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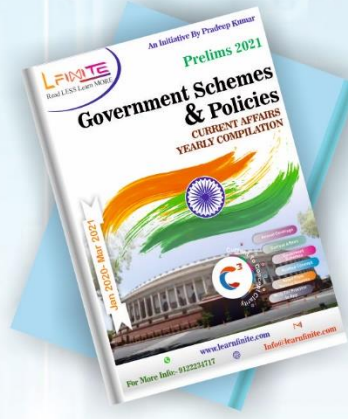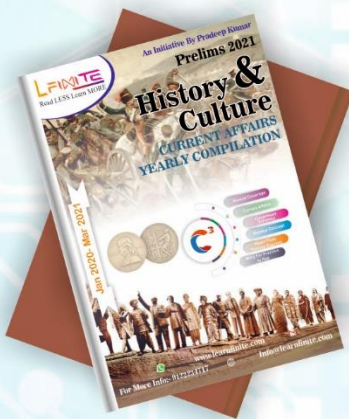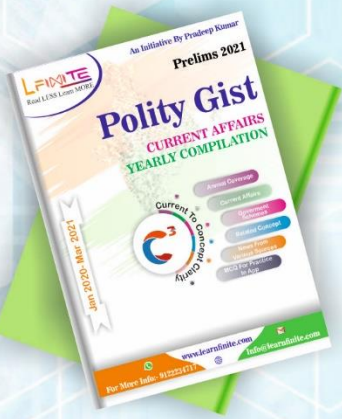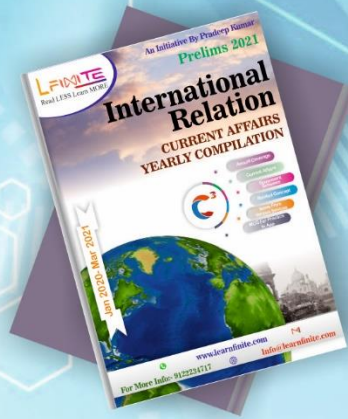
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DEFFENCE AND SECURITY

Indian Cyber Crime Coordination Centre

In news
Union Minister for Home Affairs inaugurated the Indian *Cyber Crime Coordination Centre (I4C)* and dedicated National Cyber Crime Reporting Portal to the Nation.

Objective
- To deal with all types of cybercrimes in a comprehensive and coordinated manner.
- To act as a nodal point in the fight against cybercrime
- Identify the research problems/needs of Law Enforcement Agencies (LEAs) and take up R&D activities in developing new technologies and forensic tools in collaboration with academia / research institutes within India and abroad
- To prevent misuse of cyber space for furthering the cause of extremist and terrorist groups

Components of The I4C Scheme
- National Cybercrime Threat Analytics Unit (TAU)
- National Cybercrime Reporting
- Platform for Joint Cybercrime Investigation Team
- National Cybercrime Forensic Laboratory (NCFL) Ecosystem
- National Cybercrime Training Centre (NCTC)
- Cybercrime Ecosystem Management Unit
- National Cyber Crime Research and Innovation Centre

Cybercrime
- It is a broad term that is used to define **criminal activity in which computers or computer networks are a tool, a target, or a place of criminal activity** and include everything from electronic cracking to denial of service attacks.
- It also covers the traditional crimes in which computers or networks are used to enable the illicit activity.
- **Cyberlaw in India is not a separate legal framework.** It's a combination of Contract, Intellectual property, Data protection, and privacy laws.
- **The Information Technology Act, 2000** addresses the gamut of new-age crimes. Computer technology, mobile devices, software, and the internet are both medium and target of such crimes.

Amendments in Arms Act, 1959 and Arms Rules, 2016 notified

In news
The Ministry of Home Affairs has amended the provisions of the Arms Act, 1959 and the Arms Rules, 2016 to increase the number of firearms that can be kept by the shooters and enhanced the quantity of ammunition fixed for their practice for the year.

Highlights
- As per the new rules, currently, International Medalists/Renowned Shooters are allowed to keep extra weapons up to a complete of twelve under the exempted category, which earlier was seven.
- If a shooter is renowned in one event, he can keep maximum eight (previously it had been four), if a shooter is renowned in 2 events he can keep maximum 10 (previously it had been seven) and if a shooter is renowned in more than 2 events, he can keep maximum twelve (previously it had been seven) firearms under exempted category.
- The junior target shooter/ aspiring shooter is now allowed to possess 2 weapons (previously one) of any class in which the person is a junior target shooter/aspiring shooter.
- This provision shall facilitate shooters in practicing with various types of firearms.
- Apart from the above exemptions, the shooters are entitled to possess 2 firearms as normal citizens under provisions of the Arms Act, 1959

Chief Vigilance Commissioner

In news
Sanjay Kothari, Secretary to the President of India, will be the next Chief Vigilance Commissioner (CVC).

Chief Vigilance commission
It has the status of an autonomous and statutory body, free of control from any executive authority, charged with monitoring all vigilance activity under the Central Government of India, advising various authorities in central Government organizations in planning, executing, reviewing and reforming their vigilance work.

Composition
- A Central Vigilance Commissioner - Chairperson;

- Not more than two Vigilance Commissioners - Members;

They are appointed by the president on recommendations of a committee of PM + Home minister + leader of opposition Lok Sabha. They occupy post till age of 65 yrs or 4 year term.

They are not eligible for any other govt appointment under centre or state after ceasing to hold office.

Removal
- President does removal on grounds of bankruptcy, unsound mind, infirmity of body or mind, sentenced to imprisonment for a crime, or engages in paid employment or has acquired financial or other interest that might affect his judgment.
- He can also be removed for proved misbehaviour or incapacity if SC inquiry finds him guilty. They can resign by writing to president.

Exercise AJEYA WARRIOR-2020

In news

Salisbury Plains, United Kingdom will be hosting 5th edition of Joint Military Exercise AJEYA Warrior-2020 conducted between India and UK

Aim

To conduct company level joint training with emphasis on counter terrorists operation in Urban and Semi Urban areas.

AJEYA Warrior 2020

- Exercise AJEYA WARRIOR will promote defence cooperation and enhance interoperability while sharing experiences between both the armies.
- It is alternatively conducted in United Kingdom and India.
- The joint military exercise displays a bilateral willingness to work jointly and share operating procedures to deal with a situation in a specified operational setting.

New explosive detection device

In news
RaIDer-X, a new explosive detection device, was unveiled at the National Workshop on Explosive Detection (NWED-2020) in Pune.

Details
- RaIDer-X has the capability to detect explosives from a stand-off distance.

- The data library can be built in the system to expand its capability to detect a number of explosives in pure form as well as with the contaminants.
- Bulk explosive in concealed condition can also be detected by the device.
- RaIDer-X has been co-developed by High Energy Materials Research Laboratory (HEMRL) Puneand Indian Institute of Science, Bangalore.

Benefits of RaIDer-X
- It is a portable device that can be taken to any place along with the military contingent.
- This device will also help security agencies to work efficiently and safely.
- RaIDer-X will help Indian Security Agencies to save people from anti-social elements.
- RaiDer-X will also enhance the Indian Army's power in the field to work more efficiently.

IIT Bombay, Delhi break into top 50 in QS world university rankings

The prestigious Indian Institute of Technology (IIT) in Mumbai and Delhi are among the top 50 engineering colleges across the globe, according to subject-wise QS World Ranking.

Major findings of the report
- While IIT Bombay has been ranked 44, IIT Delhi has bagged the 47th rank.
- Five institutions from India have been ranked among the top 100 this year, while in 2019 there were three, IIT Bombay, IIT Delhi and IIT Madras. This year IIT Kharagpur (IIT-KGP) is at 86th, IIT Madras (IITM) at 88 and IIT Kanpur (IITK) at 96.
- In arts and humanities, the Jawaharlal Nehru University (JNU) has been ranked at the 162nd position while the Delhi University has been ranked at 231 spot.

Annual Refresher Programme In Teaching (ARPIT)

In news
In a unique initiative to enhance quality of teaching in higher education, the Government is successfully running an online 'Annual Refresher Programme In Teaching (ARPIT)' for the last two years for professional development of higher education faculty.

ARPIT
- Using the MOOCs platform SWAYAM, the programme was launched in 2018 to fulfil government's commitment towards quality

education. It is a major and unique initiative of online professional development of 15 lakh higher education faculty.

- Through ARPIT, new & emerging trends, pedagogical improvements and methodologies for transacting revised curriculum have been imparted to more than 1.8 Lakh teachers in the last two years.

- ARPIT has been launched to enhance the quality of teaching and is a step towards the commitment of the government to "HarEkKaamDeshKeNaam"

World's largest aircraft carrier, Indian warships conduct naval exercise together

In news

World's largest aircarft carrier USS Nimitz (CVN 68) along with Ticonderoga-class guided missile cruiser USS Princeton (CG 59) and Arleigh Burke-class guided missile destroyers USS Sterett (DDG 104) and USS Ralph Johnson (DDG 114), participated in joint naval exercises with the Indian Navy in the Indian Ocean.

Passex exercise

- Both Indian Navy and the US Navy conducted high-end exercises designed to maximize training and interoperability, including air defense.
- Indian Navy had conducted similar PASSEXs with Japan Maritime Self-Defense Force and French Navy in recent past.
- Four frontline warships of the Indian Navy participated in the "**PASSEX**" exercise when the US carrier strike group was transiting through the Indian Ocean Region on its way from the South China Sea.
- The Indian Navy has increased its surveillance missions and beefed up operational deployment in the Indian Ocean region in the wake of the country's bitter border standoff with China in eastern Ladakh.

IAF new deal with Russia

In news

The **Defence Acquisition Council (DAC)** chaired by Defence Minister approved defence deals worth ₹38,900 crore whichincludes procurement of 21 MiG29 fighter jets for theIndian Air Force (IAF) from Russia.

What are the major deals approved?

- The Defence Ministry said the MiG29procurements andupgradation from Russia are estimated to cost ₹7,418crore .
- Other deals approved bythe DAC include **Pinaka rocket ammunition**, longrangeland attack missile system of over 1,000 km range andclose to 250 **Astra Beyond Visual Range (BVR)** airtoairmissiles for the IAF.
- The **Astra Mk1**has been integratedon the Su30MKIjets and is being inducted into theforce.
- An ungraded variant, the **Astra MkII**is underdevelopment by the **Defence Research and Development Organisation (DRDO).**

What are the new fighter jets for?

- The 12Su30MKIs are meant to make up for the gaps in theSu30MKISquadronscaused due to crashes overthe years.
- India hascontracted 272 Su30jets from Russia in differentbatches, a majority ofwhich are being licencemanufacturedby HAL.

What other steps is the Indian Air Force taking toaddress the shortage?

- The IAF currently has one squadron of LCA in initial operational configuration (IOC) and later on, it constitutedthe second LCA squadron with one aircraft in the finaloperational clearance (FOC) configuration.
- An indigenous fifth generation advancedmedium combat aircraft (AMCA) is also underdevelopment and is expected to make first flight by 2032.
- The IAF is also upgrading all aircraft in its currentinventory to make up for the shortfall.

What about budgetary allocations?

- The defence budget has been going down as apercentage of the GDP, and the novel coronaviruspandemic has put further budgetary constraints onmilitary modernisation.
- There is a steep rise in defence pensions, 13.5%, from ₹1.18lakhcrore in revised estimates of last year to₹1.34lakhcrore this year.
- In comparison, last year, the IAF had committedliabilities, payments for deals already signed for, of over₹47,000 crore which was more than its entire capitalallocation.
- The IAF has signed several major deals whichinclude 36 Rafale jets from France, S400air defencesystems from Russia, Apache attack helicopters andChinook heavy lift helicopters from the U.S. amongothers.

Naval Innovation and Indigenisation Organisation (NIIO) launched

In news
Raksha Mantri Shri Rajnath Singh launched the Naval Innovation and Indigenisation Organisation (NIIO) through an online webinar.

Naval Innovation and Indigenisation Organisation

- The NIIO is a three-tiered organisation. Naval Technology Acceleration Council (N-TAC) will bring together the twin aspects of innovation and indigenisation and provide apex level directives.
- An online discussion forum for engaging domestic industry and academic institutes has been created in partnership with RSU and was launched during the webinar.
- A compendium of Indian Navy's Indigenisation perspective plans titled 'SWAVLAMBAN' was also released on the occasion.

Defence Acquisition Procedure – 2020

In news
Recently, a new Defence Acquisition Procedure (DAP) (erstwhile Defence Procurement Procedure or DPP), 2020 was released by the Ministry of Defence (MoD).

Background
The first Defence Procurement Procedure (DPP) was promulgated in the year 2002 and has since been revised periodically to provide impetus to the growing domestic industry and achieve enhanced self reliance in defence manufacturing.

DAP 2020

DAP 2020 has been aligned with the vision of the Government ofAtmanirbhar Bharat and empowering Indian domestic industry through Make in India initiative with the ultimate aim of turning India into a global manufacturing hub.

With the new Foreign Direct Investment policy announced, DAP 2020 has adequately included provisions to encourage FDI to establish manufacturing hubs both for import substitution and exports while protecting interests of Indian domestic industry.

Features
- Reservation in Categories for Indian Vendors
- Enhancement of Indigenous Content.
- Rationalisation of Trial and Testing Procedures.

- Make & Innovation

Land Management System (LMS)

In news
As part of efforts to improve overall management of defence land, for the first time a Land Management System (LMS) has been developed by Department of Defence in conjunction with DGDE and Armed forces

Highlights
- The Intra-net portal shall digitize all requests of defence land management received by the Department in future.
- It is also in process of progressively capturing archival data into the system.
- All data for cases since 2016 have already been captured and are available in the portal.
- The portal is expected to bring in greater speed, transparency and efficiency into the Land Management System (LMS) of the Department.
- This will integrate several mapping tools into the existing "Raksha Bhoomi" software, which was launched with the data updated in 2011.
- The software, apart from capturing the textual details of all proposals relating to defence management, integrates these details as well as other relevant aspects, including satellite imagery of the area and other amenities.

The technical support for this GIS-based system has been provided by BISAG, India's premier organization in GIS based informatics.

BISAG
Bhaskaracharya National Institute for Space Applications and Geo-informatics{BISAG} is an Autonomous Scientific Society registered under the Societies Registration Act, 1860 under the MeitY, Government of India to undertake technology development & management, research & development, facilitate National & International cooperation, capacity building and support technology transfer & entrepreneurship development in area of geo-spatial technology.

BISAG has three main domain areas: ***Satellite Communication, Geo-informatics and Geo-spatial technology.***

Indo-Thai Coordinated Patrol (CORPAT)

In news
The 30th edition of ***India-Thailand Coordinated Patrol (Indo-Thai CORPAT)*** between the Indian Navy and the

Royal Thai Navy was being conducted from 18 – 20 November 2020.

As part of Government of India's vision of SAGAR (**S**ecurity **A**nd **G**rowth for **A**ll in the **R**egion), the Indian Navy has been involved in assisting countries in the Indian Ocean Region with EEZ Surveillance, Humanitarian Assistance and Disaster Relief (HADR), and other capacity building and capability-enhancement activities, on their request.

Aim

Keeping this vital part of the Indian Ocean safe and secure for commercial shipping and international trade

Participants

Indian Naval Ship (INS)Karmuk, an *indigenously built Missile Corvette* and His Majesty's **Thailand Ship (HTMS)Kraburi, a Chao Phraya** Class Frigate along with *Dornier Maritime Patrol Aircraft* from both the navies are participating in the CORPAT.

History

The two navies have been carrying out CORPAT along their International Maritime Boundary Line twice a year since 2005.

Significance

- CORPAT builds up the understanding and interoperability between navies and facilitates institution of measures to prevent and suppress Illegal Unreported Unregulated (IUU) fishing, drug trafficking, maritime terrorism, armed robbery and piracy.
- It further enhances the operational synergy by exchange of information for prevention of smuggling, illegal immigration and for conduct of SAR operations at sea.
- The 30th Indo-Thai CORPAT will contribute towards Indian Navy's efforts to consolidate inter-operability and forge strong bonds of friendship with Royal Thai Navy.

SAGAR

- In 2015, India unveiled it's strategic vision for the Indian Ocean i.e. **Security and Growth for All in the Region (SAGAR).**
- It is an increasing recognition of the increasing importance of **maritime security, maritime commons and cooperation.**
- Through SAGAR, India seeks to deepen **economic and security cooperation** with its maritime neighbours and assist in building their maritime security capabilities.
- Further, India seeks to safeguard its national interests and ensure Indian Ocean region to

become **inclusive, collaborative and respect international law.**

Trilateral Maritime Exercise SITMEX-20

In news

The 2nd edition of India, Singapore and Thailand Trilateral Maritime Exercise SITMEX-20 was conducted in the Andaman Sea.

Aim

To strengthen mutual confidence and develop common understanding and procedures towards enhancing the overall maritime security in the region.

Participants

- Indian naval ships, including indigenously-built anti-submarine warfare corvette Kamorta and missile corvette Karmuk, are participating.
- The three navies participate in a variety of exercises including naval manoeuvres, surface warfare exercises and weapon firings.

Details

- The first edition of SITMEX, hosted by Indian Navy, was conducted off Port Blair in September 2019.
- The SITMEX series of exercises are conducted to enhance mutual inter-operability and imbibing best practices between Indian Navy, Republic of Singapore Navy (RSN) and Royal Thai Navy (RTN).
- *The 2020 edition of the exercise is being hosted by RSN.*
- The exercise, conducted as a 'non-contact, at sea only' exercise in view of COVID-19 pandemic, highlighted growing synergy, coordination and cooperation in the maritime domain between the three friendly navies and maritime neighbors.

Passage Exercise (PASSEX)

In news

The Indian Navy (IN) is undertaking a Passage Exercise (PASSEX) with Russian Federation Navy (RuFN) in the Eastern Indian Ocean Region (IOR) from 4 to 5 December 2020.

Aim

Enhancing interoperability, improving understanding and imbibing best practices between both the friendly navies, and would involve advanced surface and anti-submarine warfare exercises, weapon firings, seamanship exercises and helicopter operations.

- RuFN guided missile cruiser *Varyag,* large anti-submarine ship *AdmiralPanteleyev* and medium ocean tanker *Pechenga.*
- *IN*is being represented by indigenously constructed guided missile frigate *Shivalik* and anti-submarine corvette*Kadmatt*alongwith integral helicopters.

PASSEXs

- This exercise is conducted regularly by *IN* with units of friendly foreign navies, whilst visiting each other's ports or during a rendezvous at sea.
- It is being conducted in the Eastern Indian Ocean Region, reflects the strong long-term strategic relationship between the two countries and particularly, defence cooperation in the maritime domain.
- This exercise is being **conducted on the occasion of 'Navy Day' of the IN on 4th December**, which emphasizes the strong bonds of friendship shared between the two friendly militaries.
- This PASSEX would be another step towards strengthening Indo-Russian defence relations.

Indian Defence Industry Global Outreach

In news

A webinar between India and Brazil was recently held for defence industry global outreach.

Theme

Indian Defence Industry Global Outreach for Collaborative Partnership: Webinar and Expo

Participants

High Commissioners of both the countries, Secretary SEPROD Brazil and senior MoD officials from both side participated in the webinar and spoke about multifaceted relationship and strategic partnership between two countries.

Highlights

- This webinar is a part of the series of webinars which are being organized with friendly foreign countries in order to boost defence exports and achieve defence export target of $5 billion in the next five years.
- The new year 2021 appears promising for India – Brazil defence cooperation as many MoUs and JVs are likely to show results.
- The webinar was attended by more than 150 delegates and more than 100 virtual exhibition stalls from Indian companies were setup in the Expo.

Quantum Communication between two DRDO Laboratories

Context

Secure communications are vital for defence and strategic agencies world over and distribution of encryption keys from time to time is an important requirement in this context.

Sharing of keys over the air or wired links requires encryption, which in turn requires encryption keys to be pre-shared. Quantum based communication offers a robust solution to sharing the keys securely

In news

Defence Research & Development Organisation (DRDO) undertook the project for development of this technology

Quantum based communication

- DRDO developed Quantum Key Distribution (QKD) technology underwent trials in Hyderabad between two DRDO labs, DRDL and RCI, to show secure communication.
- The technology is developed by CAIR, Bengaluru and DYSL-QT, Mumbai.
- The setup demonstrated the validation of detection of a third party trying to gain knowledge of the communication.
- Quantum based security against eavesdropping was validated for the deployed system at over 12kms range and 10dB attenuation over fibre optic channel.

Functioning

- Continuous wave laser source was used to generate photons without depolarization effect. The timing accuracy employed in the setup was of the order of picoseconds.
- The Single photon avalanche detector (SPAD) recorded arrival of photons and key rate was achieved in the range of kbps with low Quantum bit error rate.
- Software was developed for data acquisition, time synchronization, post-processing, determining Quantum bit error rate and extracting other important parameters.

Significance

- The work being done at DRDO will be used to enable start-ups and SMEs in the domain of Quantum information technologies.
- It will also serve to define standards and crypto policies that can leverage QKD system in a unified Cipher Policy Committee (CPC) framework for more secure and pragmatic key management for current and future military cryptographic systems.

2nd PROJECT 17A SHIP 'HIMGIRI'

In news

Himgiri', the first of the three Project 17A ships being built at M/s Garden Reach Shipbuilders and Engineers Limited (GRSE), Kolkata was launched

Project 17A

- Under the Project 17A program, a total of seven ships, four at Mazagon Dock Shipbuilders Limited (MDL) and three ships at GRSE are being built with enhanced stealth features, advanced indigenous weapon and sensor fit along with several other improvements.
- Since its inception, Project 17A has upheld India's vision for Atmanirbhar Bharat.
- Project 17A ships are sourcing 80% of the material/ equipment required for the project from indigenous vendors and with employment generation for over 2000 Indian firms and MSMEs within the country.
- P17A ships are the first gas turbine propulsion and largest combat platforms ever built at GRSE, which has emerged as a leading shipyard having built over 100 ships.
- The construction is being done in two locations, Mumbai based MDL (four) and Kolkota based GRSE (three ships) concurrently.

Significance

The launch symbolizes the birth of the ship as she makes her first contact with water and it is done in true maritime traditions — with the application of vermillion, breaking of coconut on the ship's bow and the chanting of Vedic mantras.

Indian Ocean Naval Symposium

In news

The 5th meeting of the Indian Ocean Naval Symposium (IONS) Working Group on Humanitarian Assistance and Disaster Relief (HADR) is scheduled on 17 December 2020

Highlights

- 5th meeting of IWG on HADR has been scheduled through video conference due to covid 19
- The meeting is being coordinated by Indian Navy being the Chair of the IONS Working Group on HADR.
- The meeting will be *attended by Australia, Bangladesh, France, Indonesia, Iran, Kenya, Maldives, Oman and Thailand besides India.*
- The IONS is a voluntary and inclusive initiative that brings together navies of Indian Ocean Region littoral states to increase maritime co-operation and enhance regional security.
- In the past few years, three IONS Working Groups (IWG) have been progressing work in the fields of Humanitarian Assistance & Disaster Relief and Maritime Security & Information Sharing and Inter-operability.

Indian Ocean Naval Symposium

- The Indian Ocean Naval Symposium (IONS) are a series of biennial meetings among the littoral states of the Indian Ocean region.
- It provides a forum to increase maritime security cooperation, providing a forum for discussion of regional maritime issues and promote friendly relationships among the member nations.
- The IONS a regional forum of Indian Ocean littoral states, represented by their Navy chiefs, was initiated and launched by India in February 2008.

Successful Maiden Launch of MRSAM

In news

Defence Research and Development Organisation (DRDO) achieved a major milestone today with the maiden launch of Medium Range Surface to Air Missile (MRSAM), Army Version from Integrated Test Range, Chandipur, off the Coast of Odisha around 1600 hrs.

Details

- The missile completely destroyed a high speed unmanned aerial target which was mimicking an aircraft with a direct hit.
- Army version of MRSAM is a surface to Air Missile developed jointly by DRDO, India and IAI, Israel for use of the Indian Army.
- MRSAM Army weapon system comprises of Command post, Multi-Function Radar and Mobile Launcher system.
- The complete Fire Unit has been used during the launch in the deliverable configuration.
- Number of range instruments such as Radar, Telemetry and Electro-Optical Tracking System

were deployed and captured the complete mission data, validating the weapon system performance including the destruction of the target.

SAHAYAK-NG

In news

Defence Research and Development Organisation (DRDO) along with Indian Navy conducted the successful maiden test trial of **'SAHAYAK-NG'**

Highlights

- India's first indigenously designed and developed Air Dropped Container from IL 38SD aircraft (Indian Navy) off the coast of Goa.
- The trial was conducted by Indian Navy to enhance its operational logistics capabilities and provide critical engineering stores to ships which are deployed more than 2000 km from the coast.
- It reduces the requirement of ships to come close to the coast to collect spares and stores.
- SAHAYAK-NG container was developed by two DRDO laboratories i.e. NSTL, Visakhapatnam and ADRDE, Agra along with Avantel for GPS integration.
- According to the ministry, *SAHAYAK-NG is an advanced version of SAHAYAK Mk I.*
- The newly developed GPS aided air dropped container is having the capability to carry a payload that weighs up to 50 kg and can be dropped from heavy aircraft.

Indian Air Force to get 83 Tejas fighter jets

In news

After securing French multirole fighter aircraft Rafale, the Indian Air Force (IAF) will soon get 83 indigenously designed Tejas LCA (Light Combat Aircraft) fighter jets and 10 trainer aircraft.

Highlights

- The LCA-Tejas is going to be the backbone of the IAF fighter fleet in years to come.
- The Tejas Mk-1A Light Combat Aircraft (LCA) is a made in India fourth-generation fighter aircraft with critical operational capabilities that include active electronically-scanned array (AESA) radar, an electronic warfare (EW) suite, and is capable of air-to-air refueling (AAR).
- The Tejas single-seat, single-engine, lightweight, high-agility supersonic fighter aircraft manufactured by Hindustan Aeronautics Limited (HAL) entered service with the Indian Air Force (IAF) in July 2016.

- The aircraft's design and development programme was led by the Aeronautical Development Agency (ADA) of the Indian Department of Defence, with Hindustan Aeronautics Limited (HAL) as the prime industrial contractor.

India's First Indigenously Developed 9mm Machine Pistol

In news

India's first indigenous 9mm Machine Pistol has been jointly developed by DRDO and Indian Army

Highlights

- The Machine Pistol fires the in-service 9mm ammunition and sports an upper receiver made from aircraft grade Aluminium and lower receiver from carbon fibre.
- 3D Printing process has been used in designing and prototyping of various parts including trigger components made by metal 3D printing.
- The weapon has huge potential in Armed forces as personal weapon for heavy weapon detachments, commanders, tank and aircraft crews, drivers/dispatch riders, radio/radar operators, Closed Quarter Battle, counter insurgency and counter terrorism operations etc.
- The Machine Pistol is likely to have production cost under rupees 50000 each and has potential for exports.
- The weapon is aptly named *"Asmi"* meaning "Pride", "Self-Respect" & *"Hard Work".*

Indian Army To Get Made-In-India Drones

In news

Indian Army signs USD 20 million contract with ideaForge to procure SWITCH drones (unmanned aerial vehicles (UAVs)

Highlights

- The contract marks a strategic shift in the Indian defence procurement process as the Indian Army goes on an aggressive modernization drive.
- It has also cemented ideaForge's position as India's largest manufacturer of drones for defence, homeland security and industrial applications.
- This fixed-wing UAV, capable of vertical takeoff and landing, can be deployed at high altitude and harsh environments for day-and-night surveillance.
- A high-altitude variant of ideaForge's SWITCH UAV" will be delivered to the Indian Army over a period of one year.

- SWITCH UAV is an indigenous system built to cater for the most demanding surveillance operations of the Indian Forces
- It is man-portable and has the highest time on target compared to any other UAV in its class.
- SWITCH UAV is the culmination of insights and knowledge we have gained over years of experience in helping the Indian Forces operationalize UAVs in their ranks

Unmanned Aerial Vehicle (UAV)

- It is popularly known as Drone, is an airborne system or an aircraft operated remotely by a human operator or autonomously by an onboard computer.
- UAV based Remote Sensing (UAV-RS) is the new addition to the North Eastern Space Applications Centre (NE-SAC) for large-scale mapping and real time assessment and monitoring activities of various applications.

Application
- Mapping of Landslide Affected Area
- Infested Crop Damage Assessment
- Large Scale Mapping of Nongpoh Town of Meghalaya
- 3-Dimensioinal Terrain Model Construction

Aero India-21 Review

In news
Aero India 2021 is a keenly anticipated event which is now being conducted as a Business event from 03Rdto 05th February 2021

Highlights
- This three day event is unique as it will be the World's first Hybrid exhibition wherein the Business element of the event will be both physical as well as virtual.
- Aero India-21 is now being held simultaneously as a Physical Exhibition and a Virtual Exhibition with Stalls being provided in both the physical and virtual realms which will result in greater engagement and the exhibitors will experience a greater outreach catering to those who could not join the event physically.
- Aero India-21 mobile app was also launched which will be the handy interactive interface for all issues related to the event and promises to provide a hassle free entry to the venue.
- Aero India being one of the Major International Aerospace and Defence (A&D) exhibitions,

requires active participation, shared responsibility and synchronised efforts at all levels.

Aero India Show

- Aero India exhibition is organized every alternate year. It is one of the major exhibition for aerospace and defence industries with a public air show.
- It enables industry professional to gain market insights, announce new developments and gain media coverage. Aero India offers a unique platform to international aviation sector to bolster business.
- Aero India 2021 is the 13 th edition of Aero India being organised at Bengaluru, Karnataka from 03 - 05 February 2021.
- Aero India 2021 provides opportunity to demonstrate products to the potential customer and investors.
- In Aero India 2021 Exhibitors are likely to showcase their products using latest technologies to the potential customers.
- This is an important international event likely to be attended by thousands of business visitors and lakh general visitors.

Indo-French Exercise Desert Knight-21

In news
Indian Air Force and French Air and Space Force (Armée de l'Air et de l'Espace) will conduct a bilateral Air exercise, Ex Desert Knight-21 at Air Force Station Jodhpur from 20 to 24 Jan 21

Participants
- French side will participate with Rafale, Airbus A-330 Multi-Role Tanker Transport (MRTT), A-400M Tactical Transport aircraft and approximately 175 personnel.
- The Indian Air Force aircraft participating in the exercise will include Mirage 2000, Su-30 MKI, Rafale, IL-78 Flight Refuelling Aircraft, AWACS and AEW&C aircraft.

Highlights

- The exercise marks an important milestone in the series of engagements between the two Air forces. As part of Indo-French defence cooperation
- Indian Air Force and French Air and Space Force have held six editions of Air Exercises named 'Garuda', the latest being in 2019 at Air Force Base Mont-de-Marsan, France.

- As measures to further the existing cooperation, the two forces have been gainfully utilising available opportunities to conduct 'hop-exercises'.
- The exercise is unique as it includes fielding of Rafale aircraft by both sides and is indicative of the growing interaction between the two premier Air Forces.

Exercise Kavach

In news

The three wings of the Indian armed forces will be holding a massive joint military exercise 'Excercise Kavach' next week, the defence ministry said.

Highlights

- It will be conducted under the aegis of the Andaman and Nicobar Command (ANC), the only Joint Forces Command of the country.
- The exercise would involve participation and deployment of elements of Army's Amphibious Brigade along with supporting forces including Special Forces of Navy, Armour/Mechanised components, Naval Ships comprising Destroyers, ASW Corvettes and Landing Ships withship-bornehelicopters of Eastern Naval Command and ANC, Jaguar Maritime Strike and Transport aircrafts from Indian Air Force and assets of Coast Guard.
- The exercise involves synergised application of maritime surveillance assets, coordinated air and maritime strikes, air defence, submarine and landing operations.
- The tri-services exercise involves synergised application of maritime surveillance assets, coordinated air and maritime strikes, air defence, submarine and landing operations.
- The ISR exercise will validate the capabilities of intelligence gathering from space, air, land and sea-based assets/ sensors, its analysis and sharing to achieve battle field transparency for quick decision making at different stages of operations,

Smart Anti Airfield Weapon from Hawk-i aircraft

In news

DRDO successfully conducted captive and release trial of indigenously developed Smart Anti-Airfield Weapon (SAAW) from Hawk-i aircraft of Hindustan Aeronautics Limited (HAL) off the Odisha coast

Smart Anti-Airfield Weapon (SAAW)

- The DRDO Smart Anti-Airfield Weapon (SAAW) is a long-range precision-guided anti-airfield weapon

currently developed by India's Defence Research and Development Organisation (DRDO).
- It is designed to be capable of engaging ground targets with high precision up to a range of 100 kilometres (62 mi).
- The SAAW project was approved by the Government of India in 2013.
- The first successful test of the weapon was conducted in May 2016. Another successful test was conducted in November of the following year.
- This was followed by a series of three successful tests in December 2017.
- Between 16 and 18 August 2018, three successful tests were conducted, which brought the total number of tests to eight.
- In September 2020, the SAAW was approved for procurement by the Indian government for the Navy and the Air Force.

Hawk aircraft**It is a tandem seat aircraft developed by HAL. The aircraft has an integrated attack system and radio and inertial navigation system. It is spin resistant.**

Successful Maiden Test Launch of Akash-NG Missile

In news

DRDO conducted the successful maiden launch of Akash-NG (New Generation) Missile from Integrated Test Range off the coast of Odisha on 25 January 2021

Highlights

- Akash-NG is a new generation Surface to Air Missile meant for use by Indian Air Force with an aim of intercepting high maneuvering low RCS aerial threats.
- The missile intercepted the target with text book precision. The launch met all the test objectives by performing high maneuvers during the trajectory.
- The performance of the Command and Control system, onboard avionics and aerodynamic configuration of the missile was successfully validated during the trial.
- During the test launch, entire flight path of the missile was monitored and the flight data was captured by various Range instruments such as Radar, EOTS and Telemetry systems deployed by ITR, Chandipur.
- The Multi Function Radar was tested for its capability of integration with the system.
- The Akash-NG system has been developed with better deployability compared to other similar systems with canisterized launcher and much smaller ground system footprint.
- The test launch was carried out by a combined team of DRDO, BDL & BEL in the presence of the representatives of Indian Airforce.

Joint Military Exercise in Andaman Sea

In news
Indian Armed Forces conducted a large-scale conjoint military training exercise "KAVACH" alongwith "AMPHEX-21" in the Andaman Sea and Bay of Bengal

Aim
To validate air dominance and maritime strike capability within the area of interest in Indian Ocean Region (IOR). Prior to amphibious landing operations, troops of the Army, Navy and Air Force were mobilised and transported by sea and air in close coordination with all agencies.

Highlights
- The exercise was conducted under the aegis of Andaman and Nicobar Command (ANC) with participation of Eastern Naval Command (ENC) and Army Southern Command (SC) involving assets of Army, Navy, Air Force and Coast Guard.
- The exercise involved participation and deployment of all forces of ANC, elements of Amphibious Brigade of Army's Southern Command along with corvettes, submarine and amphibious landing ships of Navy's Eastern Fleet and Marine Commandos.
- Jaguar Maritime Strike and transport aircraft from Indian Air Force and assets of Coast Guard also participated.

SAMPRITI - IX

In news
A joint military training exercise between India and Bangladesh 'SAMPRITI-IX' will be conducted at Umroi, Meghalaya from 3rd-16th february, 2020.
- The exercise is **hosted alternately by both countries.**
- The **eighth edition** of the exercise was conducted at **Tangail, Bangladesh.**

Objective
- The purpose of this exercise is to strengthen and broaden the interoperability and cooperation between the Indian and Bangladesh's armies.
- Another objective of this exercise is to strengthen and expand the aspects of mutual cooperation between both armies.
- The exercise will comprise strategic level action to deal with terrorism and terrorist attacks.
- This exercise will also create a strong military partnership and military trust between the two countries.

Aero India 2021

In news
Aero India 2021 is the 13 th edition of Aero India being organised at Bengaluru, Karnataka from 03 - 05 February 2021.

Aero India
- Aero India exhibition is organized every alternate year.
- It is one of the major exhibition for aerospace and defence industries with a public air show.
- It enables industry professional to gain market insights, announce new developments and gain media coverage. Aero India offers a unique platform to international aviation sector to bolster business.

Highlights of 2021
- Aero India 2021 provides opportunity to demonstrate products to the potential customer and investors In
- Aero India 2021 Exhibitors are likely to showcase their products using latest technologies to the potential customers.
- This is an important international event likely to be attended by thousands of business visitors and lakh general visitors.

This edition will see a combination of both physical and virtual exhibition with 601 exhibitors, including 523 from India and 78 from 14 foreign countries, expected to participate in the event.

Aatmanirbhar formation flight
- A unique flying display of HAL titled *'Aatmanirbhar Formation Flight'* will comprise of HAL products such as LCA trainer (LIFT Trainer), HTT-40, IJT, Advanced Hawk Mk 132 and Civil Do-228 that will fly in a special formation.
- HAL's HALL-E will be the major attraction of the event and will have the Combat Air Teaming System (CATS) simulator with TEJAS–MAX cockpit as the mother-ship platform.

Joint Maritime Exercise

Context
Indian Navy conducts/participates in bilateral/multilateral maritime exercises and coordinated patrols (CORPATS) with friendly foreign countries on a regular basis.

Aim
The aim and objective of these exercises include providing operational exposure to our Naval forces, enhance interoperability and undertake mutual exchange of best

practices, special operations tactics and to develop cooperation among the armed forces of participating nations etc.

Details

- In this process the current tactical and technological practices/techniques etc., are exchanged during such exercises.
- The conduct and planning of such exercises is a continuous process.
- The countries with which joint military exercise are proposed to be conducted during the coming year include most of the above countries, and these exercises are under the stage of discussions with respective countries.

Light Utility Helicopter (LUH)

In news

The Light Utility Helicopter (LUH) received the Initial Operational Clearance (IOC) for the Indian Army from Centre for Military Airworthiness and Certification (CEMILAC) during the ongoing Aero India 2021 at Air Force Station Yehalanka, Bengaluru on February 05, 202

Highlights

- The LUH is a three-ton class new generation single engine helicopter indigenously designed and developed by Rotary Wing Research and Design Centre of HAL with features suitable for operations in the diverse operating conditions unique to India.
- The LUH will replace the ageing fleet of Cheetah/Chetak helicopters operated by the Services.
- The LUH is powered by a single turbo shaft engine Ardiden 1U from M/s. Safran Helicopter Engine (SHE), France with adequate power margins to accomplish high altitude missions in Himalayas with ease.
- LUH is equipped with Smart Cockpit Display System (Glass Cockpit), state-of-the-art HUMS (Health & Usage Monitoring System) and is designed for various utility and armed roles.
- All certification activities like Ground testing, Ground Test Vehicle endurance runs, system testing, Flight testing including hot weather trials, cold weather trials, sea level trials and hot weather high altitude trials have been completed.
- Based on the flight trials carried out, all PJSQR requirements for basic helicopter certification

iDEX – Start-up Manthan

In news

iDEX4Fauji as an initiative providing opportunities to innovate to the Indian Armed Forces

Aim of iDEX4Fauji

To create corporate models for Indian Defence needs and allow the defence sector to harness start-ups.

Highlights

- Since its launch, iDEX has emerged as a national scale ecosystem bringing together military users and operators with start-ups, innovators and entrepreneurs.
- The event provided a unique opportunity to firms associated with DIO-iDEX to showcase capabilities, products and services to industry leaders and business decision makers.
- iDEX4Fauji opens up a new window allowing Indian soldiers and service personnel to be recognised and rewarded as innovators.
- The initiative creates opportunities for innovators to propose ways to harness technological capabilities and strengthen our nation's military capability.
- iDEX had been designed to infuse the latest technology into military warfare closely intertwined with the needs of services and to reduce dependence on imports.
- The iDEX was launched by the Prime Minister Shri Narendra Modi in April 2018 with the core aim to create corporate models for Indian Defence needs and allow the defence sector to harness start-ups.

Malabar Navy Exercise

In news

For the first time in over a decade, the exercise will see the participation of all four Quad countries

Highlights

- The Malabar series of exercises began as an annual bilateral naval exercise between India and the US in 1992. Japan joined the Naval Exercises in 2015.
- Malabar 2020 saw the participation of the Australian Navy also.
- The Malabar Naval exercises enhanced synergy, interoperability and coordination between the four country navies.
- The exercises highlight the convergence of views among the participating countries on maritime issues and their shared commitment to an open,

- inclusive Indo-Pacific and a rules-based international order.
- The 24th edition of Malabar maritime exercise, hosted by Indian Navy in 2020, witnessed the participation by Indian Navy, United States Navy, Japan Maritime Self Defence Force and Royal Australian Navy.

What is the difference this year?
- India seeks to increase cooperation with other countries in the maritime security domain and in the light of increased defence cooperation with Australia, Malabar 2020 will see the participation of the Australian Navy".
- This will be the second time Australia will participate.
- In 2007, there were two Malabar Exercises.
- The first was held off Okinawa island of Japan in the Western Pacific — the first time the exercise was held away from Indian shores — and the second in September 2007, off Visakhapatnam, with the Indian, Japanese, US, Australian and Singapore navies.

TROPEX 21

In news
Indian Navy's largest war game – the biennial Theatre Level Operational Readiness Exercise (TROPEX 21) - which commenced in early January, is currently underway with participation of all operational units of Indian Navy including ships, submarines, aircraft as well as units of the Indian Army, Indian Air Force and Coast Guard

Aim
- Testing combat readiness of the Navy in a complex multi-dimensional scenario set in the context of the current geo strategic environment.
- The Theatre Level exercise also aims to validate Navy's offensive-defence capabilities, safeguard national interests in the maritime domain and promote stability and peace in the Indian Ocean Region.

Detail
- Exercise Sea Vigil was followed by a large-scale Tri-Service joint amphibious exercise AMPHEX-21, which was conducted in the Andaman and Nicobar group of Islands from 21-25 January.
- The amphibious exercise was aimed at validating India's capabilities to safeguard the territorial integrity of its Island territories and enhance operational synergy and joint warfighting capabilities amongst the three Services.

- The Weapon Workup Phase of TROPEX, which concluded recently, witnessed multiple 'on-target' ordnance deliveries including missiles, torpedoes and rockets from frontline warships, aircraft and submarines and demonstrated the lethal firepower of the Indian Navy and reaffirm the Navy's capability to carry out long range maritime strikes in the Indian Ocean Region, a capability that is central to meeting operational challenges and ensuring safe seas and secure coasts.

2nd MARITIME INDIA SUMMIT- 2021

In news
24 countries set to participate in the 2nd MARITIME INDIA SUMMIT- 2021 which starts from 2nd March

Highlights
- The event is being organised by the Ministry of Ports, Shipping and Waterways (MoPSW) jointly with FICCI as Industrial Partner and EY as Knowledge Partner.
- The MIS 2021 will provide a unique platform which will have physical and virtual presence of prominent shipping and transport ministers/ dignitaries from across the world.
- Maritime States of India will participate in the Summit through dedicated sessions. The Summit will also include an exclusive CEOs' forum and various thematic/ breakout sessions.

Significance
- The Maritime India Summit-2021 will provide a unique platform that will have the virtual and physical presence of prominent shipping and transport dignitaries/ministers from all over the world.
- The maritime states of India will also be participating in the summit through the dedicated sessions. The summit will include an exclusive CEOs forum and various breakout/thematic sessions.
- The event will see the participation of 20,000 delegates as well as 24 partner countries who will join the two-day event. More than 400 projects will also be showcased in the Maritime India Summit-2021

APEDA upgrades the GrapeNet

In news
In a bid to ensure cyber security protection for its traceability initiative, APEDA has adopted next generation Blockchain and Cloud migration enabled GrapeNet System

Grapenet

The GrapeNet is a web based certification and traceability software system for monitoring fresh grapes exported from India to the European Union.

Significance

- It will ensure a secured, scalable and cost effective interface for all the stakeholders in the exports value chain.
- The Blockchain will help track all the activities and steps involved in the grapes lifecycle process, right from the allocation of the farms for production of the grapes to the point of grapes being delivered to the customers.
- It will keep a record of all the processes involved which can be traced by the customers at the end of the chain to validate the authenticity of the grapes being provided to them.
- The traceability of the grapes can be done from any level.
- The chain of the process flow will be able to be retrieved to determine also if all the processes have been followed.

Software Defined Radio

Context

- Communication is vital and critical to all military operations.
- The Combat Net Radio (CNR) is the mainstay of communications for the Indian Army in the battlefield.
- The contemporary CNR equipment in the Indian Army supports voice communication only and has limited or no data transmission capability.

In news

Present radios are to be replaced soon by indigenously developed Software Defined Radio (SDR) in Indian Army

Why?

To arm the soldiers with advantages offered by technology and equip him to fight a war in the Net–Centric battle space.

Highlights

- Software Defined Radio (SDR) has enhanced data transmission capability, enhanced voice clarity and data transmission accuracy in spectrally noisy environments, support multiple waveforms, greater system security and better communication survivability in clear and secure mode to meet the operational requirements of the Indian Army.

- Development of V/UHF Manpack SDR under Make-II will be a game changer for Indian Army.
- It is in sync with the "Aatmanirbhar Bharat" policy of the Government which will lead to "Self Reliance" in advanced communication systems.

Indian Navy Ship to participate in NAVDEX 21 and IDEX 21

In news

Indian Naval Ship Pralaya arrived at Abu Dhabi, UAE to participate in the NAVDEX 21 (Naval Defence Exhibition) and IDEX 21 (International Defence Exhibition), scheduled from 20 to 25 February 2021

Details of the ship

- INS *Pralaya*, the second ship of the indigenously built *Prabal* Class Missile Vessels, was commissioned in the Indian Navy on 18 December 2002.
- The 56 m long ship, displacing about 560 T is capable of speeds in excess of 35 knots and is fitted with an impressive array of weapons and sensors.
- These include a 76.2 mm medium range gun, 30 mm close range guns, chaff launchers and long range surface to surface missiles.
- The ship, built indigenously at Goa Shipyard Limited, bears testimony to capabilities of the Indian ship building industry and is a versatile platform capable of performing a wide variety of surface warfare missions.

Significance

- Participation of INS *Pralaya* in NAVDEX 21 and IDEX 21, one of the leading international naval and defence exhibitions of the region, is aimed at showcasing the strengths of India's indigenous ship building, in line with Hon'ble Prime Minister's vision of 'AtmaNirbhar Bharat'.
- In addition, participation of an Indian Navy Ship in NAVDEX 21 and IDEX 21 also highlights close relations between India and UAE.

Anti-Tank Guided Missile Systems 'Helina' and 'Dhruvastra'

In news

Joint User Trials for Helina (Army Version) and Dhruvastra (Air Force Version) Missile Systemshave been carried out from Advanced Light Helicopter (ALH) platform in desert ranges.

- The missile systems have been designed and developed indigenously by Defence Research and Development Organisation (DRDO).
- Five missions were carried out for evaluating the missile capabilities in minimum and maximum range.
- The missiles were fired in hover and max forward flight against realistic static and moving targets. Some missions were carried out with warheads against derelict tanks.
- The Helinaand Dhruvastra are third generation, Lock on Before Launch (LOBL) fire and forget Anti-Tank Guided Missiles that can engage targets both in direct hit mode as well as top attack mode.
- The system has all-weather day and night capability and can defeat battle tanks with conventional armour as well as with explosive reactive armour.
- It is one of the most-advanced anti-tank weapons in the world.

VL-SRSAM Missile System

In news

Defence Research & Development Organisation (DRDO) conducted two successful launches of Vertical Launch Short Range Surface to Air Missile (VL-SRSAM)

Details

- The launches were carried out today from a static vertical launcher from Integrated Test Range (ITR), Chandipur off the coast of Odisha.
- Indigenously designed and developed by DRDO for Indian Navy, VL-SRSAM is meant for neutralizing various aerial threats at close ranges including sea-skimming targets.
- The current launches were carried out for demonstration of vertical launch capability as part of its maiden launch campaign.
- The launches were monitored by senior scientists from various DRDO labs involved in the design and development of the system such as DRDL, RCI, Hyderabad and R&D Engineers, Pune.
- The present trials have proved the effectiveness of the weapon system and few more trials will be conducted shortly before deployment on Indian Naval ships.
- Once deployed, the VL-SRSAM system will prove to be a force multiplier for the Indian Navy.

24th India-USA Executive Steering Group (ESG) Meeting

In news

The 24th edition of the India-USA Executive Steering Group (ESG) meeting was held at New Delhi from 22 to 24 Feb 2021.

Aim

It aims to discuss Army to Army cooperation on issues of mutual interests.

Discussion

- A number of contemporary issues of mutual interests where discussed with an aim to enhance the engagements in diverse fields, the statement said.
- Relevant issues of defence cooperation and common subjects of interest where discussed between both sides during the meet

ECOLOGY AND ENVIRONMENT

State Energy Efficiency Index 2019

In news

State Energy Efficiency Index 2019 was released which tracks the progress of Energy Efficiency (EE) initiatives in 36 states and union territories based on 97 significant indicators.

Highlights

- Haryana, Karnataka and Kerala have topped the State Energy Efficiency Index 2019.
- Manipur, Jammu & Kashmir, Jharkhand and Rajasthan perform worst in their groups

Energy Efficiency Index

- The index was released on the occasion of RPM (Review, Planning and Monitoring) meeting, which is being held on 09-10 Jan 2020 at PravasiBharatiya Kendra, New Delhi.
- The index is developed by Bureau of Energy Efficiency (BEE) in association with Alliance for an Energy Efficient Economy (AEEE).
- The first such Index, the "State Energy Efficiency Preparedness Index 2018", was launched on August 1, 2018.
- It incorporates qualitative, quantitative and outcome-based indicators to assess energy efficiency initiatives, programs and outcomes in five distinct sectors – buildings, industry,

municipalities, transport, agriculture, and DISCOMs.

Bureau of Energy Efficiency (BEE)

- It is a statutory body under the Ministry of Power, created under the provisions of the **Energy Conservation Act 2001.**
- It assists in developing policies and strategies with the primary objective of reducing the energy intensity of the Indian economy.
- It co-ordinates with designated consumers and designated agencies to identify and utilize the existing resources and infrastructure, in performing the functions assigned to it under the Energy Conservation Act.

13th Conference of Parties(COP) of the Convention on the conservation of migratory species of wild animals(CMS)

In news

Gandhinagar in Gujarat will be hosting the 13th Conference of Parties (COP) of the Convention on the conservation of migratory species of wild animals (CMS), an environmental treaty under the aegis of United Nations Environment Programme

COP of CMS

- India has been a Party to the CMS since 1983.
- The Conference of Parties (COP) is the decision-making organ of this convention.
- The theme of CMS COP13 in India is, "Migratory species connect the planet and we welcome them home".
- "The CMS COP 13 logo is inspired by 'Kolam', a traditional artform from southern India.
- In the logo of CMS COP-13, Kolam art form is used to depict key migratory species in India like Amur falcon, humpback whale and marine turtles.
- The mascot for CMS COP13, "Gibi - The Great Indian Bustard" is a critically endangered species which has been accorded the highest protection status under the Wildlife Protection Act, 1972.

India shall be designated as the Presidency during the inter-sessional period following the meeting.

The COP Presidency is tasked to provide political leadership and facilitate positive outcomes that further advance the objectives of the Convention, including steering efforts towards implementing the Resolutions and Decisions adopted by the Conference of Parties.

Incois launches three ocean-based services

In news

The Indian National Centre for Ocean Information Services (Incois), Hyderabad, has launched three ocean-based specialised products/services

- The Small Vessel Advisory and Forecast Services System (SVAS)
- The Swell Surge Forecast System (SSFS)
- Algal Bloom Information Service (ABIS).

Small Vessel Advisory and Forecast Services System (SVAS)

- TheSmall Vessel Advisory and Forecast Services System (SVA) is an innovative impact-based advisory and forecast service system for small vessels operating in Indian coastal waters.
- The SVA system warns users about potential zones where vessel overturning can take place, ten days in advance.
- The advisories are valid for small vessels of beam width up to 7 m.
- This limit covers the entire range of beam widths of the fishing vessels used in all the 9 coastal states and union territories of India.
- The warning system is based on the 'Boat Safety Index' (BSI) derived from wave model forecast outputs such as significant wave height, wave steepness, directional spread and the rapid development of wind at sea which is boat-specific.

Swell Surge Forecast System

- Swell surge forecast system is an innovative system designed for the prediction of Kallakkadal/Swell Surge that occurs along the Indian coast, particularly the west coast.
- Kallakadal/Swell surge are flash-flood events that take place without any noticeable advance change in local winds or any other apparent signature in the coastal environment.
- The local population remains totally unaware of these flooding events until they actually occur.
- Kallakkadal is a colloquial term used by Kerala fishermen to refer to the freaky flooding episodes and in 2012 UNESCO formally accepted this term for scientific use.
- The system will now predict Kallakkadal and warnings will be given to concerned authorities at least 2-3 days in advance, which will help the local authorities for contingency plans and to reduce damage.

Algal Bloom Information Service (ABIS)

- The increasing frequency of algal blooms is a major concern due to its ill effects on fishery, marine life and water quality.
- INCOIS has developed a service for **"Detection and Monitoring of Bloom in the Indian Seas".**
- The target users are fishermen, marine fishery resource managers, researchers, ecologists and environmentalists.
- The service also complements INCOIS' marine fishing advisories i.e. Potential Fishing Zone advisories.
- Accordingly, relevant data retrieved from satellites i.e. Sea Surface Temperature , chlorophyll-a, Algal Bloom Index - chlorophyll, rolling chlorophyll anomaly, rolling sea surface temperature anomaly, phytoplankton class/species, phytoplankton size class and a composite image delineating bloom and non-bloom regions will be disseminated daily through ABIS.
- In addition, four regions have been identified as bloom hotspots viz. a) North Eastern Arabian Sea b) coastal waters off Kerala c) Gulf of Mannar and d) coastal waters of Gopalpur.

International protection for Great Indian Bustard, Bengal Florican and Asian Elephant

In news

India's proposal to include Great Indian Bustard, Asian Elephant and Bengal Florican in Appendix I of UN Convention on migratory species was unanimously accepted at the ongoing thirteenth Conference of the Parties to the Convention on MigratorySpecies (CMS) in Gandhinagar.

Asian Elephant

- The Government of India has declared Indian elephant as National Heritage Animal. Indian elephant is also provided highest degree of legal protection by listing it in Schedule I of the Wildlife (Protection) Act, 1972.
- Placing Indian elephant in Schedule I of the CMS Convention, will fulfil natural urge of migration of Indian elephant across India's borders and back safely and thereby promote conservation of this endangered species for our future generations.
- It will also help to reduce human elephant conflicts in many parts of its migratory routes.
- The challenges confronting Asian elephant conservation in most elephant Range States are habitat loss and fragmentation, human elephant conflict, and poaching and illegal trade of elephants.

Great Indian Bustard

- The Great Indian Bustard, an iconic, critically endangered and conservation dependent species, exhibits transboundary movements, and its migration exposes it to threats such as hunting in boundary area of Pakistan-India and power-line collisions in India.
- Inclusion of the species in Appendix I of CMS will aide in transboundary conservation efforts facilitated by International conservation bodies and existing international laws and agreement.
- The Great Indian Bustard is a Critically Endangered species with a small population of about 100–150 individuals that is largely restricted to Thar desert in Rajasthan, India.
- The species has disappeared from 90% of this range; their population has reduced by 90% within 50 years (six generations); and their threats are expected to increase in future.

Bengal Florican

- The Bengal Florican an iconic, critically endangered species of topmost conservation priority, exhibits transboundary movements, and its migration exposes it to threats such as land use changes, collision with power transmission line at boundary area of India-Nepal and probable power-line collisions.
- Populations have declined as a result of habitat loss, hunting and the species no longer breeds outside Protected Areas in the Indian subcontinent, except in a few areas of Assam.

Groundwater affects Himalayan slip and climate as the mountains dance to its tune

In news

Researchers from Indian Institute of Geomagnetism (IIG), an autonomous institute under the Department of Science & Technology, have found the mighty Himalayas subside and move up depending on the seasonal changes in groundwater.

The study

The researchers have made the **combined use of Global Positioning System(GPS) and Gravity Recovery And Climate Experiment (GRACE) data**, which has made it possible for them to quantify the variations of hydrologic mass.

Findings of the study

- The Himalayan foothills and the Indo-Gangetic plain are sinking because its contiguous areas are rising due to tectonic activity associated with landmass movement or continental drift.

- The new study shows that subsidence and uplift are found to be associated with seasonal changes in groundwater, apart from the normal, common reasons.
- Water acts as a lubricating agent, and hence when there is water in the dry season, the rate of slip of the fault in this region is reduced.
- In the Himalaya, seasonal water from glaciers, as well as monsoon precipitation, plays a key role in the deformation of the crust and the seismicity associated with it.
- The subsidence rate is associated with groundwater consumption.
- It was revealed that the combined GPS and GRACE data suggest a 12% reduction in the rate of the subsurface slip.
- **This slip refers to how fast the fault is slipping relative to the foot and hanging wall.**
- The slip occurs at the Main Himalayan Thrust (MHT), due to hydrological variations and human activities, over which there is the periodic release of accumulated strain.

GRACE Mission
- The Gravity Recovery and Climate Experiment (GRACE) was a joint mission of NASA and the German Aerospace Center.
- Twin satellites took detailed measurements of Earth's gravity field anomalies from its launch in March 2002.
- By measuring gravity anomalies, GRACE showed how mass is distributed around the planet and how it varies over time.
- Data from the GRACE satellites is an important tool for studying Earth's ocean, geology, and climate.

Coal Bed Methane

In news
The Ministry of Petroleum and Natural Gas has brought out following policies/notifications after Coal Bed Methane (CBM) Policy 1997

What is coalbed methane (CBM)?
- CBM, like shale gas, is extracted from what are known as unconventional gas reservoirs — where gas is extracted directly from the rock that is the source of the gas (shale in case of shale gas and coal in case of CBM).
- The methane is held underground within the coal and is extracted by drilling into the coal seam and removing the groundwater. The resulting drop in

pressure causes the methane to be released from the coal.
- According to the Directorate General of Hydrocarbons, Ministry of Petroleum and Natural Gas, India's CBM resources are estimated at around 92 trillion cubic feet (TCF), or 2,600 billion cubic metres (BCM).
- ***The country's coal and CBM reserves are found in 12 states of India, with the Gondwana sediments of eastern India holding the bulk.***

Application
- In Power generation.
- As Compressed natural gas (CNG) auto fuel.
- As feedstock for fertilisers.
- Industrial uses such as in cement production, rolling mills, steel plants, and for methanol production.

WIHG reveals 35 thousand-year history of river erosion in Ladakh Himalayas

In news
Scientists and students from Wadia Institute of Himalayan Geology (WIHG), an autonomous institute under the Department of Science &Technology, Govt. of India studied rivers in Ladakh Himalaya, bringing out 35 thousand-year history of river erosion and identified hotspots of erosion and wide valleys that act a buffer zones.

Findings of the Study
- The study showed how rivers in drier Ladakh Himalaya operated in longer time scales and how they responded to varying climate, an understanding of water and sediment routing, which is crucial as the country gears up its infrastructure and develops smart cities.
- The scientists have traced where the rivers draining Himalaya and its foreland erode the most and identify the zones that receive these eroded sediments and fill up.
- The wide valley of Padam, with an area of 48 square km, in the upper Zanskar, has stored a vast amount of sediments in these landforms.
- Most sediments were derived from Higher Himalayan crystalline that lie in the headwater region of Zanskar.
- It was found out that **dominant factors responsible for sediment erosion** were deglaciation and Indian Summer Monsoon derived precipitation in the headwaters despite the presence of a geomorphic barrier (the deep, narrow gorge) between the upper and lower catchments of the river, and it remained connected throughout its aggradation history.

- The Ladakh Himalaya forms a high altitude desert between Greater Himalayan ranges and Karakoram Ranges.
- The Indus and its tributaries are major rivers flowing through the terrain.
- The Zanskar River is one of the largest tributaries of the upper Indus catchment, draining orthogonally through highly deformed Zanskar ranges.
- Two prominent tributaries of Zanskar River are the Doda and TsrapLingti Chu, which confluence at Padam village in the upper valley to form the Zanskar River.

Five initiatives launched on International Day of Biodiversity

In news

In a virtual celebration of the International Day for Biological Diversity 2020, **Union Minister of Environment, Forest andClimate Change**launched **five key initiatives** towards conservation of biodiversity.

Initiatives launched

- The year 2020 which is also the "**SUPER YEAR FOR BIODIVERSITY**", as the Strategic Plan for Biodiversity with 20 global Aichi targets adopted in 2010 ends in 2020 and all the countries together are in the process of preparation of Post-2020 Global Biodiversity Framework.
- Theme for this year - *"OUR SOLUTIONS ARE IN NATURE".*
- The Union Environment Minister launched the **National Biodiversity Authority (NBA)** and **United Nations Development Programme (UNDP) 'Biodiversity Samrakshan Internship Programme** which proposes to engage 20 students with postgraduate degrees for a period of one year through an open, transparent, online competitive process.
- The programme wishes to engage dynamic and creative students, who are willing to learn about natural resource management and biodiversity conservation and to support the projects of NBA in various State and Union Territories and to technically assist the State Biodiversity Boards/UTs Biodiversity Council in discharge of their mandates. an open, transparent, online competitive process.
- The virtual event also saw **the Launch of UNEP Campaign on Illegal Trafficking of Endangered Species**: '**Not all Animals Migrate by Choice'.**

- Illegal trade in wildlife carries the risk of spreading dangerous pandemics.
- **The campaign Not all Animals Migrate by Choice, launched by the Wildlife Crime Control Bureau, with UNEP**, seeks to address these environmental challenges, to raise awareness, and to advocate solutions.
- An awareness campaign supported by WWF to highlight the crucial role played by nature through its free ecological services provided for humankind was also launched during the course of the event.

Urban Forest scheme to develop 200 'Nagar Van'

In news

On the occasion of World Environment Day, the government announced implementation of the **Nagar van scheme** to develop 200 Urban Forests across the country in next five years with a renewed focus on people's participation and collaboration between Forest Department, Municipal bodies, NGOs, Corporates and local citizens.

Nagar Van Scheme

- India is probably the only country where trees are worshipped, where animals, birds and reptiles are worshipped and this is the respect Indian society places for environment.
- We had a very important tradition of village forest since ages, now this new scheme of urban forest will fill up the gap because urban areas have Gardens but very rarely forests; With this activity of creating urban forest we will also create additional carbon sink.
- India has 8 percent of world's biodiversity, despite having many constraint like only 2.5 % of the world's landmass, has to carry 16% of human as well as cattle population and having only 4% of fresh water sources; the mega biodiversity that we have is the result of Indian ethos which is to be in sync with the nature."
- The forest is rich in biodiversity with 23 plant species, 29 bird species, 15 butterfly species, 10 reptiles and 3 mammal species.
- This **Urban Forest project** is now helping maintain ecological balance, serving both environmental and social needs. The Warje Urban Forest(Pune) is now a role model for the rest of the country.

Decarbonising Transport

In news

NITI Aayog in collaboration with **International Transport Forum (ITF)** will launch the "**Decarbonising Transport in**

India" project, with the intention to develop a pathway towards a low-carbon transport system for India.

- The "**Decarbonising Transport in India**" project will design a tailor-made transport emissions assessment framework for India.
- It will provide the government with a detailed understanding of current and future transport activity and the related CO_2 emissions as a basis for their decision-making.
- It will also offer the opportunity to provide inputs regarding India's transport challenges and how they relate to CO_2 reduction ambitions.

About DTEE
- The India project is carried out in the wider context of the International Transport Forum's "Decarbonising Transport" initiative.
- It is part of the "**Decarbonising Transport in Emerging Economies" (DTEE**) family of projects, which supports transport decarbonisation across different world regions.
- India, Argentina, Azerbaijan, and Morocco are current participants.
- **The DTEE** is a collaboration between the ITF and the Wuppertal Institute, supported by the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

About ITF
- **The International Transport Forum (ITF)** is an inter-governmental organisation within **the OECD (Organisation for Economic Co-operation and Development) system.**
- It is the only global body with a mandate for all modes of transport.
- It acts as a think tank for transport policy issues and organises the annual global summit of transport ministers.
- The ITF's motto is "Global dialogue for better transport"

India's Tiger Census (11 July 2020)

In news

The fourth cycle of the **All India Tiger Estimation 2018**, has entered the Guinness World Record for being the world's largest camera trap wildlife survey.

Tiger Census
- India has fulfilled its resolve to double the tiger numbers four years before the target.
- The country now has an estimated 2967 tigers as per the latest census.

- With this number, India is home to nearly 75% of the global tiger population and has already fulfilled its resolve of doubling tiger numbers, made **at St. Petersburg in 2010,** much before the **target year of 2022**.
- India has now firmly established a leadership role in tiger conservation, with its bench marking practices being looked at as a gold standard across the world.

"Mausam"

In news
Ministry of Earth Sciences feels proud to launch the mobile App "**Mausam**" for India Meteorological Department.

About Mausam
Users can access observed weather, forecasts, radar images and be proactively warned of impending weather events.

The MAUSAM mobile App has the following 5 services:
- **Current Weather** -Current temperature, humidity, wind speed and direction for 200 cities updated 8 times a day. Information on Sunrise/ sunset and moonrise/ moonset are also given.
- **Nowcast**- Three hourly warnings of localized weather phenomena and their intensity issued for about 800 stations, and districts of India by State Meteorological Centres of IMD. In case of severe weather, its impact also is included in the warning.
- **City Forecast** – Past 24 hours and 7 day forecast of weather conditions around 450 cities in India.
- **Warnings**- Alerts issued twice a day for all districts for the next five days in colour code (Red, Orange and Yellow) to warn citizens of approaching dangerous weather. The colour code Red is the most severe category urging authorities to take action, Orange code prompts authorities and public to be alert and Yellow code prompts authorities and public to keep themselves updated.
- **Radar products**:Latest Station wise radar products updated every 10 minutes.

India's first of its kind public EV Charging Plaza

In news

With a focus on enhancing energy efficiency and promoting e-mobility, Minister for Power, New & Renewable Energy, inaugurated India's first publicEV(Electric Vehicle) charging plaza at Chelmsford Club in New Delhi.

- EESL is spearheading the EV ecosystem development in India by undertaking demand aggregation for procuring EVs and identifying innovative business models for implementation of Public Charging Station (PCS).
- EESL in collaboration with NDMC has established India's first of its kind public EV Charging Plaza in Central Delhi.
- This plaza will host 5 Electric Vehicle Chargers of different specifications.
- The charging plaza, with its compatibility with a wide range of electric vehicles will greatly spur e-mobility adoption.
- This would make EV charging hassle free and convenient for the consumers, thereby making e-mobility adoption an attractive proposition.

RAISE programme
- It stands for Retrofit of Air-conditioning to improve Indoor Air Quality for Safety and Efficiency" (RAISE) national programme.
- TheRAISE initiative can potentially alleviate the issue of bad air quality in workspaces across the nation and pioneer ways to make them healthier and greener.
- EESL has undertaken a retrofit of its office air-conditioning and ventilation system.
- This is a part of the larger initiative to "**Retrofit of Air-conditioning to improve Indoor air quality for Safety and Efficiency**" developed for healthy and energy efficient buildings, in partnership with **U.S. Agency for International Development's (USAID) MAITREE programme.**
- **It will focus on energy efficiency, promoting e-mobility and improving indoor air quality.**

Source: PIB

World's Largest Solar Tree

In news
CSIR-CMERI has developed the World's Largest Solar Tree, which is installed at CSIR-CMERI Residential Colony

About Solar Tree
- The installed capacity of the Solar Tree is above 11.5 kWp.
- It has the annual capacity to generate 12,000-14,000 units of Clean and Green Power.
- The Solar Tree has been designed in a manner to ensure maximum exposure of each Solar PV Panel to Sunlight and also creation of the least amount of shadow area beneath.

- There are a total of 35 Solar PV Panels in each tree with a capacity of 330 wp each.
- Each Solar Tree has the potential to save 10-12 tons of CO_2 emissions being released into the atmosphere as Greenhouse Gases when compared with fossil fuel fired energy generation.
- The solar tree has the capability to incorporate IOT based features, i.e. round-the-clock CCTV surveillance in agricultural fields.

Geothermal springs in Himalayas release large amount of carbon dioxide

In news
Himalayan Geothermal Springs release huge amount of carbon dioxide in the atmosphere

Detail
- Himalaya hosts about 600 geothermal springs having varied temperature and chemical conditions.
- Carbon outflux from Earth's interior to the exosphere through volcanic eruptions, fault zones, and geothermal systems contribute to the global carbon cycle that effects short and long term climate of the Earth.
- The Himalayan geothermal springs which cover about 10,000 square km in the Garhwal region of Himalaya, show a significant discharge of Carbon dioxide(CO_2) rich water.
- This was found by Wadia Institute of Himalayan Geology, an autonomous institute under the Department of Science & Technology, Govt. of India, which investigated and characterised the gas emissions from these springs.
- CO_2 in these thermal springs are sourced from metamorphic decarbonation of carbonate rocks present deep in the Himalayan core along with magmatism and oxidation of graphite.
- Most of the geothermal water is dominated by evaporation followed by weathering of silicate rocks.

Isotopes found
- Isotopic measurements (identification of the abundance of certain stable isotopes and chemical elements within organic and inorganic compounds) such as Dissolved Inorganic Carbon ($\delta13CDIC$), and Oxygen ($\delta18O$) along with major ions were analysed for all the samples.

- Among the major ions, bicarbonate (HCO3−) varied between 1697 to 21,553 μEq/L; chloride and sodium ranged between 90 to 19,171 μEq/L and 436 to 23181 μEq/L.

- A high concentration of Cl− and Na+ in geothermal spring waters indicated its deeper source.

Geothermal spring
- A hot spring, hydrothermal spring, or geothermal spring is a spring produced by the emergence of geothermally heated groundwater that rises from the Earth's crust.
- While some of these springs contain water that is a safe temperature for bathing, others are hot enough that immersion can be harmful, i.e., lead to scalding and, potentially, a death.

National Transit Pass System (NTPS)
In news
Environment Minister Prakash Javadekar today virtually launched piloting of the National Transit Pass System
NTPS
- The National Transit Pass System (NTPS) is an online transit pass generation system for inter-state and intra-state transportation of timber, bamboo and other forest produces from private lands/government/private depot.
- The system will be used for issuance, monitoring and maintaining records of transit permits.

Benefits
- Issuance of TP, NOC and so forth **without physically going to the forest offices.**
- A **single pan India permit** for the transit of timber, bamboo and other minor forest produce for ease of doing business.
- It has **replaced the manual paper-based transit system.**
- The NTPS will help **save time and transportation cost,** benefitting farmers and traders.
- It also provides **transparency in obtaining transit permits.**
- The NTPS facilitates **agroforestry activities.**

Ocean Services, Modelling, Applications, Resources and Technology (O-SMART) SCHEME

In news
The O-SMART scheme was launched by the ministry of Earth Sciences.

Objectives of O-SMART scheme
- To generate and regularly update information on Marine Living Resources and their relationship

with the physical environment in the **Indian Exclusive Economic Zone (EEZ),**
- To periodically monitor levels of sea water pollutants for health assessment of coastal waters of India, to develop shoreline change maps for assessment of coastal erosion due to natural and anthropogenic activities,
- To develop a wide range of state-of-the art ocean observation systems for acquisition of real-time data from the seas around India.
- To develop high resolution models for ocean forecast and reanalysis system,
- To develop algorithms for validation of satellite data for coastal research and to monitor changes in the coastal research,
- To develop technologies to tap the marine bio resources,
- To develop technologies generating freshwater and energy from ocean,
- To develop underwater vehicles and technologies,
- Establishment of state of the art sea front facility to cater to the testing and sea trial activities of ocean technology,
- To carryout exploration of Polymetallic Nodules (MPN) from water depth of 5500 m in site of 75000 sq.km allotted to India by United Nations in Central Indian Ocean Basin, to carryout investigations of gas hydrates,

Climate Smart Cities Assessment Framework (CSCAF 2.0)
In news
Minister of State for Housing and Urban Affairs (I/C) has launched the Climate Smart Cities Assessment Framework (CSCAF) 2.0.

About CSCAF
- CSCAF is to provide a clear roadmap for cities towards combating Climate Change while planning and implementing their actions, including investments.

- In the last decade, an increasing frequency of cyclones, floods, heat waves, water scarcity and drought-like conditions have had adverse impacts on many of our cities.

- Such extreme events and risks cause loss of life as well as impact the economic growth.

- In this context, CSCAF initiative intends to inculcate a climate-sensitive approach to urban planning and development in India.

- The framework has 28 indicators across five categories namely;

- Energy and Green Buildings,

- Urban Planning, Green Cover & Biodiversity,

- Mobility and Air Quality,

- Water Management and

- Waste Management.

- The Climate Centre for Cities under National Institute of Urban Affairs (NIUA) is supporting MoHUA in implementation of CSCAF.

World's Largest Solar Tree

In news
CSIR-CMERI has developed the World's Largest Solar Tree, which is installed at CSIR-CMERI Residential Colony.

Highlights
- The installed capacity of the Solar Tree is above 11.5 kWp. It has the annual capacity to generate 12,000-14,000 units of Clean and Green Power".

- The Solar Tree has been designed in a manner to ensure maximum exposure of each Solar PV Panel to Sunlight and also creation of the least amount of shadow area beneath.

- There are a total of 35 Solar PV Panels in each tree with a capacity of 330 wp each.

- The inclination of the arms holding the Solar PV Panels are flexible and can be adjusted as per requirement, this feature is not available in Roof-Mounted Solar facilities.

- The energy generation data can be monitored either real-time or on daily basis.

Significance
- TheseSolar Trees can be aligned with Agriculture for substituting price-volatile fossil fuels.
- Each Solar Tree has the potential to save 10-12 tons of CO_2 emissions being released into the atmosphere as Greenhouse Gases when compared with fossil fuel fired energy generation.
- Besides, the surplus generated power can be fed into an Energy Grid.

- This Agricultural Model can provide a consistent economic return and help the farmers counter the effects of the uncertain variations in Agriculture related activities, thus, making farming an Economic and Energy Sustainable practice."

Low ozone over Brahmaputra River Valley

In news
Scientists at the Aryabhatta Research Institute of Observational Sciences (ARIES), Nainital have evaluated the near surface ozone in the Brahmaputra River Valley (BRV)

Findings
- They have found relatively low concentration of Ozone over Guwahati compared to the other urban locations in India.

- Tropospheric, or ground-level ozone, is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC).

- It usually increases when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources chemically react in the presence of sunlight, impacting human health.

- It also assessed seasonal, day of week, and characteristics of ozone to identify the emission source of ozone and its precursors, especially methane (CH4) and NMHCs, along with study the relationships between the meteorological parameters, ozone and its precursors in a tropical setting.

- The examination of nitric oxide, nitrogen dioxide, and ozone concentrations in this study suggested that this site is well influenced by local sources such as adjacent major national highway.

Methane in Krishna-Godavari (KG) basin

In news
In a recent study conducted, it is found that the methane hydrate deposits are located in the Krishna-Godavari (KG) basin are of biogenic origin.

Methane

- The methane hydrate deposit in this basin is a rich source that will ensure adequate supplies of methane, a natural gas.
- Methane is a clean and economical fuel.
- It is estimated that one cubic meter of methane hydrate contains 160-180 cubic meters of methane.
- Even the lowest estimate of methane present in the methane hydrates in KG Basin is twice that of all fossil fuel reserves available worldwide.

About the study

- This study has shown that methanogens under these elevated pressure and temperature conditions are well adapted to these conditions and are different in methane-producing activities.
- Understanding of these methane-producing methanogenic communities under such an extreme and pristine environment was very important.
- This study using molecular and culturing techniques revealed maximum methanogenic diversity in the KG basin, which is one of the prominent reasons to confirm it to be the extreme source of biogenic methane in comparison to the Andaman and Mahanadi basins.

Ratification of seven Persistent Organic Pollutants listed under Stockholm Convention

In news

The Union Cabinet, chaired by the Prime Minister,has approved the Ratification of seven (7) chemicals listed under Stockholm Convention on Persistent Organic Pollutants (POPs).

Stockholm Convention on Persistent Organic Pollutants

- **The Stockholm Convention** is a global treaty to protect human health and environment from POPs, which are identified chemical substances that persist in the environment, bio-accumulate in living organisms, adversely affect human health/ environment and have the property of long-range environmental transport (LRET).
- Exposure to POPs can lead to cancer, damage to central & peripheral nervous systems, diseases of immune system, reproductive disorders and interference with normal infant and child development.
- POPs are listed in various Annexes to the Stockholm Convention after thorough scientific research, deliberations and negotiations among member countries.
- India had ratified the Stockholm Convention on January 13, 2006 as per Article 25(4), which

enabled it to keep itself in a default "opt-out" position such that amendments in various Annexes of the convention cannot be enforced on it unless an instrument of ratification/ acceptance/ approval or accession is explicitly deposited with UN depositary.
- The regulation inter alia prohibited the manufacture, trade, use, import and export seven chemicals namely (i) Chlordecone, (ii) Hexabromobiphenyl, (iii) Hexabromodiphenyl ether and Heptabromodiphenylether (Commercial octa-BDE), (iv) Tetrabromodiphenyl ether and Pentabromodiphenyl ether (Commercial penta-BDE), (v) Pentachlorobenzene, (vi) Hexabromocyclododecane, and (vii) Hexachlorobutadiene, which were already listed as POPs under Stockholm Convention.

Importance of Ratification

- Ratification of POPs demonstrates India's commitment to meet its international obligations with regard to protection of environment and human health.

- It also indicates the resolve of the Government to take action on POPs by implementing control measures, develop and implement action plans for unintentionally produced chemicals, develop inventories of the chemicals' stockpiles and review as well as update its National Implementation Plan (NIP).

- The ratification process would enable India to access Global Environment Facility (GEF) financial resources in updating the NIP.

India and Finland sign MOU for biodiversity conservation

In news

India and Finland signed a MOU for developing cooperation between two countries in the field of Environment protection and biodiversity conservation.

Highlights

- The MoU was signed virtually by Shri Prakash Javadekar, Minister of Environment, Forest and Climate Change from the Indian side and Ms Krista Mikkonen, Minister of the Environment and Climate Change, Government of Finland from the Finnish side.
- This MOU will definitely commits India & Finland to work together more closely towards on the fulfilment of commitments made under Paris Agreement.

- India has achieved its voluntary target of reducing emissions intensity of its GDP by 21% over 2005 levels, *by 2020 and is poised to achieve 35% reduction well before the target year of 2030.*
- The MoU will strengthen technological, scientific and management capabilities and develop bilateral cooperation in the field of environmental protection and biodiversity conservation .

Partnership and support areas
- Prevention of Air and water pollutio
- Waste management
- Promotion of circular economy
- Low-carbon solutions and sustainable management of natural resources including forests
- Climate change
- Conservation of Marine and Coastal Resources; etc.

What is the Paris Agreement?

At COP 21 in Paris, *on 12 December 2015*, Parties to the UNFCCC reached a landmark agreement to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future.

Aim
- To strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.
- To increase the ability of countries to deal with the impacts of climate change, and at making finance flows consistent with a low GHG emissions and climate-resilient pathway.

SDG Investor Map for India

In news

UNDP and Invest India have launched the SDG Investor Map for India, laying out 18 Investment Opportunities Areas (IOAs) in six critical SDG enabling sectors.

Highlights
- It is the *first-ever 'SDG Investor Map for India'.*
- This initiative is an *instrumental stride in India's development trajectory.*
- SDG Finance Facility platform at UNDP in partnership with Invest India, the investment promotion arm of the Government of India has developed this Map.
- The map will help public and private sector stake-holders direct capital towards IOAs, and White Spaces (Areas of Potential) that can contribute to the sustainable development needs of the country.

- The map has identified eight 'white spaces', which have seen investor interest and have the potential to grow into IOAs in five to six years with policy support and private sector participation.
- The observations from the map present a strong case for investing in SDG enabling sectors and IOAs, bridging the gap between high-level development targets and the need for commercially viable returns.

Significance
- It can help India push the needle forward on Sustainable Development.
- By mapping the overlaps and gaps between public sector priorities and private sector interest, the SDG Investor Map lays out pathways that can bring together private-sector investment and public sector support for six SDG-enabling sectors.
- Investing in the SDGs at this point is crucial to 'building back better' and making the economy and our societies more resilient and sustainable.

Six focus sectors
- Education
- Healthcare
- Agriculture and allied activities
- Financial services,
- Renewable energy and alternatives
- Sustainable environment

Biodiversity Conclave

In news

Biodiversity Conclave was inaugurated which is one of Sustainable Development Goals and its strategies are also the main thrust areas of many events of IISF 2020.

Aim

To bring together academicians/scientists/researchers/ students/ entrepreneurs to present their research findings and exchange innovative ideas on developing bio-diversity based bio-economy for self-reliance and global welfare.

Highlights

- It showcases the rich biodiversity of India at ecosystem, species and genetic levels, the long tradition of bio-diversity conservation by traditional communities, and the country's efforts towards mapping the distribution of biodiversity and
- conservation of critical ecosystems and threatened species.
- Impact of climate change on biodiversity is one of the focus areas.

- It hosts biodiversity hotspots harbouring unique biodiversity particularly in the northeast region and the Western Ghats.
- India is a home of several tribal communities which has a long history of preserving traditional knowledge and biodiversity conservation.

Convention of Biological Diversity (CBD)

- It led to changes in administrative and legislative levels and paved the path for Biodiversity Act of India 2002.
- Under the CBD there is a concept of equitable sharing of knowledge and benefits arising from the sustainable utilization of biodiversity.

Challenge

- Biodiversity degradation due to deforestation, mining, climate change and other factors.
- The conclave will do the needful to bring the common people, administration and policymakers on one platform to provide crucial outputs to conserve our invaluable biodiversity.

International Blue Flag

In news

International Blue Flag hoisted at 8 beaches across the Country

Highlights

- India secured the International Blue Flag Certification for these beaches on 6th October 2020.
- Blue Flag certification is a globally recognised eco-label accorded by **"Foundation for Environment Education in Denmark"** based on 33 stringent criteria.
- Neat and clean beaches are an indicator that the coastal environment is in good health and the Blue Flagcertification is a global recognition of India's conservation and sustainable development efforts.
- The beaches where the International Blue Flags were hoisted are: **Kappad (Kerala), Shivrajpur (Gujarat), Ghoghla (Diu), Kasarkod and Padubidri (Karnataka), Rushikonda (Andhra Pradesh), Golden (Odisha) and Radhanagar (Andaman & Nicobar Islands).**

Background

India started its journey of sustainable development of coastal regions on World Environment Day in June' 2018 by launching its beach cleaning campaign – I-AM- SAVING-

MY-BEACH simultaneously at 13 coastal states and thereafter implementing ministry's coveted program BEAMS(Beach Environment & Aesthetics Management Services).

What is the 'Blue Flag' certification?

- The 'Blue Flag' is a certification that can be obtained by a beach, marina, or sustainable boating tourism operator, and serves as an eco-label.
- The certification is awarded by the Denmark-based non-profit Foundation for Environmental Education, which sets stringent environmental, educational, safety-related and access-related criteria that applicants must meet and maintain.
- It is awarded annually to beaches and marinas in FEE member countries.
- The *Blue Flag programme was started in France in 1985 and in areas out of Europe in 2001*.
- The programme promotes sustainable development in freshwater and marine areas through four main criteria: water quality, environmental management, environmental education and safety.

Air Quality Commission calls for strict implementation of RFID system

In news

Air Quality Commission calls for strict implementation of RFID system at 13 toll plazas of Delhi

Why?

These 13 toll plazas contribute to about 70 % commercial vehicles entry to NCT of Delhi.

Significance

Move to help reduce vehicular pollution from vehicles entering Delhi.

The Radio Frequency Identification (RFID) system

- Radio-frequency identification (RFID) uses electromagnetic fields to automatically identify and track tags attached to objects.
- An RFID system consists of a tiny radio transponder; a radio receiver and transmitter.
- When triggered by an electromagnetic interrogation pulse from a nearby RFID reader device, the tag transmits digital data, usually an identifying inventory number, back to the reader.
- This number can be used to track inventory goods.

There are two types of RFID tags

- Passive tags are powered by energy from the RFID reader's interrogating radio waves.
- Active tags are powered by a battery and thus can be read at a greater range from the RFID reader; up to hundreds of meters.

Two new Zoos

In news

- Two new zoos the Rajgir Zoo Safari in Nalanda, Bihar and Shaheed Ashfaque Ullah Khan Prani Udyaan in Gorakhpur, Uttar Pradesh were granted recognition.
- This recognition was given at the 37th General Body meeting of Central Zoo Authority chaired by Union Minister for Environment, Forest and Climate Change, Shri Prakash Javadekar.

Rajgir Zoo Safari, Nalanda, Bihar

- Rajgir Zoo Safari, in the eastern state of Bihar was granted recognition during the General Body meeting of the Central Zoo Authority on December 07, 2020.
- The zoo is established exclusively comprising on only safari enclosures which, on contrary to conventional enclosure, offer larger space for captive animals.
- There are five safari enclosures and a walk-in proposed in the zoo.
- The zoo proposes to house Lion, Bear, Tiger, Leopard and a mixed safari of common herbivore species such as Spotted Deer, Sambar among others.
- The zoo is *located close to the historically important Nalanda* and is expected to have a high footfall.
- The zoo will display wild animals in naturalistic safari enclosures and promote awareness of towards wildlife conservation.

Shaheed Ashfaque Ullah Khan Prani Udyaan, Gorakhpur, U.P.

- Shaheed Ashfaque Ullah Khan Prani Udyaan, Gorakhpur, U.P Bihar was granted recognition during the General Body meeting of the Central Zoo Authority on December 07, 2020.
- With this, the state of *Uttar Pradesh has a total of 9 zoos.*
- The establishment of the zoo is personally monitoring by the Chief Minister of the state.
- The zoo is *situated in the spiritual land of Gorakhpur and has a high visitation.*
- The zoo features enclosures for a range of birds, herbivores and carnivores.

- The zoo aims to create awareness through naturalistic enclosures and create long-lasting visitor experience through state-of-the-art visitor facilities like 4D Theatre, battery-operated train and accessibility to Divyangjan.

New species of Muraingrass

In news

A new species of Indian Muraingrasses known for their ecological and economic importance, such as fodder, have been spotted by scientists in Goa in the Western Ghats, one of the four global biodiversity hotspots of India.

Highlights

- The species has adapted to survive harsh conditions, low nutrient availability, and blossoms every monsoon.
- Globally 85 species are known from *Ischaemum*, of which 61 species are exclusively found in India.
- The Western Ghats have 40 species with the highest concentration of the genus.
- **Agharkar Research Institute (ARI), Pune**, an autonomous institute of the Department of Science & Technology, has been exploring the biodiversity of the Western Ghats for last few decades.
- The first collection of this new species was made in the 2017 monsoon.
- The population was kept under observation for the next two years to confirm the consistency of its characters. Morphological and molecular data of the species were used to confirm the novelty of the species.

Fit India Cyclothon

In news

Fit India Cyclothon getting huge response, around 13 Lakh people participated in the first week of its launch.

Highlights

- This mega cycling event started on 7th December 2020 and participants from across the country are participating in this.
- This event will continue till 31st December 2020.
- The inaugural edition of the Fit India Cyclothon was launched by the Sports Minister in January 2020 in Panaji, Goa.
- This event was organized with the aim to get the people involved in outdoor activities and to start a cycling culture across the country.

Significance

It will reduce pollution in environment along with individuals health improvement as it involves physical workout

Fit India Movement

- The Fit India Movement is a movement to take the nation on a path of fitness and wellness.
- It provides a unique and exciting opportunity to work towards a healthier India.
- As part of the movement, individuals and organisations can undertake various efforts for their own health and well-being as well as for the health and well-being of fellow Indians.

JSA II: Catch the Rain" Awareness Generation Campaign

In news

National Water Mission(NWM), Ministry of Jal Shakti in collaboration with Nehru Yuva Kendra Sangathan (NYKS), Ministry of Youth Affairs & Sports launched the *"JSA II: Catch the Rain" Awareness Generation Campaign*

Highlights

- Emphasis was given on need to focus on water conservation and rainwater harvesting.
- Youngsters in the revolutionary campaign should be involved
- The highest priority to the issue of water conservation and the need of the hour is to adopt an integrated approach towards water management.
- The awareness generation phase of campaign will run from mid-December 2020 to March 2021.

About the campaign

- NWM has launched a campaign Catch the rain" with tag line *"catch the rain, where it falls, when it falls" i*n order to nudge all stake-holders to create Rain Water Harvesting Structures (RWHS)
- Which is suitable to the climatic conditions and sub-soil strata to store rain water as rains falling in the four/five months of monsoon are the only source of water for most parts of the country.
- Drives to make water harvesting pits, rooftop RWHS and check dams; removal of encroachments and de-silting of tanks to increase their storage capacity; removal of obstructions in the channels which bring water to them from the catchment areas; repairs to traditional water harvesting
- structures like step-wells and using defunct bore-wells and old wells to put the water back to aquifers etc.

Air Quality Commission directs for 100 percent switching over of industries in Delhi to PNG.

In news

The Commission for Air Quality Management in NCR and Adjoining Areas reviewed the progress of switching over of Industries operating in Delhi to Piped Natural Gas.

Highlights

- About 1644 of Industrial Units spread across 50 industrial areas in Delhi had been identified to switch over to *Piped Natural Gas (PNG).*
- Though sizeable number of Industries are using PNG, the Commission stressed the need to switch over to PNG by all identified Industries in Delhi considering the fact that industrial sector is one of the major contributors to air pollution in Delhi and National Capital Region.
- Indraprastha Gas Limited (IGL) and Gas Authority of India Limited (GAIL) were impressed upon to complete the pipeline network, metering and associated infrastructure.

Piped Natural gas (PNG) It is used for Domestic, Commercial and Industrial Consumption. PNG has several distinctions to its credit-of being a pollution free fuel, economical and safer fuel being few of them.

Benefits

Uninterrupted Supply: PNG is being supplied through pipe 24X 7. PNG offers the convenience of ensuring continuous and adequate supply of PNG at all times, without any problems of storing gas in cylinders.

Convenience: Since the supply of PNG is continuous, the domestic consumers is relieved from the task of booking LPG cylinder and waiting for the delivery man for delivery. Further there is no storage space required. In case of Commercial and Industrial consumption, the customer is relieved from storage space for the fuel and fuel inventory management as they don't need to monitor the fuel stock and material handling.

Safety: Natural Gas is a safe fuel. In case of leakage, NG being lighter than air, disperses in the air.

Economy: PNG is economical to LPG and any other liquid fuels. Further in the case of PNG, billing is normally after a cycle of fortnightly /monthly /quarterly after the use by the consumer whereas the consumers pay upfront for any other fuel used by them. Thus there is savings on account of release of working capital for the commercial and industrial sector and deferment of expenses for the domestic sector.

Eco friendly fuel: PNG is one of the cleanest burning fuels, and helps improve the quality of air. When natural gas burns completely, it gives out carbon dioxide and water vapour. These are the very components that we give out while breathing

Biodiversity Conclave

In news

Biodiversity Conclave was inaugurated which is one of Sustainable Development Goals and its strategies are also the main thrust areas of many events of IISF 2020.

Aim

To bring together academicians/scientists/researchers/ students/ entrepreneurs to present their research findings and exchange innovative ideas on developing bio-diversity based bio-economy for self-reliance and global welfare.

Highlights

- It showcases the rich biodiversity of India at ecosystem, species and genetic levels, the long tradition of bio-diversity conservation by traditional communities, and the country's efforts towards mapping the distribution of biodiversity and
- conservation of critical ecosystems and threatened species.
- Impact of climate change on biodiversity is one of the focus areas.

Indian biodiversity

- It hosts biodiversity hotspots harbouring unique biodiversity particularly in the northeast region and the Western Ghats.
- India is a home of several tribal communities which has a long history of preserving traditional knowledge and biodiversity conservation.

Convention of Biological Diversity (CBD)

- It led to changes in administrative and legislative levels and paved the path for Biodiversity Act of India 2002.
- Under the CBD there is a concept of equitable sharing of knowledge and benefits arising from the sustainable utilization of biodiversity.

Challenge

- Biodiversity degradation due to deforestation, mining, climate change and other factors.
- The conclave will do the needful to bring the common people, administration and policymakers on one platform to provide crucial outputs to conserve our invaluable biodiversity.

International Blue Flag

In news

International Blue Flag hoisted at 8 beaches across the Country

Highlights

- India secured the International Blue Flag Certification for these beaches on 6th October 2020.
- Blue Flag certification is a globally recognised eco-label accorded by *"Foundation for Environment Education in Denmark"* based on 33 stringent criteria.
- Neat and clean beaches are an indicator that the coastal environment is in good health and the Blue Flagcertification is a global recognition of India's conservation and sustainable development efforts.
- The beaches where the International Blue Flags were hoisted are: **Kappad (Kerala), Shivrajpur (Gujarat), Ghoghla (Diu), Kasarkod and Padubidri (Karnataka), Rushikonda (Andhra Pradesh), Golden (Odisha) and Radhanagar (Andaman & Nicobar Islands).**

Background

India started its journey of sustainable development of coastal regions on World Environment Day in June' 2018 by launching its beach cleaning campaign – I-AM- SAVING-MY-BEACH simultaneously at 13 coastal states and thereafter implementing ministry's coveted program BEAMS(Beach Environment & Aesthetics Management Services).

Antarctic iceberg, once Earth's biggest, suffers major split

In news

A major crack appeared in the Antarctic ice giant, A68a, once the world's biggest iceberg, as captured in satellite images since January 25, 2021.

Background

The iceberg had detached from the Larcen C ice shelf in 2017 and was travelling up towards the island of South Georgia in the British Overseas Territory, when turbulent sea currents diverted it towards to the South Atlantic Ocean.

Findings

- The recent satellite footage captured a smaller slab, now called A68g, distinctly separated from the original iceberg but floating along it about 135 km off the south-eastern coast of South Georgia.
- A68a, when it first broke off Antarctica, measured 5,800 square kilometres, almost triple the size of Delhi.
- It splintered and shed much of its mass since because of higher temperatures and rough sea currents.

- It still posed a threat to the little island of about the same size and home to penguins, seals and endangered blue whales.
- A68g is not the first one to depart from the floating ice giant. In fact, as the suffix 'g' suggests, it is the sixth smaller chunk or 'childberg' to have calved from A68a since the last part of 2020.
- These city-sized ice masses that have drifted away from Antarctica, still threaten marine and coastal habitats, squishing small species under their weight or erasing the lands where their food grows.
- **The earth lost 28 trillion tonnes of ice between 1994 and 2017 of which 6.5 trillion tones were from Antarctic ice shelves**

Centre for Wetland Conservation and Management

In news
On the World Wetland Day the Minister of State for Environment, Forest and Climate Change, announced the establishment of a Centre for Wetland Conservation and Management (CWCM)
It is a part of its commitment towards conservation, restoration and management of India's wetlands.

Why was it required?
- India has nearly 4.6% of its land as wetlands, covering an area of 15.26 million hectares and has 42 sites designated as Wetlands of International Importance (Ramsar Sites), with a surface area of 1.08 million hectares.
- The year 2021 also commemorates the 50[th]anniversary of the signing of the Ramsar Convention on Wetlands on 2 February 1971 in Ramsar, Iran, celebrated annually as World Wetlands Day.

Benefits
- The dedicated Centre would address specific research needs and knowledge gaps and will aid in the application of integrated approaches for conservation, management and wise use of the wetlands.
- WCM would serve as a knowledge hub and enable exchange between State/ UT Wetland Authorities, wetland users, managers, researchers, policy-makers and practitioners.

Wetland

- A wetland is a distinct ecosystem that is flooded by water, either permanently or seasonally, where oxygen-free processes prevail.
- The primary factor that distinguishes wetlands from other land forms or water bodies is the characteristic vegetation of aquatic plants,adapted to the unique hydric soil.
- Wetlands play a number of functions, including water purification, water storage, processing of carbon and other nutrients, stabilization of shorelines, and support of plants and animals.

Source: The Hindu & PIB

World Sustainable Development Summit 2021

In news
Prime Minister Shri Narendra Modi inaugurated World Sustainable Development Summit 2021 via video conferencing
Theme :*'Redefining our common future: Safe and secure environment for all'.*

World Sustainable Development Summit
- The World Sustainable Development Summit (WSDS) is the annual flagship event of The Energy and Resources Institute (TERI).
- Instituted in 2001, the Summit series has marked 20 years in its journey of making 'sustainable development' a globally shared goal.
- The World Sustainable Development Summit will bring together a wide number of business leaders, governments, climate scientists, academicians, youth, and civil society in the fight against climate change.
- Adaptation and resilience, energy and industry transition, climate finance, nature-based solutions, clean oceans, circular economy, and air pollution are among the range of topics that will be discussed during the summit.
- The Ministry of New and Renewable Energy, the Ministry of Environment, Forests and Climate Change, and the Ministry of Earth Sciences is the key partners of the Sustainable Development Summit.

Objective
Post the signing of the Paris Agreement and the adoption of the Sustainable Development Goals, the summit aims at providing long-term solutions for the benefits of the global community by bringing together various stakeholders on a single platform and taking a step in a direction of achieving constructive action in combating issues that are significant to the future of humanity.

Leopard population tracking gets new approach

Context
Wildlife specialists have for long faced challenges estimating the density of leopards in areas where some of the spotted cats are melanistic or black.

Experts from three organisations, one of them Assam-based Aaranyak, have come up with a system that helps in properly estimating the leopard population in areas sustaining a mix of rosette and melanistic individuals.

Issue

- Melanistic leopards — commonly called black leopards or black panthers or ghongs (Assamese) — have been difficult to estimate as their rosettes are invisible.
- This problem is acute in the tropical and subtropical moist forests of South and Southeast Asia where the frequency of melanistic leopards is high and leopards also face the greatest threat.
- No precise estimates of leopard population could thus be done in protected areas and non-protected areas in India except on some occasions.

Solution

- The Spatial Mark-Resight (SMR) models applied by the scientists of Aaranyak, Panthera and World Wide Fund for Nature-India have provided a way of counting the melanistic leopards too.
- "In the SMR models, researchers borrow the capture history of the rosette leopards and apply the information on the melanistic leopards to estimate the entire population size of leopards.
- This is a significant analytical development that can help assess the population of leopards across a great part of the species range from where population estimates are scant.

Sub Mission on Plant Protection and Plant Quarantine

In news

The Department of Agriculture and Farmers Welfare performs regulatory, monitoring, surveillance and Human Resource Development functions through a scheme **"Sub Mission on Plant Protection and Plant Quarantine (SMPPQ)"**

Aim

Minimizing loss to quality and yield of agricultural crops from the ravages of insect pests, diseases, weeds, nematodes, rodents etc. and to shield our bio-security from the incursion and spread of alien species.

Locust attack

- During 2020-21, India became the first country in the world to control locusts by using drones after finalizing protocols and Standard Operating Procedures.

- The largest locust control operation in Indian history has been conducted by the Central Government in collaboration with the States. Locust attack was controlled in more than 5.70 lakh hectare area of 10 States.
- Control capabilities of Locust Circle Offices (LCOs) have been strengthened by deploying helicopters for aerial spraying of pesticides for locust control.
- Till now control operations against locusts were carried out in an area of 2,87,986 hectares by LCOs and 2,83,268 hectares by State Governments.

Locusts normally arrive during July-October, but have already caused chaos in Rajasthan. At a time India is battling coronavirus pandemic, locusts present a new worry with their potential for exponential growth and crop destruction. Standing crops and vegetables in Rajasthan, Punajb, Haryana and Madhya Pradesh face a major threat as swarms of locust have been reported a month in advance.

Outdoor Air Purifier

In news

CSIR-Central Mechanical Engineering Research Institute, Durgapur unveiled the CSIR-CMERI developed Outdoor Air Purifier at its residential campus in Durgapur (West Bengal)

Reason

- Air Pollution due to industries and automobile is the major cause of concern these days. Particularly during the pandemic COVID period, it was especially noticeable on account of more getting an environment free from pollution as well as microorganisms, bacteria and viruses etc.
- Indoor Air Cleaner and purifiers are available in the market but it is an outdoor one which has the radial range of 5 meters.

Significance

- With its help air pollution can be reduced by 50% depending on the environment and pollution level.
- A customized adjustable timer can be set for the most pollution period say 8 AM to 6 PM.
- The machine is very cost effective and has a low maintenance cost. We can clean it with the vacuum cleaner

About the purifier

- These air purifiers have been installed on the street light poles focusing the narrow lanes of the campus and the machine also runs on solar power.

- Considering the comprehensive features, used components and the materials, the existing cost of a unit comes to 25 thousand rupees which may go up to 30 thousand rupees inclusive of taxes.
- This cost can be well reduced when steel sheet body is replaced by plastic and UV lamp is removed or customized as per requirement.

International Commission on Large Dams (ICOLD)

In news

The International Commission on Large Dams (ICOLD) Symposium on Sustainable Development of Dams & River Basins was inaugurated

Details
- INCOLD in collaboration with Central Water Commission (CWC), Dam Rehabilitation Improvement Project (DRIP) and National Hydrology Project (NHP) is organising Symposium on "Sustainable Development of Dams and River Basins"
- More than 300 delegates from across the country and abroad will participate in the Symposium.
- Dam Safety Bill which has been approved by Lok Sabha, in order to put regulatory mechanism in place, to provide for proper surveillance, inspection, operation and maintenance of all dams in India, which has been enacted will be publicised.
- There will also be a Special Sessions on "Innovative Financing in Dam Projects, Use of Geo-synthetics in Dam Engineering

Significance
- The symposium is being organised to provide an excellent opportunity to Indian Dam Engineering Professionals and Agencies to share their experiences, ideas and latest developments in new materials and construction technologies, advancement in investigation techniques, best engineering practices, dam safety issues etc.
- Besides this offers opportunity to networking with the world renowned dam experts from different countries and global organizations involved in Dam Construction, management and operation and maintenance for mutual benefits.

National Wildlife Board

In news
Recently Union Minister for Environment, Forest and Climate Change, Prakash Javadekar tweeted about giving wildlife clearances to projects in 11 states.

Why?
India's National Board for Wildlife (NBWL) has not met in six years. Policy decisions and clearances have, meanwhile, come from a standing committee, to the dismay of experts. The Standing Committee of the NBWL cleared the projects.

About National Board for Wildlife
- The Central Government under Section 5 A of the Wildlife (Protection) Act, 1972, constitutes the NBWL (WLPA).
- It serves as an apex body to review all wildlife-related matters and approve projects in and around national parks and sanctuaries.
- The board is advisory in nature and advises the Central Government on framing policies and measures for conservation of wildlife in the country.

Key amendment to Environment Impact Assessment(EIA) Notification 2006

In news
To address unprecedented situation arising from global outbreak of Novel Corona Virus (COVID-19), and to ramp up availability or production of various drugs, Ministry of Environment,Forest and Climate Change has made an amendment to EIA Notification 2006.

Key Amendments
- All projects or activities in respect of bulk drugs and intermediates, manufactured for addressing various ailments, have been re-categorized from the existing Category 'A' to 'B2' category.
- Projects falling under Category B2 are exempted from requirement of collection of Base line data, EIA Studies and public consultation.
- The re-categorization of such proposals has been done to facilitate decentralization of appraisal to State Level so as to fast track the process.

Why such need arises?
- To help in increasing the availability of the important medicines/ drugs in the country within short span of time.
- To ensure expeditious disposal of the proposals within given time-line, Ministry has also advised states to use information technology e.g. video conference, considering the fact that in view of the prevailing situation on ground, appraisal of

proposals may not be possible through physical meetings.

Petersberg Climate Dialogue

In news

The 11th session of Petersberg Climate Dialogue was conducted to discuss the ways of tackling the societies and economies after COVID-19.

Aim

To provide a forum for informal high-level political discussions, focusing both on international climate negotiations and the advancement of climate action.

Key Highlights

- Secretary-General Antoni Guterres, in his remarks, talked about the suffering of people and destabilization of the global economy due to COVID-19.
- He talked about strengthening the measures that will limit the global temperature rise.
- Secretary-General asked the countries from all over the world to commit to carbon neutrality by 2050.
- There should be support for those countries that are least responsible for clime change but have been facing its impacts.
- To help developing countries in protecting their populations from climate change, there has been a need for financing. It begins with a promised mobilization of $100 billion US dollars a year for adaptation efforts in developing countries.
- Secretary-General proposed six climate-related actions for climate-resilient growth.
- Countries were encouraged to work together. He also mentioned the common framework for action i.e. 2030 agenda for sustainable development and the Paris Agreement on Climate Change.
- He also asked countries to come up with strategies to reach net-zero emissions by 2050.
- G20 countries were also mentioned for their contribution to global emissions. Secretary-General asked for their commitment to carbon neutrality 2050.

IMD releases new list of cyclone names

In news

The newly released list by IMD has 13 names each from the 13 member countries, including India, of the World Meteorological Organisation (WMO).

Details

- The India Meteorological Department (IMD) has released a new list consisting of 169 names of future tropical cyclones that would emerge in the Arabian Sea and Bay of Bengal. The list was released by IMD on April 28.

- The newly released list has 13 names each from the 13 member countries, including India, of the World Meteorological Organisation (WMO).
- IMD is one of the six Regional Specialised Meteorological Centres (RSMC) in the world.

Significance

- Identify each individual cyclone.
- Create awareness of its development.
- Remove confusion in case of simultaneous occurrence of TCs over a region
- Remember a TC easily
- Rapidly and effectively disseminate warnings to much wider audience
- Cyclones are given many names in different regions of the world – They are known as **typhoons** in the China Sea and Pacific Ocean; **hurricanes** in the West Indian islands in the Caribbean Sea and Atlantic Ocean; **tornados** in the Guinea lands of West Africa and southern USA.; **willy-willies** in north-western Australia and tropical cyclones in the Indian Ocean.

EventBot

In news

The Indian Computer Emergency Response Team (CERT-In) has issued an advisory warning people against a Trojan called EventBot

About

- The EventBot is a banking trojan or a banker Trojan that specifically targets the financial apps on the phone and the financial data of its victim.
- It can affect Android smartphone users in the country and steal their personal financial information**.**
- The EventBot trojan has over 200 different financial applications under its target, including banking applications, money-transfer services, and cryptocurrency wallets, or financial applications based in the US and European region.

Functioning

- CERT-In noted that EventBot has not been spotted on the official Google Play Store as of now but it can "masquerade" as a genuine application to cheat users.
- The cybersecurity agency noted that the malware asks for permissions such as "controlling system alerts, reading external storage content, installing additional packages, accessing the internet, whitelisting it to ignore battery optimisation, auto-initiate upon reboot, read and receive SMS messages as well as continue running and accessing data in the background" once it is installed on victim's Android phone.

Alternative dwarfing genes in wheat can eliminate rice crop residue burning

In news

Scientists at Pune based Agharkar Research Institute (ARI), an autonomous institute of the Department of Science and Technology, have mapped two alternative dwarfing genes **Rht14 and Rht18** in wheat. These genes are associated with better seedling vigour and longer coleoptiles (sheath protecting the young shoot tip).

Rh14 and Rht18

- ARI have mapped the dwarfing genes on chromosome 6A in durum wheat, and DNA-based markers were developed for a better selection of these genes in wheat breeding lines.
- The DNA-based markers will help wheat breeders to precisely select wheat lines carrying these alternative dwarfing genes from a massive pool of wheat breeding lines.
- These DNA based markers are being used at ARI for marker-assisted transfer of these genes in Indian wheat varieties, so as to make them suitable for sowing under rice stubble-retained conditions and dry environments.
- Wheat breeding lines with these alternative dwarfing genes are presently at an advanced stage.
- Wheat lines with these alternative dwarfing genes, apart from reducing crop residue burning, can allow deeper sowing of wheat seeds to avail advantage of residual moisture in the soil under dry environments.
- The improved wheat lines which are being developed at ARI will help reducing stubble burning incidences under the rice-wheat cropping system.
- These lines will also allow deeper sowing of wheat seeds to avail advantage of residual moisture in the soil, therefore, saving valuable water resources and reduce the cost of cultivation to farmers.

Importance

- In India, close to twenty-three million tonnes of leftover rice residues are annually burnt by farmers to get rid of the straw and prepare their fields for sowing wheat, which is the next crop, resulting in air pollution.
- Also, dry environments pose a challenge for the germination of wheat varieties with short coleoptile.
- Burning of leftover rice crop residue has serious implications for the environment, soil, and human health.

- Therefore, there is a need to include alternative dwarfing genes in wheat improvement programs.

Foldscope could be a better alternative to clinical microscope

In news

The study evaluated the use of the **Foldscope** in the clinical diagnosis of oral and urinary tract infections and evaluated its efficacy as a motivational tool for improving oral health among school children in India.

Foldscope

- Foldscope is an affordable origami-based microscopy device composed of a series of paper clippings.
- The study identifies that Foldscope is particularly convenient to diagnose urinary tract infection (UTI) and monitor kidney stone.
- Using this tool, one can easily monitor own-kidney stone status at home with a simple glass-slide, a Foldscope and a phone in hand.
- Such monitoring could perhaps avoid kidney stone reaching a painful state or surgery in recurring cases.
- Given the ease of operation and low cost, Foldscope may be employed in public healthcare centres for primary diagnosis of oral health and UTI or as personal health monitoring device.

Private sector to get level playing field with space reforms

In news

The Union Cabinet approved the creation of the Indian **National Space Promotion and Authorization Centre (IN-SPACe)**

About IN-SPACe

- It aims to provide a level playing field for private companies to use Indian space infrastructure.
- This is part of reforms aimed at giving a boost to private sector participation in the entire range of space activities.
- **The IN-SPACe** will also hand-hold, promote and guide the private industries in space activities through encouraging policies and a friendly regulatory environment.
- **'New Space India Limited (NSIL)'** would endeavour to reorient space activities from a 'supply driven' model to a 'demand driven' one, thereby ensuring optimum utilisation of the nation's space assets.

Importance of these reforms

- These reforms will allow ISRO to focus more on research and development activities, new technologies, exploration missions and human spaceflight programme. Some of the planetary exploration missions will also be opened up to private sector through an 'announcement of opportunity' mechanism.
- The proposed reforms will enhance the socio-economic use of space assets and activities, including through improved access to space assets, data and facilities.

NSIL

- NewSpace India Limited (NSIL) is a Central Public Sector Enterprise of Government of India.
- It was established on 6 March 2019 under the administrative control of Department of Space (DOS), India.
- The main objective of NSIL is to scale up industry participation in Indian space programmes.

ANTRIX

- **Antrix Corporation Limited (ACL), Bengaluru** is a wholly owned Government of India Company under the administrative control of the Department of Space.
- It was incorporated in September 1992 commercially exploiting ISRO's space products, providing technical consultancy services and transferring technologies developed by Indian Space Research Organisation to industry.

Detection of fluorine in hot Extreme Helium Stars

In news

A study by the Indian Institute of Astrophysics (IIA) which detected the presence of singly ionised fluorine for the first time in the atmospheres of hot Extreme Helium Stars makes a strong case that the main formation of these objects involves a merger of a carbon-oxygen (CO) and a Helium (He) white dwarf.

Details

- An extreme helium star or EHe is a low-mass supergiant that is almost devoid of hydrogen, the most common chemical element of the universe.
- There are 21 of them detected so far in our galaxy.
- The origin and evolution of these Hydrogen deficient objects have been shrouded in mystery.
- Their severe chemical peculiarities challenge the theory of well-accepted stellar evolution as the observed chemical composition of these stars do not match with that predicted for low mass evolved stars.

The study

- Clues to evolution of extreme helium stars require accurate determinations of their chemical composition, and the peculiarities, if any, become very important.
- Fluorine plays a very crucial role in this regard to determine the actual evolutionary sequence of these hydrogen deficient objects.
- Severe fluorine enrichment w.r.t normal stars (of the order of 800 – 8000) was observed in the cool EHes along-with the cooler classical hydrogen deficient stars, the RCB variables (R Coronae Borealis Stars) hinting at close evolutionary connection between them.
- By comparing the observed fluorine abundances with other abundances of the key elements, the scientists could determine the formation channels responsible for fluorine enrichment.
- The varied range of observed fluorine abundance across stars having similar atmospheric parameters points out the difference in the individual star's evolution and the ensuing nucleosynthesis.
- The detection of enhanced fluorine abundances in the atmospheres of hot EHes solves a decade-old mystery about their formation.
- It firmly places hot EHes in an evolutionary sequence with cool EHes and other hydrogen-deficient stars and zeros in on the evolutionary scenario, which involves the merger of two double degenerate white dwarfs (WDs).

MoES-Knowledge Resource Centre Network (KRCNet)

In news

Under the **Digital India initiative of Government of India**, Ministry of Earth Sciences (MoES)aims to develop a World-Class Knowledge Resource Centre Network (KRCNet).

Salient objectives of the KRCNet

- Establish a Total Quality Management (TQM) system by securing ISO certification for documenting MoESknowledge resources, its maintenance, easy retrieval and dissemination.
- **Collect, collate, analyze, index, store and disseminate** the intellectual resources, products and project outputs available in MoES headquarter and its institutes.
- Develop and maintain an up-to-date meta-data of the print & digital resources available in MoES headquarter and MoES institutes, including MoES services.
- Provide 24X7 access to the subscribed knowledge contents through the **KRCNet** portal.

- Application of information analytical tools & techniques like bibliometrics, scientometrics, big-data analytics, social media analytics etc., for policy formulation, report preparation and information dissemination.
- Periodically organize training workshops to popularize usage of electronic journals, databases, digital products, data analytics etc.

International Thermonuclear Experimental Reactor (ITER)

In news
The ITER Organization is celebrating the Start of Assembly of the ITER Tokamak with a ceremony today on 28th July 2020 at Saint-Paul-Lez-Durance, France.

About ITER
- In southern France, 35 nations are collaborating to build the world's largest tokamak, a magnetic fusion device that has been designed to prove the feasibility of fusion as a large-scale and carbon-free source of energy based on the same principle that powers our Sun and stars.
- The experimental campaign that will be carried out at ITER is crucial to advancing fusion science and preparing the way for the fusion power plants of tomorrow.
- ITER will be the first fusion device to produce net energy. ITER will be the first fusion device to maintain fusion for long periods of time.
- And ITER will be the first fusion device to test the integrated technologies, materials, and physics regimes necessary for the commercial production of fusion-based electricity.

ITER-India

In news
Recently, the International Thermonuclear Experimental Reactor (ITER) celebrated the start of Assembly of the ITER Tokamak at Saint-Paul-Lez-Durance, France.

About ITER
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- And ITER will be the first fusion device to test the integrated technologies, materials, and physics

regimes necessary for the commercial production of fusion-based electricity.

Significance
The amount of fusion energy a tokamak is capable of producing is a direct result of the number of fusion reactions taking place in its core. Scientists know that the larger the vessel, the larger the volume of the plasma ... and therefore the greater the potential for fusion energy.

India
- ITER-India is a special project under Institute for Plasma Research.
- It is governed by the Empowered Board, which is chaired by the Secretary, Department of Atomic Energy (DAE). India became a full seventh partner of ITER in December 2005.
- ITER-India, Institute for Plasma Research (IPR), located in Gandhinagar, western India, is the Indian Domestic Agency to design, build and deliver the Indian in-kind contribution to ITER

Chunauti"- Next Generation Start-up Challenge Contest

In news
Union Minister for Electronics and Information Technology Shri Ravi Shankar Prasad launched "Chunauti"- Next Generation Startup Challenge Contest to further boost startups and software products with special focus on Tier-II towns of India.

Aim
To identify around 300 startups working in identified areas and provide them seed fund of upto Rs. 25 Lakh and other facilities.

Areas of work
- Edu-Tech, Agri-Tech & Fin-Tech Solutions for masses
- Supply Chain, Logistics & Transportation Management
- Infrastructure & Remote monitoring
- Medical Healthcare, Diagnostic, Preventive & Psychological Care
- Jobs & Skilling, Linguistic tools & technologies

Significance
- The startups selected through Chunauti will be provided various support from the Government through Software Technology Parks of India centers across India.
- They will get incubation facilities, mentorship, security testing facilities, access to venture capitalist funding, industry connect as well as advisories in legal, Human Resource (HR), IPR and Patent matters.

Submarine communications cable

In news
The Union Cabinet, has given its approval for Provision of Submarine Optical Fibre Cable Connectivity between Mainland (Kochi) and Lakshadweep Islands (KLI Project).

Project Execution
- The project is funded by the Government of India through the Universal Service Obligation Fund (USOF) under the Department of Telecommunications, Ministry of Communications.
- Bharat Sanchar Nigam Limited (BSNL) executed this project while Telecommunications Consultants India Limited (TCIL) are the Technical Consultants.

Significance
- The submarine cable will also connect Port Blair to Swaraj Dweep (Havelock), Little Andaman, Car Nicobar, Kamorta, Great Nicobar, Long Island, and Rangat.
- This connectivity will enable delivery of faster and more reliable mobile and landline telecom services to Andaman & Nicobar Islands, at par with other parts of India.

About the cable
- A submarine communications cable is a cable laid beneath the sea to provide telecommunication links between countries.
- The first such cables carried telegraphy traffic.
- Subsequent generations of cables carried telephone traffic, then data communications traffic.
- All modern cables use fiber optic technology to carry digital payloads, which include telephone traffic, internet signals, and private data traffic.
- As of 2005, submarine cables link all the world's continents except Antarctica. Currently 99% of the data traffic that is crossing oceans is carried by undersea cables.
- The reliability of submarine cables is high, especially when (as noted above) multiple paths are available in the event of a cable break.
- The total carrying capacity of submarine cables is in the terabits per second, while satellites typically offer only 1,000 megabits per second and display higher latency.

Simple paper-strip based naked-eye fluoride test

In news
Scientists from the Institute of Nano Science and Technology (INST) have developed an equipment-free fluoride ion detection and quantification in drinking water with the naked eye.

It can be operated by non-experts for household use to evade Fluorosis-based disorders.

Fluorosis
- It is a crippling disease resulting from deposition of fluorides in the hard and soft tissues of body due to excess intake of fluoride through drinking water/food products/industrial pollutants over a long period.
- It results in dental fluorosis, skeletal fluorosis, and non-skeletal fluorosis.
- Easy detection of fluorides in water can help preventing the public health hazards.

Current method
- Currently available, commercial kits for F– detection need analytical methods, mainly spectrometers (mobile or static).
- Some colorimetric detection kits are available, but they have some handling issues like work only with pH<1 (use of HCl), etc.
- The kit developed by the INST scientists' scores above these in its ease of usage.

Vaishwik Bharatiya Vaigyanik Summit

In news

The Prime Minister Narendra Modi is to inaugurate VAIBHAV Summit on October 2, 2020.

VAIBHAV Summit
- **Vaishwik Bharatiya Vaigyanik (VAIBHAV) Summit** is a collaborative initiative by S&T and Academic Organisations of India to enable deliberations on thought process, practices and R&D culture with a problem solving approach for well defined objectives.
- **The VAIBHAV initiative aims** to bring out the comprehensive roadmap to leverage the expertise and knowledge of global Indian researcher for solving emerging challenges.
- By bringing the Indian Overseas and Resident academicians/scientists together a structure of association will be evolved.
- The aim of summit is to reflect in-depth on the collaboration and cooperation instruments with academia and scientists in India.
- The goal is to create an ecosystem of Knowledge and Innovation in the country through global outreach.

- To bring Indian luminaries all over the world it to discuss and debate about collaboration mechanism with their counterparts in India.
- To bring together diverse academic cultures.
- To strengthen aatma nirbhar Bharat initiative.

Coal Gasification and Liquefaction

In news
India aims for 100 million tonnes (MT) coal gasification by 2030 with investments worth over Rs. 4 lakh crores

Significance

This will boost production of synthetic natural gas, energy fuel, urea for fertilisers and production of other chemicals.

Coal gasification
- It is the process of producing syngas—a mixture consisting primarily of carbon monoxide (CO), hydrogen (H2), carbon dioxide (CO2), natural gas (CH4), and water vapour (H2O)—from coal and water, air and/or oxygen.
- Historically, coal was gasified to produce coal gas, also known as "town gas".
- Coal gas is combustible and was used for heating and municipal lighting, before the advent of large-scale extraction of natural gas from oil wells.
- In current practice, large-scale coal gasification installations are primarily for electricity generation, or for production of chemical feedstocks.
- The hydrogen obtained from coal gasification can be used for various purposes such as making ammonia, powering a hydrogen economy, or upgrading fossil fuels.

Applications
- The syngas can be used in a variety of applications such as in the production of electricity and making chemical products such as fertilisers.
- The hydrogen obtained from coal gasification can be used for various purposes such as making ammonia, powering a hydrogen economy or upgrading fossil fuels.
- Methane or natural gas extracted from coal gasification can be converted into LNG for direct use as fuel in the transport sector.

Biofortification
In news
Prime Minister dedicated to the Nation 17 recently developed biofortified varieties of 8 crops.

Indian thali into nutri-thali
- The 17 recently developed biofortified varieties of 8 crops to be dedicated to the nation by the Prime Minister will have up to 3.0-fold increase in nutritional value.
- The high zinc rice has been developed from landraces of Assam rice collected from Garo hills and those of finger millets from Gujarat collections of Dang district

Significance
- The production of bio-fortified crop varieties will be upscaled and linked with government programmes of mid-day meal, Anganwadi etc. to reduce malnutrition and make India Kuposhan Mukta through naturally enriched food ingredients.
- This will also usher in higher income of farmers and will open new avenues of entrepreneurship development.

Biofortification
- It is the process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology.
- Biofortification differs from conventional fortification in that biofortification aims to increase nutrient levels in crops during plant growth rather than through manual means during processing of the crops.
- Biofortification may therefore present a way to reach populations where supplementation and conventional fortification activities may be difficult to implement and/or limited.

Examples of biofortification projects include
- Iron-biofortification of rice, beans, sweet potato, cassava and legumes;
- Zinc-biofortification of wheat, rice, beans, sweet potato and maize;
- Provitamin A carotenoid-biofortification of sweet potato, maize and cassava; and
- Amino acid and protein-biofortification of sourghum and cassava.

Injectable hydrogel can help rapid recovery in internal injuries

Context
Repeated dressing of diabetic wound badly affects its healing process while it is difficult to assess the wound repair in internal injuries due to treatment complications.

In news

An injectable hydrogel derived from spirulina can help accelerated wound repair in internal injuries and rapid healing in diabetic patients.

Details of hydrogel

- Govt. of India, have recently developed an injectable hydrogel from *kappa-carrageenan*, a water-soluble polysaccharide found in edible red seaweeds and a pigmented protein called C-phycocyanin found in spirulina.
- The gelling property of *κ-carrageenan* was utilized by the researchers along with C-phycocyanin as an injectable and regenerative wound dressing matrix to heal the wound rapidly and also to monitor it progress in real-time.
- The matrix developed was highly biocompatible.
- The research published in the journal *'Acta Biomaterialia'* established the superior haemostatic (blood flow retarding) capabilities of the combination in traumatic injury conditions.

Significance

- It could help monitor the recovery of the wound by taking the time-lapse 3D images of the hydrogel filled wound.
- Changing depth of the wound bed allow detection of the percentage recovery in wounds.
- Such types of imaging can allow real-time monitoring of wound repair in internal injuries and diabetic patients where monitoring of wound repair is a challenge.
- The synthesized hydrogel will be highly beneficial for people of all age groups in wound healing applications.
- Its injectable property allowed its application in tough to reach internal injuries without opening the peritoneum of the patients.
- It also holds promise to be utilized in high altitude frost injury application due to its self-healing properties.

Way forward

The team is now exploring the mechanism of action of *κ-carrageenan-C-phycocyanin* (κ-CRG-C-Pc) hydrogel and involvement of signalling pathway for exploring the process of wound healing and regenerative properties.

International Science Festival 2020

In news

CSIR-Central Mechanical Engineering Research Institute (CMERI)organised a series of pre-events as a Curtain Raiser to the India International Science Festival- 2020 to generate awareness

Highlights of the event

- The awareness included lectures on a diverse range of topics ranging from Municipal Solid Waste, Amphibian Robots, Air and Water Purification, Solar Power Technologies, Smart Grid, Mini-Grid and Agro-Machineries.
- There were a total of 8 events which reached out to over 17,000 people virtually.

India International Science Festival

- It is a platform to accelerate the dissemination of Science to the Society and exchange of ideas and innovations.
- It is a vehicle to showcase the tremendous Science & Technology potential of Modern-Day India and the rich scientific heritage.

Theme: *"Science for Self-Reliant India and Global Welfare"*

The journey of IISF started in 2015.

This year's 6th edition of the IISF is being organized during 22-25 December 2020 on the virtual platform.

Objective

To showcase Indian science achievements and innovations for the students, young researchers and general public and to display India's contribution in the field of S&T and to motivate the young scientists to find solutions to the burning issues of our society.

AI & Robotics Technologies Park (ARTPARK)

In news

An AI & Robotics Technologies Park (ARTPARK) set up in Bengaluru will promote technology innovations in AI & Robotics leading to societal impact by executing ambitious mission mode R&D projects in healthcare, education, mobility, infrastructure, agriculture, retail and cyber-security focusing on problems unique to India.

Significance

This will lead to cutting edge innovations in terms of new technologies, standards, products, services and intellectual properties.

ARTPARK

- ARTPARK, is a unique not-for-profit foundation established by Indian Institute of Science (IISc), Bengaluru with support from AI Foundry in a public-private model.
- It will bring about collaborative consortium of partners from industry, academia and government bodies.
- ARTPARK will develop AI & Robotics facilities to support technology innovations as well as capacity building through advanced skills training of students and professionals in these areas.

- It will develop DataSetu - that will enable confidentiality and privacy-preserving framework to share data and run analytics spurring the data-sharing ecosystem and create a data marketplace, boosting AI applications and solutions.
- ***One such service will be BhashaSetu - that will enable real-time Indic language translation, both of speech to speech and speech to text.***
- This will further unlock the economic potential of the country, and enable all Indian citizens to equitably participate in the economic progress, regardless of their language.

Improved disease-resistant banana plants

Context
India is the leading producer of banana in the world and the present cultivation is vulnerable to this fungal disease which dwells in soil as a saprophyte and shifts to the parasitic mode in presence of host roots. Scientists are trying to understand the disease paradigm for developing innovative management strategies.

In news
An improved understanding of ***Fusarium,*** a root pathogen infection in banana plant may soon help develop strategies to prevent the disease that causes wilting of the fruit crop that is grown in at least 5 major states of India.

The study
- According to the research work conducted by Dr.Ghag and his team, a molecular combat exists between the two partners at the site of infection where repertoire of virulent factors from Foc and defense molecules from banana are secreted.
- In the process of recognition of banana roots, Foc activates a series of virulence genes.
- All these virulence genes are under the control of a few master regulators which are up-regulated during colonization.
- FocSge1 is one such master regulator that acts as a co-activator and triggers the expression of effector genes required for pathogenicity.

Facts about Banana fruit crop
- Banana is an important fruit crop of many tropical and subtropical regions of India.
- It is cultivated in India in an area of 830.5 thousand ha and total production is around 29,779.91 thousand tons.
- Main banana growing states are Tamil Nadu, Maharashtra, Gujarat, Andhra Pradesh and Karnataka.
- India contributes 29.19% of the global production of banana.
- Besides India, other major banana producing countries are China, Philippines, Ecuador, Brazil and Indonesia.

Why star explodes?

In news
Upcoming experiments may be able to probe their theory and shed light on the almost century old conundrum how do stars explode.

Details
- Scientists may soon find a clue to how stars explode due to neutrinos, one of the most abundant particles in the universe.
- These sub atomic particles are extremely difficult to detect because of their limited interactions with matter.
- However, they are very important to the study of supernovas or powerful luminous stellar explosions, because they power the explosion and provide an early warning signal that allows scientists to look in the right direction before the supernova explosion takes place.

Supernova
A supernova is the explosion of a star. It is the largest explosion that takes place in space.

Where Do Supernovas Take Place?
- Supernovas are often seen in other galaxies. But supernovas are difficult to see in our own Milky Way galaxy because dust blocks our view.
- In 1604, Johannes Kepler discovered the last observed supernova in the Milky Way. NASA's Chandra telescope discovered the
- remains of a more recent supernova. It exploded in the Milky Way more than a hundred years ago.

Why Do Scientists Study Supernovas?
- A supernova burns for only a short period of time, but it can tell scientists a lot about the universe.
- One kind of supernova has shown scientists that we live in an expanding universe, one that is growing at an ever increasing rate.
- Scientists also have determined that supernovas play a key role in distributing elements throughout the universe.
- When the star explodes, it shoots elements and debris into space.
- Many of the elements we find here on Earth are made in the core of stars.
- These elements travel on to form new stars, planets and everything else in the universe.

Sewage Treatment - Phytorid Technology

Context

A huge quantity of sewage is generated in rural and urban areas. With limited installed capacity of treatment in centralised manner, a large portion of this sewage remains untreated and left as it is to water bodies.

In news

An eco- friendly technology for sewage water treatment (Phytorid) was inaugurated at
CSIR-National Chemical Laboratory (NCL)-Pune.

About Phytorid

- Phytorid is a self sustainable technology for wastewater treatment that works on the principle of natural wetland.
- It uses certain specific plants which can absorb nutrients directly from wastewater but do not require soil.
- ***These plants act as nutrient sinker and remover.***
- Using Phytorid Technology for the treatment of sewage, it is possible to recover and reuse the treated water for gardening purposes.

Advantages

- No mechanical or electrical machinaries
- Space saving
- Decentralized and saves cost of piping
- Can be integrated in natural topography

Sewage treatment

- It is the process of removing contaminants from municipal wastewater, containing mainly household sewage plus some industrial wastewater.
- Physical, chemical, and biological processes are used to remove contaminants and produce treated wastewater (or treated effluent) that is safe enough for release into the environment.
- A by-product of sewage treatment is a semi-solid waste or slurry, called sewage sludge.
- The sludge has to undergo further treatment before being suitable for disposal or application to land.

Worlds' first, satellite-based narrowband-IoT network in India

In news

BSNL, in partnership with Skylotech India, announced a breakthrough in satellite-based NB-IoT (Narrow Band-Internet of Things)

Highlights

- ***This is theworlds first satellite-based NB-IoT network***
- With this solution, India will now have access to a ubiquitous fabric of connectivity for millions of yet unconnected machines, sensors and industrial IoT devices.
- This new 'Made in India' Solution, which is indigenously developed by Skylo, will connect with BSNLs satellite- ground infrastructure and provide PAN-India coverage, including Indian seas.
- The coverage will be so vast that it will not leave any dark patch within the boundary of India, from Kashmir & Ladakh to Kanyakumari, and from Gujarat to the North East, including the Indian seas.
- Examples of where this technology has already been tested successfully include, Indian Railways, fishing vessels, and enabling connected vehicles across India.
- This new digital machine connectivity layer will serve as a complement to smartphone-centric mobile & Wi-Fi networks, and covers India's full geography to bring online new applications for the first time.

IoT

The Internet of Things, or IoT, refers to the billions of physical devices around the world that are now connected to the internet, all collecting and sharing data.

VigyanYatra

Context

The 6th edition of IISF was recently organised and Vigyan Yatra is an promotional activity performed under it

Highlights

Vision
To promote scientific temper and inculcate the culture of science among the masses.

- In this activity, the mobile science exhibition vans flag off from many cities of the country
- Indian Association of the Cultivation of Science (IACS), Kolkata organised this VigyanYatra virtually**.**

- CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad also organized 'VigyanYatra' on Youtube platform,under the East segment of four segments (East, West, North and South) cover the whole country.
- This program also ignites the minds of the youngsters because science exhibition mobile vans are viewed by all local school/university students that create interest in science and generate awareness about the IISF.
- This 6th edition of IISF is going to be organized on virtual platform due to the unprecedented Covid-19 pandemic.

High-performance hybrid supercapacitors

In news
Scientists at **the International Advanced Research Center for Powder Metallurgy and New Materials (ARCI)**, an autonomous body of the Department of Science and Technology, Government of India in collaboration with IIT Hyderabad have developed high-performance hybrid supercapacitors.

Highlights
- It is low-cost supercapacitor device with excellent capacitive retention.
- It can pave the way for the next generation high power-high energy storage devices.
- Hybrid supercapacitors combine the features of both conventional double layer supercapacitors and batteries and act as high power-high energy storage devices.

Supercapacitor Properties
- These hybrid supercapacitor have high power density, long cycle life, and excellent capacity retention compared to their battery counterparts.
- These electrodes have excellent electrochemical performance.
- It contains nanosheet structures with incorporated oxygen vacancies as an active material, for hybrid supercapacitors.

Supercapacitors
These are electrochemical energy storage devices that store and release energy by reversible adsorption and desorption of ions at the interfaces between electrode materials and electrolytes.

Hypersonic Wind Tunnel

In news
Defence Minister Rajnath Singh inaugurated the advanced Hypersonic Wind Tunnel (HWT) test facility Hyderabad.

Highlights
- India the third country after the US and Russia to have such a facility.
- It is an indigenous development and an outcome of synergistic partnership with Indian industries.
- The facility has the capability to **"simulate hypersonic flow"** over a wide spectrum and will play a major role in the realization of highly complex futuristic aerospace and defence systems.
- Two anti-drone technologies were demonstrated by DRDO labs.

Hypersonic Wind Tunnel
- It is designed to generate a hypersonic flow field in the working section, thus simulating the typical flow features of this flow regime - including compression shocks and pronounced boundary layer effects, entropy layer and viscous interaction zones and most importantly high total temperatures of the flow.
- The speed of these tunnels vary from Mach 5 to 15.

Key features
- Secure communication link
- Effective recoil management system
- High firing angular resolution and vision-based target detection and tracking

Technological achievements
- Hypersonic Technology Demonstration Vehicle (HSTDV)
- Anti-Radiation Missile (RUDRAM)
- Quick Reaction Surface to Air Missile (QRSAM)
- Supersonic Missile Assisted Release Torpedo (SMART)
- Quantum Key Distribution (QKD)

Quantum based technology for Random Number Generation

In news
DRDO Young Scientists Laboratory Develops Quantum based technology for Random Number Generation

The research
- The Laboratory has developed a fiber-optic branch path based QRNG.
- Branch path based QRNG is based on the principle that if a single photon is incident on a balanced beam splitter, it will take either of the beam-splitter output paths randomly.

- As the path chosen by photon is random, the randomness is translated to sequence of bits.
- QRNG system developed by the laboratory has passed the global randomness testing standards viz. NIST and Die-harder Statistical Test Suites at the speed of ~150 kbps after post-processing.
- The generated random numbers are also evaluated and verified using DRDO's indigenously developed Randomness Testing Statistical Test Suite of SAG.

Significance

With this development India enters the club of countries who have the technology to achieve the generation of random numbers based on the Quantum Phenomenon.

Random Number

- Random numbers have essential roles in many fields, such as Quantum Communication, cryptography (key generation, key wrapping, authentication etc.), scientific simulations, lotteries and fundamental physics experiments.
- The generation of genuine randomness is generally considered impossible with classical means.
- Quantum Mechanics has the inherent potential of providing true random numbers and thus has become the preferred option for the scientific applications requiring randomness.

40th Indian scientific expedition to Antarctica

In news

India launched the 40th scientific expedition to Antarctica his Indian expedition marks four decades of country's scientific endeavour to the southern white continent.

Highlights

- The 40th expedition journey will be flagged off from Goa on January 5, 2021, with 43 members onboard
- The Indian Antarctic expeditions began in 1981. The first trip comprised of a team of 21 scientists and support staff led by Dr SZ Qasim.
- The preceding 39th Indian Scientific Expedition to Antarctica was launched in November 2019.

Background

- The Indian Antarctic expeditions began in 1981.
- The Indian Antarctic programme has now been credited to have built three permanent research base stations in Antarctica—named Dakshin Gangotri, Maitri, and Bharati.
- As of today, India has two operational research stations in Antarctica named Maitri and Bharati.

- The National Centre for Polar and Ocean Research (NCPOR), Goa, manages the entire Indian Antarctic program.

'Blue jet' lightning

In news

Scientists on the International Space Station spotted a bright-blue lightning bolt shooting upward from thunderclouds.

How it appears?

- Blue jets seem to appear when the positively-charged upper region of a cloud interacts with the negatively charged boundary between the cloud and the air above, according to the report.
- The blue jet appears as a result of this "electric breakdown," where the opposing charges swap places in the cloud and briefly equalize, releasing static electricity.
- The properties of blue jets and the altitude to which they extend above clouds "are not well characterized," the authors noted, so this study adds to our understanding of the dramatic phenomenon.

What are blue jets?

- Blue jets are initiated as "normal" lightning discharges.
- The positive end network fills the negative charge region and after that the negative end fills the positive charge region.
- After that, the positive end exits the cloud and starts propagating upward.
- Earlier, it was believed that blue jets are directly related to lightning flashes but it is the result of the hails.
- The blue jets are brighter than sprites and are blue in colour.
- The blue colour of the jets is the result of blue and near-ultraviolet emission lines from neutral and ionized molecular nitrogen.
- The blue jets were recorded on October 21, 1989 for the first time.

NICSI celebrates 25 years of its establishment

In news

National Informatics Centre Services Incorporated (NICSI), a Public Sector Enterprise under National Informatics

Centre (NIC), Ministry of Electronics & Information Technology (MeitY), celebrated 25 years of its establishment.

NIC Products Portfolio
- The visual intelligence tool, through the collaborative effort of NIC and NICSI (CEDA), is completely developed in-house using open source technologies and bringing together the best features comparable to market leading BI tools.
- The tool would be primarily used by Government Departments at various levels in the centre and state.
- It will provide State-of-the-art and powerful data analysis for officials to design analytical reports and turn data into accurate analysis and smart visualizations.

e-Auction India
- It caters to the electronic forward and reverse auction requirements of the Government departments and organizations.
- It aims at transparency and non-discrimination amongst bidders, by allowing free access to auction documents, clarifications, online submission of quotes from any place on 24x7 basis, in a secured environment, adopting industry standard open technologies.

Work from AnyWhere Portal
- WAW (Work from AnyWhere) Portal will ease and enhance accessibility of key applications to the Government employees.
- WAW portal is built upon core workplace experience and creates a highly extensible environment for users to dynamically adapt to changing needs.
- The virtual work environment, provisioned by WAW portal, will empower employees with all the key resources enabling them to access organizations' applications and data and communicate with fellow officials.
- With the following objectives to achieve, WAW portal will facilitate quick transition to remote workplace environment, while maintaining secured access to departmental applications.

NICSI
National Informatics Centre Services Inc. (NICSI) was established in 1995 as a section-8 (erstwhile section-25) company under National Informatics Centre, Ministry of Electronics & Information Technology, Government of India for providing and procuring IT solutions for multiple e-governance projects undertaken by NIC, MeitY, Governments and Government Organizations (like Public Sector Undertakings).

Biodigester Mk-II Technology

In news
DRDO Signs MOU with MAHA-METRO for implementation of Advanced Biodigester Mk-II Technology in Metro Rail Network"

Highlights
- DRDO's biodigester is an ***indigenous, green and cost-effective technology,*** with a rare distinction.
- Indian Railways has already installed about 2.40 lakh biodigesters in its fleet of passenger coaches.
- This technology is upgraded through improvements in the bio-degradation efficiency, design modification and addition of secondary treatment module.
- The new reactor is designed to provide more path length with increased biological reaction time, thereby enhancing the bio-degradation efficiency of the system.
- This technology was primarily developed for the armed forces in high altitude Himalayan regions, including Leh-Ladakh and Siachen glacier.

Biodigester
- The biodigester technology degrades and converts human waste into usable water and gases. The generated gas is used for cooking and water for irrigation purposes. This is done in an eco-friendly manner.
- The biodigester technology involves bacteria that feed upon fecal matter.
- The fecal matter is dumped into a tank along with the bio digesting bacteria. The bacteria through anaerobic process will degrade the fecal matter. During the process water and methane gas are released.

5th National STI Policy

In news
The Government of India has now released the draft of 5th National Science, Technology, and Innovation Policy for public consultation.

Aim
- The 5th Science, Technology, and Innovation Policy aim to foster, develop, and nurture a robust system for evidence and stakeholder-driven STI planning, information, evaluation, and policy research in India.
- The policy also identifies and addresses the strengths and weaknesses of the Indian STI ecosystem to catalyse socio-economic development of India and to make the Indian STI ecosystem globally competitive.

- It also aims to bring in the concept of dynamic policy with a robust policy governance mechanism incorporating features such as implementation strategy, periodic review, policy evaluation, feedback, and adaptation, and most importantly, a timely exit strategy for various policy instruments.

Evolution of STI policies in India are as follows:
- The **first policy** on science was adopted in the year 1958 in India-- Scientific Policy Resolution, 1958 **(SPR1958)**.
- The **second policy** on science was adopted in the year 1983 in India-- Technology Policy Statement, 1983 **(TPS1983)**.
- The **third policy** on science was adopted in the year 2003 in India-- Science and Technology Policy 2003 **(STP2003)**.
- The **fourth policy** on science was adopted in the year 2013 in India-- Science, Technology, and Innovation Policy 2013 **(STIP2013)**.

Objective
- To identify and address the strengths and weaknesses of the Indian STI ecosystem to catalyse the socio-economic development of the country and also make the Indian STI ecosystem globally competitive.
- It aims to foster, develop, and nurture a robust system for evidence and stakeholder-driven STI planning, information, evaluation, and policy research in India.

ISRO to adopt 100 Atal Tinkering Labs

In news
ISRO to adopt 100 Atal Tinkering Labs across the country for mentorship and promoting STEM and Space Education

Significance
This collaboration with ISRO will add great impetus to the opportunities provided by ATLs to young school students to learn in space technologies and innovate for the country

Atal Tinkering Lab (ATL)
- It is a program run by Atal Innovation Mission (AIM) under NITI Aayog to foster curiosity and innovative mindset in young students across India to encourage research and innovation in schools across the country.
- The vision of the initiative is 'To create One million children in India as Neoteric Innovators'.

STEM Education
The Space Foundation is building the next generation of space leaders and improving the overall quality of education through teacher, student and community programs that use space themes to improve students' interest and skills in science, technology, engineering and mathematics (STEM).

Ultra-high mobility electron gas

In news
Scientists have produced electron gas with ultra-high mobility, which can speed up transfer of quantum information and signal from one part of a device to another and increase data storage and memory

Details
- The need for attaining new functionalities in modern electronic devices has led to the manipulation of property of an electron called **spin degree of freedom** along with its charge.
- This has given rise to an altogether new field of spin-electronics or 'spintronics'. It has been realized that a phenomenon called the 'Rashba effect', which consists of splitting of spin-bands in an electronic system, might play a key role in spintronic devices.
- Scientists at **Institute of Nano Science and Technology (INST), Mohali (Punjab)**, an autonomous institution of Department of Science and Technology (DST), Government of India, have produced an ultra-high mobility **2d-electron gas(2DEG)** at the interface of two insulating oxide layers.

Working
- Due to the high mobility of the electron gas, electrons do not collide inside the medium for a long distance and hence do not lose the memory and information**.**
- Hence, such a system can easily remember and transfer its memory for a long time and distance.
- In addition, since they collide less during their flow, their resistance is very low, and hence they don't dissipate energy as heat. So, such devices do not heat up easily and need less input energy to operate.

Driverless Metro Car in India

In news
Indigenously designed & developed state-of-the-art Driverless Metro trains are being manufactured at BEML Bangaluru Complex

- Mumbai Metropolitan Region Development Authority (MMRDA) project has 63 per cent indigenous content which will enhance to 75 per cent in next two to three years.
- Driver-less metro project will act as a source of inspiration to other Indian companies, particularly the defence industry to help India emerge as a manufacturing hub.
- Ministry of Defence has taken a number of steps like introducing Defence Production and Export Promotion Policy (DPEPP) 2020 and new Defence Acquisition Policy incorporating provisions for purchasing equipment and platforms with more indigenous technology.

Possibilities in future

- MMRDA driver-less technology will lead to its expansion into other fields of defence such as tanks and fighter planes in the future.
- **The Ministry of Defence has taken a number of steps like introducing Defence Production and Export Promotion Policy (DPEPP) 2020 and new Defence Acquisition Policy incorporating provisions for purchasing equipment and platforms with more indigenous technology.**

Chitra Flow Diverter stent

In news

Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), an autonomous institute of the Department of Science & Technology (DST), Govt. of India, under theTechnical Research Centre (TRC), has entered into Technology Transfer Agreements with Pune based Biorad Medisys for two biomedical implant devices.

Highlights

- The flexible flow diverter stent that allows accurate positioning of the device across the aneurysm developed by SCTIMST is the first one to be manufactured in India.
- The cost of the Chitra Flow Diverter stent is expected to be priced significantly lower than the currently imported ones.

Significance of the device

The novel ASD occlude developed by SCTIMST promotes better healing of the hole in the heart and also has softer edge for minimizing the damage to adjacent tissue.

Functioning of the device

- The delivery system has a novel release mechanism to enable smooth release of the device. The device is protected through two

Indian patent applications, one international patent application, and design registration.
- It possesses kink resistance and improved radial strength through a novel braiding pattern making the device flexible and adaptable to the distortion of the vessel boundaries.
- The device is also provided with radio-opaque markers for radiographic visibility.

Anomalous behaviour of bacterial colonies

In news

Scientists have found a clue to dynamical origin of fluctuations in systems like fish schools, swarm of insects, flocking birds and bacterial colonies, which are called active matter systems.

Significance

This understanding can be useful in nanotechnology applications like building small-scale energy-efficient bio-devices as well as biomedical applications like characterizing infection spread in organs, antibiotic resistance and so on.

Finding

- Such systems are made up of self-driven components which extract energy from their surroundings to generate mechanical work.
- Due to continuous energy input, such systems are driven far from equilibrium and exhibit, unlike in equilibrium, fascinating collective behaviours, like clustering, "giant" mass fluctuations and anomalous transport.
- Particularly, their transport properties (molecular properties, analogous to viscosity, thermal conductivity and mobility that indicate the rate at which momentum, heat, and mass are transferred from one part of a system to another) can be perplexing at times.

Analogy to understand the finding

- The anomalous behaviour of such systems can be understood by considering a cup of coffee, stirred with a spoon.
- If one stops stirring, the coffee will eventually come to rest, due to the internal viscous forces, which resist the fluid motion.
- In contrast, imagine "stirring" a bacterial solution, which, under suitable conditions (bacterial concentration), can exhibit perpetual or unceasing collective directed motion; in that case, the viscosity would vanish in such "active" bacterial fluids.

AstroSat's Ultraviolet Imaging Telescope spots rare ultraviolet-bright stars

In news

AstroSat's Ultraviolet Imaging Telescope spots rare ultraviolet-bright stars in a massive intriguing cosmic dinosaur in the Milky Way

Findings

- It is said to have at least five generations of stars have spotted rare hot UV-bright stars in it.
- These stars whose inner core is almost exposed, making them very hot, exist in the late stages of evolution of a Sun-like star.
- It is not clear how these stars end their lives as not many of them are detected in these fast-evolving phases, making their study crucial.
- Astronomers distinguished the hot UV-bright stars from the relatively cooler red giant and main-sequence stars which appear dim in these images.
- About 34 UV-bright stars were found to be members of the globular cluster. From the data, the team derived the properties of these stars such as their surface temperatures, luminosities and radii.

Mass of Dark matter

Context

Around 95 percent of the Universe is unknown to human beings. It is often referred to as dark which has nothing to do with the colour of any substance but to do with the unknown nature of cosmic entities known as dark matter and dark energy.

In news

Scientists from the University of Sussex have found a new way to know more about dark matter.

They have narrowed down the range of masses within which particles that could make up dark matter may lie in.

Finding

- The range they have established — 10^{-3} electron-volts to 10^7 electron-volts — is far smaller than the earlier known range of 10^{-24} electron-volt to 10^{19} giga electron-volt.
- This is the first time anyone has thought of using what we know about quantum gravity to calculate the mass range for dark matter
- Scientists estimate that roughly 68 per cent of the Universe is made up of dark energy which is responsible for the accelerated expansion of the Universe.
- Another 27 per cent is dark matter whose existence was inferred from the observation that

ordinary matter in galaxies, including the Milky Way, is far less than that required by gravity to hold the galaxies together.

- Dark matter's gravitational effects are also necessary to explain the motions of clusters of galaxies and the structure of the entire Universe at the largest scale.
- On smaller scales, dark matter is too diffused to impact the motion of the Solar System, Earth or the origin and evolution of humans in any significant way.

INSPIRE programme

In news

Department of Science & Technology (DST) has developed an innovative programme named Innovation in Science Pursuit for Inspired Research (INSPIRE)

Aim

To attract, motivate, nurture and train talented and meritorious students to study science subjects and opt for careers in Research and Development (R&D) to build a pipeline of quality human resource, thereby widening the R&D human resource base of the country.

INSPIRE has three components

- Scheme for Early Attraction of Talent (SEATS),
- Scholarship for Higher Education (SHE) a
- Assured Opportunity for Research Careers (AORC).

Scheme for Early Attraction of Talent (SEATS)

It aims to attract talented youth to study science by providing INSPIRE Award of Rs 5000 to one million young learners of the age group 10-15 years, ranging from Class VI to Class X standards, and also by arranging summer camps for about 50,000 science students of Class XI with global leaders in science to experience the joy of innovations on an annual basis through INSPIRE Internship.

Scholarship for Higher Education (SHE

- It aims to enhance rates of attachment of talented youth to undertake higher education in science intensive programmes, by providing scholarships and mentorship.
- The scheme offers 10,000 Scholarship every year at Rs 0.80 lakh per year for the talented youth in the age group 17-22 years, for undertaking Bachelor and Masters level education in natural sciences.
- The main feature of the scheme is the mentorship support provided to every scholar.

Assured Opportunity for Research Careers (AORC)

- It aims to attract, attach, retain and nourish talented young scientific Human Resource for strengthening the R&D foundation and base. It has two sub-components.

- In the first component i.e. INSPIRE Fellowship (age group of 22-27 years), it offers 1000 fellowships every year, for carrying out doctoral degree in both basic and applied sciences including engineering and medicine.
- In the second component i.e. INSPIRE Faculty Scheme, it offers assured opportunity every year for 1000 post- doctoral researchers in the age group of 27-32 years, through contractual and tenure track positions for 5 years in both basic and applied sciences area.

Techno-management options to control Orobanche in mustard

In news
A field workshop on "Techno-management options to control Orobanche in mustard-a pilot study" was jointly organized by Institute of Pesticide Formulation Technology (IPFT), Gurugram, Haryana and the ICAR-Directorate of Rapeseed-Mustard Research (ICAR-DRMR), Bharatpur at village Gurda Nandi in the Bharatpur district.

About the workshop
- The workshop was held at the project site and attended by the Scientists from IPFT, Gurugram and the ICAR-DRMR, Bharatpur as well as by the 50 mustard growing farmers whose crop is affected by Orobanche.
- The work initiated on innovative herbicide formulation and field testing showed good insights about the Orobanche management and will come out with fruitful results in the coming years

Orobanche
- ***Orobanche a serious hidden parasitic weed in mustard*** cause severe yield loss to the extent of up to 50% and there is no absolute control measures developed so far
- Broomrapes (***Orobanche*spp**.)are aggressive root parasitic weeds, which attack strategic food crops, such as legumes and vegetables, and threaten the livelihood of many nations.
- The continuous spread of ***Orobanche*** limits the choice of rotational crops and often force farmers to give up growing the most profitable host crops. Many farmers in the areas infested abandon agriculture altogether, forced to migrate and seek other means of income outside the rural domains.
- Heavy ***Orobanche***infestation does not only lead to a complete crop failure, but make field soils *Orobanche*-sick over a long period of time, preventing the reasonable production of legumes and vegetables in the infested fields for many

years to come. Failure of containing this parasite will be disastrous.
- The continuous spread of the parasite in many countries is hastened by the lack of awareness about the biology of the parasite and the possible means of its management among farmers and personnel of the Ministries of Agriculture.

Multidisciplinary Research Unit (MRU)

Why in news?
Department of Health Research has a Central Sector Scheme titled "Setting-up of nation-wide network of laboratories for managing epidemics and national calamities.

Highlights
- The Scheme has mandate to create three tier networks of Virus Research and Diagnosis Laboratories at Regional Level, State level and Medical College Level for timely diagnosis/identification of viruses during outbreaks of epidemics and generation of data about viral diseases for facilitating quick deployment of resources & measures to save the human lives.
- Regional Laboratories have state-of-art facilities so that it could achieve the objectives in research, continuous monitoring and surveillance of existing as well as new viral and other strains and handling of viruses etc. with a potential of being used as agents of bioterrorism, capacity building, diagnosis, development of diagnostic kits etc.

Multi -Disciplinary Research Units
- Government of India approved the scheme for 'Establishment of Multi -Disciplinary Research Units (MRUs) in the Government Medical Colleges/Research Institutions' as a path- breaking initiative to develop/strengthen the health research infrastructure in the country.
- This initiative fulfils the function of Department of Health Research related to "Promotion, Coordination and Development of Basic, Applied and Clinical Research". Scheme has now been continued beyond 12th year Plan i.e. for the period of 2017-18 to 2019-20.

Objectives
- To encourage and strengthen an environment of research in Medical Colleges
- To bridge the gap in the infrastructure which inhibits health research in the Medical Colleges by assisting them to establish multidisciplinary

research facilities with a view to improve the health research and health services.

- To ensure the geographical spread of health research infrastructure, in order to cover un-served and under-served Medical Colleges and other institutions
- To improve the overall health status of the population by creating evidence-based application of diagnostic procedures/processes/methods.

Major Functions of the MRU

- To promote and encourage quality medical research in the Medical Colleges/Institutions.
- To constitute local research advisory committees for identifying the research priorities and projects with participation of State health system officials.
- To undertake research in non-communicable diseases and other need-based research as recommended by the Local Research Advisory Committee.

SAKSHAM (Shramik Shakti Manch)

In news

Two new initiatives of Technology Information, Forecasting and Assessment Council (TIFAC) —SAKSHAM (Shramik Shakti Manch)

SAKSHAM

- SAKSHAM (Shramik Shakti Manch), a dynamic portal for jobs/ mapping the skills of Shramiks vis-à-vis requirements of MSMEs and other industries all across the country.
- The portal with the demand and supply data uses algorithm and Artificial Intelligence (AI) tools, for geo spatial information on demand and availability of Shramiks, and also provide analysis on skill training programmes of Shramiks.
- The pilot portal originally initiated with two districts is now being launched as an all India portal.

Key Features of SAKSHAM

- A dynamic job portal - opportunity for Shramiks and MSMEs
- Facilitate creation of 10 lakh blue collar jobs
- Direct connect between Shramiks and MSMEs, no middleman in between
- Minimise migration of Shramiks – job opportunity in proximate MSMEs

International Day of Women and Girls in Science 2021

Theme: ***Women Scientists at the forefront of the fight against COVID-19***

- On 11 February 2021, the 6th International Day of Women and Girls in Science Assemblywill be held at the United Nations Headquarters virtually.
- With great momentum and interest to accelerate progress in achieving the 2030 Development Agenda and its 17 Global Goals, the 6th International Day of Women and Girls in Science Assembly theme will be Beyond the Borders: Equality in Science for Society, with a special focus on the value of the social aspects and cultural dimensions in Science, Technology and Innovation to enhance sustainable development programmes.

Optical flare detected in oldest astronomic objects

In news

Indian Astronomers have reported one of the strongest flares from a feeding supermassive black hole or blazar called BL Lacertae

BL Lacertae

- BL Lacertae blazar is 10 million light-years away and is among the 50 most prominent blazars that can be observed with the help of a relatively small telescope. It was among the 3 to 4 blazars that was predicted to be experiencing flares by the Whole Earth Blazar Telescope (WEBT), an international consortium of astronomers.
- Analysis of the flare from this blazar, one of the oldest astronomical objects, can help trace the mass of the black hole and the source of this emission.
- Blazars or feeding supermassive black holes in the heart of distant galaxies receive a lot of attention from the astronomical community because of their complicated emission mechanism.They emit jets of charged particles traveling nearly at the speed of light and are one of the most luminous and energetic objects in the Universe.

Significance

Such analysis can provide a lead to probe into mysteries and trace events at different stages of evolution of the Universe.

Black Hole

- A black hole is a place in space where gravity pulls so much that even light can not get out. The gravity is so strong because matter has been squeezed into a tiny space. This can happen when a star is dying.

- Because no light can get out, people can't see black holes. They are invisible. Space telescopes with special tools can help find black holes.
- The special tools can see how stars that are very close to black holes act differently than other stars.

India Maps the 21st Century

In news

Maps and accurate geospatial data are crucial for national infrastructure projects such as linkages of rivers, creation of industrial corridors and deploying smart power systems

Issue

- The existing regime imposed significant restrictions on the mapping industry - from creation to dissemination of maps, requiring Indian companies to seek licenses, follow a cumbersome system of pre-approvals and permissions.
- Compliance with these regulatory restrictions has subjected startups in India to unnecessary red tape, hindering Indian innovation in map technologies for decades.

Solution

- The regulations that apply to geospatial data and maps henceforth stand radically liberalised.
- The Department of Science and Technology is announcing sweeping changes to India's mapping policy, specifically for Indian companies.
- What is readily available globally does not need to be restricted in India and therefore geospatial data that used to be restricted will now be freely available in India.
- Furthermore, our corporations and innovators are no longer subject to restrictions nor do they require prior approvals before they collect, generate, prepare, disseminate, store, publish, update digital Geospatial Data and Maps within the territory of India.

TECHNOGRAHIS

In news

An Enrolment Module for TECHNOGRAHIS, has been launched by Shri Durga Shanker Mishra, Secretary, MoHUAvia video conferencing.

Highlights

- TECHNOGRAHIS are students from IITs, NITs, engineering, planning and architecture colleges, faculty members, academicians, and stakeholders.
- This will help them in getting a first-hand account of the technologies being used and in turn, they

can adapt and adopt them as per their requirements in the construction sector for a 'Make in India' approach".

- LHP E-Newsletter which captures the progress of the projects at each location. This will be the first volume of the E-Newsletter.
- Twelve such E-Newsletters will be released every month to inform the students, faculty, stakeholders and public about the development works through write-ups and photographs.
- It will also promote a healthy competition among the six states regarding the progress of each state.
- The six State-specific LHP booklets are for structured information about each site.
- They give an idea about the technical specifications, an insight into each technology and other details. These booklets will be one-stop guide for technocrats for information exchange.
- The Ministry of Housing and Urban Affairs (MoHUA) is promoting six Light House Projects (LHPs) as **Live Laboratories** for transfer of technology to the field.
- The primary goal is to encourage large scale participation of people tocreate technical awareness for on-site learning.

NASA lands Perseverance rover on the Mars surface

In news

NASA successfully landed its fifth robotic rover, Perseverance, on the surface of Mars on Thursday after its six-month voyage from Earth.

Highlights

- The rover is the most technologically advanced robot NASA has ever sent to Mars.
- The agency aims to spend nearly two years using it to explore the surface.
- NASA spent about $2.4 billion to build and launch the Perseverance mission, with another $300 million in costs expected for landing and operating the rover on the Mars surface.
- The rover, about the size of a small car, weighs about 1 ton and is 10 feet long by 9 feet wide by 7 feet tall.

Other missions to Mars

- Another Mars mission, the UAE's Al Amal (Hope)– the Arab world's first such mission–**entered the Martian orbit last week**. However, this is an orbital mission and does not involve landing on the planet's surface. Apart from the UAE, China also launched a Mars mission during the July-August window.**What will the Perseverance rover do on Mars?**

- Perseverance will spend one Mars year (two years on Earth) on the planet during which it will explore the landing site region.
- The Jezero crater where it will land was once the site of an ancient river delta (scientists know this because of evidence collected during previous landed and orbital missions that point to wet conditions on the planet billions of years ago).
- If Mars once harboured a warmer atmosphere enabling water to flow in its ancient past (3.5-3.8 billion years ago), and if microbial life existed on it, it is possible that it exists in "special regions" even today.
- The rover is carrying with it seven instruments, which include an advanced camera system with the ability to zoom, a SuperCam, which is an instrument that will provide imaging and chemical composition analysis and a spectrometer.
- One of the most interesting instruments aboard the rover, however, is called MOXIE, which will produce oxygen from Martian atmospheric carbon dioxide.
- If this instrument is successful, then future astronauts (as of now, no human has kept foot on Mars) can use it to burn rocket fuel for returning to Earth.
- The rover will also carry Ingenuity, the first helicopter to fly on Mars.

India emerges key mover of global S&T partnerships.

Context

- The world-class 3.6 meter optical telescopeset up at the place has assumed global importance for observing a number of time-critical cosmic explosive events such as Gamma Ray Bursts and Supernovae.
- It is theAsia's largest fully steerable optical telescope, an international facility for and people from different parts of the world compete for observation and machine time by submitting research proposals.

India is a key player in Mission Innovation'

- India played a crucial role in sowing the seed of 'Mission Innovation', launched as a partnership of 20 countries in 2015.
- The country funded 9 RD&D projects under smart grids engaging 17 Indian institutes, 22 foreign institutes and 15 industries and 8 innovators.
- The country has initiated three R&D programs including national and international bilateral programs to bring in affordable heating and cooling of buildings, supporting 40 R&D projects, engaging over 50 Indian institutes, 15 foreign institutes and 20 industries.

- The country is one of the co-leads in Smart Grids Innovation Challenge in coordination with the member countries, which targets innovation and deployment of reliable, efficient and affordable smart grids technologies at regional, distribution and micro-grids levels in various geographical areas
- to achieve the ability to accommodate 100% renewable based energy sources in power grids.
- DST has supported 9 Projects involving 8 countries--Australia, Canada, France, Germany, Italy, Norway, UK and USA, for large scale renewable energy generation & integration to conventional grid, transition from conventional vehicle to electric vehicle, cyber physical systems in smart grids and financial & market strategies considering renewable penetration.

Dutch Indian Water Alliance for Leadership Initiative (DIWALI)

- In order to find solutions for water related challenges a platform called DIWALI has been developed in which India and Netherlands could participate for designing solution for water challenges.
- The consortium of experts from the two counties would explore the potential and sustainability of Dutch Solutions to resolve challenges in specific water challenged sites in India which are scalable, sustainable and affordable.
- Under this initiative The Dutch consortia titled "Water for Change.
- Integrative and Fit-for-Purpose Water Sensitive Design Framework for Fast Growing Livable Cities" in 2019.

Global Partnerships on Artificial Intelligence (GPAI)

Expanding the areas of its foray of global scientific leadership into new and emerging areas of science, India has joined the 'Global Partnership on Artificial Intelligence (GPAI)' as a founding member to support the responsible and human-centric development and use of Artificial Intelligence (AI).

Scientist from IIT Kanpur develops washable adhesive

In news

Scientists have developed a sticky mat which takes away dust from a contacting surface, ensuring a clean, hygienic, healthy, and refreshing atmosphere at our home, offices, hospitals, and laboratories as also smooth functioning of many expensive equipments.

- The mat is a low-cost one and remains washable and usable over many cycles.
- The scientists took **inspiration from adhesive pad present at the feet of wall climbing animals, like house lizards**.
- The adhesive associated makes use of nanoscopic pyramidal bumps on its surface to attract dust particles towards it, thereby cleaning the sole of our shoes when we step on it.
- When the adhesive gets completely covered with particulate matter, it is washed in a way that we wash our clothes. At this, the surface gets back its ability to stick and remains usable through hundreds of such cycles.

Materials used

- The scientists have used a bottom-up approach of preparation of nano- to micro-patterned surface on elastomer over a large area, control of geometry of surface patterns by simple methods, washability, and reusability of the adhesive over many cycles for the development of this mat.
- It has been validated, and an Indian patent application has been filed for the sticky mat.
- It is simple to prepare, easy to wash,environmentally benign, cost-effective,andcan be a replacement for materials imported for the same purpose.
- The closest substitute is the 3M sticky pad that is not washable or reusable.

Application

- This mat can be used in ICU of Hospitals, clean rooms, facilities housing sophisticated equipment as a component of air filters.
- The technology is important wherever cleanliness and hygiene is desired.
- The product is in 7 – 8 level of technology readiness level and is yet to be commercialised. A pilot plant is being built to make the material in a scale larger.

Waste heat to electricity

In news
Scientists have found a new Lead (Pb) free material which can efficiently convert waste heat to power our small home equipment and automobiles.

Highlights

- Thermoelectric energy conversion allows generation of electrical voltage when one end of a material is heated while keeping the other side cold.

- It entails fitting in three seemingly different properties into a single material-- high electrical conductivity of metals, high thermoelectric sensitivity of semiconductors, and low thermal conductivity of glasses.
- Most efficient thermoelectric materials developed by scientists so far use Lead (Pb) as a major constituent element, restricting their use for mass-market applications.

Major finding

Lead-free material called Cadmium (Cd) doped Silver Antimony Telluride ($AgSbTe_2$) which can efficiently allow recovery of electricity from 'waste heat' marking a paradigm shift in the thermoelectric puzzle.

New way of predicting solar cycles

In news
Scientists have estimated how the Sun has rotated over a century from data extracted from old films and photographs that have been digitized

The study

- The team compared the consistent digitized data with manual data of rotation taken earlier and said that they have been able to differentiate the behaviors of the bigger and smaller solar spots for the first time.
- Such digitized data and differentiation of bigger and smaller sun spots can improve understanding of solar magnetism and sun spots, paving the path towards predicting solar cycles in the future.

Significance

- This estimation would help study magnetic field generated in the interior of the Sun, which causes sunspots and results in extreme situations like the historical mini-ice age on Earth (absence of sunspots).
- It could also help predict solar cycles and their variations in the future.

Solar Cycle

- Our Sun is a huge ball of electrically-charged hot gas. This charged gas moves, generating a powerful magnetic field. The Sun's magnetic field goes through a cycle, called the solar cycle.
- Every 11 years or so, the Sun's magnetic field completely flips. This means that the Sun's north and south poles switch places. Then it takes about another 11 years for the Sun's north and south poles to flip back again.
- The solar cycle affects activity on the surface of the Sun, such as sunspots which are caused by the

Sun's magnetic fields. As the magnetic fields change, so does the amount of activity on the Sun's surface.

ECONOMY

NitiAayog's draft for private trains

The Indian Railways kick-started the process to allow private players to operate certain trains on its network by inviting **Request for Qualifications (RFQ)** for operation of passenger train services on over 100 routes with 150 modern trains.

Objective
To introduce modern technology rolling stock with reduced maintenance, reduced transit time, boost job creation, provide enhanced safety, provide world-class travel experience to passengers, and also reduce demand supply deficit in the passenger transportation sector.

Highlights
- The Railways said "majority" of trains will be manufactured in India and the private entity will be responsible for financing, procuring, operation and maintenance of the trains, which will be designed for a maximum speed of 160 kmph.
- Each train shall have a minimum of 16 coaches and a maximum not exceeding the longest passenger train operating on the respective path
- The maintenance of the trains shall be the responsibility of private entity.
  Operation and maintenance of the passenger trains would be governed by standards to be laid down by
  Research Designs & Standards Organisation (RDSO).
- "The operation of the trains by the private entity shall conform to the key performance indicators like punctuality, reliability, upkeep of trains, etc.

Significance
- There would be a substantial reduction in journey time.
- The running time taken by a train will be comparable to or faster than the fastest train of Indian Railways operating in the respective route.

Northeast gas pipeline grid project

In news
Cabinet approves Capital Grant as Viability Gap Funding to Indradhanush Gas Grid Limited for setting up the North East Natural Gas Pipeline Grid

Details
- The proposed gas pipeline **grid will connect Guwahati to the major Northeast cities and major load centers**. It is 1, 656 km long.
- The project is being implemented under ambitious **Urja Ganga Gas Pipeline Project.**
- Besides connecting all the state capitals in the region, the pipeline will also connect with the National Gas Grid through Barauni-Guwahati Gas Pipeline, which is being laid by GAIL.
- The pipeline will enable the supply of piped cooking gas to households and CNG to automobiles, besides fuel to industry.
- The North-East pipeline grid is to be implemented by Indradhanush Gas Grid, a joint venture of state-owned GAIL India, Indian Oil Corp (IOC), Oil and Natural Gas Corp (ONGC), Oil India Ltd (OIL) and Numaligarh Refinery Ltd (NRL).

Aims and objectives of National Gas Grid
- To remove regional imbalance within the country with regard to access of natural gas and provide clean and green fuel throughout the country.
- To connect gas sources to major demand centres and ensure availability of gas to consumers in various sectors.
- **Development of City Gas Distribution (CGD) Networks** in various cities for supply of CNG and PNG.

Significance
- Development of industrial climate in eight states of the north-eastern region i.e. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

- Reduction in the usage of kerosene, wood etc. due to increased usage of environment friendly fuel natural gas thereby improving the environment in the region.

- Improvement in the standard of living of peoples living in the region.

- It will boost Exploration & Production activities and connect regional gas sources with pipeline network for early monetisation of natural resources in the region.

- Possibility of installing bottling plants for LPG can be explored for reducing transportation cost. Uninterrupted supply of LPG and other valueadded products can be ensured in the region which will bring energy security to the people in the area.

Indradhanush Gas Grid Limited (IGGL)
- It is a joint venture company of five CPSEs (IOCL, ONGC, GAIL, OIL and NRL) has been incorporated on 10.08.2018 to develop and operate Natural gas pipeline grid in North-East region.

- Petroleum & Natural Gas Regulatory Board (PNGRB) has also issued provisional authorization to IGGL on 14.09.2018 for the development of North-East Gas pipeline grid.

The first Silk Processing Plant in Gujarat

In news
In a historic initiative taken by Khadi and Village Industries Commission (KVIC), a first Silk Processing Plant was inaugurated today at Surendranagar in Gujarat

Significance
It would help cut down the cost of production of silk yarn drastically and increase the sale and availability of raw material for Gujarati Patola Sarees locally.
Details
- Patola, the trademark Saree of Gujarat, is considered to be very costly and worn only by the Royals or the Aristocrat.
- Reason being the raw material silk yarn is purchased from Karnataka or West Bengal, where silk processing units are situated, thus increasing the cost of the fabric manifolds.
- Cocoons will be brought from Karnataka and West Bengal and Silk yarn will be processed in house, thus reducing the cost of production and giving a major boost to the sale of famous Gujarati Patola Sarees.
- Surendranagar district is a backward district in Gujarat where KVIC has invested Rs. 60 Lakhs to build the Silk Processing Plant, in order to generate livelihood and boost sales of Patola Sarees by making silk more ready available at a low cost, for the Patola Saree manufacturers in the nearby area.
- Traditionally, every region in India has had its own unique weave for the Silk Saree. It is quite notable that Patola Silk Saree is amongst the top five silk weaves which are desired in every Indian Saree Lover's wardrobe

Vision for the National Data and Analytics Platform

In news
NITI Aayog released its vision for the National Data and Analytics Platform (NDAP).

Aim
To democratize access to publicly available government data.

Detail
- It will host the latest datasets from various government websites, present them coherently, and provide tools for analytics and visualization.
- NDAP will follow a user-centric approach and will enable data access in a simple and intuitive portal tailored to the needs of a variety of stakeholders.
- NDAP will spearhead the standardization of formats in which data is presented across sectors and will cater to a wide audience of policymakers, researchers, innovators, data scientists, journalists and citizens.
- Data is the new oil, at NitiAayog feel that there is need to modernise our data system.
- The platform will be enabled by a user-friendly search engine, with easy navigation, with an easy user interface.
- Data will be given in a machine-readable format with customisable analytics, the document mentions.
- Standard Operating Procedures (SOPs) will be created to ensure data is updated regularly.
Challenges
- Data is not published in a user-centric manner
- Data ecosystem is incoherent due to different standards

Market Study on E-commerce in India

In news
The Competition Commission of India (CCI) released a Report titled 'Market Study on E-commerce in India
Highlights
- The Market Study on E-commerce in India ('the study') was initiated by the CCI in April 2019.

- It was initiated with a view to better understand the functioning of e-commerce in India and its implications for markets and competition.

- The study, a combination of

Secondary research,
Questionnaire survey
Focused group discussions
One-on-one meeting

Amulti-stakeholder workshop and written submissions of stakeholders, covered the three broad categories of e-commerce in consumer goods (mobiles, lifestyle, electrical & electronic appliances and grocery), accommodation services and food services.

Objective
To identify impediments to competition, if any, emerging from e-commerce and to ascertain the Commission's enforcement and advocacy priorities in light of the same.

The three areas which have been focused in the Study are
- Key market trends and main features of ecommerce

- Key competition issues that have emerged from the study.

- The observations of the Commission based on the findings

Growing Trends of E-Commerce
Importance of E-Commerce
Strategic Response to E-Commerce Growth
Role of Online Marketplace Platforms

1000 springs initiative

In news
Shri Arjun Munda Launches 'Capacity Building Programme for Scheduled Tribe Pri Representatives' and '1000 Springs Initiatives' in Bhubneshwar

Highlights
- It is online portal on GIS-based Spring Atlas with hydrological and chemical properties of the Springs on the occasion.
- 1000 Springs Initiative' aims at improving access to safe and adequate water for the tribal communities living in difficult and inaccessible part of rural areas in the country.
- It is an integrated solution around natural springs. It includes provision of infrastructure for piped water supply for drinking; provision of water for irrigation; community-led total sanitation initiatives; and provision for water for backyard

nutrition gardens, generating sustainable livelihood opportunities for the tribal people

Spring
- Springs are natural sources of groundwater discharge and have been used extensively in the mountainous regions across the world, including India.
- In the central and eastern Indian belt with more than 75% tribal population, it remains largely unrecognized and under-utilized.
- The initiative will help in harnessing the potential of perennial springs' water to address natural scarcity of water in tribal areas.
- Under this initiative, more than 70 young tribal youths from the rural belt of three districts of Odisha namely, Kalahandi, Khandamal and Gajapatihave been trained as barefoot hydro geologists by combining traditional and scientific knowledge for identification and mapping of springs, and undertaking rejuvenation and protection measures in their habitations.

Soil health card Scheme Completes 5 years on 19-2-2020

Context
Soil Health Card Scheme was launched at Suratgarh, Rajasthan will be completing five years on 19-02-2020.

Soil Health Card Scheme

2015 was celebrated as International year of soils and in the same year this scheme was launched to assess the nutrient status of every farm holding in the country.

Objectives

To farmers every 2 years so as to provide a basis to address nutritional deficiencies in fertilization practices

Soil Testing
- Soil testing is developed to promote soil test based on nutrient management.
- Soil testing reduces cultivation cost by application of right quantity of fertilizer.
- It also promotes sustainable farming.

Ease of Living Index and Municipal Performance Index 2019

To map the progress of cities, Ease of Living Index (EoLI) and Municipal Performance Index (MPI) 2019 have been launched by the Ministry of Housing & Urban Affairs.

Municipal Performance Index (MPI) 2019

- With the Municipal Performance Index 2019, the Ministry has sought to assess the performance of municipalities based on five enablersnamely Service, Finance, Planning, Technology and Governance which have been further divided into 20 sectors which will be evaluated across 100 indicators.
- This will help Municipalities in better planning and management, filling the gaps in city administration, and improving the liveability of cities for its citizens.

Ease of living Index

- Ease of Living Index is aimed at providing a holistic view of Indian cities - beginning from the services provided by local bodies, the effectiveness of the administration, the outcomes generated through these services in terms of the liveability within cities and, finally, the citizen perception of these outcomes.
- The key objectives of the Ease of Living Index are four-folds, viz.
  - generate information to guide evidence-based policy making;
  - catalyse action to achieve broader developmental outcomes including the SDG;
  - assess and compare the outcomes achieved from various urban policies and schemes; and
  - obtain the perception of citizens about their view of the services provided by the city administration.

India to get 13th major port at Vadhavan

In news
The Union Cabinet recently approved the setting up of the country's 13th major port at Vadhavan in Maharashtra.

Highlights

- The Vadhavan port will be developed on the 'Landlord Model'.

- A Special Purpose Vehicle (SPV) to be set up to provide the necessary infrastructure to the port with Jawaharlal Nehru Port Trust (JNPT) as the lead partner, with equity participation equal to or more than 50% to implement the project.

- This will be 13th major port in India.

- With the development of this port, India will become one of the countries in the top-10 container ports in the world.

- The SPV will develop port infrastructure including land reclamation, construction of the breakwater, besides establishing connectivity with the interstate. All business activities will be done by private developers under the PPP model.

Landlord model

- In the landlord port model, the publicly governed port authority acts as a regulatory body and as landlord while private companies carry out port operations—mainly cargo-handling activities.
- Here, the port authority maintains ownership of the port while the infrastructure is leased to private firms that provide and maintain their own superstructure and install own equipment to handle cargo.
- In return, the landlord port gets a share of the revenue from the private entity.
- The role of the landlord port authority would be to carry out all public sector services and operations such as the award of bids for cargo terminals and dredging.

Farmer Producer Organizations

In news
The CCEA approved 10,000 FPOs to be formed in five years period from 2019-20 to 2023-24 to ensure economies of scale for farmers.

Farmer Produce Organisations

- POs are basically legal entity formed by primary producers, viz. farmers, milk producers, fishermen, weavers, rural artisans, craftsmen is called producer organisation.
- A PO can be a producer company, a cooperative society or any other legal form, which provides for sharing of profits/benefits among the members.

Scheme for "Formation and Promotion of Farmer Producer Organizations (FPOs)"

- A new central sector scheme will promote 10,000 FPOs with the total outlay of Rs.4496 crore for five years covering 2019-20 to 203-24.
- There will be three implementing agencies initially viz.,
  - Small Farmers Agri-business Consortium (SFAC),
  - National Cooperative Development Corporation (NCDC) and
  - National Bank for Agriculture and Rural Development (NABARD).

- States have autonomy to nominate their Implementing Agency in consultation with DAC&FW.
- FPOs will be formed and promoted through Cluster Based Business Organizations (CBBOs) engaged at the State/Cluster level by implementing agencies.
- There will be a National Project Management Agency (NPMA) at SFAC which will provide project guidance, data compilation and maintenance through integrated portal and Information management and monitoring.
- There will be 300 FPO in palin area and 100 in North East and Hilly areas initially.
- On priority basis FPOs will be formed in Aspirational districts with at least one FPO in each block of aspirational districts.
- FPOs will be promoted under "One District One Product" cluster to promote specialization and better processing, marketing, branding & export by FPOs.

Benefits
- FPOs will give immense economic strength to small and marginal farmers.
- With the formation of FPOs, farmers will have better collective strength for better access to quality input, technology, credit and better marketing access through economies of scale for better realization of income.

National logistics policy

In news
To lower logistics costs and increasing the global competitiveness for Indian products worldwide the upcoming national logistics policy is expected to streamline rules and address supply-side constraints.

India's logistics sector

- Despite being central to economic growth India's logistics sector has remained fragmented and unregulated.
- Right now logistics cost is estimated to be 13-14% of the GDP which can be reduced to 10% according to a logistics policy draft released by the commerce ministry in February 2019, the government will create a single point of reference for all logistics and trade facilitation matters thus reducing costs.
- Due to a lack of cold chain infrastructure almost 25-30% of fruits and vegetables produced in India are wasted.
- Around 22 million Indians work in the Indian logistics sector. As such improving the sector will

facilitate 10 % decrease in indirect logistics cost leading to the growth of exports from 5 to 8%.
- It is estimated that Indian logistics will grow from 160 billion USD to 215 billion USD in next 2 years.

Draft National Logistics Policy
- To promote the development of multi-modal infrastructure the draft policy will optimize the modal mix (road-60%, rail-31%, water-9%) to global benchmarks (road - 25-30%, rail - 50-55%, water - 20-25%).
- Setting up a Logistics Wing is also under the policy that will be "the nodal agency tasked to identify key projects for driving first mile and last mile connectivity and to optimize the modal mix to identify commodity and the corridor for the most cost-effective mode of transport."
- The Logistics Wing will "work with the ministries of food processing industries, consumer affairs, food & public distribution and the department of horticulture in respective states to identify key policy interventions and infrastructure enhancement to promote penetration of cold chain facilities and adoption of reefer (refrigerator) trucks in strategic locations."
- With the policy issues like the predictability of regulations, registration of services providers, regulation of multi-modal transport and performance standards for service delivery will be addressed. Also the policy will delineate the roles of the regulatory agencies at the central and state government level.
- This has been implemented in countries like South Korea and Singapore among many in the early 2000s.
- Different type of logistics service providers is covered under this such as freight forwarding, others in trucking, some act as full third-party logistics providers.
- Using the policy seamless multi-modal freight transfer and make freight movement for key commodities cost-efficient will be allowed.

Key elements of a warehouse will be standardised which will lead to new demand and creation of Grade A warehouses under the policy

Apiary on Wheels

In news
The Union Minister of MSME flagged off apiary on Wheels', a unique concept designed by KVIC for the easy upkeep and migration of Bee Boxes having live Bee colonies.

Highlights
- Apiary on Wheels is a platform that can carry 20 Bee Boxes from one place to another without any difficulty.
- Two large wheels on either side of the Apiary on Wheels and 4 separate compartments with independent doors, having 5 bee boxes each help the platform to remain intact without disturbing the live bee colonies.
- The Apiary on Wheels is also connected with a solar panel system which automatically triggers a fan inside the compartment as soon as the temperature reaches 35-degree centigrade or above. Not only this, the Apiary on Wheels also has sugar drips which help to feed the bees in the summer season.
- The Apiary on Wheels is like an attachment that can be easily connected with a Tractor or a Trolley and may be pulled to any suitable destination. Specially, in summers, the beekeepers usually adopted crude methods to feed the bees and many bees used to die in the process.
- This concept of migration, cooling with the help of solar panels and sugar drips with zero risks to the lives of bees, will prevent any damages to the bee boxes or bee colonies and help produce quality, honey.

Significance
- It is designed so as to reduce the labour and cost of maintaining and upkeeping Bee Boxes and live bee colonies across India.
- Apiary on Wheels will make the migration easy, the maintenance easy, easy feeding of bees and it will also help the bees to sustain even in extreme summers

DTAA between India and Sri Lanka

In news
Cabinet approves protocol amending the Agreement between India and Sri Lanka for avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income

Impact

Updation of preamble text and inclusion of Principal Purpose Test, a general anti abuse provision in the Double Taxation Avoidance Agreement (DTAA) will result in curbing of tax planning strategies which exploit gaps and mismatches in tax rules.

Details
- The existing DTAA between India and Sri Lanka was signed on 22nd January, 2013 and entered into force on 22nd October, 2013.

- India and Sri Lanka are members of the Inclusive Framework and as such are required to implement the minimum standards under G-20 OECD BEPS Action Reports in respect of their DTAAs with Inclusive Framework countries.

- Minimum standards under BEPS Action 6 can be met through the Multilateral Convention to Implement Tax Treaty Related Measures to Prevent Base Erosion and Profit Shifting (MLI) or through agreement bilaterally.

- India is a signatory to the MLI.

- However, Sri Lanka is not a signatory to the MLI as of now.

- Therefore, amendment of the India-Sri Lanka DTAA bilaterally is required to update the Preamble and also to insert Principal Purpose Test (PPT) provisions to meet the minimum standards on treaty abuse under Action 6 of G-20 OECD Base Erosion & Profit Shifting (BEPS) Project.

Mission Solar Charkha

In news
The Ministry of Micro, Small and Medium Enterprises (MSME) has launched the Mission Solar Charkha in 2018-19 for implementation of 50 Solar Charkha Clusters across the country.

The aims and objectives
- To ensure inclusive growth by generation of employment, especially for women and youth and sustainable development through solar charkha cluster in rural areas.
- To boost rural economy and help in arresting migration from rural to urban areas.
- To leverage low-cost, innovative technologies and processes for substance.

Background
- A pilot project on Solar Charkha was implemented at Khanwa village, Nawada District of Bihar in 2016.

- Based on the success of the pilot project, Government of India has accorded approval to set up 50 such clusters with a budget of Rs. 550 Crore for 2018-19 and 2019-20.
- The scheme is envisaged to generate direct employment nearly to one lakh persons in the approved Fifty (50) clusters.

APEDA signs MoU with SFAC (18 March 2020)

In news
Agri Export Policy announced by Government of India with *"Farmers' Centric Approach"* suggests for developing product specific clusters in the country to help improving productivity and quality of the varieties of crops with special involvement of Farm Producer Organizations(FPOs).

Aim
Addressing the obstacles faced by FPOs through organisation like Small Farmers Agribusiness Consortium (SFAC) and State level organizations to expand FPO network.

Significance
It is expected that with the approach of joint collaboration with the organizations like SFAC, APEDA will be able to reach to a large farmer base for improving the production base of agri products quantitatively and qualitatively both for maintaining the consistency of supply and establish an image of quality supplier in the international market leading to increase in export volume and value and indirectly contribute to doubling of farmers' income.

About SFAC
- The Government of India (Ministry of Agriculture & Farmers' Welfare) established SFAC as an autonomous society in 1994.
- It is also registered as a Non Banking Financial Company (NBFC) which is regulated by the RBI.
- SFAC is an exclusive society focused on increasing incomes of small and marginal farmers through aggregation and development of agribusiness.

Business Immunity Platform

In news
Invest India Business Immunity Platform launched to helping businesses withstand COVID-19

Highlights
- The platform, hosted on the Invest India website, is designed as a comprehensive resource to help businesses and investors get real-time updates on India's active response to COVID-19 (Coronavirus).
- This dynamic and constantly updating platform keeps a regular track on developments with respect to the virus, provides latest information

on various central and state government initiatives, gives access to special provisions, and answers and resolves queries through emails and on WhatsApp.
- The Business Immunity Platform (BIP) is the active platform for business issue redressal, operating 24/7, with a team of dedicated sector experts and responding to queries at the earliest.
- Invest India has also announced a partnership with SIDBI (Small Industries Development Bank of India) for responding and resolving queries for MSMEs.

Features

- It keeps a regular track on developments with respect to the coronavirus.
- Provides latest information on various central and state government initiatives, and answers and resolves queries through emails and on WhatsApp.
- Includes frequently asked questions on important aspects like locations of COVID-19 testing and other location-specific information.
- Maps and highlights the response mechanism put in place by leading Indian companies such as sanitation of staff vehicles, disabling biometric attendance systems,usage of video-conferencing and tele-conferencing, developing online solutions and other unique initiatives.

BEE launches star rating programme for Deep Freezer and Light Commercial Air Conditioners (LCAC) on its foundation day

In news

To commemorate its 19th foundation day, Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India organized a Stakeholder Consultation to develop a vision towards building an energy efficient India.

The Star Labeling Programme
- It has been formulated by Bureau of Energy Efficiency, as part of its mandate, under the Energy Conservation Act, 2001.
- Under this Programme, *BEE has covered 24 appliances* till date wherein 10 appliances are under mandatory regime.
- BEE has expanded the coverage by including Energy Efficient "Deep Freezers" and "Light Commercial Air Conditioners (LCAC)".
- Through launch of these two new appliances under voluntary regime, 26 appliances would now be covered under this programme.
- Through this initiative*, it is expected to save around 6.2 Billion Units by FY2030*, which is

equivalent to Green House Gas (GHG) reduction of 5.3-million-ton of Carbon Dioxide.

UrjaDakshata Information Tool

- UrjaDakshata Information Tool (UDIT) (www.udit.beeindia.gov.in), a first ever initiative taken by BEE with World Resources Institute (WRI), to facilitate a database on energy efficiency was launched.
- UDIT is a user-friendly platform that explains the energy efficiency landscape of India across industry, appliances, building, transport, municipal and agriculture sectors.
- UDIT will also showcase the capacity building and new initiatives taken up by the Government across the sectors in the increase energy efficiency domain.

Flexi Fare System

Context
During the eight months period from 1st July 2019 to 29th February 2020, approximately 28.93 Lakh berths remained vacant in Rajdhani, Shatabdi and Duronto type trains having flexi fare.

Flexi Fare System
- Flexi fare system is also called dynamic pricing system.
- Railways were demanding this kind of system for quite some time on demand-supply basis.
- This system of pricing was introduced in Railways in September 2016 for premier trains- 44Rajdhani, 52 Duronto and 46 Satabdi trains.
- Under this, the base fare increases by 10 per cent with every 10 per cent of berths sold, subject to a prescribed limit of 1.5 times of the basic fare. This means, the price of the train ticket increases as bookings grow.
- The scheme was introduced mainly to augment the earnings and reduce losses in passenger segment

Conversion of Barren Land into Arable Land

Context

As per the Desertification and Land Degradation Atlas of India, prepared by the Space Applications Centre for the period 2011-2013, 96.4 million hectares i.e. 29.32% of the Total Geographical Area of the country is undergoing the process of desertification/land degradation. Approximately 6.35% of land in Uttar Pradesh is undergoing desertification/degradation.

The Desertification and Land Degradation Atlas

- As per the Special Report on Climate Change & Land of Intergovernmental Panel for Climate Change, land use change, land-use intensification and climate change have contributed to desertification and land degradation.
- The report highlights that climate change, including increases in frequency and intensity of extremes, has adversely impacted food security and terrestrial ecosystems as well as contributed to desertification and land degradation in many regions.
- National Afforestation & Eco Development Board (NAEB) Division of the Ministry of Environment, Forest and Climate Change is implementing the "National Afforestation Programme (NAP)" for ecological restoration of degraded forest areas under which an area of over 2 million ha has been approved for afforestation at a cost of Rs.3874 crore.
- Various other schemes like Green India Mission, fund accumulated under Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Nagar Van Yojana etc. also help in checking degradation and restoration of forest landscape.
- MoEF&CC also promote tree outside forests realizing that the country has a huge potential for increasing its Trees Outside Forest (TOF) area primarily through expansion of agroforestry, optimum use of wastelands and vacant lands.
- The IWMP was amalgamated in 2015-16 as the Watershed Development Component of the Pradhan MantriKrishiSinchayeeYojana (WDC-PMKSY).
- India has also committed to achieve land degradation neutrality status by 2030.
- India has raised its ambition to restore degraded land from 21 mha to 26 mha by 2030

Cabinet approves Mega Consolidation in Public Sector Banks {PSBs}

In news
The Union Cabinet has approved the mega consolidation of ten PSBs into four which include the –
- Amalgamation of Oriental Bank of Commerce and United Bank of India into Punjab National Bank
- Amalgamation of Syndicate Bank into Canara Bank
- Amalgamation of Andhra Bank and Corporation Bank into Union Bank of India
- Amalgamation of Allahabad Bank into Indian Bank

Significance

- This would result in creation of seven large PSBs with scale and national reach with each amalgamated entity having a *business of over Rupees Eight lakh crore.*
- The Mega consolidation would help create banks with scale comparable to global banks and capable of competing effectively in India and globally.
- Greater scale and synergy through consolidation would lead to cost benefits which should enable the PSBs enhance their competitiveness and positively impact the Indian banking system.
- In addition, consolidation would also provide impetus to amalgamated entities by increasing their ability to support larger ticket-size lending and have competitive operations by virtue of greater financial capacity.
- The adoption of best practices across amalgamating entities would enable the banks improve their cost efficiency and risk management, and also boost the goal of financial inclusion through wider reach.
- Further, with the adoption of technologies across the amalgamating banks, access to a wider talent pool, and a larger database, PSBs would be in a position to gain competitive advantage by leveraging analytics in a rapidly digitalising banking landscape.

Cabinet approves recapitalization of Regional Rural Banks to improve their Capital to Risk Weighted Assets Ratio

In news
The Cabinet Committee on Economic Affairs, has given its approval for continuation of the process of recapitalization of Regional Rural Banks (RRBs)

It will be done by providing minimum regulatory capital to RRBs for another year beyond 2019-20, that is, up to 2020-21 for those RRBs which are unable to maintain minimum Capital to Risk weighted Assets Ratio (CRAR) of 9%, as per the regulatory norms prescribed by the Reserve Bank of India.

Importance of the Move
- A financially stronger and robust Regional Rural Banks with improved CRAR will enable them to meet the credit requirement in the rural areas.
- As per RBI guidelines, the RRBs have to provide 75% of their total credit under PSL (Priority Sector Lending).
- RRBs are primarily catering to the credit and banking requirements of agriculture sector and rural areas with focus on small and marginal farmers, micro & small enterprises, rural artisans and weaker sections of the society.

- In addition, RRBs also provide lending to micro/small enterprises and small entrepreneurs in rural areas.
- With the recapitalization support to augment CRAR, RRBs would be able to continue their lending to these categories of borrowers under their PSL target, and thus, continue to support rural livelihoods.

Capital Adequacy Ratio
- Capital Adequacy Ratio (CAR) is also known as Capital to Risk (Weighted) Assets Ratio (CRAR), is the ratio of a bank's capital to its risk.

- National regulators track a bank's CAR to ensure that it can absorb a reasonable amount of loss and complies with statutory Capital requirements.

- It is a measure of a bank's capital. It is expressed as a percentage of a bank's risk-weighted credit exposures.

- The enforcement of regulated levels of this ratio is intended to protect depositors and promote stability and efficiency of financial systems around the world.

Mineral Laws (Amendment) Bill, 2020

In news

Parliament passed The Mineral Laws (Amendment) Bill, 2020 for amendments in Mines & Mineral (Development and Regulation) Act 1957 and The Coal Mines (Special Provisions) Act, 2015.

Highlights
- Rajya Sabha passed the bill today while Lok Sabha already passed this bill on 6th March, 2020.
- The Mineral Laws (Amendment) Bill, 2020, will open a new era in Indian coal & mining sector specially to promote Ease of Doing Business.
- This Bill will transform the mining sector in the country boosting coal production and reducing dependence on imports.
- The Bill replaces the ordinance for amendment of the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act) and the Coal Mines (Special Provisions) Act, 2015 (CMSP Act) which was promulgated on 11th January 2020.

Removal of restriction on end-use of coal

- Currently, companies acquiring schedule ii and schedule iii coal mines through auctions can use the coal produced only for specified end-uses such as power generation and steel production.
- The bill removes this restriction on the use of coal mined by such companies.
- Companies will be allowed to carry on coal mining operation for own consumption, sale or for any other purposes, as may be specified by the central government.

Eligibility for auction of coal and lignite blocks

- The bill clarifies that the companies need not possess any prior coal mining experience in india in order to participate in the auction of coal and lignite blocks.
- Further, the competitive bidding process for auction of coal and lignite blocks will not apply to mines considered for allotment to:
  (i) A government company or its joint venture for own consumption, sale or any other specified purpose;
  (ii) A company that has been awarded a power project on the basis of a competitive bid for tariff.

Composite license for prospecting and mining

- Currently, separate licenses are provided for prospecting and mining of coal and lignite, called prospecting license, and mining lease, respectively.
- Prospecting includes exploring, locating, or finding mineral deposit.
- The bill adds a new type of license, called prospecting license-cum-mining lease.
- This will be a composite license providing for both prospecting and mining activities.

Non-exclusive reconnaissance permit holders to get other licenses

- Currently, the holders of non-exclusive reconnaissance permit for exploration of certain specified minerals are not entitled to obtain a prospecting license or mining lease.
- Reconnaissance means preliminary prospecting of a mineral through certain surveys.
- The bill provides that the holders of such permits may apply for a prospecting license-cum-mining lease or mining lease.
- This will apply to certain licensees as prescribed in the bill.

Transfer of statutory clearances to new bidders

- Currently, upon expiry, mining leases for specified minerals (minerals other than coal, lignite, and atomic minerals) can be transferred to new persons through auction.
- This new lessee is required to obtain statutory clearances before starting mining operations. The bill provides that the various approvals, licenses, and clearances given to the previous lessee will be extended to the successful bidder for a period of two years.
- During this period, the new lessee will be allowed to continue mining operations.
- However, the new lessee must obtain all the required clearances within this two-year period.

Reallocation after termination of the allocations

- The cmsp act provides for the termination of allotment orders of coal mines in certain cases. T
- he bill adds that such mines may be reallocated through auction or allotment as may be determined by the central government.
- The central government will appoint a designated custodian to manage these mines until they are reallocated.

Prior approval from the central government

- Under the mmdr act, state governments require prior approval of the central government for granting reconnaissance permit, prospecting license, or mining lease for coal and lignite.
- The bill provides that prior approval of the central government will not be required in granting these licenses for coal and lignite, in certain cases.
- **These include cases where**
  (i) The allocation has been done by the central government, and
  (ii) The mining block has been reserved to conserve a mineral.

Advance action for auction

- Under the mmdr act, mining leases for specified minerals (minerals other than coal, lignite, and atomic minerals) are auctioned on the expiry of the lease period.
- The bill provides that state governments can take advance action for auction of a mining lease before its expiry.

Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme

In news

The Union Cabinet has approved financial assistance to the Modified Electronics Manufacturing Clusters (EMC2.0) Scheme

Highlights

- Approved for development of world class infrastructure along with common facilities and

amenities through Electronics Manufacturing Clusters (EMCs).

- It is expected that these EMCs would aid the growth of the ESDM sector, help development of entrepreneurial ecosystem, drive innovation and catalyze the economic growth of the region by attracting investments in the sector, increasing employment opportunities and tax revenues.

Objective
To address the disabilities, by providing support for creation of world class infrastructure along with common facilities and amenities, including Ready Built Factory (RBF) sheds / Plug and Play facilities for attracting major global electronics manufacturers along with their supply chain to set up units in the country.

Benefits

The Scheme will create a robust infrastructure base for electronic industry to attract flow of investment in ESDM sector and lead to greater employment opportunities. Following are the expected outputs/outcomes for the Scheme

- Availability of ready infrastructure and Plug & Play facility for attracting investment in electronics sector:
- New investment in electronics sector
- Jobs created by the manufacturing units;
- Revenue in the form of taxes paid by the manufacturing units

Background
To build and create requisite infrastructure ecosystem for electronics manufacturing; Ministry of Electronics and Information Technology (MeitY) notified Electronics Manufacturing Clusters (EMC) Scheme which was open for receipt of applications upto October, 2017.

Biofortified carrot variety developed by farmer scientist benefits local farmers

In news
Madhuban Gajar, a biofortified carrot variety with high β-carotene and iron content developed by Shri Vallabhhai Vasrambhai Marvaniya, a farmer scientist from Junagadh district, Gujarat.

Madhuban Gajar
- The Madhuvan Gajar is a highly nutritious carrot variety developed through the selection method with higher β-carotene content (277.75 mg/kg) and iron content (276.7 mg/kg) dry basis and is used for various value-added products like carrot chips, juices, and pickles.
- Among all the varieties tested, beta-carotene and iron content were found to be superior.
- The variety is being cultivated in more than 1000 hectares of land in Gujarat, Maharashtra, Rajasthan, West Bengal, Uttar Pradesh during the last three years.
- Madhuban Gajar carrot variety possesses a significantly higher root yield (74.2 t/ha) and plant biomass (275 gm per plant) as compared to check variety.

Minimum Support Price (MSP) for Minor Forest Produce (MFP)

In news
Government raises Minimum Support Price (MSP) for Minor Forest Produce (MFP) of 49 items in view of circumstances arising out of Covid 19.

Background
- The Central government had introduced a minimum support price (MSP) for a select list of MFP through "Mechanism for Marketing of Minor Forest Produce through Minimum Support price and development of Value Chain of MFP" Scheme in 2011 to provide a social safety net to these underprivileged forest dwellers, and to aid in their empowerment.
- TRIFED, as the apex national organisation involved in the improvement of the livelihood and empowerment of these tribal people, is the nodal agency for the implementation of the scheme.
- The Van Dhan tribal start-ups, also a component of the same scheme, further complements MSP beautifully and has emerged as a source of employment generation for tribal gatherers and forest dwellers and the home-bound tribal artisans.

MSP
- MSP is price fixed by Government of India to protect the producer - farmers - against excessive fall in price during bumper production years.
- The minimum support prices are a guarantee price for their produce from the Government.
- The major objectives are to support the farmers from distress sales and to procure food grains for public distribution.

- In case the market price for the commodity falls below the announced minimum price due to bumper production and glut in the market, government agencies purchase the entire quantity offered by the farmers at the announced minimum price.

Minor Forest Produce (MFP)
- MFP includes all non-timber forest produce of plant origin and includes bamboo, canes, fodder, leaves, gums, waxes, dyes, resins and many forms of food including nuts, wild fruits, honey, lac, tusser etc.
- It provides both subsistence and cash income for people who live in or near forests. They form a major portion of their food, fruits, medicines and other consumption items and also provide cash income through sales.

Kisan Rath Mobile app

In news
Agriculture Minister launches "Kisan Rath"Mobile App to facilitate transportation of foodgrains and perishables during lockdown.

About Kisan Rath Mobile App

- **AppTag Line- "Kisan ka apna Vahan"**
- A Farmer friendly mobile application developed by the National Informatics Centre (NIC) to facilitate farmers & traders in searching transport vehicles for Primary and Secondary transportation for movement of Agriculture & Horticulture produce.
- Primary transportation would include movement from Farm to Mandis, FPO Collection Centre and Warehouses etc.
- Secondary Transportation would include movement from Mandis to Intra-state & Inter-state mandis, Processing units, Railway station, Warehouses and Wholesalers etc.
- Transportation will become easier with the Kisan Rath app as it will help farmers and traders for transporting produce from farm gate to mandi and mandi to mandi all over the country.
- The Mobile Application named "Kisan Rath" facilitates Farmers and Traders in identifying right mode of transportation for movement of farm produce ranging from foodgrain (cereal, coarse cereal, pulses etc), Fruits & Vegetables, oil seeds, spices, fiber crops, flowers, bamboo, log & minor forest produce, coconuts etc.
- This App also facilitates traders in transportation of perishable commodities by Reefer (Refrigerated) vehicles.

Why such move ?
- Transportation of agri produce is critical and indispensable component of supply chain.
- Under the extraordinary situation prevailing in the country currently due to lockdown, "**Kisan Rath**" will ensure smooth and seamless supply linkages between farmers, warehouses, FPOs, APMC mandis and intra-State & inter-State buyers and help in reduction of food wastage by providing timely services. All these will contribute in better prices for perishable commodities.

Working of the app

- The Consignors (farmer, FPOs, buyer/ trader) places a requirement for transportation on this app, which is disseminated to transport aggregators in the market, who in turn interface with various truckers and fleet owners for obtaining a competitive quote against the requirement and passes back the quote and trucker details to the Consignor.
- Thereafter, the Consignor directly negotiates off line with the trucker and finalizes the deal. Once the trip is completed, the user can provide a rating/ feedback for the trucker in the App, which, over a period, becomes feedback mechanism for the transporter to improve their services.
- This would also help the Consignors in the selection process of Logistics Service Providers in future.

NGOs permitted to buy food grains directly from FCI for Relief operations

In news

To ensure uninterrupted supply of foodgrain to these organization Government has directed FCI to provide Wheat and Rice to such organizations at the Open Market Sale Scheme (OMSS) rates without going through the e-auction process

Open Market Sale Scheme (OMSS)
- It refers to selling of foodgrains by Government / Government agencies at predetermined prices in the open market from time to time to enhance the supply of grains especially during the lean season and thereby to moderate the general open market prices especially in the deficit regions.
- In addition to maintaining buffer stocks and making a provision for meeting the requirement of the Targeted Public Distribution Scheme and Other Welfare Schemes (OWS), Food Corporation of India (FCI) on the instructions from the Government, sells wheat and rice in the open

market from time to time to enhance the supply of wheat and rice especially during the lean season and to moderate the open market prices especially in the deficit regions.
- For transparency in operations, the Corporation has switched over to e- auction for sale under Open Market Sale Scheme (Domestic).
- The FCI conducts a weekly auction to conduct this scheme in the open market using the platform of commodity exchange NCDEX (National Commodity and Derivatives Exchange Limited).
- The State Governments/ Union Territory Administrations are also allowed to participate in the e-auction, if they require wheat and rice outside TPDS & OWS.

The present form of OMSS comprises 3 schemes as under
- Sale of wheat to bulk consumers/private traders through e-auction.
- Sale of wheat to bulk consumers/private traders through e-auction by dedicated movement.
- Sale of Raw Rice Grade 'A' to bulk consumers/private traders through e-auction.

Chardham Pariyojana

In news
Union Minister for Road Transport & Highways and MSMEs inaugurated the breakthrough event of **Chamba Tunnel under Chardham Pariyojana** through video conference mode.
Chardham Pariyojana
- Border Roads Organisation (BRO) achieved this major milestone by digging up a 440 m long Tunnel below the busy Chamba town on Rishikesh-Dharasu road Highway (NH 94).
- The breakthrough was completed amidst threat of COVID-19 and nationwide lockdown.
- This Rishikesh-Dharasu-Gangotri road in Uttarakhand has a very significant role from socio economic and religious point of view.
- Under prestigious Chardham Project costing around Rs 12,000 Crore with approximate length of 889 Km, BRO is constructing 250 Km of National Highways leading to holy shrine Gangotri and Badrinath.
- A Tunnel of 440 mtr length to decongest busy Chamba town is being constructed out of these 10 projects. This is a Horse shoe type tunnel with 10 mtr carriage way width and 5.5 mtr vertical clearance.
- The sanctioned cost of this tunnel is 107.07 Crore.
- The awarded cost is Rs 86 Crore, including 43 Crore for Tunnel and 43 Crore for 4.2 Km approach roads to tunnel.

Transportation Management System Launched by CSIR

In news
Kisan Sabha App developed by CSIR-Central Road Research Institute (CSIR-CRRI), New Delhi to connect farmers to supply chain and freight transportation management system was remotely launched.

Features of Kisan Sabha App
- This portal will act asone stop solution for farmers, transporters and other entities engaged in the agriculture Industry and offered that ICAR can work together with CSIR and use the Krishi Vigyan Kendra's (KVK) networks for implementation.
- The portal connects the farmers, transporters, Service providers (like pesticides/ fertilizer/ dealers, cold store and warehouse owner), mandi dealers, customers (like big retail outlets, online stores, institutional buyers) and other related entities for timely and effective solution.
- The portal acts as a single stop for every entity related to agriculture, be they a farmer who needs better price for the crops or mandi dealer who wants to connect to more farmers or truckers who invariably go empty from the mandis.
- KisanSabha also works for people in agriculture services sector such as dealers of fertilizers/ pesticides,who can reach out to more farmers for their services.
- It would also prove to be useful for those associated with cold store(s) or godown(s). KisanSabha also provides a platform for people who want to buy directly from the farmers.
- Kisan Sabha has 6 major modules taking care of Farmers/Mandi Dealers/Transporters/Mandi Board Members/ Service Providers/Consumers.
- Kisan Sabha aims to provide the most economical and timely logistics support to the farmers and increase their profit margins by minimizing interference of middlemen and directly connecting with the institutional buyers.
- It will also help in providing best market rates of crops by comparing nearest mandis, booking of freight vehicle at cheapest cost thereby giving maximum benefit to the farmers.
Why app is needed?

- In present situation of COVID 19, farmers are looking for help in their harvest reaching the market, seed/ fertilizer procurement, etc.
- A robust supply chain management is urgently required to facilitate the timely delivery of the produce at the best possible prices.

- The overall agriculture market is not well organized and lot of produce gets wasted or is being sold at a very low rates.

Kailash – Mansarovar yatra route from Dharchula to Lipulekh (China Border)

In news
Union Minister for Road Transport &Highways and MSMEs has complemented the efforts of the Border Roads Organisation (BRO) for achieving the completion of road connectivity from Dharchula to Lipulekh (China Border) famously known as Kailash-Mansarovar Yatra Route.

Dharchula to Lipulekh route

- The Darchula – Lipulekh road is an extension of Pithoragarh-Tawaghat-Ghatiabagarh road.
- It originates from Ghatiabagarh and terminates at Lipulekh Pass, the gateway to Kailash Mansarovar.
- In this 80 Km road, the altitude rises from 6000 feet to 17,060 feet.
- With the completion of this project, the arduous trek through treacherous high-altitude terrain can now be avoided by the Pilgrims of Kailash MansarovarYatra and the period of journey will be reduced by many days.

CHAMPIONS Portal

In news
In a major initiative Union Ministry of MSME has launched CHAMPIONS portal www.Champions.gov.in, a Technology driven Control Room-Cum-Management Information System.

Champions portal
- The system utilising modern ICT tools is aimed at assisting Indian MSMEs march into big league as National and Global CHAMPIONS.
- **The CHAMPIONS stands here for Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength.** Accordingly, the name of the system is CHAMPIONS.
- As the name suggests, the portal is basically for making the smaller units big by solving their grievances, encouraging, supporting, helping and handholding. It is a real one-stop-shop solution of MSME Ministry.
- An ICT based system would be set up to help the MSMEs in present difficult situation and also to handhold them to become national and international champions.

- It is a technology packed control room-cum-management information system. In addition to ICT tools including telephone, internet and video conference, the system is enabled by Artificial Intelligence, Data Analytics and Machine Learning.
- It is also fully integrated on real time basis with GOI's main grievances portal CPGRAMS and MSME Ministry's own other web based mechanisms.
- The entire ICT architecture is created in house with the help of NIC in no cost.
- Similarly, the physical infrastructure is created in one of ministry's dumping rooms in a record time.

National Migrant Information System (NMIS)

In news
In order to capture the information regarding movement of migrants and facilitate the smooth movement of stranded persons across States, National Disaster Management Authority (NDMA) has developed an online Dashboard - National Migrant Information System (NMIS).

NMIS
- The online portal would maintain a central repository on migrant workers and help in speedy inter-State communication/co-ordinationto facilitate their smooth movement to native places.
- It has additional advantages like contact tracing, which may be useful in overall COVID-19 response work.
- The key data pertaining to the persons migrating has been standardized for uploading such as name, age, mobile no., originating and destination district, date of travel etc., which States are already collecting.
- States will be able to visualize how many people are going out from where and how many are reaching destination States.
- The mobile numbers of people can be used for contact tracing and movement monitoring during COVID-19.

SWADES initiative

In news
With the aim of making the best of our skilled workforce returning to the country due to the ongoing pandemic, the Government of India has launched a new initiative SWADES (Skilled Workers Arrival Database for Employment Support) to conduct a skill mapping exercise of the returning citizens under the Vande Bharat Mission.

SWADES initiative

- This is a joint initiative of **the Ministry of Skill Development & Entrepreneurship, the Ministry of Civil Aviation and the Ministry of External Affairs** which aims to create a database of qualified citizens based on their skillsets and experience to tap into and fulfil demand of Indian and foreign companies.
- The collected information will be shared with the companies for suitable placement opportunities in the country.
- The returning citizens are required to fill up an online **SWADES Skills Card**.
- The card will facilitate a strategic framework to provide the returning citizens with suitable employment opportunities through discussions with key stakeholders including State Governments, Industry Associations and Employers.
- **MSDE's implementation arm National Skill Development Corporation (NSDC)** is supporting the implementation of the project.
- **The SWADES Skill Form (online)** was made live on 30th May 2020 and has garnered around 7000 registrations till 3rd June 2020 (2 pm).
- Amongst the data gathered so far, the top countries from where the citizens are returning are UAE, Oman, Qatar, Kuwait and Saudi Arabia.

Healthy and Energy Efficient Buildings

In news

On occasion of World Environment Day, today, Energy Efficiency Services Limited (EESL), a joint venture of PSUs under Ministry of Power, 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.

Healthy and Energy Efficient Buildings Initiative

This initiative is addressing the challenges of retrofitting existing buildings and air conditioning systems so that they are both healthy and energy efficient.

Importance of the Initiative

- Poor air quality has been a concern in India for quite some time and has become more important in light of the COVID 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. Nor are there standardized approaches to retrofitting.
- The EESL office pilot will address this problem by 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.

MAITREE programme

The Market Integration and Transformation Program for Energy Efficiency (MAITREE), under which this initiative has been launched, 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.

About EESL

- **Energy Efficiency Services Limited (EESL**), under the administration of Ministry of Power, Government of India, is working towards mainstreaming energy efficiency and is implementing the world's largest energy efficiency portfolio in the country.
- Driven by the mission of Enabling More – more transparency, more transformation, and more innovation, EESL aims to create market access for efficient and future-ready transformative solutions that create a win-win situation for every stakeholder.

About USAID

USAID is the world's premier international development agency and a catalytic actor driving development results.

Animal Husbandry Infrastructure Development Fund (AHIDF)

In news

In pursuance of recently announced Atma Nirbhar Bharat Abhiyan stimulus package for ensuring growth in several sectors, the Cabinet Committee on Economic Affairs has approved setting up of **Animal Husbandry Infrastructure Development Fund (AHIDF)** worth Rs. 15000 crore.

Aim
- Building infrastructure for dairy.
- Building meat processing
- Value addition infrastructure
- Establishment of animal feed plant in the private sector.

About AHIDF
- The fund is part of the Rs 20 lakh crore stimulus packages to help people affected by the lockdown to prevent the spread of COVID-19.
- The AHIDF would promote infrastructure investments in dairy, meat processing and animal feed plants.
- Farmer producer organizations (FPOs), MSMEs, Section 8 companies, private companies and individual entrepreneurs would be eligible to benefit from the fund.
- It will ensure the availability of capital to meet upfront investment required for these projects and also help enhance overall returns/ payback for investors.

International Comparison Programme (ICP)

In news
The World Bank has released new Purchasing Power Parities (PPPs) for reference year 2017, under International Comparison Program (ICP)hat adjust for differences in the cost of living across economies of the World.

Globally 176 economies participated in 2017 cycle of ICP.
ICP
- The International Comparison Program (ICP) is the largest worldwide data-collection initiative, under the guidance of UN Statistical Commission (UNSC), with the goal of producing Purchasing Power Parities (PPPs) which are vital for converting measures of economic activities to be comparable across economies.
- Along with the PPPs, the ICP also produces Price Level Indices (PLI) and other regionally comparable aggregates of GDP expenditure.
- India has participated in almost all ICP rounds since its inception in 1970.
- The Ministry of Statistics and Programme Implementation is National Implementing Agency (NIA) for India, which has the responsibility of planning, coordinating and implementing national ICP activities.
- India is also proud to have been a co-Chair of the ICP Governing Board along with Statistics Austria for the ICP 2017 cycle.

Worldwide status
- The Purchasing Power Parities (PPPs) of Indian Rupee per US$ at Gross Domestic Product (GDP) level is now 20.65 in 2017 from 15.55 in 2011.
- The Exchange Rate of US Dollar to Indian Rupee is now 65.12 from 46.67 during same period.
- The Price Level Index (PLI)—the ratio of a PPP to its corresponding market exchange rate—is used to compare the price levels of economies, of India is 47.55 in 2017 from 42.99 in 2011.

India
In 2017, India retained its regional position, as the **second largest** economy, accounted for 20.83 % (HK$ 48,395 billion out of Asia-Pacific total of HK$ 232,344 billion) of Regional Gross Domestic Product (GDP) in terms of PPPs where China was at 50.76% (first) and Indonesia at 7.49% (third). India is also second largest economy in terms of its PPP-based share in regional Actual Individual Consumption and regional Gross Capital Formation.

Affordable rental housing Complexes for urban migrants / poor

In news
The Union Cabinethas given its approval for developing **of Affordable Rental Housing Complexes (AHRCs)** for urban migrants / poor as a sub-scheme under Pradhan MantriAwasYojana – Urban (PMAY – U).

AHRC
- Ministry of Housing & Urban Affairs (MoHUA) has initiated an Affordable Rental Housing Complexes (ARHCs) for urban migrants/poor as a sub-scheme under Pradhan MantriAwasYojana (Urban).
- The scheme was announced by the Hon'ble Finance Minister on 14 May, 2020.
- This scheme seeks to fulfill the vision of **'AtmaNirbhar Bharat.**
- A large part of workforce in manufacturing industries, service providers in hospitality, health, domestic/commercial establishments, and construction or other sectors, labourers, students etc. who come from rural areas or small towns seeking better opportunities will be the target beneficiary under ARHCs.
- An expenditure of Rs 600 Crore is estimated in the form of **Technology Innovation Grant** which will be released for projects using identified innovative technologies for construction.
- Approximately,three Lakh beneficiaries will be covered initially under ARHCs.
- **ARHCs** will create new ecosystem in urban areas making housing available at affordable rent close

to the place of work. Investment under ARHCs is expected to create new job opportunities.

- ARHCs will cut down unnecessary travel, congestion and pollution.
- Government funded vacant housing stock will be converted into ARHCs for economically productive use.
- The scheme would create a conducive environment for Entities to develop AHRCs on their own vacant land which will enable new investment opportunities and promote entrepreneurship in rental housing sector.

'Agriculture Infrastructure Fund'

In news
The Union Cabinet has given its approval to a new pan India **Central Sector Scheme-Agriculture Infrastructure Fund.**

Agriculture Infrastructure Fund
- The scheme shall provide a medium - long term debt financing facility for investment in viable projects for post-harvest management Infrastructure and community farming assets through interest subvention and financial support.
- **Under the scheme, Rs. One Lakh Crore** will be provided by banks and financial institutions as loans to Primary Agricultural Credit Societies (PACS), Marketing Cooperative Societies, Farmer Producers Organizations (FPOs), Self Help Group (SHG), Farmers, Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Agri-entrepreneurs, Startups, Aggregation Infrastructure Providers and Central/State agency or Local Body sponsored Public Private Partnership Project
- All loans under this financing facility will have interest subvention of 3% per annum up to a limit of Rs. 2 crore.
- **The total outflow as budgetary support from Government of India (GoI) will be Rs.10,736 crore**:
- **Agri Infra fund** will be managed and monitored through an online **Management Information System (MIS)** platform.
- It will enable all the qualified entities to apply for loan under the fund.
- The online platform will also provide benefits such as transparency of interest rates offered by multiple banks, scheme details including interest

subvention and credit guarantee offered, minimum documentation, faster approval process as also integration with other scheme benefits.
- The National, State and District level Monitoring Committees will be set up to ensure real-time monitoring and effective feed-back.
- The duration of the Scheme shall be from FY2020 to FY2029 (10 years).

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750 MW Rewa Solar Project

In news
Prime Minister dedicated to the nation the 750 MW Solar Project set up at Rewa, Madhya Pradesh.

Rewa Solar Project
- This Project comprises of three solar generating units of 250 MW each located on a 500 hectare plot of land situated inside a Solar Park (total area 1500 hectare).
- The Solar Park was developed by the **Rewa Ultra Mega Solar Limited (RUMSL),** a Joint Venture Company of Madhya Pradesh UrjaVikas Nigam Limited (MPUVN), and Solar Energy Corporation of India (SECI), a Central Public Sector Undertaking.
- Central Financial Assistance of Rs. 138 crore has been provided to RUMSL for development of the Park.
- The Rewa Solar Project was the first solar project in the country to break the grid parity barrier.
- The Rewa Project also exemplifies India's commitment to attain the target of 175 GW of installed renewable energy capacity by the year 2022, including 100 GW of Solar installed capacity.
- Rewa project will reduce carbon emission equivalent to approx. 15 lakh ton of CO_2 per year

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Automotive technology e-portal from International Centre of Automotive Technology(ICAT)

In news
A new dedicated portal was launched by the Ministry of heavy industries & Enterprises named ASPIRE.

ASPIRE E-Portal
- **ICAT** is developing technology platform for automotive industry called **ASPIRE - Automotive Solutions Portal for Industry, Research and Education.**
- **The key objective** of this portal is to facilitate the Indian Automotive Industry to become self reliant by assisting in innovation and adoption of global technological advancements by bringing together the stakeholders from various associated avenues.

- The e-portal will act as a one stop solution providing a technology platform which will help to bring together the various stakeholders from the Indian auto industry, providing the necessary impetus for ushering the industry into future with combined efforts.

Objective of the portal
- The objective of these portals is to create an ecosystem which will bring solution seekers and problem solvers together.
- These include, industry, academia, research institutes, start-ups, professionals and experts.

India Energy Modeling Forum

In news
In the joint working group meeting of the Sustainable Growth Pillar on July 2, 2020, an India Energy Modeling Forum was launched.

Highlights
- There exist energy modelling forums in different parts of the World.
- The Energy Modelling Forum (EMF) in USA was established in 1976 at Stanford University to connect leading modelling experts and decision makers from government, industry, universities, and other research organizations.
- The forum provides an unbiased platform to discuss the contemporary issues revolving around energy and environment.
- In India, there was no formalized and systematic process of having a modeling forum.
- Even then, various think-tanks/research organizations like TERI, IRADe, CSTEP, CEEW, NCAER, etc., have been consistently developing scenarios and contributing through modelling studies and analyses to provide required inputs to MoEF&CC and other relevant ministries, including NITI Aayog.

The India Energy Modelling Forum will accelerate this effort and aim to
- Provide a platform to examine important energy and environmental related issues;
- Inform decision-making process to the Indian government;
- Improve cooperation between modelling teams, government, and knowledge partners, funders;
- Facilitate exchange of ideas, ensure production of high-quality studies;
- Identify knowledge gaps at different levels and across different areas;
- Build capacity of Indian institutions.

NITI Aayog will initially coordinate the activities of the forum and finalizing its governing structure. The forum would include knowledge partners, data agencies and concerned government ministries.

Special Liquidity Scheme for NBFCs and HFCs

In news
With a view to improving the liquidity position of NBFCs as well as HFCs, the Union Minister for Finance & Corporate Affairs announced on 13th March 2020, launch of a Special Liquidity Scheme of Rs. 30,000 crore.

Details
- RBI will provide funds for the Scheme by subscribing to government guaranteed special securities issued by the Trust.
- The total amount of such securities issued outstanding shall not exceed Rs. 30,000 crores at any point of time. Government of India will provide an unconditional and irrevocable guarantee to the special securities issued by the Trust.
- The Scheme is being launched on July 1, 2020through a Special Purpose Vehiclein the form of SLS Trust set up by SBI Capital Markets Limited (SBICAP).
- Any NBFC including Microfinance Institutions registered with RBI under the Reserve Bank of India Act, 1934 (excluding those registered as Core Investment Companies)
- HFC registered with the National Housing Bank (NHB) under the National Housing Bank Act, 1987

NITI Aayog to Launch Nationally Determined Contributions (NDC)–Transport Initiative for Asia(TIA) India Component

In news
NITI Aayog will virtually launch the India Component of the Nationally Determined Contributions (NDC)–Transport Initiative for Asia (TIA).

About NDC-TIA
- The NDC-TIA programme has a duration of 4 years.
- It will allow India and other partner countries to achieve accountable long-term targets by making a sectoral contribution through various interventions, coordinated with a large number of stakeholders in the domain.
- This will contribute towards achieving their NDCs and increasing their ambition in the transport sector of 2025 NDCs.
- The NDC–TIA India Component will focus on establishing a multi-stakeholder dialogue platform

for decarbonizing transport in India, strengthening GHG and transport modelling capacities, providing technical support on GHG emission reduction measures, financing climate actions in transport, offering policy recommendations on electric vehicle (EV) demand and supply policies, evaluating business models through cost-benefit analyses and so forth.

Business Responsibility Reporting

In news
Ministry of Corporate Affairs (MCA) released the 'Report of the Committee on Business Responsibility Reporting (BRR)

What is Business Responsibility Reporting?
It is a disclosure of adoption of responsible business practices by a listed company to all its stakeholders. Business Responsibility Reporting is applicable to all types of companies including manufacturing, services etc.

Background
- Corporate Voluntary Guidelines in 2009;
- Endorsement of United Nations Guiding Principles on Business & Human Rights by India in 2011;
- MCA issued 'National Voluntary Guidelines on Social, Environmental and Economical Responsibilities of Business' which encourages reporting on environment, social and governance issues in 2011;
- SEBI mandates top 100 listed companies by market capitalization to file Business Responsibility Reports (BRR) based on NVGs in 2012;
- SEBI extends BRR reporting to top 500 companies by market capitalization in 2015;
- National Guidelines on Responsible Business Conduct (NGRBC) released in 2019.

Start-Up Village Entrepreneurship Programme (SVEP)

In news
Start-Up Village Entrepreneurship Programme (SVEP) is propelling enterprises in rural areas and building rural entrepreneurs.

About SVEP
- **Start-Up Village Entrepreneurship Programme (SVEP)** is implemented by **Deendayal Antyodaya Yojana –National RuralLivelihoods Mission (DAY-NRLM),** Ministry of Rural Development, as a sub-scheme since 2016.

- With an objective to support the rural poor come out of poverty, supporting them setup enterprises and provide support till the enterprises stabilize.
- Another key area is to promote the block resource center (BRC) in SVEP blocks, to monitor and manage the community resource persons, appraise SVEP loan application and acts as the repository of enterprise related information in the concern block.
- BRCs play the role to support sustainable revenue model to operate effectively and independently.
- SVEP focusses on providing self-employment opportunities with financial assistance and training in business management and soft skills while creating local community cadres for promotion of enterprises.
- SVEP addresses three major pillars of rural start-ups namely - finances, incubation and skill ecosystems.
- The SVEP focused on mobilizing rural communities to setup and strengthen the institution structures, invest on training and capacity building on business management aspects for the BRC members, created pool of CRP-EPs and provided them intensive training, supported the entrepreneurs to scale up their existing enterprises as well as establish and support the new enterprises.
- SVEP promotes both individual and group enterprises, set-up and promote enterprises majorly on manufacturing, trading and service sectors.

Ranking of States: 2019, on support to Startup Ecosystems

In news
The Results of the second edition of Ranking of States on Support to Startup Ecosystems were released by Minister of Commerce & Industry and Railways Shri Piyush Goyal

Objective
- To foster competitiveness and propel States and Union Territories to work proactively towards uplifting the startup ecosystem.
- It has been implemented as a capacity development exercise to encourage mutual learning among all states and to provide support in policy formulation and implementation.

7 broad reform area of Startup Ranking Framework 2019
- Institutional Support
- Easing Compliances
- Relaxation in Public Procurement norms
- Incubation support
- Seed Funding Support

- Venture Funding Support
- Awareness & Outreach

Highlights
- The Department for Promotion of Industry and Internal Trade (DPIIT) conducted the second edition of the States' Startup Ranking Exercise
- A total of 22 States and 3 Union Territories participated in the exercise. Evaluation Committees comprising independent experts carried out a detailed assessment of responses across various parameters.
- Many parameters involved getting feedback from beneficiaries which was gathered through more than 60,000 calls made in 11 different languages to empathetically connect with beneficiaries to ascertain the real situation at the implementation levels.

States are classified into 5 Categories
- Best Performers
- Top Performers
- Leaders
- Aspiring Leaders
- Emerging Startup Ecosystems

Merchandise Exports from India Scheme (MEIS) (2 Sep 2020)

Why in news?
A limit has been imposed on total rewards under the Merchandise Exports from India Scheme (MEIS).

About MEIS
- The Government of India has introduced Merchandise Exports from India Scheme (MEIS) through the Foreign Trade Policy (FTP) 2015-20 w.e.f. April 1, 2015. It seeks to promote export of notified goods manufactured/ produced in India.
- MEIS replaced the various export incentive schemes which gave different types of duty credit scrips namely, Focus Market Scheme (FMS), Focus Product Scheme (FPS), Vishesh Krishi Gramin Udyog Yojana (VKGUY), Market Linked Focus Product Scheme (MLFPS) and Agri Infrastructure incentive scheme. All duty credit scrips issued under the earlier incentive schemes were transferred to the MEIS.

SPICe+ Portal deployed by MCA

In news
The Ministry of Corporate Affairs (MCA) has notified and deployed a web-form namely 'SPICe+' (pronounced SPICe Plus) as a part of Government of **India's Ease of Doing Business (EODB) initiative**.

SPICe+ Portal
- SPICe+ would offer 10 services by 3 Central Govt Ministries & Departments (Ministry of Corporate Affairs, Ministry of Labour & Department of Revenue in the Ministry of Finance) and One State Government (Maharashtra).
- It will help in saving as many procedures, time and cost for Starting a Business in India and would be applicable for all new company incorporations.

Features of the new Spice+ web form
- **SPICe+** would be an integrated Web Form.
- **SPICe+** would have two parts viz.: **Part A**-for Name reservation for new companies and **Part B** offering a bouquet of services viz.
- *Incorporation*
- *DIN allotment*
- *Mandatory issue of PAN*
- *Mandatory issue of TAN*
- *Mandatory issue of EPFO registration*
- *Mandatory issue of ESIC registration*
- *Mandatory issue of Profession Tax registration(Maharashtra)*
- *Mandatory Opening of Bank Account for the Company and*
- *Allotment of GSTIN (if so applied for)*
- The new web form would facilitate On-screen filing and real time data validation for seamless incorporation of companies. For ensuring ease while filing, **SPICe+** has been structured into various sections. Information once entered can be saved and modified.
- Registration for EPFO and ESIC shall be mandatory for all new companies to be incorporated through **SPICe+** and no EPFO & ESIC registration nos. shall be separately issued by the respective agencies.

Green Term Ahead Market (GTAM)

In news
As a first step towards Greening the Indian short term power Market, the Minister of State (IC) Power and New & Renewable Energy & Minister of State (Skill Development and Entrepreneurship), launched pan-India Green Term Ahead Market (GTAM) in electricity.

Key features of GTAM
- Transactions through GTAM will be bilateral in nature with clear identification of corresponding buyers and sellers, there will not be any difficulty in accounting for RPO.

- GTAM contracts will be segregated into Solar RPO & Non-Solar RPO as RPO targets are also segregated.
- Further, within the two segments GTAM contracts will have Green Intraday, Day Ahead Contingency, Daily and Weekly Contracts

NIDHI-EIR Brochure featuring Entrepreneurs in Residence launched

In news
Department of Science & Technology launched a brochure featuring Entrepreneurs in Residence (EIR) under the National Initiative for Developing and Harnessing Innovations (NIDHI) programme.

NIDHI-EIR programme

Aims
To provide guidance to these aspiring entrepreneurs from experienced, innovative and highly successful entrepreneurs on the business concept strategy and insight into specific industries or markets, inspire the best talents to be entrepreneurs, to minimise the risk involved in pursuing start-ups, and to partially set off their opportunity costs of high paying jobs.

- **Entrepreneurs-in-Residence (EIR)** Programme under **National Initiative for Developing and Harnessing innovations (NIDHI)** of Department of Science and Technology supports aspiring or budding entrepreneur of considerable potential for pursuing a promising technology business idea over a period up to 18 months with a subsistence grant up to Rs 30000 per month with a maximum cap for total support of Rs 3.6 lakh to each EIR over a maximum of 18 months.
- **The NIDHI-EIR programme** provides tremendous opportunities for innovative entrepreneurs to expand their networks and get critical feedback on their ventures in order to promote their entrepreneurial career goals and aspirations.
- This program is important in that it creates a pipeline of startups with a focus on young budding entrepreneurs.

Ease Banking Reforms Index 2.0

In news
Union Minister of Finance & Corporate Affairs inaugurated Doorstep Banking Services by PSBs and results of EASE Banking Reforms Index 2.0

Doorstep Banking Services by PSBs
- As part of the EASE Reforms, **Doorstep Banking Services** is envisaged to provide convenience of banking services to the customers at their door step through the universal touch points of Call Centre, Web Portal or Mobile App.
- Customers can also track their service request through these channels.
- The services shall be rendered by the Doorstep Banking Agents deployed by the selected Service Providers at 100 centres across the country.
- The services can be availed by customers of Public Sector Banks at nominal charges.
- The services shall benefit all customers, particularly Senior Citizens and Divyangs who would find it at ease to avail these services.

Performance of PSB on EASE 2.0 Index
- A common reform agenda for PSBs, EASE Agenda is aimed at institutionalizing clean and smart banking.
- It was launched in January 2018, and the subsequent edition of the program — EASE 2.0 built on the foundation laid in EASE 1.0 and furthered the progress on reforms.
- **Reform Action Points** in EASE 2.0 aimed at making the reforms journey irreversible, strengthening processes and systems, and driving outcomes.
- The overall score of PSBs increased by 37% between March-2019 and March-2020, with the average EASE index score improving from 49.2 to 67.4 out of 100.
- Significant progress is seen across six themes of the Reforms Agenda, with the highest improvement seen in the themes of **'Responsible Banking'**, '**Governance and HR'**, '**PSBs as Udyamimitra for MSMEs'**, and '**Credit off-take'**.
- PSBs have adopted tech-enabled, smart banking in all areas, setting up retail and MSME Loan Management Systems for reduced loan turnaround time andPSBloansin59minutes.
- **comandTReDS f**or digital lending.
- PSBs have instituted real-time visibility to retail and MSME customers on the status of their loans.
- Most branch-based services are now accessible from home and mobile, including in local languages.

Kosi Rail Mahasetu (18 Sep 2020)

In news
The Prime Minister Shri Narendra Modi dedicated the historic Kosi Rail Mahasetu to the Nation and inaugurated new Rail Lines and Electrification Projects in Bihar for the benefit of passengers .

Kosi Rail Mahasetu
- Kosi rail line was envisaged in 2003 .
- Kosi Mahasetu, a new rail route on Kiul River with the electronic interlocking facility trains will be able to run at the speed of 125 kilometers per hour on this entire route.
- The bridge is 1.9 km long.

Kosi River
- Kosi river is a trans-boundary river which flows through Tibet, Nepal and India.
- It drains the northern slopes of the Himalayas in Tibet and the southern slopes in Nepal.
- From a major confluence of tributaries north of the Chatra Gorge onwards, the Kosi River is also known as Saptakoshi for its seven upper tributaries.

SVAMITVA Scheme

In news
In a historic move set to transform rural India and empower millions of Indians, Prime Minister launched the physical distribution of Property Cards under the SVAMITVA Scheme.

SVAMITVA Scheme
- **SVAMITVA** is a Central Sector Scheme of the Ministry of Panchayati Raj, which was launched by the Prime Minister on National Panchayati Raj Day, 24th April 2020.
- The scheme aims to provide the 'record of rights' to village household owners in rural areas and issue Property Cards.
- The Scheme is being implemented across the country in a phased manner over a period of four years (2020-2024) and would eventually cover around 6.62 lakh villages of the country.
- Different States have different nomenclature for the Property Cards viz. 'Title deed' in Haryana, 'Rural Property Ownership Records (RPOR)' in Karnataka, 'Adhikar Abhilekh' in Madhya Pradesh, 'Sannad' in Maharashtra, 'Svamitva Abhilekh' in Uttarakhand, 'Gharauni' in Uttar Pradesh.
- Around 1 lakh villages in Haryana, Uttar Pradesh, Madhya Pradesh, Maharashtra, Karnataka and Uttarakhand and a few border of Rajasthan and Punjab along with the establishment of **Continuous Operating System (CORS)** stations network across Rajasthan and Punjab are being covered in this phase (2020-2021).
- The governments of Rajasthan and Punjab have also signed a Memorandum of Understanding with Survey of India for the establishment of a CORS network for assistance in future drone flying activities.

Zozila Tunnel – the longest tunnel road in Asia

In news

Union Minister for Road Transport and Highways launched the first blasting for construction related work at the 14.15 km Zojila tunnel, one of the longest in Asia, that will provide all-year connectivity between Srinagar valley and Leh.

Zozila Tunnel
- The tunnel will provide all-weather connectivity between Srinagar valley and Leh (Ladakh plateau) on NH-1, and will bring about an all-round economic and socio–cultural integration sof Jammu & Kashmir.
- It involves construction of a 14.15 Km long tunnel at an altitude of about 3000 m under Zojila pass (presently motorable only for 6 months in a year) on NH-1 connecting Srinagar and Leh through Dras & Kargil.
- It is one of the most dangerous stretch in the world to drive a vehicle & this project is also geo-strategically sensitive.
- The project was re-awarded this year to Megha Engineering & Infrastructure Ltd (MEIL).
- **Zozila Tunnel project** shall bring to fruition, 30 years of overwhelming public demand of Kargil, Drass and Ladakh region.
- This Project will make the travel on Srinagar-Kargil-Leh Section of NH-1 free from avalanches.
- Project would enhance the safety of the travelers crossing Zozila Pass and would reduce the Travel time from more than 3 hours to 15 minutes.

Safety features
- Fire Alarm System in buildings
- Automatic Fire Detection and suppression System in the tunnel
- Fire Hydrants and Hydrant Niches, Fire Extinguishers.
- Tunnel Lighting Systems:

"Kamdhenu Deepawali Abhiyan"

In news

Rashtriya Kamdhenu Aayog (RKA) has started a nation-wide campaign to celebrate "**Kamdhenu Deepawali Abhiyan**" this year on the occasion of Deepawali festival.

Kamdhenu Deepawali Abhiyan
- Through this campaign, the RKA is promoting extensive use of cow-dung/ Panchgavya products during this Diwali
- Festival.
- RKA aims reaching 11 crore families to ignite 33 crore Diyas made of cow-dung during this year's Deepawali festival.

About RKA

- **Rashtriya Kamdhenu Aayog (RKA)** has been constituted by Prime Minister of India for the conservation, protection and development of cows and their progeny and for giving direction to the cattle development programmes.
- RKA is high powered permanent body to formulate policy and to provide direction to the implementation of schemes related to cattle so as to give more emphasis on livelihood generation.
- Livestock economy sustains nearly 73 million households in rural areas.
- Even though, the country is largest producer of milk, the average milk yield in India is only 50% of the world average.
- The low productivity is largely due to deterioration in genetic stock, poor nutrition and unscientific management.
- The trend needs to be reversed and popular perception about cow and cow based agriculture and cow based industry need to be corrected immediately for social and economic rejuvenation of society particularly poor in rural areas.

Kasturi Cotton (7 Oct 2020)

In news

Union Minister of Textiles and Women & Child Development launched the 1st ever Brand & Logo for Indian Cotton on 2nd World Cotton Day on 7th October, 2020.Now India's premium Cotton would be known as 'Kasturi Cotton' in the world cotton Trade. The Kasturi Cotton brand will represent Whiteness, Brightness, Softness, Purity, Luster, Uniqueness and Indianness.

Cotton

- Cotton is one of the principal commercial crops of India and it provides livelihood to about 6.00 million cotton farmers.
- India is the 2nd largest cotton producer and the largest consumer of cotton in the world.
- India produces about 6.00 Million tons of cotton every year which is about 23% of the world cotton.
- India produces about 51% of the total organic cotton production of the world, which demonstrates India's effort towards sustainability.

Natural Gas Marketing Reforms

In news

The Cabinet Committee on Economic Affairs chaired by the Prime Minister Shri Narendra Modi has approved 'Natural Gas Marketing Reforms', taking another significant step to move towards gas based economy.

Objective

The objective of the policy is to prescribe standard procedure to discover market price of gas to be sold in the market by gas producers, through a transparent and competitive process, permit Affiliates to participate in bidding process for sale of gas and allow marketing freedom to certain Field Development Plans (FDPs) where Production Sharing Contracts already provide pricing freedom.

Aim

- To provide standard procedure for sale of natural gas in a transparent and competitive manner to discover market price by issuing guidelines for sale by contractor through e-bidding.
- This will bring uniformity in the bidding process across the various contractual regimes and policies to avoid ambiguity and contribute towards ease of doing business.

Significance

- The policy has also permitted Affiliate companies to participate in the bidding process in view of the open, transparent and electronic bidding.
- This will facilitate and promote more competition in marketing of gas.
- Rebidding will have to be done in case only affiliates participate, and there are no other bidders.
- The policy will also grant marketing freedom to the Field Development Plans (FDPs) of those Blocks in which Production Sharing Contracts already provide pricing freedom.
- These reforms will build on a series of transformative reforms rolled out by the Government in last several years.

Source: PIB

India Energy Modeling Forum

In news

In the joint working group meeting of the Sustainable Growth Pillar of the India-US partnership, an India Energy Modeling Forum was launched.

Aim

To engage Indian researchers, knowledge partners, think tanks and national and international government agencies and departments for modelling and long-term energy planning.

- Provide a platform to examine important energy and environmental related issues;
- Inform decision-making process to the Indian government;

- Improve cooperation between modelling teams, government, and knowledge partners, funders;
- Facilitate exchange of ideas, ensure production of high-quality studies;
- Identify knowledge gaps at different levels and across different areas;
- Build capacity of Indian institutions.

PM-SVANidhi Scheme

In news

Under the PM SVANidhi-Pradhan Mantri Street Vendor's Atma-Nirbhar Nidhi- A Special Micro-Credit Facility Scheme, 27,33, 497 applications have been received out of which 14,34,436 have been sanctioned and about 7,88,438 loans disbursed.

About SVANidhi Scheme?

PM SVANidhi or Pradhan Mantri Street Vendor's Atmanirbhar Nidhi scheme was launched on June 1, 2020, by the Central Government to help the street vendors resume their livelihood activities who were impacted by COVID-19.

Aim

The scheme aims at facilitating working capital loan up to Rs. 10,000 at a subsidized rate of interest, incentivizing regular repayment of the loan and to reward digital transactions. The scheme aims at providing benefits to street vendors or hawkers in urban, pre-urban and rural areas on March 24, 2020, or before.

Features of the scheme
- Initial working capital of up to Rs. 10,000.
- Interest subsidy on timely or early repayment at the rate of 7%.
- Monthly cash-back incentive on digital transactions.
- Higher loan eligibility on timely repayment of the first loan.

Street vendors in India
- There are an estimated 50-60 lakh street vendors in India, with the largest concentrations in the cities of Delhi, Mumbai, Kolkata, and Ahmedabad. Most of them are migrants who typically work for 10–12 hours every day on average.
- Anyone who doesn't have a permanent shop is considered a street vendor.

The Street Vendors Act

The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014 was enacted to regulate street vendors in public areas and protect their rights.

Then Union Minister of Housing and Urban Poverty Alleviation, Kumari Selja introduced it in Lok Sabha on September 6, 2012.

World Fisheries Day'- 21st November

Context

The Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India is celebrating the 'World Fisheries Day' on 21st November 2020.
The celebrations serve to focus on changing the way the world manages global fisheries to ensure sustainable stocks and healthy ecosystems.

Aim

To draw attention to overfishing, habitat destruction and other serious threats to the sustainability of our marine and inland resources.

Reason for celebration

It is being celebrated to demonstrate solidarity with all fisherfolk, fish farmers and concerned stakeholders throughout the world.

History

It started in 1997 where "World Forum of Fish Harvesters & Fish Workers" met at New Delhi leading to formation of "World Fisheries Forum" with representatives from 18 countries and signed a declaration advocating for a global mandate of sustainable fishing practices and policies

India and fishing sector
- The Government of India is transforming the sector and to usher in economic revolution through Blue Revolution in the country.
- **Pradhan Mantri Matsya Sampada Yojana" (PMMSY)** was launched this year in September and aims to achieve fish production to 22 million metric tonnes (MMT) by 2024-25 and also to **create an additional employment opportunity to about 55 lakh people.**
- India is leading fish producing country and second major producer of fish through aquaculture in the world.
- Fisheries sector in India provides direct employment to about 28 million fishers and fish farmers besides meeting the food and nutritional security and foreign exchange earnings.
- India contributes about 7.7% to the global fish production and country ranks 4th in global exports of fish products.

Blue Revolution

Integrated Development and Management of Fisheries' Foreseeing high potential, the Hon'ble Prime Minister has

called for "a revolution" in the fisheries sector and has named it as "Blue Revolution". The Blue Revolution, with its multi-dimensional activities, focuses mainly on increasing fisheries production and productivity from aquaculture and fisheries resources, both inland and marine.

Objectives

- To increase the overall fish production in a responsible and sustainable manner for economic prosperity

- To modernize the fisheries with special focus on new technologies

- To ensure food and nutritional security

- To generate employment and export earnings

- To ensure inclusive development and empower fishers and aquaculture farmers

Sahakar Pragya

In news
Union Minister of Agriculture and Farmers Welfare, Rural Development, Panchayat Raj and Food Processing Industries, Shri Narendra Singh Tomar unveiled Sahakar Pragya.

Aim
To help primary cooperative societies play bigger roles in AtmaNirbhar Bharat.

Details

- Farmers in primary cooperatives in rural areas of the country would be trained under Sahakar Pragya by the National Cooperative Development Corporation.
- Sahakar Pragya will be implemented through an elaborate network of 18 Regional Training Centres across the country.
- 45 training modules for transferring knowledge, skills and organisational capacities have been prepared.
- The 45 dedicated training modules would equip the cooperative societies to run their affairs in professional business terms of market economy.
- Currently, India has a network of over 8.50 lakh cooperative societies with about 290 million members.

Emergency Credit Line Guarantee Scheme (ECLGS)

In news
The Government has extended Emergency Credit Line Guarantee Scheme (ECLGS) through ECLGS 2.0 for the 26 sectors.

Emergency Credit Line Guarantee Scheme
The scheme was launched as part of the *first Atmanirbhar Bharat* package in May to mitigate the distress caused by coronavirus pandemic-induced lockdown, by providing credit to different sectors, especially micro, small and medium enterprises (MSMEs).

Aim
Providing relief to the Indian economy reeling under the impact of the novel coronavirus pandemic.

Objective

- To provide **fully guaranteed and collateral free additional credit** to MSMEs, business enterprises, **MUDRA borrowers** and individual loans for business purposes **to the extent of 20% of their credit outstanding** as on 29th February, 2020.
- **100% guarantee coverage** is being provided by the **National Credit Guarantee Trustee Company,** whereas **Banks** and **Non Banking Financial Companies (NBFCs)** provide loans.

SDG Investor Map for India

In news
UNDP and Invest India have launched the SDG Investor Map for India, laying out 18 Investment Opportunities Areas (IOAs) in six critical SDG enabling sectors.

Highlights

- It is the *first-ever 'SDG Investor Map for India'.*
- This initiative is an *instrumental stride in India's development trajectory.*
- SDG Finance Facility platform at UNDP in partnership with Invest India, the investment promotion arm of the Government of India has developed this Map.
- The map will help public and private sector stake-holders direct capital towards IOAs, and White Spaces (Areas of Potential) that can contribute to the sustainable development needs of the country.
- The map has identified eight 'white spaces', which have seen investor interest and have the potential to grow into IOAs in five to six years with policy support and private sector participation.
- The observations from the map present a strong case for investing in SDG enabling sectors and IOAs, bridging the gap between high-level

development targets and the need for commercially viable returns.

Significance

- It can help India push the needle forward on Sustainable Development.
- By mapping the overlaps and gaps between public sector priorities and private sector interest, the SDG Investor Map lays out pathways that can bring together private-sector investment and public sector support for six SDG-enabling sectors.
- Investing in the SDGs at this point is crucial to 'building back better' and making the economy and our societies more resilient and sustainable.

Six focus sectors

- Education
- Healthcare
- Agriculture and allied activities
- Financial services,
- Renewable energy and alternatives
- Sustainable environment

12 Months of Adventure Travel

In news

The Ministry of Tourism's *DekhoApnaDesh* Webinar series titled "12 Months of Adventure Travel" on 28th November 2020 focused on Adventure Tourism which has the potential to make India a round the year destination.

India's raking in tourism

- India is *ranked 34th on the world travel and tourism index* driven by rich natural and cultural resources.
- The *World Economic Forum ranked India* as the *5th best destination on the Natural Heritage Index* in the world.

India's potential

- Mountains, Forests, Rivers, Deserts, Mangroves, Islands, Canals, Wildlife and over 31 adventure activities that will delight an Indian and also an overseas traveller.
- India is a 12 month destination in respect of adventure and culture and the country is so vast and huge that one life is not enough to cover the entire country.
- India is one of the very few countries in the world that boasts natural and cultural attractions so diverse and complex, which promises ample opportunities to explore every kind of landscape imaginable.

The Adventure Tour Operators Association of India (ATOAI)

- It was founded with an aim to create awareness about the immense potential for adventure tourism in India and to harness this potential in a safe, sensitive and environment-friendly manner.
- The association also works towards creating awareness overseas about the potential of adventure tourism in India.

DekhoApnaDesh

- With a huge impact on tourism due to the ongoing lockdown, Dekho Apna Desh webinar series will help to visit places and destinations virtually with the help of technology.

Goatribal plan

In news

With changing tribal lives all over the country, TRIFED is taking its plan of Tribal Empowerment to the next level drawing up plans to launch 200 TRIFOOD Projects, 3000 VanDhan Clusters to get almost 25 lakh tribals on the road to entrepreneurship.

For this there was a virtual meeting held on 26th November 2020 to finalize the Goa Tribal Development Plan.

Agenda of the meeting

To finalise the Tribal Development Plan for the state of Goa for the establishment of 25 Van Dhan Vikas Kendras, 1 Tribal food park, 2 showrooms in North and South Goa. The proposed activities

- Setting up of 25 VDVKs in Goa
- Setting up of 25 procurement centres-cum-godowns; of 2 tertiary processing units (mega food parks/ tribal enterprises) and
- Two flagship retail outlets across the state.

The target is to identify 20 minor forest produces per VDVK.

KVIC's Honey Mission

In news

The self-sustainability measures initiated by Khadi and Village Industries Commission (KVIC) in wake of the Covid-19 pandemic have begun yielding results.

Details

- Five migrant workers in Western UP's Muzaffarnagar district extracted 253 kg of honey from their 50 honey bee boxes that were distributed to them on August 25 this year.
- Raw honey sells at an average of Rs 200 per kg and at this rate it is estimated to fetch nearly Rs 50,000 to the migrant workers.

- This means an average income of Rs 10,000 to each of these beneficiaries.
- The *production of honey from these boxes will increase by at least 5 times in the months from December to March* as the Eucalyptus and Mustard crop will be in full bloom during the season.

Khadi and Village Industries Commission

- (KVIC) is a statutory body *formed in April 1957 (as per an RTI) by the Government of India*, under the *Act of Parliament, 'Khadi and Village Industries Commission Act of 1956'.*
- It is an apex organisation under the Ministry of Micro, Small and Medium Enterprises, with regard to khadi and village industries within India, which seeks to - "plan, promote, facilitate, organise and assist in the establishment and development of khadi and village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.
- In April 1957, it took over the work of former All India Khadi and Village Industries Board.
- Its head office is in Mumbai, whereas its six zonal offices in Delhi, Bhopal, Bangalore, Kolkata, Mumbai and Guwahati.

Structural reforms in mining sector

In news
Government is coming up with many structural reforms in the mining sector to realise its true potential

Issue
Some of the successful bidders are trying to evade the process of auctions by delaying the production while some have completed the process of auction

Aim of structural reform

- To *increase participation of the private sector in mineral exploration.*
- Redefine the norms of exploration for auction of mineral blocks to ensure a seamless transition from exploration to production.

Reforms

- The standard of exploration required for auctioning of blocks for prospecting license-cum mining lease and open acreage licensing policy for allocation of mining rights which will give a major boost to the production of minerals in the country will be redefined.
- The Government is fully committed to ensure that the auction of mineral resources of the country is

a complete success and it generates revenue and employment for the state governments.
- Apart from generating jobs, reducing dependence on fuel import and stimulating the economic growth.
- The opening of the coal sector to private players will garner *hefty capital investment in the country over next 5-7 years.*
- FDI caps in the mining and exploration of metal and non-metal ores have been increased to 100% under the automatic route.
- The Geological Survey of India has almost doubled its exploration activity by implementing about 400 mineral exploration projects on various mineral commodities.

India's mining sector

- India is endowed with vast natural resources and the industry has contributed in many ways to the country's economy like direct contribution to the GDP, indirect contribution through development of downstream industries and employment.
- With industrial development, the government has also shifted its priorities in terms of availability of raw material, managing the country's economy and natural resources. It is government's priority to ensure that the regulatory environment is conducive to ease of doing business with simpler, transparent and time-bound procedures for doing business.

All states choose option-1 to meet GST implementation shortfall

In news
All the 28 states and 3 union territories with legislature have decided to go for option-1 to meet the revenue shortfall arising out of the Goods and Services Tax (GST) implementation.

Highlights

- Jharkhand became the latest state to go for Option 1.
- The state will receive ₹ 1,689 crore through a special borrowing window to meet the GST shortfall.

Option-1

- The Central government has set up a special borrowing window for the states and the UTs who choose Option-1 to borrow the amount of shortfall arising out of GST implementation.
- The *window has been operationalised since 23rd October 2020*

- The Government of India has already borrowed an amount of ₹30,000 crores on behalf of the States in five installments and passed it on to the States and Union Territories, who chose Option-1
- Under the terms of option-1, besides getting the facility of a special window for borrowings to meet the shortfall arising out of GST implementation, the states are also entitled to get unconditional permission to borrow the final instalment of 0.50 percent of Gross State Domestic Product (GSDP) out of the 2 percent additional borrowings permitted by the government, under Atma Nirbhar Abhiyaan

India Mobile Congress 2020

In news
Prime Minister Shri Narendra Modi addressed the virtual India Mobile Congress (IMC) 2020 today through video conference.

Theme: *"Inclusive Innovation - Smart, Secure, Sustainable"*

Aim
- It aims to align to the Prime Minister's vision to promote 'AatmaNirbhar Bharat', 'Digital Inclusivity', and 'Sustainable development, entrepreneurship & innovation'.
- To drive foreign and local investments, encourage R&D in the telecom and emerging technology sectors.

Highlights
- PM Modigave a call to work together to make India a global hub for telecom equipment, design, development and manufacturing.
- Better healthcare, Better education, Better information and opportunities for our farmers, Better market access for small businesses are some of the goals that can be worked on.
- India is emerging as one of the most preferred destinations for mobile manufacturing.
- Government aims to bring high speed fibre-optic connectivity in every village over the next three years.

DakPay

In news
Department of Posts (DoP) and India Post Payments Bank (IPPB) unveiled a new digital payment app 'DakPay' at virtual launch event.

Aim
To Transform Banking Experience at the last mile

Highlihgts
- The App is launched as part of its ongoing efforts to provide Digital Financial inclusion at the last mile across India.
- DakPay is double strength of service offerings in the form of online payments and home delivery of financial services.
- This innovative service will not only give access to banking services and postal products online, but also is a unique concept where one can order and avail postal financial services at doorsteps.
- Dak Pay brings simplified payment solutions to all by offering all customers access to the banking and payments products and services either through an App.

Services
- (Domestic Money Transfers – DMT),
- Scan QR code and make payment for services/merchants digitally (Virtual debit card & with UPI),
- Enabling cashless ecosystem through biometrics,
- Providing interoperable banking services to the customers of ANY BANK (AePS) and Utility Bill Payment services.

India Post Payments Bank
- India Post Payments Bank (IPPB) has been established under the Department of Posts, Ministry of Communication with 100% equity owned by Government of India.
- IPPB was *launched by the Prime Minister Shri Narendra Modi on September 1, 2018.*
- The bank has been set up with the vision to build the most accessible, affordable and trusted bank for the common man in India.

Role of SAIL steel plants in Mission Purvodaya

In news
Steel Minister emphasizes role of SAIL steel plants in Mission Purvodaya to drive development of eastern India.

Mission Purvodaya
It was launched in 2020 for the accelerated development of eastern India through the establishment of an integrated steel hub in Kolkata, West Bengal.

Objective
To enable swift capacity addition and improve overall competitiveness of steel producers both in terms of cost and quality.

Integrated Steel Hub would focus on 3 key elements

- **Capacity addition** through easing the setup of greenfield steel plants
- Development of **steel clusters** near integrated steel plants as well as demand centres
- **Transformation of logistics and utilities infrastructure** which would change the socio-economic landscape in the East.

Benefits of Integrated Steel Hub

- It will play a significant role in the overall socio-economic growth of Eastern India, thus reducing the disparity between the East and other regions of the country.
- It would enable the eastern belt to add more than **75%** of the country's incremental steel capacity envisioned by the **National Steel Policy**.
- This would also be accompanied by social infrastructure in the form of cities, schools, hospitals, skilling centers, etc
- It would enable **swift capacity addition** and **improve the overall competitiveness** of **steel producers both in terms of cost and quality.**
- In addition to **increased steel capacity**, this hub would also help enhance **best-in-class value addition capabilities.**
- The creation of world-class logistics and utility infrastructure would also spur the development of other manufacturing industries across sectors.

First Centre of Excellence for Skill Development in Power Sector

In news
Ministry of Skill Development and Entrepreneurship, Government of India, the Ministry of National Education and Youth, Government of the French Republic and Schneider Electric, announced the inauguration of first Center of Excellence(CoE) for skill development in power sector.

Centre of Excellence (CoE) for Power Sector

- The CoE has high-end modern labs designed keeping in mind the future technology, which will further strengthen India and France's relationship in energy sector.
- The establishment of CoE is a result of the MoU signed earlier between MSDE, Ministry of Education-France and Schneider Electric.
- The CoE will focus on creating a pool of highly skilled trainers and assessors for further training to increase employability of candidates in the field of Electricity, Automation and Solar Energy Sectors.

- The centre will design and deliver Training for Trainers, Instructors, Training of Assessors and other high-end program in the power and solar sector.

Significance

The establishment of CoE is a result of the MoU signed earlier between MSDE, Ministry of Education-France and Schneider Electric

ASSOCHAM Foundation Week 2020

In news
The Associated Chambers of Commerce & Industry of India (ASSOCHAM),will be commemorating its journey over the past century and celebrating its Foundation Day 2020, on 12th December 2020.

Central theme: *'India's resilience: Aatmanirbhar roadmap towards a US$5 trillion economy'.*

ASSOCHAM

- It is country's oldest and most proactive apex industry body set up in 1920.
- It has well-established National Councils in each of the segments may it be education, health, manufacturing, banking-finance, international trade etc.
- The ASSOCHAM with its vast reach serving over 4.5 lakh members from trade, industry and professional services through over 400 associations, federations and regional chambers
- It has shown the ability to transform itself to the contemporary Corporate India and of late has emerged as the 'Knowledge Chamber', leveraging country's strength in the knowledge-led global economy.

8th producing Basin of India - Bengal Basin

In news
Oil and Natural Gas Corporation (ONGC) Limited has begun crude oil production from the Asokenagar-1 well, Bengal Basin in 24 Paragana district

Highlights

- This has made the Bengal basin India's eighth producing basin, joining the ranks of Krishna-Godavari (KG), Mumbai Offshore, Assam Shelf, Rajasthan, Cauvery, Assam-Arakan Fold Belt and Cambay.
- The discovery would play a role for India's energy security.
- There are 26 sedimentary basins in India, covering a total area of 3.4 million square kilometer. Of

these, 16 are onland basins, 7 located both onland and offshore and 3 completely offshore.
- The Bengal basin is spread across nearly 1.22 lakh square kilometres, with nearly two-third of it falling under the waters of the Bay of Bengal.

ONGC is India's largest oil and gas producer contributing 72 per cent of the country's hydrocarbon production.

Aesthetic Dhokra Decorative Pieces Added to the Tribes India Collection

In news
Exquisite Dhokra products from different tribes of India were among the main items added in its 7th edition of ***"From Our Home to your Home"*** campaign on Tribes India.

Aesthetic Dhokra Decorative
- Dhokra is a non-ferrous metal casting style which uses the lost-wax technique. This style of metal casting has been in vogue in all parts of India for centuries.
- The dhokra products reflect the simplicity and motifs of tribal and folk life and make for excellent gifting options. Hence they are popular both in India and abroad.
- Among the *dhokra* products being introduced on Tribes India are attractive statues of fish, elephants and hangers in the boat jail design from the Lohra tribes of Jharkhand.
- From the Sadeibarainitribals from Odisha, Ganesha statues, including a dancing Ganesha, a mask of Goddess Durga and Lord Jagannath, a Buddha Jaali and beautiful diyas in different shapes have been sourced.
- Other products include products from the Kattunayakan tribes of Tamil Nadu.

Eklavya Model Residential School

In news
Union Minister of Tribal Affairs Shri Arjun Munda inaugurated the new office of National Education Society for Tribal Students (NESTS)

National Education Society for Tribal Students (NESTS)

NESTS was a symbolic name given to signify how the government plans to make EMRS cradles for tribal children and bring them at par with the national standards of education in public schools.

Eklavya Model Residential Schools (EMRS)
- In the context of the trend of establishing quality residential schools for the promotion of education in all areas and habitations in the country, the Eklavya Model Residential Schools (EMRS) for ST students take their place among the Jawahar Navodaya Vidyalayas, the Kasturba Gandhi Balika Vidyalayas and the Kendriya Vidyalayas. Eklavya Model Residential Schools (EMRS) are set up in States/UTs with grants under Article 275(1) of the Constitution of India.
- EMRS started in the year 1997-98
- The scheme is being implemented by the Ministry of Tribal Affairs, Government of India.

Objective

To provide quality middle and high level education to Scheduled Tribe (ST) students in remote areas, not only to enable them to avail of reservation in high and professional educational courses and as jobs in government and public and private sectors but also to have access to the best opportunities in education at par with the non ST population.

North East's first-ever specialized "Ginger" Processing Plant

In news

North East's first-ever specialised "Ginger" Processing Plant at district Ri-Bhoui in Meghalaya is being revived and is likely to become functional in the beginning of 2021"

Details
- The only Ginger Processing Plant of North East India was established around the year 2004 but has remained non-functional for many years.
- The NERAMAC has now undertaken the responsibility of reviving it and initiated steps to operationalize the closed Plant through PPP mode.
- The plant will not only process ginger but also help in preparing products like waxed ginger, ginger paste, ginger powder, ginger flakes, ginger oil etc.
- The ginger products being prepared from this Plant will not only be available for domestic consumption but will also have a wider demand and this will also be in keeping with Prime Minister Modi's calls for ***"Vocal for Local".***

Issue

North Eastern Region of India produces about 450,000 Metric Ton of high-quality ginger every year but most of it is sold at a lower price due to lack of processing and cold storage facilities.

The Plant at Meghalaya will give the much-needed facility to the ginger growers and they will be able to use their capacities and at the same time optimally utilize the natural resources.

Sovereign Gold Bond scheme

In news

The eleventh tranche of the Sovereign Gold Bond scheme 2020-21 will be available for five days starting February 1, 2021.

Sovereign Gold Bond Scheme

- It was launched by Govt in November 2015, under Gold Monetisation Scheme. Under the scheme, the issues are made open for subscription in tranches by RBI in consultation with GOI.
- RBI Notifies the terms and conditions for the scheme from time to time. The subscription for SGB will be open as per following calendar.
- The rate of SGB will be declare by RBI before every new tranche by issuing a Press Release.
- As per RBI instructions "Every application must be accompanied by the 'PAN Number' issued by the Income Tax Department to the investor(s)'' as the PAN number of the first/ sole applicant is mandatory.

Gold bond advantages over physical gold

- A sovereign gold bond is a better investment than physical gold because of many reasons.
- These gold bonds allow you to get a lower price than physical gold when applied online.
- Fixed interest rate on these gold bonds.
- Gold bonds have no holding or storage cost.
- These bonds carry a sovereign guarantee since they are issued by the government.
- Another benefit of sovereign gold bond scheme is that there is no capital gains tax at maturity or redemption for individual investors. Also, there is indexation benefit if the same is transferred before maturity for non-individual investors.

Workshop on "Committee of Creditors: An Institution of Public Trust"

''The Insolvency and Bankruptcy Board of India (IBBI) jointly with the State Bank of India and the Indian Banks' Association organised a one-day virtual workshop on "Committee of Creditors: An Institution of Public Trust"

- This is the fifth such workshop in the series for the benefit of financial creditors who comprise

Committee of Creditors (CoC) under the Insolvency and Bankruptcy Code, 2016 (Code).
- The workshop aimed at developing a better understanding of the role of and expectations from the CoC, under the Code and to build the capacity of financial creditors.
- The Insolvency and Bankruptcy Board of India was established on 1st October, 2016 under the Insolvency and Bankruptcy Code, 2016 (Code).

In news

The Insolvency and Bankruptcy Board of India (IBBI) jointly with the State Bank of India and the Indian Banks' Association organised a one-day virtual workshop on "Committee of Creditors: An Institution of Public Trust"

Aim

The workshop aimed at developing a better understanding of the role of and expectations from the CoC, under the Code and to build the capacity of financial creditors to ensure that the CoC:

- Discharges its statutory duties and responsibilities with utmost care and diligence.
- Has the capability and motivation to take business decisions in terms of generating multiple competing resolution plans and approving the best among them.
- Considers and balances the interest of all stakeholders in a resolution process.

The Insolvency and Bankruptcy Board of India

- It was established on 1st October, 2016 under the Insolvency and Bankruptcy Code, 2016 (Code).
- It is a key pillar of the ecosystem responsible for implementation of the Code that consolidates and amends the laws relating to reorganization and insolvency resolution of corporate persons, partnership firms and individuals in a time bound manner for maximization of the value of assets of such persons, to promote entrepreneurship, availability of credit and balance the interests of all the stakeholders.

14th BSM conducted by Spices Board in FY 2020-21

In news

Spices Board conducted the Virtual Buyer Seller Meet(BSM) for Chili and Turmeric, with focus on Andhra Pradesh, which saw participation from 245 stakeholders

Highlights

- This was the 14th BSM conducted by the Board in FY 2020-21.

- India is the world's largest exporter of chili and turmeric, the exports of which have recorded a steady progress, over the years. During 2019-20, India exported 4,84,000 tonnes of chili and chili products valued at Rs.6211.70 crores which contributed to more than 40 per cent in volume and 29 per cent in value of India's total spice exports.
- Turmeric held a share of 11 per cent in volume and 6 per cent in value of the export basket, with an export of 1,36,000 tonnes valued at Rs.1216.40 crores.
- Spices items in 225 categories were exported to 185 countries in the last year.

Requirements
- Integration between all segments of value chain will help to derive better value in export.
- Their is need for more value addition in spices and urged the exporters to come up with ideas for enhancing export of value addition in chili and ways of investment in spice processing.

Remission of Duties and Taxes on Exported Products

In news
Taking a major step to boost exports, Government has decided to extend the benefit of the Scheme for Remission of Duties and Taxes on Exported Products (RoDTEP) to all export goods with effect from 1 stJanuary, 2021.

IFSCA becomes member of IOSCO

In news
The International Financial Services Centres Authority (IFSCA) has become an Associate Member of the International Organization of Securities Commissions (IOSCO)

Highlights
- The membership of IOSCO would provide IFSCA the platform to exchange information at the global level and regional level on areas of common interests.
- The IOSCO platform would enable IFSCA to learn from the experiences and best practices of the regulators of other well established financial centres.
- The IOSCO's membership is a significant milestone in connecting IFSCA with the regulators of securities markets globally and would contribute immensely towards the development and regulation of the financial products, financial services and financial institutions at the Gujarat International

- Finance Tec-City International Financial Services Centre.

The International Financial Services Centres Authority

It has been established on April 27, 2020 under the International Financial Services Centres Authority Act, 2019. It is headquartered at GIFT City, Gandhinagar in Gujarat**Role of IFSCA**
- The IFSCA is a unified authority for the development and regulation of financial products, financial services and financial institutions in the International Financial Services Centre (IFSC) in India.
- At present, the GIFT IFSC is the maiden international financial services centre in India.
- Prior to the establishment of IFSCA, the domestic financial regulators, namely, RBI, SEBI, PFRDA and IRDAI regulated the business in IFSC.

The International Organization of Securities Commissions (IOSCO)
It is a global cooperative of securities regulatory agencies that aims to establish and maintain worldwide standards for efficient, orderly and fair markets.

IOSCO Objectives
- To cooperate in developing, implementing and promoting adherence to internationally recognized and consistent standards of regulation, oversight and enforcement in order to protect investors, maintain fair, efficient and transparent markets, and seek to address systemic risks;
- To enhance investor protection and promote investor confidence in the integrity of securities markets, through strengthened information exchange and cooperation in enforcement against misconduct and in supervision of markets and market intermediaries; and
- To exchange information at both global and regional levels on their respective experiences in order to assist the development of markets, strengthen market infrastructure and implement appropriate regulation.

TRIFOOD Parks

In news
Trifed Signs MoU with Akhil Bhartiya Vanvasi Kalyan Ashram for Setting up of TRIFOOD Parks in Madhya Pradesh.

Highlights
- Its mission is to improve tribal livelihoods.
- The two organisations will work together by undertaking various initiatives all aimed at

improving the livelihood of tribal people and implementation of the **Van DhanYojana** through the mobilization of Self Help Groups (SHGs) / VanDhanVikas Kendra (VDVKs) / VPCs / TRIFOOD Parks.

- With TRIFED as the mentoring organization, it has been agreed that VanvasiKalyan Ashram would form new Van DhanKendras in tribal areas by identifying SHGs, organize training, building infrastructure, provide machinery and equipment and other support.
- Among other scope of activities, Kalyan Ashram will include other areas, viz agriculture, horticulture, floriculture, fisheries, animal husbandry, handlooms, crafts to keep the operations running year-long and make the VanDhan scheme all-inclusive and viable.

TRIFOOD

- This Scheme is a joint initiative of Ministry of Food Processing Industry, Ministry of Tribal Affairs and TRIFED.
- TRIFOOD Scheme, implemented in the backdrop of VanDhan Yojana will promote value addition to Minor Forest Produce (MFP).
- The units are envisaged to be professionally operated by reputed food processors who will operate the facilities for a designated period of time under the overall administrative control of TRIFED so that the assets created are efficiently commercially utilised as per its installed capacities and designed objectives.
- In the process creating local employment opportunities for the tribal communities and providing entrepreneurial opportunities in terms of raw material linkages to the units.

Akhil Bhartiya Vanvasi Kalyan Ashram

- It is an Indian social welfare organization based in Jashpur, in the Chhattisgarh state of India.
- It focuses on the welfare activities of Janjatis, that is Scheduled Tribes in remote areas of Bharat (India), and has branches throughout the country.
- These branches focus on agriculture, healthcare, child education, and sports.
- It also works to create cultural awareness among janjatis thereby facilitating the idea of preservation of their tradition and customs followed in different groups.

Cooperation between India and Japan on Partnership in "Specified Skilled Worker"

In news

The Union Cabinet, has approved the signing of a Memorandum of Cooperation between the Government of India and Government of Japan, on a Basic Framework for Partnership for Proper Operation of the System Pertaining to **"Specified Skilled Worker".**

Details

- The present Memorandum of Cooperation would set an institutional mechanism for partnership and cooperation between India and Japan on sending and accepting skilled Indian workers, who have qualified the required skill and Japanese language test, to work in fourteen specified sectors in Japan.
- These Indian workers would be granted a new status of residence o*f **"Specified Skilled Worker"*** by the Government of Japan.

Implementation Strategy

Under this MOC, a Joint Working Group will be set up to follow up the implementation of this MOC.

Major Impact

The Memorandum of Cooperation (MOC) would enhance people-to -people contacts, foster mobility of workers and skilled professionals from India to Japan.

Beneficiaries

Skilled Indian workers from fourteen sectors viz. Nursing care; Building cleaning; Material Processing industry; Industrial machinery manufacturing industry; Electric and electronic information related industry; Construction; Shipbuilding and ship-related industry; Automobile maintenance; Aviation; Lodging; Agriculture; Fisheries; Food and beverages manufacturing industry and Food service industry would have enhanced job opportunities to work in Japan.

Urban Local Bodies reforms

In news

Telangana has become the 3rd State in the country to successfully undertake *"Urban Local Bodies (ULB)"* reform stipulated by the Department of Expenditure, Ministry of Finance.

Other States

Andhra Pradesh and Madhya Pradesh, have completed this reform.

Aim of the reform

Financial strenghtening of ULBs in the State and to enable them to provide better public health and sanitation services

Objectives

- The State will notify (a) floor rates of property tax in ULBs which are in consonance with the prevailing circle rates (i.e. guideline rates for property transactions) and (b) floor rates of user charges in respect of the provision of water-supply, drainage and sewerage which reflect current costs/ past inflation.
- The State will put in place a system of periodic increase in floor rates of property tax/ user charges in line with price increases.

Citizen centric areas identified for reforms

- Implementation of One Nation One Ration Card System
- Ease of doing business reform
- Urban Local body/ utility reforms
- Power Sector reforms.

Seventh Trade Policy Review of India at the WTO

In news

The second and final Session of India's seventh Trade Policy Review (TPR) concluded on 8[th]January 2021, at the World Trade Organization in Geneva

Trade Policy Reviews

- Surveillance of national trade policies is a fundamentally important activity running throughout the work of the WTO.
- At the centre of this work is the Trade Policy Review Mechanism (TPRM).
- All WTO members are reviewed, the frequency of each country's review varying according to its share of world trade.

Importance of Trade Policy Reviews

- The TPRM is a valuable tool for the development of trade policies in developing and least developed countries.
- These Members often face challenges in adjusting their domestic policies in compliance with multilateral trade rules, and TPRs can help them self-assess existing measures as well as taking new trade policy-making directions.

India's progress

- Since previous TPR, India has worked diligently to reform and transform the entire economic eco-

system to meet the socio-economic aspirations of a billion-plus Indians.
- The introduction of the GST, the IBC, labour sector reforms, an enabling and investor-friendly FDI Policy, and various national programmes like Make in India, Digital India, Startup India and Skill were the path-breakers.

Non-toxic wall paint

In news

The eco-friendly, non-toxic paint, called"Khadi Prakritik Paint" is a first-of-its-kind product, with anti-fungal, anti-bacterial properties was launched on 12 Jan 2021

Highlight

- Based on cow dung as its main ingredient, the paint is cost-effective and odorless, and has been certified by Bureau of Indian Standards
- Khadi Prakritik Paint is available in two forms – distemper paint and plastic emulsion paint**.**
- Production of Khadi Prakritik Paint is aligned with Hon'ble Prime Minister's vision of increasing farmers' income.
- The project was conceptualized by Chairman KVIC in March 2020, and later developed by Kumarappa National Handmade Paper Institute, Jaipur (a KVIC unit).
- The paint is free from heavy metals like lead, mercury, chromium, arsenic, cadmium and others.

Significance

It will be a boost to local manufacturing and will create sustainable local employment through technology transfer.

This technology will increase consumption of cow dung as a raw material for eco-friendly products and will generate additional revenue to farmers and gaushalas.

NCAVES India Forum 2021

In news

The Ministry of Statistics & Programme Implementation has taken up several initiatives under the NCAVES Project during the past three years

Highlights

- Three live sessions of NCAVES India Forum 2021 are scheduled to be held on January 14, 21 and 28, 2021
- **Natural Capital Accounting and Valuation of the Ecosystem Services (NCAVES)**India Forum-2021 is being organised by the **Ministry of Statistics and Programme Implementation (MoSPI).**

- India is one of the five countries taking part in this project – the other countries being **Brazil, China, South Africa and Mexico.**

The objectives
- To present India's achievements in the domain of Natural Capital Accounting (NCA);
- To prioritize the emerging opportunities for NCA in India;
- To familiarize stakeholders with the work undertaken by the different international agencies in the area of NCA; and
- To provide a platform to selected Research Institutions to present their research conducted in the valuation of ecosystem services.

What is NCAVES Project?
- The project has been launched by the United Nations Statistics Division, the United Nations Environment Programme, the Secretariat of the Convention on Biological Diversity and the European Union.
- **Aim:** To assist the five participating partner countries, namely Brazil, China, India, Mexico and South Africa, to advance the knowledge agenda on environmental-economic accounting, in particular ecosystem accounting.
- **Funding and Duration:** The project is funded by the European Union(EU) and will have a duration until the end of 2021.
- **Implementation of Project in India:** In India, the NCAVES project is being implemented by the MoSPI in close collaboration with the Ministry of Environment, Forest and Climate Change (MoEF&CC) and the National Remote Sensing Centre(NRSC).

APEDA and Indian Embassy

In news
In a bid to boost exports potential of India's agricultural and processed food products exports, APEDA has organized a Virtual Buyer Seller Meet (BSM) in association with Indian Embassy in, Azerbaijan today

Highlights
- The meet brought together key stakeholders from the respective Governments and trade on a common platform for strengthening strategic cooperation between India and Azerbaijan in export of Basmati Rice.
- APEDA took a lead to organize Virtual BSM to provide a platform to the exporters and importers of India and Azerbaijan

- This Virtual-BSM with Azerbaijan is the 16th in the series of such events organized by APEDA with various countries.
- Earlier such virtual Virtual-BSM was first organized with the United Arab Emirates (UAE) followed by Kuwait, Indonesia, Switzerland, Belgium, Iran, South Africa, Germany, The United States, Canada and Australia, Thailand and Nepal.

Agricultural and Processed Food Products Export Development Authority (APEDA)

- Agricultural & Processed Food Products Export Development Authority (APEDA) is a government organization established in 1985 through an act for the development and promotion of export of scheduled products.
- It provides financial assistance, information, guidelines towards the development of scheduled products.
- The products specified under the APEDA ACT are called schedule products and exporters of such scheduled products are required register under APEDA.

Objective

- To promote schedule products export and to achieve this various functions has been undertaken by this body under the regulation of central government.
- Central government lays down the rules and regulation and implements through this body for the efficient administration of APEDA Act.

Kevadia- Emerging as a major global tourist destination

In news
Kevadiya in Gujarat is no longer just a small block in some remote area, it has come up as a one of the biggest tourist destination of the world.

Kevadiya
- Kevadia is a census town in Narmada district in the Indian state of Gujarat.
- This town is famous tourist Location, as Statue of Unity is located here.
- The town also has a Railway Station,which is located at a distance of just 5 kilometres from Statue of Unity.

The Statue of Unity
- It is a colossal statue of Indian statesman and independence activist Vallabhbhai Patel (1875–1950), who was the first Deputy Prime Minister

- and Home minister of independent India and adherent of Mahatma Gandhi during the non-violent Indian Independence movement.
- Patel was highly respected for his leadership in uniting 562 princely states of India with a major part of the former British Raj to form the single Union of India.

Improving tourism in kevadiya
- Eight trains connecting different regions of the country to Kevadiya in Gujarat was flagged off.
- The train that will connect Hazrat Nizamuddin, Varanasi, Rewa, Dadar, Chennai, Pratapnagar comprises of Vistadome, AC chair car Executive Class, AC chair car and Non-AC chair car coaches.

India Innovation Index 2.0

In news
NITI Aayog releases second edition of India Innovation Index-2020

Highlights
- The index demonstrates the government's continued commitment towards transforming the country into an innovation-driven economy.
- Innovation Index in sync with Global innovation index's parameters.
- Innovation will play a key role in making the country self-reliant and heading towards the five trillion dollar economy.
- The innovation index will increase the competitive federalism among the States and Union Territories.

Innovation Index
- The index ranks different states and UTs based on how they support innovation and disruptive technologies.
- The first edition of the index was launched in October 2019.
- The motive of the index is to showcase the government's initiative to create an innovation-driven economy.

Tripartite agreement

In news
Tripartite agreement signed between MECL, RSMML and DMG for harnessing Potash in Rajasthan

Significance
- MoU will pave the way to undertake feasibility studies for harnessing sub-surface salt deposits through solution mining, utilise Rajasthan's rich

mineral reserves, boost its economy and establish it as a hub of solution mining of potash, the 1st in the country.
- Paving the way for the 1st Solution Mining project in the country, this project will generate employment as well as support the Atmanirbhar Bharat Abhiyan by way of generating import substitution by boosting the domestic mineral production of Potash and associated minerals.

Rajasthan Mineral
- Rajasthan has huge Potash and Halite resources spread across 50,000 sq. kms in the Nagaur – Ganganagar basin in the northwest.
- Bedded Salt formations are strategically useful for underground oil storage, repositories for hydrogen, ammonia and helium gas, storage of compresses gas and nuclear waste.
- Potash & Sodium Chloride from the Bedded Salt are extensively used in the Fertiliser Industry and the Chemical Industry respectively.

4-tier structure for tighter regulation of NBFCs

In news
The Reserve Bank of India (RBI) has proposed a tighter regulatory framework for non-banking financial companies (NBFCs) by creating a four-tier structure with a progressive increase in intensity of regulation.

Base Layer
If the framework is visualised as a pyramid, the bottom of the pyramid, where least regulatory intervention is warranted, can consist of NBFCs, currently classified as non-systemically important NBFCs (NBFC-ND), NBFCP2P lending platforms, NBFCAA, NOFHC and Type I NBFCs.

Middle Layer
- As one moves up, the next layer can consist of NBFCs currently classified as systemically important NBFCs (NBFC-ND-SI), deposit taking NBFCs (NBFC-D), housing finance companies, IFCs, IDFs, SPDs and core investment companies.
- The regulatory regime for this layer will be stricter compared to the base layer.
- Adverse regulatory arbitrage vis-à-vis banks can be addressed for NBFCs falling in this layer in order to reduce systemic risk spill-overs, where required.

Upper Layer
- Going further, the next layer can consist of NBFCs which are identified as systemically significant among.

- This layer will be populated by NBFCs which have large potential of systemic spill-over of risks and have the ability to impact financial stability.
- There is no parallel for this layer at present, as this will be a new layer for regulation.
- The regulatory framework for NBFCs falling in this layer will be bank-like, albeit with suitable and appropriate modifications.

Top Layer

- It is possible that considered supervisory judgment might push some NBFCs from out of the upper layer of the systemically significant NBFCs for higher regulation/supervision.
- These NBFCs will occupy the top of the upper layer as a distinct set.
- Ideally, this top layer of the pyramid will remain empty unless supervisors take a view on specific NBFCs.
- In other words, if certain NBFCs lying in the upper layer are seen to pose extreme risks as per supervisory judgement, they can be put to higher and bespoke regulatory/supervisory requirements.

Bharat Parv 2021

In news

The Ministry of Tourism in collaboration with other central Ministries is organizing this year a virtual 'Bharat Parv' event from 26th to 31st January 2021, showcasing the spirit of 'Ek Bharat Shreshtha Bharat'.

About Bharat Parv

- Bharat Parv is a festival to celebrate the spirit of India and for showcasing the rich and cultural diversity of the country. It will be celebrated till January 31.
- Bharat Parv is organized by the Tourism Ministry every year since 2016 in front of the Red Fort during the Republic Day celebrations.
- The mega festival by the government is held to generate fervour and for showcasing the varied and rich cultural heritage and diversity of India.
- The event by the tourism ministry brings together the spiritual, tourism, and other activities held in different states and UTs of India on one single platform.

Bharat Parv 2021

- The recorded performances of the Armed forces music bands and glimpses of the Republic Day Parade will be available on the virtual platform.
- Different central ministries and organisations which includes the Ministry of Ayush, Ministry of Culture, Ministry of Railways, Ministry of

Consumer Affairs, National Museum, Archaeological Survey of India, National Gallery of Modern Arts, Khadi, and other industries will be showing handlooms, handicrafts, dance, music, paintings and other materials from all over India.
- Prasar Bharati will also virtually showcase its efforts of promoting Ek Bharat-Shrestha Bharat.
- Another media unit of the Information and Broadcasting ministry, the Bureau of Outreach and Communication, will be focusing on the 150th Birth anniversary of Mahatma Gandhi by displaying videos, photos, animation related to Sashakt Bharat, Swachh Bharat, Bapu Ke Sapno ka Bharat.
- In order to celebrate the diversity and spirit of India, there will also be a rich display of books on art and culture as well as the biographies and history of builders of Modern India.

Mega Investment Textiles Parks (MITRA)

In news

The Government has proposed a scheme of Mega Investment Textiles Parks (MITRA) to enable the textile industry to become globally competitive, attract large investments, boost employment generation and exports. MITRA will be launched in addition to the Production Linked Incentive Scheme(PLI).

Significance

- It will be a game changer for the Indian Textiles Industry. Along with the Production Linked Incentive (PLI) scheme, MITRA will lead to increased investments and enhanced employment opportunities.
- MITRA will give our domestic manufacturers a level-playing field in the international textiles market & pave the way for India to become a global champion of textiles exports across all segments
- This will create world class infrastructure with plug and play facilities to create global champions in exports. 7 Textile Parks will be established over 3 years.

Similar Parks

- Such parks have already been present in nations like China and Vietnam which help give a thrust to the textile sector.
- India has been losing its competitive edge to Bangladesh and Vietnam owing to their low labour costs, wider scale of operations and the Free Trade Agreement (FTA) advantage enjoyed by them.
- With the textile sector being the second largest employment generator in the country after

agriculture, the Budget announcements mean a significant step forward for the industry.

National Infrastructure Pipeline Development Financial Institution

In news
In order to achieve the target of National Infrastructure Pipeline (NIP) in the coming years the Government proposes following three steps
- Creation of institutional structures
- A big thrust on monetizing assets
- Enhancing the share of capital expenditure in Central and State budgets

Infrastructure financing - Development Financial Institution (DFI)
- The Union Finance Minister announced that a sum of Rs. 20,000 crore has been provisioned in the Union Budget to capitalise Development Financial Institution (DFI).
- A Bill will be introduced to set up DFI which will act as a provider, enabler and catalyst for infrastructure financing.
- The ambition is to have a lending portfolio of at least Rs. 5 lakh crore for this DFI in three years time, the Minister added.

Asset Monetisation
- The Union Finance Minister announced launch of a *"National Monetization Pipeline"* of potential brownfield infrastructure assets stating that Monetizing operating public infrastructure assets is a very important financing option for new infrastructure construction.
- An Asset Monetization dashboard will also be created for tracking the progress and to provide visibility to investors.

Policy of Strategic Disinvestment

In news
Union Minister announced that government has **approved** a **policy** of **strategic disinvestment** of public sector enterprises that will provide a **clear roadmap** for **disinvestment** in all **non-strategic** and **strategic** sectors.

Aim
The government aims at making use of disinvestment proceeds to finance various social sector and developmental programmes and also to infuse private capital, technology and best management practices in Central Government Public Sector Enterprises.

Policy on Strategic Disinvestment
Fulfilling the governments' commitment under the AtmaNirbhar Package of coming up with a policy of **strategic disinvestment of public sector enterprises**, the Minister highlighted the following as it's main features :
- Existing CPSEs, Public Sector Banks and Public Sector Insurance Companies to be covered under it.
- Two fold classification of Sectors to be disinvested

Strategic Sector : Bare **minimum presence** of the public sector enterprises and remaining to be privatised or merged or subsidiarized with other CPSEs or closed.
Following 4 sectors to come under it
- Atomic energy, Space and Defence
- Transport and Telecommunications
- Power, Petroleum, Coal and other minerals
- Banking, Insurance and financial services

Non- Strategic Sector : In this sector, CPSEs will be privatised, otherwise shall be closed.

National Agriculture Market (e-NAM)

Why in news?
e-NAM is now developing as "Platforms of Platform" to create a digital ecosystem that leverage the expertise of individual platforms across various segments of agri. value chainviz. developing and Integrating service platform with e-NAM (QC services, transportation & delivery services, sorting/grading services, packaging services, insurance, trade finance, warehouses etc.), enabling the farmers to add value to their produce and facilitate them with ease of agri marketing.

New addition
- The government would integrate an additional 1,000 mandis with electronic National Agriculture Market (eNAM) in the coming financial year to enhance farmers' access to multiple markets and buyers across the country, an official statement said on Thursday.
- The Agriculture Ministry has linked 1,000 mandis in the country to eNAM and the latest Budget has made provisions for extending this to another 1,000 mandis, the statement said adding that over 1.69 crore farmers and 1.55 lakh traders have already registered on the digital platform.
- The digital trading system so far has seen trading of 41.3 million tonnes of bulk commodities and 36.8 million coconut and bamboo worth approximately ₹1.22-lakh crore

National Agriculture Market (eNAM)

- It is a pan-India electronic trading portal which networks the existing APMC mandis to create a unified national market for agricultural commodities.
- Small Farmers Agribusiness Consortium (SFAC) is the lead agency for implementing eNAM under the aegis of Ministry of Agriculture and Farmers' Welfare, Government of India.

Vision

To promote uniformity in agriculture marketing by streamlining of procedures across the integrated markets, removing information asymmetry between buyers and sellers and promoting real time price discovery based on actual demand and supply.

Mission

Integration of APMCs across the country through a common online market platform to facilitate pan-India trade in agriculture commodities, providing better price discovery through transparent auction process based on quality of produce along with timely online payment.

Startup India Seed Fund Scheme

Startup India Seed Fund Scheme (SISFS) has been approved for the period of next four years starting from 2021-22.

Aim

The Scheme aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry and commercialization.

Highlights

- It will be implemented with effect from 1st April 2021.
- Rs. 945 Crore corpus will be divided over the next 4 years for providing seed funding to eligible startups through eligible incubators across India.
- The scheme is expected to support about 3600 startups.

Benefits under 'Atmanirbhar Bharat'

- Rescheduling of Payments – Term Loans and Working Capital Facilities
- Easing of Working Capital Financing
- Production-Linked Incentive (PLI) Scheme
- Reliefs through Employee Provident Fund (EPF)
- EPF contribution reduced for Business & Workers for 3 months

Hathkargha Samvardhan Sahayata (HSS) Yojana

In news

HSS is a component of National Handloom Development Programme(NHDP) and Comprehensive Handloom Cluster Development Scheme(CHCDS)

Highlights

- The scheme was introduced to facilitate technology up-gradation in the handloom sector by providing 90% subsidy for the purchase of looms and accessories by the weavers.
- The scheme is designed for all the weavers, including SC/ST/OBC and women.

Objectives

- To facilitate the up-gradation of technology in loom units
- To encourage the development of capabilities to create employment opportunities in emerging technological areas.

Background

- The Government of India, Ministry of Textiles introduced the technology up-gradation scheme under National Handloom Development Programme (NHDP) and Comprehensive Handloom Cluster Development Scheme (CHCDS) in 2015-16.
- This scheme, with some modifications, was named as "Hathkargha Samvardhan Sahayata (HSS) Yojana" in December 2016, for providing upgraded looms/accessories to handloom weavers to improve quality of fabric and enhance productivity.

Pradhan Mantri Fasal Bima Yojana

In news

To boost the safety of farmers' crops and ensure maximum benefit of crop insurance reaches to farmers, the Government of India has allocated Rs 16000 crores for Pradhan Mantri Fasal Bima Yojana(PMFBY)for the fiscal year 2021-22

Pradhan Mantri Fasal Bima Yojana

The new Crop Insurance Scheme is in line with One Nation – One Scheme theme. It incorporates the best features of all previous schemes and at the same time, all previous shortcomings / weaknesses have been removed. The PMFBY will replace the existing two schemes National Agricultural Insurance Scheme as well as the Modified NAIS.

Objectives

- To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases.
- To stabilise the income of farmers to ensure their continuance in farming.
- To encourage farmers to adopt innovative and modern agricultural practices.
- To ensure flow of credit to the agriculture sector.

Atmanirbhar Bharat Rojgar Yojana

In news

Atmanirbhar Bharat Rozgar Yojana" is being launched to boost employment in formal sector and incentivize creation of new employment opportunities during the Covid recovery phase under Atmanirbhar Bharat Package 3.0.

Details

- This scheme being implemented through the Employees' Provident Fund Organisation (EPFO), reduces the financial burden of the employers of various sectors/industries including MSME and will encourages them to hire more workers.

- Under ABRY, the Government of India is bearing both the employees' share (12% of wages) and employers' share (12% of wages) of contribution payable or only the employees' share, depending on employment strength of the EPFO registered establishments.

Benefits

Government of India will provide subsidy for two years in respect of new employees engaged on or after 1st October, 2020 and upto 30th June, 2021 at following scale

- Establishments employing up to 1000 employees: Employee's contributions (12% of Wages) & Employer's contributions (12% of wages) totalling 24% of wages
- Establishments employing more than 1000 employees: Only Employee's EPF contributions (12% of EPF wages)

The subsidy support to get credited upfront in Aadhaar seeded EPFO Account (UAN) of eligible new employee.

Easy access to Cultural Heritage Sites forPersons with Disabilities

In news

The basic public amenities like drinking water, toilets, signages, etc. are available at most of the Centrally Protected Monuments including World Heritage Sites.

Further, wheelchairs, ramps, Braille cultural notice boards and disabled friendly public amenities have been provided to make these sites accessible to persons with disabilities.

Steps have been taken by the Government to upgrade the existing infrastructure at museums and art galleries

- Ramps are available for easy access to the museums. Appropriate action for retro-fitting has already been taken up where such facilities were not available.
- Lift provided in museums, wherever feasible.
- Tactile Path, Braille signages, toilets for differently-abled persons available in most of museums/galleries.
- Wheelchairs are available in all museums/galleries.
- Some of Museums/Galleries have developed exhibitions with Braille labels and tactile path.

Cultural heritage

- It is the legacy of cultural resources and intangible attributes of a group or society that is inherited from past generations.
- Not all legacies of past generations are "heritage", rather heritage is a product of selection by society.
- Cultural heritage includes tangible culture (such as buildings, monuments, landscapes, books, works of art, and artifacts), intangible culture (such as folklore, traditions, language, and knowledge), and natural heritage (including culturally significant landscapes, and biodiversity).
- The deliberate act of keeping cultural and heritage from the present for the future is known as preservation (American English) or conservation (British English), which cultural and historical ethnic museums and cultural centers promote, though these terms may have more specific or technical meaning in the same contexts in the other dialect.
- Preserved heritage has become an anchor of the global tourism industry, a major contributor economic value to local communities

Child Labour Institutes

In news

The Government is implementing the National Child Labour Project (NCLP) Scheme for rehabilitation of child labour in the country

Centre for National Resource Centre on Child Labour

- Imparting training is one of the activities of NRCCL with the objective to develop capabilities of various target groups towards progressive elimination of child labour in India.

- NRCCL has been conducting a number of Sensitisation programmes, Capacity Building programmes, Orientation programmes, Training of Trainers programmes and Awareness Generation Programmes.
- The training programmes form a part of the Centre's endeavour to create a large group of trainees from different geographical regions.

GOBARDHAN waste to wealth

Context

As per the information provided by National Dairy Development Board(NDDB), total dung production (assuming 15 Kg Dung per animal per day) in the country from bovines is about 1,655 million tonnes per year, out of which, a major part is traditionally used in compost/ raw form.

In news

The Government of India has launched a multi-ministrial programme named as 'GOBARDHANwaste to wealth', under Phase II of the Swachh Bharat Mission Grameen (SBM-G)

Highlights

- The programme is being implemented by the Department of Drinking Water and Sanitation (DDWS) in collaboration with the Department of Animal Husbandry and Dairying, NDDB and other Ministries.
- Under the Gobar-dhan component, DDWS has included the small holder based Manure Management Model established by NDDB as one of the solid waste management models for implementation across the country wherein bio-degradable waste is envisaged to be managed through composting and bio-gas plants.

- Indian Council of Agricultural Research has developed a technology to prepare various types of organic manures such as compost, vermin compost, bio-enriched compost etc. from various organic wastes including animal wastes.

GOBAR-DHAN Scheme

Aim

The scheme aims to positively impact village cleanliness and generate wealth and energy from cattle and organic waste. The scheme also aims at creating new rural livelihood opportunities and enhancing income for farmers and other rural people

- Under GOBAR-DHAN scheme, solid waste of dung and fields will be changed into compost and fuels such as biogas and bio-CNG.

- The cooking gas will be provided to the rural habitations with optimum technical support to ensure that the schemes functions on a sustainable basis.
- The government has selected over 115 districts for implementation of the scheme.
- Under the scheme, farmers will be able to make use of easily available Compost fertilizer for their farm lands.
- As part of the scheme, people will be educated about the utilisation of cattle dung for converting it into more valuable fuel, biogas and manure.

Impact

- The scheme will boost village cleanliness and generate wealth and energy from cattle and organic wastes.
- It will create new rural livelihood opportunities and enhance income for farmers and other rural people
- It will help in saving electricity and environment too.

Liberalised guidelines for geo-spatial data

In news

The Government has announced liberalised guidelines for geo-spatial data

Geo-spatial data

- Geospatial data is data about objects, events, or phenomena that have a location on the surface of the earth.
- The location may be static in the short-term, like the location of a road, an earthquake event, malnutrition among children, or dynamic like a moving vehicle or pedestrian, the spread of an infectious disease.
- Geospatial data combines location information, attribute information (the characteristics of the object, event, or phenomena concerned), and often also temporal information or the time at which the location and attributes exist.
- Geo-spatial data usually involves information of public interest such as roads, localities, rail lines, water bodies, and public amenities.
- The past decade has seen an increase in the use of geo-spatial data in daily life with various apps such as food delivery apps like Swiggy or Zomato, e-commerce like Amazon or even weather apps.

Significance

- Availability of comprehensive, highly accurate, granular and constantly updated representation of Geospatial Data will significantly benefit diverse

- sectors of the economy and will significantly boost innovation in the country and greatly enhance the preparedness of the country for emergency response

- The availability of data and modern mapping technologies to Indian companies is also crucial for achieving the vision of AtmaNirbharBharat and a five trillion-dollar economy"
- With the advent of publicly available geospatial services, a lot of Geospatial Data that used to be in restricted zone are freely and commonly available now and some of the policies/guidelines that used to regulate such information have been rendered obsolete and redundant

E-Chhawani

In news
Raksha Mantri Shri Rajnath Singh launched E-Chhawani portal and mobile app in New Delhi

Details
- The portal has been created to provide online civic services to over 20 lakh residents of 62 Cantonment Boards across the country.

- E-Chhawani portal as an innovative effort to transform the functioning of Cantonment Boards, in line with the vision of 'New India'.
- Through the portal, the residents of cantonment areas will be able to avail basic services like renewal of leases, application for birth & death certificates, water & sewerage connections, trade licences, mobile toilet locators and payment of different types of taxes and fees, with just a click of a button.
- The portal, jointly developed by eGov Foundation, Bharat Electronics Limited (BEL), Directorate General Defence Estates (DGDE) and National Informatics Centre (NIC), provides a platform to the residents to avail these services from the comfort of their home.

City Innovation Exchange (CiX)

In news
City Innovation Exchange (CiX) Launched for Fostering Innovation in Urban Ecosystem.

Highlights
- The platform will be a significant addition to the growing innovation ecosystem of India and focuses on fostering innovative practices in cities.

- CiX, through an 'open innovation' process, engages with innovators to design-test-deliver on solutions to pressing urban challenges.

- This initiative is among the ongoing efforts of the Government to realise Prime Minister's vision of New and AtmaNirbhar Bharat, by making cities more self-reliant and enabled to meet the needs of and provide services to their citizens.
- The Smart Cities Mission will partner and effectively collaborate with Startup India, Atal Innovation Mission, AGNIi and other initiatives in the Indian Innovation ecosystem.

What is City Innovation Exchange?
- The City Innovation Exchange (CiX) will connect cities to innovators across the national ecosystem to design innovative solutions for their pressing challenges.
- The platform will ease the discovery, design& validation of solutions through a robust, transparent and user centric process that will reduce barriers for innovators and cities to discover fitting solutions.
- Built on the concept of 'open innovation', the platform will help in the flow of ideas 'outside in and inside out', enhancing the skills and capacity required to deliver smart urban governance.
- Through interaction with the Academia andBusinesses/Startups, the platform will benefit cities in the transfer of ideas from 'labs' to real environment.
- The Platform has more than 400 start-ups, 100 smart cities, more than 150 challenges statements and over 215 solutions at the time of launch.

Saras Aajeevika Mela 2021

In news
Union Minister for Agriculture and Farmers Welfare, Rural Development, Panchayati Raj and Food Processing Shri Narendra Singh Tomar inaugurated Saras Aajeevika Mela 2021

Highlights
- Union Minister of State for Agriculture and Farmers Welfare Shri Kailash Choudhary was also present on the occasion.
- These SHGs played a vital role in increasing family income and improving quality of life
- People's participation is a must and SHGs can play a major role to achieve this goal.
- He urged the empowered SHGs to come forward and help other SHGs to become Atmanirbhar.

Self Help Groups (SHGs)

- Self-Help Groups (SHGs) are informal associations of people who choose to come together to find ways to improve their living conditions.
- It can be defined as self governed, peer controlled information group of people with similar socio-economic background and having a desire to collectively perform common purpose.
- Villages face numerous problems related to poverty, illiteracy, lack of skills, lack of formal credit etc. These problems cannot be tackled at an individual level and need collective efforts.
- Thus SHG can become a vehicle of change for the poor and marginalized. SHG rely on the notion of "Self Help" to encourage self-employment and poverty alleviation

GEOGRAPHY

Tsunami Ready programme

In news
Tsunami Ready is a community performance-based programme initiated by the Intergovernmental Oceanographic Commission (IOC) of UNESCO.

Objective

- To promote tsunami preparedness through active collaboration of public, community leaders, and national and local emergency management agencies.
- To improve coastal community's preparedness for tsunami emergencies, to minimize the loss of life and property.
- To ensure a structural and systematic approach in building community preparedness through fulfilling the best-practice indicators set by the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) of UNESCO-IOC.

The Indian Tsunami Early Warning Centre (ITEWC), INCOIS

- It is the nodal agency to provide tsunami advisories to India. INCOIS is also providing tsunami advisories to Indian Ocean region (25 countries) as a Tsunami Service Providers as the responsibility assigned by IOC-UNESCO.
- To create awareness and preparedness about the tsunamis, INCOIS regularly organizes Tsunami Standard Operating Procedure (SOP) workshops,

training sessions and seminars for state and district level Disaster Management Officials (DMOs) of the coastal states.
- ITEWC at INCOIS also conducts IOWave Tsunami mock exercises biannually in coordination with ICG/IOTWMS and conducts at National level mock exercises alternative years in coordination with Ministry of Home Affairs (MHA) and National Disaster Management Authority (NDMA) and State Disaster Management Agencies (SDMA) to strengthen the readiness to handle the emergency situations with stakeholders.

Flash flood guidance services for South Asia (23 Oct 2020)

In news
India Meteorological Department Commissions Flash Flood Guidance Services for South Asia.

Features

- The Guidance for flash floods in the form of Threats (6 hours in advance) and Risks (24 hours in advance) will be provided by Regional Centre to National Meteorological & Hydrological Services, National and State Disaster Management Authorities and all other stake holders for taking necessary mitigation measures to reduce the loss of life and property in the South Asian Region countries.
- These include, apart from India, Bangladesh, Bhutan, Nepal and Sri Lanka.
- This will enable all the member countries for issuing impact-based forecasting at watershed and also city level, of floods which are very sudden and of short duration.

Flash Flood

- Flash Floods are highly localized events of short duration with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood.
- There is general lack of flash flood warning capabilities and capacities of the nations across the world.
- Recognizing that flash floods have a particularly disastrous impact on lives and properties of the affected populations.

Cyclonic Storm

In news
In view of the India Meteorological Department (IMD) forecast and the projected requirements ahead of the landfall of cyclone 'nivar', the National Disaster Response Force (NDRF) has deployed nearly 1,200 rescue personnel

in Tamil Nadu, Andhra Pradesh and Puducherry and has put 800 others on standby.

Cyclonic Strom "NIVAR"

- It is very likely to cross the Tamil Nadu and Puducherry coasts between Karaikal and Mahabalipuram around Puducherry late on November 25 evening.
- The sea surface temperatures in the south Bay of Bengal is 29-30°C.
- These temperatures are 0.5-1.0°C above normal, which can make a difference.

Cyclone

- A cyclone is a general term for a weather system in which winds rotate inwardly to an area of low atmospheric pressure.
- For large weather systems, the circulation pattern is in a counterclockwise direction in the Northern Hemisphere and a clockwise direction in the Southern Hemisphere.
- Types of cyclones include tropical cyclones, extratropical cyclones and tornadoes.
- A tropical cyclone is a rotating low-pressure weather system that has organized thunderstorms but no fronts. They form over warm ocean waters.

Aerosols in Indo-Gangetic Plain led to increased incidents of high rainfall

In news

Scientists have found that aerosols like black carbon and dust, which makes the Indo-Gangetic Plain one of the most polluted regions of the world, have led to increased incidents of high rainfall events in the foothills of the Himalayan Region.

Highlights

- The Indo-Gangetic Plainis located South and upwind of the Himalayan foothills.
- The region is associated with high aerosol loading, much of which is black carbon and dust, and thus provides an opportunity for studying how aerosol affects extreme rainfall events, particularly when air mass is forced from a low elevation to a higher elevation as it moves over rising terrain technically called orographic forcing.
- A team of researchers have highlighted the crucial role of the aerosol direct radiative effect on high precipitation events over the Himalayan region.
- The findings of the current work have been accepted for publishing in the scientific journal *'Atmospheric Chemistry and Physics'* recently.

- Particulate emissions can alter the physical and dynamical properties of cloud systems and, in turn, amplify rainfall events over orographic regions downwind of highly polluted urban areas.

Longitudinal Ageing Study of India

In news

Dr.Harsh Vardhan, Union Minister for Health & Family Welfare released INDIA REPORT on Longitudinal Ageing Study of India (LASI) Wave-1 virtual platform.

About the survey

- LASI is a full–scale national survey of scientific investigation of the health, economic, and social determinants and consequences of population ageing in India.
- It is India's first and the world's largest ever survey that provides a longitudinal database for designing policies and programmes for the older population in the broad domains of social, health, and economic well-being.
- The evidence from LASI will be used to further strengthen and broaden the scope of National Programme for Health Care of the Elderly and also help in establishing a range of preventive and health care programmes for older population and most vulnerable among them.

Importance of the Longitudinal Aging Study in India

- In 2011 census, the 60+ population accounted for 8.6% of India's population, accounting for 103 million elderly people.
- Growing at around 3% annually, the number of elderly age population will rise to 319 million in 2050.75% of the elderly people suffer from one or the other chronic disease.
- 40% of the elderly people have one or the other disability and 20% have issues related to mental health. This report will provide base for national and state level programmes and policies for elderly population.
- A unique feature of LASI is the coverage of comprehensive biomarkers.
- No other survey in India collects detailed data on health and biomarkers together with information on family and social network, income, assets, and consumption.

Water scarcity likely in the Himalayan catchment

In news

Glaciers of the Himalayas that make for a picturesque panorama are important sources of water for about a

billion people who live in the basins of the Indus, Ganges and Brahmaputra rivers

Himalayan
- Himalayan rivers are affected by the different components – rainfall-runoff, snow-melt and glacier-melt – and notes that if drier and warmer scenarios continue in the near future (2031–2050), we are more likely to face water stress in these catchment areas.
- The team studied five basins in the central Himalaya – Sutlej, Thulo Bheri, Kali Gandaki, Dudh Kosi and Arun.
- They analysed the daily precipitation, maximum and minimum daily temperatures, wind speeds, land cover, elevation and soil properties.

The study
- The results show that the glacier-melt increases about 15% to 70% in a warmer environment with its present volume, but then decreases to 3%–38% substantially when the glacier volumes shrink.
- Snowpacks and glaciers are two important water storage units in the Himalaya.
- Glacier melt will increase initially, they will shrink in size quickly and the amount of glacier melt will also decline in the latter end of the century.

National Monsoon Mission

In news
Under the Monsoon Mission, Ministry has developed the state-of-the-art weather and climate prediction models, which are now in operational use.

Targets of Monsoon Mission

- Development of a seamless prediction system using monsoon mission model, on different time scales, like Seasonal (for whole Monsoon season), Extended range (up-to 4 weeks), Short range prediction (up-to 5days).
- Initiate and coordinate working partnership between Indian and foreign institutes to develop a system for prediction of extremes and climateapplications
- Develop and implement system for climate applications having social impacts (such as agriculture, flood forecast, extreme events forecast, wind energy,etc.)
- Advanced data assimilation system for preparing high quality data for model predictions.

National Monsoon Mission
- It was launched by the **Ministry of Earth Sciences in 2012.**

- Its aim is to improve the forecasting skills by setting up a state-of-the-art dynamic prediction system for monsoon rainfall different time scales.
- NMM builds a **working partnership between the academic and research and development** (R&D) **organisations,** both **national and international.**
- Its **augmentation with the HPC facilities** has helped the country in achieving a paradigm shift in weather and climate modelling for operational weather forecasts.

What caused south Indian deluge in early January

Context
As many as 16 districts received 10 times (or more) the normal rainfall. The most excess was seen in Tiruppur district with almost 20 times the usual rainfall.

In news
All districts in Kerala had large excess rainfall with the highest being in Kasargod and Malappuram, where the rainfall was 100 times the normal

Reason for the rainfall
- The polar sudden stratospheric warming or SSW is one of the reasons for the high rainfall in the tropics this year
- SSW events are regular but non-periodical. No SSW events were reported between 2013 and 2018 (see 'A decade of warming Arctic stratosphere').
- SSW occurs in two phases — easterly and westerly — based on the direction of the planet it impacts.

Oscillating Arctic

Air pressure and winds around Arctic switch between the two scenarios shown below; contribute to winter weather patterns

Normal scenario — Strong jet stream, Stable polar vortex, Cold air stays inside the Arctic

Sudden stratospheric warming scenario — Weak jet stream, Wavy Polar vortex, Cold air moves south, Warm air moves north
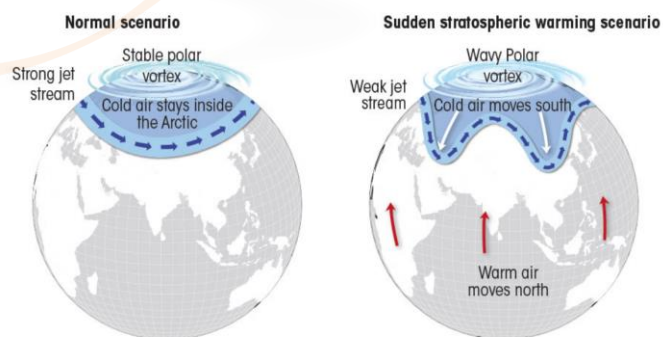
Source: US National Oceanic and Atmospheric Administration

International Commission on Large Dams (ICOLD)

In news
The International Commission on Large Dams (ICOLD) Symposium on Sustainable Development of Dams & River Basins was inaugurated

Details
- INCOLD in collaboration with Central Water Commission (CWC), Dam Rehabilitation Improvement Project (DRIP) and National Hydrology Project (NHP) is organising Symposium on "Sustainable Development of Dams and River Basins"
- More than 300 delegates from across the country and abroad will participate in the Symposium.
- Dam Safety Bill which has been approved by Lok Sabha, in order to put regulatory mechanism in place, to provide for proper surveillance, inspection, operation and maintenance of all dams in India, which has been enacted will be publicised.
- There will also be a Special Sessions on "Innovative Financing in Dam Projects, Use of Geo-synthetics in Dam Engineering

Significance
- The symposium is being organised to provide an excellent opportunity to Indian Dam Engineering Professionals and Agencies to share their experiences, ideas and latest developments in new materials and construction technologies, advancement in investigation techniques, best engineering practices, dam safety issues etc.
- Besides this offers opportunity to networking with the world renowned dam experts from different countries and global organizations involved in Dam Construction, management and operation and maintenance for mutual benefits.

HEALTH AND MEDICINE

Price Monitoring & Resource Unit (PMRU)

In news
Jammu & Kashmir Union Territory has become 12th State where National Pharmaceutical Pricing Authority (NPPA) has set up the Price Monitoring & Resource Unit (PMRU).

Highlights
- PMRUs have already been set up by NPPA in 11 States, including, Kerala, Odisha, Gujarat, Rajasthan, Punjab, Haryana, Nagaland, Tripura, Uttar Pradesh, Andhra Pradesh and Mizoram.
- It is a registered society set up for drug price monitoring.
- PMRU will function at the State level under the direct supervision of the State Drug Controller for increasing outreach of NPPA.
- PMRUs are societies registered under the Societies Registration Act having its own Memorandum of Association/ Bye laws.
- The Board of Governors of PMRU includes the representatives from Central Government and State Government concerned and other stakeholders.

Function
- To monitor notified prices of medicines,
- To detect violation of the provisions of the DPCO,
- To look at price compliance, collect test samples of medicines, and
- To collect and compile market-based data of scheduled as well as non-scheduled formulations.

Integrated Government Online Training (iGOT)

In news
Government of India launches a training module for management of COVID-19 named 'Integrated Government Online training' (iGOT) portal on DIKSHA platform of MHRD.

Aim
To enhance capacity building of front line workers to handle the pandemic efficiently

Similar Platform
MHRD's DIKSHA Platform is being already used by more than one crore teachers & students across 30 states & UTs

About iGOT
- Courses on iGOT have been launched for Doctors, Nurses, Paramedics, Hygiene Workers, Technicians, Auxiliary Nursing Midwives (ANMs), State Government Officers, Civil Defence Officers, Various Police Organisations, National Cadet Corps (NCC), Nehru Yuva Kendra Sangathan (NYKS), National Service Scheme, Indian Red Cross Society, Bharat Scouts and Guides and other volunteers.
- The training contents of the course include Basics of COVID, clinical management, ICU care management, infection prevention and care, usage of PPE, quarantine and isolation, training for NCC cadets, management of COVID 19 cases, laboratory sample collection and testing, psychological care of patients, paediatric care in COVID, pregnancy during COVID, etc. The new

- learning content is being regularly added to the modules.
- The platform provides the training module on flexitime and on site basis so that the COVID response can be delivered at scale for the workforce needed to tackle the pandemic.

Aarogyapath

In news

A CSIR National Healthcare Supply Chain Portal that aims to provide real-time availability of critical healthcare supplies https://www.aarogyapath.inhas been launched.

Aarogyapath

- AarogyaPath would serve manufacturers, suppliers and customers.
- The information platform named AarogyaPath with a vision of "providing a path which leads one on a journey towards Aarogya (healthy life)" was developed to address number of challenges.
- This integrated public platform that provides single-point availability of key healthcare goodscan be helpful to customers in tackling a number of routinely experienced issues.
- These issues include dependence on limited suppliers, time-consuming processes to identify good quality products, limited access to suppliers who can supply standardized products at reasonable prices within desired timelines, lack of awareness about the latest product launches, etc.
- It also helps manufacturers and suppliers to reach a wide network of customers efficiently, overcoming gaps in connectivity between them and potential demand centers like nearby pathological laboratories, medical stores, hospitals, etc.
- It will also create opportunities for business expansion due to an expanded slate of buyers and visibility of new requirements for products.

Amoebiasis or amoebic dysentery

In news

A team of researchers from the Jawaharlal Nehru University (JNU) has developed new drug molecules against the protozoa that causes amoebiasis.

Details

- According to the World Health Organization (WHO), *Entamoeba histolytica* is the third-leading cause of morbidity and mortality due to parasitic disease in humans.
- It causes amoebiasis or amoebic dysentery, which is highly prevalent in developing countries.

- This protozoan is anaerobic or micro-aerophilic in nature such that it cannot survive high concentrations of oxygen. However, during infection, it faces a high surge of oxygen inside the human body.
- The organism synthesizes large amounts of cysteine to counter oxidative stress.
- This pathogen deploys cysteine as one of the essential molecules in its defence mechanism against high oxygen levels.
- Entamoeba expresses two crucial enzymes for synthesizing cysteine.

Finding

- Researchers from JNU has characterized and determined the molecular structures of both these crucial enzymes.
- They have also successfully screened for potent inhibitors for one of the enzymes, O-acetyl L-serine sulfhydrylase (OASS).

Annual TB Report 2020 released (24 June 2020)

In news

Health ministry recently released the annual TB Report 2020.

News release

A Joint Monitoring Mission (JMM) report, a manual on Direct Benefit Transfer (DBT) to TB patients under NIKSHAY system, a Training Module, and the quarterly newsletter NIKSHAY Patrika.

Significance

- The ranking will surely encourage all the States/UTs to improve their performance to attain their targets.
- Early accurate diagnosis followed by prompt appropriate treatment is vital for ending TB.
- The National TB Elimination Programme (NTEP) has expanded both the laboratory network as well as diagnostic facilities to cover the entire country.
- To End TB by 2025, expansion of TB services and addressing determinants of TB that are beyond health, through a multi-sectoral approach is necessary.
- **For the first time Central TB Division (CTD) introduced a quarterly ranking on TB elimination efforts by all the states and UTs.**

NIKSHAY also expanded the provision of four Direct Benefit Transfers (DBT) schemes of the programme –

- Nikshay Poshan Yojana (NPY) to TB patients
- The incentive to Treatment Supporters
- Incentive to Private Providers and

- Transport incentive to TB patients in the notified tribal areas

New biomolecules to fight drug resistance in Kala-

Context
Visceral leishmaniasis, which is commonly known as Kala-azar in India, is fatal in over 95% of the cases, if left untreated.

About the disease
- Leishmaniasis is a neglected tropical disease affecting almost 100 countries including India.
- It is caused by a parasite called Leishmania, which is transmitted through the bite of sand flies.
- There are three main forms of leishmaniasis – visceral, which affects multiple organs and is the most serious form of the disease, cutaneous, which causes skin sores and is the most common form); and mucocutaneous, which causes skin and mucosal lesion).

Available drug
- The only drug available against leishmaniasis, miltefosine, is rapidly losing its effectiveness because of emerging resistance to this drug due to a decrease in its accumulation inside the parasite, which is necessary for the drug to kill the parasite.
- Specific types of protein molecules, called transporter proteins, play a major role in carrying miltefosine into and out of the parasite's body, which comprises a single cell.
- A protein called 'P4ATPase-CDC50', is responsible for intake of the drug by the parasite, and another protein, called 'P-glycoprotein', is responsible for throwing this drug out from within the parasite's body.

Research

- The researchers worked with one of the species of Leishmania that causes infection, called Leishmania major. They tried to manipulate these transporter proteins in the species in a manner that would result in increased uptake of the drug and decrease in its being thrown out of the parasite's body.
- Scientists need to be extremely careful while seeking to manipulate the transport proteins.
- They exist across a diverse range of organisms from bacteria to mammals, including humans and any mishandling could cause more harm than be of use.
- Consequently, though various researchers have been working over the past two decades to combat drug resistance, their activities were limited to laboratory studies.

WHO World Malaria Report 2020

In news

The World Malaria Report (WMR) 2020 released by WHO, which gives the estimated cases for malaria across the world, based on mathematical projections, indicates that India has made considerable progress in reducing its malaria burden.

Highlights of the report
- India is the only high endemic country which has reported a decline of 17.6% in 2019 as compared to 2018.
- The Annual Parasitic Incidence (API) reduced by 27.6% in 2018 compared to 2017 and by 18.4% in 2019 as compared to 2018. ***India has sustained API less than one since year 2012.***
- India has also contributed to the largest drop in cases region-wide, from approximately 20 million to about 6 million.
- The ***percentage drop in the malaria cases was 71.8% and deaths was 73.9% between 2000 to 2019.***

Decline of API in HBHI (High Burden High Impact)

- WHO has initiated the High Burden to High Impact (HBHI) initiative in 11 high malaria burden countries, including India.
- Implementation of "High Burden to High Impact (HBHI)" initiative has been started in four states i.e. West Bengal and Jharkhand, Chhattisgarh and Madhya Pradesh in July, 2019.

High Burden to High Impact
It is a country-led response, aimed to reignite the pace of progress in the global malaria fight, and is guided by the following principles

- Country-owned, country-led, and aligned with the GTS, the health-related Sustainable Development Goals (SDGs) and national health goals, strategies and priorities
- Focused on high-burden settings. Able to demonstrate impact, with an intensified approach to reducing mortality while ensuring progress is on track to reach the GTS targets for reducing malaria cases
- Characterized by packages of malaria interventions, optimally delivered through appropriate channels, including a strong foundation of primary health care.

Hospital Management Information System Trial Project

In news
Indian Railways Launches Hospital Management Information System Trial Project

About HMIS IN Railways
The HMIS in Railways has been developed by Indian Railways in coordination with RailTel Corporation Limited.

Objective
To provide a single window of clearance of hospital administration activity such as clinical, diagnostics, pharmacy, examinations, industrial health etc.

The primary objectives of envisaged solution are
- Effectively manage all the health facilities & its resources
- Monitor performance of hospitals across the administrative channel
- Impart quality health care services to its beneficiaries
- Improve the patient turn-around time
- Generate and maintain EMR (electronic medical records) of all patients

Significance of the project

- The HMIS will bring a paradigm shift in the health care systems maintained by Indian Railways.
- The new system will improve the quality of health services and aid in utilization of resources in a transparent manner.
- Patients waiting time at the hospitals will be minimized and medical records will be available to the team of doctors at all the times.
- Implementation of HMIS will develop good amount of data (like Electronic Medical Records) and will help the medical fraternity not only in curative procedures but also preventive medical systems.
- It is expected to economize the drug management and better utilization of resource management.

eSanjeevani

In news
India has crossed a landmark milestone in its eHealth journey. eSanjeevani telemedicine service of the Health Ministry has crossed 1 million (10 lakh) tele-consultations

About eSanjeevani
The eSanjeevani is a telemedicine service which is implemented under Ayushman Bharat health initiative for doctor-to-doctor interaction.

Aim
To provide healthcare services to patients in their homes. Safe & structured video-based clinical consultations between a doctor in a hospital and a patient in the confines of his home are being enabled.

eSanjeevaniOPD
eSanjeevaniOPD – Stay Home OPD has been developed by Centre for Development of Advanced Computing (C-DAC) in Mohali. Salient features of this citizen friendly web-based National Teleconsultation Service (eSanjeevaniOPD) are:
- Patient registration
- Token Generation
- Queue Management
- Audio-Video Consultation with a Doctor
- ePrescription
- SMS/Email Notifications
- Serviced by State's Doctors
- Free Service
- Fully configurable (no. of daily slots, no. of doctors/clinics, waiting room slots, consultation time limit etc).

eSanjeevaniOPD is based on eSanjeevani - Government of India's flagship telemedicine technology developed by Centre for Development of Advanced Computing (Mohali). eSanjeevani - a doctor to doctor telemedicine system is being deployed nationally for the Miinistry of Health & Family Welfare at 155,000 Health and Wellness Centres under Ayushman Bharat Scheme of Government of India.

Fit India Cyclothon

In news
Fit India Cyclothon getting huge response, around 13 Lakh people participated in the first week of its launch.

Highlights
- This mega cycling event started on 7th December 2020 and participants from across the country are participating in this.
- This event will continue till 31st December 2020.
- The inaugural edition of the Fit India Cyclothon was launched by the Sports Minister in January 2020 in Panaji, Goa.
- This event was organized with the aim to get the people involved in outdoor activities and to start a cycling culture across the country.

Significance
It will reduce pollution in environment along with individuals health improvement as it involves physical workout

Fit India Movement

- The Fit India Movement is a movement to take the nation on a path of fitness and wellness.
- It provides a unique and exciting opportunity to work towards a healthier India.
- As part of the movement, individuals and organisations can undertake various efforts for their own health and well-being as well as for the health and well-being of fellow Indians.

Consortia for Medicinal Plants

In news

National Medicinal Plants Board Launches Consortia for Medicinal Plants

Consortium

- A consortium is a group made up of two or more individuals, companies, or governments that work together to achieving a common objective.
- Entities that participate in a consortium pool resources but are otherwise only responsible for the obligations that are set out in the consortium's agreement.
- Every entity that is under the consortium, therefore, remains independent with regard to their normal business operations and has no say over another member's operations that are not related to the consortium.

Highlights

- MPB Consortia will address/deliberate (not limited to) on Quality Planting Material, Research & Development, Cultivation, Trade of medicinal plants/market linkage etc.
- To establish the linkage between the farmers and manufacturers, a 'Seed to Shelf' approach is being introduced
- Aspects related to Quality Planting Materials (QPM), Good Agriculture Practices (GAP's), Good Post Harvest Practices (GPHP's) would be addressed.
- In the first phase NMPB consortia is proposed for medicinal plant species - **Ashwagandha (*Withania somnifera*), Pippali (*Piper longum*), Aonla (*Phyllanthus emblica*), Guggulu (*Commiphora wightii*), Satavari (*Asparagus racemosus*).**

Avian Influenza

In news

Avian Influenza (AI) viruses have been circulating worldwide for centuries with four known major outbreaks recorded in the last century.

Spread in India

- In India, the disease spreads mainly by migratory birds coming into India during winter months i.e. from September – October to February – March.
- The secondary spread by human handling (through fomites) cannot be ruled out.

Support provided by the Department to the States/UTs include

- Technical support from referral lab i.e. ICAR-NIHSAD, Bhopal
- Funding support to States/UTs to undertake culling and compensation
- Funding to states under ASCAD scheme
- Training of veterinary work force
- Support for strengthening RDDLs / CDDL

Motor Bike Ambulance 'Rakshita

In news

Institute of Nuclear Medicine and Allied Sciences (INMAS), Delhi based DRDO laboratory, handed over Rakshita, a bike-based casualty transport emergency vehicle to Central Reserve Police Force (CRPF)

Features

- Rakshita is fitted with a customized reclining Casualty Evacuation Seat (CES), which can be fitted in and taken out as per requirement.
- Other major features are the head immobilizer, safety harness jacket, hand and foot straps for safety, adjustable footrest, physiological parameter measuring equipment with wireless monitoring capability and auto warning system for driver.
- The vital parameters of the patient can be monitored on the dashboard mounted LCD.
- It is also equipped with air splint, medical and oxygen kit for on spot medical care.

Application

- The bike ambulance will help in overcoming the problems faced by Indian security forces and emergency healthcare providers.

- It will provide life-saving aid for evacuation of injured patients from low intensity conflict areas.
- This will be handy in the congested streets and remote locations, where access through ambulance is difficult and time consuming.
- The bike can respond to a medical emergency need of patients faster than a four-wheeler due to its functionality and integrated emergency medical support system.
- This bike ambulance is useful not only for the paramilitary and military forces but has potential civil applications too.

National Polio Immunization

In news

President of India Shri Ram Nath Kovind launched the National Polio Immunisation Day for 2021 by administering polio drops to children less than five years old at Rashtrapati Bhawan.

Highlights

- As per provisional report on day one, close to 89 lakh children (as per provisional data) under five years across the country were given polio drops.
- Vaccinations were conducted at close to 7 lakh booths which were staffed with around 12 lakh vaccinators and 1.8 lakh supervisors.
- The booth activity will be followed by house-to-house surveillance (mop-up rounds) over the next two to five days to identify and vaccinate children who missed getting vaccinated at the booths.
- Vaccination teams have also been deployed at bus terminals, railway stations, airports and ferry crossing to vaccinate children in transit to ensure no child misses the life-saving dose.
- India has been free of polio for a decade, with the last case of wild poliovirus reported on 13th January 2011.
- The country, however, continues to remain vigilant to prevent re-entry of the poliovirus into the country from neighbouring countries of Afghanistan and Pakistan, where wild poliovirus continues to cause disease.

Polio

- Polio, or poliomyelitis, is a disabling and life-threatening disease caused by the poliovirus.
- The virus spreads from person to person and can infect a person's spinal cord, causing paralysis (can't move parts of the body).

National Food Security Mission

Why in news?

The Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) is implementing the Centrally Sponsored Scheme of PMKSY-PDMC from 2015-16 in all the States of the country which focuses on enhancing water use efficiency at farm level through Micro Irrigation viz., Drip and Sprinkler irrigation systems

Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

- Government of India launched the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) on 1st July, 2015 with the motto of "Har Khet Ko Paani" for providing end-to-end solutions in irrigation supply chain viz. water sources, distribution network and farm level applications.
- The components of PMKSY are; Accelerated Irrigation Benefit Programme (AIBP), PMKSY - Har Khet Ko Paani, PMKSY - Per Drop More Crop (PMKSY – PDMC) and PMKSY (Watershed).
- These schemes promoting irrigation for crops supports for enhancing production and productivity of crops to achieve the **objective of NFSM**.
- The Indian Council of Agricultural Research (ICAR) through its various research institutes, All India Coordinated Research Projects (AICRPs), network projects and State Agriculture Universities develop high yielding varieties(HYV)/hybrids of various crops in the country.
- In order to promote the latest high yielding varieties/hybrids of rice, wheat, pulses, coarse cereals, nutri-cereals, cotton, jute, sugarcane and oilseeds, assistance is given to farmers on certified seeds under NFSM.

National Food Security Mission

- In view of the stagnating food grain production and an increasing consumption need of the growing population, Government of India has launched this Centrally Sponsored Scheme, **'National Food Security Mission'** in October 2007.
- The Mission met with an overwhelming success and achieved the targeted additional production of rice, wheat and pulses.
- The Mission continued during 12th Five Year Plan with new targets of additional production of food grains of 25 million tonnes of food grains comprising of 10 million tonnes rice, 8 million tonnes of wheat, 4 million tonnes of pulses and 3 million tonnes of coarse cereals by the end of 12th Five Year Plan.
- Based on past experience and performance of 12th Plan, the programme is being continued upto

2019-20, which is co-terminus with Fourteenth Finance Commission (FFC) period.

- The targets to achieve are 13 million tonnes of additional foodgrains production comprising of Rice – 5 million tonnes, Wheat- 3 million tonnes, Pulses- 3 million tonnes and Coarse Cereals- 2 million tonnes.

Schemes for Treatment of Infectious Disease

In news
With a view to encourage and promote medical research in the country including research for treatment of diseases, the Department of Health Research has several schemes/sub-schemes

Sub schemes
- **Grant-in-aid scheme** for Inter-sectoral Coverage & Coordination for Promotion and Guidance on Health Research with a view to provide support in the form of grant-in-aid for carrying out research studies to identify the existing knowledge gaps and to translate the existing health leads into deliverable products. There is a special focus on encouraging innovation, their translation and implementation by collaboration and cooperation with other agencies.
- **Human Resource Development for Health Research** with the aim to create a pool of talented health research personnel in the country by upgrading skills of faculty of Medical Colleges/ Institutes, mid - career Scientists, medical students, etc., by specialized training in priority areas of health research in leading national and international institutions, encourage and support the trainees to develop and take up research projects for addressing critical national and local health problems and financial assistance to Institutions for up- gradation of infrastructure to enable such Institutions to provide training with state of the art technologies.
- **Establishment of Network of Laboratories for Managing Epidemics and Natural Calamitie**s through establishment of Viral Research & Diagnostics Laboratories across the country for creating infrastructures for developing capacity for identification of novel and unknown viruses; providing training to health professionals and undertaking research for identification of emerging and newer genetically active/ modified agents.
- **Establishment of Multi-Disciplinary Research Units (MRUs)** in Government Medical Colleges/Institutes with the view to encourage and strengthen an environment of medical research in Non-Communicable Diseases (NCDs) in

Government Medical Colleges, bridge the gap in the infrastructure inhibiting health research in the Medical Colleges and ultimately to improve the overall health status of the population by creating evidence-based application of diagnostic procedures/processes/methods.
- **Establishment of Model Rural Health Research Units (MRHRUs)** in States, in close proximity to the PHCs/CHCs to undertake medical research by creating infrastructure for transfer of technology to the rural level for improving quality of health services to rural population
- **Health Technology Assessment in India (HTAIn)** for providing evidence based guidelines on cost-effectiveness of technologies, namely, treatments, devices and technologies for providing access to quality healthcare at affordable cost.

Potential drug candidate for the treatment of Alzheimer's

In news
Scientists have developed a small molecule that disrupts the mechanism through which neurons become dysfunctional in Alzheimer's disease (AD)

The novel drug candidate TGR63 developed by the JNCASR team has potential as a promising drug candidate for AD treatment.

Alzheimer's disease
- In the Alzheimer's brain, abnormal levels of naturally forming protein clump together to form plaques that collect between neurons and disrupt cell function.
- This is caused by production and deposition of the amyloid peptide (Aβ) that accumulates in the central nervous system.
- The multifactorial nature of Alzheimer's disease (AD) attributed to multifaceted amyloid toxicity has kept researchers from developing effective treatment
- AD severely affects the patients, families, caregivers and hence is a major societal and economic burden globally.

About the study
- The detailed studies established the molecule called TGR63 as the lead candidate to rescue neuronal cells from amyloid toxicity.
- The molecule was also found to reduced amyloid burden in the cortex and hippocampus, or a complex part embedded deep into the temporal lobe, thereby reversing cognitive decline.

- This research has been published recently in the journal*Advanced Therapeutics.*

HISTORY AND CULTURE

LalaLajpat Rai

Why in news?

The Prime Minister, Shri Narendra Modi has paid tributes to LalaLajpat Rai ji on his Jayanti.

About LalaLajpat Rai
- LalaLajpat Rai was born on January 28, in the year 1865, in Punjab.
- He was one of the most active and important leaders in India's freedom struggle. He popularly came to be known as Punjab Kesari. LalaLajpat Rai was also a part of the Lal-Bal-Pal triangle.
- Lal took his last breath on November 17, 1928.

Contributions
- LalaLajpat Rai assisted in foundation of the Punjab National Bank.
- At the time of studying Law at Lahore, Rai helped in establishing the Dayananda Anglo-Vedic School(DAV).
- LalaLajpat Rai was greatly influenced by Hinduism and worked in the reformation of many Indian policies.
- LalaLajpat Rai, Bal GangadharTilak and Bipin Chandra Pal formed a triumvirate 'Lal Bal Pal' and fought for the Independence of India and promoted the Swadeshi movement
- Rai was delineated as the pillar of nationalism in India

First Antarrashtriya Yoga Diwas Media Samman

In news
The Government of India has announced first 'Antarrashtriya Yoga Diwas Media Samman' for several media houses. This award was conferred on January 7, 2020, to 30 media houses.

Objective
To bring positivity and acknowledge the role of media in the outreach of Yoga in the world.

Antarrashtriya Yoga Diwas Media Samman
- 11 awards were given under the Best Media Coverage category of Yoga Day in Newspapers.
- 8 awards were conferred under the category of "Best Media Coverage of Yoga on Television.

- Apart from that, 11 awards were given under the category "Best Media Coverage of Yoga in Radio.
- Antarrashtriya Yoga Diwas Media Samman' consists of a medal, plaque, trophy, and a citation.
- A jury, consisting of 6 members, assessed the entries for the award. This jury was headed by Justice C. K. Prasad (Chairman, Press Council of India).

International Day of Yoga
The International Day of Yoga has been celebrated annually on 21 June since 2015. The idea of International Day of Yoga was first proposed by the Prime Minister of India, Shri Narendra Modi, during his address at the United Nations General Assembly (UNGA), on 27 September 2014.

First five re-printed volumes of Mongolian Kanjur Manuscripts released

In news
The Ministry of Culture has taken up the project of reprinting of 108 volumes of Mongolian Kanjur under the National Mission for Manuscripts (NMM).

Mongolian Kanjur
- Mongolian Kanjur, the Buddhist canonical text in 108 volumes is considered to be the most important religious text in Mongolia.
- In the Mongolian language '**Kanjur'** means '**Concise Orders'**- the words of Lord Buddha in particular.
- It is held in high esteem by the Mongolian Buddhists and they worship the Kanjur at temples and recite the lines of Kanjur in daily life as a sacred ritual.
- The Kanjur are kept almost in every monastery in Mongolia.
- **Mongolian Kanjur** has been translated from Tibetan.
- The language of the Kanjur is Classical Mongolian.
- The Mongolian Kanjur is a source of providing a cultural identity to Mongolia.

National Mission for Manuscripts
- The National Mission for Manuscripts was launched in February 2003 by the Government of India, under the Ministry of Tourism and Culture,
- It aims to mandate of documenting, conserving and disseminating the knowledge preserved in the manuscripts.
- One of the objectives of the mission is to publish rare and unpublished manuscripts so that the knowledge enshrined in them is spread to researchers, scholars and general public at large.
- Under this scheme, reprinting of 108 volumes of Mongolian Kanjur has been taken up by the Mission.

KVIC Brings Alive 1000-yrs Old Monpa Handmade Paper Industry

In news
The 1000-year old heritage art – the Monpa Handmade Paper of Arunachal Pradesh – which was driven to the extinction, has come to life once again

Old heritage art – the Monpa Handmade Paper of Arunachal Pradesh

- The art of making handmade paper originated among the Monpas over 1000 years ago. Gradually this art became an integral part of local custom and culture of Tawang in Arunachal Pradesh.
- Once produced in every household in Tawang, this handmade paper was a major source of livelihood for the locals. However, the handmade paper industry almost disappeared in the last 100 years
- The paper has great historic and religious significance as it is the paper used for writing Buddhist scriptures and hymns in monasteries.
- The Monpa handmade paper, will be made from the bark of a local tree called Shugu Sheng, which has medicinal values too.
- Monpas used to sell these papers to countries like Tibet, Bhutan ,Thailanand and Japan as no paper making industry existed in these countries at that time

Dev Deepawali Mahotsav

In news
PM participates in Dev Deepawali Mahotsav in Varanasi

Highlights
- The idol of Mata Annapurna that was stolen from Kashi more than 100 years ago, is now coming back again.
- It is a matter of great fortune for Kashi.

Dev Deepawali
- Dev Deepawali is a function after Deepawali when a large number of lamps are lit on the banks of rivers and other places on Kartik Purnima.
- Dev Diwali also called the **'Diwali of the Gods'.**
- The gods are believed to descend to Earth to bathe in the Ganges on this day.
- The tradition of lighting the lamps on the Dev Deepawali festival day was **first started at the Panchganga Ghat in 1985.**

Ganga Mahotsav
- Ganga Mahotsav is a tourist-centric festival in Varanasi, which is celebrated over five days every year, starting from Prabodhani Ekadashi to Kartik Poornima during the months of October and November.
- It showcases the rich cultural heritage of Varanasi. With its message of faith and culture, the festival features popular cultural programs, classical music, a country boat race, a daily shilp mela (arts and crafts fair), sculpture displays, and martial arts.
- On the final day (Poornima), which coincides with the traditional Dev Deepawali (light festival of the Gods), the ghats on the Ganga River glitter with more than a million lit-up earthen lamps.

First Ever Virtual Aadi Mahotsav

In news
Shri Arjun Munda, Union Minister for Tribal Affairs, launched the virtual edition of Aadi Mahotsav- Madhya Pradesh.

Highlights
- The 10-day long festival, commencing on December 1, 2020, is being hosted on the Tribes India website(www.tribesindia.com).
- The main focus is on the tribal craft and culture of Madhya Pradesh.
- It is another effort to help in the transformation of tribal lives and livelihoods.

Lucknow Declaration Adopted at the 1st India-Africa Defence Ministers Conclave, 2020

In news
The Lucknow Declaration was adopted as **the first India – Africa conclave held in Lucknow recently.**

Lucknow Declaration

Theme **"Silence The Guns: Creating conducive conditions for African Development"**

First ever AFINDEX which is an Africa India Field Training Exercise was started in March 2019 also to further strengthen cooperation in defence preparedness and security.

Top priorities for both the countries will be peace and security.

Vision
- To achieve 'a conflict-free Africa, prevent genocide, make peace a reality for all and rid the continent of wars, violent conflicts, human rights violations, and humanitarian disasters.

- Almost all the peacekeeping operations in Africa has seen India's presence.

Way Forward

Defence Ministers also called for deeper cooperation in the domain of defence industries including through investments, joint venture in defence equipment software, digital defence, research and development on mutually beneficial terms.

India has also made available defence equipment and supply to African countries through its robust India-Africa development partnership, including through grant assistance and Lines of Credit. This effort will be considerably enhanced.

INTERNATIONAL RELATION

Extradition Treaty between India and Belgium

In news

Cabinet approves signing and ratifying of the Extradition Treaty between India and Belgium

Salient Features

Each Party agrees to extradite to the other any person found in its territory, who is accused or convicted of an extraditable offence in the territory of the other Party. An extraditable offence means an offence punishable under the laws of both the Parties with imprisonment for a period of one year or more severe punishment.

Under the Treaty, extradition shall be refused if:

- The offence involved is a political offence. However, the Treaty specifies certain offences, which will not be considered as political offences.
- The offence for which extradition is requested is a military offence
- The request for prosecution has been made for the purpose of prosecuting or punishing the person on account of his race, sex, religion, nationality or political opinion.
- The prosecution of enforcement of sentence has become time barred.

Extradition of nationals is discretionary. The nationality will be determined at the time the offence was committed.

Benefits

- The Treaty would provide a legal framework for seeking extradition of terrorists, economic offenders, and other criminals from and to Belgium.
- After ratification, the Treaty will enter into force from the date of exchange of instruments of ratification between India and Belgium.

Background

The new Extradition Treaty will replace the pre-Independence Extradition Treaty between Great Britain and Belgium of 1901 that was made applicable to India through the exchange of Letters in 1958 and is currently in force between the Republic of India and the Kingdom of Belgium. Due to the present procedural requirements and the fact that only limited number of offences are listed under the pre-Independence Treaty, the same has become obsolete in today's context.

Indian GLP programme

In news

India has been designated the 'Vice-Chair' of Good Laboratory Practice (GLP) Working Group of the Organisation for Economic Co-operation and Development (OECD), recognising the contribution of the Indian GLP programme.

GPL

Good Laboratory Practice (GLP) is a quality system, which has been evolved by Organisation for Economic Co-operation and Development (OECD) to ensure that safety data generated on various chemicals like industrial chemicals, pharmaceuticals (Human and Veterinary), agrochemicals, cosmetic products, food/ feed additives, and medical devices, etc., can be relied upon by regulatory authorities.

National GLP Compliance Monitoring Authority (NGCMA)

- NGCMA is the National body which grants GLP certification to test facilities (TFs) conducting safety studies on new chemicals of the above-mentioned categories in accordance with OECD Principles of GLP and OECD Council norms.
- The Grant of the first GLP certificate by NGCMA in 2004 was a milestone.
- The non-hazardous nature of chemicals needs to be established through studies and data, which is examined by the regulators of the concerned countries to certify that the use of these chemicals does not pose any hazards to human health and the environment.

15th G20 Leaders' Summit

In news

Saudi Arabia hosted the 15th annual G20 Leaders' Summit on November 21 and 22, 2020 in its capital Riyadh.
Theme of the Summit is - *"Realising the opportunities of 21st Century for all"*

Highlights

- The focus of G20 Summit was an inclusive, resilient, and sustainable recovery from the COVID-19.
- The *agenda* of the Summit was *focused on overcoming the pandemic, economic recovery and restoring jobs, and building an inclusive, sustainable and resilient future.*
- PM called for a new Global Index for the Post-Corona World that comprises four key elements
- Creation of a vast Talent Pool.
- Ensuring that Technology reaches all segments of the society.
- Transparency in systems of governance.
- Dealing with Mother Earth with a spirit of Trusteeship

India will enter the G20 troika (a three-member country committee chaired by the current summit presidency) along with Saudi Arabia when Italy will take over the G20 presidency on December 1

What is the G20?

- The Group of Twenty, or the G20, is the premier forum for international economic cooperation.
- The G20 brings together the leaders of both developed and developing countries from every continent.
- Collectively, G20 members represent around 80% of the world's economic output, two-thirds of global population and three-quarters of international trade.
- Throughout the year, representatives from G20 countries gather to discuss financial and socioeconomic issues.

History of the G20

- Originated in 1999 at the level of Finance Ministers and Central Bank Governors, the G20 gathered for high-level discussions on macro-financial issues.
- In the wake of the 2008 global financial crisis, the G20 was elevated to include the leaders of member countries.
- The first G20 Leaders' Summit took place in Washington D.C. in November 2008.
- Consequently, the G20 agenda expanded beyond macro-financial issues, to include socio-economic and development issues.

AIM–Sirius Innovation Programme 3.0

In news

The 14-day-long AIM–Sirius Innovation Programme 3.0 for school students drew to an end today 22 Nov 2020.

Focus area

Drawing inspiration from India's Aatmanirbhar Bharat and Russia's Big Challenges, this year's edition was focused on developing technological solutions (web-based and mobile applications) to address the grassroot problems of the two countries.

- *Culture :* Embracing Cultural talents of countries,
- *Distance Education:* Statistical analysis of the difficulty of Olympiad tasks.
- *Applied Cognitive Science:* Statistical analysis of the difficulty of Olympiad tasks.
- *Health and Well-Being:* Monitoring, data analysis and abnormalities search, Promoting Sports, Fitness, and Games Training
- *Chemistry:* On the Fly Check and Search identities in chemical databases
- *Leveraging Artificial Intelligence:* customizable news feed aligned to user interests
- Digital Financial Assets of the 21st Century

Details

- Atal Innovation Mission (AIM) and Sirius, Russia, launched 'AIM–Sirius Innovation Programme 3.0'– a 14-day virtual programme for Indian and Russian schoolchildren.
- This was the first Indo-Russian bilateral youth innovation initiative.
- Innovations developed by the student teams will leverage 21st-century technologies such as app development, artificial intelligence, blockchain, machine learning etc.

Background

- In 2017, the Hon'ble Prime Minister of India, Sh. Narendra Modi was invited by His Excellency President of Russia, Mr. Vladimir Putin to visit the Sirius Centre, Sochi.
- Impressed by the innovative students of the Sirius Centre, Sh. Modi and Mr. Putin mutually agreed that a bi-lateral collaboration between India and Russia may be explored for the benefit of young innovators of both countries.
- In 2018, the collaboration between Atal Innovation Mission, NITI Aayog, Government of India and Sirius Centre, Sochi, Russia started with the AIM-Sirius Innovation Festival.

India and Finland sign MOU for biodiversity conservation

In news

India and Finland signed a MOU for developing cooperation between two countries in the field of Environment protection and biodiversity conservation.

- The MoU was signed virtually by Shri Prakash Javadekar, Minister of Environment, Forest and Climate Change from the Indian side and Ms Krista Mikkonen, Minister of the Environment and Climate Change, Government of Finland from the Finnish side.
- This MOU will definitely commits India & Finland to work together more closely towards on the fulfilment of commitments made under Paris Agreement.
- India has achieved its voluntary target of reducing emissions intensity of its GDP by 21% over 2005 levels, *by 2020 and is poised to achieve 35% reduction well before the target year of 2030.*
- The MoU will strengthen technological, scientific and management capabilities and develop bilateral cooperation in the field of environmental protection and biodiversity conservation .

Partnership and support areas

- Prevention of Air and water pollutio
- Waste management
- Promotion of circular economy
- Low-carbon solutions and sustainable management of natural resources including forests
- Climate change
- Conservation of Marine and Coastal Resources; etc.

What is the Paris Agreement?

At COP 21 in Paris, *on 12 December 2015*, Parties to the UNFCCC reached a landmark agreement to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future.

Aim

- To strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.
- To increase the ability of countries to deal with the impacts of climate change, and at making finance flows consistent with a low GHG emissions and climate-resilient pathway.

SCO Online International Exhibition

In news

The first ever SCO Online International Exhibition on Shared Buddhist Heritage commences today

Details

- This SCO online International exhibition, first ever of its kind, is developed and curated by National Museum, New Delhi, in active collaboration with SCO member countries.
- Buddhist philosophy and art of Central Asia connects Shanghai Cooperation Organization (SCO) countries to each other.
- The international exhibition gives a glimpse of the artistic wealth displayed in various museums across Asia
- It represents the artistic excellence embedded within an eclectic historical timeline spanning across the development of different Schools of Buddhism

Participating institutions

- National Museum (New Delhi)
- Indian Museum (Kolkata)
- National Museum of Kazakhstan
- Dun Huang Academy (China)
- National Historical Museum of the Kyrgyz Republic
- Museums of Pakistan
- State Museum of Oriental Art, Moscow (Russia)
- National Museum and National Museum of Antiquities
- Tajikistan and renowned archaeological sites of Uzbekistan.

The Shanghai Cooperation Organisation (SCO)

It is a permanent intergovernmental international organisation, the creation of which was announced on 15 June 2001 in Shanghai (China) by the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan.

DST–CII Technology Summit 2020

In news

The Department of Science and Technology (DST) with the Confederation of Indian Industry (CII) held the Curtain Raiser to announce the 26th edition of Technology Summit 2020.

Highlights

- Portugal is the partner country this year.
- There has been successful bilateral research cooperation between India's Department of Science and Technology (DST), with the Foundation for Science and Technology (FCT) of Portugal.
- This Summit will sign several MoUs and agreements which will increase bilateral trade between the two countries.

- The 26th edition of India-Portugal Technology Summit 2020 will be *held over a digital platform from 7th – 9th December 2020.*
- The three days of the summit will witness the highest ever online participation of research and development community of Portugal.
- Over the past 26 years, DST has been co-organizing the Technology Summit in partnership with CII.

Significance

- The summit has benefitted immensely the Indian industry and academic & research institutions by forging partnerships, stimulating innovation, investment & trade and facilitating technology transfers, joint projects, and market access.
- The summit will bring together experts from India and Portugal to deliberate on their country expertise in the focus sectors and to explore opportunities for future collaboration.

The Focus sectors of the summit for this year are Watertech, Agritech, Healthtech, Energy, Climate change, Cleantech, IT, ICT, Advanced technologies, and Space-Ocean Interactions.

Sri Lanka Economic Summit 2020

In news

Recently, the Union Minister for Finance & Corporate Affairs has delivered a Keynote Address at the inauguration of the 20th Edition of **Sri Lanka Economic Summit (SLES) 2020.**

Theme: *"Roadmap for Take-off: Driving a People –Centric Economic Revival".*

Highlights

- SLES annually organized by the Ceylon Chamber of Commerce (CCC) is the *premier forum in Sri Lanka for discussion on economic and business issues.*
- India's 'Aatmanirbhar Bharat Abhiyan' and the vision of 'Self Reliant Sri Lanka', are synergistic and complementary and could be used to further consolidate the economic rejuvenation efforts by both countries.
- Cooperation between India and Sri Lanka would be beneficial for a sustained growth that is so essential for people centric development by both countries.

U.S.-India Counternarcotics meeting

In news

The officials of India and USA met virtually for the inaugural meeting of the U.S.-India Counternarcotics Working Group (CNWG) on November 24, 2020

Meeting Highlights

- Both sides *exchanged views on the broad array of narcotics-related challenges* facing India and United States.
- They committed to strengthening their cooperation in curtailing the illegal production, manufacturing, trafficking, and distribution of pharmaceutical and illicit drugs, as well as the precursor chemicals used to manufacture them.
- The two sides also discussed *initiatives to strengthen India's regional leadership role in building capacity for counternarcotics initiatives in South Asia.*
- Countering regional cross-border drugs trafficking and crime through enhanced sharing of operational intelligence.
- And expanding law enforcement cooperation on counternarcotics issues.
- Both sides also agreed to cooperate and assist each other in the arena of drug treatment and awareness against drug abuse.
- India and United States agreed to enhance their data sharing operations to combat the production, distribution, diversion, and export/import of drugs and precursor chemicals.
- *Both sides agreed to continue these discussions at the CNWG meeting in the spring of 2021*.

Drug Challenges as per united nation offence on drug and crime

- Death among injecting drug users.
- Trends and patterns of drug trafficking in South Asia
- Trafficking of heroin from Pakistan and Afghanistan into India.
- Further trafficking from India to neighbouring countries of South Asia, Europe and the American continent.
- Illicit cultivation as well as wild growth of cannabis in India.

Addressing drug challanges

- Community based treatment
- Drug dependence treatment and rehabilitation in prison settings
- Role of drug dependence treatment and rehabilitation on HIV and AIDS prevention and care

- Sustainable livelihoods for reintegration and rehabilitation

Fourth South Asia Forum on SDGs

Context
South Asian nations are facing challenges of extreme weather events like floods, cyclone, heat waves, cold waves, landslides and drought as well as COVID-19 pandemic and its recovery.

In news
UNESCAP South Asia and Pacific virtually organised a special dialogue on disaster and climate resilience in South Asia

Objectives
- To identify the opportunities and imperatives to **overcome the challenges in implementing the systemic approach to disaster and public health risk management.**
- Other objectives were to **formulate the strategies for capitalizing on existing regional and sub-regional cooperation mechanism.**
- It also included the South Asian Forum on SDG to scale up multi-hazard and multi-sectoral preparedness systems for future cascading disasters.

Highlights

- India is hosting SAARC Disaster Management Centre, it works closely withUniversitiesof SAARC andBIMSTECmember States.
- The prevailing COVID-19 situation is further increasing vulnerabilities of the region in an exponential manner.
- Therefore, it is the duty of all of us in the region to not only reduce our own disaster risks but also to promote regional cooperation and mutual help, before, during and after disasters.

MoU for Road Infrastructure Sector

In news
India signed a MoU with tRepublic of Austria on Technology Cooperation in the Road Infrastructure Sector

Participants
- The Ministry of Road Transport and Highways
- The Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology of the Republic of Austria

Aim
To create an effective framework for bilateral cooperation in the field of Road Transportation, Road/Highways infrastructure development, management and administration, Road safety and Intelligent Transport Systems between both countries.

India and Austria
- It will further strengthen ties, promote long standing bilateral relations and enhance trade and regional integration between the two countries.
- **India has had good diplomatic relations with Austria** since the establishment of bilateral ties between the two countries in 1949.
- **Both countries share a history of friendly economic and diplomatic relations.**
- Austria has state of the art technologies for roads and highways, such as electronic toll systems, intelligent transportation systems, traffic management systems, tunnel monitoring system, geo-mapping and landslide protection measures.
- The Indo-Austria bilateral cooperation in the road transport sector would be beneficial both from the perspective of enhanced road safety as well as attractive financing possibilities for the sector, thus fostering and intensifying the already good relations between the two countries, through this MoU in the Transport sector.

DST-CII India-Portugal Tech Summit

In news
The joint annual flagship DST-CII Technology Summit was inaugurated by Union Minister for Science & Technology, and Health & Family Welfare and Earth Sciences, Dr. Harsh Vardhan, and Minister of Science, Technology and Higher Education, Government of Portugal, Manuel Heitor.

Collaboration opportunities

Industry, academia and research intuitions from India and Portugal in the areas of agriculture technology, water tech, health tech, cleantech, energy, climate change, IT/ICT/ emerging technologies, innovation and start-ups, and space-ocean interactions.

Highlights
- Identifies possibilities of India & Portugal jointly scaling up solutions to address societal challenges.
- This summit provided an effective platform for industry, academic institutions, researchers, and government agencies from both the countries.
- Opportunities for fast-track market entry for new stakeholders will be created.

- *Bilateral cooperation* between India and Portugal in the science and technology is the *oldest and robust.*

Significance

Opportunity would encourage innovation and knowledge creation for managing challenges and provide the necessary impetus to work for mutual growth in the foreseeable future

India and UK to strengthen education collaboration

In news

In a bilateral meeting India and the United Kingdom have expressed the resolve to further strengthen their educational collaboration.

Highlights

- The two countries agreed to deepen their engagement in the field of education and research, and work collaboratively on mutual recognition of academic qualifications
- UK has made several changes in their visa and immigration rules to facilitate student mobility.
- India and UK have agreed to set up a joint Task Force consisting of designated higher education organizations from both countries to work towards mutual recognition of academic qualifications.
- Setting up of a joint task force will expedite the process for achieving mutual recognition of academic qualification.
- This will support India's agenda for internationalization of higher education.

India - Nepal Defence Cooperation Webinar and Expo

In news

Webinar on India - Nepal Defence Cooperation Webinar and Expo held

Theme: *"Exploring Synergies and Strengthening Defence Cooperation with Nepal"*

Details

- It was organized under the aegis of Department of Defence Production, Ministry of Defence through SIDM.
- This webinar is the part of Aero India 21 series of webinars which are being organized to boost defence cooperation and engagements with friendly foreign countries and achieve defence export target of $5 billion in the next five years.

- Defence cooperation with Nepal is not a new phenomenon and is almost 70 years old when India and Nepal signed Treaty of Peace and Friendship in 1950.
- In accordance with the *"Neighbourhood First"* policy of the government, India remains a committed development partner for a stable, prosperous and peaceful Nepal.
- During the webinar twelve Indian Defence Companies made company and product presentations on major platforms that India can offer.

MISSION SAGAR III

In news

Indian Naval Ship Kiltan arrived at NhaRong Port, Ho Chi Minh City on 24 December 2020 as part of Mission Sagar-III.

Highlights

- The ship will deliver 15 Tons of Humanitarian Assistance and Disaster Relief (HADR) Stores for the flood-affected people of Cambodia, which will be handed over to Cambodia's National Disaster Management Committee (NDMC).
- This Mission is part of India's Humanitarian Assistance and Disaster Relief (HADR) assistance to Friendly Foreign Countries during the ongoing pandemic.
- The Mission highlights the importance accorded to ASEAN countries and further strengthens the existing bonds.

India and Cambodia

- India and Cambodia share strong cultural ties.
- The relations have reinforced in recent years due to increasing engagements in all sectors.
- The current visit seeks to fortify the bilateral cooperation between the two countries and contribute towards security and stability in the region.

3 Indian Missions in Estonia, Paraguay and Dominican Republic

In news

The Union Cabinet chaired by Prime Minister Shri Narendra Modi today approved the opening of 3 Indian Missions in Estonia, Paraguay and Dominican Republic in 2021.

Implementation Strategy

- Opening of Indian Missions in these countries will help expand India's diplomatic footprint, deepen political relations, enable growth of bilateral trade, investment and economic engagements, facilitate stronger people-to-people contacts, bolster political outreach in multilateral fora and help garner support for India's foreign policy objectives.
- Indian mission in these countries will also better assist the Indian community and protect their interests.

Objective

- The objective of our foreign policy is to build a conducive environment for India's growth and development through partnerships with friendly countries.
- There are presently Missions and Posts across the world which serve as conduits of our relations with partner countries.
- The decision to open these 3 new Indian Missions is a forward-looking step in pursuit of our national priority of growth and development or **'Sabka Saath Sabka Vikas'.**
- Enhancement of India's diplomatic presence will, inter-alia, provide market access for Indian companies and bolster Indian exports of goods and services.
- This would have a direct impact in augmenting domestic production and employment in line with our goal of a self-reliant India or *'Atmanirbhar Bharat'.*

Indian Defence Industry Global Outreach

In news

A webinar between India and Brazil was recently held for defence industry global outreach.
 Theme: *Indian Defence Industry Global Outreach for Collaborative Partnership: Webinar and Expo*

Participants

High Commissioners of both the countries, Secretary SEPROD Brazil and senior MoD officials from both side participated in the webinar and spoke about multifaceted relationship and strategic partnership between two countries.

Highlights

- This webinar is a part of the series of webinars which are being organized with friendly foreign countries in order to boost defence exports and achieve defence export target of $5 billion in the next five years.
- The new year 2021 appears promising for India – Brazil defence cooperation as many MoUs and JVs are likely to show results.

- The webinar was attended by more than 150 delegates and more than 100 virtual exhibition stalls from Indian companies were setup in the Expo.

India and Japan Sign MoU in the Field of ICT

In news

India and Japan signed MoU to enhance cooperation in the field of Information and Communications Technologies

Objective

 Under this MoU, the Telecom department of India and the Ministry of Communications of Japan will enhance the mutual cooperation in the field of telecom security, 5G technologies, spectrum management, submarine optical fiber cable system to Indian islands, a high-altitude platform for broadband in unconnected areas, disaster management and public safety, smart cities, etc.

Key Highlights

- Connecting Andaman & Nicobar with the submarine optical fiber cable and mentioned it as a great example of cooperation between India and Japan.
- India's rapid adoption of innovative digital technologies during the pandemic such as the rapid growth of digital payments, the Aarogya Setu tracing App, digital hearings in the courts of India.
- During the pandemic, because of the attractive policies of India such as SPECS and PLI, there has been a large investment in the field of electronics manufacturing.

First India-EU IPR dialogue

In news

The 1st India-EU IPR dialogue was held on 14th January, 2021 between the EU Commission and Department for Promotion of Industry and Internal Trade (DPIIT)through a virtual platform.

Aim

 To further strengthen the India-EU relation & facilitate enhanced cooperation in the field of Intellectual Property Rights.

Topic of discussion

- Directive on Copyright in the digital market keeping in pace with changing demands of industry.
- On Trademark, they presented the details about the dual system available in the region which provides flexibility to the owners.

- There were discussions on plant protection and farmer's right and their importance for Indian economy.
- Key intellectual property issues that affect business entities and to identify areas for closer collaboration for mutual benefit of both economies.

5TH India – Singapore Defence Ministers' Dialogue

In news

The 5th Defence Ministers' Dialogue (DMD) between India and Singapore was successfully held on 20 January 2021 through a video conference

Key points
- During the virtual interaction, Union Defence Minister Rajnath Singh conveyed his compliments to his Singaporean counterpart on the effectiveness of the pandemic mitigation measures implemented in the nation and the contribution of the Singapore Armed Forces in restricting the spread of COVID-19.
- The Defence Minister also highlighted the role of the Indian Armed Forces in combating COVID-19 and various missions undertaken to assist in the repatriation of Indians stranded overseas.
- Singaporean Defence Minister Dr. Ng Eng Hen reciprocated the compliments and exchanged views on the role of the Armed Forces in the whole of government's approach towards control of the pandemic.
- The two ministers also expressed satisfaction at the growing defence ties between the two countries.
- They also reviewed the progress of various bilateral defence cooperation initiatives being pursued between the two nations over the last year and expressed commitment to further boost the scale of engagements between the Armed Forces as well as in areas such as industry and defence technology.
- The two ministers further discussed new areas of potential cooperation and articulated their vision in this direction.

Year of Indo-French alliance towards a Greener Planet

In news
Minister for Environment,Forest and Climate Change, Shri Prakash Javadekar and Ms Barbara Pompili, the French Minister for Ecological Transition launched the Indo-French Year of the Environment

Objective
To strengthen Indo-French cooperation in sustainable development, increase the effectiveness of actions in favor of global environment protection and give them greater visibility.

Major themes
Environmental protection, climate change, biodiversity conservation, sustainable urban development, and the development of renewable energies and energy efficiency.

India's achievement
- India has made significant progress towards climate change action & has already achieved 26% of reduction of emission intensity.
- As of 2020 the renewable capacity in India stands at 90 GW which includes 36 GW of solar energy & 38 GW of wind energy.

Act East policy

Why in news?

In Asia Pacfic Youth Exchange (APYE) meet union Minister Dr Jitendra Singh says, PM's vision of "Act East" imparting a new approach in our relations with neighbouring countries

Act East
India's 'Act East' policy is a diplomatic initiative to promote economic, strategic and cultural relations with the vast Asia-Pacific region at different levels.

Objectives of "Act East Policy
- Promote economic cooperation, cultural ties, and develop a strategic relationship with countries in the Asia-Pacific region through continuous engagement at regional, bilateral, and multilateral levels.
- To increase the interaction of the **North-Eastern Indian states with other neighboring countries.**
- To find out the alternatives of the traditional business partners like; more focus on the Pacific countries in addition to the South East Asian countries.

Background
The country's eastward drive since 1992 has underscored the importance of this region in its contemporary international relations. 'Act East' and its early avatar, 'Look East' are not different; rather, they are two sides of the same coin, representing two different, but continuing phases in the evolution of India's policy towards the Asia-Pacific region.

Key differences between "Look East Policy" and "Act East Policy"

The focus of the "Look East Policy" was to increase **economic integration** with the South East Asian countries and the area was just confined to South East Asia only. On the other hand the focus of the "Act East Policy" is **economic and security integration** and the focus area increased to **South East Asia as well as East Asia.**

SAMPRITI - IX

In news

A joint military training exercise between India and Bangladesh 'SAMPRITI-IX' will be conducted at Umroi, Meghalaya from 3rd-16th february, 2020.

- The exercise is **hosted alternately by both countries.**
- The **eighth edition** of the exercise was conducted at **Tangail, Bangladesh.**

Objective

- The purpose of this exercise is to strengthen and broaden the interoperability and cooperation between the Indian and Bangladesh's armies.
- Another objective of this exercise is to strengthen and expand the aspects of mutual cooperation between both armies.
- The exercise will comprise strategic level action to deal with terrorism and terrorist attacks.
- This exercise will also create a strong military partnership and military trust between the two countries.

12th South Asia Conference

In news

The 12th edition of the annual South Asia Conference was held on 28-29 January 2020 in New Delhi

Theme:India's "Neighbourhood First" Policy: Regional Perceptions.

The South Asia Conference

- It is organized by the Institute for Defence Studies and Analyses (IDSA), New Delhi.
- The Institute for Defence Studies and Analyses (IDSA) is a New Delhi based premier think tank of India.
- It has been engaged in research on defence and security related issues of south Asia in particular and world in general.
- Our yearly south Asia conference is an endeavour of the institute to bring together experts from all south Asian countries and discuss with them

issues of contemporary relevance in an increasingly interdependent South Asia.

- Since the countries in the South Asian region not only share many features of governance and structures but face similar challenges, the IDSA conferences have attempted to engage policy makers, scholars and grassroots activists to dialogue on key concerns with the objective to achieve sustainable peace and security.

ASEAN India Hackathon

In news

The ASEAN-INDIA Hackathon is an initiative taken by the Ministry of Education on the clarion call of Prime Minister Narendra Modi.The ASEAN India Hackathon is being organized online from February 1-3.

Highlights

- The Hackathon will be enactment of six fundamental virtues of the civilisation — respect, dialogue, cooperation, peace, prosperity and innovation.
- This Hackathon will provide a unique opportunity to India and ASEAN countries to solve their common identified challenges under two broad themes of "Blue Economy" and "Education" and thereby provide an opportunity to forward their economic and cultural ties through collaboration in education, science and technology.
- This ASEAN India Hackathon will provide the countries involved a unique opportunity to solve their common identified challenges & will indeed provide a much-needed support to the budding start-ups.

India-ASEAN Relation

- The background and the foundation of the India-ASEAN relations lies in the shared beliefs, religions, and culture.
- India is the largest democratic and the demographic country of the region. Thus, it becomes India can lead the ASEAN community.
- In that line, India has extended its support to ASEAN countries by providing COVID-19 vaccines. India and ASEAN also share the strong academic and research ties.
- Various Indian universities such as IIT-Delhi and Tezpur University host students from the ASEAN partner countries.
- India also launched 1000 ASEAN PhD Fellowships for ASEAN citizens. Further, the National Education Policy 2020 will also bring opportunities for India as well the entire world.

Source: PIB

Lalandar "Shatoot" Dam

In news

MoU was signed between India and Afghanistan for the construction of the Lalandar "Shatoot" Dam in Afghanistan

Details

- The project is a part of the New Development Partnership between India and Afghanistan
- This is the second major dam being built by India in Afghanistan, after the India- Afghanistan Friendship Dam [Salma Dam], which was inaugurated by the Prime Minister and the President in June 2016.
- Signing of the MoU on Lalandar [Shatoot] Dam is a reflection of India's strong and long-term commitment towards the socio-economic development of Afghanistan and the enduring partnership between our two countries.
- As a part of our Development Cooperation with Afghanistan, India has completed more than 400 projects covering all 34 provinces of Afghanistan.

Significance

The Lalander [Shatoot] Dam would meet the safe drinking water needs of Kabul City, provide irrigation water to nearby areas, rehabilitate the existing irrigation and drainage network, aid in flood protection and management efforts in the area, and also provide electricity to the region.

India-Australia Circular Economy (I-ACE) Hackathon, 2021

In news

NITI Aayog's Atal Innovation Mission & Commonwealth Scientific and Industrial Research Organisation kick-start the India-Australia Circular Economy (I-ACE) Hackathon, 2021

Highlights

- The Hackathon is an effort to strengthen bi-lateral innovations in Circular Economy
- Students and startups of both the nations will work together on Innovative ways of boosting Circular Economy in priority themes viz. Innovation in packaging reducing packaging waste, Innovation in food supply chains avoiding waste, Creating opportunities for plastics waste reduction, and Recycling critical energy metals and e-waste.
- I-ACE is supported by the Australian Department of Industry, Science, Energy and Resources (DISER), AIM Atal Incubation Centre network, and various domain experts.

- "*The theme of this hackathon, circular economy, is incredibly important for Australia, as it is for India*.
- A 'circular economy' model, which employs not only waste management, but reuse, recycling and responsible manufacture can support the development of new industries and jobs, reducing emissions and increasing efficient use of natural resources."

About Atal Innovation Mission (AIM)

- The Atal Innovation Mission (AIM), NITI Aayog, is the Government of India's flagship initiative to promote a culture of innovation and entrepreneurship in the country.
- Towards this end, AIM has rolled out a holistic set of programs supporting innovation across various stages of the innovation lifecycle catering to various stakeholders.

About Commonwealth Scientific and Industrial Research Organisation (CSIRO)

- The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is Australia's national science agency and innovation catalyst, solving the greatest challenges through innovative science and technology

Eleventh India-EU Macroeconomic Dialogue

In news

The 11th India-EU Macroeconomic dialogue was held virtually through video conferencing

Highlights of the dialogue

- It covers all dimensions–political, economic, security, trade and investment, environment, research and innovation.
- The EU is one of our largest trading partners, one of the largest investors in India and an important source for technology, innovation and best practices.
- The dialogue,inter-alia, covered sharing of their experiences to enable both sides on various aspects including collaboration in the G20 on finance track matters, including through G20 Framework Working Group deliverables, G20 Action plan, debt related issues and international taxation of digital economy.

India-EU relation

- India was one of the first countries to develop relations with the European Union.
- The Joint Political Statement of 1993 and the 1994 Co-operation Agreement were the foundational agreements for the bilateral partnership.

- In 2004, India and European Union became "Strategic Partners". A Joint Action Plan was agreed upon in 2005 and updated in 2008.
- India-EU Joint Statements was published in 2009 and 2012 following the India-European Union Summits

India emerges key mover of global S&T partnerships

Context

- The world-class 3.6 meter optical telescopeset up at the place has assumed global importance for observing a number of time-critical cosmic explosive events such as Gamma Ray Bursts and Supernovae.
- It is theAsia's largest fully steerable optical telescope, an international facility for and people from different parts of the world compete for observation and machine time by submitting research proposals.

India is a key player in Mission Innovation'

- India played a crucial role in sowing the seed of 'Mission Innovation', launched as a partnership of 20 countries in 2015.
- The country funded 9 RD&D projects under smart grids engaging 17 Indian institutes, 22 foreign institutes and 15 industries and 8 innovators.
- The country has initiated three R&D programs including national and international bilateral programs to bring in affordable heating and cooling of buildings, supporting 40 R&D projects, engaging over 50 Indian institutes, 15 foreign institutes and 20 industries.
- The country is one of the co-leads in Smart Grids Innovation Challenge in coordination with the member countries, which targets innovation and deployment of reliable, efficient and affordable smart grids technologies at regional, distribution and micro-grids levels in various geographical areas
- to achieve the ability to accommodate 100% renewable based energy sources in power grids.
- DST has supported 9 Projects involving 8 countries--Australia, Canada, France, Germany, Italy, Norway, UK and USA, for large scale renewable energy generation & integration to conventional grid, transition from conventional vehicle to electric vehicle, cyber physical systems in smart grids and financial & market strategies considering renewable penetration.

Dutch Indian Water Alliance for Leadership Initiative (DIWALI)

- In order to find solutions for water related challenges a platform called DIWALI has been developed in which India and Netherlands could participate for designing solution for water challenges.
- The consortium of experts from the two counties would explore the potential and sustainability of Dutch Solutions to resolve challenges in specific water challenged sites in India which are scalable, sustainable and affordable.
- Under this initiative The Dutch consortia titled "Water for Change.
- Integrative and Fit-for-Purpose Water Sensitive Design Framework for Fast Growing Livable Cities" in 2019.

Global Partnerships on Artificial Intelligence (GPAI)

Expanding the areas of its foray of global scientific leadership into new and emerging areas of science, India has joined the 'Global Partnership on Artificial Intelligence (GPAI)' as a founding member to support the responsible and human-centric development and use of Artificial Intelligence (AI).

Global Prevention Coalition (GPC) for HIV Prevention

In news

Global AIDS response has shown remarkable success in reducing new infections, improving access to prevention services for key population and treatment services for People living with HIV (PLHIV), reducing AIDS related mortality, enabling reduction in mother to child transmission of HIV and creating an enabling environment.

Global HIV Prevention Coalition

- In 2017, a global coalition of United Nations Member States, donors, civil society organizations and implementers was established to support global efforts to accelerate HIV prevention.
- Membership includes the 25 highest HIV burden countries, UNAIDS Cosponsors, donors, and civil society and private sector organizations.

Goal

To strengthen and sustain political commitment for primary prevention by setting a common agenda among key policy-makers, funders and programme implementers.

Significance

- The coalition aspires to maintain a global accountability process with score cards, reflecting

- progress against national targets, to track yearly progress.
- It is establishing a coordinated and responsive modality for providing technical support to needs assessments, target-setting, planning, implementation, programme reviews and technical and policy guidance through an interagency draw-down mechanism.

NATIONAL IMPORTANCE

India's Hidden Gems - Dekho Apna Desh

In news
The Ministry of Tourism's Dekho Apna Desh Webinar series titled "India's Hidden Gems" on 21st November 2020 focused on hidden gems of India.

Details
- The series Dekho Apna Desh are organised to promote the spirit of Ek Bharat Shreshtha Bharat.
- The Dekho Apna Desh Webinar Series is presented in technical partnership with National e Governance Department, Ministry of Electronics and Information Technology.

Hidden Gems
- Dudhsagar plantation – Dudhsagar, GoaA 50-acre property with cashew plantations, a spice garden, a tropical palm garden, a nature trail and a unique natural pool.
- SAVE Farms, Dahanu, Maharashtra, is an enviable, eco-friendly green cocoon that the Save family has cultivated from scratch with vast farms, luscious Chikoo and Lychee orchards and botanical gardens with medicinal plants
- Great Hornbill resorts – Owned by a retired banker and his son, this property is located in Amarambalam, Nilambur, Kerala.

Dekho Apna Desh Webinar series
The Ministry of Tourism, Govt. of India is arranging a series of Webinars under the over all theme of 'Dekho Apna Desh'. Recognising the fact that revival in the tourism sector will be largely spearheaded by Domestic Tourism, the Ministry is focusing on the promotion of Domestic Tourism.

Objective
To promote various tourism destinations of India – including the lesser known destinations and lesser known facets of popular destinations.

Details
- The Webinars include glimpses of the culture, heritage, handicrafts and cuisine of the destinations, in addition to the tourist spots.
- Concepts of Responsible Tourism, Accessible Tourism, Wildlife, Trekking, Bicycling and Motor Cycle Tours, etc. have also been promoted through the Webinars.
- They are an attempt to present an undiscovered India to its citizens and encourage them to travel.
- A repository of all the Webinars is being maintained by the Ministry and YouTube links to the Webinars are made available on the Incredible India Social Media handles of the Ministry of Tourism.

Innovate for India

In news
Minister of Petroleum & Natural Gas and Steel has appealed to the scientific community to Innovate for India (I4I) and create competitive advantage to make India Aatmanirbhar.

Highlights
- Scientists were called to create products and services which can compete with the best in the world.
- The theme of the event was *"Self-reliant India and Global Welfare."*
- Aatmanirbhar Bharat is a Bharat which does not only fulfills its own requirements but also is a beacon of hope for the global community, true to the spirit of 'Vasudhaiv Kutumbukam.

Vasudhaiva Kutumbakam
- It is a philosophy that inculcates an understanding that the whole world is one family.
- It is a philosophy that tries to foster an understanding that the whole of humanity is one family.
- It is a social philosophy emanating from a spiritual understanding that the whole of humanity is made of one life energy.

Innovate India
Innovate India is a unique platform to display, promote and recognize innovations happening across the nation. It has been launched in collaboration with AIM-NITI Aayog and MyGov. Citizens from all parts of the country are eligible to share the innovation on the platform.

SJVN signs MoU with IREDA for Green Energy Projects

In news

SJVN Limited, a PSU under Ministry of Power has entered an MoU with Indian Renewable Energy Development Agency Ltd. (IREDA).

MoU Highlights

- IREDA will also assist SJVN in developing an action plan to create and acquire Renewable Energy projects for the next 5 years.
- IREDA, under Ministry of New & Renewable Energy, *will provide its services to SJVN for Green Energy projects.*
- The *MoU highlights IREDA's continuous efforts for the development of Renewable Energy sector* in line Hon'ble Prime Minister's vision of Aatmanirbhar Bharat.
- It will serve to facilitate knowledge and technology transfer and provide consultancy & research services, which will contribute to driving sustainable development of the country.

Indian Renewable Energy Development Agency (IREDA)

- IREDA is India's leading financial institution dedicated to clean energy expansion.
- Since its founding under MNRE in 1987, IREDA has financed the largest share of renewable energy projects in India.
- It is a Non-Banking Financial Institution under the administrative control of this Ministry for providing term loans for renewable energy and energy efficiency projects.
- It offers a credit enhancement guarantee scheme to support the issuance of bonds by wind and solar energy project developers.

Aims

- To enhance the credit rating of bonds for renewable energy projects, thereby improving their marketability and liquidity, and attracting lower-cost and longer-term funding for project developers.
- IREDA's long-term objective is to contribute to the development of a bond market for renewable energy projects in India.

Yogasana as a competitive sport

In news

The Ministry of AYUSH and Ministry of Youth Affairs and Sports announced the formal recognition of Yogasana as a competitive sport

Highlights

- Yogasana is an integral and important component of Yoga, which is psycho-physical in nature and popular across the globe for its efficacy in fitness and general wellness.
- It is becoming a sport will also ensure new technologies and new strategies being inducted into the disciplines, to benefit athletes.
- Yogasana as a sport will enhance interest in Yoga among people around the globe.
- Yogasana as a Sport discipline in Khelo India and in the University Games and we will also pitch it at the National Games
- The ultimate goal is to be a part of olympics
- The sport is likely to have 51 medals in 4 events & 7 categories.

The proposed events for both men and women

- Traditional Yogasana
- Artistic Yogasana (Single)
- Artistic Yogasana (Pair)
- Rhythmic Yogasana (Pair)
- Free Flow/Group Yogasana
- Individual All Round – Championship and Team Championship

National Rail Plan

In news

In an endeavour to address the inadequacies of capacity constraints and improve its modal share in total freight eco system of the country, Indian Railways has come up with Draft National Rail Plan.

Highlights

- A long term strategic plan called the National Rail Plan has been developed to plan infrastructural capacity enhancement along with strategies to increase modal share of the Railways.
- The National Rail Plan will be a common platform for all future infrastructural, business and financial planning of the Railways.
- This plan is being circulated among various Ministries for their views now.
- Railways aim to finalise the Final plan by January 2021.

Objective

- To create capacity ahead of demand by 2030, which in turn would cater to growth in demand right up to 2050 and also increase the modal share of Railways from 27% currently to 45% in freight by 2030

- It would be achieved as part of a national commitment to reduce Carbon emission and to continue to sustain it.
- Net Zero Carbon emission by 2030.

New games in Khelo India Youth Games 2021

In news

The Sports Ministry has approved the inclusion of four Indigenous Games to be a part of Khelo India Youth Games 2021, scheduled to take place in Haryana.

New Games Added

- **Gatka :** *Originates from the State of Punjab and this traditional fighting style of the Nihang Sikh Warriors is used both as self-defense as well as a sport.*
- **Kalaripayattu :** *It has its origin from Kerala and has practitioners all over the world; Bollywood actor* **Vidyut Jammwal** *being one.*
- **Thang-Ta :** *Manipur marital art has passed into oblivion in the recent decades.*
- **Mallakhamba:** *This has been well-known across India and Madhya Pradesh and Maharashtra have been the hotspots of this sport.*

Significance

- The sports will get national recognition with the help of the Khelo India Youth Games 2021
- Khelo India will certainly help to promote and revive a forgotten Indian traditional martial art having a historical significance.

Agri-hackathon Atmanirbhar Krishi

In news

Union Minister of Agriculture & Farmers' Welfare, inaugurated the Virtual Agri-hackathon 2020organised by the Department of Agriculture and Cooperation and Farmers' Welfare in association with IARI, Pusa.

Highlights

- The 2-month long event is the first of its kind & the largest virtual event in the history of Indian agriculture.
- It will bring together the most important stakeholders from industry & government alongside India's young bright minds, creative startups and smart innovators who will build new, fast and frugal solutions to tackle the big questions we're facing today.
- The hackathon will happen in 3 elimination rounds and the final 24 winners will get a cash prize of INR 1,00,000 along with incubation support, tech & business mentoring and various other benefits.

- The hackathon will accept innovations & ideas on farm mechanization, precision agriculture, supply chain & food technology, waste to wealth, green energy, etc.

Objective

From the biggest names to the most exciting startups,from learning, innovating to pitching, Agri India Hackathon will unfold incredible things in a never-before virtual experience.**The goal:** Collective impact with new-age, fast & frugal innovations to navigate these focus areas.

PARAKRAM DIWAS

In news

Government of India has decided to celebrate the 125th Birth Anniversary year of Netaji Subhas Chandra Bose in a befitting manner at national and international level, beginning from 23rdJanuary 2021

Highlights

- Government of India has decided to celebrate his birthday on the day of January every year as 'PARAKRAM DIWAS"
- It is celebrated in order to honour and remember Netaji's indomitable spirit and selfless service to the nation.
- And to inspire people of the country, especially the youth, to act with fortitude in the face of adversity as Netaji did, and to infuse in them a spirit of patriotic fervour.
- The announcement was made by the Union Ministry of Culture.

Netaji Subhash Chandra Bose

- Subhas Chandra Bose, affectionately called as Netaji, was one of the most prominent leaders of Indian freedom struggle.
- Though Mahatma Gandhi and Jawaharlal Nehru have garnered much of the credit for successful culmination of Indian freedom struggle, the contribution of Subash Chandra Bose is no less.
- He has been denied his rightful place in the annals of Indian history. He founded Indian National Army (Azad Hind Fauj) to overthrow British Empire from India and came to acquire legendary status among Indian masses.

New findings in number theory

In news

Interesting new findings on theoretical speculations in number theory may soon emerge from India

- Scientists are working on new cases of Stark conjectures, hypothetical information about the leading terms of L-functions in number theory.
- These conjectures have direct applications to Hilbert's 12th problem, one of the central problems in algebraic number theory.
- This theory has significance in cryptography, for instance, for generating elliptic curves for use in cryptosystems.

Number theory

- It concerns the study of integer solutions to polynomial equations with integer coefficients. Solving such equations, in general, is challenging.
- They are studied by attaching various invariants-- function, quantity, or property, which remains unchanged when a specific transformation is applied.
- A very classical, fruitful, and much-studied invariant is the L-function (function on the complex plane, associated to one out of several categories of mathematical objects).
- Some of the deepest problems in modern number theory are concerned with proving exact formulae for the values of L-functions at integer points in terms of purely arithmetic objects.

Statehood Day

In news

Prime Minister praised the warm-hearted people of northestern states of Manipur, Meghalaya and Tripura and acknowledged their contributions to national development as he congratulated them on their Statehood Day

Highlights

- On this day in 1972, all the three states became full-fledged states under the North Eastern Region (Reorganisation) Act, 1971.
- January 21, 2021 marks the 49th statehood day of northeastern states Manipur, Tripura, and Meghalaya.
- Tripura and Manipur, the former princely states were blended into the Indian Union in October 1949 and became full states on January 21, 1972.
- Meghalaya, which was part of Assam, also received its own full statehood under the North Eastern Region (Re-Organisation) Act, 1971.
- Before the northeastern region turned into seven sisters with statehood of Tripura, Manipur, Meghalaya, Mizoram, Assam, Arunachal Pradesh andNagaland, the regional composition of the North East comprised Assam plains from the old

Assam Province, the hill districts, and the North Eastern Frontier Tracts (NEFT) of the North-Eastern borderland.
- Soon after independence in 1947, the princely states of Manipur and Tripura got their own statehood based on the tribal and ethnic population in the region.

Background

- Manipur and Tripura states were granted the status of Union Territories in 1949.
- Meanwhile, Nagaland was granted statehood on December 1, 1963. Within Assam, Meghalaya was given the status of an autonomous state through the Assam Reorganisation (Meghalaya) Act 1969, according to the sixth schedule of the Indian constitution.
- It was finally, in 1972 that Tripura, Meghalaya were granted full statehood by the North East Reorganisation Act of 1971.

7th Edition of MASCRADE 2021

In news

National Informatics Centre Services Incorporated (NICSI), a Public Sector Enterprise under National Informatics Centre (NIC), Ministry of Electronics & Information Technology (MeitY), celebrated 25 years of its establishment.

NIC Products Portfolio

- The visual intelligence tool, through the collaborative effort of NIC and NICSI (CEDA), is completely developed in-house using open source technologies and bringing together the best features comparable to market leading BI tools.
- The tool would be primarily used by Government Departments at various levels in the centre and state.
- It will provide State-of-the-art and powerful data analysis for officials to design analytical reports and turn data into accurate analysis and smart visualizations.

e-Auction India

- It caters to the electronic forward and reverse auction requirements of the Government departments and organizations.
- It aims at transparency and non-discrimination amongst bidders, by allowing free access to auction documents, clarifications, online submission of quotes from any place on 24x7 basis, in a secured environment, adopting industry standard open technologies.

Work from AnyWhere Portal

- WAW (Work from AnyWhere) Portal will ease and enhance accessibility of key applications to the Government employees.
- WAW portal is built upon core workplace experience and creates a highly extensible environment for users to dynamically adapt to changing needs.
- The virtual work environment, provisioned by WAW portal, will empower employees with all the key resources enabling them to access organizations' applications and data and communicate with fellow officials.
- With the following objectives to achieve, WAW portal will facilitate quick transition to remote workplace environment, while maintaining secured access to departmental applications.

NICSI

National Informatics Centre Services Inc. (NICSI) was established in 1995 as a section-8 (erstwhile section-25) company under National Informatics Centre, Ministry of Electronics & Information Technology, Government of India for providing and procuring IT solutions for multiple e-governance projects undertaken by NIC, MeitY, Governments and Government Organizations (like Public Sector Undertakings).

6 New Circles of Archaeological Survey of India created

In news

Archaeological Survey of India, an attached office of Ministry of Culture, Government of India vide Notification dated 28th August 2020 established Six new Circles by bifurcation of its existing Circles.

New circles

- Rajkot Circle, Gujarat – by bifurcation of Vadodara Circle.
- Jabalpur Circle, Madhya Pradesh – by bifurcation of Bhopal Circle.
- Tiruchirappalli (Trichy) Circle, Tamil Nadu – by bifurcation of Chennai & Thrissur Circle.
- Meerut Circle, Uttar Pradesh – by bifurcation of Agra circle
- Jhansi Circle, Uttar Pradesh – by bifurcation of Lucknow Circle.
- Raiganj Circle, West Bengal – by bifurcation of Kolkata Circle.

In addition Hampi Mini-Circle has been upgraded as full-fledged Circle and Delhi Mini-Circle merged with Delhi Circle.

Archaeological Survey of India (ASI)

- ASI, under the Ministry of Culture, is the premier organization for the archaeological research and protection of the cultural heritage of the nation.
- It administers more than 3650 ancient monuments, archaeological sites and remains of national importance.
- Its activities include carrying out surveys of antiquarian remains, exploration and excavation of archaeological sites, conservation and maintenance of protected monuments etc.
- It was founded in 1861 by Alexander Cunningham- the first Director-General of ASI. Alexander Cunningham is also known as the "Father of Indian Archaeology".

Ganga Amantran Abhiyan

In news

Ganga Aamantran Abhiyan, a rafting and kayaking expedition on the Ganga River from Devprayag to Ganga Sagar, was organised between 10th October 2019 to 12th November 2019.

Aim

To integrate people's participation and economic development for Ganga rejuvenation with various stakeholders who have a key role to play in this initiative including Agriculture, Power, Tourism, Energy, Water, AYUSH, Environment, Forest & Climate Change etc., NMCG is working in an integrated manner with concerned Ministries/Departments and Government agencies to boost economic activities and tourism in the river Ganga.

About Ganga Aamantran Abhiyan

- The Ganga Aamantran Abhiyan will cover the five Ganga basin states- Uttarakhand, Uttar Pradesh, Jharkhand, Bihar and West Bengal. It will have stops at five spots including Rishikesh, Haridwar, Kanpur, Allahabad, Varanasi, Patna, Sonepur and Kolkata.
- The expedition will be undertaken by a nine-member team comprising rafters and swimmers of the Indian Armed Forces, led by international open-water swimmer Wing Commander Paramvir Singh from the Indian Air Force.

Significance

- The 'Ganga Aamantran Abhiyan' is a unique social awareness initiative that is expected to play a

- historic and pioneering role in connecting with the people.
- This will mark the first-ever effort by the National Mission for Clean Ganga to raft across the entire River.
- It will also be the longest-ever social campaign implemented in form of an adventure sport to spread the key message of river rejuvenation and water conservation on a massive scale.
- The open-water rafting expedition is expected to highlight the ecological challenges faced by the Ganga River.

Astro-Tourism

In news
The Ministry of Tourism's Dekho Apna Desh Webinar series titled "Astro- Tourism: The Next Frontier of Nature-based Tourism" held on 06th February, 2021

Focus
- It focused on promoting nature-based tourism which is emerging strongly in a post - COVID world, the major thrust of the webinar was sustainable and responsible travel.
- The webinar focused on exploring the evolution of Astro-tourism as one of the most authentic and environment-friendly ways of travelling along with its immense potential to bring positive social, economic and conservation benefits to remote communities.
- Astrostays is a community-driven astrotourism model that puts communities at the heart and center of the tourism model.
- This model is also an innovative form of experiential and sustainable tourism that generates economic benefits for remote and rural regions of the world that have access to clear night skies while creating unique life-changing experiences for travellers.

Aim
Empowering and strengthening communities by diversifying economic bases and creating new opportunities for livelihood creation using astrotourism as a key development intervention.

SVAMITVA

In news
SVAMITVA Scheme is a Central Sector scheme launched by Hon'ble Prime Minister of India on National Panchayat Day i.e 24 th April 2020

Details

- **SVAMITVA Scheme** is a Central Sector scheme launched by Hon'ble Prime Minister of India on National Panchayat Day i.e 24th April 2020.
- The Ministry of Panchayati Raj (MoPR) is the Nodal Ministry for implementation of the scheme.
- In the States, the Revenue Department / Land Records Department will be the Nodal Department and shall carry out the scheme with support of State Panchayati Raj Department.

Aim

The scheme aims to provide an integrated property validation solution for rural India. The demarcation of rural abadi areas would be done using Drone Surveying technology. This would provide the 'record of rights' to village household owners possessing houses in inhabited rural areas in villages which, in turn, would enable them to use their property as a financial asset for taking loans and other financial benefits from Bank

Objective
- To bring financial stability to the citizens in rural India by enabling them to use their property as a financial asset for taking loans and other financial benefits.
- Creation of accurate land records for rural planning.
- Determination of property tax, which would accrue to the GPs directly in States where it is devolved or else, add to the State exchequer.
- Creation of survey infrastructure and GIS maps that can be leveraged by any department for their use.
- To support in preparation of better-quality Gram Panchayat Development Plan (GPDP) by making use of GIS maps.
- To reduce property related disputes and legal cases

What is the SVAMITVA card?

- The acronym SVAMITA stands for Survey of Villages and Mapping with Improvised Technology in Village Areas.
- It is a Central Sector Scheme aimed at "providing 'record of rights' to village household owners possessing houses in inhabited rural areas in villages and issuance of property cards to the property owners."
- The plan is to survey all rural properties using drones and prepare GIS based maps for each village.

SANKALP

In news

The Union Minister of Skill Development and Entrepreneurship chaired a function 'Transforming skilling through strategic partnerships under SANKALP' and rolling out of the Mahatma Gandhi National Fellowship (MGNF) and other initiatives

SANKALP

- Skills Acquisition and Knowledge Awareness for Livelihood Promotion) is a World Bank loan assisted programme to strengthen the district skill administration and the District Skill Committees (DSCs)
- The SANKALP programme will also support in Training of Trainer (ToT) system in Public Private Partnership (PPP) mode that a collaborative approach between industry and the technical and vocational education and training (TVET) ecosystem.
- Towards this, a 'Cluster Approach' is adopted to meet the objectives and GIZ-developed automotive cluster in Aurangabad has been selected for the pilot.

Mahatma Gandhi National Fellowship

- The Union Ministry of Skill Development and Entrepreneurship has launched the Mahatma Gandhi National Fellowship in association with nine IIMs of the country.
- Selected fellows will be given a stipend of about Rs 50,000 per month during the first year and Rs 60,000 per month during the second year of the fellowship programme.
- The government has invited applications from the interested candidates and the registrations will remain open between February 15 and March 27.

International Commission on Large Dams (ICOLD)

In news

The International Commission on Large Dams (ICOLD) Symposium on Sustainable Development of Dams & River Basins was inaugurated

Details

- INCOLD in collaboration with Central Water Commission (CWC), Dam Rehabilitation Improvement Project (DRIP) and National Hydrology Project (NHP) is organising Symposium on "Sustainable Development of Dams and River Basins"

- More than 300 delegates from across the country and abroad will participate in the Symposium.
- Dam Safety Bill which has been approved by Lok Sabha, in order to put regulatory mechanism in place, to provide for proper surveillance, inspection, operation and maintenance of all dams in India, which has been enacted will be publicised.
- There will also be a Special Sessions on "Innovative Financing in Dam Projects, Use of Geo-synthetics in Dam Engineering

Significance

- The symposium is being organised to provide an excellent opportunity to Indian Dam Engineering Professionals and Agencies to share their experiences, ideas and latest developments in new materials and construction technologies, advancement in investigation techniques, best engineering practices, dam safety issues etc.
- Besides this offers opportunity to networking with the world renowned dam experts from different countries and global organizations involved in Dam Construction, management and operation and maintenance for mutual benefits.

POLITY AND GOVENRENCE

22nd Law Commission of India

In news

The Union Cabinet has approved Twenty-second Law Commission of India for a period of three years

Law Commission

- The first law Commission was established in 1834 under the Charter Act of 1833 under the Chairmanship of **Lord Macaulay** which recommended codification of the Penal Code and the Criminal Procedure Code.
- The Law Commission of India is a non-statutory body constituted by the Government of India from time to time. The Commission was originally constituted in 1955 and is re-constituted every three years. The tenure of twenty-first Law Commission of India was upto 31st August, 2018.
- The various Law Commission have been able to make important contribution towards the progressive development and codification of Law of the country.
- The Law Commission has so far submitted 277 reports.

Benefits

The Government will have the benefit of

recommendations from a specialised body on different aspects of law which are entrusted to the Commission for its study and recommendations, as per its terms of reference.

Organization of Law Commission

The 22nd Law Commission will be constituted for a period of three years from the date of publication of its Order in the Official Gazette.

It will consist of

- A full-time Chairperson
- 4 full-time Members (including Member-Secretary)
- Secretary, Department of Legal Affairs as ex-officio Member;
- Secretary, Legislative Department as ex officio Member; and
- Not more than five part-time Members.

Terms of reference
- The Law Commission shall, on a reference made to it by the Central Government or suo-motu, undertake research in law and review of existing laws in India for making reforms therein and enacting new legislations.
- It shall also undertake studies and research for bringing reforms in the justice delivery systems for elimination of delay in procedures, speedy disposal of cases, reduction in cost of litigation etc.

The Law Commission of India shall
- Identify laws which are no longer needed or relevant and can be immediately repealed;
- Examine the existing laws in the light of Directive Principles of State Policy and suggest ways of improvement and reform and also suggest such legislations as might be necessary to implement the Directive Principles and to attain the objectives set out in the Preamble of the Constitution;
- Consider and convey to the Government its views on any subject relating to law and judicial administration that may be specifically referred to it by the Government through Ministry of Law and Justice (Department of Legal Affairs)
- Consider the requests for providing research to any foreign countries as may be referred to it by the Government through Ministry of Law and Justice (Department of Legal Affairs);
- Take all such measures as may be necessary to harness law and the legal process in the service of the poor

- Revise the Central Acts of general importance so as to simplify them and remove anomalies, ambiguities and inequities;

School Health Ambassador Initiative

In news

The central Government launched the School Health Ambassador Initiative on February 12, 2020 to spread awareness about the preventive health aspects.
Under the initiative, two teachers will be identified in every government school as *'health and wellness ambassadors'.*

Objective
- The **School Health Ambassador Initiative** aims to foster growth, development and educational achievements of school-going children by promoting their health and well-being.
- It also aims to strengthen the concept of preventive, promotive and positive health, which forms a fundamental part of the health and wellness centres of the Ayushman Bharat scheme.

Highlights
- Two teachers will be selected as ''health and wellness ambassadors'' in every government school to raise awareness about preventive health aspects. These ambassadors will receive support from class monitors, who will serve as ''Health and Wellness Messengers''.
- The health and wellness ambassadors will spread awareness regarding preventive health by organising culturally sensitive activity sessions for one hour every week for 24 weeks in a year to promote joyful learning.
- A proper 24-hour curriculum has been prepared for the health programme by the National Council of Educational Research and Training (NCERT). Besides this, materials for the training of nodal teachers and a facilitator's guide have also been developed in consultation with the Health and HRD Ministry.
- Eleven themes have been identified under the health programme including emotional and mental wellbeing, gender equality, interpersonal relationships, nutrition, prevention and management of substance misuse, health and sanitation, reproductive health and HIV prevention, promotion of safe use of the internet, media and social media and security against violence and injuries.

National Creche Scheme
In news
National Creche Scheme (earlier named as Rajiv Gandhi National Creche Scheme) is being implemented as a

Centrally Sponsored Scheme through States/UTs with effect from 2017 to provide day care facilities to children (age group of 6 months to 6 years) of working mothers.

Features of the Scheme
- Daycare Facilities including Sleeping Facilities.
- Early Stimulation for children below 3 years and pre-school Education for 3 to 6 years old children.
- Supplementary Nutrition (to be locally sourced)
- Growth Monitoring
- Health Check-up and Immunization
- Crèches shall be open for 26 days in a month and for seven and half (7-1/2) hours per day.
- The number of children in the crèche should not be more than 25 per crèche with 01 Worker and 01 helper respectively.

User charges to bring in an element of community ownership and collected as under
- BPL families - Rs 20/- per child per month.
- Families with Income (Both Parents) of uptoRs. 12,000/- per month – Rs. 100/- per child per month
- Families with Income (Both Parents) of above Rs. 12,000/- per month – Rs. 200/- per child per month.

Tourism Ministry launches 'Stranded in India' to help foreign tourists

In news
The Ministry of Tourism has launched a portal 'Stranded in India' to help foreign tourists who are stuck in various parts of the country.

About the portal
- It aim to extend support to the foreign tourists who are stranded in India.
- The portal will disseminate information regarding the services that can be availed by foreign tourists who are stuck far away from their home land.
- **The portal strandedinindia.com** consists of information around Covid-19 helpline numbers and call centres that foreign tourists can reach out for help, information around Ministry of External Affairs control centers along with their contact information and information around state-based/regional tourism support infrastructure.
- The portal strandedinindia.com consists of the following information that will be useful for the tourists in their time of need

- Comprehensive information around COVID-19 helpline numbers or call-centres that the foreign tourists can reach out to for help.
- A variety of information around Ministry of External Affairs control centers along with their contact information.
- Information around state-based/regional tourism support infrastructure.
- Help Support section to extend help to the ones in need of further information and connect foreign tourists to concerned authorities.

Members of Parliament Local Area Development Scheme (MPLADS)

In news

The Members of Parliament Local Area Development Scheme (MPLADS) is meant to enable MPs to recommend works of developmental nature with emphasis on creation of durable community assets based on locally felt needs.

Features
- The MPLADS is a Plan Scheme fully funded by Government of India. The annual MPLADS fund entitlement per MP constituency is Rs. 5 crore.
- MPs are to recommend every year, works costing at least 15 per cent of the MPLADS entitlement for the year for areas inhabited by Scheduled Caste population and 7.5 per cent for areas inhabited by S.T. population.
- In order to encourage trusts and societies for the betterment of tribal people, a ceiling of Rs. 75 lakh is stipulated for building assets by trusts and societies subject to conditions prescribed in the scheme guidelines.
- Lok Sabha Members can recommend works within their Constituencies and Elected Members of Rajya Sabha can recommend works within the State of Election (with select exceptions). Nominated Members of both the Rajya Sabha and Lok Sabha can recommend works anywhere in the country.
- All works to meet locally felt infrastructure and development needs, with an emphasis on creation of durable assets in the constituency are permissible under MPLADS as prescribed in the scheme guidelines. Expenditure on specified items of non-durable nature are also permitted as listed in the guidelines.

24x7 National Teleconsultation Centre

In news
The Health and Family Welfare Minister have launched national Teleconsultation Centre

- The Centre is a telemedicine hub, through which , expert doctors from various clinical domains will be available 24x7 to answer questions related to COVID-19 all.
- This is a multi-modal telecommunication hub through which two way audio-video and text communications can be exchanged from any part of the country as well as the from the world.
- The modes of communication will include simple mobile telephony as well as two way video communications using WhatsApp, Skype and Google Duo.
- Through this system multiple modes of communication will be possible using Skype, Whatsapp and others.
- The centre would be manned by a mix of specialists to help in managing serious COVID patients. .
- This centre is also integrated with the National Medical College Network, NMCN. 1 National Medical College Network (NMCN) terminal has also been established for two way video conferencing with all the 50 Medical Colleges on the network.

Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme

In news

In a bid to boost large-scale electronics manufacturing in India, the Union Cabinet approved three schemes, including a production-linked incentive scheme, with a total outlay of almost ₹48,000 crore.

How these schemes will help?

- The three schemes together will enable large-scale electronics manufacturing, a domestic supply chain ecosystem of components and a state-of-the-art infrastructure and common facilities for large anchor units and their supply chain partners.
- The schemes are expected to attract new investments worth at least ₹50,000 crore in the sector, while generating more than five lakh direct and 15 lakh indirect jobs.

About the Schemes

- **The production-linked incentive scheme** aims to attract large investments in mobile phone manufacturing and specified electronic components, including assembly, testing, marking

and packaging (ATMP) units, at a budgetary outlay of ₹40,995 crore for five years.

- The scheme will offer an incentive of 4-6% on incremental sales of goods manufactured in India and is expected to create a total of 8 lakh jobs.
- "Domestic value addition for mobile phones is expected to rise to 35-40% by 2025 from the current 20—25% due to the impetus provided by the scheme.
- For the '**Scheme for Promotion of Manufacturing of Electronics Components and Semiconductors'** the outlay has been kept at ₹3,285 crore over eight years and is expected to create about 6 lakh jobs.
- The third scheme, **Electronics Manufacturing Clusters (EMC) 2.0**, aims at creating quality infrastructure with a minimum area of 200 acres along with industry-specific facilities such as common facility centres, ready-built factory sheds/ plug-and-play facilities at an outlay of ₹3,762.25 crore over eight years.

EMC 2.0

The Scheme will create a robust infrastructure base for electronic industry to attract flow of investment in ESDM sector and lead to greater employment opportunities.

Following are the expected outputs/outcomes for the Scheme:

Availability of ready infrastructure and Plug & Play facility for attracting investment in electronics sector:

- New investment in electronics sector
- Jobs created by the manufacturing units;
- Revenue in the form of taxes paid by the manufacturing units

Scheme for Promotion of manufacturing of Electronic Components and Semiconductors

In news

The Union has approved to offer financial incentive of 25% of capital expenditure for the manufacturing of goods that constitute the supply chain of an electronic product under the Scheme for Promotion of manufacturing of Electronic Components and Semiconductors (SPECS).

Significance

The scheme will help offset the disability for domestic manufacturing of electronic components and semiconductors in order to strengthen the electronic manufacturing ecosystem in the country.

Benefits

- Development of electronic components manufacturing ecosystem in the country and deepening of Electronics value chain.

- New investments in Electronics Sector to the tune of at leastRs. 20,000 crore.
- Direct employment of approximately 1,50,000 is expected to be created in the manufacturing units supported under the scheme, including indirect employment of about three times of direct employment as per industry estimates. Thus, total employment potential of the scheme is approximately 6,00,000.
- Reducing dependence on import of components by large scale domestic manufacturing that will also enhance the digital security of the nation.

Background

The vision of National Policy on Electronics 2019 (NPE 2019) notified on 25.02.2019 is to position India as a global hub for Electronics System Design and Manufacturing (ESDM) by encouraging and driving capabilities in the country for developing core components, including, chipsets, and creating an enabling environment for the industry to compete globally.

CollabCAD in ATL schools

In news

Atal Innovation Mission, NITI Aayog and National Informatics Centre (NIC) jointly launched CollabCAD, a collaborative network, computer enabled software system, providing a total engineering solution from 2D drafting & detailing to 3D product design.

Aim

To provide a great platform to students of Atal Tinkering Labs (ATLs) across country to create and modify 3d designs with free flow of creativity and imagination

CollabCAD

- This software would also enable students to create data across the network and concurrently access the same design data for storage and visualization.
- AIM's collaboration with NIC's CollabCAD is a great platform for students to utilize indigenous, state-of-the-art made-in-India software for 3D modeling/slicing to use 3D Printing.
- A customized version of CollabCAD for ATLs with features that are most relevant to school students to materialize their ideas and creativity into physical solutions has been developed to enable designing without constraints and, thus, allowing creativity and innovation to thrive.
- It is an indigenous three dimensional computer aided design system which helps the used to build models in virtual 3d space and create and engineering drawings for shop floor which makes it a complete package for smart manufacturing.

Atal Tinkering Labs

- With a vision to 'Cultivate one Million children in India as Neoteric Innovators', Atal Innovation Mission, an initiative of the National Institution for Transforming India (NITI Aayog), Government Of India, is establishing **Atal Tinkering Laboratories (ATLs)** in schools across India.
- The objective of this scheme is to foster curiosity, creativity and imagination in young minds and inculcate skills such as design mind - set, computational thinking, adaptive learning, physical computing, rapid calculations, measurements etc. Young children will get a chance to work with tools and equipment to understand what, how and why aspects of STEM (Science, Technology, Engineering and Math).
- **ATL** program has launched a '**Tinker from Home'** campaign to ensure that the children across the county have access to useful easy-to-learn online resources to keep themselves fruitfully occupied. The objective of the initiative is to harness the creativity and innovativeness of children by encouraging learning through self-initiation.
- **AIM** also launched **the Game Development module** in partnership with DELL Technologies and Learning Links Foundation.
- It is an online platform where students can start their learning journey while tinkering from home. Through the platform they can learn to create their own games and also share it with others. This platform envisages to make students transition from 'game players' to 'game makers'

About AIM

Atal Innovation Mission housed at NITI Aayog is the Government of India's flagship initiative to promote a culture of innovation and entrepreneurship. At the school level, AIM is establishing ATLs in all districts across India.

Bharat Padhe Online

In news

HRD Ministry has launched a week long 'Bharat Padhe Online' campaign for Crowd sourcing of Ideas for Improving Online Education ecosystem of India in New Delhi.

About Bharat Padhe Online Campaign

- The campaign aims to invite best brains in India to share suggestions/solutions directly with HRD Ministry to overcome constraints of online education while promoting the available digital education.
- Students and teachers are our main target audience in it and he hoped that they will

participate in this campaign wholeheartedly to improve the existing online education methods.
- Students who are currently studying in schools or higher educational institutions are the ones engaging with the existing digital platforms offering various courses etc. on a daily basis.

PCPNDT Act

In news
MoHFW has not suspended the PC&PNDT Act, which prohibits sex selection before or after conception

About PCPNDT Act
- The Pre-conception & Pre-natal Diagnostics Techniques (PC & PNDT) Act, 1994 was enacted in response to the decline in Sex ratio in India, which deteriorated from 972 in 1901 to 927 in 1991.
- The main purpose of enacting the act is to ban the use of sex selection techniques before or after conception and prevent the misuse of prenatal diagnostic technique for sex selective abortion.
- Offences under this act include conducting or helping in the conduct of prenatal diagnostic technique in the unregistered units, sex selection on a man or woman, conducting PND test for any purpose other than the one mentioned in the act, sale, distribution, supply, renting etc. of any ultra sound machine or any other equipment capable of detecting sex of the foetus.

Amendments
- The act was amended in 2003 to improve the regulation of the technology used in sex selection.
- The Act was amended to bring the technique of pre conception sex selection and ultrasound technique within the ambit of the act.
- The amendment also empowered the central supervisory board and state level supervisory board to be constituted.

Instant PAN through Aadhaar based e-KYC

In news

Union Minister for Finance & Corporate Affairs formally launched the facility for instant allotment of PAN (on near to real time basis).

About the new facility
- This facility is now available for those PAN applicants who possess a valid Aadhaar number and have a mobile number registered with Aadhaar.
- The allotment process is paperless and an **electronic PAN (e-PAN)** is issued to the applicants free of cost.

- The instant PAN applicant is required to access the e-filing website of the Income Tax Department to provide her/his valid Aadhaar number and then submit the OTP received on her/his Aadhaar registered mobile number.
- On successful completion of this process, a **15-digit acknowledgment number** is generated.
- If required, the applicant can check the status of the request anytime by providing her/his valid Aadhaar number and on successful allotment, can download the e-PAN.
- The e-PAN is also sent to the applicant on her/his email id, if it is registered with Aadhaar.

Significance
The launch of the Instant PAN facility is yet another step by the Income Tax Department towards Digital India, thereby creating further ease of compliance to the taxpayers.

Garbage-free star rating for the cities

In news
MOHUA announces results of Star rating of garbage free cities, 6 Cities rated 5 Star, 65 Cities rated 3 Star and 70 Cities rated 1 Star

Star Rating Protocol
- The Star Rating Protocol was launched by the Ministry in January 2018 to institutionalize a mechanism for cities to achieve Garbage Free status, and to motivate cities to achieve higher degrees of cleanliness.
- This certification is not only an acknowledgement of the clean status of Urban Local Bodies and strengthened SWM systems but also a mark of trust and reliability akin to universally known standards.
- The performance of cities under the Star Rating Protocol is crucial as it carries significant weightage when it comes to their final assessment in Swachh Survekshan."
- The protocol has been devised in a holistic manner including components such as cleanliness of drains & water bodies, plastic waste management, managing construction & demolition waste, etc. which are critical drivers for achieving garbage free cities.
- The key thrust of this protocol is on SWM, it also takes care of ensuring certain minimum standards of sanitation through a set of prerequisites defined in the framework.

Significance
- It al ensures certain minimum standards of sanitation through a set of prerequisites defined in the framework.

- Since the rating is conducted at a city level, it makes the process easier to implement and helps the cities incrementally improve their overall cleanliness.
- The rating protocol is an outcome-based tool that helps MoHUA and other stakeholders to evaluate cities on the basis of this single rating.

5TH Anniversary of Urban Missions

In news
5th Anniversary of Pradhan Mantri Awas Yojana(Urban) (PMAY-U), Smart Cities Mission (SCM) and Atal Mission for Rejuvenation and Urban Transformation (AMRUT) was being celebrated

Highlights

- Atal Mission for Rejuvenation and Urban Transformation (AMRUT),launched by Hon'ble Prime Minister on 25 June 2015, has completed 5 successful years.
- The Mission aims at ensuring **universal coverage of drinking water supply and substantial improvement in coverage and treatment capacities of sewerage and septage, along with storm water drainage, non-motorized urban transport and green spaces & parks**.
- Smart Cities Mission (SCM) was **launched on 25th June 2015** with the objective of promoting cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' solutions.
- Pradhan Mantri Awas Yojana – Urban (PMAY-U) completed five years on 25 June 2020. The scheme was launched in **2015 with the objective of providing pucca house to all eligible beneficiaries of Urban India by 2022 with the vision of '**Housing for All'.

Skills Build Reignite" Platform

In news
MSDE-IBM Partnership Unveils Free Digital Learning Platform "Skills Build Reignite" to Reach More Job Seekers & Provide New Resources to Business Owners in India

Skill Build Reignite Platform
- IBM and its partners are introducing the SkillsBuild Reignite and the SkillsBuild Innovation Camp.
- **The SkillsBuild Reignite** tends to provide job seekers and entrepreneurs, with access to free online coursework and mentoring support designed to help them reinvent their careers and businesses.

- Job seekers, individual business owners, entrepreneurs and any individual with learning aspirations can now tap into host of industry relevant content on topics including Artificial intelligence, Cloud, Data analytics and security to reskill and upskill themselves, at no cost.
- Its special feature is the personalized coaching for entrepreneurs, seeking advice to help establish or restart their small businesses as they begin to focus on recovery to emerge out of the COVID 19 pandemic.
- Courses for small business owners include, for example, financial management, business strategy, digital strategy, legal support and more.
- Plus, IBM volunteers will serve as mentors to some of the 30,000 SkillsBuild users in 100 communities in at least five major regions worldwide to help reinvigorate local communities.

The SkillsBuild Innovation camp

- The SkillsBuild Innovation camp is a 10 week program which supports 100 hours of structured learning to learners who are interested in gaining hands-on project experience to enhance learning and are intent on building their network and enhance their employability.
- With the guidance of expert facilitators, IBM volunteers and coaches, the students will be guided through the design thinking process and learn strategic methods to craft their problem statement, ideate creatively, solve complex problems more quickly, design an innovative user experience and tell compelling stories.
- **The SkillsBuild Innovation Camp** concludes with a pitch to facilitators, other teams, stakeholders and potential employers or investors.

On-line NISHTHA programme

In news
The first on-line **NISHTHA programme** for 1200 Key Resources Persons of Andhra Pradesh was launched by Union HRD Minister.

NISHTHA Programme

- NISHTHA is a **National Initiative for School Heads' and Teachers' Holistic Advancement** at the elementary stage under **Samagra Shiksha** -a flagship programme of MHRD to improve learning outcomes.

- NISHTHA has been customized for online mode to be conducted through DIKSHA and NISHTHA portals by the NCERT.
- The modules developed under NISHTHA focus on holistic development of children and hence include curriculum and inclusive education health and well-being, personal social qualities, art integrated learning, initiatives in school education, subject-specific pedagogies, ICT in teaching-learning, leadership, pre-school education, pre-vocational education, etc.
- All the modules are centred around learning outcomes and, learner-centred pedagogy.

AI-based ASEEM digital platform

In news
In an aim to improve the information flow and bridge the demand-supply gap in the skilled workforce market, the **Ministry of Skill Development and Entrepreneurship (MSDE)** launched '**Aatamanirbhar Skilled Employee Employer Mapping (ASEEM)**' portal to help skilled people find sustainable livelihood opportunities.

ASEEM Portal

- The Artificial Intelligence-based platform has been imagined to strengthen their career pathways by handholding them through their journeys to attain industry-relevant skills and explore emerging job opportunities especially in the post COVID era.
- **ASEEM** will provide employers a platform to assess the availability of skilled workforce and formulate their hiring plans.
- **Aatamanirbhar Skilled Employee Employer Mapping (ASEEM)** refers to all the data, trends and analytics which describe the workforce market and map demand of skilled workforce to supply.
- It will provide real-time granular information by identifying relevant skilling requirements and employment prospects.
- ASEEM shall help in providing real-time data analytics to NSDC and its Sector Skill Councils about the demand and supply patterns including - industry requirements, skill gap analysis, demand per district/ state/cluster, key workforce suppliers, key consumers, migration patterns and multiple potential career prospects for candidates.
- ASEEM will be used as a match-making engine to map skilled workers with the jobs available.
- The portal and App will have provision for registration and data upload for workers across job roles, sectors and geographies.

- The skilled workforce can register their profiles on the app and can search for employment opportunities in their neighbourhood.
- Database of labour migrants in Indian states and overseas citizens, who returned to India under the Vande Bharat Mission and filled SWADES Skill Card, has been integrated with the ASEEM portal.
- Candidate data coming to Skill India Portal from various state and central skilling schemes will be integrated including PMKVY, Fee-based Programs, National Urban Livelihoods Mission, Deen Dayal Upadhyaya Grameen Kaushalya Yojana and Seekho aur Kamao .

PRAGYATA Guidelines on Digital Education

In news
Union Human Resource Development Minister released **PRAGYATA Guidelines** on Digital Education through online medium in New Delhi.

Pragyata Guidelines

- These guidelines on Digital/ Online Education provide a roadmap or pointers for carrying forward online education to enhance the quality of education.
- The guidelines will be relevant and useful for a diverse set of stakeholders including school heads, teachers, parents, teacher educators and students.
- The guidelines stress upon the use of alternative academic calendar of NCERT, for both, learners having access to digital devices and learners having limited or no access.
- **The PRAGYATA guidelines** include eight steps of online/ digital learning that is, **Plan- Review- Arrange- Guide- Yak(talk)- Assign- Track- Appreciate.**
- These steps guide the planning and implementation of digital education systematically with examples.

The guidelines
- Need assessment
- Concerns while planning online and digital education like duration, screen time, inclusiveness, balanced online and offline activities etc level wise
- Modalities of intervention including resource curation, level wise delivery etc.
- Physical, mental health and wellbeing during digital education
- Cyber safety and ethical practices including precautions and measures for maintaining cyber safety
- Collaboration and convergence with various initiatives.

Recommended screen time

Class	Recommendation
Pre Primary	On a given day for interacting with parents and guiding them, not more than 30 minutes.
Classes 1 to 12	Recommended to adopt/adapt the alternative academic calendar of NCERT
Classes 1 to 8	Online synchronous learning may be undertaken for not more than two sessions of 30-45 minutes each on the days the States/UTs decide to have online classes for primary sections
Classes 9 to 12	Online synchronous learning may be undertaken for not more than four sessions of 30-45 minutes each on the days as decided by States/UTs.

Guidelines for Parents
- The guideline helps to understand the need for physical, mental health and wellbeing along with the cyber safety measures for children at home.
- Guidelines for physical health and mental wellness is stressed across the guidelines for all stakeholders measures so that children do not get overly stretched or stressed, or get affected negatively (postural defects, ophthalmic issues, and other physical problems) owing to prolonged use of digital devices.

Consumer Protection Act, 2019

In news
The Consumer Protection Act, 2019 replaced the old Consumer Protection Act, 1986.

Aim
The basic aim of the Consumer Protection Act, 2019 to save the rights of the consumers by establishing authorities for timely and effective administration and settlement of consumers' disputes.

Key features of the Consumer Protection Act, 2019

- ***Establishment of the Central Consumer Protection Authority (CCPA)***
- The act has the provision of the Establishment of the CCPA which will protect, promote and enforce the rights of consumers.

- The CCPA will regulate cases related to unfair trade practices, misleading advertisements, and violation of consumer rights.
- The CCPA will have the right to impose a penalty on the violators and passing orders to recall goods or withdraw services, discontinuation of the unfair trade practices and reimbursement of the price paid by the consumers.

Rights of consumers
- To have information about the quantity, quality, purity, potency, price, and standard of goods or services.
- To be protected from hazardous goods and services.
- To be protected from unfair or restrictive trade practices.
- To have a variety of goods or services at competitive prices
- ***Prohibition and penalty for a misleading advertisement***
- The Central Consumer Protection Authority (CCPA) will have the power to impose fines on the endorser or manufacturer up to 2-year imprisonment for misleading or false advertisement (Like Laxmi Dhan Warsha Yantra).
- Worth to mention that repeated offense, may attract a fine of Rs 50 lakh and imprisonment of up to 5 years.

Consumer Disputes Redressal Commission
- The act has the provision of the establishment of the Consumer Disputes Redressal Commissions (CDRCs) at the national, state and district levels.

- Overcharging or deceptive charging
- Unfair or restrictive trade practices
- Sale of hazardous goods and services which may be hazardous to life.
- Sale of defective goods or services
- Jurisdiction under the Consumer Protection Act, 2019

National Recruitment Agency

In news
The Union Cabinet chaired by Prime Minister has decided to set up a **National Recruitment Agency (NRA).**The Union Cabinet has approved an amount of Rs 1517.57 crore for the NRA, for a period of 3 years.

Why is the NRA needed?
- As of now, aspirants have to take different exams that are conducted by various agencies for central government jobs.

- On an average 2.5 crore to 3 crore aspirants appear for about 1.25 lakh vacancies in the central government every year.
- As and when it will be set up, the NRA will conduct a common eligibility test (CET) and based on the CET score a candidate can apply for a vacancy with the respective agency.

Salient features
- The Common Eligibility Test will be held **twice a year**.
- There will be different CETs for graduate level, 12th Pass level and 10th pass level to facilitate recruitment to vacancies at various levels.
- The CET will be conducted in **12 major Indian languages**. This is a major change, as hitherto examinations for recruitment to Central Government jobs were held only in English and Hindi.
- To begin with CET will cover recruitments made by three agencies : viz. Staff Selection Commission, Railway Recruitment Board and the Institute of Banking Personnel Selection. This will be expanded in a phased manner.
- CET will be held in 1,000 centres across India in a to bid remove the currently prevalent urban bias. There will be an examination centre in every district of the country. There will be a special thrust on creating examination infrastructure in the 117 aspirational districts.
  - CET will be a first level test to shortlist candidates and the score will be **valid for three years.**
- There shall be no restriction on the number of attempts to be taken by a candidate to appear in the CET subject to the upper age limit. Age relaxation for SC/ST and OBC candidates as per existing rules will apply.

Will it lead to speedy recruitment?
- The government says that a single eligibility test would "**significantly reduce**" the recruitment cycle.
- Even some of the departments have indicated their intention to do away with any second-level test and go ahead with recruitment on the basis of CET scores, Physical Tests and Medical examination.

Central Government constitutes National Council for Transgender Persons

In news
The central government has constitutes a National Council for Transgender Persons under the chairmanship of Union Minister of Social Justice & Empowerment (ex-officio) and Union Minister of State for Social Justice & Empowerment will be Vice-Chairperson (ex-officio).A Member of National Council, other than ex officio member, shall hold office for a term of three years from the date of his nomination.

The National Council shall perform the following functions, namely:—
- To advise the Central Government on the formulation of policies, programmes, legislation and projects with respect to transgender persons;
- To monitor and evaluate the impact of policies and programmes designed for achieving equality and full participation of transgender persons;
- To review and coordinate the activities of all the departments of Government and other Governmental and non-Governmental Organisations which are dealing with matters relating to transgender persons;
- To redress the grievances of transgender persons; and
- To perform such other functions as may be prescribed by the Central Government.

Indore Cleanest City Fourth Time in A Row

In news
Fifth edition of the annual cleanliness urban survey conducted by the Ministry of Housing and Urban Affairs (MoHUA) declared results of swachh Survekshan.

About rankings
- Indore won the coveted title of the Cleanest City of India, Surat and Navi Mumbai won the second and third position respectively (in the > 1 lakh population category).
- Chhattisgarh won the prestigious title of the Cleanest State of India in the > 100 ULB category while Jharkhand was adjudged the Cleanest State of India in the <100 ULB category.

Key highlights of Swachh Survekshan 2020
- 1.87 crore citizen feedback received
- 1.7 crore citizens registered on Swachhata App
- Over 11 crore impressions on social media
- Over 5.5 lakh sanitary workers linked to social welfare schemes and over 84,000 informal waste pickers integrated into the mainstream
- Over 4 lakh contractual employees employed by Urban Local Bodies
- Over 21,000 Garbage Vulnerable Points identified and transformed

Comptroller and Auditor General of India (CAG)

In news

Girish Chandra Murmu has been appointed as the new Comptroller and Auditor General of India (CAG.) Earlier, he was the Lieutenant-Governor of Jammu & Kashmir Union Territory.

CAG

- The Comptroller and Auditor General (CAG) of India is the Constitutional Authority in India, established under Article 148 of the Constitution of India.
- He is empowered to Audit all receipts and expenditure of the Government of India and the State Governments, including those of autonomous bodies and corporations substantially financed by the Government.
- The CAG is also the statutory auditor of Government-owned corporations and conducts supplementary audit of government companies in which the Government has an equity share of at least 51 per cent or subsidiary companies of existing government companies.
- The reports of the CAG are laid before the Parliament/Legislatures and are being taken up for discussion by the Public Accounts Committees (PACs) and Committees on Public Undertakings (COPUs), which are special committees in the Parliament of India and the state legislatures.
- The CAG is also the head of the Indian Audit and Accounts Department, the affairs of which are managed by officers of Indian Audit and Accounts Service

Rashtriya Swachhata Kendra

In news

PM inaugurates Rashtriya Swachhata Kendra - an interactive experience centre on the Swachh Bharat Mission.

About Rashtriya swachhata Kendra

- The RSK has a balanced mix of digital and outdoor installations tracking India's transformation from having over 50 crore people defecating in the open in 2014 to becoming open defecation free in 2019.
- The RSK has a balanced mix of digital and outdoor installations tracking India's transformation from having over 50 crore people defecating in the open in 2014 to becoming open defecation free in 2019.
- It will introduce future generations to its successful journey as the world's largest behaviour change campaign.

- It will showcase the core elements of the mission and anecdotes on the journey of the country from Satyagraha to Swachchagrah.
- It will impart information, awareness and education on Swachhata (sanitation) and related aspects.

National Food Security Act 2013

In news

The Department of Food and Public Distribution under Ministry of Consumer Affairs, Food & Public Distribution has sent letters to States Governments/UTs to include all eligible disabled persons under the National Food Security Act 2013.

Act Highlights

- It is stated that those not already covered should be covered with fresh ration cards to be issued as per the eligibility criteria.
- It is also reiterated that disability is one of the criteria for inclusion of beneficiaries under AAY households and as disabled persons are vulnerable section of the society.
- The Section 10 of the National Food Security Act, 2013 provides for coverage of persons under the **Antyodaya Anna Yojana** in accordance with the guidelines applicable to the said scheme and the remaining households as priority households in accordance with such guidelines as the States Government may specify.
- The Atma Nirbhar Bharat Package of the Government of India is for the persons, who are not covered either under NFSA or any States Scheme PDS Cards.

Atal Rankings of Institutions on Innovation Achievements (ARIIA) 2020 (17 Aug 2020)

In news

The Vice-President of India to release results of Atal Ranking of Institutions on Innovation Achievements (ARIIA) 2020

ARIIA

- It is an initiative of Ministry of HRD, implemented by AICTE and Ministry's Innovation Cell, Government of India to systematically rank higher education institutions and universities in India on indicators related to Innovation, Startup and

Entrepreneurship Development amongst students and faculty.

- ARIIA 2020 will have six Prize categories which also includes special category for women only higher educational institutions to encourage women and bringing gender parity in the areas of innovation and entrepreneurship.

Other countries

- Centrally Funded Institutions
- State funded universities
- State funded autonomous institutions
- Private/Deemed Universities and
- Private Institutions

YuWaah Initiative

In news

Ministry of Youth Affairs & Sports and United Nations Children Fund (UNICEF) are set to establish YuWaah, Generation Unlimited (GenU), a global multi-stakeholder platform in India.

YuWaah Initiative

- Support young people by providing entrepreneurship classes (online and offline) with successful entrepreneurs and experts, towards establishing entrepreneurial mindset among young people.
- Upskilling of young people on 21st century skills, life skills, digital skills through online and offline channels and support them through self-learning, for their productive lives and the future of work.
- Create linkages with aspirational economic opportunities to connect young people with employment opportunities, including building pathways to connect them with jobs or self-employment. For this, innovative solutions and technology platforms will be engages to take maximize the scale and reach.
- Providing career guidance support to young people through career portal as well as through job-readiness and self-exploration sessions to make young people career-ready.

E-Gram Swaraj Portal (20 Sep 2020)

In news

With a vision to strengthen digitalization in Panchayats for the purpose of empowering rural India, a unified tool **e-GramSWARAJ portal** (https://egramswaraj.gov.in/) has been developed by the Ministry of Panchayati Raj for

effective monitoring and evaluation of works taken up in the Gram Panchayats.

Features of the portal

- **eGramSwaraj** aims to bring in better transparency in the decentralised planning, progress reporting and work-based accounting.
- **e-Gram SWARAJ** unifies the planning, accounting and monitoring functions of Gram Panchayats.
- It's combination with the Area Profiler application, Local Government Directory (LGD) and the Public Financial Management System (PFMS) renders easier reporting and tracking of Gram Panchayat's activities.
- It provides a single window for capturing Panchayat information with the complete Profile of the Panchayat, details of Panchayat finances, asset details, activities taken up through Gram Panchayat Development Plan (GPDP), Panchayat information from other Ministries/ Departments such as Census 2011, SECC data, Mission Antyodaya survey report etc.

iRAD App (12 Sep 2020)

In news

Road Transport and Highways Ministry is in the process of implementing Integrated Road Accident Database Project (iRAD) which will be applicable across the country

About the app

- The Integrated Road Accident Database (iRAD) Project is an initiative of the Ministry of Road Transport and Highways (MoRTH), Government of India and is funded by World Bank.
- The project would generate various types of insights by analyzing the collected road accident data across the country through implementation of data analytics technique.
- The proposed system would represent the analysis output through Monitoring & Reporting Dashboard & Analytics Dashboard for easy understanding and accordingly forecasting & Decision Making by Apex Authorities for formulation of new policies & strategies.
- The outcome of the project would be enhanced road safety i.e. 'Safe Road for All' in India.

Objective

To improve road safety in the country.

The main objective of the project is development of Integrated Road Accident Database (iRAD), to enrich the accident databases from every parts of the country.

Data Governance Quality Index

In news
Department of Fertilizers ranked 2nd amongst the 16 Economic Ministries / Departments and ranked 3rd amongst the 65 Ministries / Departments in the Survey Report on Data Governance Quality Index

DGQI
- A Survey conducted by Development Monitoring and Evaluation Office (DMEO), Niti Ayog to assess different Ministries /Departments' performance on the implementation of Central Sector Schemes (CS) and Centrally Sponsored Schemes (CSS).
- Self-assessment based review of data preparedness levels across Ministries / Departments to produce a DGQI score card.

Objective

Assessing data preparedness of Ministries / Departments on a standardized framework to drive healthy competition among them and promote cooperative peer learning from best practices.

Theme
Data Generation; Data Quality; Use of Technology; Data Analysis, Use and Dissemination; Data Security and HR Capacity and Case Studies.

Thalassemia Bal Sewa Yojna

In news
Union Minister for Health and Family Welfare launched the second phase of "Thalassemia Bal Sewa Yojna" for the underprivileged Thalassemic patients.

Thalassemia Bal Sewa Yojna
Launched in 2017, this scheme is a Coal India CSR funded **Hematopoietic Stem Cell Transplantation (HSCT) program**
It aims to provide a one-time cure opportunity for **Haemoglobinopathies** like Thalassaemia and Sickle Cell Disease for patients who have a matched family donor.

Thalassemia
- Thalassemia is an inherited (i.e., passed from parents to children through genes) blood disorder caused when the body doesn't make enough of a protein called hemoglobin, an important part of red blood cells.
- When there isn't enough hemoglobin, the body's red blood cells don't function properly and they last shorter periods of time, so there are fewer

healthy red blood cells traveling in the bloodstream.

Ambedkar Social Innovation & Incubation Mission (ASIIM)

In news

Ministry of Social Justice and Empowerment has launched the Ambedkar Social Innovation and Incubation Mission (ASIIM) under Venture Capital Fund for SCs with a view to promoting innovation and enterprise among SC students studying in higher educational institutions.

Objectives
- To promote entrepreneurship among the SC Youth with special preference to Divyangs;
- To support (1,000) innovative ideas till 2024 through a synergetic work with the Technology Business Incubators (TBIs) set up by Department of Science and Technology;
- To support, promote, hand-hold the start-up ideas till they reach commercial stage by providing liberal equity support; and
- To incentivise students with innovative mind-set to take to entrepreneurship with confidence.

Benefits
- Under the "Ambedkar Social Innovation Incubation Mission (ASIIM)" initiative, 1,000 SC youth would be identified in the next 4 years with start-up ideas through the Technology Business Incubators (TBIs) in various higher educational institutions.
- They will be funded @ Rs. 30 lakhs in 3 years as equity funding so that they can translate their start-up ideas into commercial ventures.
- Successful ventures would further qualify for venture funding of up to Rs. 5 Crore from the Venture Capital Fund for SCs.

Unlawful Activities (Prevention) Act, 1967
Why in news?
Eighteen more individuals declared as terrorists under the Unlawful Activities (Prevention) Act, 1967

About the act
- This bill empowers to central agencies and states to deal with terrorist activities strictly. This article to know full details of the UAPA, 1967.
- The Unlawful Activities (Prevention) Act, 1967 enables more effective prevention of certain unlawful activities of individuals and associations

and for dealing with terrorist activities, and other related matters.

- It is applicable across the entire country
- Any Indian or foreign national charged under UAPA is liable for punishment under this Act, irrespective of the location of crime/offense committed
- UAPA will be applicable to the offenders in the same manner, even if the crime is committed on foreign land, outside India

National Pharmacy Week 2020

In news

The National pharmacy week is celebrated every year during the 3rd week of November.

Theme
"Pharmacist: Frontline Health Professionals"

Objective

To acknowledge and thank all the pharmacists and pharmacy sectors who are working tirelessly during the time of great uncertainty and challenges in addition to the regular responsibilities of taking care of patients with minor illnesses or chronic diseases and making available the drugs with continuous supply chain management.

Details

- The event is online and there will be no fees for the same.
- The competition is open for pharmacy students only.
- The first three winners will be awarded by appreciation certificates & trophies while separate participation certificate will be provided to all for each activity.
- This year it is celebrated to describe the role of pharmacist, pharmacy profession and to spread the awareness amongst public M. M. College of pharmacy in collaboration with pharmaceutical society is celebrating.
- IPADSB Student's Forum has also lined up a number of online competitions to mark the NPW celebrations.

UMANG's international version launched

In news

In coordination with Ministry of External Affairs, UMANG's international version was launched by Shri Ravi Shankar Prasad during the conference for selected countries

Countries

USA, UK, Canada, Australia, UAE, Netherlands, Singapore, Australia and New Zealand.
The international version of the UMANG App can be downloaded by going to the Play Store of specific countries.

Significance

- It will help Indian international students, NRIs and Indian tourists abroad, to avail Government of India services, anytime.
- It will also help in taking India to the world through 'Indian Culture' services available on UMANG and create interest amongst foreign tourists to visit India.
- Cultural portfolio available on UMANG will be extremely useful for Indians abroad to pass on information on Indian culture and heritage to the next generation.

About UMANG

- The **UMANG mobile app (Unified Mobile Application for New-age Governance)** is a Government of India all-in-one single, unified, secure, multi-channel, multi-lingual, multi-service mobile app. providing access to high impact services of various Government of India Departments and State Governments.
- UMANG has now grown to provide 2039 services (373 Central departments, 487 departments of 27 States and 1,179 services for utility bill payments)

Key Services

UMANG provides easy access to a plethora of Indian government services ranging from – Healthcare, Finance, Education, Housing, Energy, Agriculture, Transport to even Utility and Employment and Skills.

Abhayam app for safety of women passengers

In news

The AP state government has launched Abhayam project, a one-of-its-kind initiative aimed at ensuring safety of women and children while travelling in public transport, particularly autorickshaws.

Project Aim

To bring one lakh autos under the Abhayam initiative, where 5,000 vehicles will be equipped with tracking and IoT devices by February 1, 50,000 vehicles by July 1.

Highlights

- The Abhayam device would be fitted in autorickshaws and cabs.and the app will provide emergency help to those in distress.

- This is the first Internet of Things (IoT) based women safety project.

How the app works?
- Those travelling by autos will need to install the Abhayam mobile application on their mobile.
- The QR code affixed to the vehicle must be scanned before boarding the vehicle.
- With this, the driver's photo and vehicle details will be shown.
- If women using a smartphone encounter difficulty in their journey, they can send the vehicle number to the police from the app and the whereabouts of the vehicle can be tracked through GPS.
- Passengers who do not have a smartphone can press the panic button on the IoT device attached to the vehicle and the information is sent to the Command Control Centre.

33rd PRAGATI interaction

In news
Prime Minister Shri Narendra Modi chaired the PRAGATI meeting. It marked Prime Minister's thirty-third interaction through PRAGATI - the ICT based multi-modal platform for Pro-Active Governance and Timely Implementation, involving Central and State governments.

Projects discussed
- The projects taken up were of the Ministry of Railways, MORTH, DPIIT and Power Ministry.
- Grievances related to COVID-19 and to the PM Awas Yojana (Gramin) were taken up.
- PM SVANidhi, agriculture reforms and development of districts as export hubs were reviewed.

Previous Report
In the previous 32 such meetings, a total of 275 projects worth Rs 12.5 lakh crore have been reviewed, along with 47 programmes/schemes and grievances across 17 sectors have been taken up.

About PRAGATI
Aim
Starting a culture of Pro-Active Governance and Timely Implementation. It is also a robust system for bringing e-transparency and e-accountability with real-time presence and exchange among the key stakeholders.

Details
- PRAGATI (Pro-Active Governance And Timely Implementation)
- The platform was launched on March 25, 2015.
- It is a multi-purpose and multi-modal platform that is aimed at addressing common man's grievances, and simultaneously monitoring and reviewing important programmes and projects of the

Government of India as well as projects flagged by State Governments.
- It is a three-tier system (PMO, Union Government Secretaries, and Chief Secretaries of the States)

India Climate Change Knowledge Portal

In news
Ministry of Environment, Forest and Climate Change, Shri Prakash Javadekartoday launchedthe "India Climate Change Knowledge Portal

Highlights
- The portal will be a *"single point Information resource"* which provides information on the different climate initiatives taken by various Line Ministries enabling users to access updated status on these initiatives.
- India has practically achieved its Pre-2020 Climate Action targets
- The portal captures sector-wise adaptation and mitigation actions that are being taken by the various line Ministries in one place
- It will updated information on their implementation.
- The knowledge portal will help in disseminating knowledge among citizens about all the major steps Government is taking at both national and international levels to address climate change issues.

Major components included in the knowledge portal
- India's Climate Profile
- National Policy Framework
- India's NDC goals
- Adaptation Actions
- Mitigation Actions
- Bilateral and Multilateral Cooperation
- International Climate Negotiations
- Reports & Publications

ASCI guidelines on online gaming and fantasy sports

In news
The Ministry of Information and Broadcasting has issued an advisory asking all private television broadcasters to follow guidelines issued by the Advertising Standards Council of India (ASCI) for advertisements relating to online gaming, fantasy sports etc.

Reason behind the concern

- It has come to the notice of Ministry of I&B that a large number of advertisements on Online Gaming,

Fantasy Sports, etc have been appearing on the television.

- Concerns were expressed that such advertisements appear to be misleading, do not correctly convey to the customers the financial and other risks associated thereof, are not in strict conformity with the Advertising Code laid down under Cable Television Networks (Regulation) Act, 1995 and the Consumer Protection Act, 2019.

Guidelines

- Every such gaming advertisement must carry the following disclaimer: 'This game involves an element of financial risk and may be addictive. Please play responsibly and at your own risk".
- Such a disclaimer should occupy at least 20% of the advertisement space.
- The guidelines also state that gaming advertisements cannot depict users under the age of 18 years as engaged in playing a game of "online gaming for real money winnings" or suggest that such users can play these games.
- The advertisements should neither suggest that online gaming presents an income generating opportunity as an alternative to employment nor depict a person playing such games is more successful than others.

The Advertising Standards Council of India

- It was established in 1985, is a Mumbai based self-regulatory voluntary organization of the advertising industry in India.
- It seeks to ensure that advertisements conform to its Code for Self-Regulation.
- Under the Cable Television Networks (Regulation) Act, 1995 it is mandatory for television networks to follow the advertising code laid down by ASCI.

e-Courts Project

In news

2927 Court complexes across India have been connected so far by a high-speed Wide Area Network (WAN) under e-Courts Project

E-Courts Project

- The E-Courts Project was conceptualised on the basis of **"National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian**

Judiciary - 2005" submitted by e-Committee of the Hon'ble Supreme Court of India

- The e-Courts National portal (ecourts.gov.in) was launched by Hon'ble the Chief Justice of India on 7th August 2013.
- This provides Case Status, daily Cause-list, Cases Filed and Cases Registered through the Case information System (CIS) Software.
- The e-Courts National portal also provides training material for judicial officers and staff, links to District Court websites and statistical reports that can be used as a judicial management information system.
- This portal is expected to play a key role in bringing about judicial reforms.

The main objectives of the e-Court Project are as follows:

- To provide efficient & time-bound citizen-centric service delivery.
- To develop, install & implement decision support systems in courts.
- To automate the processes to provide transparency of Information access to its stakeholders.
- To enhance judicial productivity both qualitatively & quantitatively, to make the justice delivery system affordable, accessible, cost-effective & transparent.

Madras High Court gets 10 additional judges

In news

The President of India, in exercise of the power conferred by clause (I) of Article 224 of the Constitution of India, appointed 10 Additional Judges of the Madras High Court.

Article 224 in The Constitution Of India

Appointment of additional and acting Judges

- If by reason of any temporary increase in the business of High Court or by reason of arrears of work therein, it appears to the President that the number of the Judges of that Court should be for the time being increased, the President may appoint duly qualified persons to be additional Judges of the Court for such period not exceeding two years as he may specific
- When any Judge of a High Court other than the Chief Justice is by reason of absence or for any other reason unable to perform the duties of his office or is appointed to act temporarily as Chief Justice, the President may appoint a duly qualified person to act as a Judge of that Court until the permanent Judge has resumed his duties

- No person appointed as an additional or acting Judge of a High Court shall hold office after attaining the age of sixty two years.

An additional judge is usually elevated as a permanent **Judge** after two years based on performance.

Electricity (Rights of Consumers) Rules, 2020

In news

Union Government for the first time lays down Rights to the Electricity Consumers through "Electricity (Rights of Consumers) Rules, 2020

Highlights

- Consumers to have the option to apply for new electricity connection and pay bills online Consumers to get electricity connection in prescribed timeline which is 7 days in Metro cities, 15 days in other cities and 30 days in rural areas.
- Rules to benefit about 30 crores existing and prospective consumers in the country These rules are important step towards furthering the ease of doing business across country.
- These rules shall empower the consumers of electricity .
- States and DISCOMs are being advised to provide wide publicity to these highly consumer friendly Rules of the Government.

Key areas are covered in the Electricity (Rights of consumers) Rules

- Rights of consumers and Obligations of Distribution licensees
- Release of new connection and modification in existing connection
- Metering arrangement
- Billing and Payment
- Disconnection and Reconnection
- Reliability of supply
- Consumer as Prosumer
- Standards of Performance of licensee
- Compensation Mechanism
  - Call Centre for Consumer Services
  - Grievance redressal mechanism

Triple talaq law

Context

The bench was hearing an appeal filed against a Kerala High Court order, which had declined to grant anticipatory bail to the woman.

In news

The offence under the triple talaq law can only be committed by a Muslim man, and his mother cannot be accused of it, the Supreme Court has ruled.

- The Supreme Court has said there is no bar on granting anticipatory bail for an offence committed under the Muslim Women (Protection of Rights on Marriage) Act 2019, which makes the practice of instant divorce through "triple talaq" among Muslims a punishable offence, provided the court hears the complainant woman before granting pre-arrest bail.
- The judgment said that even legislation, such as the SC and ST Act, where a bar is interposed on the application of Section 438 of the CrPC (anticipatory bail), "this court has held that the bar will not apply where the complaint does not make out 'a prima facie case' for the applicability of the provisions of the Act".

Issue

The Supreme Court has observed that relatives of a 'husband' cannot be accused of an offence under Muslim Women (Protection of Rights on Marriage) Act.

What is Triple Talaq ?
- Talaq is an Islamic word for divorce, denoting dissolution of marriage when a Muslim man can severe all marital ties with his wife.
- Under the Muslim law, Triple Talaq means liberty from the relationship of marriage, eventually or immediately, where the man, by simply uttering the word *'talaq'* three times, ends his marriage.
- This instant divorce is called Triple Talaq, also known as *'talaq-e-biddat'.*
- The Muslim Personal Law (Shariat) Application Act of 1937 had legalised and allowed the practice of Triple Talaq which gave a Muslim husband special privileges over his wife.

What is the Triple Talaq law?
- Triple Talaq, also known as Muslim Women (Protection of Rights on Marriage) Bill, 2019, was passed by the Indian Parliament as a law on July 30, 2019, to make instant Triple Talaq a criminal offence.
- The Rajya Sabha passed the Bill, with 99 votes in its favour and 84 against it. The Triple Talaq law makes the instant triple talaq a criminal offence and provides for a jail term of three years for a Muslim man who commits the crime.
- The law also makes Triple Talaq a cognisable and non-bailable offence. Introduced in the Lok Sabha by Minister of Law and Justice Ravi Shankar Prasad

on June 21, 2019, the Bill replaced an Ordinance promulgated on February 21, 2019.

- As the Bill was pending for consideration in the Rajya Sabha and the practice of Triple Talaq divorce system was continuing, there was an urgent need to take immediate action to prevent such a practice by making strict provisions in law.

Prarambh: Startup India International Summit

In news
The two day 'Prarambh', Startup India International Summit begin in New Delhi

Prarambh

- As a noun, **'Prarambh'** means 'an auspicious beginning'. As a verb, it implies 'to start'.
- Prarambh is expected to bring together top policy makers, industry, academia, investors, startups and all stakeholders from across the globe.
- In addition to deliberating on good practices from best of the ecosystems across the world, the sessions of the Summit are designed to showcase the spread and depth of entrepreneurship based on innovation in India.
- The idea is to attain attention of global capital for startups in India, mobilize domestic capital, provide opportunities for accessing international markets to our startups and evolve enabling policy provisions.

Objectives

- Encouraging and inspiring the youth for innovation and entrepreneurship
- Exchange knowledge on best practices on nurturing startup ecosystems
- Develop capacities of entrepreneurial ecosystem
- Mobilize global and domestic capital for investments into startups
- Provide opportunities to startups for entering domestic (private and public) and international markets
- Showcasing high-quality, high technology and frugal innovations from India
- Enable ease of doing business for startups and investors.

Chintan Baithak

In news
Chintan Baithak' to be held at Dhordo, Kutch,Gujarat from 21st to 23rd January,2021

Highlights

- Chintan Baithak is a important initiative for finalising a roadmap of India's Maritime sector for the next decade.
- The Chintan Baithak includes sessions on exploring new vistas of urban transportation, effective implementation of SAROD-Ports, issues related to International Arbitrations etc.
- The future action plan for development of satellite ports by all major ports will be deliberated.
- Chintan Baithak is to evolve out of the box ideas for improving the performance and efficiency of our Major Ports, setting up of world-class infrastructure facilities at ports by adopting global benchmarks for reducing logistics costs, enhancing connectivity and Ease Of Doing Business are our focus areas.
- All the ideas emerged out of the extensive discussions during this Chintan Baithak are going to be dovetailed in the Maritime Vision 2030
- The vision is to fulfil Prime Minister Shri Narendra Modi's vision of ' Atmanirbhar Bharat' with his key mantra of **'Reform, Perform & Transform'**

MEITY's Rapid Assessment System

In news
Under the Covid Vaccination drive, the Government of India is using 'Rapid Assessment System (RAS)', a platform developed by Ministry of Electronics & IT (MeitY) for taking feedback from those who get vaccinated.

Aim
RAS platform is aimed at improving the vaccination experience for citizens, while ensuring that all norms are being followed during the vaccination process at all vaccination centres.

Feedback
This feedback system will help the Government to make the vaccination process more citizen-friendly. RAS platform has already sent out around 6.2 lakh SMSes to all those who have been vaccinated in a short span of 4 days. ***The following process has been put in place to collect feedback on vaccination experience.***

- Registered mobile numbers and names of those vaccinated on a day are sent to RAS system by Co-WIN platform at midnight.
- RAS system prepares a unique URL for feedback questions and sends personalized SMSs to all beneficiary of that day.
- SMS contains the name of the person, dose (first/ second), and a unique URL. The sender ID used for SMS is ***"GOVRAS".***

Rapid Assessment System (RAS)

- National e-Governance Division, Ministry of Electronics & IT, developed Rapid Assessment System (RAS) for online instant feedback for e-services (online as well as offline through counters) delivered by the Government of India and State Governments.
- The **main objective of RAS** is to continuously assess the quality of eServices, through feedback, under each e-Governance project and realign processes to achieve targeted benefits.
- RAS interface prompts the citizens to provide feedback about the quality of service immediately after the citizen avails an eService of the Government.
- The analytic features of RAS help integrated departments in system improvement and better delivery of services.

Shramshakti

In news

Ministry of Tribal Affairs Virtually Launches **"Shramshakti"** Digital Data Solution for Migrant Workers

Highlights

- A National Migration Support Portal at a programme held at Panjim, Goa.
- It would effectively help in the smooth formulation of state and national level programs for migrant workers.
- He also launched a tribal migration cell, a tribal museum at Goa and **"ShramSaathi",** a training manual for migrant workers.
- The Chief Minister of Goa Pramod Sawant also launched dedicated Migration cell in Goa to facilitate and support migrants who come from different States to Goa.

Challenge

- Lack of real time data of migrants was the biggest challenge for state and national governments in formulating effective strategies and policy decisions for welfare of migrant workers at both source and destination states
- The migration of tribal population is distress-driven and the migrants are exposed to difficult and unsafe conditions.

Significance

- It would help the government for linking the migrant population with existing Welfare Scheme-under Atam Nirbhar Bharat.

- The various data that will be recorded via Shram Shakti include demographic profile, livelihood options, skill mapping and migration pattern.
- After training via this module, tribal migrant workers will be able to demand and access services, rights and entitlements related to livelihood and social security at their village before migration, as well after migration at destination towns and cities.

State Reforms Action Plan Rankings

In news

The Department for Promotion of Industry and Internal Trade (DPIIT) has released the rankings of States and Union Territories (UTs) under State Reform Action Plan (SRAP), 2019 on 05.09.2020.

SRAP

- The Action Plan included 187 reform points covering 12 business regulatory areas, viz., Access to Information & Transparency Enablers, Labour Regulation-Enablers, Construction Permit Enablers, Single Window System, Sector Specific, Inspection Enablers, Paying Taxes, Environment Registration Enablers, Obtaining Utility Permits, Land Administration/Transfer of Property, Contract Enforcement and Land Availability and Allotment.
- It is the annual ease of doing business index of states and UTs of India based on the completion percentage scores of action items points of annual Business Reforms Action Plan (BRAP) under the Make in India initiative.
- This ranking is based on the implementation of the business reform action plan.
- Some of the key focus areas are access to information and technology, the setting up of a single-window system, construction permit enablers and land administration, according to DPIIT.
- It based on the progress of states in completing annual reform action plan covering 8 key areas.

The top ten states under the State Reform Action Plan

- Andhra Pradesh
- Uttar Pradesh
- Telangana
- Madhya Pradesh
- Jharkhand
- Chhattisgarh
- Himachal Pradesh
- Rajasthan
- West Bengal
- Gujarat

National Urban Digital Mission

National Urban Digital Mission (NUDM) & Several Digital Initiatives Launched For Transforming Urban Governance.

National Urban Digital Mission (NUDM)

- NUDM is citizen-centric, ecosystem-driven, and principles-based in both design and implementation.
- NUDM has articulated a set of governing principles, and inherits the technology design principles of the National Urban Innovation Stack (NUIS), whose strategy and approach was released by MoHUA in February, 2019.
- The principles in turn give rise to standards, specifications, and certifications, across the three pillars of people, process, and platforms.

Significance

- It will create the ideal space to harness immense synergies from the domain of urban and technology towards creating a citizen-centric governance that reflects Prime Minister Shri Narendra Modi's vision of 'minimum government and maximum governance'.
- The National Urban Digital Mission (NUDM) will create a shared digital infrastructure for urban India, working across the three pillars of people, process, and platform to provide holistic support to cities and towns. It will institutionalise a citizen-centric and ecosystem-driven approach to urban governance and service delivery in 2022 cities by 2022, and across all cities and towns in India by 2024
- NUDM will create a shared digital infrastructure that can consolidate and cross-leverage the various digital initiatives of the Ministry of Housing and Urban Affairs, enabling cities and towns across India to benefit from holistic and diverse forms of support, in keeping with their needs and local challenges.

Intermediary Guidelines and Digital Media Ethics Code Rules 2021

In news
Government notifies Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021

Highlights
- Social media platforms welcome to do business in India but they need to follow the Constitution and laws of India Social media platform can certainly be used for asking questions and criticise.
- Social media platforms have empowered ordinary users but they need accountability against its misuse and abuse.
- The new Rules empower ordinary users of social media, embodying a mechanism for redressal and timely resolution of their grievance.
- Rules about digital media and OTT focuses more on in house and self-regulation mechanism whereby a robust grievance redressal mechanism has been provided while upholding journalistic and creative freedom.

Background

- The Digital India programme has now become a movement which is empowering common Indians with the power of technology.
- The extensive spread of mobile phones, Internet etc. has also enabled many social media platforms to expand their footprints in India.
- Common people are also using these platforms in a very significant way. Some portals, which publish analysis about social media platforms.
- These social platforms have enabled common Indians to show their creativity, ask questions, be informed and freely share their views, including criticism of the Government and its functionaries.

Issue

- Proliferation of social media,on one hand empowers the citizens then on the other hand gives rise to some serious concerns and consequences which have grown manifold in recent years.
- These concerns have been raised from time to time in various forums including in the Parliament and its committees, judicial orders and in civil society deliberations in different parts of country.
- Such concerns are also raised all over the world and it is becoming an international issue.

SCHEMES AND POLICIES

Purvodaya Scheme

In news
Union Minister of Steel, Petroleum and Natural Gas has launched Purvodaya Mission for the development of eastern India through an integrated steel hub in Kolkata, West Bengal.

- At accelerated development of eastern India through the establishment of an integrated steel hub.
- To transform logistics and utility infrastructure which would change the socio-economic landscape in eastern India.

Focus

Eastern states of India (Odisha, Jharkhand, Chhattisgarh, West Bengal) and the northern part of Andhra Pradesh which collectively holds 80% of the country's iron ore, ~100% of coking coal and a significant portion of chromite, bauxite and dolomite reserves.

Objective of this hub
- To enable swift capacity addition and improve the overall competitiveness of steel producers both in terms of cost and quality.
- The Integrated Steel Hub would focus on capacity addition through easing the setup of Greenfield steel plants.
- Development of steel clusters near integrated steel plants as well as demand centres.

Why Eastern India?
- This Eastern belt has the potential to add more than 75% of the country's incremental steel capacity envisioned by the National Steel Policy.
- Eastern India is a land of infinite opportunities, despite being endowed with natural resources, this region has lagged behind in socio-economic development as compared to some other parts of the country. With Mission Purvodaya in the steel sector, there will be development in eastern India.

National Stock Exchange (NSE) Knowledge Hub

In news
Commerce and Industry & Railways Minister inaugurated the National Stock Exchange (NSE) Knowledge Hub in New Delhi, an Artificial Intelligence (AI) powered learning ecosystem that will assist the banking, financial services, and insurance (BFSI) sector.

Highlights
- The 'NSE Knowledge Hub' is an Artificial Intelligence (AI) powered learning ecosystem.
- The platform has been developed by NSE Academy, a wholly owned subsidiary of the National Stock Exchange (NSE).
- This platform seeks to assist the banking, financial, securities and insurance (BFSI) sector in enhancing skills for their employees.
- It also aims to help the academic institutions in preparing future-ready talent skilled for the financial services industry.

- The platform will also be available on mobile and will attempt to bring together excellent content and learners through this state- of-the-art and future-ready platform.

Swachh Bharat Mission (Grameen) Phase-II

In news
The Union Minister for Jal Shakti launched Phase II of Swachh Bharat Mission (Grameen) [SBM (G)].

SBM(G)
- Phase – II of the SBM(G) will focus on sustaining the gains made under the programme in last five years in terms of toilet access and usage, ensuring that no one is left behind.
- It will ensure that effective solid and liquid waste management (SLWM) is instituted in every Gram Panchayat of the country.
- The SBM-G Phase II will continue to generate employment and provide impetus to the rural economy through construction of household toilets and community toilets, as well as infrastructure for SLWM such as compost pits, soak pits, waste stabilisation ponds, material recovery facilities etc.

A study done by the UNICEF and Bill and Melinda Gates Foundation (BMGF) on the impact of the SBM(G)
- Surveyed 6,993 women across the 5 states of Bihar, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh, in February, 2020, and indicated that the increased access to household toilets has led to the improvement in the Suvidha, Suraksha and Swabhimaan of women in rural India.
- 93% women feel safer from assault by not going out in the open to defecate
- 91% women save up to one hour of their day, earlier spent on walking to defecation sites
- 88% of women are proud to own a toilet

"Tech ForTribals"

In news
A game changing and unique project aimed to transform 5 crore Tribal Entrepreneurs under the name "Tech for Tribal" has been launched by TRIFED.
Tech for Tribal
- Launched by TRIFED and IIT-Kanpur along with IIT-Roorkee, IIM Indore, Kalinga Institute of Social Science, Bhubaneshwar and SRIJAN, Jaipurin the first phase of organising tribal entrepreneurship and skill development program.
- It is an initiative of TRIFED supported by **Ministry of MSME**, aims at capacity building and imparting entrepreneurship skills to tribal forest produce

gatherers enrolled under the Pradhan MantriVanDhanYojana(PMVDY).
- The trainees will undergo a 30 days program over six weeks comprising 120 sessions.
- The Tech for tribals capacity building program will ensure higher success rate of the Tribal Entrepreneurs by enabling and empowering them to run their business with marketable products with quality certifications.

Scheme for formalisation of Micro Food Processing Enterprises (FME)

In news
The Union Cabinet, chaired by the Prime Minister, has given its approval to a new Centrally Sponsored Scheme - "**Scheme for Formalisation of Micro food processing Enterprises (FME)"** for the Unorganized Sector on All India basis with an outlay of Rs.10,000 crore. GOI and the States in ratio of 60:40 will share the expenditure.

Objectives
- Increase in access to finance by micro food processing units.
- Increase in revenues of target enterprises.
- Enhanced compliance with food quality and safety standards.
- Strengthening capacities of support systems.
- Transition from the unorganized sector to the formal sector.
- Special focus on women entrepreneurs and Aspirational districts.
- Encourage Waste to Wealth activities.
- Focus on minor forest produce in Tribal Districts.

Salient features
- Centrally Sponsored Scheme. Expenditure to be shared by Government of India and States at 60:40.
- 2,00,000 micro-enterprises are to be assisted with credit linked subsidy.
- Scheme will be implemented over a 5 year period from 2020-21 to 2024-25.
- Cluster approach.
- Focus on perishables.

Support to Individual micro units
- Micro enterprises will get credit linked subsidy @ 35% of the eligible project cost with ceiling of Rs.10 lakh.
- Beneficiary contribution will be minimum 10% and balance from loan.
- On-site skill training & Handholding for DPR and technical upgradation.

Impact and employment generation
- Nearly eight lakh micro- enterprises will benefit through access to information, better exposure and formalization.
- Credit linked subsidy support and hand-holding will be extended to 2,00,000 micro enterprises for expansion and upgradation.
- It will enable them to formalize, grow and become competitive.
- The project is likely to generate nine lakh skilled and semi-skilled jobs.
- Scheme envisages increased access to credit by existing micro food processing entrepreneurs, women entrepreneurs and entrepreneurs in the Aspirational Districts.
- Better integration with organized markets.
- Increased access to common services like sorting, grading, processing, packaging, storage etc.

Coir Geo textiles

In news
Coir Geo textiles gets nod for Rural Road Construction

Details
- Coir Geo textiles, a permeable fabric, natural, strong, highly durable, resistant to rots, moulds and moisture, free from any microbial attack, has finally been accepted as a good material for rural road construction.
- Coir Geo textiles will be used for construction of rural roads under the PMGSY-III says a communication from the National Rural Infrastructure Development Agency under Union Ministry of Rural Development, Govt. of India.
- As per the PMGSY new technology guidelines for road construction, 15% length in each batch of proposals, is to be constructed using new technologies.
- Out of this 5% roads are to be constructed using IRC accredited technology. The IRC has now accredited coir Geo textiles for construction of rural roads.
- As per these instructions, 5% length of the rural roads under PMGSY-III will be constructed using Coir Geo textiles. Accordingly 164 Kms of road will be constructed using coir geo textiles in Andhra Pradesh, 151 kms in Gujarat, 71 kms in Kerala , 328 kms in Maharashtra,470 kms in Odisha, 369 kms TN and 121 kms in Telengana.

What are Geotextiles?
They are permeable fabrics which, when used in association with soil, have the ability to separate, filter, reinforce, protect, or drain. These are typically made from polypropylene or polyester

Pradhan Mantri Vaya Vandan Yojana

In news
Pradhan Mantri Vaya Vandana Yojana (PMVVY) is now available to senior citizens in its new avatar.

PMVVY – New rules
- The biggest change in the new modified version is the reduced pension rates.
- The Modified PMVVY will carry lesser interest rate on the investment than before. Unlike in the older version of PMVVY, in the Modified PMVVY, the interest rate will keep varying depending on the financial year (FY) in which the investment is made.
- The scheme is for 10 years and on investments made in the FY 20-21 till March 31, 2021, the government has declared the interest rate of 7.4 per cent payable monthly i.e. 7.66 per cent per annum for the entire duration of ten years.

PMVVY Features
- PMVVY is exclusively available to those who are 60 years of age and above.
- The PMVVY is a pension scheme for senior citizens that comes with guaranteed returns on monthly, quarterly, half-yearly or on an annual basis for a period of 10 years.
- As an investor, you can decide on the basis of the pension amount that you want or the purchase price that you want to invest in PMVVY.

Sahakar Mitra Scheme

In news

Union Minister for Agriculture & Farmers' Welfare launches **Sahakar Mitra: Scheme on Internship Programme**, an initiative **by National Cooperative Development Corporation.**

Sahakar Mitra
- The new scheme called **Sahakar Mitra**: Scheme on Internship Programme (SIP) will provide the young professionals an opportunity of practical exposure and learning from the working of NCDC and cooperatives as a paid intern.
- NCDC has also introduced a complementary scheme to promote start-up cooperative ventures.
- **Sahakar Mitra** would also provide an opportunity to professionals from academic institutions to develop leadership and entrepreneurial roles through **cooperatives as Farmers Producers Organizations (FPO).**
- **Sahakar Mitra scheme** is expected to assist cooperative institutions access new and innovative ideas of young professionals.

- While the interns gain experience of working in the field giving confidence to be self-reliant.
- It is expected to be a win-win situation both for cooperatives as well as for the young professionals.

Eligibility for the scheme
- Under the scheme, professional graduates in disciplines such as Agriculture and allied areas,IT etc. will be eligible for internship.
- Professionals who are pursuing or have completed their MBA degrees in Agri-business, Cooperation, Finance, International Trade, Forestry, Rural Development, Project Managementetc. will also be eligible.
- NCDC has earmarked funds for **Sahakar Mitra paid internship** program under which each intern will get financial support over a 4 months internship period.
- Online application portal for internship application available on NCDC website, was also launched by the Union Agriculture & Farmers' Welfare Minister.

Assistance to Disabled persons for purchasing/fitting of aids/appliances (ADIP) scheme

In news
Amidst the prevailing unprecedented situation faced by the society due to Pandemic COVID-19, special measures have been taken by Government of India so that the benefit of welfare scheme for Persons with Disabilities (Divyangjan) continue uninterrupted.

Objectives
The main objective of the Scheme is to assist the needy disabled persons in procuring durable, sophisticated and scientifically manufactured, modern, standard aids and appliances that can promote their physical, social and psychological rehabilitation, by reducing the effects of disabilities and enhance their economic potential.

Eligibility of the Beneficiaries

- He/she should be an Indian citizen of any age.
- Should be certified by a Registered Medical Practitioner that he/she is disabled and fit to use prescribed aid/appliance. Holds a 40% Disablement Certificate.
- Person who is employed/self-employed or getting pension and whose monthly income from all sources does not exceed Rs. 20,000/- per month.
- In case of dependents, the income of parents/guardians should not exceed Rs. 20,000/- per month.
- Persons who have not received assistance from the Government, local bodies and Non-Official

Organisations during the last 3 years for the same purpose. However, for children below 12 years of age this limit would be 1 year.

'Accelerate Vigyan'

In news
To provide a single platform for research internships, capacity building programs, and workshops across the country, the **Science and Engineering Research Board (SERB)** has launched a new scheme called '**Accelerate Vigyan' (AV).**

Accelerate Vigyan
- The primary objective of this inter-ministerial scheme is to give more thrust on encouraging high-end scientific research and preparing scientific manpower, which can lead to research careers and knowledge-based economy.
- Recognizing that all research has its base as development of quality and well-trained researchers, AV will initiate and strengthen mechanisms of identifying research potential, mentoring, training and hands-on workshop on a national scale.
- The vision is to expand the research base, with three broad goals, **namely, consolidation / aggregation of all scientificprograms, initiating high-end orientation workshops, and creating opportunities for research internships for those who do not have access to such resources / facilities.**
- Another new component under AV is '**SAMMOHAN'** that has been sub-divided into '**SAYONJIKA' and 'SANGOSHTI'**.
- **SAYONJIKA** is an open-ended program to catalogue the capacity building activities in science and technology supported by all government funding agencies in the country.
- **SANGOSHTI** is a pre-existing program of SERB.

ABHYAAS Programme
- **'ABHYAAS' programme**, it is an attempt to boost research and development in the country by enabling and grooming potential PG/PhD students by means of developing their research skills in selected areas across different disciplines or fields.
- It has two components: High-End Workshops (**'KARYASHALA'**) and Research Internships (**'VRITIKA'**).

Manodarpan

In news
Union HRD Minister launched virtually the Manodarpan initiative.

Manodarpan
- It will cover a wide range of activities to provide Psychosocial Support to students for their Mental Health & Well-being during the COVID outbreak and beyond.
- The '**Manodarpan**' initiative has been included in the **ATMANIRBHAR BHARAT ABHIYAN**, as a part of strengthening human capital and increasing productivity and efficient reform and initiatives for the Education sector.

Kumhar Sashaktikaran Yojana

In news
Seeking to empower and associate the marginalized potters' community with India's quest to become "**Aatmanirbhar**", the Union Home Minister distributed 100 electric potter wheels to 100 trained artisans under **the Kumhar Sashaktikaran Yojana of the Khadi and Village Industries Commission (KVIC).**

Kumhar Sashaktikaran Yojana
- It is an initiative of the **Khadi and Village Industries Commission(KVIC)** for empowerment of potters community in the remotest of locations in the country.
- The program reaches out to the potters in : U.P., M.P., Maharashtra, J&K, Haryana, Rajasthan, West Bengal, Assam, Gujarat, Tamil Nadu, Odisha, Telangana and Bihar.

This program provides the following support to potters
- Training for advanced pottery products
- Latest, new technology pottery equipments like the electric Chaak
- Market linkages and visibility through KVIC exhibitions

Atal Innovation Mission launches 'AIM-iCREST'

In news
NITI Aayog's Atal Innovation Mission (AIM), has launched AIM iCREST – an Incubator Capabilities enhancement program for a Robust Ecosystem focused on creating high performing Startups. This is a first of its kind initiative for advancing innovation at scale in India.

AIM-iCREST
- **AIM iCREST**, as the name suggests, has been designed to enable the incubation ecosystem and act as a growth hack for **AIM's Atal and Established incubators** across the country.

- Under the initiative, the AIM's incubators are set to be upscaled and provided requisite support to foster the incubation enterprise economy, that will help them to significantly enhance their performance.
- This will be complemented by providing training to entrepreneurs, through technology driven processes and platforms.
- **The program aims at going beyond incubator capacity building.**
- Given the current pandemic crisis, the effort will focus on supporting start-up entrepreneurs in knowledge creation and dissemination as well as in developing robust and active networks.

Pradhan Mantri Gareeb Kalyan Anna Yojana

In news
Prime Minister Narendra Modi extended the Pradhan Mantri Gareeb Kalyan Anna Yojana till November-end.

What is Pradhan Mantri Garib Kalyan Anna Yojana?
- Considered as world's largest food security scheme, the Pradhan Mantri Garib Kalyan Anna Yojana aims at ensuring sufficient food the poor and needy during the coronavirus crisis.
- Part of the scheme, the food needs to be provided to all the beneficiaries under public distribution system (TPDS) for Antyodaya Anna Yojana (AAY) and priority household (PHH) ration cardholders.
- As per updates, the eligible beneficiaries will receive 5kg of foodgrains and 1 kg Gram per month for a period of three months between April and June, 2020. This time period has now been extended to five more months.

Special Window for Affordable and Mid Income Housing (SWAMIH)

In news

SWAMIHhas approved 81 projects that will enable the completion of almost 60,000 homes across India.

Details
These projects are spread across a mix of markets including large cities such as NCR, MMR, Bengaluru, Chennai, Pune and also Tier 2 locations including Karnal, Panipat, Lucknow, Surat, Dehradun, Kota, Nagpur, Jaipur, Nashik, Vizag, Chandigarh etc.

SWAHIM
- In 2019, the Union Finance Minister set up a 'Special Window' in the form of AIF to provide priority debt financing for the completion of stalled housing projects.
- SBICAP Ventures would be the Investment Manager to the first AIF set-up under this special window.
- It has been formed to complete construction of stalled, brownfield, RERA registered residential developments that are in the affordable housing/mid-income category.
- The SBICAP Ventures Ltd is a wholly owned subsidiary of SBI Capital Markets Ltd which in turn is a wholly owned subsidiary of the State Bank of India.
- It is set up as a Category-II AIF (Alternate Investment Fund) debt fund registered with SEBI.

National Biopharma Mission (NBM)

In news
The National Biopharma Mission (NBM) is an industry-Academia Collaborative Mission for accelerating biopharmaceutical development in the country.

Highlights
- Under this Mission the Government has launched Innovate in India (i3) programme to create an enabling ecosystem to promote entrepreneurship and indigenous manufacturing in the sector.
- The mission will be implemented by Biotechnology Industry Research Assistance Council (BIRAC).
- The mission was approved in 2017 at a total cost of Rs 1500 crore and is 50% co-funded by World Bank loan. It is managed through a dedicated Program Management Unit (PMU) at BIRAC.
- The program is promoting entrepreneurship by supporting small and medium enterprises for indigenous product development (Novel Cell lines, indigenously developed Biologics, devices and Raw materials for Biologics manufacturing) and through establishment of shared facilities and Technology Transfer Offices.
- Innovation is being promoted in India for inclusiveness.

Krishi Megh

In news
Union Minister of Agriculture & Farmers' Welfare, virtually launched the **Krishi Megh (National Agricultural Research &Education System -Cloud Infrastructure and Services)** along with the **KVC ALUNET** (Krishi Vishwavidyalaya Chhatr Alumni Network) and Online Accreditation System for Higher Agricultural Educational Institutions (HEI).

Krishi Megh
- **Krishi Megh** is a new chapter in digital India enabling the farmers, researchers, students and policy makers more equipped with updated and latest information regarding agriculture, research, education and extension in digital form generated by ICAR institutes and State Agriculture Universities.
- **ICAR-Krish Megh** provide a robust and dynamic platform to meet the growing IT needs of the NARES system with the deployment of mission critical applications such as e-Office, ICAR-ERP, Education Portal, KVK Portal and mobile apps, ICAR institute websites, Academic Management System, Alumni Portal, e-Courses of UG and PG level etc.
- **ICAR-Krishi Megh** at NAARM Hyderabad is synchronized with ICAR-Data Center at ICAR-IASRI, New Delhi has been built to mitigate the risk, enhance the quality, availability and accessibility of e-governance, research, extension and education in the field of agriculture in India.
- This new Centre has latest AI/Deep learning software/tools kits for building and deploying of deep learning based applications such as disease and pest identification using image analysis, detection of maturity and ripening of fruits through image analysis, disease identification in livestock etc.

Rashtriya Krishi Vikas Yojana

In news
Ministry of Agriculture funding start-ups under the innovation and agripreneurship component of Rashtriya Krishi Vikas Yojana in 2020-21.

Highlights
- A component, Innovation and Agri-entrepreneurship Development programme has been launched under Rashtriya Krishi Vikas Yojana in order to promote innovation and agripreneurship by providing financial support and nurturing the incubation ecosystem.
- These start-ups are in various categories such as agro-processing, artificial intelligence, digital agriculture, farm mechanisation, waste to wealth, dairy, fisheries etc.

Knowledge Partners (KPs) as Centres of Excellence
- National Institute of Agricultural Extension Management (MANAGE), Hyderabad,
- National Institute of Agricultural Marketing(NIAM) Jaipur,
- Indian Agricultural Research Institute (IARI) Pusa, New Delhi,
- University of Agriculture Science , Dharwad, Karnataka and

- Assam Agriculture University, Jorhat, Assam

Components of this scheme
- Agripreneurship Orientation - 2 months duration with a monthly stipend of Rs. 10,000/- per month. Mentorship is provided on financial, technical, IP issues etc.
- Seed Stage Funding of R-ABI Incubatees – Funding upto Rs. 25 lakhs (85% grant & 15% contribution from the incubatee).
- Idea/Pre-Seed Stage Funding of Agripreneurs – Funding up to Rs. 5 lakhs (90% grant and 10% contribution from the incubatee).

Rashtriya Gokul Mission

Why in news?
Prime Minister will also launch e-Gopala App, a comprehensive breed improvement marketplace and information portal for direct use of farmers.

About the mission
- Rashtriya Gokul Mission (RGM) has been launched in December 2014 with an outlay of Rs 2025 crore for development and conservation of indigenous breeds through selective breeding in the breeding tract and genetic upgradation of nondescript bovine population.
- The scheme comprises of two components namely National Programme for Bovine Breeding (NPBB) and National Mission on Bovine Productivity (NMBP).

Objective
- To develop and conserve the indigenous breeds.
- To initiate a breed improvement programme for improving the genetic makeup.
- To improve and increase milk production and productivity.
- Use of elite indigenous breeds like Gir, Sahiwal, Rathi, Deoni, Tharparkar, Red Sindhi for upgrading nondescript cattle.
- To distribute disease free high genetic merit bulls for natural service.

Gokul Grams
- Funds under the scheme will be allocated for the establishment of Integrated Indigenous Cattle Centres viz "Gokul Gram".
- Where they can be established? Gokul Grams will be established in: i) the native breeding tracts and ii) near metropolitan cities for housing the urban cattle.

Pradhan Mantri Matsya Sampada Yojana launched

In news
On 10th September 2020 PM, has officially launched the Pradhan Mantri Matsya Sampada Yojana.

Aim
- Enhancing fish production by an additional 70 lakh tonne till 2024-25,
- Increasing fisheries export earnings to Rs.1,00,000 crore,
- Doubling of incomes of fishers and fish
- Reducing post-harvest losses from 20-25% to about 10%
- Generation of additional 55 lakhs direct and indirect gainful employment opportunities in the fisheries sector and allied activities farmers.

Significance
- This yojana will create modern infrastructure with efficient supply chain management from farm gate to retail outlet.
- It will increase growth of food processing sector in the country.
- It will increase GDP, Employment and investment.
- It will help in reducing huge wastage of agriculture products.
- It will help in providing better prices to farmers and double their of income.

Gram Panchayat Development Plans (GPDP) and VPRP

In news
Gram Panchayats have been mandated for the preparation of Gram Panchayat Development Plan (GPDP) for economic development and social justice utilizing the resources available to them.

GPDP
- The GPDP planning process has to be comprehensive and based on participatory process which involves the full convergence with Schemes of all related Central Ministries / Line Departments related to 29 subjects enlisted in the Eleventh Schedule of the Constitution.
- Panchayats have a significant role to play in the effective and efficient implementation of flagship schemes on subjects of National Importance for transformation of rural India.
- The People's Plan Campaign will commence from 1st May to 15th June, 2020 for preparing GPDP for 2020-21.
- **PPC guidelines and the joint advisory issued by the Ministry of Panchayati Raj**

and Ministry of Rural Development, has **mandated Self Help Groups and their federations under Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)** to participate in the annual GPDP planning process and prepare **the Village Poverty Reduction Plan (VPRP).**

Objectives of VPRP are three-fold
- Prepare a comprehensive and an inclusive demand plan of the community for local development
- Facilitate an interface between the SHG federation and Panchayati Raj institutions for development of demand plan
- Strengthen the community based organisations and their leadership for active participation in poverty reduction activities

Components of VPRP
- **Social inclusion -** plan for inclusion of vulnerable people/household into SHGs under NRLM
- **Entitlement -** demand for various schemes such as MGNREGS, SBM, NSAP, PMAY, Ujjwala, Ration card etc.
- **Livelihoods -** specific demand for enhancing livelihood through developing agriculture, animal husbandry, production and service enterprises and skilled training for placement etc.
- **Public Goods and Services -** demand for necessary basic infrastructure, for renovation of the existing infrastructure and for better service delivery
- **Resource Development -** demand for protection and development of natural resources like land, water, forest and other locally available resources
- **Social Development -** plans prepared for addressing specific social development issues of a village under the low cost no cost component of GPDP

Samarth Scheme (18 Sep 2020)

In news
The Ministry of Textiles is implementing the Samarth-Scheme for Capacity Building in Textiles Sector
Features
- Training of Trainers (ToT)
- Aadhar Enabled Biometric Attendance System (AEBAS)
- CCTV recording of training programme
- Dedicated call centre with helpline number
- Mobile app based Management Information System (MIS)
- On-line monitoring of the training process.

- It will provide National Skills Framework Qualification (NSFQ) compliant skilling programmes to over 10 lakh persons.
- The skilling programmes offered under Samarth Scheme aim to incentivize and supplement the efforts of the Textile industry.
- The scheme aims to create more jobs in the textile and related sectors that will cover the entire value chain of the textile but will exclude spinning and weaving.
- It aims to promote sustainable livelihood to all sections of society.

Five Star Villages Scheme

In news

The Department of Posts has launched a scheme called Five Star Villages, to ensure universal coverage of flagship postal schemes in rural areas of the country.

Highlights

- The scheme seeks to bridge the gaps in public awareness and reach of postal products and services, especially in interior villages.
- All postal products and services will be made available and marketed and publicized at village level, under the Five Star Villages scheme.
- Branch offices will function as one-stop shop to cater all post office - related needs of villagers.

Schemes covered

- Savings Bank accounts, Recurrent Deposit Accounts, NSC / KVP certificates.
- Sukanya Samridhi Accounts/ PPF Accounts.
- Funded Post Office Savings Account linked India Post Payments Bank Accounts.
- Postal Life Insurance Policy/Rural Postal Life Insurance Policy.
- Pradhan Mantri Suraksha Bima Yojana Account / Pradhan Mantri Jeevan Jyoti Bima Yojana Account.

PM Street Vendor's AtmaNirbhar Nidhi

What is the Scheme?

This is a Central Sector Scheme to facilitate street vendors to access affordable working capital loan for resuming their livelihoods activities, after easing of lockdown.

Details

- The COVID-19 pandemic and consequent lockdowns have adversely impacted the livelihoods of street vendors.
- They usually work with a small capital base, which they might have consumed during the lockdown.

- Therefore, credit for working capital to street vendors will be helpful to resume their livelihoods.

Objectives

- To facilitate working capital loan up to `10,000 at subsidized rate of interest.
- To incentivize regular repayment of loan.
- To reward digital transactions.

Features

- Initial working capital of up to `10,000/-
- Interest subsidy on timely/ early repayment @ 7%
- Monthly cash-back incentive on digital transactions
- Higher loan eligibility on timely repayment of the first loan.

Ayushman Sahakar

In news

Union Minister of State for Agriculture Shri Parshottam Rupala today launched AYUSHMAN SAHAKAR

Details

- It is a unique scheme to assist cooperatives play an important role in creation of healthcare infrastructure in the country formulated by the apex autonomous development finance institution under the Ministry of Agriculture and Farmers Welfare, the National Cooperative Development Corporation (NCDC).
- AYUSHMAN SAHAKAR scheme would revolutionize the way healthcare delivery takes place in rural areas
- NCDC's scheme aligns itself with the focus of the National Health Policy, 2017, covering the health systems in all their dimensions- investments in health, organization of healthcare services, access to technologies, development of human resources, encouragement of medical pluralism, affordable health care to farmers etc.
- It has a comprehensive approach-hospitals, healthcare, medical education, nursing education, paramedical education, health insurance and holistic health systems such as AYUSH.
- Ayushman Sahakar scheme fund would also assist cooperative hospitals take up medical / Ayush education.

Meghalaya to achieve 100% household tap water connections

In news

Under Jal Jeevan Mission, the Government of Meghalaya has decided to provide Functional Household Tap Connectionsto all rural homes in the State by 2023.
Focus: *'service delivery' and 'functionality'.*

Stats

- There are 5.90 lakh rural households in 6,415 villages in the State and out of these, balance 5.83 lakh households are planned to be provided tap connection.
- **Implementation**
- The mission is being implemented in such a manner that local communities through their Gram Panchayats or its sub-committees namely Village Water and Sanitation Committees (VWSCs) plan, implement, approve, operate and maintain their own water supply systems.

Significance

- Earlier, the watersupply was through public stand post requiring women and children to walk every time to fetch water.
- The provision of tap connection has saved hours of drudgery of women and girls.
- The daughters are now relieved of their evening routine to fetch water and use saved hours for studies and games.

Jal Jeevan Mission

- Jal Jeevan Mission, is envisioned to provide safe and adequate drinking water through individual household tap connections by 2024 to all households in rural India.
- The programme will also implement source sustainability measures as mandatory elements, such as recharge and reuse through grey water management, water conservation, rain water harvesting.
- The Jal Jeevan Mission will be based on a community approach to water and will include extensive Information, Education and communication as a key component of the mission.
- JJM looks to create a jan andolan for water, thereby making it everyone's priority.

Khadi and Village Industries Commission (KVIC) and Workshed scheme.

Why in news?

A family from Assam was driven to the verge of homelessness due to aggressive soil erosion by flooding of River Brahmaputra until Khadi and Village Industries Commission came to her rescue by granting her a house under Artisans' **Workshed Scheme.**

Khadi and Village Industries Commission

- It is a statutory body established by an Act of Parliament

- In April 1957, it took over the work of former All India Khadi and Village Industries Board.

Objectives

- The social objective of providing employment.
- The economic objective of producing saleable articles.
- The wider objective of creating self-reliance amongst the poor and building up of a strong rural community spirit.

Schemes implemented via KVIC

Prime Minister's Employment Generation Programme (PMEGP)

It is a credit linked subsidy scheme, for setting up of new micro-enterprises and to generate employment opportunities in rural as well as urban areas of the country through KVIC, State Khadi & Village Industries Board (KVIB) and District Industries Centre (DIC).

Scheme of Fund for Regeneration of Traditional Industries (SFURTI)

It helps in making traditional industries more productive and competitive by organizing the traditional industries and artisans into clusters.

Worxshed Scheme

- It provides financial assistance for construction of work shed to khadi artisans belonging to BPL category through the khadi institutions with which the khadi artisans are associated.
- This empowers khadi spinners and weavers to chart out a sustainable path for growth, income generation and better work environment.

Scheme for Promoting Innovation, Rural Industry and Entrepreneurship (ASPIRE)

Har Ghar Jal' by 2023-24

In news

A team from the National Jal Jeevan Mission is visiting West Bengal from 2nd to 4th December, 2020 to provide technical assistance to the State to realize the goal of **'HarGhar Jal'**

Objective

To provide running tap water for every household.

Highlights

- This resolution is an unflinching endeavor to provide clean drinking water in the homes of approximately 2 crore households in the state through concerted co-operation of the people of every village.

- West Bengal State has planned to provide 100% tap connections to all the households in the State by 2023-24.
- Government of India is working in tandem with the States to achieve the goals of JJM within the time frame.

Jal jeewan mission

Every rural household has drinking water supply in adequate quantity of prescribed quality on regular and long-term basis at affordable service delivery charges leading to improvement in living standards of rural communities.

Guidelines for Implementation of Feeder Level Solarisation

In news

Ministry of New and Renewable (MNRE), after consultation with state governments, has decided to issue Guidelines for Implementation of Feeder Level Solarisation under Component-C of PM-KUSUM Scheme.

Objective of Component C

- To provide reliable day-time power to farmers, enhancing their income by purchasing surplus solar power and thus incentivising them for saving water.
- In case of feeder level solarisation, farmers will get daytime reliable solar power for irrigation, but there is no provision of selling surplus solar power.

Highlights

- Scheme consists of three components. The Component-A includes installation of Decentralized Ground Mounted Grid Connected Renewable Power Plants
- Component-B includes installation of standalone Solar Powered Agriculture Pumps
- Component-C includes Solarisation of Grid-connected Agriculture Pumps.
- As per provisions of the PM-KUSUM Scheme, the grid connected agriculture pumps can be solarised with central and state subsidy of 30% each and farmer's contribution of 40%.

Implementation Methodology

- The Distribution Company (DISCOM)/Power Department will be the implementing agency for feeder level solarisation in their respective areas.

- State Government may appoint any other expert agency to help DISCOM for tendering and other related activities of installation of solar power plant for feeder level solarisation.
- Where agriculture feeders have already been separated the feeders may be solarised under the scheme. This will lead to lower cost both in terms of lower capital cost and cost of power.

Atmanirbhar Bharat RojgarYojana (ABRY)

In news

The Union Cabinet, chaired by the Prime Minister, Shri Narendra Modi, has given its approval for **Atmanirbhar Bharat RojgarYojana (ABRY)**

Objective

To boost employment in formal sector and incentivize creation of new employment opportunities during the Covid recovery phase under Atmanirbhar Bharat Package 3.0.

Beneficiaries

- Any new employee joining employment in EPFO registered establishments on monthly wages less than Rs 15,000.
- EPF members drawing monthly wage of less than Rs 15,000 who made exit from employment during covid-19 pandemic from March 1, 2020, to September 30, 2020, and is employed on or after October 1, 2020.

Features

- Government of India will provide subsidy for two years in respect of new employees engaged on or after 1st October, 2020 and upto 30th June, 2021
- Government of India will pay both 12% employees' contribution and 12% employers' contribution i.e. 24% of wages towards EPF in respect of new employees in establishments employing upto 1000 employees for two years,
- Government of India will pay only employees' share of EPF contribution i.e. 12% of wages in respect of new employees in establishments employing more than 1000 employee for two years.
- An employee drawing monthly wage of less than Rs. 15000/- who was not working in any establishment registered with the Employees' Provident Fund Organisation (EPFO) before 1st October, 2020 and did not have a Universal Account Number or EPF Member account number prior to 1stOctober 2020 will be eligible for the benefit,

- Any EPF member possessing Universal Account Number (UAN) drawing monthly wage of less than Rs. 15000/- who made exit from employment during Covid pandemic from 01.03.2020 to 30.09.2020 and did not join employment in any EPF covered establishment up to 30.09.2020 will also be eligible to avail benefit,
- EPFO will credit the contribution in Aadhaar seeded account of members in electronic manner,
- EPFO shall develop a software for the scheme and also develop a procedure which is transparent and accountable at their end.
- EPFO shall work out modality to ensure that there is no overlapping of benefits provided under ABRY with any other scheme implemented by EPFO.

Source: PIB

Fitness Ka Dose Aadha Ghanta Roz campaign

In news
WHO applauds India's initiative on promoting physical activity through its campaign
Fitness Ka Dose Aadha Ghanta Roz.

Highlights
- The campaign launched as part of the nation-wide Fit India Movement by Union Minister of Youth Affairs and Sports Shri Kiren Rijiju on December 1.
- It has gained the support of celebrities from different fields including Bollywood, sportspersons, writers, doctors and fitness influences.
- They have enthusiastically urged Indians to follow the basic mantra of 30 minutes of fitness every day.
- The Fit India Freedom Run, Plog Run, Cyclothon, Fit India Week, Fit India School Certificate and various other programmes have seen a collective organic participation of over 3.5 crore people.

5th India Water Impact Summit

In news
The 5th IWIS will forge greater interaction between investors and stakeholders in the water sector and promote international cooperation between India and many foreign countries for water and river management.

Organiser
National Mission for Clean Ganga and Center for Ganga River Basin Management and Studies (cGanga)

Theme
Comprehensive analysis and holistic management of local rivers and water bodies with focus on Arth Ganga - river conservation synchronised development.

Details

- NamamiGange is one of the largest, holistic and successful river conservation programs in the country which is laying down a model framework for river rejuvenation
- This summit is aimed at discussing and disseminating the needs for the modalities of embracing Arth Ganga and the vision ofthe Prime Minister in sectors that closely interweave with river conservation.
- The 5th IWIS will forge greater interaction between investors and stakeholders in the water sector and promote international cooperation between India and many foreign countries for water and river management."
- *5 Rs" for waste water management which are recycle, reuse, reduce, recharge (ground water) and respect for water was proposed*

Socio-Economic Profiling

In news
Ministry of Housing and Urban Affairs launched a programme of Socio-Economic Profiling of PM SVANidhi beneficiaries and their families , as an additional component of PM SVANidhi Scheme

Highlights of the Project

- Under this, a complete profile of each PM SVANidhi beneficiary and their family members will be prepared.
- Based on the profiled data, benefits of the various eligible Central Schemes would be extended to them for their holistic socio-economic upliftment.
- It is seen as an instrument for outreach to street vendors and their families for their holistic development and socio-economic upliftment.
- In the first phase, 125 cities have been selected for the programme.

PM SVANidhi
The scheme is a Central Sector Scheme i.e. fully funded by Ministry of Housing and Urban Affairs .

Objectives

- To facilitate working capital loan up to `10,000;
- To incentivize regular repayment; and
- To reward digital transactions

- The scheme will help formalize the street vendors with above objectives and will open up new opportunities to this sector to move up the economic ladder.

Development of sludge management framework in India

In news

Norwegian Institute of Bioeconomy Research signs MOU with cGanga (think-tank of NMCG) for development of sludge management framework in India

Highlights

- **Norwegian Institute of Bioeconomy Research** signs MOU with **cGanga (think-tank of NMCG)** for development of sludge management framework in India.
- Norway intends to deepen relationship with India especially in prevention of climate change and conservation of environment.
- The summit also had discussions revolving around **"River Conservation Synchronised Agriculture".**
- It is essential that traditional wisdom and modern science work together to have river development synchronised agriculture
- NMCG is also trying to promote organic farming, natural farming and zero budget farming.

Issue

India does not have shortage of water but there is need to improve water management.

India Water Impact 2020

It is a five-day long summit, hosting experts and academicians from all over the world to discuss and debate issues related to water conservation, water security and river rejuvenation. The event is co-organised by National Mission for Clean Ganga and Centre for Ganga River Basin Management and Studies.

Recognition Scheme for Hygiene Rating Audit Agencies

In news

Quality Council of India (QCI) at the behest of the FSSAI has come out with a Scheme for approval of Hygiene Rating Audit Agencies to scale up Hygiene Rating by increasing the number of recognised Hygiene Rating Audit Agencies in the country.

Aim

To allow consumers to make informed choices/decisions pertaining to the food outlets where they eat by encouraging food businesses to improve their hygiene and safety standards.

Highlights

- FSSAI's initiative of 'Food Hygiene Rating Scheme' is a certification system for food businesses supplying food directly to consumers, either on or off premise.
- The food establishments are rated based on food hygiene and safety conditions observed at the time of audit.
- The hygiene rating will be in the form of **smileys (1 up to 5)** and the certificate should be displayed prominently in the consumer facing area.
- The recognised Hygiene Rating Audit Agencies will be responsible for verifying the compliance with food hygiene and safety procedures laid by FSSAI and get Hygiene Rating.
- Currently, this scheme is applicable for Food service establishments (such as hotels, restaurants, cafeteria, dhabhas, etc), sweet shops, bakeries and meat retail stores.

Recognition of Prior Learning

In news

Skill India undertakes Recognition of Prior Learning (RPL) for workers under Department of Panchayati Raj in Chandauli and Varanasi

Aim

- To promote decentralization and local governance for better planning and implementation.
- To align the competencies of the pre-existing workforce of the country to the standardized framework.

Highlights

- The programme, implemented under SANKALP Programme of MSDE
- About 70 per cent of our country''s population resides in rural India and hence the inclusion of gram panchayats is crucial for the success of District Skill Development Plans and will provide a huge fillip to the Skill India Mission
- The initiative will contribute in development of rational and realistic state skill development plans, finally leading to a well-grounded national plan for skill development.

Pradhan Mantri Kaushal Vikas Yojana

- The Ministry of Skill Development and Entrepreneurship (MSDE) launched Pradhan Mantri Kaushal Vikas Yojana (PMKVY) in the year 2015.

- This Scheme was further extended in the year 2016.
- The objective of this Skill Certification Scheme was to enable a large number of Indian youth to take up industry-relevant skill training that will help them in securing a better livelihood.

Source: PIB

New routes for RO-RO, RO-PAX & Ferry Services

In news

Ministry of Ports, Shipping and Waterways identifies new routes for RO-RO, RO-PAX & Ferry Services.

Highlights

- Ministry has been working continuously for the promotion of Coastal Shipping under Sagarmala Programme.
- The Sagarmala programme is the flagship programme of the Ministry to promote port-led development in the country through harnessing.
- MoPSW has identified Domestic locations namely Hazira, Okha, Somnath Temple, DIU, PIPAVAV, Dahej, Mumbai/JNPT, Jamnagar, Kochi, Ghogha, Goa, Mundra and Mandvi and 6 International routes.
- It connects 4 international destinations namely Chattogram (Bangladesh), Seychelles (East Africa) Madagascar (East Africa) and Jaffna (Sri Lanka) from Indian major coastal port towns for the commencement of ferry services through inland waterways.
- RO-PAX ferry service based on the localized demand to promote the supplementary and sustainable mode of the transportation

The purpose is to

- Create a supplementary mode of transportation, which will not only be beneficial for the daily commuters, tourists' movement and cargo transportation but also helpful in reducing carbon footprint by shifting to environment-friendly mode of transportation from rail and road.
- Provide impetus to the tourism industry
- Create job opportunities in the coastal regions
- Saving in terms of both cost and time for the users
- Decongest road and rail networks

Consortia for Medicinal Plants

In news

National Medicinal Plants Board Launches Consortia for Medicinal Plants

Consortium

- A consortium is a group made up of two or more individuals, companies, or governments that work together to achieving a common objective.
- Entities that participate in a consortium pool resources but are otherwise only responsible for the obligations that are set out in the consortium's agreement.
- Every entity that is under the consortium, therefore, remains independent with regard to their normal business operations and has no say over another member's operations that are not related to the consortium.

Highlights

- MPB Consortia will address/deliberate (not limited to) on Quality Planting Material, Research & Development, Cultivation, Trade of medicinal plants/market linkage etc.
- To establish the linkage between the farmers and manufacturers, a 'Seed to Shelf' approach is being introduced
- Aspects related to Quality Planting Materials (QPM), Good Agriculture Practices (GAP's), Good Post Harvest Practices (GPHP's) would be addressed.
- In the first phase NMPB consortia is proposed for medicinal plant species - **Ashwagandha (*Withania somnifera*), Pippali (*Piper longum*), Aonla (*Phyllanthus emblica*), Guggulu (*Commiphora wightii*), Satavari (*Asparagus racemosus*).**

Modified scheme to enhance ethanol distillation

Context

There has been surplus production of sugar in the country since sugar season 2010-11 (except reduction due to drought in sugar season 2016-17); & sugar production is likely to remain surplus in the country in coming years due to introduction of improved varieties of sugarcane.

Issue

The excess stocks of 60 LMT which remain unsold also block funds of sugar mills to the tune of about Rs. 19,000 crore thereby affecting liquidity positions of sugar mills resulting in accumulation of cane price arrears of farmers

In news

Cabinet approves modified scheme to enhance ethanol distillation capacity in the country.

Significance

- This will increase income of farmers as other feed stocks such as cereals (rice, wheat, barley, corn & sorghum), sugarcane and sugar beet to be used for production of ethanol

- For benefiting a large population of farmers, Government is encouraging distilleries to produce ethanol from maize & rice available with FCI
- Diversion of excess sugarcane and sugar to ethanol will facilitate the clearance of cane price dues of farmers

Beti Bachao Beti Padhao Achievements

Why in news?
Beti Bachao Beti Padhao Scheme Increases Awareness and Sensitize the Masses on Gender Equality

Achievements so far

Sex Ratio at Birth
- Promising trends of improvement in Sex Ratio at Birth (SRB) have been observed at National level. SRB has improved by 16 points from 918 (2014-15) to 934 (2019-20), as per the HMIS data of MoH&FW.
- Out of 640 districts covered under BBBP 422 districts have shown improvement in SRB from 2014-15 to 2018-2019.
- Some Districts which had very low SRB in 2014-15 have shown huge improvement after implementation of the Scheme such as Mau (Uttar Pradesh) from 694 (2014-15) to 951 (2019-20), Karnal (Haryana) from 758 (2014-15) to 898 (2019-20), Mahendergarh (Haryana) from 791 (2014-15) to 919 (2019-20), Rewari (Haryana) from 803 (2014-15) to 924 (2019-20), and Patiala (Punjab) from 847 (2014-15) to 933 (2019-20),

Health
- Percentage of 1st Trimester ANC Registration has shown an improving trend from 61% in 2014-15 to 71% in 2019-20 (As per HMIS, MoH&FW).
- Percentage of Institutional Deliveries has shown an improving trend from 87% in 2014-15 to 94% in 2019-20 (As per HMIS, MoH&FW).

Education
- Gross Enrolment Ratio of girls in the schools at secondary level has improved from 77.45 (2014-15) to 81.32 (2018-19-provisional figures) as per UDISE-data.
- Percentage of schools with functional separate toilets for girls has shown improvement from 92.1% in 2014-15 to 95.1% in 2018-19 (2018-19 provisional figure, as per UDISE-data)

Attitudinal change
- The BBBP scheme has been able to bring the focus on important issue of female infanticide, lack of education amongst girls and deprivation of their rights on a life cycle continuum.
- The scheme has successfully engaged with Community to defy the age old biases against the girl child and introduce innovative practices to celebrate the girl child.

Ayushman CAPF' scheme

In news
Union Home Minister launched 'Ayushman CAPF' scheme for personnel and dependents of Central Armed Police Forces during a function in Guwahati, Assam

Key features
- Comprehensive coverage of OPD, IPD and follow-ups
- Cashless treatment at empaneled private hospitals
- Portability to ensure access to health services across the country
- Paperless to ensure ease and convenience
- Dedicated call center for support and grievance redressal
- Well defined set of health benefits packages
- Pan India expansion of the scheme will be done in phased manner

"AYU SAMVAD" Campaign

In news
AYU SAMVAD"(My Health My Responsibility) is one of the **largest public awareness campaign** program on **AYURVEDA and COVID 19 PANDEMIC, organized by All India Institute of Ayurveda New Delhi**

Objective of the Campaign
- The main objective of the campaign is to create awareness through Lecture series to make common people aware about the theme "Ayurveda for COVID 19 Pandemic".
- This campaign ensures the uniformity of information through a structured PPT delivered to approximately 01 crore target audience across India through 05 Lakh lectures.
- This campaign will be immensely beneficial in understanding the importance of Ayurveda & in the fight against COVID 19 & also for Post Covid Management.
- This campaign will specifically focus on the Role of Preventive, Promotive, Curative and Rehabilitation in Management of COVID 19 through Ayurveda.
- Campaign will monitor through State AYUSH Directors & NAM team. The report of the Documentation part of lectures & various activities will be submitted by state AYUSH Director in first week of May 2021.

- More than 5 lac lectures will be organized across the nation by Ayurveda Physicians for citizens of India.
- All India Institute of Ayurveda has drafted a power point presentation & booklet for reference.
- The trained personnel's will further organize lectures for Government Offices, Non-Government sector employees, schools, colleges, panchayati raj institutions, gram sabhas, industries, various housing societies, NGOs, Mahila udyogs, Asha workers and health staff etc across India.

STARS project

In news

Agreement for the financial support of the implementation of Strengthening Teaching-Learning and Results for States (STARS) project of Ministry of Education was signed between Department of Economic Affairs (DEA) and World Bank along with Ministry of Education.

Highlights

- STARS project would be implemented as a new Centrally Sponsored Scheme under Department of School Education and Literacy (DoSEL), MOE.
- Earlier Union Cabinet has approved the proposal of STARS project on 14th Oct 2020.
- The project covers 6 States viz Himachal Pradesh, Rajasthan, Maharashtra, Madhya Pradesh, Kerala and Odisha.
- The identified States will be supported for various interventions for improving the quality of education.
- The Program envisions improving the overall monitoring and measurement activities in the Indian school education system through interventions in selected states.
- STARS will draw on existing structure under Samagra Shiksha with the DoSEL, MoE as the main implementing agency at the national level.
- At the State level, the project will be implemented through the integrated State Implementation Society (SIS) for Samagra Shiksha.

46 Food Processing Projects Operationalized

In news

Ministry of Food Processing Industries has taken numerous initiatives for development of food processing sector

Major achievements and initiatives

Creation of Infrastructure Facilities

A total of 46 food processing projects were completed/operationalised ***Approval of New Infrastructure Facilities***

A total of 134 food processing projects were sanctioned.

COVID-19 initiatives and Grievances Redressal

- Ministry of Food Processing Industries (MoFPI) has been taking several initiatives for maintaining steady growth of food processing sector.
- Alike many sectors, food processing sector also went through several hitches during the lockdown.
- Critical issues such as reduction in processing capacity due to plant shutdowns, disruption in logistics and movement of workers, labor availability at manufacturing sites as well as steep drop in demand, liquidity crunch impacted the sector.

Atmanirbhar Bharat Abhiyan

Ministry of Food ProcessingIndustries launched an all India centrally sponsored **PM Formalisation of Micro food processing Enterprises (PMFME) Scheme** for providing financial, technical and business support for upgradation of existing micro foodprocessing enterprises. It is to be implemented for a period of five years from 2020-21 to 2024-25 with an outlay of Rs. 10,000 crores.

Remission of Duties and Taxes on Exported Products

In news

Taking a major step to boost exports, Government has decided to extend the benefit of the Scheme for Remission of Duties and Taxes on Exported Products (RoDTEP) to all export goods with effect from 1st January, 2021.

Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme

- The Remission of DutiesandTaxes on Exported Products(RoDTEP) scheme was announced by Government of India (GOI) on 14 September 2019
- It was announced to boostexportsby allowing reimbursement oftaxesandduties, which are not exempted or refunded under any other scheme in accordance with World Trade Organization (WTO) norms.

Objective of the RoDTEP Scheme

- Refund to exporters the embedded Central, State and local duties/taxes that were so far not being rebated/refunded and were, therefore, placing our exports at a disadvantage.

- Refund would be credited in an exporter's ledger account with Customs and used to pay Basic Customs duty on imported goods. The credits can also be transferred to other importers.

5th National Science, Technology, and Innovation Policy

In news
The draft of the 5thNational Science Technology and Innovation Policy has been finalized and is now available for public consultation

Aim
To foster, develop, and nurture a robust system for evidence and stakeholder-driven STI planning, information, evaluation, and policy research in India.

Objective
To identify and address strengths and weaknesses of the Indian STI ecosystem to catalyse socio-economic development of the country and also make the Indian STI ecosystem globally competitive.

Highlights

- The STIP will be guided by its broad vision of achieving technological self-reliance and position India among the top three scientific superpowers in the decade to come.
- It will focus to attract, nurture, strengthen and retain critical human capital through a 'people centric' science, technology and innovation (STI) ecosystem, to double the number of Full-Time Equivalent (FTE) researchers, Gross Domestic Expenditure on R&D (GERD) and private sector contribution to the GERD every 5 years and to build individual and institutional excellence in STI with the aspiration to achieve the highest level of global recognitions and awards in the coming decade.
- The new policy, STIP, revolves around the core principles of being decentralized, evidence-informed, bottom-up, experts-driven, and inclusive.
- It aims to bring in the concept of 'dynamic policy' with a robust policy governance mechanism incorporating features such as implementation strategy, periodic review, policy evaluation, feedback, and adaptation, and most importantly, a timely exit strategy for various policy instruments.

Kisan Kalyan Mission

In news
Yogi govt to felicitate 100 progressive farmers in each district during 3-month long Kisan Kalyan Mission.

Aims
To double the farmer income covering all the Assembly constituencies of the state of Uttar Pradesh, which will be achieved through campaigns that create awareness among farmers on how to reduce agricultural caused by using fertilizers in a balanced manner.

Highlights
- The mission will also encourage farmers to time their cultivation of crops according to the demand of the market.
- Under the mission several programmes such as exhibition of agriculture and associate sector including products of MSME missions and livelihood missions are to be launched.

Global Housing Technology Challenge

In news
Prime Minister Narendra Modi will lay the foundation stone of Light House Projects (LHPs) under Global Housing Technology Challenge-India (GHTC-India) at six sites across six states

Light House Project
- They are being constructed at Indore (Madhya Pradesh), Rajkot (Gujarat), Chennai (Tamil Nadu), Ranchi (Jharkhand), Agartala (Tripura) and Lucknow (Uttar Pradesh).
- They comprise about 1000 houses at each location along with allied infrastructure facilities.
- These projects will demonstrate and deliver ready to live houses at an expedited pace within twelve months, as compared to conventional brick and mortar construction, and will be more economical, sustainable, of high quality and durability.
- These LHPs demonstrate a variety of technologies, including Prefabricated Sandwich Panel System in LHP at Indore, Monolithic Concrete Construction using Tunnel Formwork etc.

Global Housing Technology Challenge (GHTC)
- Global Housing Technology Challenge was launched in 2019.
- The challenge is undertaken under the Pradhan Mantri Awas Yojana Urban (PMAY-U).
- GHTC aims to fast-track the construction of affordable housing and meet the target of constructing 2 crore houses by 2022.

- GHTC focuses on identifying and mainstreaming proven demonstrable technologies for lighthouse projects and spotting potential future technologies for incubation and acceleration support through ASHA (Affordable Sustainable Housing Accelerators) — India.

EDUCON-2020

In news
Union Education Minister inaugurates two-day Virtual International Akhand Conference

Significance
- This two-day Akhand Conference will pass on the message to the researchers and students across the globe that the research is a 24X7 exercise and requires strong perseverance.
- It will help the prospective teachers to become familiar with different technologies and their functioning to bring transformational change in the field of education.
- It will help in preparing a roadmap for effective implementation of NEP-2020 and developing necessary skill-set among youngsters to enable them to contribute towards building an *AtmaNirbhar Bharat.*
- This Conference will provide a platform to researchers and educationists to share their views on drawing strategic-plan for implementing the recommendations of the student-centric National Education Policy-2020, which is rooted in our Indian Culture and Value System.

Focus
Conference will focus, from the global perspectives, on various paradigms of NEP-2020, intended to transform the 'learning system of our nation' to meet world standard by empowering youth with the global competencies- thereby realizing the vision of the Prime Minister ShriNarendraModi

Crop Insurance Scheme- The Pradhan Mantri Fasal Bima Yojana

In news
Crop Insurance Scheme- The Pradhan Mantri Fasal Bima Yojana (PMFBY) successfully completes 5 Years of operations on 13th January 2021

Pradhan Mantri Fasal Bima Yojana
Crop Insurance Scheme is in line with One Nation – One Scheme theme. It incorporates the best features of all previous schemes and at the same time, all previous shortcomings / weaknesses have been removed.

Objectives
- To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases.
- To stabilise the income of farmers to ensure their continuance in farming.
- To encourage farmers to adopt innovative and modern agricultural practices.
- To ensure flow of credit to the agriculture sector.

Pradhan Mantri Kaushal Vikas Yojana

In news
The third phase of Pradhan Mantri Kaushal Vikas Yojana (PMKVY 3.0) is launched in 600 districts across all states of India

Highlights
- Skill India Mission PMKVY 3.0 envisages training of eight lakh candidates over a scheme period of 2020-2021 with an outlay of Rs. 948.90 crore.
- The 729 Pradhan Mantri Kaushal Kendras (PMKKs), empaneled non-PMKK training centres and more than 200 ITIs under Skill India will be rolling out PMKVY 3.0 training to build a robust pool of skilled professionals.
- On the basis of the learning gained from PMKVY 1.0 and PMKVY 2.0, the Ministry has improved the newer version of the scheme to match the current policy doctrine and energize the skilling ecosystem affected due to the COVID-19 pandemic.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
- It is the flagship scheme of the Ministry of Skill Development & Entrepreneurship (MSDE) implemented by National Skill Development Corporation.
- The objective of this Skill Certification Scheme is to enable a large number of Indian youth to take up industry-relevant skill training that will help them in securing a better livelihood.
- Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL).

Pension Payment Order

In news
The recently-introduced electronic pension payment order (e-PPO) promises ease of living for senior citizens.

Issue
The Department of Pensions and Pensioners' Welfare in the ministry was often at the receiving end of complaints

from senior citizens about the original copies of their pension payment order getting misplaced.

"In such situations, the pensioners, particularly the older pensioners, had to face several hardships.

Solution

Department of Pensions and Pensioners' Welfare decided to integrate the electronic PPO generated through PFMS application of CGA (Controller General of Accounts) with Digi-locker.**Significance**This enables the pensioner to obtain an instant print - out of the latest copy of his PPO from the Digi-locker account.

Pension Payment Order (PPO)

It is a unique number or a code provided to the pensioners of employees' pension scheme (EPS) to help them to get a pension after retirement. PPO and is allotted by the EPFO to every employee who retires from any organisation.

Iron-ore Policy 2021

In news

Ministry of Railways rolls out a new iron ore policy governing allocation of rakes and transportation of iron ore.**Aim**To attune it to the present day needs of customers and to meet the complete requirement of transportation of iron ore customers and provide total logistics support to steel industry to meet the competitive challenges.

Highlights

- Production of steel is critically dependent on transportation of iron and other raw materials.
- The policy sets down clear guidelines on how to fully meet the requirement of customers by leveraging infrastructure facilities available at loading and unloading ends to the fullest.
- The new policy has been named as 'Iron-ore Policy 2021' and shall come into effect from 10.02.2021.
- The provisions of the new policy will be updated in the Rake Allotment System module by CRIS.
- Categorization of Priority of movement of Iron Ore has now been based on the availability of Railway infrastructure developed by the customer for loading/unloading and the nature of movement between various types of sidings with a view to maximize iron-ore movement by rail.

Iron Ore and Indian Railways

- Iron-ore is the second most important stream of traffic of Railways and along with steel accounts for nearly 17% (53.81 Million Tonne of Steel & 153.35 Million Tonne of Iron ore) of total 1210 Million Tonne freight loading of IR in 2019-20.

- The new Iron-ore Policy, 2021 issued by Ministry of Railways is expected to have positive impact on the steel industry, provide powerful impetus to the core sector of the economy and boost country's economic growth.

Jal Utsav

In news
Madhya Pradesh village celebrates 'Jal Utsav' to welcome tap water connection

Highlights
- The festivities included tribal songs, dance & music which filled the whole atmosphere with the spirit of joy.
- The village which mostly comprises of tribal population has suffered paucity of potable water in their area since ever.
- But now, it's a double dip of celebration for them as the availability of tap water has provided 'ease of living' to the community as well as has brought their revered river Narmada to their homes.

Jal Jeevan Mission
- Jal Jeevan Mission (JJM), the flagship programme of Union Government is ensuring safe drinking water to every rural household of the country.
- Jal Jeevan Mission envisages adoption of participatory approach for ensuring safe and sustainable rural water supply for every household.
- In this light Madhya Pradesh Jal Nigam is implementing 58 Multi Village Schemes (MVS) in about 6,896 villages in 34 districts to ensure the availability of water for drinking and other domestic purposes throughout the year.

Objectives
- To provide FHTC to every rural household.
- To prioritize provision of FHTCs in qualityaffected areas, villages in drought prone and desert areas, Sansad Adarsh Gram Yojana (SAGY) villages, etc.
- To provide functional tap connection to Schools, Anganwadi centres, GP buildings, Health centres, wellness centres and community buildings
- To monitor functionality of tap connections.
- To promote and ensure voluntary ownership among local community by way of contribution in cash, kind and/ or labour and voluntary labour (shramdaan)
- To assist in ensuring sustainability of water supply system, i.e. water source, water supply infrastructure, and funds for regular O&M
- To empower and develop human resource in the sector such that the demands of construction,

- plumbing, electrical, water quality management, water treatment, catchment protection, O&M, etc. are taken care of in short and long term
- To bring awareness on various aspects and significance of safe drinking water and involvement of stakeholders in manner that make water everyone's business

Pradhan Mantri Awaas Yojana – Gramin.

In news
PM releases financial assistance to over 6 lakh beneficiaries in UP under Pradhan Mantri Awaas Yojana – Gramin

Highlights
- Pradhan Mantri Awas Yojana was launched on 1 June 2015 to provide affordable housing to the urban poor.
- It is a Credit Linked Subsidy Scheme (CLSS), which means beneficiaries under PMAY scheme are eligible for interest subsidy if they avail a loan to buy or construct a house.
- The mission of this scheme is to provide housing to all by the end of 2022.

Features & Benefits of PMAY Gramin Scheme
- It promotes housing facilities in all rural areas in India except Delhi and Chandigarh.
- The main objective of this scheme is to assist the applicants in constructing a pucca house.
- This scheme aims to construct 4 crore houses for the rural poor by 2022.
- The budget for this scheme is ₹ 81,975 crore

24th "Hunar Haat"

In news
Ministry of Minority Affairs is organising the 24ʰ "Hunar Haat" at Avadh Shilpgram, Lucknow (UP) from 22ⁿᵈ January to 04ᵗʰ February, 2021

Theme: *"Vocal for Local"*

Hunar Haat
It is **an exhibition of handicrafts and traditional products made by artisans from the minority communities.** Organised by **ministry of minority affairs under "USTTAD" scheme** at different parts of the country.

Aim
To provide market exposure and employment opportunities to artisans, craftsmen and traditional culinary experts.

Significance
"Hunar Haat" have become a successful mission **to provide employment and employment opportunities and national as well international markets for thousands of master artisans, craftsmen and culinary experts.**

USTTAD SCHEME
USTTAD (Upgrading the Skills and Training in Traditional Arts/Crafts for Development) scheme aims to preserve heritage of traditional arts and crafts of minority communities and build capacity of traditional craftspersons and artisans and establish linkages of traditional skills with the global market.

Atal Beemit Vyakti Kalyan Yojana

In news
Atal Beemit Vyakti Kalyan Yojana of ESI Corporation provides relief in form of cash compensation to Insured Persons in the contingency of their unemployment. Presently under this Scheme 50% of average earning of the Insured Person is paid for maximum 90 days in case of his unemployment subject to certain contributory conditions.

Issue
- It was brought to the notice of ESIC that in some cases employers have struck off their employees from the rolls few months after actually terminating them from service.
- During this period, ESI contribution was also not filed by the employers for these employees in the system.
- As the relief under Atal Beemit Vyakti Kalyan Yojana is available only in case of unemployment of the Insured Persons, such. employees though terminated from service became ineligible for relief under this scheme.

Review of the issue
- The matter was reviewed and ESIC has now decided that in cases where the employer has shown "Zero" contribution in respect of an employee for some months before exiting him from the system, the relief under ABVKY for such period of ***"Zero"*** contribution, shall also be allowed.
- However, only those beneficiaries who have been exited from the rolls of the employer, shall be considered for payment of relief under ABVKY subject to fulfilment of other eligibility conditions.

About the scheme
- Atal Bimit Vyakti Kalyan Yojana is a welfare measure being implemented by the Employee's State Insurance (ESI) Corporation.

- It offers cash compensation to insured persons when they are rendered unemployed.
- The Scheme was introduced w.e.f. 01-07-2018.
- The scheme is implemented on pilot basis for a period of two years initially. The scheme has been extended upto 20 June 2021.

Rashtriya Yuva Sashaktikaran Karyakram

Context

Youth represent the most dynamic and vibrant segment of the population. India is one of the youngest nations in the world and is expected to have a very favourable demographic profile in the time to come. In India, youth in the age group of 15-29 years constitute 27.5% of the population.

In news

The Rashtriya Yuva Sashaktikaran Karyakram Scheme is a Central Sector Scheme of the Ministry of Youth Affairs & Sports and has been continuing since 12th Five Year Plan.

Aim

The Scheme aims to develop the personality and leadership qualities of the youth and to engage them in nation building activities.

The 7 sub-schemes under scheme RYSK are

- Nehru Yuva Kendra Sangathan.
- National Youth Corps.
- National Programme for Youth and Adolescent Development.
- International Cooperation.
- Youth Hostels.
- Assistance to Scouting and Guiding Organisations.
- National Young Leaders Programme.

NaiRoshni

In news

"NaiRoshni", a scheme for Leadership Development of Minority Womenis being implemented across India with an aim to empower and instill confidence in women by providing knowledge, tools and techniques for interacting with Government systems, banks and other institutions at all levels

Objective

To embolden the minority women to move out of the confines of their homes and community and assume leadership roles in society.

Highlights

- The scheme provides for six days training programme followed by handholding for a period of one year.
- The training is provided on various pre-designed Training modules covering issues relating to women viz. Leadership of Women through participation in decision making, Educational Programmes for women, Health and Hygiene, Legal rights of women, Financial Literacy, Digital Literacy, Swachh Bharat, Life Skills, and Advocacy for Social and Behaviourial change.
- The Scheme is being implemented through Non-Governmental Organisations empanelled under the NaiRoshni Scheme as per scheme guidelines in force.
- NaiRoshni scheme targets women beneficiaries specifically, other schemes of the Ministry also lay lot of emphasis on minority women.
- In SeekhoAurKamao (Learn & Earn) Scheme, 33% of the total beneficiaries are women. Similarly in NaiManzilscheme , 30% of the total beneficiaries are women. These schemes help in economic empowerment of the Minority women.

Sakhi/One Stop Centres

Context

Women facing physical, sexual, emotional, psychological and economic abuse, irrespective of age, class, caste, education status, marital status, race and culture will be facilitated with support and redressal.

In news

733 One Stop Centres (OSCs) have been approved for 730 districts, out of which. 700 have become operational in 35 States/ UTs

One Stop Centres (OSC) are intended to support women affected by violence, in private and public spaces, within the family, community and at the workplace.

The Scheme will be funded through Nirbhaya Fund . The Central Government will provide 100% financial assistance to the State Government /UT Administrations under the Scheme.

Objectives

- To provide integrated support and assistance to women affected by violence, both in private and public spaces under one roof.
- To facilitate immediate, emergency and non - emergency access to a range of services including medical, legal, psychological and counselling

support under one roof to fight against any forms of violence against women.

Pradhan Mantri Krishi Sinchayee Yojana

In news

Integrated Watershed Management Programme (IWMP) was amalgamated as the Watershed Development Component (WDC) of the Pradhan MantriKrishiSinchayeeYojana (PMKSY) in 2015-16.

Pradhan Mantri Krishi Sinchayee Yojana

Government of India is committed to accord high priority to water conservation and its management. To this effect Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) has been formulated with the vision of extending the coverage of irrigation 'Har Khet ko pani'and improving water use efficiency'More crop per drop'in a focused manner with end to end solution on source creation, distribution, management, field application and extension activities. The Cabinet Committee on Economic Affairs chaired by Hon'ble Prime Minister has accorded approval of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) in its meeting held on 1st July, 2015.

Objectives of PMKSY include

- Achieve convergence of investments in irrigation at the field level (preparation of district level and, if required, sub district level water use plans).
- Enhance the physical access of water on the farm and expand cultivable area under assured irrigation (Har Khet Ko Pani).
- Integration of water source, distribution and its efficient use, to make best use of water through appropriate technologies and practices.
- Improve on - farm water use efficiency to reduce wastage and increase availability both in duration and extent.
- Enhance the adoption of precision - irrigation and other water saving technologies (More Crop Per Drop).
- Enhance recharge of aquifers and introduce sustainable water conservation practices.
- Ensure the integrated development of rainfed areas using the watershed approach towards soil and water conservation, regeneration of ground water, arresting runoff, providing livelihood options and other NRM activities.
- Promote extension activities relating to water harvesting, water management and crop alignment for farmers and grass root level field functionaries.
- Explore the feasibility of reusing treated municipal waste water for peri-urban agriculture.

SFURTI clusters

In news

Gadkari inaugurates 50 SFURTI clusters in 18 States, which will support over 42,000 artisans in traditional crafts

Highlights

- The artisans have been supported in the traditional segments of muslin, khadi, coir, handicraft, handlooms, wood craft, leather, pottery, carpet weaving, bamboo, agro processing, tea, etc.
- The Ministry of MSME is implementing a Scheme of Fund for Regeneration of Traditional Industries (SFURTI) with a view to organize traditional industries and artisans into clusters to make them competitive and increase their income.
- These clusters have been inaugurated in the States of Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Odisha, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.

Background

- As on date, there are 371 numbers of Clusters which have are being funded by the Ministry, supporting 2.18 lakh artisans with a total Government assistance of Rs. 888 cr.
- More than Rs.708 crore has been the budgetary allocation under the scheme, of which more than Rs.567 crore has been released for the implementation of the scheme so far.
- These clusters are spread all over the country covering 248 districts. The Ministry aims to support at least 1 cluster in each district in the coming period.
- Under the Scheme, the Ministry supports various interventions including setting up of infrastructure through Common Facility Centers (CFCs), procurement of new machineries, creating raw material banks, design intervention, improved packaging, improvement of marketing Infrastructure, improved skills and capacity development through training and exposure visits, etc.

SCIENCE AND TECHNOLOGY

Pigmentary disorder

In news

A Rs. 3.6 crore grant to promote research on pigmentary disorder

- It typically indicate an increased amount of melanin, leading to darker color of the skin, called hypermelanosis or hyperpigmentation
- Decreased or absent pigment makes the skin appear lighter or white, known as hypomelanosis or hypopigmentation
- The disorders can be genetic or acquired.
- Physiological pigmentation is a critical defense mechanism by which skin is protected against harmful UV radiations.
- Inefficient pigmentation predisposes to skin cancers, which are one of the leading causes of cancer-associated deaths worldwide.
- Further, pigmentary disorders (both hypo and hyperpigmentary) are considered a social stigma and therefore they impart long-term psychological trauma and tremendously hamper mental well-being of patients.

Online Chatbot 'ASKDISHA'

In news
Online Chatbot 'ASKDISHA' upgraded to converse with Railway customers in Hindi language

About the chatbot
- The ASKDISHA Chatbotwas initially launched in English language but in order to further enhance the customer services rendered and to further strengthen the services of the chatbot, IRCTC has now powered voice enabled ASKDISHA to converse with customers in Hindi language also in the e-ticketing site www.irctc.co.in.
- The customers can now ask queries to ASKDISHA in Hindi language by voice as well as text.
- The chatbot is a special computer programme designed to simulate conversation with users, especially over the internet.
- The first-of-its-kind initiative by IRCTC is aimed at facilitating accessibility by answering users' queries pertaining to various services offered to railway passengers.

National Mission on Quantum Technologies & Applications

In news
National Mission on Quantum Technologies & Applications (NM-QTA) with a total budget outlay of Rs 8000 Crore announced by the government in budget 2020.
It will be implemented for a period of 5 years by the Department of Science & Technology (DST).

Quantum Technology
- Quantum Theory explains the nature of energy and matter on the atomic and subatomic level and Quantum Technology is based on its principles.
- The goal is to achieve information processing beyond the limits of the classical world by controlling and manipulating Quantum Systems.
- Quantum field is not mature enough to be used commercially but Quantum principles will be used for engineering solutions to extremely complex problems in computing, communications, sensing, chemistry, cryptography, imaging and mechanics.

Need of the mission
- It is required to meet the every rising technological needs of society taking into account new technology trends and road maps of leading countries.
- The mission would bring quantum computers, secured communications through fibre and free space, quantum encryption and crypt-analysis and associated technologies to the country.
- To bring India at par with other advanced countries advanced research in quantum science and technology, technology development and higher education in science, technology and engineering disciplines is required which will help boost translational research. At the same time preparing next gen skilled labor, entrepreneurship and start-up ecosystem development.

Way Forward
- Quantum computers and computing, quantum communication, quantum key distribution, encryption, crypt analysis, quantum devices, quantum sensing, quantum materials, quantum clock are next gen transformative technologies which will receive a push.
- Aero-space engineering, numerical weather prediction, simulations, securing the communications & financial transactions, cyber security, advanced manufacturing, health, agriculture, education will receive huge boost and other important sectors with focus on creation of high skilled jobs, human resources development, start-ups & entrepreneurship leading to technology lead economic growth will be boosted as well.
- Quantum technologies is expected to change entire paradigm of computation, communication and encryption as such countries who achieve an edge in this field will hold an advantage leading to a leadership role while garnering multi-fold economic growth.

DST launches SATHI Initiative

In news

"Sophisticated Analytical & Technical Help Institutes (SATHI)", a unique scheme launched by Department of Science & Technology.

SATHI
- SATHI will foster a strong culture of collaboration between institutions and across disciplines to take advantage of developments, innovations and expertise in diverse areas.
- It aims to address the problems of accessibility, maintenance, redundancy and duplication of expensive equipment in our Institutions, while reaching out to the less endowed organizations in need, e.g., industry, MSMEs, startups and State Universities.
- SATHI will foster a strong culture of collaboration between institutions and across disciplines to take advantage of developments, innovations and expertise in diverse areas.
- SATHI Centres are expected to house major analytical instruments to provide common services of high-end analytical testing, thus avoiding duplication and reduced dependency on foreign sources.
- DST has already set up three such centres in the country, one each at IIT Kharagpur, IIT Delhi and BHU at a total cost of Rs 375 Cores.
- It is planned to set up five SATHI Centres every year for the next four years.

Science and Applied Research Alliance and Support (SARAS)

In news

Coal India's flagship subsidiary NCL has set up a centre named *"Science and Applied Research Alliance and Support"(SARAS)*

Objective

To promote Innovation, Research & Development and skill development along with improving company's operational efficiency and utilize resources at optimum level.

Highlights
- SARAS will help and enable the company in Integration of Innovation and Research for enhancing coal production, productivity, and safety in mines.
- The company has set up a dedicated R&D Centre in collaboration with IIT (BHU) and have already commenced 6 varied domain projects worth ₹ 60 Million to facilitate this move.

- SARAS would also help establish centres of excellence to ensure technical support to R&D along with thrust on quality skill development and employment to local youths in and around company's operational area.
- Continuous improvement of the existing technical infrastructure of the company for operational efficiency and integrating all initiatives with common tech platforms for optimum utilization of resources are also the objectives of setting up this centre.

National Deworming Day

In news

The National Deworming Day is conducted in all states/UTs on February 10 every year, with a mop-up day on February 15. Some states/UTs also conduct a bi-annual round on 10 August, depending on worm prevalence in their state/UT.

Objective
- To deworm all preschool and school-age children (enrolled and non-enrolled) between the ages of 1-19 years through the platform of schools and AnganwadiCenters in order to improve their overall health, nutritional status, access to education and quality of life.
- This is one of the largest public health programs reaching large number of children during a short period.
- More than 836 million children are at risk of parasitic worm infections worldwide. According to World Health Organization 241 million children between the ages of 1 and 14 years are at risk of parasitic intestinal worms in India, also known as **Soil-Transmitted Helminths (STH).**

About STH

Helminths (worms) which are transmitted through soil contaminated with faecal matter are called soil-transmitted helminths (Intestinal parasitic worms). Roundworm (Ascarislumbricoides), whipworm (Trichuristrichiura) and hookworms (Necatoramericanus and Ancylostomaduodenale) are worms that infect people.

STH transmission
- Adult worms live in human intestines for food and survival and produce thousands of eggs each day.
- Eggs are passed in the faeces of infected person.
- Infected people who defecate outdoors spread worm eggs in the soil.
- Eggs contaminate the soil and spread infection in several ways: –
- Ingested through vegetables that are not carefully cooked, washed or peeled;
- ingested from contaminated water sources;

ingested by children who play in soil and then put their hands in their mouths without washing them.

Scientists of ARI, Pune develop biofortified, high protein wheat variety

Context

Scientists from Agharkar Research Institute (ARI), Pune, an autonomous institute under the Department of Science & Technology, Government of India, have developed a biofortified durum wheat variety MACS 4028, which shows high protein content.

Wheat variety MACS 4028

- The wheat variety developed by the ARI scientists group on Wheat improvement, shown high protein content of about 14.7%, better nutritional quality having zinc 40.3 ppm, and iron content of 40.3ppm and 46.1ppm respectively, good milling quality and overall acceptability.
- It is a semi-dwarf variety, which matures in 102 days and has shown the superior and stable yielding ability of 19.3 quintals per hectare.
- It is resistant to stem rust, leaf rust, foliar aphids, root aphids, and brown wheat mite.
- The MACS 4028 variety is also included by the Krishi Vigyan Kendra (KVK) programme for United Nations Children's Fund (UNICEF) to alleviate malnutrition in a sustainable way and can boost the Vision 2022 "KuposhanMukt Bharat", the National Nutrition Strategy.

IUSSTF - Viterbi Program creates long-term S&T linkages between India & US

In news

A total of 14 students will undertake a research internship at Viterbi School of Engineering, University of Southern California, LA, USA.

About Viterbi program

- The Viterbi Program of IUSSTF was developed between IUSSTF and the Viterbi School of Engineering, University of Southern California (USC).
- This program is a part of the Government's endeavour to encourage research and development amongst the bright young Indian minds to create long-term, sustainable, and vibrant linkages between India and the US.

About IUSSTF

- IUSSTF was established under an agreement between the Governments of India and the United States of America in March 2000.
- It is an autonomous bilateral organization jointly funded by both the Governments that promote Science, Technology, Engineering, and Innovation through substantive interaction among government, academia, and industry.
- The Department of Science & Technology (DST), Governments of India, and the U.S. Department of State are respective nodal departments.

Indian Regional Navigation Satellite System

In news

Department of Space (DoS) has reported that Indian Space Research Organisation (ISRO) has designed NavIC messaging system and developed a NavIC receiver.

Usage of the system

- **The Indian National Centre for Ocean Information System (INCOIS)** is using this messaging system to broadcast emergency warning messages like cyclone, tsunami and high waves as and when it occurs and also for broadcasting of information of Potential Fishing Zone (PFZ).
- DoS have reported that ISRO has transferred this technology to five industries in India to manufacture the receivers.

One of the department is fisheries

NAVIC

- IRNSS is an independent regional navigation satellite system being developed by India.
- It is designed to provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary, which is its primary service area.
- IRNSS will provide two types of services, namely, Standard Positioning Service (SPS) which is provided to all the users and Restricted Service (RS), which is an encrypted service provided only to the authorised users.
- The IRNSS System is expected to provide a position accuracy of better than 20 m in the primary service area.

Some applications of IRNSS are

- Terrestrial, Aerial and Marine Navigation
- Disaster Management
- Vehicle tracking and fleet management
- Integration with mobile phones
- Precise Timing
- Mapping and Geodetic data capture
- Terrestrial navigation aid for hikers and travellers

- Visual and voice navigation for drivers

Starch-based materials developed to stop rapid blood loss during accidents

In news
After a serious injury, few challenges are more urgent than stopping life-threatening bleeding.
Scientists from the Institute of Nano Science and Technology (INST), have developed a starch-based '**hemostat**' material that concentrates the natural clotting factors in blood by physically absorbing excess fluid.

Features of the Hemostat
- Hemostat materials absorb excel fluid by concentrating the natural clotting factors in the blood that are critical for stopping the blood flow; however, the bleeding can restart when non-biodegradable materials are removed.
- The microparticles of the product, known as 'calcium-modified carboxymethyl-starch,' swelled up to form a cohesive and adherent gel within 30 seconds after contact with blood in lab tests.

How it absorbs fluid from blood?
- The microparticles are prepared by modifying some of the chemical hydroxyl groups on starch to carboxymethyl groups while also incorporating the beneficial calcium ions, which encourages the aggregation of red blood cells and platelets and their activation to generate the fibrin protein network that forms a stable blood clot.
- This modification increases the ability of the molecules to interact with water.
- This is the basis of its impressive ability to absorb fluid from the blood and hence concentrate the clotting factors.

Juice aplenty from the Grape variety from ARI, Pune

In news
Anautonomous institute of the DST, have developed a hybrid variety of grapes which is resistant to fungal diseases, high yielding and has excellent juice quality.

The hybrid variety ARI-516
- The hybrid variety ARI-516 has been developed by interbreeding of two species from the same genus -- Catawba variety of Vitis labrusca and Beauty seedless variety of Vitis vinifera.
- The fungal resistance of ARI-516 has been derived from Catawba, which is an American grape variety.
- It has superior quality fruits and higher yield per unit area.

- An early ripening hybrid, it matures in 110 - 120 days after pruning.

The salient features of ARI-516
- It include evenly maturing character with long cylindrical medium-sized fruit bunches making this variety superior over other varieties.
- It has small to medium bluish blackberries with one rudimentary seed in each berry, which is sweet in taste having the value of TSS (Total Soluble Solids) as 20-22 ^{0}B with musky flavor having about 65-70% juice content.
- The berry yield is about 15-20 ton/acre, and it is tolerant to downy & powdery mildew diseases as well as resistant to anthracnose disease -- a group of fungal diseases that affect a variety of plants in warm, humid areas.
- It is also suitable for preparation of juice, raisin, jam and red wine and farmers are enthusiastically adopting the variety.
- The hybrids are evaluated for their disease resistance, fruit quality, and whether they are seedless or not.

India ranks twelfth in the world in terms of grape production.

Huntington disease (HD)
In news
A team of scientists from the **National Centre for Cell Science (NCCS), Pune** studied the HTT gene in **fruit flies.**

Observation
- They observed that the pathogenic Huntingtin protein causes a decrease in the overall protein production in cells and that the Huntingtin clumps collect together (sequester) molecules of another protein called Orb2, which is involved in the process of protein formation.
- They speculated that the Huntingtin clumps were possibly making molecules of Orb2 unavailable to carry out their normal function associated with protein formation, leading to the observed reduction in proteins in the cell.
- To gain clarity on this, they induced the cells to produce Orb2 in excess, and found that this did indeed reduce the adverse effects of the faulty Huntingtin protein, which supported their speculation.

About the disease
- Huntington disease (HD) is a progressive genetic disorder affecting the brain that causes uncontrolled movements, impaired coordination

- of balance and movement, a decline in cognitive abilities, difficulty in concentrating and memory lapses, mood swings and personality changes.
- It is caused by a mutation in a gene called HTT.
- The HTT genes are involved in the production of a protein called huntingtin.
- They provide the instruction for making the protein.
- When the genes mutate, they provide faulty instructions leading to production of abnormal huntingtin proteins and these form into clumps.
- The clumps disrupt the normal functioning of the brain cells, which eventually leads to death of neurons in the brain, resulting in Huntington disease.

Bio fortified crops

In news
Scientists from Agharkar Research Institute (ARI), Pune, have developed a biofortified durum wheat variety MACS 4028, which shows high protein content.

Results
The wheat variety developed by the ARI scientists group on Wheat improvement, shown high protein content of about 14.7%, better nutritional quality having zinc 40.3 ppm, and iron content of 40.3ppm and 46.1ppm respectively, good milling quality and overall acceptability.

Details
- Wheat crop in India is grown under six diverse agroclimatic zones.
- In the peninsular zone of India (Maharashtra and Karnataka states), wheat cultivation is majorly done under rainfed and limited irrigation conditions.
- Under such conditions, the crop experiences moisture stress.
- There is a high demand for drought-tolerant varieties.
- Efforts for the development of high yielding, early maturing varieties with good quality and disease resistance for rainfed conditions are carried out at Agharkar Research Institute, Pune under All India coordinated Wheat and Barley improvement programme, coordinated through **Indian Institute of Wheat and Barley Research** Karnal governed by the Indian Council of Agriculture Research

Biofortification
- It is the process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology.
- Biofortification differs from conventional fortification in that biofortification aims to

increase nutrient levels in crops during plant growth rather than through manual means during processing of the crops.
- Biofortification may therefore present a way to reach populations where supplementation and conventional fortification activities may be difficult to implement and/or limited.

#Researchers at the Indian Institute of Astrophysics (IIA) have discovered hundreds of Li-rich giant stars (19 April 2020)

This indicates that Li is being produced in the stars and accounts for its abundance in the interstellar medium

Lithium enhancement is also being associated with central Helium (He) burning stars, also known as red clump giants.

This association could open up new vistas in the evolution of the red giant stars.

This is an important discovery that will help to eliminate many proposed theories such as planet engulfment during the red giant evolution in which helium at the center is not burning.

Lithium rich red giants

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Highlights
- This indicates that Li is being produced in the stars and accounts for its abundance in the interstellar medium
- Lithium enhancement is also being associated with central Helium (He) burning stars, also known as red clump giants.
- This association could open up new vistas in the evolution of the red giant stars.
- This is an important discovery that will help to eliminate many proposed theories such as planet engulfment during the red giant evolution in which helium at the center is not burning.
- Indian Institute of Astrophysics (IIA) is an autonomous institute under the Department of Science &Technology.

Lithium in stars
- Lithium (Li), is one of the three primordial elements, apart from Hydrogen and Helium (He), produced in the big bang nucleosynthesis (BBN)
- Identifying sources of Li enrichment in our Galaxy has been a great interest to researchers to validate Big Bang Nucleosynthesis as well as a stellar mixing process.

NASA announced new SunRISE mission to study giant solar particle storms

In news
US space agency National Aeronautics and Space Administration (NASA) has announced that it has selected a new mission to study giant solar particle storms.

About SUNRISE mission

- **The Sun Radio Interferometer Space Experiment (SunRISE)** will look into how Sun generates and releases the giant weather storms, known as the solar particle storms, into space.
- The mission will help in greater understanding of the solar system. The findings would safeguard astronauts from solar storms while they travel to Mars or the Moon.
- **SunRISE contains six CubeSats** which will work together as a large radio telescope. Each of the CubeSats would run on solar power and would be of the size of a toaster oven.
- Together, these will observe radio images of low-frequency emission from solar activity and create 3D maps to locate the origin place of a solar particle storm on the Sun. The entire procedure of the storm evolution as it moves outward into the space will be studied too.
- NASA has awarded $62.6 million for building, designing and launching the mission.
- **It will be headed by Justin Kasper** of the University of Michigan and managed by NASA's Jet Propulsion Laboratory in Pasadena, California.
- **The launch date of the mission has been set for July 1, 2023.**
- **Missions of Opportunity** are part of NASA's oldest continuous program called the **Explorers Program**. These aim at providing low-cost, efficient and frequent access to space for various missions.

NCC offers its volunteer cadets for national duty to fight COVID-19 under 'Ex NCC Yogdan'

In news

National Cadet Corps (NCC) has offered a helping hand to civilian authorities in the country's fight against COVID-19 by extending the services of cadets under 'Exercise NCC Yogdan'.

Exercise NCC Yogdan
- Guidelines have been issued for temporary employment of its cadets to augment relief efforts

and functioning of various agencies involved in battling the pandemic.
- The tasks envisaged for NCC cadets include, manning of helpline/call centres; distribution of relief materials/medicines/ food/essential commodities; community assistance; data management and queue & traffic management.
- According to the guidelines, cadets should not be employed in handling of law and order situation or for active military duties or at hot spots.
- Only Senior Division volunteer cadets above 18 years of age will be employed.
- They should be employed in small cohesive groups of eight to 20 under the supervision of Permanent Instructor Staff or/and an Associate NCC Officer.
- For employment of volunteer cadets, State governments /district administration has to send the requisition through State NCC Directorates.

About NCC
- The NCC, which operates under Ministry of Defence, is the largest uniformed youth organisation of the country and has been engaged in conducting various social service and community development activities. T
- The NCC cadets have been contributing to the national cause during natural calamities like floods, cyclone, etc since its inception.

New model to predict ionospheric electron density can help communication/navigation

In news

Researchers from Indian Institute of Geomagnetism (IIG), Navi Mumbai, an autonomous institute of the Department of Science & Technology, Govt. of India, have developed a global model to predict the ionospheric electron density with larger data coverage—a crucial need for communication and navigation.

Ionospheric Electron Density
A new **Artificial Neural Networks based global Ionospheric Model (ANNIM)** was developed by using long-term ionospheric observations to predict the ionospheric electron density and the peak parameters.

Artificial Neutral Networks
- ANNs replicate the processes in the human brain (or biological neurons) to solve problems such as pattern recognition, classification, clustering, generalization, linear and nonlinear data fitting, and time series prediction, and very few attempts have been made to model the global ionosphere variability using ANNs.
- A neural network-based global ionospheric model was developed by using an extensive database

consisting of nearly two decades of global Digisonde (an instrument that measures real-time on-site electron density of the ionosphere by sending the radiofrequency pulses), Global Navigation Satellite System (GNSS) radio occultation and topside sounders observations.

- These datasets were processed with various quality control measures to eliminate spurious data points (outliers) and prepared for the training.
- Day number, Universal Time, latitude, longitude, F10.7 index (responsible for Photo-ionization), Kp (represents the disturbed space weather conditions), magnetic declination, inclination, dip latitude, zonal and meridional neutral winds were taken as inputs in the study.

Gamma-ray flux variability of luminous and high energy blazars: clues to blazar emission mechanisms

In news

Researchers from the Indian Institute of Astrophysics (IIA), Bangalore, an autonomous institute of the Department of Science & Technology, Govt. of India, have conducted the first systematic study on the gamma-ray flux variability nature on different types of blazars.

Where Blazars found?

- At the center of most galaxies, there's a massive black hole that can have mass of millions or even billions of Suns that accrete gas, dust, and stellar debris around it.
- As these material falls towards the black hole, their gravitational energy gets converted to light forming active galactic nuclei (AGN).
- A minority of AGN (~15%) emit collimated charged particles called jets travelling at speeds close to the speed of light.
- Blazars are AGN whose jets are aligned with the observer's line of sight.
- Some blazars are thought to host binary black holes in them and could be potential targets for future gravitational-wave searches.

What are Blazars?

- Blazars are the most luminous and energetic objects in the known universe were found to be emitters of gamma-rays in the 1990s.
- It is only with the capability of Fermi Gamma-ray space telescope (launched in 2008) to scan the entire sky once in three hours one is able to probe the flux variability characteristics of blazars on a range of time scales.

- One of the open problems in high energy astrophysics is to localize the site for the production of gamma-rays.
- Variability studies in the high energy gamma-ray band can help one to locate the high energy emission site and the high energy emission process.

Importance of Study

Their study could provide clues to the processes happening close to the black hole, not visible through direct imaging.

IIA scientists connect Lithium abundance in interstellar space to new Lithium rich red giants

In news

Researchers at the Indian Institute of Astrophysics (IIA), an autonomous institute under the Department of Science &Technology, Govt. of India, have discovered hundreds of Li-rich giant stars indicating that Li is being produced in the stars and accounts for its abundance in the interstellar medium.

Findings of the study

- Lithium (Li), is one of the three primordial elements, apart from Hydrogen and Helium (He), produced in the **big bang nucleosynthesis (BBN)** whose models predict primordial Li abundance.
- However, the present measurement of Li in the interstellar medium and very young stars is about 4 times more than the primordial value.
- Thus, identifying sources of Li enrichment in our Galaxy has been a great interest to researchers to validate Big Bang Nucleosynthesis as well as a stellar mixing process.
- Apart from reactions, in which high energy cosmic ray particles bombard with heavier nuclei such as carbon and oxygen-producing lighter particles such as Li, stars are also proposed as likely Li source in the Galaxy.
- This is an important discovery that will help to eliminate many proposed theories such as planet engulfment or nucleosynthesis during the red giant evolution in which helium at the center is not burning.

Plasmonic semiconductor nanomaterials to remove toxic materials from water

In news

IASST Inspire fellow developing plasmonic semiconductor nanomaterials to remove toxic materials from water.

Plasmonic Semi-conductor

- Plasmonic semiconductor nanomaterials (which are metal-like materials with free electrons on the surface that oscillate collectively when hit by light) for removal of toxic organic compounds from water by harvesting solar light.
- The materials can easily adsorb toxic ions like arsenic and fluoride, which are often found in water in North East India and convert it to its not toxic forms when they are exposed to sunlight.
- A further extension of this work is in the generation of hydrogen (H_2) fuel from water, which can reduce the use of greenhouse gas-emitting fossil fuels.

SCTIMST scientists design super absorbent material

In news
Scientists at Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) an autonomous institute under the Department of Science and Technology (DST), Govt of India have designed and developed a highly efficient superabsorbent material for liquid respiratory and other body fluid solidification and disinfection for the safe management of infected respiratory secretions.

Chitra Acrylosorb Secretion Solidification System

- The material titled Chitra Acrylosorb Secretion Solidification System is a highly efficient superabsorbent material for liquid respiratory and other body fluid solidification and disinfection.
- AcryloSorb can absorb liquids at least 20 times more than its dry weight and also contains a decontaminant for in situ disinfection.
- Containers filled with this material will immobilize the contaminated fluid by solidifying it (gel-like), thus avoiding spillage and will also disinfect it.
- The canister containing the solidified waste canister can then be decomposed as all other biomedical waste by incineration.
- This technology reduces the risk for the hospital staff, the need for personnel for disinfecting and cleaning the bottles and canisters for reusing them and makes the disposal safer and easier.

SOCIAL ISSUES

Central Adoption Resource Authority (CARA)

In news
Central Adoption Resource Authority (CARA) reported 246 cases of disruption and 10 cases of dissolution in adoption over the period of the last five years.

Highlights

- The figure of 1100 has been misquoted from the RTI response given by it, which also included the figures of withdrawal from the adoption process.
- It further stated that disruption implies returning back of the children to the institution after being placed with a family and is not a happy situation as the children face rejection and are scarred for a long time.
- There have also been 10 cases of dissolutions during the last five years, where the parents returned the child after concluding the legal adoption process through adoption order by the court.
- The total number of disruption and dissolution reported have been less than 2% of the total adoptions under the JJ Act, 2015 and not approximately 6% as has been reported by the print media.

Clarification

- There is a difference between parents withdrawing from the adoption process after accepting the profile of a child referred for various reasons, and those who return the child after taking them in pre-adoption foster care, which is called disruption.
- While the former is about helping parents take an informed decision of adopting the child, the latter is completely detrimental to the best interest of the child which is the guiding principle for any organisation working for children.

Way forward
In order to check this trend, CARA has formed a sub-committee of experts who have been travelling to different States to help them in building the capacity of social workers at the gross root level.

CARA
It is an apex body of Government of India under the Ministry of Women and Child Developmentfor promoting and facilitating in-country adoptions and is the designated Central Authority for regulating inter-country adoptions.

VidyaDaan 2.0

In news
Indian govt launched VidyaDaan 2.0 on DIKSHA used by CBSE,NCERT to strengthen e-learning content.
VidyaDaan 2.0 is a common national program to develop and contribute e-learning content and a chance to be recognised nationally.

VidyaDaan 2.0: Motto of the programme

- The programme brings together academicians and organisations to develop and contribute fun and engaging e-learning content aligned to the curriculum.
- Contributors can contribute a variety of e-learning content in the form of explanatory videos, animations, teaching videos, lesson plans, assessments and question banks in the prescribed format.
- The content will be monitored by a panel of academic experts and released for use on the DIKSHA app to help millions of children across the country continue learning anytime and anywhere.

DIKSHA Platform

- DIKSHA is a unique initiative which leverages existing highly scalable and flexible digital infrastructures, while keeping teachers at the center.
- It is built considering the whole teacher's life cycle - from the time student teachers enroll in Teacher Education Institutes (TEIs) to after they retire as teachers.
- In India, many teachers are creating & using innovative tech-based solutions in their classrooms. Some state governments have also initiated programs to support their teachers digitally.
- This inspired MHRD and NCTE to coordinate these efforts at a national level and build DIKSHA.

Tribal Health & Nutrition Portal – 'Swasthya

In news
A series of initiatives were announced by the Ministry of Tribal Affairs here today, which included the Tribal Health and Nutrition Portal 'Swasthya' and e-newsletter on health and nutrition ALEKH; opening of National Overseas Portal and National Tribal Fellowship Portal.

Highlights
- A first of its kind e-portal, providing all health and nutrition related information of the tribal population of India in a single platform.
- Swasthya will also curate innovative practices, research briefs, case studies, and best practices collected from different parts of India to facilitate the exchange of evidence, expertise and experiences.
- The launch of the portal is a first step towards the much bigger goal of serving the tribal population of our nation

- Through the GOAL Programme, the Ministry aims to mentor 5000 Tribal Youth across India and enable them to become village-level digital young leaders for their communities.

GOAL
- Going Online as Leaders (GOAL) Program was launched by the Ministry of Tribal Affairs (MoTA) and Facebook on 15th May 2020 to digitally skill and empower 5000 youth from tribal communities over five years.
- The project aims to identify and mobilise 2500 renowned people from the industry which include policy makers and influencers, teachers, artists, entrepreneurs and social workers known for their achievements in their respective domains, to personally mentor tribal youth across India.
- The programme has been designed for the youth in tribal areas and targets their capacity building which will in turn inspire, guide and encourage them and boost their confidence levels while igniting higher aspirations among them.
- The core areas of mentorship program are digital literacy, life skills, leadership & entrepreneurship and sector-specific skills.

Global Multidimensional Poverty Index and India

In news
NITI Aayog as the nodal agency has been assigned the responsibility of leveraging the monitoring mechanism of the Global **Multidimensional Poverty Index (MPI)** to drive reforms.

Global Indices to Drive Reforms and Growth (GIRG)
- Global MPI is part of Government of India's decision to monitor the performance of the country in 29 select Global Indices.
- The objective of the "**Global Indices to Drive Reforms and Growth (GIRG)"** exercise is to fulfil the need to measure and monitor India's performance on various important social and economic parameters and enable the utilisation of these Indices as tools for self-improvement, bring about reforms in policies, while improving last-mile implementation of government schemes.
- As the Nodal agency for the MPI, NITI Aayog has constituted a Multidimensional Poverty Index Coordination Committee (MPICC).

MPI
- Global MPI is an international measure of multidimensional poverty covering 107 developing countries and was first developed in 2010 by **Oxford Poverty and Human Development Initiative (OPHI)** and **United Nations Development Programme (UNDP) for UNDP's Human Development Reports.**

- The Global MPI is released at the High-Level Political Forum (HLPF) on Sustainable Development of the United Nations in July, every year.
- Global MPI is computed by scoring each surveyed household on 10 parameters based on -nutrition, child mortality, years of schooling, school attendance, cooking fuel, sanitation, drinking water, electricity, housing and household assets.

World Bank's STARS Project

In news
The cabinet has approved $500 million STARS program to improve the quality and governance of school education in six Indian states through Samagra Shiksha.

Aim
The STARS project aims at focussing on initiatives of PM e-Vidya, Foundational Literacy and Numeracy Mission and National Curricular and Pedagogical Framework for Early Childhood Care and Education as part of the Atmanirbhar Bharat Abhiyan.

Highlights
- The project would be implemented under the Department of School Education and Literacy, Ministry of Education (MoE).
- The project will cover six major states-- Himachal Pradesh, Rajasthan, Maharashtra, Madhya Pradesh, Kerala and Odisha.
- The cabinet has also approved setting up of an independent and autonomous institution (PARAKH) under the Department of School Education and Literacy, MoE.
- A project similar to STARS will be funded by ADB-- Gujarat, Tamil Nadu, Uttarakhand, Jharkhand and Assam.

STARS program
- Strengthening Teaching-Learning and Results for States Program (STARS) will help in improving assessment systems, facilitating school-to-work transition, strengthening classroom instruction and remediation, decentralizing management and strengthening the governance.
- It will also support India's goal 'Education for All'. For this vision, the World Bank has earlier assisted with more than $3 billion.

RAISE 2020
In news

Prime Minister Narendra Modi inaugurated a five-day global virtual summit on Artificial Intelligence. **The Responsible AI for Social Empowerment (RAISE 2020) summit** will be organized by the Government of India in partnership with Industry and Academia.

RAISE 2020
- The summit would be a global meeting of minds to exchange ideas and charter a course to use AI for social empowerment, inclusion, and transformation in key areas like Healthcare, Agriculture, Education and Smart Mobility amongst other sectors.
- The summit will witness participation from global industry leaders, key opinion makers, Government representatives, and academia.

Meri Saheli Initiative

In news
Meri Saheli' initiative was launched as Pilot Project by Railway Protection Force (RPF) across South Eastern Railway for security of women passengers in trains originating in that zone.

Aim
- The Railway Ministry decided to launch the Meri Saheli initiative with an aim of providing safety and security to the women passengers who will be travelling by trains for their whole journey from the starting station to the destination station.
- It will instill a sense of security among the women passengers travelling through short or longer routes of the train. .
- The initiative also aims at responding effectively to any security-related issue faced by the women travelling from trains.

Meri Saheli
- The initiative was started as a pilot project in South Eastern Railway in September 2020 and after getting encouraging response from lady passengers.
- An initiative of RPF, the strategy entails interaction with lady passengers especially those travelling alone by a team of lady RPF personnel at the originating station.
- These lady passengers are briefed about all precautions to be taken during the journey and told to dial 182 in case they face or see any problem in the coach.
- The RPF team collects only the seat numbers of the ladies and conveys them to stoppages en-route.
- RPF/RPSF escort onboard also covers all the coaches/identified berths during its duty period.

AWARDS

Gandhian Young Technological Awards

In news

Union Minister Dr Harsh Vardhan gave away Students Innovations for Advancement of Research Explorations - Gandhian Young Technological Innovation (SITARE-GYTI) and Society for Research and Initiatives for Sustainable Technological Innovations-Gandhian Young Technological Innovation (SRISTI-GYTI) awards, at a virtual function in New Delhi

Highlights

- Fourteen awards and eleven appreciation awards under SITARE-GYTI, and Seven awards and 16 appreciation awards under SRISTI-GYTI were given.
- The awardees were selected after a rigorous review process by eminent professors and scientists in respective fields.

Gandhian Young Technological Innovation awards

- It constitute two categories of awards, SITARE–GYTI under Biotechnology Industry Research Assistance Council (BIRAC), Department of Biotechnology (DBT) and SRISTI-GYTI given by SRISTI.
- The awards and appreciations are given under these two categories to encourage technology students to move towards setting up Biotech and other st0art-ups.

SITARE-GYTI awards are given every year to the most promising technologies developed by the students in life sciences, biotechnology, agriculture, medical devices etc. SRISTI-GYTI awards are given to students in other engineering disciplines, he said.

National Water Awards

In news

Tamil Nadu has bagged the first place under the 'Best State' category under the National Water Awards (NWAs) 2019,Tamil Nadu was followed by Maharashtra and Rajasthan as the best states under the normal category. The awards presented by the Union Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation.

Parameters considered for the ranking

- The ministry confers the award based on various parameters, including implementation of irrigation water supply schemes such as check dams, performance under micro irrigation, increase in irrigation coverage, performance in roof top rain water harvesting and status of implementation of water accounting and auditing.

- The total number of water bodies created, reuse of waste water from farms/industry/sewage, management and utilisation of data/IT technology in water conservation and irrigation.

Why are the awards given?

- The awards are given to motivate the individuals/organizations who are doing commendable work in the field of water resources conservation and management.
- Also, it strives to create awareness among the people about importance of water and motivate them to adopt the best water usage practices.
- The award winners in different categories will be given a citation, trophy and cash prize.
- The NWAs focuses on the good work and efforts made by individual and organizations across the country, and the government's vision for the path to a 'Jal Samridh Bharat'.

Categories

- The National Water Awards 2019 is awarding the participants 98 number of awards in 16 different categories - Best State, Best District, Best Village Panchayat, Best Urban Local Body, Best Research/ Innovation/ New Technology, Best Education/ Mass Awareness effort, Best TV show, Best Newspaper, Best School, Best Institution/ RWA/ Religious Organization, Best Industry, Best Water Regulatory Authority, Best Water Warrior, Best NGO, Best Water User Association, and Best Industry for CSR Activity.
- Each of the categories has sub-categories in different zones of the country.

2nd National water Awards

In news

Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, organised the 2ndNational Water Awards(NWAs)for the year 2019. The Award Distribution Ceremony is on 11th& 12th November, 2020 through virtual platform.
The Goalpara district administration, under the guidance of Deputy Commissioner VarnaliDeka, received on Wednesday the prestigious National Water Award, 2019 under the category of Water Conservation, Best District in the Northeast.

Objective

- The awards are given to motivate individuals/organizations who are doing commendable work in the field of water resources conservation and management.

- Also, it strives to create awareness among the people about the importance of water and motivate them to adopt the best water usage practices. The award winners in different categories will be given a citation, trophy and cash prize.
- The NWAs focus on the good work and efforts made by individual and organisations across the country, and the government's vision for the path to *'JalSamridh Bharat'*.
- The event provides a good opportunity to start-ups as well as leading organisations to engage and deliberate.
- The event also provides an occasion for all people and organisations to further cement a strong partnership and engender stakeholders'engagement in water resources conservation and management activities.

National Water Awards

The Ground Water Augmentation Awards and National Water Award were launched in the year 2007 with an objective to encourage all stakeholder including the Non-Governmental Organizations (NGOs), Gram Panchayats, Urban Local Bodies, Water User Associations, Institutions, Corporate Sector, Individuals etc. for adopting innovative practices of ground water augmentation by rainwater harvesting and artificial recharge, promoting water use efficiency, recycling & re-use of water and creating awareness through people's participation in the targeted areas resulting into the sustainability of ground water resources development, adequate capacity building amongst the stakeholders etc.

Lilavati Award-2020

In news

Union Minister of Education Ramesh Pokhriyal 'Nishank' virtually launched Lilavati Award 2020 on November 17. Theme: **Women Empowerment**

Sub-Themes

- Women Health
- Self Defence
- Sanitation & Hygiene
- Literacy
- Women entrepreneurship
- Legal awareness

Aim

To use "traditional Indian values" to raise awareness on issues such as sanitation, hygiene, health and nutrition.

Objective

- To create awareness about issues like sanitation, hygiene, health, nutrition, literacy, employment,

technology, credit, marketing, innovation, skill development, natural resources and rights among women.
- For promoting and practicing ideas of gender equity.

Significance

The program is expected to ensure the participation of women and enable them to hold higher positions in educational institutions.

Investment Promotion Award 2020

In news

The United Nations (UNCTAD) has declared Invest India-the National Investment Promotion Agency of India- as a winner of the 2020 United Nations Investment Promotion Award.

Highlights

- The **award ceremony took place on 7th December 2020** at UNCTAD Headquarters in Geneva.

- The award recognizes and celebrates the outstanding achievements and best practices ofInvestment Promotion Agencies (IPAs) across the globe.

- The evaluation was based on UNCTAD's assessment of work undertaken by 180 Investment Promotion Agencies.
- This United Nations Investment Promotion Award is the **most coveted award for Investment Promotion Agencies.**
- UNCTAD is acentral agency that monitors performance of IPAs and identifies global best practices.

Germany, South Korea and Singapore have been some of the past winners of the award.

Invest India

- As the national investment promotion and facilitation agency, **Invest India focuses on sector-specific investor targeting and development of new partnerships to enable sustainable investments in India**.
- In addition to a **core team that focuses on sustainable investments,** Invest India also partners with substantial investment promotion agencies and multilateral organizations.
- Invest India also actively works with several Indian states to build capacity as well as bring in global best practices in investment targeting, promotion and facilitation areas.

- Invest India, set up in 2009, is a non-profit venture under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India.

Ramanujan Prize for Young Mathematicians 2020

In news

Ramanujan Prize for Young Mathematicians 2020 awarded to Dr. Carolina Araujo from Brazil for **outstanding work in Algebraic Geometry.**

Work area
Focuses on birational geometry, which aims to classify and describe the structure of algebraic varieties.

She is the **first non-Indian** to receive this prize and will be a role model for all women.

About the award
- The prize awarded annually to a researcher from a developing country
- It is funded by the Department of Science and Technology of the Government of India in collaboration with ICTP (International Centre for Theoretical Physics), and the International Mathematical Union was given for her outstanding work in algebraic geometry.
- The Prize, given every year to young mathematicians less than 45 years of age who have conducted outstanding research in a developing country.

Meghdoot awards

In news
Postal Department confers Meghdoot awards to Postal Employees for their achievements in 2019-20

Highlights
- A memorandum of Understanding was signed by Department of Posts with CSC e-Governance Services India Limited to provide citizen centric service
- This will give a flip to setting a common service centres in more than 10000 Post Offices across the country for providing various G2C (Government to Citizen) and B2C (Business to Citizens) services to citizens in rural and remote areas
- Through this agreement, Department of Posts intends to provide a one-stop solution for all e-Governance services on assisted model through its "Common Service Centres(PO-CSCs)" in Post Offices.

- These "PO-CSCs" will also contribute to ease of living and ease of business to the nearby digitally deprived rural and semi-urban population .

The B2C (Business to Citizens) Services
- It includes Bharat Bill Payment System Bills (Electric, Gas, Water bills etc.).
- The services offered also included Third Party Services such as EMI (Equal Monthly Instalment) collections for various loans offered by financial institutions and submission of online application forms for loans.
- Travel services such as Ticket booking service would be available for Flight, Train and Bus Tickets.

Golden Peacock Environment Management Award 2020
In news
Steel Authority of India Limited (SAIL) has been awarded with the prestigious Golden Peacock Environment Management Award for the year 2020 in the Steel Sector

Highlights
- **SAIL has been the winner** of this award for successive **two years.**

- This award is one of the most coveted awards in the category.

- Considering various environmental issues leading to global warming and climate change, the award encourages corporates to enhance their environmental performance and to compete with peers to set benchmarks".

Corporate Responsibility of SAIL

- Focuses on adopting various environmental measures including, upgrading of pollution control facilities, treatment & recirculation of wastewater from individual units & outfalls, enhancement in the green cover in & around Plants & Units, efficient handling of different solid wastes (viz. process waste, hazardous waste, canteen/township waste), carbon sequestration through afforestation, eco-restoration of mined out area, among others.
- The impact of SAIL's initiatives and best practices on improving cleaner environment, reducing emissions & discharges, mitigating impacts of climate change and helping the Company to

conduct its operations in environmentally benign manner has been recognized.

Legion of Merit Award

In news
US President Donald Trump has presented the prestigious Legion of Merit, a top US honour, to Prime Minister Narendra Modi for his leadership in elevating the strategic partnership of India and the US.

Other awardee
- *Former Japanese Prime Minister Shinzo Abe:* For his leadership and vision for a free and open Indo-Pacific

- *Australian Prime Minister Scott Morrison:* For his leadership in addressing global challenges and promoting collective security.

India, the US, Australia and Japan constitute the 'Quad' group of countries, which has been seen as a counter to Chinese dominance in the Indo-Pacific region.

The Legion of Merit
- The Legion of Merit was instituted in 1942 by former US president Franklin D Roosevelt.
- It is the only US military decoration that has distinct ranks, and the first US medal to be awarded to citizens of other nations
- US military personnel qualify only for the lowest rank of legionnaire, any foreign citizen is eligible for the three higher ranks of officer, commander, and chief commander.
- The Legion of Merit, in the highest degree of the Chief Commander, is a prestigious award conferred by the President of the United States, typically upon Heads of State or Heads of Government of other countries.

The US had last awarded Legion of Merit to late Amir of Kuwait Sheikh Sabah al-Ahmed Al-Jaber Al-Sabah on September 18, 2020 as the senior-most Royal in the Middle-East for bridging divides in the restive region.

CII-ITC Sustainability Awards 2020

In news
NTPC ltd has been conferred *"Excellence"* in the prestigious CII-ITC Sustainability Awards 2020 in Corporate Social Responsibility (CSR) Domain.

Highlights
- NTPC has been honoured in the Corporate Excellence Category, Commendation for Significant Achievement.
- NTPC wins the prestigious CII-ITC Sustainability Awards in Corporate Excellence category second time in a row i.e. in the year 2019 and 2020.

CII-ITC Sustainability Awards 2020
- This was 15th CII-ITC Sustainability Awards 2020 held through the virtual platform.

- This is the highest award conferred by CII-ITC in CSR domain. NTPC is the only PSU to receive the award in the Corporate Excellence category.
- Instituted in 2006, the CII-ITC Sustainability Awards recognise and reward excellence in businesses that are seeking ways to be more sustainable and inclusive in their activities.
- CII-ITC Sustainability Awards define the science of sustainability performance.
- Excellence in sustainability is a journey of continuous improvement in processes and results.
- In the past 14 years, cumulatively, 953 businesses have applied of which 304 have been recognised.

National Energy Conservation awards 2020

In news
Indian Railways bags 13 awards at the 'National Energy Conservation awards 2020

Highlights
- These awards are given by the Bureau of Energy Efficiency to those organisations that put in special efforts to reduce energy consumption.
- These awards have been given to Indian Railways' zones and workshops for significant improvements in energy conservation by adopting various measures to promote energy efficiency

National Energy Conservation Awards
- The Ministry of Power, Government of India has launched a scheme in 1991, to give national recognition through awards to industries and establishments that have taken special efforts to reduce energy consumption while maintaining their production.

- The awards were given away for the first time on December 14, 1991, which was declared as the `National Energy Conservation Day'.
- These awards are given by eminent dignitaries holding very high positions in the Government of India in a function organized on 14th December every year.

- In line with the previous years, the Ministry of Power, Govt. of India, has decided to organize the "National Energy Conservation Award 2020" to recognize the efforts of various industrial units / establishments / organizations who have achieved efficient utilization and conservation of energy.

SKOCH Challenger Award

In news

Tribal Affairs Minister Arjun Munda is honoured with the SKOCH Challenger Award in a virtual ceremony on January 16, 2021

SKOCH Challenger Awards

- SKOCH Challenger Awards, instituted in 2003, salute people, projects and institutions that went the extra mile to make India a better nation.
- SKOCH Challenger Awards – the highest independently instituted civilian honours – have been conferred, the mighty and the ordinary have shared this platform for their extraordinary achievements in contributing to the society.
- The SKOCH Challenger Awards cover the best of efforts in the area of digital, financial and social inclusion.
- They encompass the best of governance, look at excellence in academics, change management, inclusive growth, citizen services delivery, capacity building, empowerment and other such softer issues that get normally lost in the glamour and the glitz of industry-sponsored or advertising focused jamborees

Highlights

- The Ministry of Tribal Affairs has digitalised the entire scholarship release process

- All 5 scholarship schemes have been digitalised as per DBT Mission mandate.
- 13 schemes are on Ministry dashboard, 6 initiatives are on Prayas PMO dashboard.
- Making the entire scholarship release process online has enabled 64 lakh beneficiaries to receive scholarships directly into their accounts through DBT.

Ice-Stupa

- It is a unique project to solve water problem in Ladakh region which faces shortage due to climate change.
- It is a way to store frozen melt water in the winter which can be used during the spring sowing season.

- The structure is built comprising of locally found material with large water retention capacity, which looks like Stupa.
- "26 such Ice-Stupas were establish in 2019-20, which stored about 60 million litre of water.
- More than 35 villages have been benefitted from this already.
- The projects is owned by the community and is scaling up to include another 25 Stupas".

Subhash Chandra Bose Aapda Prabandhan Puraskar 2021

In news

To recognize and honour the invaluable contribution and selfless service rendered by individuals and organizations in India in the field of Disaster Management, Government of India has instituted an annual award known as Subhash Chandra Bose Aapda Prabandhan Puraskar.

Highlights

- The award is announced every year on 23rd January, the birth anniversary of Netaji Subhash Chandra Bose.
- The award carries a cash prize of Rs. 51 lakh and a certificate in case of an institution and Rs. 5 lakh and a certificate in case of an individual.
- For the award this year, nominations were solicited from 1st July, 2020 onwards.
- The award scheme for the year 2021 was given wide publicity through print, electronic and social media.
- In response to the award scheme, 371 valid nominations were received from institutions and individuals.

Award for 2021

- Sustainable Environment and Ecological Development Society (in the institutional category)
- Dr. Rajendra Kumar Bhandari (in the Individual category) have been selected for the Subhash Chandra Bose Aapda Prabandhan Puraskar for their excellent work in Disaster Management.

AWBI (The Animal Welfare Board of India) Awards

In news

The Animal Welfare Board of India (AWBI), the apex body in the country for the welfare and protection of animals, conferred 14 Prani Mitra awards and JeevDaya awards 2021 to the individuals, organizations and

corporates for their outstanding performance in the field of animal welfare.

Animal Welfare Board of India (AWBI)
- It is a statutory body
- It is an advisory body advising the Government of India on animal welfare laws, and promotes animal welfare in the country of India.
- The Animal Welfare Board of India was established in 1962 under Section 4 of The Prevention of Cruelty to Animals Act,1960.
- The Board consists of 28 Members, who serve for a period of 3 years.

Functions
- The Board grants recognition to the newly started Animal Welfare Organisations (AWOs).
- To keep the law in force in India for the Prevention of Cruelty to Animals under constant study and to advise the government on the amendments to be undertaken in any such law from time to time.

Nari Shakti Puraskar

In news

President of India Confers Nari Shakti Puraskar for 2019 The awards were conferred on15 eminent women in recognition of their efforts in rendering distinguished services towards emancipation of women, especially vulnerable and marginalized women.

About the award
- Nari Shakti Puraskar is an initiative of the Ministry of Women and Child Development to acknowledge the exceptional contribution made by individuals and institutions, to celebrate women as game changers and catalyst of positive change in the society.
- These outstanding women have contributed towards safeguarding women's rightsalong with pushing the 2030 Agenda for Sustainable Development Goals.
- These awards are an effort to recognize women as equal partners in the advancement of society.