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Sunderbans Damaged in Cyclone Amphan

Why in News

Recently, the Chief Minister of West Bengal highlighted that about **28% of the Sunderbans** has been **damaged by Cyclone Amphan** and launched a drive for planting **mangroves** and trees to mark the **World Environment Day (5th June)**.

Key Points

- The Indian Sunderbans, an **area south of the Dampier Hodges line**, is spread over 9,630 sq km, of which the mangrove forest accounts for 4,263 sq km.
 - 1,200 sq km of that mangrove forest has been destroyed.
 - **Mangroves** not only **reduce wind speed** but **break the waves during a storm surge** caused by a cyclone.
 - **Trees turned yellow and red** after the cyclone mostly **due to salinity** and trees can only survive if the salinity of the soil comes down.
 - **Dampier Hodges line** is an imaginary line, passing through 24 Parganas South and North districts (West Bengal) which indicates the northern-most limits of the estuarine zone affected by tidal fluctuations.
- The **damage has been much on the Indian side** of the Sundarbans and not on the Bangladesh side.
- The CM has directed the Forest Department to be prepared to plant 3.5 crore mangroves by **14th July** which is celebrated as the **World Forest Day**.

Sundarbans

- It is a **vast contiguous mangrove forest ecosystem** in the **coastal region of Bay of Bengal** spread over **India and Bangladesh** on the delta of the **Ganges, Brahmaputra and Meghna rivers**.

- The site is intersected by a complex network of tidal waterways, mudflats and small islands of salt-tolerant mangrove forests and presents an excellent example of ongoing ecological processes.
- It constitutes **over 60% of the country's total mangrove forest area.**
- Indian Sundarbans was recognised as **UNESCO World Heritage Site in 1987, 'Wetland of International Importance'** under the **Ramsar Convention** in **January 2019** and also a **Biosphere Reserve** in **1989.**
- The area is **known for its wide range of fauna**, including 260 bird species and is home to many rare and globally threatened wildlife species such as the **Estuarine Crocodile**, Royal Bengal Tiger, Water Monitor Lizard, **Gangetic Dolphin** and **Olive Ridley Turtles.**
- The Sunderbans Delta is the **only mangrove forest in the world inhabited by tigers.**

For its preservation, **Discovery India** and **World Wide Fund** (WWF) India partnered with the Government of West Bengal and local communities in the Sunderbans in 2019.

Mangroves

- Mangroves are the plant communities occurring in **inter-tidal zones along the coasts of tropical and subtropical countries.**
- Mangrove forests perform **multiple ecological functions** such as production of woody trees, provision of habitat, food and spawning grounds for fin-fish and shellfish, provision of habitat for birds and other valuable fauna; protection of coastlines and accretion of sediment to form new land.
- Among the states and Union Territories, **West Bengal has the highest percentage of area under total Mangrove cover followed by Gujarat and Andaman and Nicobar Islands.**
- The **India State of Forest Report** gives the data about mangroves and their conditions in the country.

Source: TH

India's Campaign Brochure for UNSC Seat

Why in News

Recently, India has released a **campaign brochure** ahead of the vote for the **non-permanent member** of the **United Nations Security Council** (UNSC) in 2021-22.

- This will be the **eighth time** India will occupy a non-permanent UNSC seat, with its last term in 2011-2012.
- India also seeks for a **permanent membership in the UNSC**.
 - India along with **other countries of G4 grouping (Japan, Brazil and Germany)** is asking for a spot for permanent membership in UNSC.
 - **Five permanent members:** China, France, the Russian Federation, the UK and the USA.

Key Points

- India is guaranteed a place as it is the **sole candidate for Asia-Pacific** but needs two-thirds of the 193-member General Assembly to vote in its favour in a secret ballot scheduled for 17th June, 2020 in New York (USA).
- **Issues Highlighted:**
 - International governance has been under increasing strain due to traditional and non-traditional security challenges. **Terrorism** is one of the most cited examples.
 - Unreformed and under-representative global institutions and the **Covid-19 pandemic** with its economic impact has increased challenges for the UNSC.
- **India's Solutions:**
 - Its objective will be the achievement of **N.O.R.M.S: a New Orientation for a Reformed Multilateral System**.
 - India will highlight international terrorism, **United Nations** reforms and Security Council expansion, streamlining the peacekeeping operations and technology initiatives during its upcoming tenure.
- **Background:**
 - Since 2013, India has been planning for a seat in **2021** as the year will mark its **75th year of Independence**.
 - Identifying an uncontested spot is not an easy task.
 - However, the **Islamic Republic of Afghanistan** agreed to set aside for the 2021-22 seat, in a **friendly gesture**.
 - India also **persuaded** the **Asia-Pacific grouping nomination** by diplomacy and negotiations to avoid any last-minute contenders against India.
 - India was able to win a **unanimous endorsement from the 55-nation** grouping that **included both China and Pakistan**, in June 2019.
 - However, **winning the maximum votes** at the General Assembly this time will be a little **hard for India due to:**
 - Rising **tensions** in relations with both **Pakistan and China**.
 - Criticism from Turkey, Malaysia and the **Organisation of Islamic Cooperation** (OIC) over the government's decision on **scrapping Article 370** as well as the **Citizenship Amendment Act (CAA) 2019**.

Selection of Non-permanent Members of Security Council

- Each year, the General Assembly **elects five non-permanent members** (out of ten in total) for a **two-year term**. The ten non-permanent seats are distributed on a regional basis:
 - Five for African and Asian countries.
 - One for Eastern European countries.
 - Two for Latin American and Caribbean countries.
 - Two for Western European and other countries.
- **Article 23 of the UN Charter** concerns the composition of the Security Council.
- **Other Contenders for Other Seats:**
 - **Mexico** is expected to be elected unopposed for the **Latin American group**.
 - **Canada, Ireland and Norway** will contend for two seats of the **West European and Others Group (WEOG)**.
 - **Kenya and Djibouti** will contend for an **African seat**.

Way Forward

- India for long has been of the view that the UNSC sought to be reformed by expansion in its permanent membership and non-permanent membership as well.
- India has been acknowledged as a rising power by most of the states. Also, there is a pressing need to democratize multilateral fora, starting from the United Nation system itself. In this context, India is making a legitimate claim for its rightful place in the changing architecture of global governance, including the UNSC.

Source: TH

Draft Unmanned Aircraft System (UAS) Rules, 2020

Why in News

Recently, the Ministry of Civil Aviation has notified the **draft Unmanned Aircraft System (UAS) Rules, 2020**.

- The draft rules have been issued at a time when the use of **drones has increased due to a coronavirus lockdown**, for purposes like surveillance, disinfection and videography.
- Earlier, the government had issued **drone regulations 1.0 and the drone regulations 2.0**. The government has also finalized **National Counter Rogue Drone Guidelines for handling the threats from Unmanned Aircraft Systems**.

Drone

- Drone is a layman terminology for **Unmanned Aircraft (UA)**. There are three subsets of Unmanned Aircraft- **Remotely Piloted Aircraft, Autonomous Aircraft and Model Aircraft**.
 - Remotely Piloted Aircraft consists of remote pilot station(s), the required command and control links and any other components, as specified in the type design.
- Remotely piloted aircraft have been divided into **five** categories based on their weight-
 - **Nano** : Less than or equal to 250 grams.
 - **Micro** : From 250 grams to 2kg.
 - **Small** : From 2 kg to 25kg.
 - **Medium** : From 25kg to 150kg.
 - **Large** : Greater than 150kg.

Key Points

- **Aims:**
 - A set of rules notified by the government aims to **regulate** the production, import, trade, ownership, establishment of the drone ports (airports for drones) and operation of unmanned aircraft systems.
 - It also seeks to create a **framework for drones use by businesses**.

- **Draft Rules:**
 - **Approval by DGCA:**
 - An authorised manufacturer or importer of drones can sell its devices **only to an individual or entity approved by** the aviation regulator Directorate General of Civil Aviation (**DGCA**).
 - **Only Nano class drones** will be allowed to operate in India **in general** and **only a qualified remote pilot will** be permitted **to operate heavier drones**.
 - The DGCA will have the powers to **inspect a UAS manufacturing or maintenance** facility before granting any authorisation under these rules.
 - **Third Party Insurance:**

No UAS shall operate in India unless there is in existence a **valid third party insurance policy** to cover the liability that may arise on account of a mishap involving such UAS.
 - **Carrying Payload:**
 - **No UAS** should carry any **payload except** as permitted by the DGCA.
 - No person **shall drop or project or permit to be dropped from a UAS in motion any object** except when specified.
 - **Ownership:**
 - For owning and using a drone, one has to be at **least 18 years old**.
 - In the **case of companies**, the requirement is that their **main place of business has to be in India** and the chairman and at least two thirds of directors have to be Indian citizens.
 - Also, businesses operating drones have to be substantially **owned and effectively controlled by Indian nationals**.
- **Future Prospects:**
 - Currently, the DGCA has **permitted food startups to conduct trials** for drones Beyond the Visual Line of Sight (BVLOS).
 - Unlike Visual Line of Sight (VLOS) flights, which are operated within the pilot's line of sight, BVLOS flights are flown beyond the visual range. These are mainly performed for **monitoring large areas**.
 - It enables service providers to conduct **complex drone operations** and facilitate drones to fly **without any human interference**.
 - DGCA is also expected to issue a **separate set of rules** to enable use of drones for **e-commerce or delivering medical supplies**.

Way Forward

- Drones offer low-cost, safe and quick aerial surveys for data collection and are useful for industries such as power, mining, realty, oil and gas exploration, railways and highways. They are also effective in relief and rescue work and in policing.

- But drones can also be misused such as **Saudi-Aramco Drone Attack** and thus regulated usage of drones is necessary in today's world.

Source:TH

163348 (2002 NN4): A Near-Earth Asteroid

Why in News

Recently, **the National Aeronautics and Space Administration (NASA)** has announced that a giant **asteroid** called as **163348 (2002 NN4)**, is expected to pass Earth on 6th June 2020.

However, it is approaching the Earth within the **safe limit of distance**.

Key Points

- **163348 (2002 NN4):**
 - It was discovered in July 2002 and is expected to approach the earth in June 2020.
 - The asteroid is estimated to be between **250-570 meters in diameter**.
 - The asteroid is a **Near-Earth Object** and classified as a **Potentially Hazardous Asteroid (PHA)**.
- **Near-Earth Objects (NEOs):**
 - NEOs are **comets and asteroids** pushed by the **gravitational attraction of nearby planets into orbits** which allow them to enter the Earth's neighbourhood.
 - These objects are **composed mostly of water ice** with embedded dust particles.
 - NEOs **occasionally approach close to the Earth** as they orbit the Sun.
 - NASA's **Center for Near-Earth Object Study (CNEOS)** determines the times and distances of these objects, when their approach to the Earth is close, through the Asteroid Watch Widget.

- **Potentially Hazardous Asteroid (PHA):**
 - It means that an asteroid has the potential to make **threatening close approaches to the Earth.**
 - Specifically, all asteroids with a **Minimum Orbit Intersection Distance (MOID) of 0.05 AU** (which is about 7,480,000 Km) or less and an **Absolute Magnitude (H) of 22.0** (about 150 mt in diameter) or less are considered PHAs.
 - **Minimum Orbit Intersection Distance** is a method for calculating the **minimum distance between two almost overlapping elliptical orbits.**
 - **The Astronomical Unit (AU)** is the distance between the Earth and the Sun and is roughly 150 million km.
 - The **absolute magnitude** is a measure of the star's luminosity i.e. the **total amount of energy radiated** by the star every second.
- **Chances of hitting the earth and related Concerns:**
 - According to NASA, the objects with large size pose a **great risk to Earth** due to the **level of devastation and the impact** they can cause.
 - Less than half of the estimated 25,000 NEOs that are 140 metres or larger in size have been found to date.
 - NASA's **Near-Earth Object Observations Program** finds, tracks and characterises over 90% of the predicted number of NEOs that are 140 metre or larger in size.
 - However, no asteroid **larger than 140 metre has a “significant” chance of hitting** the Earth for the **next 100 years.**

Asteroids

- Asteroids orbit the Sun and are small bodies in the solar system.
- They are made up of metals and rocks.
- They tend to have shorter and elliptical orbits.
- They do not produce a coma or tail atmosphere.
- The **asteroid belt** is a torus-shaped region in the Solar System, located roughly between the orbits of the planets Jupiter and Mars.

Comet

- Comets also orbit the Sun and are relatively small bodies of the solar system.
- They are made up of ice and hydrocarbons.
- Comets have an eccentric orbit.
- When comets approach the sun, some part of their ice melts and the other materials vapourise due to the heat of the sun. This results in a glowing halo that extends outwards through space.

Therefore, a thin atmospheric tail is formed when close to the Sun.

Significance:

- The scientific interest in **comets and asteroids** is largely due to their status as **relatively unchanged remnant debris from the solar system** formation process over **4.6 billion years ago**. Therefore, they offer clues about the **chemical mixture** from the planets formed.
- Significantly, among all the reasons that will eventually cause the extinction of life on Earth, **an asteroid hit is widely acknowledged** as one of the likeliest.

Over the years, scientists have suggested different ways to ward off such a hit, such as blowing up the asteroid before it reaches Earth, or deflecting it off its Earth-bound course by hitting it with a spacecraft.

Way Forward

- It is not necessary that asteroids classified as PHAs will impact the Earth. It only means there is a possibility of a threat.
- By **monitoring these PHAs and updating their orbits as new observations**, it is possible to **predict the close-approach statistics and thus their Earth-impact threat**.

Source: IE

Aerosols Radiative Forcing in Western Trans-Himalayas

Why in News

Recently, a study by **the Aryabhata Research Institute of Observational Sciences (ARIES)** has found that **radiative forcing of aerosols** i.e. effect of anthropogenic aerosols is much higher over the high altitudes of western trans-Himalayas.

- **ARIES**, Nainital is an autonomous research institute under the Department of Science and Technology (DST), Ministry of Science and Technology.
- The Trans-Himalayas Mountain Region is located to the north of the Great Himalayas which consists of **Karakoram, Ladakh, Zaskar and Kailash mountain ranges**. It is also called the Tibet Himalayan Region because most of the part of these ranges lies in Tibet.

Key Points

- **Aerosol Radiative Forcing (ARF) :**
 - The study analysed the **variability of aerosol optical, physical and radiative properties** from January 2008 to December 2018 and the role of fine and coarse particles in **Aerosol Radiative Forcing (ARF)** assessment.
 - The ARF values at top of the atmosphere were mostly low over Hanle and Merak.
 - **ARF** is the **effect of anthropogenic aerosols on the radiative fluxes** at the top of the atmosphere and at the surface and on the absorption of radiation within the atmosphere.
 - Hanle and Merak, situated in Ladakh are the part of **Indian Astronomical Observatory (IAO)**.
 - **Change in Temperature:**
 - The study shows that monthly-mean atmospheric radiative forcing of aerosols leads to heating rates of **0.04 to 0.13 degree celsius per day**.
 - Further, the temperature over the Ladakh region is increasing **0.3 to 0.4 degree celsius per decade** from the last 3 decades.
- **Aerosol Optical Depth (AOD):**
 - The observations show that the **Aerosol Optical Depth (AOD)** exhibited a distinct seasonal variation with higher values (0.07) in May and lower (0.03) in winter months.
 - **AOD** is a measure of how **light is absorbed or reflected by airborne particles** as it travels through the atmosphere.
 - If aerosols are concentrated near the surface, **an optical depth of 1 or above** indicates very **hazy conditions**.
 - An optical depth, or **thickness, of less than 0.1** over the entire atmospheric vertical column is considered clean.
- **Angstrom Exponent (AE):**
 - The lower values of **Angstrom Exponent (AE)** in spring indicated dominance of coarse-mode dust aerosols.
 - **The Angstrom Exponent** is a parameter that describes **how the optical thickness of an aerosol typically depends on the wavelength** of the light.
- **Composition of Air:**

Pure and polluted dust exhibited fractions between 16% and 23%, with a low frequency of less than 13% of absorbing aerosols, denoting weak influence of **anthropogenic aerosols** and **Black Carbon** over the trans-Himalayan sites.

Significance of the Study

- The atmospheric aerosols **play a key role in the regional/global climate system** through scattering and absorption of incoming solar radiation and by modifying the cloud structure.

- The transport of **light-absorbing carbonaceous aerosols and dust from the polluted Indo-Gangetic Plain and desert areas over the Himalayas** constitutes a major climatic issue due to severe **impacts on atmospheric warming and glacier retreat**.
- This heating over the Himalayas facilitates the **“elevated-heat pump”** that strengthens the temperature gradient between land and ocean and modifies the atmospheric circulation and the monsoon rainfall.
- A deep scientific study of **aerosol generation, transport, and its properties have important implications in the mitigation of climate change**.
- The study can help better **understand the aerosol optical and microphysical properties** and improve the **modelling of aerosol effects in view of aerosol-climate implication** via modifications in atmospheric warming and changes in the snow/glacier albedo over the trans-Himalayan region.

Background

- Measurements of aerosol optical and microphysical properties started during the last decade at the **Indian Astronomical Observatory (IAO) at the high altitude background sites of Hanle and Merak in the trans-Himalayas** under the frameworks of **Aerosol Radiative Forcing over India (ARFI)** and **Astronomical Site Survey program of Indian Institute of Astrophysics (IIA)**, Bangalore.
- The **Indian Astronomical Observatory**, located near **Leh in Ladakh**, has one of the world's highest located sites for optical, infrared and gamma-ray telescopes.
- In addition to this, few in-situ measurements of carbonaceous aerosols and ionic species have also been performed at Himansh Observatory (Spiti Valley) in the western Himalayas.

Aerosol

- Aerosols are defined as a combination **of liquid or solid particles suspended** in a gaseous or liquid environment.
- In the atmosphere, these particles are mainly situated in the low layers of the **atmosphere (< 1.5 km) since aerosol sources** are located on the terrestrial surface.
- However, certain aerosols can still be found in the stratosphere, especially volcanic aerosols ejected into the high altitude layers.

- The origin of atmospheric aerosols is either **natural or the result of anthropogenic activities**.
 - **Natural sources of aerosols** include sea salt generated from breaking waves, mineral dust blown from the surface by wind, and volcanoes.
 - **Anthropogenic aerosols** include sulfate, nitrate, and carbonaceous aerosols, and are mainly from fossil fuel combustion sources.
 - **Significance:**
 - Reflect **more energy from the sun back to space**.
 - In remote places with cleaner air, the effect of aerosol particle formation on clouds is found to be much larger.
 - Affect the atmospheric chemical composition.
 - Can **reduce visibility**.
 - Have important impacts on **air quality and human health** (e.g. aerosols can cause damage to heart and lungs).
 - Serve as nuclei for cloud droplets or ice crystals in ice clouds.

Way Forward

Despite the large progress in quantifying the impact of different aerosols on radiative forcing, it still remains one of the **major uncertainties in the climate change assessment**. **Precise measurements of aerosol properties** are required to reduce the uncertainties, especially over the oceans and high altitude remote locations in the Himalayas.

Source: PIB

Advisory on Importing Live Exotic Animals

Why in News

Recently, the **Ministry of Environment, Forest and Climate Change** has issued an advisory to streamline and formalise the process of **importing live exotic animals**.

Many exotic species of birds, reptiles and amphibians are imported into India for **commercial purposes**.

Key Points

- **Exotic Animals:**
 - The term exotic does not have a set definition but it usually refers to a wild animal or one that is **more unusual and rare** than normal domesticated pets like cats or dogs.
 - These are those species which are **not usually native to an area** and are introduced to an area by humans.
 - The advisory has defined them as those that are mentioned under the Appendices of the **Convention on International Trade in Endangered Species of Wild Fauna and Flora** (CITES) but not under the **Schedules of the Wild Life (Protection) Act, 1972.**
- The **major reason** for issuing the advisory is to regulate trade because the issue of **zoonotic diseases** is linked to wildlife. With this advisory, it will be known how many such exotic animals are there in the country.
- **Provisions:**
 - For **import and disclosure** of exotic animals and their progeny already in India.
 - A person trying to import a live exotic animal will have to submit an application for grant of a licence to the **Director-General of Foreign Trade (DGFT)**, under the **Ministry of Commerce and Industry.**
 - Earlier, these imports were happening through the DGFT but they were beyond the purview of the forest departments and the chief wildlife wardens were not aware of them.
 - The importer will also have to attach a **No Objection Certificate (NOC)** of the chief wildlife warden of the state concerned along with the application.
 - For those people who have already imported exotic animals, a **declaration will have to be made within six months.**
 - However, if the declaration is made after six months, documents related to the provenance of the animal will have to be submitted.
- **Criticism:**
 - Being an advisory, it **does not have the force of law** and can **potentially incentivize illegal trade** by offering a long amnesty period.
 - Matters such as the **spread of invasive species** as well as zoonotic diseases had not been taken care of in the advisory.
 - The growing **domestic trade in exotic species of wildlife is not listed** under the various appendices of CITES (such as sugar gliders, corn snakes), which limits the scope of the advisory itself.
 - There is **no mention of the welfare standards of captive facilities** that could **lead to 'legal' backyard breeding** of wildlife with poor to no welfare concern of the wild animals involved.
 - There will be a **high chance of transmission of pathogens across the species barrier** if the ministry fails to issue any consequent guidelines on maintenance and care of animals in different facilities.

Way Forward

- The advisory should be appreciated for its effort to introduce some regulation even though India's regulation of the trade in exotic animals is severely lacking.
- Proper regulations are required for the exotic animal trade which take into account its true risks and costs.

Source: DTE

'Healthy and Energy Efficient Buildings' Initiative

Why in News

The **Energy Efficiency Services Limited (EESL)**, in partnership with the U.S. **Agency for International Development's (USAID) MAITREE program**, launched the "**Healthy and Energy Efficient Buildings**" initiative that will pioneer ways to make workplaces healthier and greener.

Key Points

- The initiative was launched on the occasion of the **World Environment day (5th June)**.
- This initiative is to **address the challenges of retrofitting existing buildings and air conditioning systems** so that they are both healthy and energy efficient.
- The initiative, implemented by the EESL in its office, will pave the way for other buildings to take appropriate steps to be healthy and energy efficient.
 - This will help in **developing specifications** for future use in other buildings throughout the country, as well as aid in **evaluating the effectiveness and cost benefits of various technologies** and their short and long-term impacts on air quality, comfort, and energy use.
- **Need:**
 - Poor air quality has been a concern in India for quite some time and has become more important in light of the Covid-19 pandemic.
 - As people return to their offices and public spaces, maintaining good indoor air quality is essential for occupant comfort, well-being, productivity and the overall public health.
 - Most buildings in India are not equipped to establish and maintain healthy indoor air quality and need to be upgraded. Such retrofit measures, like increasing outside air and additional filtration in the air conditioning system, typically come at the cost of occupant comfort and increased energy use.
 - Further, there are no standardized approaches to retrofitting.

Energy Efficiency Services Limited

- Energy Efficiency Services Limited (EESL) is under the administration of the **Ministry of Power**, Government of India.
- It is working towards mainstreaming energy efficiency and is implementing the world's largest energy efficiency portfolio in the country.
- It aims to create market access for efficient and future-ready transformative solutions that create a win-win situation for every stakeholder.
- It helps in implementing programmes such as **Unnatjyoti by Affordable LED for All (UJALA)**, **Smart Meters**, etc.

U.S. Agency for International Development

- USAID is the world's premier international development agency and a catalytic actor driving development results.
- The **Market Integration and Transformation Program for Energy Efficiency (MAITREE)**, is a part of the US-India bilateral Partnership between the Ministry of Power and USAID and is aimed at accelerating the adoption of cost-effective energy efficiency as a standard practice within buildings, and specifically focuses on cooling.

Source:PIB

Increase in Foreign Portfolio Investment

Why in News

The quantum of Foreign Portfolio Investments (FPIs) flows in the equity market reached a record high in the first week of June compared to any other month in the current calendar year of 2020.

Key Points

- The foreign portfolio investors have bought shares worth about Rs. 21,000 crore in just five trading sessions in the first week of June 2020.
- This is the highest in any month of 2020, with the previous high registered in May at Rs. 14,569 crore.
- The FPI has been brought into **sectors like automobiles, private banks and pharmaceuticals.**

- The sudden surge in FPIs is because of the **Rights Issue** of Reliance Industries Limited (RIL), **stake sale** in Kotak Mahindra Bank, and the **slight increase in optimism in Indian market**.
 - RIL's Rights Issue is India's largest Rights Issue at Rs. 53,124.20 crore.
 - Uday Kotak sold shares worth around Rs. 6,800 crore of Kotak Mahindra Bank, which were bought by FPIs.
- However, the **cumulative foreign flows in equities this year is still negative** at Rs. 19,531 crore, since **March and April saw huge outflows**.
 March witnessed a record outflow of Rs. 61,973 crore, which was followed by selling worth Rs. 6,884 crore in April.

Rights Issue

- A rights issue is when a company offers its existing shareholders the chance to buy additional shares for a reduced price.
- A company would offer a rights issue in order to raise capital which can be used to clear its debt obligations, acquire assets, or facilitate expansion without having to take out a loan from a bank.

Stake Sale

- Stake sale refers to a company selling its equity holding in a particular company to another company.
- It is the disinvestment of a company's shares. It also represents the end of the investment process in a particular company.

Foreign Portfolio Investment

- **Foreign portfolio investment (FPI)** consists of securities and other financial assets **passively held by foreign investors**.
- It does **not provide the investor with direct ownership** of financial assets and is relatively liquid depending on the volatility of the market.
- FPI is **part of a country's capital account** and is **shown on its Balance of Payments (BOP)**.
 The BOP measures the **amount of money flowing from one country to other countries** over one monetary year.
- The investor **does not actively manage** the investments through FPIs, he does not **have control over the securities or the business**.
- The investor's goal is to create a quick return on his money.
- FPI is often referred to as **"hot money"** because of its tendency to flee at the first signs of trouble in an economy.

- FPI is more liquid and **less risky than Foreign Direct Investment (FDI)**.
A Foreign Direct Investment (FDI) is an investment made by a firm or individual in one country into business interests located in another country. FDI lets an investor **purchase a direct business interest** in a foreign country.
- FPI and FDI are both important sources of funding for most economies. Foreign capital can be used to develop infrastructure, set up manufacturing facilities and service hubs, and invest in other productive assets such as machinery and equipment, which contributes to economic growth and stimulates employment.
- **Securities and Exchange Board of India (SEBI)** brought **new FPI Regulations, 2019**, replacing the erstwhile FPI Regulations of 2014.

Source:TH

LiDAR Based Research in Tamar Valley

Why in News

A U.K.-based team of archeologists has continued its research over the **Tamar Valley** through **LiDAR (Light Detection and Ranging)** despite lockdown due to **Covid-19** in the country.

LiDAR is commonly used by geologists and surveyors to make high-resolution maps.

Tamar Valley

- Tamar valley is located in the **south of England** and is a rich archaeological landscape with many sites **belonging to the Iron Age and Roman era**.
- The area is a **World Heritage Site due to its historic mining activities**.
 - A World Heritage Site is a place that is listed by the **United Nations Educational, Scientific and Cultural Organization (UNESCO)** for its **special cultural or physical significance**.
 - The list of World Heritage Sites is maintained by the **international 'World Heritage Programme'**, administered by the UNESCO World Heritage Committee.

LiDAR

- **Description:**

- LiDAR (Light Detection and Ranging) is a **remote sensing** method that uses light in the form of a pulsed laser **to measure ranges & variable distances**.
- These light pulses—combined with other data recorded by the airborne system — generate precise, three-dimensional information about the shape of the Earth and its surface characteristics.
- A LiDAR instrument principally **consists of a laser, a scanner, and a specialized GPS receiver**.

Airplanes and helicopters are the most commonly used platforms for acquiring LiDAR data over broad areas.

- **Applications:**

- LiDAR is used for **agriculture, hydrology** and water management systems
- and **geology-related** applications.
- It is also used in **archaeology**.

Source:TH

Payments Infrastructure Development Fund

Why in News

Recently, the **Reserve Bank of India (RBI)** has announced the creation of a Rs. 500-crore Payments Infrastructure Development Fund (PIDF).

Key Points

- **Aim:** PIDF has been created to **encourage deployment of Point of Sale (PoS) infrastructure**, both physical and digital, in **tier-3 to tier-6 centres** and **north eastern states**.
 - The setting of PIDF is in line with the measures proposed by the **vision document on payment and settlement systems in India 2019-2021**.
 - It is also in line with the **RBI's proposal to set up an Acceptance Development Fund** which will be used to develop card acceptance infrastructure across small towns and cities.
- **Corpus:** It has a corpus of Rs. 500 crore in which **the RBI has made an initial contribution of Rs. 250 crore**. The remaining will come from the card-issuing banks and card networks operating in the country.
- **Recurring contributions:** The PIDF will also receive recurring contributions to cover operational expenses from card-issuing banks and card networks. RBI will also contribute to yearly shortfalls, if necessary.

- **Governance:** The fund will be **governed through an advisory council** but will be managed and administered by the RBI.
- **Need:** Most of the PoS terminals in the country are concentrated in tier 1 and 2 cities because of the high cost of merchant acquisition and merchant terminalisation.
 - The **merchant onboarding** and **training** is a key challenge for enhancing the reach of digital payments in smaller towns and cities.
 - Merchant onboarding means adding the new merchant in a payment gateway system.
- **Benefit:** It will give a push to digital payments across India.
Reduce demand for cash over time.

Source: TH

Nagar Van Scheme

Why in News

The government has announced implementation of the **Nagar Van Scheme** on the occasion of the **World Environment Day (5th June)**.

- The theme of World Environment Day 2020 is '**Celebrating Biodiversity**'—a concern that is both urgent and existential but India has decided to focus on **Nagar Van (Urban Forests)** in addition to the official theme.
- The Ministry of Environment, Forest and Climate Change (MoEFCC) has also released a **brochure on the best practices on Urban Forests**.

Key Points

- **Description:**
 - The Nagar Van (Urban Forests) aims to develop **200 Urban Forests across the country** in the next **five years**.
Warje Urban Forest in Pune (Maharashtra) will be considered as a role model for the Scheme.
 - The Scheme enforces **people's participation and collaboration** between the Forest Department, Municipal bodies, NGOs, Corporates and local citizens.
 - These urban forests will primarily be on the **existing forest land in the City or any other vacant land** offered by local urban local bodies.

- **Finances:**

The finances for the scheme will be paid for by the **CAMPA (Compensatory Afforestation Fund (CAF) Act, 2016)** funds.

- The CAF Act was enacted to manage the funds collected for **compensatory afforestation** which till then was managed by ad hoc Compensatory Afforestation Fund Management and Planning Authority (CAMPA).
- Compensatory afforestation means that every time forest land is diverted for non-forest purposes such as mining or industry, the user agency pays for planting forests over an equal area of non-forest land, or when such land is not available, twice the area of degraded forest land.
- As per the rules, **90% of the CAF money** is to be given to the **states** while **10%** is to be **retained by the Centre**.

Source:PIB

iCommit Initiative

Why in News

Recently, the **iCommit initiative** was launched on the occasion of the **World Environment day** (5th June).

The initiative is driven by **Energy Efficiency Services Limited (EESL)**, under the administration of the **Ministry of Power**, Government of India.

Key Points

- iCommit initiative is centred around the idea of **building an energy resilient future**.
 - It is a clarion call to all stakeholders and individuals to continue moving towards energy efficiency, renewable energy, and sustainability to create a robust and resilient energy system in the future.
 - The prerequisite for this goal is to create a **flexible and agile power system**.
A healthy power sector can help the nation in meeting the objective of energy access and security for all.
- It seeks to bring together a diverse spectrum of government and private players to build a new energy future for India.

Source:PIB
