in illicit supply of morphine and heroin.
- Myanmar produces 80% of the world's heroin.
- Affects North-East border of India

Komodo Dragons

Why in News?

- According to the IUCN red list, the Komodo dragon is **threatened with extinction** as rising water levels, driven by the **climate crisis**, **shrink** its habitat.

About

- **Scientific Name : Varanus komodoensis**
- The dragon is a monitor lizard of the **family Varanidae**.
- It is the **world’s largest lizard**.
- **Discovery:** Europeans discovered **Komodo dragons only in the early 20th century** and were immediately **fascinated by the creatures**.
- It Grows up to **3 metres long** and weighs more than 150kg,

- It feeds mainly on **forest-dwelling pigs, deer, buffalo and fruit bats** that hang in the **low-lying mangrove trees**.

Economy

Account Aggregator Network: A Financial Data-sharing System

Why in News?

Recently India unveiled the Account Aggregator (AA) network, a financial data-sharing system that could revolutionize investing and credit, giving millions of consumers greater access and control over their financial records and expanding the potential pool of customers for lenders and fintech companies.

- Account Aggregator empowers the individual with control over their personal financial data, which otherwise remains in silos.
- This is first step towards bringing open banking in India and empowering millions of customers to digitally access and share their financial data across institutions in a secure and efficient manner.
- The Account Aggregator system in banking has been started off with eight of the India's largest banks. The Account Aggregator system can make lending and wealth management a lot faster and cheaper.

What is an Account Aggregator?

- An Account Aggregator (AA) is a type of RBI regulated entity (with an NBFC-AA license) that helps an individual securely and digitally access and share information from one financial institution they have an account with to any other regulated financial institution in the AA network. Data cannot be shared without the consent of the individual.
- There will be many Account Aggregators an individual can choose between.
- Account Aggregator replaces the long terms and conditions form of 'blank cheque' acceptance with a granular, step by step permission and control for each use of your data.

How will the new Account Aggregator network improve an average person's financial life?

- India's financial system involves many hassles for consumers today -- sharing physical signed and scanned copies of bank statements, running around to notarise or stamp documents, or having to share your personal username and password to give your financial history to a third party. The Account Aggregator network would replace all these with a simple, mobile-based, simple, and safe digital data access & sharing process. This will create opportunities for new kinds of services -- eg new types of loans.

- The individual's bank just needs to join the Account Aggregator network. Eight banks already have -- four are already sharing data based on consent (Axis, ICICI, HDFC, and IndusInd Banks) and four are going to be able to shortly (State Bank of India, Kotak Mahindra Bank, IDFC First Bank, and Federal Bank).

Grant-in-aid to Rural Local Bodies

Why in News?

On 30th August the Department of Expenditure, Ministry of Finance has released an amount of Rs. 13,385.70 crore to 25 States for providing grants to the Rural Local Bodies. This Grant-in-aid is the 1st installment of Tied grants of the year 2021-22.

- The grants have been released as per the recommendations of the 15th Finance Commission.

Tied Grants

- Tied grants are released to the Rural Local Bodies (RLBs) for improving two critical services namely
 - i. Sanitation and maintenance of open-defecation free (ODF) status, and
 - ii. Supply of drinking water, rain water harvesting and water recycling.
- Out of the total Grant-in-aid allocated for Panchayati Raj institutions, 60 percent is 'Tied Grant'. It's earmarked for national priorities like drinking water supply, rainwater harvesting and sanitation.
- Remaining 40 percent is 'Untied Grant' or Basic Grants and is to be utilized at the discretion of the Panchayati Raj institutions for location specific felt needs, except for payment of salaries.
- Tied grants are meant to ensure availability of additional funds to the Rural Local Bodies over and above the funds allocated by the Centre and the State for sanitation and drinking water under the Centrally Sponsored Schemes.
- The States are required to transfer the grants to the Rural Local Bodies within 10 working days of their receipt from the Union Government. Any delay beyond 10 working days requires the State Governments to release the grants with interest.

India at Tokyo 2020 Paralympics

Why in News?

The 2020 Summer Paralympics was the 16th Summer Paralympic Games and was held in Tokyo, Japan between 24 August and 5 September 2021.

- India registered its best show with largest ever medal haul (19) at the Paralympic Games finishing with five gold, eight silver and six bronze medals.
- India surpassed its previous best haul of four medals at Rio 2016.

- India won its first medal of the Games through Bhavinaben Patel, who brought home silver in table tennis women's singles (Class 4).

PPP Model of BharatNet Project

In News

- The **Department of Telecommunications (DoT)** has started pre-bid meetings with various stakeholders to implement the **public-private partnership model (PPP)** for the **BharatNet project**.
 - **States which took lead on the PPP model under BharatNet Phase 2** are being consulted for potential hindrances and way outs.

BharatNet Project

- **About:**
 - It is the **central government's flagship scheme** to provide internet connectivity via **National Optical Fibre Network** to all **2.5 lakh gram panchayats in the country**.
 - It is the **world's largest rural broadband connectivity** programme.
 - It is implemented by **Bharat Broadband Network Ltd. (BBNL)** under the supervision of the **Department of Telecommunication** under the **Ministry of Communications**.
 - The project is being funded by **Universal Service Obligation Fund (USOF)**.
 - The **USOF** was set up for **improving telecom services in rural and remote areas** of the country.
 - Recently it was also included in the **Viability Gap Funding Program** to help the Private sector play a dominant role.
 - **Viability Gap Funding (VGF)** is a **kind of capital subsidy** to attract more private investors.
 - In this, a certain percentage of the total **capital cost is paid by the government** to make the project economically viable.
- **Aim and Objectives:**
 - The project will create a **highly scalable network infrastructure** accessible on a non-discriminatory basis.
 - It will provide **on-demand, affordable broadband connectivity** of 2 Mbps to 20 Mbps for all rural households.
 - It will help **all the institutions to augment their capacity**, to realise the vision of **Digital India**, in partnership with States and the private sector.
 - Thus, the program will facilitate the **delivery of e-governance, e-health, e-education, e-banking, Internet and other services to rural India**.

Public-Private Partnership (PPP)

- It involves **collaboration between a government agency and a private-sector company** that can be used to finance, build, and operate projects.
- These projects can include public transportation networks, parks, and convention centres.

International Relations

Karbi Anglong Agreement: A Step towards “Insurgency free prosperous North East”

Why in News?

On 4th September 2021, a historic tripartite Karbi Anglong Agreement was signed by the Union Govt., the Assam government and five insurgency groups from the state to bring peace to the Northeastern state’s Karbi-Anglong district.

- Karbis are a major ethnic community of Assam dotted by many factions, and marked by ethnic violence, killings, abductions, taxation since the late 1980s.
- The five groups concerned are: Karbi Longri North Cachar Hills Liberation Front (KLNLF), People’s Democratic Council of Karbi Longri (PDCK), United People’s Liberation Army (UPLA), Karbi People’s Liberation Tigers (KPLT) and the Kuki Liberation Front (KLF).
- With this historic agreement, over 1000 armed cadres have abjured violence and joined the mainstream of society. A Special Development Package of Rs. 1000 crores over five years will be given by the Union Government and Assam Government to undertake specific projects for the development of Karbi areas.

Salient Features of the Agreement

- This Memorandum of Settlement will ensure greater devolution of autonomy to the Karbi Anglong Autonomous Council (KAAC), protection of identity, language, culture, etc. of Karbi people and focussed development of the Council area, without affecting the territorial and administrative integrity of Assam.
- The Karbi armed groups have agreed to abjure violence and join the peaceful democratic process as established by law of the land. The Agreement also provides for rehabilitation of cadres of the armed groups.
- The Government of Assam shall set up a Karbi Welfare Council for focussed development of Karbi people living outside KAAC area.
- The Consolidated Fund of the State will be augmented to supplement the resources of KAAC.
- Overall, the present settlement proposes to give more legislative, executive, administrative and financial powers to KAAC.

China's First Roadrail Transport Link To Indian Ocean

Why in News?

- Recently, China opened the first roadrail transport link to the Indian Ocean.

About

- The first shipments on a newly-launched railway line from the **Myanmar** border to the key commercial hub of **Chengdu in western China** were delivered.
- It provides China a new road-rail transportation channel to the Indian Ocean.
- It connects the logistics lines of Singapore, Myanmar and China.
- The new railway line completes the transport corridor involving a **sea-road-rail link**.
- It is currently the most convenient land and sea channel linking the Indian Ocean with southwest China. One way saves 20-22 days.



13th BRICS Summit

Why in News?

As part of India's ongoing Chairman ship of BRICS in 2021, Prime Minister Shri Narendra Modi will chair the 13th BRICS Summit on 9 September 2021 in virtual format.

- The meeting will be attended by the President of Brazil, H.E. Mr. Jair Bolsonaro; President of Russia, H.E. Mr. Vladimir Putin; President of China, H.E. Mr. Xi Jinping; and President of South Africa, H.E. Mr. Cyril Ramaphosa.
- India's National Security Adviser, Shri AjitDoval, President of the New Development Bank, Mr. Marcos Troyjo, the pro tempore Chair of the BRICS Business Council, Shri Onkar Kanwar and pro tempore Chair of the BRICS Women's Business Alliance, Dr. Sangita Reddy, will present reports on the outcomes pursued this year under their respective tracks to the Leaders during the Summit.

- The theme for the Summit is ‘**BRICS@15: Intra-BRICS cooperation for continuity, consolidation and consensuses.**

India had outlined four priority areas for its Chair ship. These are

- i. Reform of the Multilateral System,
 - ii. Counter Terrorism,
 - iii. Using Digital and Technological Tools for achieving SDGs, and
 - iv. Enhancing People to People exchanges.
- In addition to these areas, the leaders will also exchange views on the impact of the COVID-19 pandemic and other current global and regional issues.
 - This is the second time Prime Minister Modi will be chairing the BRICS Summit. Earlier he had chaired the Goa Summit in 2016.
 - The Indian Chairman ship of BRICS this year coincides with the fifteenth anniversary of BRICS, as reflected in the theme for the Summit.

UNSC Resolution on Afghanistan

Why in News?

- Recently, the UN Security Council, under India's presidency, adopted a **resolution demanding that the territory of Afghanistan** should not be used to threaten any country or shelter terrorists.

About

- **US Troops Departure:**
 - The adoption of **Resolution 2593** coincided with the departure of the last US troops from Afghanistan on 30 August, fulfilling Washington's commitment that all its troops would exit Afghanistan by 31 August.
- **Proclamation of Taliban:**
 - In Kabul, the Taliban proclaimed "full independence" for Afghanistan after the last US soldiers left after a two decade long stay.
- **UN Resolution 2593:**
 - The UNSC resolution was put forward by the US, the UK, and France and adopted after 13 council members voted in favour, with permanent members Russia and China abstaining.
- **Demand in Resolution:**
 - Resolution demands that Afghan territory not be used to threaten or attack any country or to shelter, train terrorists or plan or finance terrorist acts.
- **UNSC Resolution 1267:**
 - It specifically mentions individuals and entities designated pursuant to UNSC Resolution 1267, i.e., Lashkar-e-Taiba (LeT), Jaish-e-Mohammed (JeM), etc.

- The LeT and JeM are anti-India terrorist groups that are based in Pakistan.
- In the past, LeT and JeM camps have sprouted in Afghanistan when Kabul was in the control of the Taliban between 1996-2001.
- This is of direct importance to India.

China's New Maritime Law for the South China Sea **Why in News?**

- In a bid to regulate foreign ships, **China notified new maritime rules** warranting vessels **to report their information while passing through what China sees as its "territorial waters"**.

Major Points of the new law

- **China's new maritime rules** designed to control the **entry of foreign vessels** in "Chinese territorial waters".
 - Foreign vessels, both **military and commercial**, will be required to **submit to Chinese supervision in "Chinese territorial waters,"** as per the new law.
- Operators of submersibles, nuclear vessels, ships carrying radioactive materials and ships carrying bulk oil, chemicals, liquefied gas and other toxic and harmful substances are required to report their **detailed information upon their visits to Chinese territorial waters**".
- The report goes on to add that vessels that **"endanger the maritime traffic safety of China"** will be required to **report their name, call sign, current position and next port of call and estimated time of arrival**.
- The name of **shipborne dangerous goods and cargo deadweight** will also be required.

South China Sea

- It is an arm of the **western Pacific Ocean** that borders the **Southeast Asian mainland**.
- It is bounded on the **northeast by the Taiwan Strait** (by which it is connected to the East China Sea), on the east by **Taiwan and the Philippines**; on the **southeast and south by Borneo**, the **southern limit of the Gulf of Thailand**, and the east coast of the Malay Peninsula; and on the **west and north by the Asian mainland**.
- The sea's major feature is a **deep rhombus-shaped** basin in the eastern part, with reef-studded shoals rising up steeply within the basin to the south (Reed and Tizard banks and the Nanshan Island area) and northwest (Paracel Islands and Macclesfield banks).



United Nations Convention for the Law of the Sea (UNCLOS)

- The UNCLOS is an international treaty that was adopted and signed in **1982**.
- It replaced the **four Geneva Conventions** of April 1958, which respectively concerned the territorial sea and the contiguous zone, the continental shelf, the high seas, fishing and conservation of living resources on the high seas.
- The Convention has created **three** new institutions on the international scene:
 - the international Tribunal for Laws of the Sea
 - the International Seabed Authority
 - the Commission on the Limits of Continental Shelf

Art and Culture

NIOS wins UNESCO King Sejong Literacy Prize 2021

Why in News?

- The National Institute of Open Schooling (NIOS) of India won the prestigious UNESCO King Sejong Literacy Prize 2021 for 'enabling education of persons with disabilities through technology-enabled inclusive learning materials, with a specific focus on Indian Sign language-based content'.
- Every year, the UNESCO International Literacy Prizes focus on a specific theme. This year, the spotlight was on inclusive distance and digital literacy learning.
- Along with NIOS, this year's UNESCO International Literacy Prizes were awarded to five other outstanding literacy programmes from Côte d'Ivoire, Egypt, Guatemala, Mexico, and South Africa on the occasion of International Literacy Day (8 September).

Raja Mahendra Pratap Singh: A Nationalist and Reformer

Why in News?

On 14th September 2021, Prime Minister Narendra Modi laid the foundation stone of Raja Mahendra Pratap Singh State University in Aligarh (UP).

About Raja Mahendra Pratap Singh

- Raja Mahendra Pratap Singh was born into the ruling Jat family of Mursan estate in Hathras in 1886.
- Raja Mahendra Pratap Singh was a freedom fighter, revolutionary, writer, social reformer, and internationalist.
- Raja gave up his own residence in Mathura to be converted into a technical school named Prem Mahavidyalaya in 1909.
- On December 1, 1915, he proclaimed the first Provisional Government of India outside India at the historic Bagh-e-Babur in Kabul. He declared himself president, and his fiery fellow revolutionary Maulana Barkatullah of Bhopal, prime minister, of the Provisional Government.
- Mahendra Pratap Singh, who was an alumnus of the Mohammedan Anglo-Oriental College, which later became the Aligarh Muslim University (AMU), had given 3.04 acres of land to the university on lease for constructing a school in 1929.
- In 1929, Mahendra Pratap launched the 'World Federation' in Berlin.
- He was nominated for the 1932 Nobel Peace Prize by the Swedish doctor N A Nilsson, who was a member of the Commission of the Permanent International Peace Bureau.
- After almost 32 years of exile, Mahendra Pratap Singh finally returned to India in 1946.
- He entered Lok Sabha as an Independent candidate from Mathura in 1957.

Schemes

'Mera Kaam Mera Maan' Scheme

- The Govt. of Punjab has decided to roll out a new scheme called 'Mera Kaam Mera Maan' which will help the unemployed youth in the state to hone their skills and increase their chances of getting a job.
- Under the scheme, these youngsters will be given short-term skill training free of cost.
- The scheme will be rolled out from the current fiscal on a pilot basis for construction workers and their wards.
- A target of 30,000 beneficiaries has been proposed.
- The scheme also provides an employment assistance allowance of Rs. 2,500 per month for a period of 12 months from the start of the training course, which will be conducted at Punjab Skill Development Mission training centers.

Production Linked Incentive (PLI) Scheme for Textiles

Why in News?

The Government has approved Production Linked Incentive (PLI) Scheme for Textiles - for MMF Apparel, MMF Fabrics and 10 segments/ products of Technical Textiles with a budgetary outlay of Rs. 10,683 crores.

Analysis: -

- PLI scheme for Textiles will promote production of high value MMF Fabric, Garments and Technical Textiles in country.
- The incentive structure has been so formulated that industry will be encouraged to invest in fresh capacities in these segments.
- This will give a major push to growing high value MMF segment which will complement the efforts of cotton and other natural fibre-based textiles industry in generating new opportunities for employment and trade, resultantly helping India regain its historical dominant status in global textiles trade.

Highlights

- With this, India is poised to regain its dominance in Global Textiles Trade.
- Leveraging Economies of Scale, the scheme will help Indian companies to emerge as Global Champions.
- Help create additional employment of over 7.5 lakh people directly and several lakhs more for supporting activities.
- Scheme will also pave the way for participation of women in large numbers.
- Incentives worth Rs. 10,683 crore will be provided to industry over five years.
- It is expected that this scheme will result in fresh investment of above Rs 19,000 crore and additional production turnover of over Rs.3 lakh crore in five years.
- Higher priority for investment in Aspirational Districts & Tier 3/4 towns.

- Scheme will positively impact especially States like Gujarat, UP, Maharashtra, Tamil Nadu, Punjab, AP, Telangana, Odisha etc.

Transport and Marketing Assistance" (TMA) scheme

Why in News?

On 10th September 2021, the Centre has revised "Transport and Marketing Assistance" (TMA) scheme for Specified Agriculture Products'.

About the Scheme

- In February 2019, the Department of Commerce had introduced 'Transport and Marketing Assistance (TMA) for Specified Agriculture Products Scheme' to provide assistance for the international component of freight, to mitigate disadvantage of higher freight costs faced by the Indian exporters of agriculture products.

Duration Extended

- The scheme was initially applicable for exports effected during the period from 01.03.2019 to 31.03.2020 and was later extended for exports effected up to 31.03.2021.
- Now the Department has notified 'Revised Transport and Marketing Assistance (TMA) for Specified Agriculture Products Scheme' for exports effected on or after 01.04.2021 up to 31.03. 2022. The existing scheme will remain in operation for exports effected up to 31.03.2021.

Following major changes have been made in the revised scheme:

- Dairy products, which were not covered under the earlier scheme, will be eligible for assistance under the revised scheme.
- Rates of assistance have been increased, by 50% for exports by sea and by 100% for exports by air.
- Enhanced assistance under the revised scheme is expected to help Indian exporters of agricultural products to meet rising freight and logistics costs.

Science and Technology

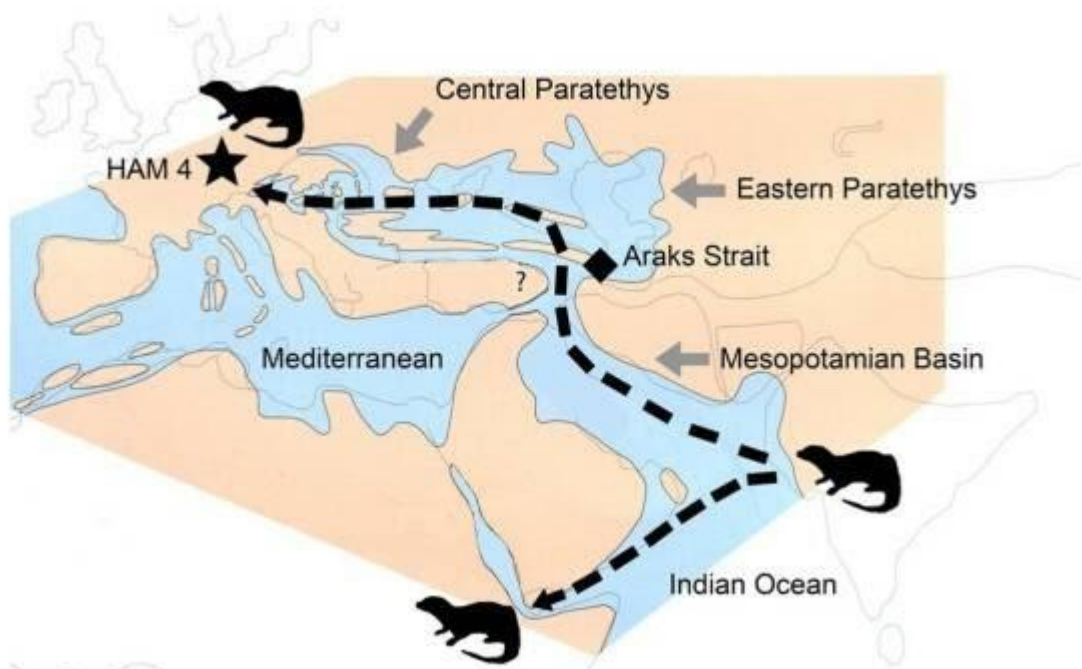
Vishnuonyx

Why In News

- According to a paper published in the Journal of Vertebrate Paleontology, a newly found fossil indicates that **Vishnuonyx** had travelled as far as Germany.

About

- Researchers from the Universities of Tübingen and Zaragoza have discovered the fossil of a previously unknown species, which they have **named Vishnuonyx neptuni**, meaning 'Neptune's Vishnu'.
- The species was discovered from 11.4-million-year-old strata in the area of Hammerschmiede, which is a fossil site in Bavaria, Germany that has **been studied for about 50 years.**



COVAX Initiative

Why In News

- Recently, the Union Health Minister announced to resume the **export of COVID-19 vaccines under 'Vaccine Maitri'** in order to fulfil the commitment towards COVAX.

About COVAX Initiative

- It is co-led by the Coalition for Epidemic Preparedness Innovations (CEPI), the Global Alliance for Vaccines and Immunisation (GAVI) and the World Health Organisation (WHO).
- **Aim:** To accelerate the development and manufacture of Covid-19 vaccines and to guarantee fair and equitable access for every country in the world.
- COVAX is the vaccines pillar of the Access to Covid-19 Tools (ACT) Accelerator.
 - The ACT Accelerator is a global collaboration to accelerate the development, production, and equitable access to Covid-19 tests, treatments, and vaccines.
- **Features:**
 - Diverse and actively managed portfolio of vaccines.
 - End the acute phase of the pandemic.
 - Rebuild economies.

Global Innovation Index 2021

Why In News

- India has been ranked **46th** in the Global Innovation Index 2021.

Key Findings

- **India's performance:**
 - India has been on a rising trajectory, over the past several years in the Global Innovation Index (GII), from a rank of **81 in 2015** to 46 in 2021.
 - India ranks **2nd** among 34 lower middle-income economies? and? **1st** among 10 Central and Southern Asian economies.
- **Global scenario:**
 - **Switzerland** topped the league table, followed by Sweden, the US and the UK.
 - Among Asian economies, South Korea jumped to the fifth position, up from 10 last year.
 - China was in the 12th position.

TOP THREE INNOVATION ECONOMIES BY INCOME GROUP

Incomes	Countries (top three)
High income	Switzerland, Sweden, USA
Upper middle income	China, Bulgaria, Malaysia
Lower middle income	Vietnam, India, Ukraine
Low income	Rwanda, Tajikistan, Malawi

Source: Global Innovation Index 2021 by World Intellectual Property Organization

Global Innovation Index

- The Global Innovation Index (GII) project was launched by Professor Soumitra Dutta in 2007 during his tenure at INSEAD.
- **WIPO started its association with the GII in 2011** and began co-publishing the GII in 2012.
- The GII continued to be co-published by Cornell University, INSEAD and WIPO up to 2020.
- The goal was to find and determine metrics and methods that could capture a picture of innovation in society that is as complete as possible.

HELINA (Helicopter based NAG)

Why In News

- Recently, Nag Anti-Tank Guided Missile (ATGM), **HELINA** completed all trials.
- The NAG missile is a **third-generation anti-tank guided missile**, which has top attack capabilities that can effectively engage and destroy all known enemy tanks day and night.

About HELINA

- HELINA (Helicopter based NAG) is a **third-generation fire and forget class anti-tank guided missile (ATGM)** system mounted on the **Advanced Light Helicopter (ALH)**.
- The system has **all-weather day and night capability** and can defeat battle tanks with **conventional armour as well as explosive reactive armour**.
- It can engage targets both in direct hit mode as well as top attack mode.

- It is being developed indigenously,
- **HELINA Weapon Systems** is being inducted into the Indian Army (IA).

Inspiration4 Mission

Why In News

Recently, the Inspiration4 Mission was launched **by** SpaceX.

About Inspiration4 Mission

- It was launched **from NASA's Kennedy Space Center** and crew aboard a **Crew Dragon capsule** and SpaceX **Falcon 9** rocket for an **Earth-orbiting mission**.
- It is the **world's first all-civilian mission to orbit**.
 - It is largely **made up of civilians with no professional space experience**, although the crew has undergone basic training.
 - It will orbit the Earth at 575km, higher than the International Space Station (408km) and the Hubble space telescope (547km).
 - This will be the farthest distance travelled by a crewed mission since 2009, when astronauts last went to repair the Hubble.
- Inspiration4 is the **third space flight by a billionaire in 2021**.
 - The other two — both suborbital missions — were the flight of Virgin **Galactic founder Richard Branson** and company employees aboard the **Unity 22 mission** on July 11, and the **flight of Blue Origin founder Jeff Bezos** and three other passengers (including noted aviator Wally Funk) flew aboard a New Shepard spacecraft on July 20.

Planet Nine

Why In News

- Recently, two astronomers at the California Institute of Technology in the United States, have plotted the probability distribution function of the **orbit of Planet Nine**.

Background

- In August 2006, the International Astronomical Union announced that it had reclassified Pluto as a dwarf planet.

- The decision was based on Pluto's size and the fact that it resides within a zone of other similarly-sized objects. Currently, there are five dwarf planets: Ceres, Pluto, Eris, Makemake and Haumea.
- Scientists have continued their search for new planets and in **2016 Konstantin Batygin and Michael E. Brown**, both from the California Institute of Technology, published a paper in The Astronomical Journal, stating that they had evidence for a **distant giant planet and nicknamed it Planet Nine**.
- The new research provides evidence of a giant planet tracing an unusual, elongated orbit in the outer solar system.
 - The prediction is based on detailed **mathematical modelling and computer simulations, not direct observation**.
- Another study published in 2018 in The Astronomical Journal, on the other hand, cited fresh evidence for the existence of Planet Nine.

About Planet Nine

- Caltech researchers have found mathematical evidence suggesting there may be a **"Planet X" deep in the solar system**.
- This hypothetical Neptune-sized planet orbits the Sun in a **highly elongated orbit far beyond Pluto**.
- The predicted orbit is **about 20 times farther from the Sun** on average than Neptune (which orbits the Sun at an average distance of 2.8 billion miles). **It could have a mass about 10 times that of Earth**
- It would take this **new planet between 10,000 and 20,000** years to make just one full orbit around the Sun (where Neptune completes an orbit roughly every 165 years).

Mission Sagar - Iv

Why In News ?

As part of Mission Sagar-IV, Indian Naval Ship Jalashwa has arrived at Port Anjouan, Comoros to deliver 1,000 Metric Tons of rice.

Explanation

- SAGAR is a term coined by PM Modi in 2015 during his Mauritius visit with a focus on the blue economy.
- It is a maritime initiative that gives priority to the Indian Ocean region for ensuring peace, stability and prosperity of India in the Indian Ocean region.

- The goal is to seek a climate of trust and transparency; respect for international maritime rules and norms by all countries; sensitivity to each other's interests; peaceful resolution of maritime issues; and an increase in maritime cooperation.
- It is in line with the principles of the Indian Ocean Rim Association.

Polity and Social Issues

August 2019 NRC is final: Assam Foreigners' Tribunal

Why In News

- In the recent Doubtful Voter case, the Foreigners' Tribunal reiterated that NRC Assam published in 2019 is the Final NRC.

National Register of Citizens (NRC)

- National Register of Citizens, 1951 is a **register prepared after the conduct of the Census of 1951** in respect of each village.
- It shows the **houses or holdings in a serial order** and indicates against each house or holding the number and names of persons staying therein.
- The NRC for **the whole country was published only once in 1951**.

D or 'Doubtful Voter'

- D voter, sometimes are also referred to as Dubious voter or Doubtful voter.
- It is a category of voters in Assam who are disenfranchised by the government on the account of their alleged lack of proper citizenship credentials

Prime Minister Narendra Modi virtually addresses 21st SCO Meeting of the Council of Heads of State

Why in News?

The 21st Meeting of the Shanghai Cooperation Organisation (SCO) Council of Heads of State was held in hybrid format on September 17, 2021 in Dushanbe, Tajikistan.

Explanation: -

- The meeting was held under the Chairmanship of President of Tajikistan, Emomali Rahmon.

- The Indian delegation was led by Prime Minister Shri Narendra Modi, who participated in the meeting via video-link and at Dushanbe, India was represented by External Affairs Minister, Dr. S. Jaishankar.
- This was the first SCO Summit held in a hybrid format and the fourth Summit in which India participated as a full-fledged member of SCO.

Ministry of Social Justice & Empowerment launches Elder Line

- Ministry of Social Justice & Empowerment has launched India's first Pan-India helpline for senior citizens named 'Elder Line' for which the toll-free number is 14567.
- The platform will allow senior citizens to connect and share their concerns, get information and guidance on problems that they face on a day-to-day basis.
- It will provide free information and guidance on pension issues, legal issues, extend emotional support, and even intervenes on the field in cases of abuse, and rescues the homeless elderly.
- Tata Trusts and NSE Foundation are the technical partners for "Elder Line".

Geography and Agriculture

Fortified Rice Kernels (FRK)

Why In News

- Recently, the Central Government issued "uniform" parameters for **fortified rice kernels (FRK)** for grade 'A' and common rice.

About

- The specifications have been issued by the **Ministry of Consumer Affairs, Food and Public Distribution**.
- The **fortified rice** is to be distributed under various government schemes, including the **public distribution system (PDS)** and **midday meals in schools, by 2024**.

Need for Rice Fortification

- India still has high levels of **malnutrition among women and children**.
- According to the **Food Ministry**, every second woman in the country is anaemic and every third child is stunted.

- India ranks 94 out of 107 countries and is in the ‘**serious hunger**’ category on the **Global Hunger Index (GHI)**.

What is Food Fortification?

- Food fortification is defined as the **practice of adding vitamins and minerals** to commonly consumed foods during processing to increase their nutritional value.
- It is a **proven, safe and cost-effective strategy** for improving diets and for the prevention and control of micronutrient deficiencies.
- In 2018, **FSSAI had notified standards** of fortification for five staple product categories — milk, edible oil, rice, flour and salt.
 - It has also **launched the ‘F+’ logo** to be displayed on labels of fortified food products for easy identification by consumers.

Delay in Monsoon Withdrawal

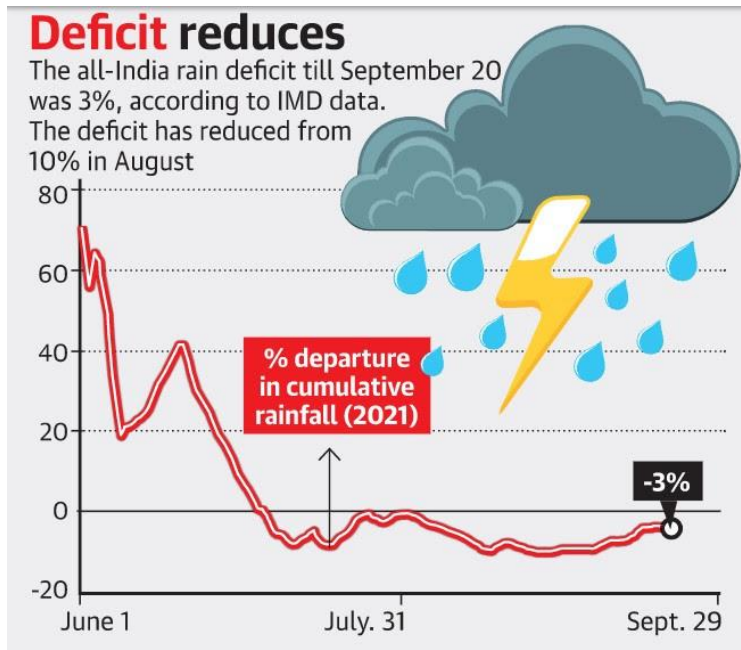
Why in News?

- The withdrawal of the Southwest monsoon is expected to be delayed with a fresh rain-bearing pressure system forming in the **Bay of Bengal**.
- There are no signs of monsoon withdrawal from North India for the next 10 days.

Reasons of Delay

- **Changing climate** is one of the reasons for the trend. The timing and length of the **monsoon over India could possibly be changing**.
- Year-to-year variations in the monsoon withdrawal can be influenced by modes of climate variability like **El Nino Southern Oscillation (ENSO) and Indian Ocean Dipole**.
 - For instance, the late withdrawal and heavy rainfall in October of 2020 were attributed to the **cooling phase of the ENSO known as the La Nina**, which is characterised by unusual cooling of the central and east-central equatorial Pacific Ocean.
 - It sometimes brings more than usual rainfall to India, extending the monsoon period.

- Long term drivers like La Nina are becoming more favourable and expected to appear during the last part of the monsoon season. There is definitely a better chance for good rainfall in September
- The September rainfall in India is **27% more than what's normal for the month**.
- Until August-end, a **crippling rainfall deficit** had brought India dangerously close to a **drought-like situation** with a nearly 9% deficit, but a resurgence of rainfall since **September has narrowed the deficit to 3%**.



Mount Sinabung

Why In News ?

Indonesia's Mount Sinabung volcano sent a cloud of hot ash as high as 3 km today, in its first big eruption since August last year.

About :-

- It is a Pleistocene-to-Holocene stratovolcano in the Karo plateau of Karo Regency, North Sumatra, Indonesia.
- It is created by the subduction of the Indo-Australian Plate under the Eurasian Plate.
- It erupted in 2010 after a 400-year-long hiatus and has been continuously active since September 2013.

Lake Chad

Why In News?

One of Africa's largest freshwater bodies, Lake Chad, has shrunk by 90 per cent.

About:-

- Lake Chad in the Sahel spans the countries of Nigeria, Niger, Chad and Cameroon and is home to 17.4 million people.
- It is blessed with rich aquatic and terrestrial biodiversity.
- The Chari River, fed by its tributary the Logone, provides over 90% of the lake's water, with a small amount coming from the Yobe River in Nigeria/Niger.
- Despite high levels of evaporation, the lake is freshwater.
- The Lake Chad basin comprises biosphere reserves, World Heritage and Ramsar sites as well as wetlands of international conservation importance.

Environment and Biodiversity

Humboldt Penguins

Why In News

- Recently, Mumbai's Byculla Zoo announced the addition of two new Humboldt penguin chicks this year.

About



- The Humboldt is one of the most popular zoo penguins due to its ability to withstand warmer climates.
- **IUCN status** : Vulnerable
- The Humboldt penguin belongs to a genus that is commonly known as the '**banded**' group.

- They are **medium-sized species among** at least 17 species.
- They are endemic to the **Pacific coasts of Chile and Peru.**
- They have **large, bare skin patches around their eyes**, an adaptation to help keep them cool.
- Their breeding season in the wild is either March-April or September-October depending on the location of the colony.
- Humboldt penguins have an average height of just over 2 ft.

Blue Flag Certification of Indian Beaches

In News

- **Kovalam in Tamil Nadu and Eden** in Pondicherry beaches in India has been accorded the coveted '**Blue Flag**' certification, taking the total number of such beaches in the country to 10.

What is the 'Blue Flag' certification?

- The Blue Flag **certification** programme was started in **France in 1985** and in areas out of **Europe in 2001.**
- The certification is awarded by the **Denmark-based non-profit Foundation for Environmental Education.**
 - FEE Denmark conducts **regular monitoring & audits** for strict compliance with the **33 criteria at all times.**
- Blue Flag certification, has also given re-certification for 8 nominated beaches Shivrajpur-Gujarat, Ghoghla-Diu, Kasarkod and Padubidri-Karnataka, Kappad-Kerala, Rushikonda- Andhra Pradesh, Golden-Odisha and Radhanagar- Andaman and Nicobar, which were awarded the Blue Flag certificate last year.
 - A waving "Blue Flag" is an indication of 100% compliance to these 33 stringent criteria and sound health of the beach.

Western Ghats Offer Major Additions to Flora: BSI

Why In News

- Recently, the **Botanical Survey of India's Plant Discoveries 2020** was released by the Ministry of Environment, Forest and Climate Change.

About

- The **BSI every year compiles and documents** new plant discoveries, playing a central role to fulfil India's global commitment of comprehensive documentation and identification of plant diversity of the country.

Major Findings of the Discovery

- It has added 267 new taxa/ species to the country's flora and of these 202 plant species are new to science while 65 others had never been reported from India.
 - The new discoveries include 119 angiosperms; 3 pteridophytes; 5 bryophytes, 44 lichens; 57 fungi, 21 algae and 18 microbes.

BOTANICAL SURVEY OF INDIA

In year 2020, Scientists and Plant Taxonomists discovered 267 plant taxa from different parts of India.

119 Species of Seed Plants

03 Species of Fern & Fern Allies

05 Species of Bryophytes

44 Species of Lichens

57 Species of Fungi

21 Species of Algae

18 Species of Microbes

Sea Cucumber

Why In News?

- The Indian Coast Guard seized two tonnes of **endangered sea cucumber** worth Rs 80 million from Tamil Nadu.

What is a Sea Cucumber?

- Sea cucumbers are an **important constituent of the marine ecosystem** as they play an important role in maintaining the health of the ecosystem.
- **Demand:** Sea cucumbers are in **high demand in China and Southeast Asia**, where they are consumed as food and used in medicine.
- This **endangered species** is primarily smuggled from Tamil Nadu to Sri Lanka.
- By **excreting inorganic nitrogen and phosphorus**, they **enhance the productivity of benthic animals** - those living on the ocean floor.
- **Role in Coral Reef preservation:** One of the **by-products of the sea cucumber's digestion of sand is calcium carbonate**, a key component of coral reef.

Woolly Mammoths

Why In News

- The United States startup Colossal Biosciences has announced plans to bring **woolly mammoths**, or animals like them, **back from extinction** and into the frosty landscape of the **Siberian tundra**.

About

- Colossal proposes to use **CRISPR gene-editing technology** to modify **Asian elephant embryos** (the mammoth's closest living relative) so their genomes resemble those of woolly mammoths.
 - CRISPR is the **gene-editing tool**; **Cas9**, associated genes, "cuts" DNA.
- Embryos could then theoretically develop into **elephant-mammoth hybrids (mammophants)**.
- **Purpose:** To release herds of these mammophants into the Arctic, where they will fill the ecological niche mammoths once occupied.

Mammoth Species

- **About:** Mammoth is any member of an extinct group of elephants found as fossils in **Pleistocene deposits** over every continent except **Australia and South America**.
 - The Pleistocene Epoch began 2.6 million years ago.
 - The Holocene Epoch began 11,700 years ago and continues through the present.)

India's Net-Zero Target

Why in news?

- The paper titled '**Getting Net Zero Approach for India at CoP 26**' strongly advocates that India **should declare its 'net zero' target year** at the 2021 United Nations Climate Change Conference or CoP 26 starting from **October 31 in Glasgow, United Kingdom**.

Major Points

- India could reach a peak around 2035 and get to net-zero sometime between **2065 and 2070** if it **caps coal usage in the next 10 years**.
- India needs **short-term decarbonisation targets** along with trajectories for the next three decades to achieve the net-zero target.
 - The best short-term target would be a planned **phasing out of coal-based power generation** as India has already adopted expanding renewable **energy capacity to 450 GW by 2030**.
- Net-zero target can put India on a green development trajectory, attracting investment in innovative technologies.
- **Arguments against committing to a net-zero target**
 - India should reject net-zero targets put out by the West since they are flawed and inequitable for developing countries.
 - India should seek enhanced emission reduction from the developed world and finance for the energy transition

India and Net Zero Target

- India, as the country with the third-largest emissions, is under pressure to come up with a **higher ambition of cutting CO2 emissions**.

- India is working to **reduce its emissions**, aligned with the **goal of less than 2°C global** temperature rise.
- India has committed to reducing the emission intensity of its gross domestic product by 33-35% by 2030 and having 175-gigawatt renewable energy capacity by 2030 under the Paris Agreement of 2016.
- There is renewed pressure on India to enhance its renewable commitment under the Paris deal with 450 GW by 2030 and phase out coal.
- But it **has not favoured a binding commitment towards carbon neutrality**.
 - India has not yet declared its Net-Zero Target

Economy

Delhi-Mumbai Expressway: World's Longest

Why in News?

- World's **longest expressway between Delhi and Mumbai** to be opened in March 2023.

About the Project

- It is a **1380-km eight-lane expressway**; it can be **expanded to a 12-lane expressway** depending on the volume of traffic.
- It passes through **Delhi, Haryana, Rajasthan, Madhya Pradesh and Gujarat**.
- Completion schedule:**
The first phase from Delhi-Jaipur and Vadodara-Ankleshwar is expected to be open by March 2022.



Stablecoins

Why In News

- Stablecoins might be the most ironically named innovation of the cryptocurrency era.

What is Stablecoin?

- Stablecoins are cryptocurrencies without volatility. They share a lot of the same powers as other cryptos, but their value is steady, more like a traditional currency, i.e. the US Dollar, Indian Rupee, etc.
- Stablecoins achieve their price stability via **collateralization (backing) or through algorithmic mechanisms** of buying and selling the reference asset or its derivatives.

45th GST Council Meeting

Why In News

Recently, the GST Council's 45th meeting was held in Lucknow under the chairmanship of the Union Finance Minister.

Key Decisions

- **Drugs:**
 - Life-saving drugs Zolgensma and Vilepso used in treatment of **Spinal-Muscular Atrophy are exempted** from GST when imported for personal use.
 - Extension of existing concessional GST rates on certain COVID-19 treatment drugs upto 31st December 2021
 - GST rates on 7 other medicines recommended by Department of Pharmaceuticals reduced from 12% to 5% till 31st December 2021
 - GST rate on Keytruda medicine for treatment of cancer reduced from 12% to 5%
- **Special abilities people's requirements:**
 - GST rates on Retro fitment kits for vehicles used by persons with special abilities reduced to 5%
- **Petroleum products:**

- Petroleum products will be **out of** the GST regime.
- **Import:**
 - Import of leased aircraft exempted from IGST. This will help the aviation industry avoid double taxation.
 - Goods supplied at **Indo-Bangladesh border** haats have also been **exempted** from GST.
 - The Council also decided to remove GST on the import of muscular atrophy drugs like Zolgensma and Viltepso, which cost crores of rupees.
- **Rice kernels:**
 - GST rates on Fortified Rice kernels for schemes like ICDS reduced from 18% to 5%
- **Footwear:**
 - **GST on footwear** costing less than Rs.1000 and ready-made garments and fabrics have increased to 12% from 5%.
 - It will come into effect from January 1st and will be done to correct inverted duty structure in footwear and textiles sector, as was discussed in earlier GST Council Meeting and was deferred for an appropriate time.
- **Bricks:**
 - Bricks would attract GST at the rate of 6% without input tax credits under the scheme, or 12% with input credits.
- **Automobiles:**
 - Consumers will have to keep paying the Compensation Cess levied on products like automobiles till March 2026 instead of July 2022 as originally envisaged at the time of rolling out the indirect tax regime.
- **No relaxation:**
 - There was also **indication that the Union government** is not inclined to consider some States' demand to extend the five-year period for which they have been assured a 14% revenue growth for giving up several taxation powers to pave the way for implementing the GST regime.

New Bad Bank Structure

Why In News

- Recently, the government has approved extending a **guarantee of Rs 30,600 crore** to the National Asset Reconstruction Company Ltd (NARCL) to help clear the banking sector's stressed assets of around **Rs 2 lakh crore in a time-bound manner**.

Key Points

- A total of Rs 90,000 crore of stressed assets, against which banks have made 100 percent provisions in their books of accounts, will be transferred to NARCL in the first phase.
- The **India Debt Resolution Company Ltd** has already been set up and will function as the asset management company.
- **Ownerships:** Public sector banks will have a 51% ownership in the NARCL, while their shareholding along with that of public sector financial institutions will be capped at 49% for the IDRC, with private lenders bringing in the rest of the equity capital.
- **Government's Guarantee:**
 - The GoI Guarantee of up to Rs 30,600 crore will back Security Receipts (SRs) issued by NARCL. The guarantee will be valid for 5 years.
 - If the bad bank is unable to sell the bad loan, or has to sell it at a loss, then the government guarantee will be invoked.
 - The guarantee shall cover the shortfall between the face value of the SR and the actual realisation.
 - A 15% cash payment would be made to the banks based on some valuation and the rest (85%) will be given as security receipts.
- **Need for Guarantee:**
 - Resolution mechanisms of this nature which deal with a backlog of NPAs typically require a backstop from the Government.
 - This imparts credibility and provides for contingency buffers.
 - It will support the regulatory provisioning requirement of the RBI.
- The Finance Minister stated that the meticulous execution of the **4 Rs — Recognition, Resolution, Recapitalisation and Reforms** — strategy since 2015 had served the banking system well.
 - In the last six fiscal years, banks had made recoveries of ₹5.01-lakh crore with as much as ₹3.1-lakh crore since March 2018. In 2018-19, banks recovered a record ₹1.2-lakh crore.

Significance of Move

- **Growth Capital:** Most of the big-ticket NPAs (Non Performing Assets) will be transferred to NARCL, thereby cleaning up banks' balance sheets and freeing up growth capital for them to support economic activity.
- **Clean & Transparent:** This will result in banks' balance sheets and books being cleaner, transparent, they will now be able to stand on their own and do business.
- **Positive step:** The government guarantee for the proposed security receipts is a positive stepping stone for unlocking stressed assets' value. A guarantee helps in improving the value of security receipts, their liquidity and tradability.
- **Inbuilt Incentives:** There is an inbuilt incentive structure within the overall framework that will drive both banks and NARCL to ensure resolution of the bad loans within a period of 5 years.
- **Quicker Resolution:** The recent moves include elements that have been missing in the functioning of the existing ARCs and hence, the large assets that have hitherto been left unaddressed will see resolution going ahead.
- **Completing Cycle:** Since 2015, resolution, recovery of NPAs, healthy capital infusion has been done alongside a series of reforms to resurrect the public sector banks. NARCL is completing the entire cycle of cleaning up India's banking system that began with the recognition of the extent of bad loans in 2015.

15th East Asia Summit of Energy Ministers

Why In News?

- Recently, the **Minister of State for Power** attended the **15th East Asia Summit of Energy Ministers** that was held virtually.

About

- The **Theme** of the meeting was “We Care, We Prepare, We Prosper”.
- The meeting was aimed at **coordinating efforts of ASEAN countries** in pursuing the goal of energy security and energy transition.

Key Highlights of the Meeting

- India stated that **ASEAN** is a region of great importance for us. Engagement with ASEAN has been and will remain a critical element of India's ‘**Act East policy** and strategy.
 - Acting East is now a central element in **India's Indo-Pacific vision**.

- India discussed the energy transition plans, policies, challenges and efforts towards decarbonisation.

East Asia Summit(EAS)

About:

- The concept of **East Asia Grouping** was first promoted in 1991 by the then **Malaysian Prime Minister**, Mahathir bin Mohamad.
- Established in 2005, it is the **Indo-Pacific's premier forum for strategic dialogue**.
- It is the **only leader-led forum** at which all key partners meet to discuss **political, security and economic challenges facing the Indo-Pacific**.

Membership:

- Apart from the **10 ASEAN** (Association of Southeast Asian Nations) member states, the East Asia Summit includes India, China, Japan, the Republic of Korea, Australia, New Zealand, the United States and Russia.
- **ASEAN leads the forum**, and the chair position rotates between the **ASEAN Member States** annually.
- India is one of the **founding members** of the East Asia Summit.

Production of millets in India

Why In News

Recently, the Union Minister for Agriculture and Farmers' Welfare urged the present generation to understand the **importance of nutritious food grains like millets** and make them a part of their daily diet.

More in News

- He Inaugurated the two-day "**Nutri-Cereal Multi-Stakeholders' Mega Convention 3.0**" at the Hyderabad International Convention Centre (HICC).

Nutri-Cereal Multi-Stakeholders' Mega Convention 3.0"

- The two-day convention is being organised by the ICAR- Indian Institute of Millets Research (IIMR), Hyderabad, the Food and Agriculture Organization (FAO) of the UN and the Union Ministry of Agriculture, Government of India.

- The objective of this event is to prepare a blueprint of a series of events planned to celebrate the “International Year of Millets, 2023” as declared by the United Nations.

About Millet

- It is a common term to categorise **small-seeded grasses** that are often termed **Nutri-cereals or dryland-cereals** and includes **sorghum, pearl millet, ragi, small millet, foxtail millet, proso millet, barnyard millet and Kodo millet**, among others.
- They are also **hardier and drought-resistant crops**.
- Millets can grow in **poor soil conditions** with **less water, fertiliser and pesticides**.
 - They can withstand **higher temperatures**, making them the perfect choice as ‘**climate-smart cereals**’.

Benefits -

- Millets can also help in **tackling health challenges** such as **obesity, diabetes and lifestyle problems** as they are **gluten-free**, have a **low glycemic index** and are high in **dietary fibre and antioxidants**.
- Millets are **Nutri-cereals** that are **highly nutritious** and known to have high **nutrient content** which includes **protein, essential fatty acids, dietary fibre, B-Vitamins and minerals** such as **calcium, iron, zinc, potassium and magnesium**.
- It can provide nutritional security and protect against **nutritional deficiency, especially among children and women**.
- It will also be critical for **climate change measures in drylands** and important for **smallholder and marginal farmers**.

International Relations

G-20 Agriculture Ministers Meet

Why In News

- Recently, India’s Agriculture Minister addressed the **G20 Agriculture meeting** virtually.
 - It is one of the ministerial meetings organised as part of the **G20 Leaders Summit 2021** to be hosted by Italy in October 2021.

Key Highlights of G20 Ministers for Agriculture Meeting

- **Achieving Food Security:** The Meeting ended with the approval of a Final Declaration (named as the “**Florence Sustainability Charter**”) reaffirming the commitment to achieve food security in the framework of the three dimensions of sustainability: **economic, social and environmental**.
- **Goal Of Zero Hunger:** To ensure sustainable and resilient food systems, the G20 Ministers reaffirmed their intention to reach the goal of zero hunger, which is also threatened by the consequences of Covid-19.
 - Amid the increase in production, in fact, a quarter of the world population still suffers from food insecurity.
- **Coordinated & Effective Responses:** Climate change, extreme weather events, parasites, animal and plant diseases and shocks such as the Covid-19 pandemic require coordinated and effective responses.
- **No Unjustified Restrictive Measures:** The G20 Ministers agreed not to adopt any unjustified restrictive measures that could lead to extreme volatility of food prices in international markets, thus threatening food security.
- **Cooperation For Agriculture:** The Ministers called for strengthened cooperation between G20 members and developing countries on food and agriculture to share knowledge and help developing the internal production capacities best suited to local needs, thus contributing to the resilience and recovery of agriculture and rural communities.

21st Meeting of the Council of Heads of State of SCO

Why In News

- The Prime Minister participated virtually in the **21st Meeting of the Council of Heads of State of the Shanghai Cooperation Organisation (SCO)**.
 - He also gave a video message in the Joint SCO-CSTO Outreach Session on Afghanistan.

Shanghai Cooperation Organisation (SCO)

- SCO is a permanent intergovernmental international organisation of Eurasian Nations with a secretariat in Beijing.

- They represent 40% of the world population and approximately 20% of World GDP along with about 22% of the world landmass.
- It is a political, economic and military organisation that aims at maintaining peace, security and stability in the region.
- The SCO's official languages are Russian and Chinese.

Key Highlights of the recent 21st meeting of the SCO Council of Heads of State

- It was held on 17 September 2021 in **Dushanbe, Tajikistan** in a **hybrid format**.
- The Indian Prime Minister addressed the Summit via video link.
 - At Dushanbe, India was represented by External Affairs Minister, Dr. S. Jaishankar.

Highlights of Indian PM's Speech:

- **Growing Radicalisation and Extremism**
 - The Indian PM put emphasis on the problems caused by growing radicalisation and extremism in the broader SCO region.
 - It runs **counter to the history of the region as a bastion of moderate and progressive cultures and values**.
- **Afghanistan Crisis**
 - The recent developments in Afghanistan could further exacerbate this trend towards extremism.
- **New Agenda of Moderation and Scientific Thoughts**
 - SCO could work on an agenda to promote moderation and scientific and rational thought.
 - It would be **especially relevant for the youth of the region**.
- **Importance of Digital Technologies in Development Programs**
 - He highlighted the Indian experience of using digital technologies in its development programmes.
 - He also offered to share these open-source solutions with other SCO members.
- **Significance of Regional Connectivity**
 - The Prime Minister also stressed **transparent, participatory and consultative connectivity projects** in order to promote mutual trust.

Indo-Nepal joint military exercise Surya Kiran -XV to begin from September 20 at Pithoragarh

- The 15th edition of Indo – Nepal Joint Military Training Exercise Surya Kiran will be held from September 20, 2021 at Pithoragarh in Uttarakhand.
- The previous edition of the Exercise Surya Kiran was conducted in Nepal in 2019. The exercise was called off in 2020, due to the Covid-19 pandemic
- During the exercise, the Indian Army and Nepali Army would share their experiences of various counter-insurgency operations, and familiarise themselves with each other's weapons, equipment, tactics, techniques and procedures of operating in a counter-insurgency environment in mountainous terrain.
- The joint military training will help in improving bilateral relations and further strengthen the traditional friendship between the two nations.

Maritime Border Dispute Between Kenya And Somalia

Why In News?

In a move that is set to further undermine stability in East Africa, Kenya has said that it will not take part in proceedings of the International Court of Justice (ICJ) over its maritime border dispute.

About :-

- Main point of disagreement between the two neighbours is the direction in which their maritime boundary in the Indian Ocean should extend.
- According to Somalia, the sea border should be an extension of the same direction in which their land border runs as it approaches the Indian Ocean, i.e. towards the southeast.
- Kenya, on the other hand, argues that the territorial southeast border should take a 45-degree turn as it reaches the sea, and then run in a latitudinal direction, i.e. parallel to the equator.
- Such an arrangement would be advantageous for Kenya, whose coastline of 536 km is more than 6 times smaller than Somalia's (3,333 km).

PM Narendra Modi addresses 76th UNGA in New York

- Prime Minister of India Shri Narendra Modi addressed the 76th session of the United Nations General Assembly (UNGA) on September 25, 2021, in New York.

- The theme of 2021 UN General Assembly session was ‘building resilience through hope – to recover from Covid-19, rebuild sustainably, respond to the needs of the planet, respect the rights of people, and revitalise the United Nations’.
- PM Modi was the first world leader to address the UN General Assembly at 6.30 PM IST.
- During the address, PM spoke on various global issues such as the Covid-19 pandemic, the need to combat terrorism focusing on Afghanistan and Extremism, and the need to strengthen the United Nations.
- Over 109 heads of state and government addressed the UN General Assembly while around 60 addressed the debate through pre-recorded video statements at the event.
- Prior to this, PM Modi had addressed UN General Assembly in 2019.

Art and Culture

Safdarjung Tomb

Why In News

- Recently, Safdarjung Tomb has suffered damages owing to the recent rains.
- The **Archaeological Survey of India (ASI)** has taken cognisance of the matter and will begin a repair exercise soon.

About

- **The Safdarjung Tomb, designed by an Ethiopian architect marks the last colossal garden tomb of the Mughals**
- It was built in **1753- 54 as the mausoleum of Safdarjung, the viceroy of Awadh under the Mughal Emperor, Mohammed Shah.**
- **It is made of marble and sandstone**
- It has several smaller pavilions with evocative names like Jangalmahal, (Palace in the woods), Moti Mahal (Pearl Palace) and Badshah Pasand (King's favourite).
- The complex also has a madrasa.

Schemes

Spin Scheme: KVIC

Why In Context

- The **SPIN (Strengthening the Potential of India)** scheme was recently launched by the **Khadi and Village Industries Commission (KVIC)** to **help potters** become self-sufficient.

SPIN scheme

- It is an initiative through which KVIC will make it easier for potters to **obtain low-interest bank loans**, allowing them to diversify their businesses and increase their income.
- **Objective:**
 - It aims to promote long-term development through fostering local self-employment, in line with the Prime Minister's pledge to "**Jobs for Every Hand**" (**Har Hath Me Kaam**).
- **Features:**
 - It is a scheme with no subsidies.
 - SPIN will enable registered potters to get a direct loan from the banks under Pradhan Mantri Shishu Mudra Yojana
 - There is no financial load on the government.
 - The loans can be repaid in convenient instalments by the recipients.

Integrated Aroma Dairy Entrepreneurship for Jammu & Kashmir

Why In News

- Recently, the Union Minister of State (Independent Charge) Science & Technology proposed **integrated Aroma Dairy Entrepreneurship for Jammu & Kashmir** to augment the **income of farmers**.

Explanation

- Jammu & Kashmir has an **abundant stock of Animal Husbandry and Dairy** resources and the same can be **effectively integrated with [Aroma Mission](#)**.
- This will pave the way for integrated Aroma Dairy Entrepreneurship, ensuring sustainable growth, increased income and fresh avenues of livelihood for farmers.

Aroma Mission

- The Aroma Mission, also popularly referred to as "**Lavender or Purple Revolution**" started from J&K.
- It was launched in 2016 to boost the **cultivation of plants** like lavender which **have aromatic medicinal properties** through new technology developed by the Council of Scientific & Industrial Research (CSIR).
- It is envisaged to **bring transformative change** in the aroma sector through desired interventions in the areas of agriculture, processing and product development.
- It also seeks to **provide technical and infrastructure support** for distillation and value-addition to farmers/growers all over the country, apart from enabling effective buy-back mechanisms to assure remunerative prices to the farmers/growers.

Rail Kaushal Vikas Scheme

Why in News

- Recently, **Rail Kaushal Vikas Yojana**, a programme under the aegis of **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** was launched.

Rail Kaushal Vikas Yojana

- **About:**
 - It is a **skill development programme**, where **training is provided** to youth with a special focus on jobs relevant to the Railways, in **four trades** viz. Electrician, Welder, Machinist and Fitter and other trades will be added by zonal railways and Production units based on regional demands and needs assessment.
 - Training will be provided to apprentices under the **Apprentice Act 1961**.
- **Objectives:**
 - To **train 50,000 candidates over the next three years**.
 - To impart **training skills** to the youth in **various trades to bring qualitative improvement**.
- **Eligibility:**
 - Candidates who are **10th passed** and **between 18-35 yrs**.

- Participants in the scheme shall however have no claim to seek employment in Railways on the basis of this training.

Ayushman Bharat Digital Mission

- The mission will create a seamless online platform through the provision of a wide-range of data, information and infrastructure services, duly leveraging open, interoperable, standards-based digital systems.
- It will enable access and exchange of longitudinal health records of citizens with their consent.

Key components of Ayushman Bharat Digital Mission

- Health ID for every citizen that will also work as their health account, to which personal health records can be linked and viewed with the help of a mobile application.
- Healthcare Professionals Registry (HPR) and Healthcare Facilities Registries (HFR) that will act as a repository of all healthcare providers across both modern and traditional systems of medicine.

Ayushman Bharat Digital Mission Sandbox

It has been created as a part of the Mission and will act as a framework for technology and product testing.

- This will help organizations become a Health Information Provider or Health Information User or efficiently link with building blocks of Ayushman Bharat Digital Mission.

Significance of Mission

- The Mission will create interoperability within the digital health ecosystem, similar to the role played by the Unified Payments Interface in revolutionizing payments.
- Citizens will only be a click-away from accessing healthcare facilities.

Launch of 'NIDHI 2.0' & 'India Tourism Statistics-2021'

Why in News?

- Ministry of Tourism is organizing an event to celebrate "World Tourism Day 2021 " on 27th September 2021 in New Delhi.
- The day has been designated by the United Nations World Tourism Organization (UNWTO) as a day to focus on "Tourism for Inclusive Growth".
- An MoU is proposed to be signed between Ministry of Tourism, United Nations Environment Programme (UNEP) and The Responsible Tourism Society of India (RTSOI).

National Integrated Database of Hospitality Industry(NIDHI):

- It aims to get a clear picture of the geographical spread of the Hospitality Sector, its size, structure and existing capacity.
- It will serve as a common repository of data from Ministry of Tourism, State Departments of Tourism and Industry and enable the Central and State Governments to deliver better support and services including policies and strategies
- Registration with NIDHI ensures electronic delivery of various services and benefits to the hospitality unit.
- It also serve as a platform for the Hospitality organisations to ideate, share best practices and connect with the Government for ease of doing business.