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AN INITIATIVE BY
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Learn FINITE

The information in this magazine is intended to provide users with resources and information which they may find useful and of interest.

We take all reasonable steps to keep this information current and accurate, but errors can occur.

We express our gratitude to all our team members and thankful to all the advisors for making first step in publishing a small magazine.

Our Methodology for this Magazine

We have used official website pib.nic.in to collect important press release important for Exam

The topics has been categorised subject wise so that is is easy for aspirants to read in flow and relate the topics

Background information has been provided so static related to current can be covered

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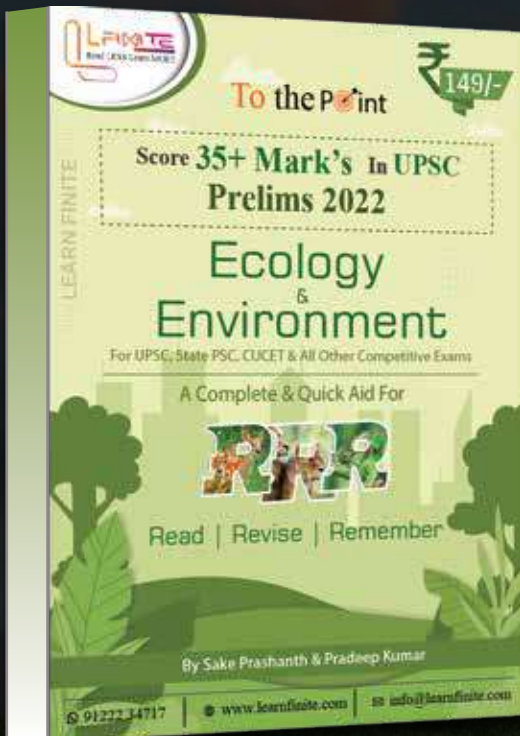
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An Initiative By Pradeep Kumar

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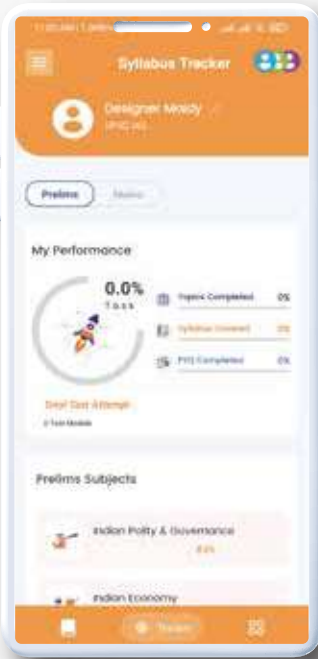
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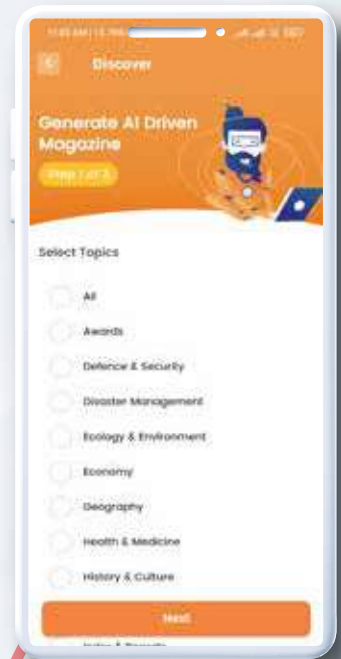
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History & Culture

Aadi Mahotsav

In news

The ongoing Tribes India Aadi Mahotsav is bigger and brighter than the editions before and with about 200 stalls and 1000 participating artisans as well as artists from across the country, it is a mini-India all under one roof. Aadi Mahotsav is a one-stop gifting destination that caters to different types of needs

Theme

“A Celebration of the Spirit of Tribal Crafts, Culture and Commerce”

Background

- Aadi Mahotsav is a national tribal festival and a joint initiative of Ministry of Tribal Affairs, Government of India & Tribal Cooperative Marketing Development Federation of India (TRIFED).
- This annual festival showcases traditional art and handicrafts and cultural heritage of the country and connects the tribal artisans with larger markets.
- This even brings to focus the diversity and richness of the tribes of India.”
- The Aadi Mahotsav is an annual event that **was started in 2017**.
- The festival is an attempt to familiarise people with the rich and diverse craft, culture of tribal communities across the country, at one place.
- Due to the pandemic, the 2020 edition of the festival could not be held.

TRIFED

- It came into existence in 1987. It is a national-level apex organization functioning under the administrative control of Ministry of Tribal Affairs, Govt. of India.
- TRIFED plays the dual role of both a market developer and a service provider, empowering them with knowledge and tools to better their operations in a systematic, scientific manner and also assist them in developing their marketing approach.
- The ultimate objective of TRIFED is socio-economic development of tribal people in the country by way of marketing development of the tribal products.

Aakashvani Sangeet Sammelan

In news

The prestigious Akashvani Music Festival, has been named after legendary vocalist and Bharat Ratna awardee Pandit Bhimsen Joshi, announced the Union Minister for Information and Broadcasting.

Pandit Bhimsen Joshi

- The All India Radio, besides its regular music broadcasts, has endeared itself to its classical music listeners by organising the Akashvani Sangeet Sammelan, in which prominent artistes from across the country perform.
- Javadekar said, “Doordarshan and All India Radio have opened the doors of huge musical treasure of Pandit Bhimsen Joshi to the general public.
- These recordings are now available on YouTube and the Ministry of I&B is making efforts to reach them to larger audience across the country.”
- “Music has many forms and it has power to motivate us. Arya Sangeet Prasarak Mandal could function for 67 years without a break because of the blessings of Pandit Bhimsen Joshi.
- Panditji was dear to one and all. The way he performed in foreign countries, he performed the same for people of all the strata of life,” Javadekar added.

Preservation of Historical Monuments

In news

There are 3693 monuments of national importance under protection of Archaeological Survey of India

Highlights

- The encroachment in the premises of the protected monuments/area are removed as per the provisions contained in the Ancient Monuments and **Archaeological Sites and Remains Act, 1958** and Rules framed thereunder.
- The Archaeological Survey of India has a list of 24 monuments, which remain untraceable.

- The Archaeological Survey of India has made efforts to locate/identify the untraceable monuments through field offices based on inspection, old records, revenue maps and published reports.

Ancient Monuments and Archaeological Sites and Remains Act(or AMASR Act)

- It is an act of parliament of the government of India that provides for the preservation of ancient and historical monuments and archaeological sites and remains of national importance, for the regulation of archaeological excavations and for the protection of sculptures, carvings and other like objects. It was passed in 1958.
- The Archaeological Survey of India functions under the provisions of this act.
- The rules stipulate that area in the vicinity of the monument, within 100 metres is prohibited area. The area within 200 meters of the monument is regulated category. Any repair or modifications of buildings in this area requires prior permission.

Udyanotsav

In news

Mughal Garden of Rashtrapati Bhavan will be opened for public viewing from 13 February 2021 (Saturday) to 21 March 2021

Mughal Garden

- The Mughal gardens of Delhi are located in Rashtrapati Bhavan, which is the residence of the President of India. As a visitor to the Rashtrapati Bhavan.
- The entire make of the Gardens is said to have been inspired by the Mughal Garden of Kashmir and Agra. There are also indications of the architecture being inspired from choicest Persian Paintings.
- Sir Edwin Lutyens, credited with the designing of most of the Indian capital, was the chief architect supervising the project of the Mughal Gardens. He designed the positioning of the plantations of the Mughal Gardens in 1917.
- By 1929, all plantings in the garden were done perfectly.

Highlights

- **Plant Varieties** - 60 to 101 types of bougainvillaeas are grown in the gardens which span over a vast 15 acres. Even the grass that shadows all the plant species present at the Mughal gardens are a particular type of doob grass that is grown extensively in Calcutta and its surrounding regions. Documents point toward the fact that the grass planted in these gardens was initially being brought from Calcutta itself.
- **Unique Trees** - There are over 50 different shrubs, vines and trees spread all over the impressive Mughal Gardens of Delhi. Some of the most attractive and exotic trees located in the place include Mousiri tree, flower-bearing torch tree, and Golden rain tree.
- **Bird's Eye View** - The real beauty of the gardens is apparent only from the first story of the Rashtrapati Bhavan, where tourists can witness the three-storied style of the garden in depth. The first is a rectangular garden, followed by a long and circular structure. Each of these structures has a unique collection of plants, trees and herbs that visitors can enjoy a view of.

Rashtriya Sanskriti Mahotsav

In news

Rashtriya Sanskriti Mahotsav will be celebrated from 14th to 28th February, 2021 in West Bengal

Rashtriya Sanskriti Mahotsav

- Rashtriya Sanskriti Mahotsav, the flagship festival of this Ministry organized since 2015 with the active participation of Seven Zonal Culture Centres has been playing a pivotal role to take the vibrant culture of India out to the masses instead of confining to auditoria and galleries.
- It has been instrumental in showcasing, folk and tribal art, dance, music, cuisines & culture of one state in other states reinforcing the cherished goal of “Ek Bharat Shreshtha Bharat” and at the same time providing an effective platform to the artists and artisans to support their livelihood.

Highlights

- Ten editions of RSM have been held till date since November, 2015 in various states and cities such as Delhi, Varanasi, Bengaluru, Tawang, Gujarat, Karnataka, Tehri and Madhya Pradesh.
- The eleventh edition of Rashtriya Sanskriti Mahotsav is being held between 14th to 28th February, 2021 in West Bengal at Cooch Behar (14th to 16th February, 2021), Darjeeling (22nd to 24th February, 2021) and Murshidabad (27th to 28th February, 2021).
- The Rashtriya Sanskriti Mahotsav-2021 will cover a profusion of folk art forms and it would offer the chance to experience the best in established and emerging virtuosity.
- The RSM will reconnect the people, especially the youth, with their indigenous culture, its multi-faceted nature, magnificence, opulence and historical importance in the context of India as a Nation over the millennia.
- This RSM, which is being organized in West Bengal, will enhance mutual understanding and bonding between people of diverse cultures, thereby securing stronger unity and integrity of India.

Maharaja Suheldev Memorial

In news

PM to lay the foundation stone of Maharaja Suheldev Memorial and development work of Chittaura Lake

Maharaja Suheldev

- Suheldev or Suheldev is an Indian king from Shravasti, popularly known to have defeated and killed the Ghaznavid general Ghazi Saiyyad Salar Masud at Bahraich in 1034 CE.
- He is mentioned in the 17th century Persian-language historical romance Mirat-i-Masudi. Since the 20th century, various Hindu nationalist groups have characterized him as a Hindu King who defeated a Muslim invader.
- The legend of Salar Masud and Suheldev is found in the Persian language Mirat-i-Masudi. It is a historical romance,[1] and a biography of Salar Masud, allegedly with a "gossipy feel".
- It was written by Abd-ur-Rahman Chishti during the reign of the Mughal emperor Jahangir (r. 1605–1627).
- The legend has been subsequently embellished by members of various castes and political groups (see politicization section below)
- According to the legend, Suheldev was the eldest son of King Mordhwaj of Shravasti
- In different versions of the legends, he is known by different names, including Sakardev, Suhirdadhvaj, Suhridil, Suhridal-dhaj, Rai Suhrid Dev, Susaj, Suhardal, Sohildar, Shahardev, Sahardev, Suhar Deo, Suhaaldev, Suhildev, Suheldev and Suheldeo.

Toy Fair 2021

In news

Prime Minister Shri Narendra Modi inaugurated the India Toy Fair 2021 today through video conference

Highlights

- The Toy Fair will be held from 27th February to 2nd March 2021.
- More than 1,000 exhibitors are participating in the fair.
- Through this Toy fair, the Government and the Industry shall come together to discuss how India can be made the next global hub for manufacturing and sourcing of toys by way of attracting investments in the sector and promoting exports.
- The National Toy Action Plan has also been prepared.
- It has included 15 ministries and departments to make these industries competitive, countries to become self-reliant in toys, and India's toys also go into the world.

Significance

- This program is a link to strengthen the country's age-old culture of sports and cheer.
- This toy fair is one such platform where one can discuss toy design, innovation, technology, Marketing and packaging and also share their experiences.
- The world has done research on toys from the era of Indus Valley civilization, Mohenjo-Daro and Harappa.

Polity & Governance

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

Software for five All India Surveys tomorrow

In news

Union Minister of State (Independent Charge) for Labour & Employment launched Software Applications and release instruction manuals with questionnaire for five All India Surveys being conducted by Labour Bureau in Chandigarh

These five surveys being undertaken by Labour Bureau are

- All India Survey on Migrant workers,
- All India survey on Domestic Workers,
- All India survey on employment generated by Professionals,
- All India survey on employment generated in Transport Sector and
- All-India Quarterly Establishment based Employment Survey.

Significance

- The surveys are significant in terms of the path-breaking initiative being taken by Bureau in terms of use of Information Technology (IT) in the entire chain of data collection to report generation.
- The results of these surveys will be declared within 7-8 months including 6 months of field work.

National Urban Digital Mission

In news

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.

Economy

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 its 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 chain viz. 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

In news

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 weavers introduced the scheme to facilitate technology up-gradation in the handloom sector by providing 90% subsidy for the purchase of looms and accessories.
- 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.

New Development Financial Institution Bill

In news

The Budget Session of Parliament will consider a new bill to set up a development financial institution (DFI) for the purpose of funding infrastructure projects across their lifespan

Development Finance Institution

- A development finance institution is an agency that finances infrastructure projects that are of national importance but may or may not conform to commercial return standards.
- In most cases, these agencies are government owned and their borrowings enjoy the comfort of government guarantees, which help bring down the cost of funding.
- In setting up a DFI, India will return to an earlier experiment with the idea.
- ICICI, in original form, and IDBI were both set up as DFIs but were later converted into universal banks as it was believed that they needed access to public deposits.
- The earlier generation of DFIs ran into the problem of financing because retail deposit access was cornered by banks and availability of long-term financing without government guarantees was limited

Significance

The legislation for setting up a development finance institution to fund infrastructure projects will allow for such institutions to be formed by the private sector

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 for Persons 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

GOBARDHAN waste to wealth

Context

As per the information provided by National Dairy Development Board(NDDDB), 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 'GOBARDHAN waste to wealth', under Phase II of the Swachh Bharat Mission Grameen (SBM-G)

Highlights

- The Department of Drinking Water and Sanitation (DDWS) are implementing the programme in collaboration with the Department of Animal Husbandry and Dairying, NDDDB and other Ministries.
- Under the Gobar-dhan component, DDWS has included the small holder based Manure Management Model established by NDDDB 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 AtmaNirbhar Bharat 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.

Draft Blue Economy Policy

In news

The Ministry of Earth Sciences (MoES) has rolled out the Draft Blue Economy policy for India in the public domain inviting suggestions and inputs from various stakeholders including industry, NGOs, academia, and citizens.

Aim

The policy document aims to enhance contribution of the blue economy to India's GDP, improve lives of coastal communities, preserve marine biodiversity, and maintain the national security of marine areas and resources.

India's blue economy

- India's blue economy is understood as a subset of the national economy comprising an entire ocean resources system and human-made economic infrastructure in marine, maritime, and onshore coastal zones within the country's legal jurisdiction.
- It aids the production of goods and services that have clear linkages with economic growth, environmental sustainability, and national security.
- The blue economy is a vast socio-economic opportunity for coastal nations like India to utilize ocean resources for societal benefit responsibly.
- With a coastline of nearly 7.5 thousand kilometers, India has a unique maritime position. Nine of its 29 states are coastal, and the nation's geography includes 1,382 islands.
- There are nearly 199 ports, including 12 major ports that handle approximately 1,400 million tons of cargo each year.
- Moreover, India's Exclusive Economic Zone of over 2 million square kilometers has a bounty of living and non-living resources with significant recoverable resources such as crude oil and natural gas.
- The coastal economy sustains over 4 million fisherfolk and coastal communities.

Why was policy required?

- With these vast maritime interests, the blue economy occupies a vital potential position in India's economic growth.
- It could well be the next multiplier of GDP and well-being, provided sustainability and socio-economic welfare are kept center-stage.
- Therefore, India's draft blue economy policy is envisaged as a crucial framework towards unlocking country's potential for economic growth and welfare.

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, AGNI 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 and Businesses/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.

Saras Aajeevika Mela 2021

In news

Union Minister Shri Narendra Singh Tomar inaugurates Saras Aajeevika Mela 2021

Highlights

- SHGs played a vital role in increasing family income and improving quality of life
- The Mela to remain open from 26th February to 14th March at Noida Haat
- SHGs have the potential to produce export quality material and with the help of these SHGs, the country can achieve the dream of Atmanirbhar Bharat.

- More than 300 rural self-help groups and craftsman from 27 states are participating in the Mela.
- Around 150 stalls and 15 food stalls serving regional cuisines have been set up and more than 60 cultural performances will be performed.
- During the Mela, workshops on product packaging and design, communication skills, social media publicity and Business 2 Business marketing will be organised to educate the rural self-help groups and craftsman.

Science & Tech

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 (**Orobanchesp.**) 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

Women Excellence Award 2021

In news

Four young women fellows of National Science Academies have been awarded for excelling in science and engineering on the International Day of Women and Girls in Science 2021

Highlights

- The SERB Women Excellence Award that has been conferred on them provides a grant of Rs. 15 lakhs for a period of three years to the awardees to pursue their research ideas.
- The award given by the Science and Engineering Research Board (SERB), a Statutory body of the Department of Science and Technology (DST) supporting basic research in the frontier areas of science and engineering, was launched in the year 2013.
- It is a one-time award given to women scientists below 40 years of age who have received recognition from any one or more of the National Academies such as Young Scientist Medal, Young Associateship, etc.

Theme:

International Day of Women and Girls in Science 2021

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 Assembly will 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 cannot 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, MoHUA via 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 to create 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 telescope set 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 the Asia’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.

Highlights

- 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, and can 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.

Health & Medicine

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 Calamities** 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 (HTAI)** for providing evidence based guidelines on cost-effectiveness of technologies, namely, treatments, devices and technologies for providing access to quality healthcare at affordable cost.

Mission Indradhanush (IMI) 3.0

In news

Various States and UTs have started implementation of the Intensified Mission Indradhanush 3.0"

Aim

- This campaign is aimed to reach those children and pregnant women who have been missed out or been left out of the Routine Immunisation Programme.
- This is aimed to accelerate the full immunization of children and pregnant women through a mission mode intervention.

Mission Indradhanush

- The Ministry of Health and Family Welfare (MOHFW) launched Mission Indradhanush (MI) on 25th December 2014 with the aim of expanding immunization coverage to all children across India.
- Children across socio-economic, cultural and geographical spectrums in India, are being immunized under this program.
- The initiative's mammoth task is being fulfilled with the support of an integrated and committed task-force, ensuring full immunisation coverage.

Objective

- The Mission Indradhanush aims to cover all those children who are either unvaccinated, or are partially vaccinated against vaccine preventable diseases.
- India's Universal Immunisation Programme (UIP) provide free vaccines against 12 life threatening diseases, to 26 million children annually.
- The Universal Immunization Programme provides life-saving vaccines to all children across the country free of cost to protect them against Tuberculosis, Diphtheria, Pertussis, Tetanus, Polio, Hepatitis B, Pneumonia and Meningitis due to Haemophilus Influenzae type b (Hib), Measles, Rubella,
- Japanese Encephalitis (JE) and Rotavirus diarrhoea. (Rubella, JE and Rotavirus vaccine in select states and districts).

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 (A β) 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*.

Environment & Ecology

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 50th 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 either a distinct ecosystem that is flooded by water, 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.

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.

In news

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 significant analytical development 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 Central Government in collaboration with the States has conducted the largest locust control operation in Indian history. 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, Punjab, Haryana and Madhya Pradesh face a major threat as swarms of locust have been reported a month in advance. There is an alert for Uttar Pradesh, Maharashtra and Delhi as well.

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 that 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.

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 climate applications
- 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

- The Ministry of Earth Sciences launched it **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.

International Relation

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.

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.

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.

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.

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

Schemes & Policies

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.

NaiRoshni

In news

"NaiRoshni", a scheme for Leadership Development of Minority Women is being implemented across India with an aim to empower and in still 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 NaiManzil scheme, 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 Mantri Krishi Sinchayee Yojana (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.

AyuSamvad

In news

The AyuSamvad Lecture Series campaign will specifically focus on the role of Ayurveda in the Preventive, Promotive, Curative and Rehabilitative Management of COVID 19.

Highlights

- The All India Institute of Ayurveda (AIIA), an autonomous organization under the aegis of Ministry of AYUSH is organizing this public awareness campaign program on “Ayurveda and Covid 19 Pandemic” with the objective to create awareness among common people.
- The AyuSamvad Campaign started with the All India Institute of Ayurveda, New Delhi, organizing an online “Training of Trainers” programme from 18-21 Jan, 2021 for all state Directors, Principals of Ayurveda Colleges, Medical Officers, PG & Ph.D scholars and other stake holders.
- The trained personnel from this programme go on to organise lectures for Government Offices, Non-Government sector employees, schools, colleges, panchayati raj institutions, gram sabhas, industries, various housing societies, NGOs, Mahilaudyogs, Asha workers and health staff etc. across the nation.
- AyuSamvad campaign ensures the uniformity of information through structured training inputs delivered to approximately one crore target audience across India through five Lakh lectures.
- This campaign is expected to be beneficial in conveying the potential role of Ayurveda in the management against COVID 19 and also for Post Covid Management.
- The AYUSH Wings of various States and UTs will also contribute to the Campaign through State AYUSH Directors and NAM team.

National Creche Scheme

In news

Ministry of Women and Child Development implements the National Crèche Scheme for the children of working mothers as a Centrally Sponsored Scheme through States/ UTs with effect from 01.01.2017 to provide day care facilities to children (age group of 6 months to 6 years) of working mothers.

The Scheme provides an integrated package of the following services:

- Day care 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

Some of the steps taken by the Government in this direction

- **Mahila Shakti Kendra Scheme:** The scheme aims to facilitate inter-sectoral convergence of schemes and programs meant for empowerment of women both at the central and State/UT level.
- **SwadharGreh Scheme:** The Scheme caters to women victims of unfortunate circumstances in need of institutional support for rehabilitation, so that they can lead their life with dignity.
- **Ujjawala Scheme:** It is a comprehensive scheme for prevention of trafficking of women and children for commercial sexual exploitation, as well as for facilitating rescue, rehabilitation and re-integration of victims in to their families and society as needed.
- **Working Women's Hostel Scheme:** This scheme promotes availability of safe and conveniently located accommodation for working women, with day care facility for their children, wherever possible, in urban, semi-urban, and even rural areas, where employment opportunities for women exist.
- **Anganwadi Services:** The Scheme envisages setting up of Anganwadi centers across the country for children and caters to the pre-school education, nutrition of children and lactating mothers.
- **POSHAN Abhiyan:** The scheme aims to reduce mal-nutrition/ under nutrition, among young children and women from the country in a phased manner.
- **Pradhan Mantri Matru Vandana Yojana (PMMVY) Scheme:** The Scheme provides cash incentives amounting to Rs.5000 in 3 installments to pregnant and lactating mothers.
- **Beti Bachao Beti Padhao (BBBP):** Objective of the scheme is to celebrate the girl child by preventing gender biased sex selective elimination, ensuring survival protection, education, and participation.
- **Home for Widows:** A Home for Widows has been set up in Vrindavan, UP to provide widows a safe and secure place to stay and live their lives with dignity.

Measures to reduce loss to crops

In news

Government has assessed the damage caused to crops in the wake of natural calamities, pest attack, cold wave/frost, diseases etc., in widespread manner in specific states/locations, as and when required

Highlights

- Government has constituted Inter-Ministerial Central Teams during the year 2020-21 to assess crop damage in Madhya Pradesh due to pest/insect attack and Rajasthan in wake of drought (Kharif).
- It has also reviewed and updated the Crisis Management Plan, during 2020, involving various agencies to deal with crisis and media management during drought.

Schemes

- Implementation of Pradhan Mantri Fasal Bima Yojana for insurance coverage to farmers against crop losses on account of natural calamities.
- Restructured Weather Based Crop Insurance Scheme to provide insurance protection against adverse weather incidences and has the advantage to settle claims within the shortest possible time.
- Interest Subvention Scheme to farmers for availing short term crop loans upto Rs.3.00 lakh up to one year.

- Other important schemes inter-alia includes, Strengthening and Modernization of Plant Quarantine Facilities, District Drought Proofing Plan, Central level monitoring meeting on weekly basis and issuance of Crop Weather Watch Group Report to States/UTs, and Monitoring & Pest Management by Indian Council of Agricultural Research.

Consultation on Farm Laws

In news

Government had promulgated several ordinance for farms law

The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020

The ordinance basically aims at **creating additional trading opportunities outside the APMC market yards** to help farmers get remunerative prices due to additional competition.

- This will supplement the existing MSP procurement system which is providing stable income to farmers.
- It will certainly pave the way for creating **One India, One Agriculture Market** and will lay the foundation for ensuring golden harvests for our hard working farmers.

The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Ordinance, 2020

- To form a national framework for farming agreements to protect farmers in dealing with buyers, companies, retailers, wholesalers etc; To build a mutually remunerative price framework

The Essential Commodities (Amendment) Ordinance, 2020" on 5th June, 2020 by following the due procedure

- It allows intra-state and inter-state trade of farmers' produce beyond the physical premises of APMC markets. State governments are prohibited from levying any market fee, cess or levy outside APMC areas.

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.

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 in still 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.

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.

National Importance.

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, Sonapur and Kolkata.
- 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, will undertake the expedition.

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 24th 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 SVAMITVA stands for Survey of Villages and Mapping with Improved 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.

Port Authorities Bill,2020

In news

Parliament passed the Major Port Authorities Bill, 2020

Aim

- It aims at decentralizing decision making and to infuse professionalism in governance of major ports.
- The Bill is aimed at reorienting the governance model in central ports to landlord port model in line with the successful global practice. This will also help in bringing transparency in operations of Major Ports.

Highlights

- It will be curtains down for the Tariff Authority for Major Ports (TAMP); every port will now be governed by a Port Authority (board) which will have the powers to fix reference tariffs for various port services.
- Shipping and waterways minister Mansukh Mandaviya said the new Act was not intended to privatise major ports but aimed at boosting their decision-making powers in order to compete with private ports.
- The major-port sector hasn't seen the required level of fixed assets creation to pare the country's high logistic costs owing to legacy issues, including the TAMP's archaic regulatory grip.

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.

Defence & Security

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.

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, 2021.

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.
- 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, powers the LUH.
- 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 have been complied satisfactorily.

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 Prime Minister Shri Narendra Modi launched the iDEX 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.

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.

TROPEX-21

In news

Theatre Level Operational Readiness Exercise had commenced in January 2021 involving all three Commands of the Indian Navy, the Tri-Services Command at Port Blair, and elements of Indian Army, Indian Air Force and Coast Guard.

Aim

- To validate its concepts of war-fighting across the entire spectrum of warfare.
- Validating Indian Navy’s op philosophy across the entire spectrum of conflict-ranging from addressing low end sub- conventional challenges to high end conventional threats.

Highlights

- The exercise had commenced in January 2021 involving all three Commands of the Indian Navy, the Tri-Services Command at Port Blair, and elements of Indian Army, Indian Air Force and Coast Guard.
- The exercise was spread over the vast geographical expanse of Indian Ocean and its adjunct waters, with exercise scenarios centred around the extant geopolitical situation in IOR.
- Live combat firings of missiles and torpedoes were also undertaken from warships, aircraft and submarines in complex multi- threat scenarios.
- This was followed by an amphibious exercise (AMPHEX- 21) in which Indian naval amphibious ships, units of the Indian Army and Indian Air Force undertook joint exercise in the Bay of Bengal and Andaman Sea, with an aim to validate India’s capabilities to safeguard the territorial integrity of its Island territories.

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 Systems have been carried out from Advanced Light Helicopter (ALH) platform in desert ranges.

Highlights

- 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 Helina and 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.

Second Edition of Maritime India Summit

In news

Ministry of Ports, Shipping and Waterways is organizing 'Maritime India Summit 2021' on a virtual platform from 2nd March to 4th March 2021, to promote both international and domestic investment in the Ports and Maritime Sector

Objective

To propel India to the forefront of the Global Maritime Sector. Signing of MoUs with various entities has already started.

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.

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