pg. 1 Easy to PICK—"PIB Monthly Magazine October -2020



PIB

Monthly Magazine (OCTOBER - 2020)

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Aspire IAS The name associated with excellence

pg. 2 Easy to PICK-"PIB Monthly Magazine October -2020

ASPIRE IAS PIB INDEX

| SR. NO. | TOPIC NAME | PAGE NO. |
|---------|---|----------|
| 1 | Ayush Grid | 4 |
| 2 | Exercise Bongosagar | 4 |
| 3 | Data Governance Quality Index (DGQI) | 4 |
| 4 | Tribal Entrepreneurship Development Programme | 5 |
| 5 | Atal Tunnel | 5 |
| 6 | BreathPrint | 5 |
| 7 | Xoo | 6 |
| 8 | PM SVANIDHI Scheme | 6 |
| 9 | National Startup Awards 2020 | 6 |
| 10 | PLI Scheme | 7 |
| 11 | Stockholm Convention | 7 |
| 12 | Natural Gas Marketing Reforms | 8 |
| 13 | World Cotton Day | 8 |
| 14 | RUDRAM | 9 |
| 15 | Agriculture Export Policy, 2018 | 9 |
| 16 | Blue Flag Certification | 10 |
| 17 | Rashtriya Kamdhenu Aayog (RKA) | 10 |
| 18 | Regional Raw Drug Repositories | 11 |
| 19 | Food and Agriculture Organization (FAO) | 12 |
| 20 | Organisation for Economic Co-operation and Development (OECD) | 13 |
| 21 | Directorate General of Shipping | 13 |

Aspire IAS The name associated with excellence

pg. 3 Easy to PICK—"PIB Monthly Magazine October -2020

| Pg. J | basy 60 11016 1 1D Williamy Wagazi | 1116 October -2020 |
|-------|---|--------------------|
| 22 | Kala Sanskriti Vikas Yojana (KSVY) | 14 |
| 23 | Devitrification | 15 |
| 24 | India-Oman Joint Commission | 15 |
| 25 | International Financial Services Centres Authority (IFSCA) | 15 |
| 26 | Multi-modal Logistic Park | 16 |
| 27 | National Deworming Day | 17 |
| 28 | Indigenous software solution for vessel traffic services | 17 |
| 29 | ASW Corvette 'Kavaratti' | 18 |
| 30 | Regional Raw Drug Repository (RRDR) | 19 |
| 31 | India Meteorological Department (IMD) | 20 |
| 32 | Project Snow Leopard (PSL) | 20 |
| 33 | Sustainable Processing of Municipal Solid Waste: 'Waste to Wealth' | 21 |
| 34 | CAWACH companies come up with safe disinfection & sanitization technologies | 22 |
| 35 | Agreement between India Post and United States Postal Service (USPS) | 23 |
| 36 | GIFT IFSC | 23 |
| 37 | Electricity Access in India and Benchmarking Distribution Utilities Report | 23 |
| 38 | SERB-POWER | 24 |
| 39 | Sardar Sarovar Dam | 25 |
| | 1 | |

Aspire IAS The name associated with excellence

pg. 4 Easy to PICK—"PIB Monthly Magazine October -2020

Ayush Grid

Context:

Ayush Grid to integrate operationally with the NDHM. **Details:**

- The integration of the Ayush Grid with the NDHM will be beneficial to the public for availing varied options for their health needs.
- The integration will also accelerate the mainstreaming of Ayush disciplines of healthcare.

Ayush Grid:

- The Ayush Grid project was initiated by the AYUSH Ministry in 2018 for creating a comprehensive IT backbone for the entire sector.
- Benefits of Avush Grid:
 - Digitalization of the entire Ayush sector will lead to its transformation in the fields of health care delivery at all levels, including research, education, various health programmes and drug regulations.
 - This will be beneficial for all stakeholders of Ayush including citizens of the country and in turn, will help to achieve various national and global goals in healthcare.
- Some of the successful projects of the Grid include the AYUSH Health Management Information System (AHMIS), the Sanjeevani Mobile App, and the Yoga Locator Mobile App.
- Next in the pipeline is Ayush Next, a project to support Ayush education.

Exercise Bongosagar

Context:

Exercise Bongosagar to start on 3rd October.

About Bongosagar:

- The second edition of the Indian Navy (IN) Bangladesh Navy (BN) Bilateral Exercise 'Bongosagar' is scheduled to commence in the Northern Bay of Bengal.
- Exercise Bongosagar, whose first edition was held in 2019, is aimed at developing inter-operability and joint operational skills through the conduct of a wide spectrum of maritime exercises and operations.
- In the 2020 edition of the exercise, ships from both navies will participate in surface warfare drills, seamanship evolutions and helicopter operations.

- This exercise will be followed by the 3rd edition of IN BN Coordinated Patrol (CORPAT) in Northern Bay of Bengal from 4 to 5 October 2020, wherein IN and BN units will undertake joint patrolling along the International Maritime Boundary Line (IMBL).
 - The conduct of CORPATs has strengthened understanding between both the navies and instituted measures to stop the conduct of unlawful activities.
- This edition of Exercise Bongosagar assumes greater significance since it is being conducted during Mujib Barsho, the 100th birth anniversary of Bangabandhu Sheikh Mujibur Rahman.
- Bongosagar and IN BN Corpat are in line with the government's vision of SAGAR (Security And Growth for All in the Region).

Data Governance Quality Index (DGQI)

Context

Department of Fertilizers ranked 2nd amongst the 16 Economic Ministries/Departments and ranked 3rd amongst the 65 Ministries/Departments in the Survey Report on Data Governance Quality Index.

About DGOI:

- The DGQI exercise was undertaken by the Development Monitoring & Evaluation Office (DMEO), NITI Aayog.
- The exercise is a 'Self-assessment based review of data preparedness levels' to produce a DGQI scorecard.
- The survey was initiated with an objective to assess the data preparedness of Ministries or Departments on a standardized framework.
- The survey was also meant to drive healthy competition among them and promote cooperative peer learning from best practices.
- For the survey, an online questionnaire was prepared under six major themes of DGQI:
 - Data Generation
 - Data Quality
 - Use of Technology
 - Data Analysis, Use and Dissemination
 - Data Security
 - HR Capacity and Case Studies
- The ministries and departments were classified into six categories namely, administrative, economic, strategic, infrastructure, social and scientific.

Development Monitoring and Evaluation Office (DMEO):

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pg. 5 Easy to PICK—"PIB Monthly Magazine October -2020

- DMEO was constituted in 2015 by merging the erstwhile Program Evaluation Office (PEO) and the Independent Evaluation Office (IEO).
- It is an attached office under NITI Aayog, aimed at fulfilling the organization's monitoring and evaluation (M&E) mandate and building the M&E ecosystem in India.
- DMEO has been mandated to actively monitor and evaluate the implementation of the Government of India programmes and initiatives so as to strengthen their implementation and scope of delivery on an ongoing basis.
- Additionally, DMEO undertakes evaluation of selected programmes/schemes, suo-moto or on the request of the Prime Minister's Office (PMO) or programme implementing Ministries/Departments of the Government of India.

Tribal Entrepreneurship Development Programme

Context:

Union Minister for Tribal Affairs e-launches the Tribal Entrepreneurship Development Programme.

Details:

- The programme was launched by the Ministry of Tribal Affairs in partnership with ASSOCHAM (Associated Chambers of Commerce and Industry of India).
- Under this 3-year partnership, ASSOCHAM has set up the 'Centre of Excellence (CoE) for Tribal Entrepreneurship Development'.
- In a bid to promote and support entrepreneurship across Indian tribal communities, efforts are underway in connecting agriculture and forest produce with markets using technology, creation of self-help groups, empowering women, and creating self-sustainable enterprises.
- However, several challenges and bottlenecks are impeding the growth of this process. These include a lack of awareness about tribal heritage and ignorance about the range and diversity of tribal produce across the country.
- The ASSOCHAM Centre of Excellence will strive to address these issues, explore avenues of promotion to create a robust tribal brand identity and in the process build and enhance the entrepreneurial capabilities of the tribal artisans.
- A differentiated value proposition should help position and develop tribal produce as a unique

lifestyle choice and in turn, create better livelihood opportunities for tribal artisans.

Atal Tunnel

Context:

Prime Minister dedicates to the nation the Atal Tunnel. **About the Atal Tunnel:**

- The Atal Tunnel at Rohtang is at an altitude of above 3,000 metres in Himachal Pradesh.
- The 9.02 km-long-tunnel, built by the Border Roads Organisation (BRO), is the world's longest highway tunnel and connects Manali to Lahaul-Spiti valley.
- It provides all-weather connectivity to the landlocked valley of Lahaul-Spiti, which remains cut-off for nearly six months in a year as the Rohtang Pass is usually snow-bound between November and April.
- Before the tunnel construction, the Lahaul Valley used to remain closed for vehicular movement due to bad weather conditions.
- But now, the people of the Valley will have allyear-round connectivity.
- The tunnel reduces the distance by 46 km between Manali and Leh and the travel time by about 4 to 5 hours.
- It is expected to boost tourism and winter sports in the region.
- The tunnel, also significant from the military logistics viewpoint, will provide better connectivity to the armed forces in reaching Ladakh.
- In 2019, the Union Cabinet decided to name the tunnel as 'Atal Tunnel' to honour former Prime Minister Atal Bihari Vajpayee for his contributions. The foundation stone for the tunnel had been laid by Vajpayee in 2002.

BreathPrint

Context:

Scientists at S. N. Bose National Centre for Basic Sciences find new "BreathPrint" for detecting ulcer-causing gastric pathogen.

Details:

Scientists have found a method for early diagnosis
of bacteria that causes peptic ulcer, with the help
of a biomarker called 'BreathPrint' found in the
breath.

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pg. 6 Easy to PICK—"PIB Monthly Magazine October -2020

- The team spotted a new biomarker for the diagnosis of Helicobacter pylori in semi-heavy water (HDO) in human exhaled breath.
 - Helicobacter pylori, a common infection which may turn serious if it is not treated early, is usually diagnosed by the traditional and invasive painful endoscopy and biopsy tests which are not suitable for early diagnosis and follow up.
- The team has used 'study of different water molecular species in human breath, also called 'Breathomics' method to explore different water isotopes in human exhaled breath.
- The team has already developed a patented 'Pyro-Breath' device for diagnosis of various gastric disorders and H. pylori infection, which are under the process of technology transfer.

Xoo

Context:

Moving towards a vaccine to reduce yield loss due to Prime Minister Street Vendor's AtmaNibhar Nidhi diseases in rice.

What is Xoo?

- Xoo is a bacterium that causes a serious bacterial leaf blight disease in rice plant.
- Xanthomonas oryzaepv. oryzae, or commonly known as Xoo infection, causes huge yield losses to rice cultivation throughout the world.
- Appropriate methods for inoculation of Xoo and disease scoring are necessary to investigate the nature of the disease and the mechanism of plant resistance to the pathogen.
- As the most widely grown crop in the worldwide, rice yield plays an important role in food security. Uncovering mechanisms of plant-pathogen interaction of rice and Xoo will help develop rice plants that are more resistant to disease caused by Xoo.

New study:

- A recipient of the DST-Inspire Faculty Fellowship, along with her research team, has uncovered the mechanism by which Xoo interacts with rice plant and causes disease.
- The team is developing new disease control strategies that they can use as vaccines that activate the rice immune system and provide resistance to rice plants from subsequent infections by pathogens.
- The research group has zeroed in on a few molecules derived from the Xoo bacterium and

- from infected rice cell walls which they hope to develop into vaccines.
- The group is working on a cellulase protein secreted by Xoo.
 - This cellulase protein has the features of a typical vaccine as it is a potent elicitor of rice immune responses.
 - Pre-treatment of rice plants with this protein provides resistance to rice against subsequent Xoo infection.

PM SVANIDHI Scheme

What's in News?

As a part of Prime Minister Street Vendor's AtmaNibhar Nidhi (PM SVANidhi) Scheme, Ministry of Housing & Urban Affairs (MoHUA) has entered into an MoU with Swiggy to onboard street food vendors on its ecommerce platform.

This would give the street vendors, online access to thousands of consumers and help these vendors grow their businesses.

(PM SVANidhi) Scheme

- Ministry of Housing & Urban Affairs (MoHUA) is implementing the scheme.
- It was launched for providing affordable working capital loan to street vendors to resume their livelihoods that have been adversely affected due to Covid-19 lockdown.
- Under the Scheme, the vendors can avail a working capital loan of up to Rs. 10,000, which is repayable in monthly installments in the tenure of one year.
- On timely/ early repayment of the loan, an interest subsidy @ 7% per annum will be credited to the bank accounts of beneficiaries through Direct Benefit Transfer on quarterly basis.
- There will be no penalty on early repayment of loan.

National Startup Awards 2020

Context:

Results of the National Startup Awards 2020 released. **Details:**

- During this event, the Department for Promotion of Industry and Internal Trade (DPIIT) also launched the following:
 - **Startup India Showcase:**
 - A part of the Startup India portal,

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pg. 7 Easy to PICK—"PIB Monthly Magazine October -2020

- this is intended to be an online discovery platform for the most promising startups of the country.
- The startups showcased here shall be handpicked by experts and will span across different sectors like FinTech, EdTech, Social Impact among others.
- The showcase will help industry, investors and public authorities find and connect with startups for potential partnerships, investments and public procurement respectively.
- This showcase will help the ecosystem connect with them better while also serving as an inspiration.

• Blockchain-based Certificate Verification System:

- This feature will enable instant verification and access to certificates of recognitions issued by DPIIT.
- This feature introduces an added layer of security to the startup certificates.
- It can be accessed by government departments, procurement entities, investors, and other third parties to verify the status of recognized startups for accessing different opportunities.

PLI Scheme

Context:

The Ministry of Electronics and Information and Technology (MeitY) has approved 16 eligible applicants under the PLI Scheme.

Details:

- The Production Linked Incentive (PLI) Scheme for Large Scale Electronics Manufacturing, notified in April 2020, extends an incentive of 4% to 6% on incremental sales (over the base year) of goods under target segments that are manufactured in India to eligible companies, for a period of five years subsequent to the base year (FY2019-20).
- The Union Minister for Electronics and IT opined that the PLI scheme has been a huge success in terms of the applications received from global as

- well as domestic mobile phone manufacturing companies and electronic components manufacturers.
- Over the next 5 years, the approved companies under the PLI Scheme are expected to lead to a total production of more than INR 10.5 lakh crore.
- The companies approved under the scheme are expected to promote exports significantly. Out of the total production of INR 10.5 lakh crore in the next 5 years, around 60% will be contributed by exports of the order of INR 6.5 lakh crore.
- The companies approved under the scheme will bring additional investment in electronics manufacturing to the tune of INR 11,000 crore.
- The companies approved under the scheme will generate more than 2 lakh direct employment opportunities in the next 5 years along with the creation of additional indirect employment of nearly 6 lakhs.

Stockholm Convention

Contexts

Cabinet approves the ratification of seven Persistent Organic Pollutants (POPs) listed under the Stockholm Convention.

Details:

- The Union Cabinet has approved the ratification of seven chemicals listed under the Stockholm Convention on Persistent Organic Pollutants (POPs).
- The Cabinet further delegated its powers to ratify chemicals under the Stockholm Convention to the Union Ministers of External Affairs (MEA) and Environment, Forest and Climate Change (MoEFCC) in respect of POPs already regulated under the domestic regulations.

Background:

- The Stockholm Convention is a global treaty to protect human health and the environment from POPs.
- POPs are identified chemical substances that persist in the environment, bio-accumulate in living organisms, adversely affect human health/environment and have the property of long-range environmental transport (LRET).
- Exposure to POPs can lead to cancer, damage central & peripheral nervous systems, cause diseases of the immune system, lead to reproductive disorders and interfere with normal infant and child development.
- POPs are listed in various Annexes to the

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pg. 8 Easy to PICK—"PIB Monthly Magazine October -2020

Convention after thorough scientific research, deliberations and negotiations among member countries.

India and Stockholm Convention:

- India ratified the Stockholm Convention in 2006 as per Article 25(4).
 - This enabled India to keep itself in a default "opt-out" position such that Details of the policy: amendments in various Annexes of the Convention cannot be enforced on it unless instrument ratification/acceptance/approval accession is explicitly deposited with the UN depositary.

Banned chemicals:

- The MoEFCC had notified the 'Regulation of Persistent Organic Pollutants Rules' in 2018 under the provisions of the Environment (Protection) Act, 1986.
- The regulation prohibited the manufacture, trade, use, import and export of seven chemicals namely, **Benefits of the reforms:**
 - Chlordecone
 - Hexabromobiphenvl
 - Hexabromodiphenyl ether and Heptabromodiphenylether (Commercial octa-BDE)
 - Tetrabromodiphenyl ether Pentabromodiphenyl ether (Commercial penta-BDE)
 - Pentachlorobenzene
 - Hexabromocyclododecane
 - Hexachlorobutadiene
- These chemicals are listed as POPs under the Convention.

Natural Gas Marketing Reforms

Context:

Cabinet approves 'Natural Gas Marketing Reforms'.

Objective of the reforms:

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

- competitive manner to discover market price by issuing guidelines for sale by contractor through ebidding.
- This will bring uniformity in the bidding process across the various contractual regimes and policies to avoid ambiguity and contribute towards ease of doing business.

- The policy has also permitted affiliate companies to participate in the bidding process - open, transparent and electronic bidding. This will facilitate and promote more competition in the marketing of gas.
- However, rebidding will have to be done in case only affiliates participate, and there are no other
- The policy will also grant marketing freedom to the Field Development Plans (FDPs) of those Blocks in which Production Sharing Contracts already provide pricing freedom.

- The domestic gas production has complete marketing and pricing freedom. All discoveries and field development plans approved after February 2019 have a complete market and pricing freedom.
- The whole ecosystem of policies relating to production, infrastructure and marketing of natural gas has been made more transparent with a focus on ease of doing business.
- These reforms will prove very significant for Atmanirbhar Bharat by encouraging investments in the domestic production of natural gas and reducing import dependence.
- These reforms will prove to be another milestone in moving towards a gas-based economy by encouraging investments.
- The increased gas production and consumption will help in the improvement of the environment.
- These reforms will also help in creating employment opportunities in the gas-consuming sectors including MSMEs.
- The domestic production will further help in increasing investment in the downstream industries such as city gas distribution and related industries.

World Cotton Day

Context:

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pg. 9 Easy to PICK—"PIB Monthly Magazine October -2020

The second World Cotton Day was observed on 7th October 2020.

About World Cotton Day:

• 7th October is observed as World Cotton Day.

Kasturi Cotton:

- On the occasion of the second World Cotton Day, the Union Textiles Minister launched the first-ever brand and logo for Indian cotton.
- Now India's premium cotton would be known as 'Kasturi Cotton' in the world cotton trade.
- The Kasturi Cotton brand will represent Whiteness, Brightness, Softness, Purity, Lustre, Uniqueness and Indianness.
- Cotton is one of the principal commercial crops of India and it provides livelihood to about 6 million cotton farmers.
- India is the 2nd largest cotton producer and the largest consumer of cotton in the world.
- India produces about 6 million tons of cotton every year which is about 23% of the world cotton.
- India accounts for about 51% of the total organic cotton production of the world, which demonstrates India's effort towards sustainability.

RUDRAM

Context:

DRDO successfully flight tests Indigenously Developed Anti-Radiation Missile (RUDRAM).

Details:

- A new generation Anti Radiation Missile (RUDRAM) was successfully flight tested onto a radiation target located on Wheeler Island off the coast of Odisha.
- The missile was launched from a SU-30 MKI fighter aircraft.

RUDRAM:

- RUDRAM is the first indigenous anti-radiation missile of the country for the Indian Air Force (IAF), being developed by the Defence Research and Development Organisation (DRDO).
- The missile is integrated on SU-30 MKI fighter aircraft as the launch platform, having a capability of varying ranges based on launch conditions.
- It has INS-GPS navigation with Passive Homing Head for the final attack.
- The Passive Homing Head can detect, classify and engage targets over a wide band of frequencies as programmed.

- The missile is a potent weapon for IAF for the suppression of enemy air defence effectively from large stand-off ranges.
- **Significance:** With this, the country has established indigenous capability to develop longrange air-launched anti-radiation missiles for neutralising enemy radars, communication sites and other RF emitting targets.

Agriculture Export Policy, 2018

- The Government has come out with a policy to double farmers' income by 2022. Exports of agricultural products would play a pivotal role in achieving this goal.
- In order to provide an impetus to agricultural exports, the Government has come out with a comprehensive "Agriculture Export Policy" aimed at doubling the agricultural exports and integrating Indian farmers and agricultural products with the global value chains.

Objectives of the Agriculture Export Policy are:

- To double agricultural exports from present ~US\$ 30+ Billion to ~US\$ 60+ Billion by 2022 and reach US\$ 100 Billion in the next few years thereafter, with a stable trade policy regime.
- To diversify our export basket, destinations and boost high value and value added agricultural exports including focus on perishables.
- To promote novel, indigenous, organic, ethnic, traditional and non-traditional Agri products exports.
- To provide an institutional mechanism for pursuing market access, tackling barriers and deal with sanitary and phyto-sanitary issues.
- To strive to double India's share in world agri exports by integrating with global value chain at the earliest.
- Enable farmers to get benefit of export opportunities in overseas market.

<u>Recommendations in the Agriculture Export Policy have</u> <u>been organised in two categories – Strategic and</u> <u>Operational</u>

- Strategic:
 - Policy measures
 - Infrastructure and logistics support
 - Holistic approach to boost exports
 - Greater involvement of State Governments in Agri exports
- Operational

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pg. 10 Easy to PICK—"PIB Monthly Magazine October -2020

- Focus on Clusters
- Promoting value-added exports
- Marketing and promotion of "Brand India
- private investments production and processing
- Establishment of strong quality regimen
- Research & Development

Context

- The consistent and concerted efforts of the Government to boost agricultural exports are bearing fruit as despite of the on-going Covid-19 crisis
- In order to boost agro exports, the Government had announced Agriculture Export Policy, 2018

Blue Flag Certification

Context:

All 8 beaches recommended by the government get International Blue Flag Certification.

Details:

- Eight beaches of India spread across five states and two union territories, have been awarded the "BLUE FLAG" by an International Jury comprising eminent members of from UNEP, UNWTO, FEE, IUCN.
- The following beaches have been awarded the "Blue Flag":
 - Shivrajpur (Dwarka-Gujarat)
 - Ghoghla (Diu)
 - Kasarkod (Karnataka)
 - Padubidri (Karnataka)
 - Kappad (Kerala)
 - Rushikonda (Andhra Pradesh)
 - Golden (Puri-Odisha)
 - Radhanagar (Andaman & Nicobar Islands)
- India has also been awarded the 3rd prize by the International Jury under the "International Best Practices" for pollution control in coastal regions.
- India is also the first country in the "Asia-Pacific" region that has achieved this feat in just about 2 years' time.
- Japan, South Korea and the UAE are the only other Asian nations that have been conferred with a couple of Blue Flag beaches, however, in a time frame of about 5 to 6 years.
- India is now in the league of 50 "BLUE FLAG" countries.

Background:

It was in 2018 that the first set of pilot beaches

- were presented for the certification.
- SICOM (under the Environment Ministry) in its pursuit of "Sustainable Development" of the coastal regions of India embarked upon its flagship program "BEAMS" (Beach Environment & Aesthetics Management Services) under its ICZM (Integrated Coastal Zone Management)
 - The Environment Ministry launched the ICZM activities in India with a view to protect and conserve the coastal and marine ecosystems and the environment through holistic coastal management.
 - The project promotes the sustainable development & management of coastal zones through its own wing SICOM.
 - The concept of ICZM was introduced in 1992 during the Earth Summit at Rio de Janeiro and most of the coastal countries in the world have been adopting ICZM principles for managing their coastal
- This project was aimed at striving for the coveted International eco-label "Blue flag", accorded by the Foundation of Environment Education, FEE
- **BEAMS** is India's own eco-label:
 - It was launched by SICOM (Society of Integrated Coastal Management).
 - It is one of the several other projects of ICZM that the government is undertaking for the sustainable development of coastal regions striving for the globally recognized and coveted eco-label Blue
 - The objective of BEAMS is to abate pollution in coastal waters, promote sustainable development of beach facilities, protect & conserve coastal ecosystems & natural resources, and seriously challenge local authorities & stakeholders to strive and maintain high standards of cleanliness, hygiene & safety for beachgoers in accordance with coastal environment & regulations.
 - This program promotes beach recreation in absolute harmony with nature.

Rashtriya Kamdhenu Aayog (RKA) Context:

Rashtriya Kamdhenu Aayog begins a nationwide were selected for development. In 2020, 8 beaches campaign to celebrate "Kamdhenu Deepawali Abhiyan" –

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pg. 11 Easy to PICK—"PIB Monthly Magazine October -2020

Promoting extensive use of cow-dung/Panchgavya products this Diwali Festival.

About the Kamdhenu Deepawali Abhiyan:

- Through this campaign, the RKA is promoting extensive use of cow-dung/Panchgavya products during this Diwali Festival.
- Manufacture of cow dung based diyas, candles, dhoop, agarbatti, shubh-labh, swastik, samrani, hardboard, wall-piece, paper-weight, havan samagri, idols of Lord Ganesha and Goddess Lakshmi for this year's Diwali festival has already started
- Apart from generating business opportunities for thousands of cow-based entrepreneurs/farmers, the use of cow-dung products will lead to a cleaner and healthier environment.
- By providing an environmentally friendly alternative to Chinese made Diyas, the campaign will boost the 'Make in India' vision also.

About Rashtriya Kamdhenu Aayog (RKA):

- The Government of India has constituted the "Rashtriya Kamdhenu Aayog" to organize animal husbandry on modern and scientific lines and to take steps for preserving and improving breeds, and prohibiting the slaughter, of cows and calves and other milch and draught cattle.
- The Aayog is a high powered permanent apex advisory body with the mandate to help the Central Government to develop appropriate programmes for conservation, sustainable development and genetic upgradation of indigenous breeds of cows.

• Functions of RKA:

- The Aayog will review existing laws, policies as well as suggest measures for optimum economic utilization of cow wealth for enhanced production and productivity, leading to higher farm income and better quality of life for the dairy farmers.
- It also aims at the transmission and application of improved technology and management practices at the farmers' doorstep through coordination with dairy cooperatives, farmer producer companies and dairy industry as well as research institutions.
- It will advise and guide the Central Government and State Governments on policy matters concerning conservation, protection, development and welfare of

cows and their progeny.

- Promotion of schemes to encourage the use of organic manure and recommend suitable measures including incentive schemes for use of dung or urine of cow in organic manure by farmers to minimize the use of chemical fertilizers.
- The Aayog will also make provisions for solutions to the problems related to abandoned cows in the country by providing technical inputs to Gaushalas, Gosadans and pinjarapoles.
- In the area affected by famine, drought or other natural calamities, guide in setting up cattle camps for the aforesaid purposes in the affected area and to take steps to prevent migration or smuggling of cows from such affected areas.
- Develop pastures or grazing lands and to associate with institutions or other bodies whether private or public, for the purpose of developing pastures and Gauchars.
- RKA will also work to create an enabling environment to attract investment for improving infrastructure supporting, milk production, processing, value addition and marketing in the sector.
- Rashtriya Kamdhenu Aayog will function as an integral part of Rashtriya Gokul Mission.

Regional Raw Drug Repositories

Context:

Regional Raw Drug Repository for AYUSH Systems launched at Chennai.

About Regional Raw Drug Repositories (RRDRs):

- RRDRs are important components of the Centrally Sponsored Scheme, National AYUSH Mission.
- The repositories play an important role in medicinal plants cultivation.
- As a step in this direction, the Ministry of AYUSH, through the National Medicinal Plants Board (NMPB), initiated the establishment of the National Raw Drug Repository and Regional Raw Drug Repositories.
- The collaborating institutes as identified by the NMPB are the National Institute of Siddha, with the Regional Research Institute of Unani Medicine, and the Siddha Central Research Institute, all three located in Chennai.
- The RRDR in Chennai would play a major role in

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pg. 12 Easy to PICK—"PIB Monthly Magazine October -2020

the collection, documentation, and authentication to mark the 75th anniversary of FAO. of raw drugs collected from the agro-climatic Details: region, that is, the Southern Plateau Region.

This RRDR will not only act as collection centres of raw drugs available and used in the southern India and FAO: region but also as an accredited reference library for authentication of raw drugs and establish standard protocols and keys for authentication of raw drug used in the herbal industries.

Background & Significance

- Medicinal plants form the major resource base of India's indigenous health care traditions.
- Their relevance has grown substantially in the current pandemic scenario, thanks to their disease preventive effects.
- The outreach and acceptability of AYUSH systems, both nationally as well as globally, are dependent on the uninterrupted availability of quality medicinal plants based raw material.
- Though most of the raw drugs are commonly available, there is a lack of scientific documentation that makes research on these medicines very difficult. This also reduces the chances of commercial exploitation of these medicines.
- Easy availability of authentic scientific data of the raw drugs will promote research on the medicines belonging to the AYUSH system which will lead to further propagation of these systems.

Additional Information

- 9000 Currently, India has more than manufacturing units for Ayurveda, Siddha, Unani and Homeopathy medicine.
- However, the quality of medicines produced by these units critically depends upon the manufacturing process followed as well as the quality of raw material.
- The Government has made it mandatory for all manufacturing units to adhere to the Good Manufacturing Practices as notified under Schedule T of the Drugs and Cosmetics Act 1940.

Food and Agriculture Organization (FAO)

Context:

PM to release commemorative coin of Rs 75 denomination

• 16th October 2020 marks the 75th anniversary of the Food and Agriculture Organization (FAO).

- Indian Civil Service Officer Dr. Binay Ranjan Sen was the Director-General of FAO from 1956-1967.
- India's proposals for the International Year of Pulses in 2016 and the International Year of Millets 2023 have also been endorsed by FAO.

Additional information:

- Recently, the Indian Council of Agricultural Research (ICAR) developed 17 biofortified varieties of eight crops.
- This will have up to a three-fold increase in nutritional value.
- The details of the fortified crops are:
 - Rice varieties: CR Dhan 315 has high
 - Wheat varieties: HI 1633 is rich in protein, iron and zinc: HD 3298 is rich in protein and iron; DBW 303 and DDW **48** are rich in proteins.
 - Ladhowal Quality Protein Maize Hybrid 1, 2 and 3 are rich in lysine and tryptophan.
 - Millets: CFMV1 and 2 of finger millet are rich in calcium, iron and zinc; CLMV1 of little millet is rich in iron and zinc.
 - Pusa Mustard 32 has low erucic acid.
 - Groundnut: Girnar 4 and 5 are fortified with enhanced oleic acid.
 - Yam varieties: Sri Neelima and DA 340 are enhanced zinc, iron and anthocyanin
- These varieties, along with other food ingredients, will transform the normal Indian thali into nutrithali.
- These varieties have been developed by utilizing the local landraces and farmer's varieties.
- The high zinc rice has been developed from landraces of Assam rice collected from the Garo hills and those of finger millets from Gujarat collections of Dang district.
- The production of biofortified crop varieties will be upscaled and linked with government programmes like the mid-day meal, Anganwadi, etc. to reduce malnutrition and make India Kuposhan Mukta (malnutrition-free) through naturally enriched food ingredients.

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pg. 13 Easy to PICK—"PIB Monthly Magazine October -2020

• This will also usher in higher incomes for farmers and will open new avenues of entrepreneurship development.

ICAR's NARI:

- ICAR has started Nutri-Sensitive Agricultural Resources and Innovations (NARI) programme for promoting family farming linking agriculture to nutrition, nutri-smart villages for enhancing nutritional security.
- Under this, location-specific nutrition garden models are being developed and promoted by Krishi Vigyan Kendras to ensure access to locally available, healthy and diversified diet with adequate macro and micronutrients.
- ICAR is an autonomous organisation under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers' Welfare, Government of India.
- Established in 1929, it is the apex body for coordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in the entire country.
- With 101 ICAR institutes and 71 agricultural universities spread across the country, it is one of the largest national agricultural systems in the world.
- It is headquartered in New Delhi.

Organisation for Economic Cooperation and Development (OECD)

Context:

India designated Vice-Chair of OECD Working Group on GLP.

India and Good Laboratory Practice (GLP):

- India has been designated the 'Vice-Chair' of Good Laboratory Practice (GLP) Working Group of the Organisation for Economic Co-operation and Development (OECD), recognising the contribution of the Indian GLP programme.
- Good Laboratory Practice (GLP) is a quality system, which has been evolved by OECD to ensure that safety data generated on various chemicals like industrial chemicals, pharmaceuticals (human and veterinary), agrochemicals, cosmetic products, food/feed additives, and medical devices, etc., can be relied upon by regulatory authorities.
- The Department of Science and Technology (DST), Government of India, established the

- National GLP Compliance Monitoring Authority (NGCMA) in 2002.
- The non-hazardous nature of chemicals needs to be established through studies and data, which is examined by the regulators of the concerned countries to certify that the use of these chemicals does not pose any hazards to human health and the environment.
- In 2011, India became fully adherent to the Mutual Acceptance of Data (MAD) in the OECD
- The MAD status has given global recognition to India's non-clinical safety data by tremendously augmenting its credibility and acceptability across the globe.
- This has not only boosted the confidence of Indian GLP TFs but also led to the removal of technical barriers to trade.
- The dedicated training of the inspectors and continued capacity building of Indian TFs (test facilities) in emerging areas by the ground team of NGCMA has resulted in upgrading Indian TFs to meet international standards.
- The spectrum of activities of Indian GLP TFs is wide, involving eight types of chemicals/test items and nine areas of expertise.
- The National GLP program has not only helped to build a network of GLP TFs in the country but also created a huge quantum of highly competent human resources.

About NGCMA:

 The National GLP Compliance Monitoring Authority (NGCMA) is the national body that grants GLP certification to TFs conducting safety studies on new chemicals of the above-mentioned categories in accordance with OECD Principles of GLP and OECD Council norms.

Directorate General of Shipping

Context

Directorate General of Shipping (DG Shipping) notified as National Authority for Ships Recycling.

Details:

 The Central Government has notified the Directorate General of Shipping as the National Authority for Recycling of Ships under Section 3 of the Recycling of Ships Act, 2019.

DG Shipping as the National Authority of Ship Recycling:

• As an apex body, DG Shipping is authorized to

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pg. 14 Easy to PICK—"PIB Monthly Magazine October -2020

administer, supervise and monitor all activities relating to ship recycling.

- DG Shipping will look after the sustainable development of the ship recycling industry, monitoring the compliance to environmentfriendly norms and safety and health measures for the stakeholders working in the ship recycling industry.
- DG Shipping will be the final authority for the various approvals required by the ship-recycling yard owners and State Governments.
- The National Authority of Ship Recycling will be set up in Gandhinagar, Gujarat. The location of the office will benefit the ship recycling yard owners situated in Alang, Gujarat which is home to Asia's largest ship breaking and ship recycling industry in the world.

About DG Shipping:

- The Directorate General of Shipping deals with the implementation of shipping policy and legislation and all matters relating to merchant shipping.
- DG Shipping's mandate includes ensuring the safety of life and ships at sea, prevention of marine pollution, promotion of maritime education and training in coordination with the International Maritime Organization, regulation of employment and welfare of seamen, development of coastal shipping, augmentation of shipping tonnage, examination and certification of Merchant Navy Officers, Supervision and Control of the allied offices under its administrative jurisdiction.
- It works for the development of Indian shipping.
- The Director-General of Shipping is vested with statutory powers under Section 7 of the Merchant Shipping Act, 1958.
- DG Shipping is a representative of India in IMO and all the conventions of IMO are being enforced by DG Shipping.
 - Under the Ship Recycling Act, 2019, India has acceded to the Hong Kong Convention for Ship Recycling under the IMO.

Kala Sanskriti Vikas Yojana (KSVY) Context:

The Culture Ministry issues guidelines for holding cultural events/activities in virtual/online mode under various scheme components of the Central Sector Scheme 'Kala Sanskriti Vikas Yojana' (KSVY).

administer, supervise and monitor all activities About the Kala Sanskriti Vikas Yojana (KSVY):

- It is an umbrella scheme of the Culture Ministry under which cultural organizations are given financial assistance for the promotion of art and culture.
- A few of the schemes under this are:
 - Repertory Grant: Repertory is the performance of ballets, dramas, operas at regular intervals by a company. Under Repertory Grant, training is provided.
 - National Presence: Under National Presence, cultural programmes/festival/seminars, etc. at the national level for the promotion of art & culture may be conducted online.
 - Cultural Function & Production Grant (CFPG): Under the CFPG, seminars, conference, research, workshops, festivals, exhibitions, symposia, production of dance, drama-theatre, music, etc. and small research projects on different aspects of Indian culture may be conducted online.
 - Himalayan Heritage: Under Financial Assistance for the Preservation & Development of Cultural Heritage of the Himalayas, study and research, preservation and documentation, dissemination through audiovisual programmes, training in traditional & fold art may be conducted online.
 - Buddhist/Tibetan: Under Financial Assistance for Development of Buddhist/Tibetan Arts, research project, purchase of books, documentation and cataloguing, award of scholarships to monks, holding of special courses and culture, audio-visual recording/documentation, IT upgradation training aids for monastic, salary to teachers may be performed online.
 - Scholarship/Fellowship: Under Scheme of Scholarships and Fellowships for Promotion of Art and Culture, advanced training within India in the field of Indian Classical Music, Indian Classical Dance, Theatre, Mime, Visual art, Folk, Traditional and Indigenous Arts and Light Classical Music and research may be performed online and report can also be submitted in soft version.

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pg. 15 Easy to PICK—"PIB Monthly Magazine October -2020

Devitrification

Context:

Scientist's demystification of the transformation of glass to crystal can help dispose of liquid nuclear waste safely.

Background:

- Glass is a non-crystalline, often transparent amorphous solid which is mostly formed by the rapid cooling of its molten form.
- However, under certain conditions, during its formation, the molten glass may rebel and transform into a crystal – the more stable state, an avoidable process called devitrification.
- However, the process of devitrification remains poorly understood as this process can be extremely slow, and this makes it difficult to study it.

Significance of the study:

- Scientists have now visualized devitrification in an experiment, thus taking a step closer to understanding it.
- This could help avoid devitrification in processes of **pharma industries** – a sector in which dodging this is of paramount importance.
- This is because an amorphous drug dissolves faster **India Oman Economic Ties:** than after devitrification, and ensuring that it remains amorphous is therefore essential during storage.

Details of the study:

- Using real-time monitoring of the particles with an optical microscope and machine learning methods to determine subtle structural features hidden in the glass, the researchers identified a parameter called 'softness', which determines the extent of devitrification.
- They found that regions in the glass which had particle clusters with large "softness" values were the ones that crystallized and that "softness" was also sensitive to the crystallization route.
- The team suggests that techniques to tune "softness" by introducing impurities may help realize long-lived glass states, which has numerous technological applications.
- The research published in the journal 'Nature Physics' can also help in the vitrification of liquid nuclear waste as a solid in a glass matrix to safely dispose it deep underground and prevent hazardous materials from leaking into the environment.

India-Oman Joint Commission

Context:

9th session of India-Oman Joint Commission virtual meeting held.

Details:

- The meeting was attended by representatives of various government departments/ministries from both sides.
- During the meeting, both sides reviewed the recent developments in trade and investment ties and reaffirmed their commitment to expand the bilateral trade and encourage businesses to invest in each other's country in order to realize the untapped potential in the commercial and economic relationship.
- Both sides, among other things, agreed to cooperate in areas of agriculture & food security, standards & metrology, tourism, information technology, health & pharmaceuticals, MSMEs, space, civil aviation, energy including renewable energy, culture, mining, and higher education.
- The Indian side appreciated Oman for signing and ratification of the International Solar Alliance (ISA) Framework Agreement.

- India is among Oman's top trading partners.
- For Oman, India was the 3rd largest source for its imports and 3rd largest market for its non-oil exports.
- Bilateral trade between India and Oman grew at 8.5% in 2019-20 over the previous year to reach USD 5.93 billion.
- While India's exports to Oman were valued at USD 2.26 billion, India's imports from Oman amounted to USD 3.67 billion in 2019-2020.
- Indian firms have invested heavily in Oman in various sectors like iron and steel, cement, fertilizers, textile, cables, chemicals, automotive,
- There are over 4100 Indian enterprises and establishments in Oman with an estimated investment of US\$ 7.5 billion.
- Cumulative FDI equity inflows from Oman to India during the period April 2000-June 2020 amounted to USD 535.07 million.

International Financial Services Centres

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pg. 16 Easy to PICK—"PIB Monthly Magazine October -2020

Authority (IFSCA)

Context:

IFSCA introduces a framework for regulatory Sandbox to tap into innovative FinTech solutions.

Details:

- IFSCA has introduced a framework for "Regulatory Sandbox".
- Under this Sandbox framework, entities operating in the capital market, banking, insurance and financial services space shall be granted certain facilities and flexibilities to experiment with innovative FinTech solutions in a live environment with a limited set of real customers for a limited time frame.
- These features shall be fortified with necessary safeguards for investor protection and risk mitigation.
- The Regulatory Sandbox shall operate within the IFSC located at GIFT City (Gandhinagar, Gujarat).
- IFSCA shall assess the applications and extend suitable regulatory relaxations to commence limited purpose testing in the Sandbox.

What is Regulatory Sandbox?

A regulatory sandbox is a framework set up by a financial sector regulator to allow small scale, live testing of innovations by private firms in a controlled environment (operating under a special exemption, allowance, or other limited, time-bound exception) under the regulator's supervision.

International Financial Services Centres Authority:

- It is a statutory unified regulatory body under the Department of Economic Affairs, Ministry of Finance, Government of India established by an Act of Parliament to develop and regulate the financial products, financial services and financial institutions located/performed in the International Financial Services Centres in India.
- The Authority is empowered to exercise the powers of RBI, SEBI, IRDAI and PFRDA in respect of financial services, financial products and financial institutions performed/located in the international financial services centres in the country.
- The IFSCA is headquartered in Gandhinagar, Guiarat.
- The members of the Authority are appointed by the Central Government.
- They will include a Chairperson of the Authority,

a member each from the RBI, SEBI, the Insurance Regulatory and Development Authority of India (IRDAI), and the Pension Fund Regulatory and Development Authority (PFRDA); and two members from the Ministry of Finance. In addition, two other members will be appointed on the recommendation of a Selection Committee.

• They will have a three-year term subject to reappointment.

What is an International Financial Services Centre (IFSC)?

- An IFSC caters to customers outside the jurisdiction of the domestic economy.
- Such centres deal with flows of finance, financial products and services across borders.
- London, New York and Singapore can be counted as global financial centres. Many emerging IFSCs around the world, such as Shanghai and Dubai, are aspiring to play a global role in the years to come.
- An expert panel headed by former World Bank economist Percy Mistry submitted a report on making Mumbai an international financial centre in 2007.
- However, the global financial crisis that unfolded in 2008 made countries including India cautious about rapidly opening up their financial sectors.
- Gujarat International Finance Tec-City Co. Ltd (GIFT City) is developed as the country's first international financial services centre (IFSC)

Multi-modal Logistic Park

Context:

Union Minister for Road Transport and Highways to virtually lay the foundation stone for the first-ever multimodal logistic park in Assam.

Details:

- The Rs 693.97 crore park will provide direct connectivity to air, road, rail and waterways to the people.
- It will be developed under the ambitious Bharatmala Pariyojana of the Government of India.
- The park will be located in Jogighopa in Bongaigaon District, Assam.
- The park aims to reduce logistics costs and improve the efficiency of transport of goods and commodities.
- The Centre had proposed to develop a Multi-Modal Logistics Park at Jogighopa in Assam to

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pg. 17 Easy to PICK—"PIB Monthly Magazine October -2020

- promote international trade with neighbouring countries.
- Under 'Bharatmala Pariyojana', more than 3000 km of economic corridors are to be developed in the North East alone covering major cities in the North East.
 - Additionally, various feeder routes, intercorridor routes, national corridors, ringroads, bypasses, border roads, international connectivity with Bhutan and Bangladesh to promote trade would be developed under Bharatmala.
- Under Bharatmala, around 3,300 km of border roads of strategic importance have been identified to be built along the international boundaries and around 2,000 km of roads are required for connecting India's major highway corridor to International trade points so as to facilitate Export-Import (EXIM) trade with Nepal, Bhutan, Bangladesh and Myanmar.
- Jogighopa is set to become India's gateway to South-East Asia as well as the rest of the North-East with the multi-modal logistics park.

- as the nodal agency to coordinate and conduct nationwide baseline STH mapping.
- In collaboration with partners and government agencies, NCDC completed the baseline STH mapping across the country by the end of 2016.
- The data showed varied prevalence ranging from 12.5 % in Madhya Pradesh to 85% in Tamil Nadu.

National Deworming Day (NDD):

- NDD is a flagship programme of the Ministry of Health and Family Welfare and was launched in 2015.
- It is implemented as a biannual single day programme implemented through the platforms of schools and anganwadis.
- Albendazole tablet, approved by WHO, is used for the treatment of intestinal worms in children and adolescents as part of Mass Drug Administration (MDA) programmes globally.
- The NDD programme is implemented by the Health Ministry in collaboration with the Ministry of Women and Child Development, Ministry of Education and technical assistance from WHO and the technical partners.

National Deworming Day

Context:

14 states report a reduction in worm prevalence; 9 show a substantial reduction.

Background:

- Soil-Transmitted Helminthiases (STH), also known as parasitic intestinal worm infection, is a significant public health concern mostly in low resource settings.
- These are known to have detrimental effects on children's physical growth and well-being and can cause anaemia and under-nutrition.
- Regular deworming as advised by the World Health Organization eliminates worm infestation among children and adolescents living in areas with high STH burden, thereby contributing to achieving better nutrition and health.
- As per a WHO Report on STH published in 2012, in India, there were an estimated 64% of children in the age group (1-14 years) at risk of STH.
- The risk was estimated based on the hygiene and sanitation practices and limited STH prevalence data at that point of time.
- To assess the exact burden of STH in India, the Ministry of Health and Family Welfare appointed the National Centre for Disease Control (NCDC)

Impact of NDD:

- To evaluate the impact of the consistently implemented high coverage NDD programme, the Health Ministry recently initiated follow-up prevalence surveys led by NCDC and partners.
- They were guided by the High Level Scientific Committee (HLSC) appointed by the Ministry.
- As on date, the follow-up surveys are completed in 14 states.
- All 14 states have shown a reduction in the followup survey compared to the baseline prevalence survey and the states of Chhattisgarh, Himachal Pradesh, Meghalaya, Sikkim, Telangana, Tripura, Rajasthan, Madhya Pradesh and Bihar have shown a substantial reduction in worm prevalence in the STH follow up prevalence survey.

Indigenous software solution for vessel traffic services

Context:

Minister of State for Shipping launches indigenous software solutions Vessel Traffic Services (VTS) and

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pg. 18 Easy to PICK—"PIB Monthly Magazine October -2020

Vessels Traffic Monitoring Systems (VTMS).

About the solutions:

- VTS and VTMS is a software which determines vessel positions, position of other traffic or meteorological hazard warnings and extensive management of traffic within a port or waterway.
- Vessel Traffic Services (VTS) contribute to the safety of life at sea, safety and efficiency of navigation and protection of the marine environment, adjacent shore areas, worksites and offshore installations from possible adverse effects of maritime traffic.
- Vessels Traffic Management Systems are installed in some of the busiest waters in the world, and are making a valuable contribution to safer navigation, more efficient traffic flow, and protection of the environment.
- Traffic flow in busy approach routes, access channels, and harbours can be coordinated safely, in the best interest of port and its users.
- Incidents and emergency situations can be dealt with quickly.
- Data from traffic movements can be stored and used as reference information for port administration, port authorities, coastguards and search and rescue services.
- VTMS is mandatory under the IMO Convention SOLAS (Safety of Life at Sea).
- The VTMS traffic image is compiled and collected by means of advanced sensors such as radar, AIS, direction finding, CCTV and VHF or other cooperative systems and services.
- A modern VTMS integrates all of the information into a single operator working environment for ease of use and in order to allow for effective traffic organization and communication.
- Presently, India has approximately 15 VTS systems operational along the Indian Coast and there is no uniformity of VTS software as each system has its own VTS software.
- Development of the indigenous VTS software will reduce the expenditure of foreign exchange on this issue and also minimize the dependence on foreign support for VTS software. Accordingly, indigenous development of VTS software will benefit with respect to:
 - Saving of foreign exchange for various VTSs in India.
 - VTS Software can be provided to Indian trade-friendly nations viz. Maldives, Mauritius, Myanmar, Sri Lanka,

Mauritius, Bangladesh and Gulf countries.

- Will also minimize the cost for future upgradations of software.
- Shall be easier to interconnect with MIS/ERP software of ports.
- The availability of Indian VTS software shall make Indian companies competitive commercially in global bids.

ASW Corvette 'Kavaratti'

Context:

Indigenously built ASW Corvette 'Kavaratti' to be commissioned at Visakhapatnam.

About INS Kavaratti:

- INS Kavaratti is an indigenously built stealth corvette under Project 28 (Kamorta Class).
- The Kamorta class corvettes are the first stealth corvettes to be built in India.
 - The other three corvettes, INS Kamorta, INS Kadmatt and INS Kiltan were commissioned in 2014, 2016 and 2017 respectively.
 - The corvettes are named after the islands in the Lakshadweep archipelago.
 - The Kamorta class corvettes are intended to succeed the Kora-class corvette by precedence and Abhay-class corvette by role.
- INS Kavaratti is indigenously designed by the Indian Navy's in-house organisation, Directorate of Naval Design (DND), and built by Garden Reach Shipbuilders & Engineers (GRSE), Kolkata.
- The ship has up to 90% indigenous content and the use of carbon composites for the superstructure is a commendable feat achieved in Indian shipbuilding.
- The ship's weapons and sensors suite is predominantly indigenous and showcases the nation's growing capability in this niche area.
- Kavaratti has a state-of-the-art weapons and sensor suite capable of detecting and prosecuting submarines. In addition to its anti-submarine warfare (ASW) capability, the ship also has a credible self defence capability and good endurance for long-range deployments.
- The ship will be commissioned into the Navy as a combat-ready platform as the ship has completed sea trials of all the systems fitted onboard.
- Kavaratti takes her name from the erstwhile INS

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pg. 19 Easy to PICK—"PIB Monthly Magazine October -2020

Kavaratti which was an Arnala class missile corvette.

The older Kavaratti had rendered service to the nation in the 1971 Bangladesh liberation war.

Regional Raw Drug Repository (RRDR)

Context:

Inauguration of Regional Raw Drug Repository of National Medicinal Plants Board at AIIA, New Delhi.

Details:

- The Minister of State for AYUSH inaugurated the Regional Raw Drug Repository (RRDR) at the All National Medicinal Plants Board (NMPB): India Institute of Ayurveda in New Delhi.
- This RRDR is the second in the series of repositories proposed by the National Medicinal Plants Board (NMPB), Ministry of AYUSH and will be dedicated to the Trans-Ganga Plain Region.

What is Regional Raw Drug Repository (RRDR)?

- The National Medicinal Plants Board (NMPB), in 2016, took up the initiative of developing a National Raw Drug Repository (NRDR) and Regional Raw Drug Repositories (RRDR) in respect of raw drugs being used in the ASU&H systems of medicine.
- RRDRs is a centrally sponsored scheme of the National AYUSH Mission.
- Three RRDRs are already ready.
- The newly inaugurated RRDR for the Trans-Ganga Plain Region covers four states -Haryana, Chandigarh, Delhi and Punjab.
- **Objectives of RRDRs:**
 - Act as a collection centre of raw drugs available and used in each region.
 - Act as an accredited reference library for the authentication of raw drugs.
 - Establish standard protocols and keys for the authentication of raw drugs used in the herbal industries.
 - Act as an educational centre for disseminating general awareness about the usefulness of raw drugs.

Activities and tasks of RRDRs:

• Collection, compilation, cataloguing of raw drugs and documentation (including

- digitization) on the information of raw drugs that are used in the traditional systems of medicine.
- Collection of plants and raw drug samples and preserving those specimens.
- Having a digital database of plants.
- Providing standard, genuine and authenticated reference samples of raw drugs to the needy.
- Development of appropriate manuals of identification keys to delineate the features for easy understanding and field identification.
- Testing of raw drugs for pesticide residues, aflatoxins, heavy metals and microbial load, etc. to international standard or any other as per requirement.

- NMPB was formed in 2000 and functions under the Ministry AYUSH.
- The Board has been established by the Government of India to coordinate with all matters relating to medicinal plants and support policies and programs for the growth of trade, export, conservation and cultivation.
- The main objective of NMPB is to encourage the cultivation of medicinal plants and its sustainable management across the country and to reduce pressure on the collection from wild habitat in forests.
- To meet the increasing demand for medicinal plants, NMBP focuses on in-situ & ex-situ conservation and augmenting local medicinal plants and aromatic species of medical significance.
- The NMPB also promotes research & development, capacity building through training, raising awareness through promotional activities like the creation of Home/School herbal gardens.
- NMPB also seeks to support programs for quality assurance and standardization through the development of Good Agricultural and Collection Practices (GACPs), development of monographs laying down standards of quality, safety and efficacy; development of agro-techniques and credible institution a mechanism for certification of quality of raw drugs, seeds and planting material.

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pg. 20 Easy to PICK—"PIB Monthly Magazine October -2020

India Meteorological Department (IMD)

Context:

India Meteorological Department commissions Flash Flood Guidance Services for South Asia.

Details:

- India has launched Flash Flood Guidance services for South Asian countries — India, Bangladesh, Bhutan, Nepal and Sri Lanka — to issue impactbased forecasting of floods, which are very sudden and of short duration, at watershed and also city level
- The Flash Flood Guidance services is the first of its kind for South Asian countries namely, India, Sri Lanka, Nepal, Bhutan and Bangladesh.
- The Flash Flood Guidance is a robust system designed to provide the necessary products in real-time to support the development of warnings for flash floods about 6- 12 hours in advance at the watershed level with a resolution of 4kmx4km for the Flash Flood prone South Asian countries.
- IMD has tested the performance of the system during recent monsoon seasons in the preoperational mode and the Flash Flood Bulletins were issued to National Hydrological and Meteorological Services in the Region for its validation.
- The system has in-depth science, dynamics and diagnostics to provide guidance for the possible occurrences of flash floods at the local level.
- The guidance for flash floods in the form of threats (6 hours in advance) and risks (24 hours in advance) will be provided by the Regional Centre to the National Meteorological and Hydrological Services, National and State Disaster Management Authorities and all other stakeholders for taking necessary mitigation measures to reduce the loss of life and property.
- Recognising that flash floods have a particularly disastrous impact on the lives and properties of the affected populations, the 15th WMO Congress had approved the implementation of a Flash Flood Guidance System project with global coverage that had been developed by the WMO Commission for Hydrology jointly with the WMO Commission for Basic Systems.

What are Flash Floods?

- A flash flood is a rapid flooding of low-lying areas: washes, rivers, dry lakes and depressions.
- It may be caused by heavy rain associated with a severe thunderstorm, hurricane, tropical storm, or

- meltwater from ice or snow flowing over ice sheets or snowfields.
- Flash floods may also occur after the collapse of a natural ice or debris dam, or a human structure such as a man-made dam.
- Flash Floods are highly localized events of short duration with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood.
- There is a general lack of flash flood warning capabilities and capacities of the nations across the world.
- Flash floods induce severe impacts in both the built and the natural environment. Especially within urban areas, the effects of flash floods can be catastrophic and show extensive diversity, ranging from damages in buildings and infrastructure to impacts on vegetation, human lives and livestock.

Project Snow Leopard (PSL)

Context:

International Snow Leopard Day is observed on 23 October to raise awareness on protection of snow leopards which are endangered.

About Project Snow Leopard:

- Project Snow Leopard (PSL) is a programme under the Ministry of Environment, Forest and Climate Change with the overarching goal to safeguard and conserve India's unique natural heritage of high altitude wildlife populations and their habitats by promoting conservation through participatory policies and actions.
- The location of the project is all biologically important landscapes in the Himalayan high altitudes in the states/UTs of Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttaranchal, Sikkim, and Arunachal Pradesh.
- PSL was launched in 2009.
- It aims to promote a knowledge-based and adaptive conservation framework that fully involves the local communities, who share the snow leopard's range, in conservation efforts.
- The Government of India has identified the snow leopard as a flagship species for the high-altitude Himalayas.

Need for the project:

 Since the harsh climate and topography of the area are relatively less conducive to agriculture and

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pg. 21 Easy to PICK—"PIB Monthly Magazine October -2020

other developmental options such as industry, most of the region is largely dependent on pastoralism.

- Wild herbivore species are getting outcompeted and their populations are declining due to increasing livestock populations in many areas.
- This is leading to increased dependence of wild predators such as the snow leopard and the wolf on livestock, causing intense human-wildlife conflicts.
- Poaching is a major threat in some areas, along with opening up of areas due to road building, pressures from immigrant labour forces, etc.
- There are increasing reports of conflicts due to crop depredation by wildlife.
- Military and para-military personnel need extensive road networks and are usually settled near important but fragile wetland sites or key mountain passes that are also important for wildlife species such as the Tibetan argali Ovis ammon and waterfowl.
- The high altitudes of India (including the Himalaya and Trans-Himalaya biogeographic zones) support a unique wildlife assemblage of global conservation importance.
- This region has attracted less attention from the point of view of wildlife conservation.
- The region represents a vast rangeland system supporting important traditional pastoral economies and lifestyles.
- The region also provides essential ecosystem services and harbours river systems vital for the nation's food security.

Sustainable Processing of Municipal Solid Waste: 'Waste to Wealth'

Context:

CSIR-CMERI has developed a Municipal Solid Waste Processing Facility.

Details:

- This new facility has not only helped in achieving decentralized decimation of solid wastes, but has also helped create value-added end-products from abundantly available redundant stuff such as dry leaves, dry grass, etc.
- The MSW Processing Facility is developed for the disposal of solid waste in a scientific way following the Solid Waste Management Rules (SWM) 2016 prescribed by Union Ministry of

- Environment, Forests and Climate Change (MoEF&CC), Govt. of India.
- The primary focus of CSIR-CMERI is to unburden the common households from the segregation responsibilities through advanced segregation techniques.
- The mechanized segregation system segregates solid waste into metallic waste (metal body, metal container, etc.), biodegradable waste (foods, vegetables, fruits, grass, etc.), non-biodegradable (plastics, packaging material, pouches, etc.) & inert (glass, stones, etc.) wastes.
- The bio-degradable component of the waste is decomposed in an anaerobic environment popularly known as bio-gasification.
 - In this process, biogas is liberated through the conversion of organic matter. The biogas can be used as fuel for cooking purpose.
 - The gas can also be utilized in the gas engine for the generation of electricity.
 - The residual slurry from the biogas plant is converted to compost in a natural process known as vermi-composting by introducing earthworms. The vermi-compost is utilized in organic farming.
- Biomass Waste Disposal
 - Biomass waste such as dry leaves, dead branches, dry grass, etc. are disposed of by first shredding it to suitable size followed by mixing with the slurry of the biogas digester.
 - This mixture is feedstock for briquette, which is utilized as fuel for cooking.
 - These briquettes are also being utilized in gasifier for production of syngas which can be utilized in gas engine for the generation of electricity.
 - The ash produced from the burning of briquette is mixed with cement and water in an appropriate proportion for production of bricks which is used for construction work.
- Polymer Waste Disposal
 - The polymer waste consisting of plastics, sanitary waste, etc. is being disposed of through two main processes i.e. pyrolysis and plasma gasification.
 - In the pyrolysis process, the polymer waste is heated to a temperature of 400 600°C in an anaerobic environment in the presence of a suitable catalyst.

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pg. 22 Easy to PICK—"PIB Monthly Magazine October -2020

- The volatile matter from the polymer waste comes out as a result of heating which on condensation gives pyrolysis oil.
- The non-condensed syngas and crude pyrolysis oil after purification are reused for heating purposes and it helps in obtaining self-sustainability.
- The solid residue known as char is mixed with the biogas slurry for production of briquette.
- Sanitary Waste Disposal
 - The sanitary items including masks, sanitary napkins, diapers, etc. are disposed of utilizing high-temperature plasma.
 - The MSW facility is equipped with special disinfection capabilities to help break the COVID Chain through UV-C Lights and Hot-Air Convection methods.
 - The Decentralized Solid Waste Management Plant developed by CSIR-CMERI has all the potentials to scientifically manage the Solid Waste including the COVID and other viruses present in the wastes.
 - The integrated MSW pilot plant is also self-sufficient in terms of energy requirement through the installation of roof-mounted solar panels, which can also feed the surplus energy supply onto a mini-grid.

CAWACH companies come up with safe disinfection & sanitization technologies Context:

Ten companies supported by CAWACH have come up with new technologies for sanitization and disinfection. **Details:**

• CAWACH is an initiative of the National Science & Technology Entrepreneurship Development Board (NSTEDB), Department of Science and Technology (DST), that supports innovations in the areas of diagnostics, devices, informatics including bio-informatics & information management systems, any intervention for the control of COVID-19 and/or start-up ideas to address/mitigate various challenges faced by country/society due to the severe impact of COVID-19.

Some of the new innovative products are mentioned below:

- Mumbai based start-up Inphlox Water Systems, with expertise in treating complex polluted water and wastewater, modified their technology to design and develop a system for space and equipment disinfection to fight COVID-19 contamination.
 - The product is titled Vajra.
 - The VAJRA KE Series uses a disinfection system consisting of a multistage disinfection process by incorporating electrostatic discharge that generates ozone, and the powerful sterilizing effects of UVC light spectrum.
- Coimbatore based Eta Purification offers advanced sterilization solutions.
 - The COSMO (Complete Sterilization by Microplasma Oxidation) system can rapidly disinfect Covid-19 infected areas, including quarantine facilities, ambulatory care, and equipment surfaces.
 - It uses environmentally-sound microcavity plasma technology.
 - The disinfectant is produced on-site, thereby eliminating the transport, storage, and handling of hazardous chemicals.
 - This offers a sustainable alternative to conventional chemical-based decontamination.
- Chennai-based start-up MicroGO offers a mechanical hand sanitizing dispenser machine that quantifies the steps of hand sanitization through touchless, real-time monitoring via a dashboard.
- Weinnovate Biosolutions from Pune has developed silver nanoparticles based on nonalcoholic liquid sanitizer.
 - Their technology pending for patent also inhibits the RNA replication activity preventing the spread of the virus and blocks surface glycoproteins making the virus ineffective.
- Lucknow based Maser Technology offers ATULYA and OPTIMASER.
 - OPTIMASER is a microwave-assisted cold sterilization device for hazardous biomedical waste disinfection and making linen and PPE reusable.
 - ATULYA is an Instant Microwave based handheld sterilizer which offers a cutting

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pg. 23 Easy to PICK—"PIB Monthly Magazine October -2020

edge over the UV tube-based steriliser, Receipts. sanitising sprays & all the possible Details: methods of sterilisation & protection.

- The framework provides for the listing of DRs by companies that are listed in FATF compliant jurisdictions (including India).
- The framework enables the eligible listed companies to raise capital through issuance and listing of DRs on the stock exchanges in GIFT IFSC.
- Additionally, the framework enables eligible companies having DRs listed on any exchange in an FATF-compliant jurisdiction to list and trade such DRs on the stock exchange(s) in GIFT IFSC as an additional venue for trading, without any fresh public offering.
- While IFSCA has prescribed the framework for essential disclosure requirements such as financial statements, material or price sensitive information, shareholding pattern, change of depository and corporate actions, the listed companies shall continue to comply with the applicable requirements of their respective home jurisdictions with respect to corporate governance norms and several other disclosure requirements, without additional regulatory burden.

Agreement between India Post and United States Postal Service (USPS)

Context:

India Post and United States Postal Service (USPS) signs Agreement for Electronic Exchange of Customs Data related to postal shipments exchanged between the two countries.

Details:

- The agreement will make it possible to transmit and receive electronic data of international postal items prior to their physical arrival at the destination and would enable customs clearance of postal items in advance in line with the evolving global postal framework.
- This will also improve the performance of postal services in terms of reliability, visibility and security.
- The primary objective that will be served by this agreement is to facilitate 'ease of exports' for small and large exporters through postal channels from different parts of the country and will contribute towards making India an Export Hub for the world.
- Exchange of Electronic Advance Data (EAD) as per the Agreement will be a key driver towards promoting mutual trade with emphasis on the exports from different parts of India to the USA through postal channel considering that USA is a major destination of MSME products, gems & jewellery, pharmaceuticals and other local products from India.
- This will fulfil a major demand of the export industry to expedite customs clearances of export
- The USA is the top export destination for India (~17%) which is also reflected in the exchange of goods through the postal channel.

Electricity India Access in Benchmarking Distribution Report

Context:

NITI Aayog, Ministry of Power, Rockefeller Foundation, and Smart Power India launched the 'Electricity Access in India and Benchmarking Distribution Utilities' report.

Details:

- The report assesses 25 distribution utilities and is based on a primary survey conducted across 10 states.
- The survey represents about 65% of the total rural population of India and with a sample size of more than 25,000, including households, commercial enterprises and institutions.
- Aimed at capturing insights from both the demand (electricity customers) as well as supply-side (electricity distribution utilities), the report seeks
- Evaluate the status of electricity access in India across these states and distribution utilities along

GIFT IFSC

Context:

GIFT IFSC prescribes framework for listing of Depository

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pg. 24 Easy to PICK—"PIB Monthly Magazine October -2020

all dimensions that constitute meaningful access

- Benchmark utilities' capacity to provide electricity access and identify the drivers of sustainable access
- Develop recommendations for enhancing sustainable electricity access
- Key findings:
 - 92% of customers reported the overall availability of electricity infrastructure within 50 metres of their premises; however, not all have connections, the primary reason being the distance of households from the nearest pole.
 - Overall, 87% of the surveyed customers have access to grid-based electricity. The remaining 13% either use non-grid sources or don't use any electricity at all.
 - The hours of supply have improved significantly across the customer categories to nearly 17 hours per day.
 - Nearly 85% of customers reported to have a metered electricity connection.
 - Access to electricity is observed in 83% of household customers.
 - A satisfaction index was created to assess the overall satisfaction level of customers with utility services.
 - The study suggested that a total of 66% of those surveyed were satisfied 74% of customers in urban areas and 60% in rural areas.

SERB-POWER

Context:

Union Minister for Science & Technology launched a scheme titled "SERB-POWER (Promoting Opportunities for Women in Exploratory Research)", designed exclusively for women scientists.

About SERB-POWER:

- SERB-POWER is an initiative of the Department of Science & Technology (DST).
- The scheme will have two components:
 - SERB-POWER Fellowship
 - Target: Women researchers in 35-55 years of age. Up to 25 Fellowships per year and not more than 75 at any point in time.
 - Components of support: Fellowship of Rs. 15,000/- per month in addition to regular

income; Research grant of Rs. 10 lakh per annum; and Overhead of Rs. 90,000/- per annum.

• **Duration**: Three years, without the possibility of extension. Once in a career.

SERB-POWER Research Grants

- Level I (Applicants from IITs, IISERs, IISc, NITs, Central Universities, and National Labs of Central Government Institutions): The scale of funding is up to 60 lakhs for three years.
- Level II (Applicants from State Universities/Colleges and Private Academic Institutions): The scale of funding is up to 30 lakhs for three years.
- POWER Grant will be regulated through terms of reference conforming to SERB-CRG (Science and Engineering Research Board -Core Research Grant) guidelines.
- While a Search-cum-Selection Committee constituted for the purpose will help in identifying the POWER Fellowship, the existing Programme Advisory Committee (PAC) mechanism will be used to select the POWER Research Grants.
- It is proposed to institute 25 POWER Fellowships annually. A total of 50 POWER Grants each will be sanctioned in Level I & Level II per annum.
- These schemes of the government are expected to empower women scientists and cultivate a women-friendly culture in India's academic and research institutions and ensure more women in leadership positions in decision-making bodies.

About SERB:

- The Science and Engineering Research Board (SERB) is a statutory body established through an Act of Parliament.
- Supporting basic research in emerging areas of Science & Engineering is the primary and distinctive mandate of the Board.
- The SERB Act 2008 is the legislation of Parliament that established the Board.
- It functions under the Department of Science and Technology, GOI.
- Objectives of SERB:

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pg. 25 Easy to PICK—"PIB Monthly Magazine October -2020

- Serve as a premier agency for planning, promoting and funding of internationally competitive research in emerging areas.
- Identify major inter-disciplinary research areas, and individuals, groups or institutions and fund them for undertaking research.
- Assist in setting up infrastructure and environment for scientific pursuit.
- Enable in order to achieve synergy between academic institutions, research and development laboratories and industry for promoting basic research in science and engineering.
- Evolve a system of approach to expeditiously provide funding for research, including monitoring and evaluation, by adopting modern management practices.

- The Narmada Bachao Andolan was formed in order to protest against the project.
- The Supreme Court stalled the project in 1995.
- In 2000–01 the project was revived but with a lower height of 110.64 metres under directions from the SC, which was later increased in 2006 to 121.92 meters and 138.98 meters in 2017.
- The dam was inaugurated in 2017 by Prime Minister Modi.

Sardar Sarovar Dam

Context:

Prime Minister inaugurates dynamic lighting of the Sardar Sarovar Dam.

About the Sardar Sarovar Dam:

- It is a concrete gravity dam on the Narmada river in Kevadiya near Navagam, Gujarat.
- Gujarat, Madhya Pradesh, Maharashtra and Rajasthan receive water and electricity supplied from the dam.
- Pandit Jawaharlal Nehru had laid the foundation stone for the project in 1961. However, the construction of the project was started only in 1987.
- It was funded by the World Bank through its International Bank for Reconstruction and Development (IBRD), although it withdrew in 1994.
- It is a part of the Narmada Valley Project, a large hydraulic engineering project involving the construction of a series of large irrigation and hydroelectric multi-purpose dams on the Narmada river.
- It is the second-largest concrete dam in the world in terms of the volume of concrete used to construct the dam.
- The project was a controversial one because many people objected to the construction of the dam citing environmental issues and the displacement of people.

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