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AN INITIATIVE BY PRADEEP KUMAR
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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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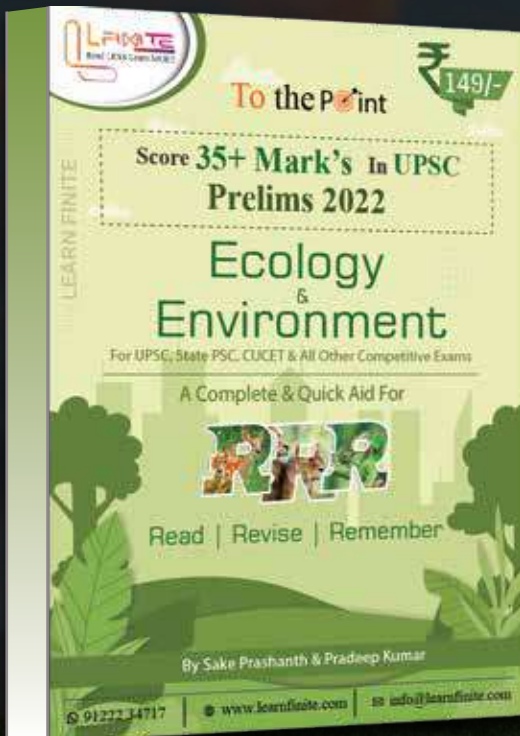
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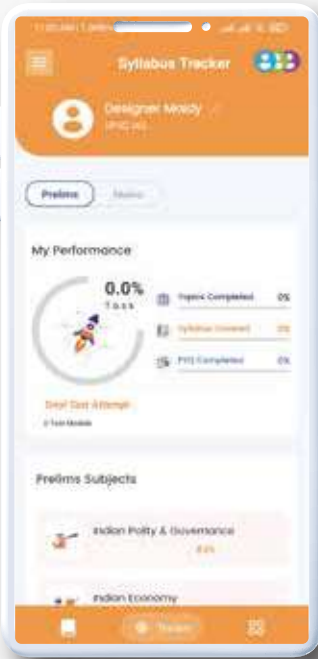
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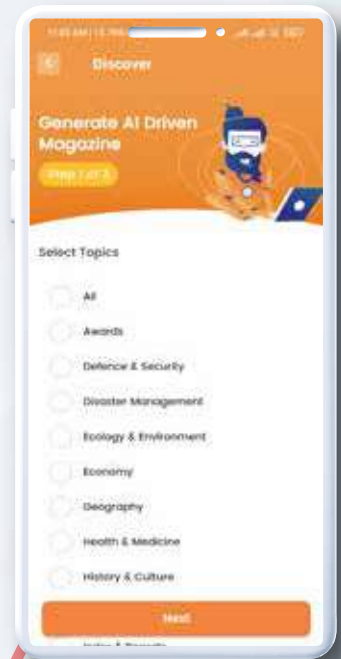
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History & Culture

BujurgonkiBaat–DeshKeSaath

In news

Union Minister of Culture Shri G.K Reddy launches program 'BujurgonkiBaat–DeshKeSaath'

Details

- The programme 'BujurgonkiBaat–DeshKeSaath' aims at enhancing the interaction between the youth and the elder persons who are 95 years and above.
- The exhibition showcases collection of paintings on the theme of Krishna from various schools of art including Amber, Kangra among other.
- This is a unique programme where the Country's youth will spend time and interact with the older generation and elders close to 95 years or above.
- They will then upload these videos and the ministry of culture will integrate them.
- Our cultures and traditions will flourish only if we share it with the world.

Gita Govinda

- 12th century poet Jayadeva originally writes Gita Govinda.
- Gitagovindam is a lyrical poetry in twelve chapters, sub-divided into twentyfour divisions called Prabandha.
- Jayadeva, the twelfth century poet, was a contemporary of several other poets in the court of Lakshmana Sena of Bengal, and even at a young age he attained fame for skill in composing verses in Sanskrit with apt words, as per his own statement in the introductory verses to *Gita Govinda*.

Samvatsari Parva 2021

In news

The Prime Minister, has greeted the people on the occasion of Samvatsari.

About the parva

- It is the day of forgiveness for Jains. It is celebrated on the last day of 'Parva Paryushana' which is the festival for the Shwetambara sect of Jainism
- Samvatsari Parva is one of the important and holiest festivals for the Jain community which falls generally in mid-August and September. It is celebrated on the last day of 'Parva Paryushana' which is the festival for the Shwetambara sect of Jainism.
- Jain community on this day, observe fast and perform Pratikraman together.
- According to the Jain calendar, this auspicious day is observed on Shukla Panchami in the month of Bhadrapada, which is the 8th day of Paryushan Parva.

Significance

- Jain strongly believes in forgiving.
- The forgiving plead is not limited to present life but also includes there all previous lives, Jains beg forgiveness from all living beings for faults they have made, whether deliberately or unknowingly.
- They forgive people animals and all kinds of living creatures. On this day, the poor are given alms, and the picture of a Jina (great teacher) is ceremoniously carried through the streets.
- The believers undertake a communal confession, and letters are sent asking for forgiveness.

- Jains say 'michachhami dukkadam' to their friends and family on Samvatsari.
- The meaning of the phrase is 'I want your forgiveness if I have offended you in any way, consciously or inadvertently, in thought, word, or deed.'
- 'Kshama yachna divas (apology-seeking day), daya divas (kindness day), and ahimsa divas (non-violence day) are some of the other names given to this festival.

157 artefacts & antiquities

In news

157 artefacts & antiquities were handed over by the United States during Prime Minister Modi's visit.

Details of artefacts & antiquities

- The list of 157 artefacts includes a diverse set of items ranging from the one and a half metre bas relief panel of Revanta in sandstone of the 10th CE to the 8.5cm tall, exquisite bronze Nataraja from the 12th CE.
- The items largely belong to the period of 11th CE to 14th CE as well as historic antiquities such as the copper anthropomorphic object of 2000 BC or the terracotta vase from the 2nd CE. Some 45 antiquities belong to the Before Common Era.
- While half of the artifacts (71) are cultural, the other half consists of figurines which relate to Hinduism (60), Buddhism (16) and Jainism (9).
- Their make spreads across metal, stone and terracotta.
- The bronze collection primarily contains ornate figurines of the well-known postures of Lakshmi Narayana, Buddha, Vishnu, Siva Parvathi and the 24 Jain Tirthankaras and the less common Kankalamurti, Brahmi and Nandikesa besides other unnamed deities and divine figures.
- The motifs include religious sculptures from Hinduism (Three headed Brahma, Chariot Driving Surya, Vishnu and his Consorts, Siva as Dakshinamurti, Dancing Ganesha etc), Buddhism (Standing Buddha, Bodhisattva Majushri, Tara) and Jainism (Jain Tirthankara, Padmasana Tirthankara, Jaina Choubisi) as well as secular motifs (Amorphous couple in Samabhanga, Chowri Bearer, Female playing drum etc).
- There are 56 terracotta pieces (Vase 2nd CE, Pair of Deer 12th CE, Bust of Female 14th CE) and an 18th CE sword with sheath with inscription mentioning Guru Hargovind Singh in Persian).

Economy

11th UK-India Economic and Financial Dialogue

In news

The 11th India-United Kingdom Economic and Financial Dialogue (EFD) was held, virtually chaired by Indian Union Minister for Finance & Corporate Affairs.

Aim

To work with financial institutions, corporates, and existing sustainable finance initiatives to accelerate efforts to mobilise capital into India.

Details

- The UK delegation included Governor Bank of England, CEO Financial Conduct Authority, Economic Secretary and other representatives from UK HMT.

- The Dialogue, inter alia, covered discussions on economic cooperation on multilateral issues, including G20 and COP26. Both sides deliberated on furthering of Financial Services collaboration with special emphasis on Fin-Tech and GIFT City, annual India-UK.
- Financial Market Dialogue and measures underway to reform financial markets.
- Infrastructure development and promotion of sustainable finance and climate finance were also discussed.
- Private sector initiatives under India-UK Financial Partnership (IUKFP) and India-UK Sustainable Finance Working Group including its progress were also discussed.
- The 11th Economic and Financial Dialogue concluded with adoption of Joint Statement by Union Finance Minister and Chancellor of Exchequer of United Kingdom and release of the Joint Statement on Climate Finance Leadership Initiative (CFLI) India partnership.

Promotion of Bee-Keeping Sector in Southern Region

In news

A one-day workshop on “Promotion of Bee-Keeping Sector in Southern Region” was organized jointly by MANAGE and National Bee Board (NBB)

Participants

More than 350 stakeholders which included senior officers from the Ministry of Agriculture and Farmers Welfare, Govt. of India, National Beekeeping and Honey Mission (NBHM), National Bee Board (NBB), NCDC, Cooperatives, Banks, Directors / Commissioners of State Agriculture / Horticulture Departments, MANAGE Faculty, Agri Startups and National Training Institutes under ACABC Scheme participated in the workshop both through physical and online mode.

Highlights

- MadhuKranti portal established by MoAFW to support small and marginal farmers and other stakeholder across the value chain.
- There is a need to promote FPO, Societies and Cooperatives to accelerate Beekeeping and Honey Mission in the country.
- Honey and beeswax-based products manufactured by Honey-based Agri Startups promoted by MANAGE under the RKVY- RAFTAAR Project of Govt. of India was released.
- The CEOs of these Agri Startups shared their experiences in organic comb honey, honey production during non-flowering period, natural preservation techniques, processing, packing, marketing, smart beehive monitoring system, use of block chain and QR based technology, IoT controlled bee box system for app-based management etc. They desired that awareness, training and opportunities need to be provided to promote Beekeeping / Honeybee in the country.

“AYUSH AAPKE DWAR” Campaign

In news

Ayush Ministry launched the campaign “**AYUSH AAPKE DWAR**” from more than 45 locations across the country

Highlights

- Total 21 states are participating in the launch activities, in which more than 2 lakh saplings will be distributed.
- The campaign aims to distribute medicinal plant saplings to 75 lakh households across the country in one year.

- The medicinal plants include Tejpatta, Stevia, Ashoka, Jatamansi, Giloy/Guduchi, Ashwagandha, Kumari, Shatavari, Lemongrass, Guggulu, Tulsi, Sarpagandha, Kalmegh, Brahmi and Amla.
- Under the Azadi Ka Amrit Mahotsav, several other programs including the launch of the Y-Break App, distribution of Prophylactic Ayush Drugs have been launched already.
- The lecture series for school and college students will be held tomorrow and webinar on the Y-Break app is to be organized on 5th September.

NALCO NAMASYA Mobile App

In news

National Aluminium Company Ltd (NALCO), a Navratna CPSE under the Ministry of Mines, has been playing a key role in empowering the Micro and Small Enterprises (MSEs) through providing a modern & innovative platform '**NALCO Micro And Small enterprise Yogayog Application' (NAMASYA)**, a bi-lingual App developed exclusively for the benefit of the Company's MSE Vendors.

Details

- The App empowers MSEs with required information about vendor registration process, items which can be supplied by them with technical specification, vendor development and training programmes of NALCO.
- Information like Reserved Items, Annual procurement plan, information on other MSE vendors etc. are provided on this easy to use App.
- As a responsible Corporate and India's leading producer and exporter of alumina and aluminium, the Company has taken several initiatives towards easing the process of doing business.

Hyderabad bags Patent for "Anaar"

In news

The MSME Tool Room, Hyderabad, Central Institute of Tool Design (CITD) has obtained a patent for the invention entitled "AUTOMATIC MACHINE FOR THE PRODUCTION OF CONICAL SHAPED FIREWORKS" for 20 years from the 10th November, 2015.

Aim

The aim of project is to automate the entire above process for relieving human fatigue and to save human from hazardous environment.

Details

- As a first project, CITD has taken up for Module-1 (consisting of flower pot chemical filling and packing).
- The total project consists of 10 different stations like paper cutting & pasting, chemical filling, washer insertion & ramming, mud filling & sealing etc.
- The entire process is minimal human intervention.
- Hence, it is safe for humans to handle the machine in Fireworks Industry.
- This is the first of its kind with fully indigenous technology. CITD and SFPL had filed a joint patent application for this innovation.
- ***The uniqueness of machine is that it completely works on pneumatic system for entire process of manufacturing.***
- There is no electrical or electronics system used in process.
- Therefore, this can avoid most of the fire accidents in field of fireworks industries.

- Trials were conducted by customer with original chemical in flowerpots and attaining the target production cones of 120 pieces per minute.

Central Institute of Tool Design CITO

- It is a Govt. of India organisation working under the administrative control of Ministry of MSME.
- It was established in the year 1968 and is a pioneering institution in training technical personnel in the field of Tool Design, CAD/CAM, Low Cost Automation etc.
- The Institute is conducting training courses right from Diploma level to Post Graduation.

Revamped Gold Monetisation Scheme

In news

Revamped Gold Monetisation Scheme, reduction in import duty of gold to help the industry to grow to the next level.

Details

- Reforms would help the industry to achieve export target of US\$ 43.75 billion this year and gems and jewellery exports to USD 75 billion in coming years.
- The Gems & Jewellery sector contributes around 7% to GDP and employs 5 million persons.
- Without any significant domestic production of raw materials, India has emerged as the leader in diamond manufacturing and export along with being one of largest exporter of other segments of industry such as gold jewellery, silver jewellery, coloured gemstones and synthetic stones.
- With support of the Government, GJEPC organized various virtual trade events last year like virtual Buyer Seller Meets, virtual IJES, virtual International Gems & Jewellery Show (e-IGJS), India Global Connect, Webinars etc. These initiatives have helped the industry to bounce back quickly as the pandemic receded and global markets opened up.

Gold Monetisation Scheme

Gold Monetization Scheme is intended to **mobilise the idle gold lying in households, institutions**, corporates & temple trusts of the country and facilitate its use for productive purposes, and in the long run, to reduce country's reliance on the import of gold.

India Export Initiative

In news

Union Minister for MSMEs Shri Narayan Rane virtually inaugurated the India Export Initiative and IndiaXports 2021 Portal of India SME Forum in New Delhi.

Aim & objective

IndiaXports aims to orient MSMEs free of cost, with the objective of focussing on the untapped export potential in existing tariff lines and supporting MSMEs in order to grow the number of exporting MSMEs and increase MSME exports by 50% in 2022 and contributing to the PM's dream of the US \$5 Trillion Economy.

Details

- Localization is essential to make the country a global manufacturing powerhouse by improving India's manufacturing base.
- This can be achieved by scaling up India's competitive advantage or augmenting the competitiveness of MSMEs and make India a preferred destination for manufacturing for the world.

- To reduce the trade balance and reduce imports, MSME will play an import role and it can be done through increasing their manufacturing capabilities.
- MSME exports are going to play a role of a catalyst in restoring the strength of the Indian economy.
- With more than 63 million MSMEs spread across the geographical expanse of India, MSMEs have been contributing nearly 40% of overall India's exports, contributing to approx. 6.11% of the country's manufacturing GDP & 24.63% of the GDP from services sector.

Science & Tech

CSIR-CMERI Mechanized Scavenging System

In news

CSIR-CMERI is developing a Mechanized Scavenging System, which was initiated after intensive studies of the diverse nature of Indian Sewerage Systems and the manner of its chokages. The technology is Modular in design so as to ensure customised deployment strategies as per situational requirements.

About the technology

- The System also focuses upon Sustainable Usage of resource i.e. Water as the System sucks in Slurry Water from the choked Sewerage Systems and after adequate filtration of the same redirects the same for Clearing of Chokages using Self-Propelling Nozzle.
- This, CSIR-CMERI technology provides in-situ option for Mechanized Scavenging as well as purification of Water.
- The design of the Technology is such that the Water Filtration Mechanism may be changed/modified as per the customised needs/requirements with the ability to change/redesign the Filter Media.
- The Vehicle-mounted Filtration Units will be able to augment and use Water from Surface Drain and Flooded Areas and purify it into Water suitable for Agricultural, Household and Drinking Water usages.
- The Drinking Water Scarcity prevalent in Flood-Affected regions can be solved to a certain by providing instantaneous and in-situ Water Purification solutions at ease.
- This provides a consolidated Technology Solution in a Flood-Affected region as it will be able to clear Drainage Chokages in flood-affected regions, which will help in providing an outlet for flood stagnated Water, as well as provide Water Purification solutions in Flood Disaster Zones.

Innovative Remotely Piloted Aircraft System

In news

Innovative Remotely Piloted Aircraft System (RPAS) Inaugurated at MCL of Coal India Ltd.

Details

- The initiative will enable access to real-time video through internet and pave the way for allied potential use-cases of drones in mines.
- Foundation stone also laid for first mile connectivity project -- Lajkura SILO, which would add 15 million tonne per annum despatch capacity to the Mahanadi Coalfields Limited (MCL).
- Carrying forward the vision of Sustainable Mining, MCL is implementing nine FMC projects to provide pollution-free state-of-the-art rake loading system at a total capital expenditure of Rs 3,600 crore.

- This will also generate a despatch capacity of 126 million tonne per year, expected to be achieved by the year 2024.
- MCL was the first coal company to introduce environment-friendly Surface Mining technology in 1999.
- The biggest fleet of 66 Surface Miners is contributing 95 per cent of the total coal production of the company.

Impact of Aerosols and Clouds on Solar Energy generation

In news

A team of Indian and international researchers have found that aerosols, dust, and clouds reduce solar energy generation from photovoltaic and rooftop solar installations resulting in substantial economic impact.

Details of research

- They estimated that the impact of total aerosol optical depth on Photovoltaic and rooftop installations amount to annual financial loss of upto 1.55 million Rupees, and the corresponding financial loss due to dust and clouds is 0.56 and 2.47 million Rupees.
- This estimation can help the Indian solar energy producers and the electricity handling entities for efficient transmission and distribution system operations and grid stability optimization.
- Recently, solar energy generation has been widely used in developing countries such as India, which has sufficient solar resources.
- Clouds and aerosols limit the solar irradiance causing performance issues in the PV and CSP plant installations.
- To achieve the large-scale development of a solar system requires proper planning, and there is a need to estimate the solar potential.

Way forward

The scientists are now planning to connect the solar energy production levels and distribution with the consumption at selected local administrative units across India and quantify the aerosol and cloud effects into the solar forecasting and energy trading principles for a decentralized energy ecosystem.

New High Rate Bio-methanation Technology

In news

A new high rate biomethanation technology for the integrated treatment of sewage and organic solid waste and concomitant generation of biogas and bio manure can treat groundwater and wastewater and convert it to potable water

Details

- It can be used for sewage and organic solid waste treatment with decentralized applications in various parts of India.
- Solid and liquid wastes are major challenges faced by big cities as also for the rapidly urbanizing areas, and sustainable technologies are needed for tackling them.
- An integrated treatment of sewage along with organic solid waste in India could help evolve a sustainable technology to overcome the solid and liquid waste disposal issues.
- This integrated approach of sewage and organic solid waste treatment could be exploited anywhere in India, where municipalities comprising around 50,000 to 1,00,000 population generate approximately 2 to 4 million litres per day of sewage and 5 to 10 metric tons per day of organic solid waste.

Applications

- This integrated and sustainable sewage and organic solid waste treatment system can be used for treating groundwater and wastewater and generating potable and reusable water, respectively.
- The technologies supported by the 'Waste Management Technology' program of the Department of Science & Technology (DST), Govt. of India have received national patents individually.

C-DOT celebrates its 38th Foundation Day

In news

Centre for Development of Telematics (C-DOT), the premier Telecom R&D Centre of the Department of Telecommunications, Ministry of Communications, Government of India, observed its 38th Foundation Day celebrations on 04 Sep 2020.

Details

- C-DOT has continued to organize technical workshops and seminars on contemporary themes related to the newly emerging dimensions of Telecom & ICT to mark its Foundation Day celebrations.
- C-DOT, this year organized the international technical conference in virtual mode as part of GB Meemamsi Lecture Series 2021, wherein several field experts, telecom veterans and academicians from around the world shared their insightful experiences and profound knowledge on the future Telecom technologies.
- The event also witnessed the launch of C-DOT's Common Alerting Protocol (CAP) lab.
- The technical session covered a wide range of topics and featured interesting talks by various field experts.

Chandigarh's first Pollen Calendar

In news

Chandigarh now has its first pollen calendar, which can identify potential allergy triggers and provide a clear understanding for clinicians as well as allergy sufferers about their causes to help limit their exposure during high pollen loads.

Aim of the study

The study aims to bring airborne pollen seasonal information to the susceptible population, healthcare professionals, policymakers, and scientists to be familiar with the current changes in the environment, which can further help develop mitigation strategies

Issues

- About 20-30% of the population suffers from allergic rhinitis/hay fever in India, and approximately 15% develop asthma.
- Pollens are considered major outdoor airborne allergens responsible for allergic rhinitis, asthma, and atopic dermatitis in humans.

Pollen Calendar

- Pollen calendars represent the time dynamics of airborne pollen taxa in graphical form in a particular geographical area.
- They yield readily accessible visual details about various airborne pollen taxa present throughout the year, with their seasonality in a single picture.

- Pollen calendars are location-specific, with concentrations closely related to locally distributed flora.

MoU for cooperation in field of Geosciences

In news

Cabinet approves the Memorandum of Understanding on cooperation in field of Geosciences between the Joint Stock Company Rosgeologia, Russia and the Geological Survey of India (GSI), India.

Objective

The main objective of this MoU is to extend mutual cooperation for technological collaboration on exploration for deep-seated and / or concealed mineral deposit; analysis and interpretation of the aero-geophysical data; PGE and REE Exploration and Research; Joint development of the Indian Geoscience Data repository with the Russian state-of-the-art Information Technology; exchange of technology & knowledge in the field of drilling, sampling and laboratory analysis to achieve data accuracy, and cost optimization; and training and capacity building of scientific personnel etc., between "both the parties in the fields of Geosciences.

Background

- Joint Stock Company Rosgeologia (ROSGEO) is the largest geological State holding company in the Russian Federation with a developed production and technical capabilities, high professional competences and a unique scope of accumulated geological information.
- The company performs all types of geological prospecting and exploration activities from regional surveys for all types of mineral resources to estimation of the reserves and commissioning of the fields into operation, it possesses the unique competence in the area of offshore geological and on-shelf operations.

Magnetic field of an eruption from the Sun's atmosphere

In news

Indian Scientists, along with international collaborators, have measured the magnetic field of an eruption from the Sun's atmosphere (by observing the weak thermal radio emission associated with the erupted plasma for the first time), offering a rare peek to the interior of the Sun.

The study

- The study of the phenomenon happening in the Sun's atmosphere or the solar corona provides insights into the inner workings of the Sun.
- The Sun is an extremely active object, spewing out vast quantities of gas in many violent events and the corona is a region of very high temperatures, strong magnetic fields, and violent plasma eruptions.
- A class of such eruptions are Coronal Mass Ejections (CMEs).
- CMEs are the most powerful explosions happening in our solar system. When a really strong CME blows past the Earth, it can damage the electronics in our satellites and disrupt radio communication networks on Earth.
- Hence, astronomers regularly study these events.
- This field of research helps to understand Space Weather.
- A team of scientists from the Indian Institute of Astrophysics (IIA), an autonomous institute of the Department of Science & Technology (DST), Government of India, along with their collaborators, used data from their radio telescopes to measure the magnetic field and other physical conditions of the plasma in a CME detected on 1 May 2016.

Improved water management system

In news

Indian researchers have developed an improved wastewater treatment solution that can completely reuse industrial dye wastewater from textile industry, eliminating its toxicity and making it suitable for domestic and industrial usage.

Details

- It can reduce water treatment costs and facilitate the reuse of the water in dry regions.
- The current 3-stage treatment process for wastewater consisting of primary, secondary, and tertiary treatment is unable to treat toxic industrial wastewater.
- The stand-alone AOP treatment technique for colour and odour properties in industrial effluents (dye-based) may be insufficient to meet set government standards and is also limited due to the high cost of AOPs involving continuous supply of chemical reagents.

Advanced Oxidation Process

- The much-improved Advanced Oxidation Process (AOP) technology targeting zero discharge water management system is being utilized for the complete reuse of industrial dye wastewater for domestic and industrial usage at a rate of 10 Kilo litres /day.
- The treatment of toxic and highly carcinogenic industrial dyes of textile effluents is performed using this AOP technology for degrading and mineralizing recalcitrant organic matter from effluent wastewater.
- It is a direct replacement of the existing treatment plant processes and consists of a low-cost solution of dye adsorption on acid-modified soil followed by a photochemical reaction step within a photocatalytic visible light filter and a unique carbon and PAN nano-mat fibre filtration process.
- The technology has resulted in the recuperation of 50% of the treatment cost incurred from conventional processes for water treatment (especially due to the high cost of sludge disposability) in the water-scarce regions of Rajasthan.

Noise Control Sheet Absorber

In news

An Indian researcher has fabricated paper honeycomb and stronger polymer honeycomb structure as sound-absorbing panels that dissipate acoustic energy to low-frequency ranges.

Details

- The technology can be used in building acoustics and also as environmental noise control solution.
- Many traditional materials have been found to be good at controlling higher frequencies.
- However, natural bee hives have been found to efficiently control high as well as low frequencies because of their geometry.
- It has been found from theoretical analysis and experimental investigations that this behaviour was owing to the conversion of acoustical energy into vibration energy.
- This vibration energy is dissipated in the form of heat due to wall damping property.
- Mimicking this property as an engineering solution could offer a cost-effective method for controlling noise pollution.
- The design methodology involves understanding the physics of bee hive sample acoustic energy dissipation and then mimicking its design.

How the Panel was made?

- The panels were made by slicing stacked extruded polypropene straws.
- The slicing process is done with the help of hot wire, which also bonds the straws together.
- The developed technology provides a mechanism of acoustic energy dissipation with lower thickness and higher specific strength of acoustic panels.
- A test facility to measure the absorption coefficient of large samples has also been established as part of this work.

Atal Innovation Mission launches Space challenge

In news

Atal Innovation Mission (AIM), NITI Aayog in collaboration with the Indian Space Research Organisation (ISRO) and Central Board of Secondary Education (CBSE) successfully launched the ATL Space Challenge 2021 for all school students across the country.

Details

- The challenge has been designed for all the school students, mentors and teachers across the country who not only are associated with schools having ATL labs but for all the non ATL schools as well.
- This is to ensure that students of classes 6 to 12 are given an open platform where they can innovate and enable themselves to solve digital age space technology problems.
- The ATL Space Challenge 2021 aligns with the World Space Week 2021 which is being observed from 4 to 10 October each year at the global level in order to celebrate the contributions of space science and technology.
- ATL Space Challenge 2021 one-of-a-kind challenge for school students across India that aligns with this year's theme of celebrating 75 years of India's independence as "Azadi Ka Amrit Mahotsav", an initiative of the Government of India to celebrate and commemorate 75 years of progressive India and the glorious history of its people, culture and achievements.
- The Space Challenge perfectly aligns with the objective of the nation-wide Mahotsav and support the young innovators and introduce them to newer technologies and skills.

Students can create a solution that can be implemented and adopted leveraging technologies such as:

- **Explore Space**
- **Reach Space**
- **Inhabit Space**
- **Leverage Space**

Saline Gargle RT-PCR technique

In news

Nagpur-based National Environmental Engineering Research Institute (NEERI) has transferred the know-how of indigenously developed Saline Gargle RT-PCR technique, used for testing COVID-19 samples.

Details

- The Saline Gargle RT-PCR technology is simple, fast, cost-effective, patient-friendly and comfortable; it also provides instant test results and is well-suited for rural and tribal areas, given minimal infrastructure requirements.
- CSIR-NEERI stated that the innovation developed by the institute has been 'dedicated to the nation' to serve the society.

- The knowhow has been transferred to the Union Ministry of Micro, Small & Medium Enterprises (MSME), on a non-exclusive basis.
- This would enable the innovation to be commercialized and licensed to all capable parties, including private, government and various rural development schemes and departments.

Benefits

- It is simple, fast, cost-effective, patient-friendly and comfortable; it also offers instant results and is well-suited for rural and tribal areas, given minimal infrastructure requirements.
- The Saline Gargle RT-PCR method is instant, comfortable and patient-friendly.
- Sampling is done instantly and results will be generated within 3 hours.
- The method is non-invasive and so simple that the patient herself can collect the sample.

High-quality transparent ceramics

In news

Indian researchers have developed transparent ceramics, reaching theoretical transparency through a technique called colloidal processing followed by simultaneous application of temperature and pressure, for the first time in India.

Details

- The material can be used for thermal imaging applications, especially in harsh service conditions and personal protection systems such as, helmets, face shields, and goggles.
- Transparent ceramics is a new class of advanced materials with unique transparency and excellent mechanical properties.
- These materials can be designed not only for transparent to visible light but also for ultraviolet (UV), Infrared (IR), and Radiofrequency (RF), giving opportunity for diverse applications.
- Though produced by different countries globally, transparent ceramics are restricted in supply as they can be used for strategic applications.

Science

- Generally, prepared from the high purity powders through a line of critically engineered processing steps, transparent ceramics needs preparation processes that will help achieve theoretical transparency by eliminating defects.
- Chemical Vapour Deposition (CVD) involving reactions of the precursors in the vapor phase at elevated temperatures and Hot Isostatic Pressing (HIP) involving simultaneous application of temperature and pressure are a few advanced processing techniques generally practiced to address the above challenges.
- An enhanced diffusion process at high temperature under pressure is suggested as the possible mechanism to eliminate the defects.

Plant to convert high ash coal to methanol

In news

India has developed an indigenous technology to convert high ash Indian coal to methanol and established its first pilot plant in Hyderabad.

Details

- This technology will help the country move towards the adoption of clean technology and promote the use of methanol as a transportation fuel, thus reducing crude oil imports.
- The broad process of converting coal into methanol consists of conversion of coal to synthesis gas, syngas cleaning and conditioning, syngas to methanol conversion, and methanol purification.
- Coal to methanol plants in most countries are operated with low ash coals.

Challenge

Handling of high ash and heat required to melt this high amount of ash is a challenge in the case of Indian coal, which generally has high ash content.

Solution

- In order to overcome this challenge, Bharat Heavy Electricals Limited (BHEL) has developed the fluidized bed gasification technology suitable for high ash Indian coals to produce syngas and then convert syngas to methanol with 99% purity.
- BHEL has integrated its existing coal to syngas pilot plant at Hyderabad with suitable downstream process for converting syngas into methanol.
- This pilot-scale project with a methanol generation capacity of 0.25 metric tons per day has been initiated by NITI Aayog and funded by the Department of Science and Technology (DST) under Clean Energy Research Initiative.

Way forward

Currently, the pilot plant is producing methanol with purity of more than 99%. Scaling it up will help in optimum utilization of the country's energy reserves and accelerate its journey towards self-reliance.

Large-scale reactor developed for cost-effective production of hydrogen

In news

A team of scientists has, for the first time, developed a large-scale reactor, which produces a substantial amount of hydrogen using sustainable sources like sunlight, and water, which is a cost-effective and sustainable process.

Details

- India has set a target of 450 GW of renewable energy by 2030.
- To achieve this feat, in the current scenario, researchers all over the world are working towards renewable energy solutions which should be sustainable with a limited carbon footprint.
- One of the most economical ways to achieve this is to produce hydrogen at a large scale through photocatalytic water splitting.
- It is the long-term persistent solution for the growing renewable energy needs and a low-cost economic process which will benefit society in the longer term.
- This work is supported by the DST Nano Mission NATDP project, and the related article has been published in the 'Journal of Cleaner Production' recently, and the team is in the process of obtaining a patent for the technology.

Process

- The INST team employed the low-cost organic semiconductor in carbon nitrides which can be prepared using cheaper precursors like urea and melamine at ease in a kilogram scale.
- When the sunlight falls on this semiconductor, electrons, and holes are generated.

- The electrons reduced the protons to produce hydrogen, and holes are consumed by some chemical agents called sacrificial agents.
- If the holes are not consumed, then they will recombine with the electrons.

Uses

- Hydrogen generated in this manner can be used in many forms like electricity generation through fuel cells in remote tribal areas, hydrogen stoves, and powering small gadgets, to mention a few.
- Eventually, they can power the transformers and e-vehicles, which are long-term research goals under progress.

Health & Medicine

'Y-Break' at workplace

In news

Dr Munjpara urges people of India to adopt 'Y-Break' at workplace to reduce stress and improve productivity

Y-Break

- Yogasanas in the Y-Break protocol open up the chest cavity and help the cardiovascular system.
- The webinar on the utility of the Y-Break App saw huge participation of Yoga practitioners.
- Employees work in an atmosphere of tension. That's why yoga is necessary in their life.
- Many meta-analyses have found that yoga is the best way to stay physically fit.
- Y-break will prove to be a big step in relieving stress and it is the medium to give maximum benefit in the shortest possible time.

Benefits of Yoga

- Yoga is very useful for people who are otherwise healthy, as it improves the mental and cognitive ability and reduces anxiety.
- There are many researches that have proved yoga and its effects on depression, anxiety and even schizophrenia.
- It not just restricts to the physical benefits but tremendously affects cognition in a positive manner.

MoU Signed between All India institute of Aryurveda and Western Sydney University

In news

All India Institute of Ayurveda under Ministry of Ayush, signed a MoU in coordination with NICM Western Sydney University Australia, in virtual mode, to appoint an Academic Chair in Ayurveda.

Details

- The new Academic Chair will undertake academic and collaborative research activities in Ayurveda, including herbal medicine and yoga, as well as design academic standards and short-term/medium-term courses and educational guidelines.
- This Chair will also conduct workshops/seminars/conferences on Ayurveda, advocate the safe and effective use of Ayurveda Systems in Australia, identify in academic and research programs on Ayurveda their strengths and gaps, provide tutorials to students, including the promotion of research activities and

innovations in Ayurveda in India, provide academic leadership demonstrating and fostering excellence in teaching research and policy development related to Ayurveda, within the robust Australian regulatory frame work, to develop strategies to promote the translation and integration of well evidence based Ayurveda medicines into conventional healthcare.

- This initiative would largely benefit both the countries and will encourage research innovation and collaboration and will also help in developing social and economical development as well as improve the health status of people.
- This Ayurveda Academic Chair will be based at Western Sydney University's NICM Health Research Institute, located on the West mead campus, with tenure for a period of three years.
- The appointment of the chair is jointly funded by the Ministry of Ayush and Western Sydney University and anticipated to commence early in 2022.

Rathnashree - Arogyadhama

In news

Shri Sarbananda Sonowal inaugurates "**Rathnashree - Arogyadhama**", a new unit of Sri Dharmasthala Manjunatheshwara Ayurveda Hospital at Udupi, Karnataka.

Details

- This new unit includes Aesthetic Medicine unit – Shringara. Deluxe Ward – Health Cottage unit, Dhyana Mandira, Panchakarma Centre and Special Ward.
- The health status of Indians can be enhanced by following AYUSH system of medicine and thus build a healthy Nation.
- The newly inaugurated hospital will serve the mankind, and strengthen the vision of our Prime Minister, Shri Narendra Modi's "Atma Nirbhar Bharath".
- General public should choose Ayurveda as the first line of treatment for their diseases.

Ayurveda

- Ayurvedic medicine is one of the world's oldest holistic ("whole-body") healing systems. It was developed more than 3,000 years ago in India.
- It's based on the belief that health and wellness depend on a delicate balance between the mind, body, and spirit.
- Its main goal is to promote good health, not fight disease. But treatments may be geared toward specific health problems.

Ecology & Environment

First India-Japan High Level Policy Dialogue on Environment

In news

The First India–Japan High Level Policy Dialogue was held virtually on 7th September 2021 between Mr. Bhupender Yadav, Union Minister of Environment, Forest and Climate Change of India and Mr. KOIZUMI Shinjiro, Minister of the Environment of Japan

Details

- They discussed issues on Air Pollution, Sustainable Technologies and Transports, Climate Change, Marine Litter, Fluorocarbons, COP 26, etc.
- India and Japan may explore strengthening bilateral cooperation especially on circular economy and resource efficiency, low carbon technology, green hydrogen, etc.
- Environment Minister also requested Japan to consider joining the Leadership Group for Industry Transition, a global initiative spearheaded by India and Sweden.
- Both countries can strengthen bilateral cooperation through the Joint Credit Mechanism (JCM), Coalition for Disaster Resilience Infrastructure (CDRI) and could also explore collaboration in areas endorsed by the G20, especially on climate, environment and energy
- Both sides agreed to further strengthen the bilateral cooperation on environment, and also to take forward the discussion on JCM.

Biological Reclamation

In news

Coal India Ltd. (CIL), under the Ministry of Coal are not only reclaiming land to its original shape but also enhancing Green cover along with Coal Mining activity.

Details

- Emphasis is to have simultaneous back filling of land after opencast Coal Mining operation and dense plantation thereon to maintain environmental equilibrium.
- Out of many such greenfield projects, one of the largest project of CIL, Jayant Opencast Coal Project in Singrauli District of Madhya Pradesh is forging ahead with a mission of looking beyond coal mining with land restoration & enhancing green cover day by day.
- This has helped in lowering down the effect of pollution substantially & has also helped in increasing Carbon offset.

Green Cover Mission

- In line with the Green Cover Mission, massive plantation is being carried out every year in and around the project which includes reclaimed area & overburden (OB) dump areas with the help of Madhya Pradesh Rajya Van Vikas Nigam Limited (MPRVNL).
- Saplings include species such as Jamun, Jungle Jalebi, Seesam, Sirus, Mahua, Subabul, Bel, Amla, Kachnar, Karanj, Neem, Amaltas, Bamboo, Bougainvillea, Cassia, Gulmohar, Khamer, Peltophorum etc.
- All new coal projects have mandatory well laid mine closure plan which apart from other activities, becomes a guiding factor for restoration of land to its original condition after completion of mining activity.
- Action on such restoration begins right from the start of the project wherein backfilling of void by overburden becomes a major activity after mining & simultaneous plantation over the land becomes key activity for early biological restoration.

Hybodont Shark

In news

In a rare discovery, teeth of new species of hybodontshark of Jurassic age have been reported for the first time from Jaisalmer.

Details

- Hybodont sharks have been reported for the first time from the Jurassic rocks (approximately, between 160 and 168 million-years-old) of the Jaisalmer region of Rajasthan.
- Hybodonts, an extinct group of sharks, was a dominant group of fishes in both marine and fluvial environments during the Triassic and early Jurassic time.
- However, hybodont sharks started to decline in marine environments from the Middle Jurassic onwards until they formed a relatively minor component of open-marine shark assemblages.
- Hybodonts finally became extinct at the end of the Cretaceous time 65 million years ago.
- Significantly, the newly discovered crushing teeth from Jaisalmer represent a new species named by the research team as *Strophodusjaisalmerensis*.
- The genus *Strophodus* has been identified for the first time from the Indian subcontinent and is only the third such record from Asia, the other two being from Japan and Thailand.
- The new species has recently been included in the Shark references.com, an international platform operating in association with International Union for Conservation of Nature (IUCN), Species Survival Commission (SSC), and Germany.

Significance

This discovery marks an important milestone in the study of Jurassic vertebrate fossils in the Jaisalmer region of Rajasthan, and it opens a new window for further research in the domain of vertebrate fossils.

INTERNATIONAL COASTAL CLEAN UP DAY

In news

The 36th International Coastal Cleanup Day was celebrated consecutively for the tenth year by Eastern Naval Command (ENC) on 18 Sep 21.

Details

- On the occasion, ENC undertook Coastal Cleanup Drive at Yarada Beach, Bheemili Beach and other sea fronts within premises of naval units at Visakhapatnam.
- Approximately 500 Naval personnel, Defence Civilians and their families carried out the cleanup drive following the prevailing COVID19 protocols.
- The cleanup drive was aimed at creating awareness among people to keep our beaches clean, safeguarding the environment and inculcating the habit of respecting coastlines which in turn nurtures the marine biodiversity.
- The International Coastal Cleanup began more than 30 years ago when communities rallied together with the common goal of collecting and documenting the trash littering their coastline.
- Every year, on the third Saturday in September, the International Coastal Cleanup Community encourages people around the world to remove trash and debris from beaches, waterways and other water bodies, to identify the sources of the litter, to change behaviours that cause pollution and to raise awareness on the extent of the marine debris problem.

Southern Naval Command (SNC) The Southern Naval Command observed International Coastal Clean-up Day on 18 Sep 21 with focus on mangrove plantation and clearance of plastic/non-biodegradable waste along waterfront areas in and around Kochi.

India's Clean Energy Economy

In news

A special event on '**Ambition to Impact: Opportunities for Global Collaboration in India's Clean Energy Economy**' at the United Nations High-Level Dialogue on Energy (HLDE) 2021 was co-organised by the Ministry of New and Renewable Energy, Government of India.

Details

- The webinar showcased India's efforts to achieve the 2030 Sustainable Development Agenda through a citizen-centric energy transition and focused on enhancing the speed of India's clean energy deployment through global collaboration.
- It discussed the multilateral efforts required for this transition through conducive international policies, co-development of technologies, pooled finances for demonstrations, and investments to create markets and scale up deployment.
- India is constantly engaging with international communities through global initiatives to achieve its targets.
- Apart from the Government of India, Energy Compacts have been submitted by a wide range of Indian stakeholders, including utilities, Smart Cities, and corporates from the bioenergy, renewable energy, power, e-mobility, telecom, consumer goods and FMCG, food, cement and hard-to-abate sectors.
- Corporate Energy Compacts include Adani Green Energy and Adani Transmission; Ather Energy; Bharti Airtel; Heidelberg Cement; ITC Ltd.; J K Cement; JSW Cement; Punjab Renewable Energy Systems Ltd.; ReNew Power and UltraTech Cement.

Three new heatwave hotspots in India

In news

North-Western, Central, and further to south-central region of India are the new hotspot of intense heatwave events over the past half-century.

About the study

- A study found an increase in deadly Indian heat waves in recent years.
- The study also highlights the need for developing effective heat action plans in the three heatwave hotspot regions with a focus on different vulnerabilities among the inhabitants.
- Heatwaves emerged as a deadly health hazard, claiming thousands of lives across the globe in recent decades, with episodes strengthening in frequency, intensity, and duration in the past half-century in India as well.
- This has caused severe impacts on health, agriculture, economy, and infrastructure.
- The study showed a shift in the Spatio-temporal trend of HW events from the eastern region of Gangetic West Bengal and Bihar to North-Western, Central and further to south-central region of India.
- The research also observed an alarming southward expansion and a spatial surge in SHW events in the last few decades that may put a greater population at additional risk of heat stress in a region already characterized by low Diurnal temperature range (DTR), or the difference between the maximum and minimum temperatures within one day and high humidity.
- Importantly, the HW/SHW events were found to be positively correlated with mortality in Odisha and Andhra Pradesh, highlighting that human health is highly susceptible to severe heatwave disasters.

Heat waves in India

In India Heat waves typically occur from March to June, and in some rare cases, even extend till July. On an average, five-six heat wave events occur every year over the northern parts of the country. Single events can last weeks,

occur consecutively, and can impact large population. In 2016, severe heat wave conditions affected Bihar, Jharkhand, Gangetic West Bengal, Odisha, Punjab, Haryana, Chandigarh & Delhi, Rajasthan, Maharashtra, West Madhya Pradesh and Gujarat.

What is criterion for declaring heat wave in India?

Heat wave is considered if maximum temperature of a station reaches at least 40°C or more for Plains and at least 30°C or more for Hilly regions.

- Based on Departure from Normal Heat Wave: Departure from normal is 4.50°C to 6.40°C Severe Heat Wave: Departure from normal is >6.40degree C
- Based on Actual Maximum Temperature Heat Wave: When actual maximum temperature $\geq 450^{\circ}\text{C}$ Severe Heat Wave: When actual maximum temperature ≥ 47
- If above criteria met at least in 2 stations in a Meteorological sub-division for at least two consecutive days and it declared on the second day.

International Relations

8th Meeting of Agricultural Experts of BIMSTEC Countries

In news

India hosted the 8th Meeting of Agriculture Experts of Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) Countries virtually.

Details

- Experts of Agricultural Ministries from Bangladesh, Bhutan, India, Nepal, Sri Lanka, Myanmar and Thailand participated in the meeting.
- The Chairman highlighted the UN Food System Summit 2021 and the transformations that are happening in the agriculture and food systems globally.
- He exhorted to enhance the engagement and deepen the cooperation in agriculture and allied sectors amongst the BIMSTEC Member States by encouraging the exchange of knowledge, germplasm, students and experts.
- He also emphasized addressing biosafety and biosecurity concerns and promoting digital agriculture along with the trade of technologies for developing resilient agriculture, food systems and value chains.

Area of cooperation

- The BIMSTEC Member States appreciated the greater engagement of India offering six slots of scholarships each for Master and PhD programmes in agriculture and its other initiatives for capacity development and training including the development of seed sectors.
- The cooperation in the areas of high impact transboundary diseases of livestock and poultry; aquatic animal diseases and bio-security in aquaculture and digitalization to promote precision farming was also discussed in the meeting.
- The BIMSTEC provides a unique link between South and South-East Asia with 5 countries - Bangladesh, Bhutan, India, Nepal and Sri Lanka from South Asia and two countries - Myanmar and Thailand from South-East Asia coming together on one platform for cooperation in 14 key economic and social sectors of the economy.

BIMSTEC

- The BIMSTEC was founded in 1997 with an ambition to pursue mutual trade, connectivity and cultural, technical and economic development in the region.
- Initially, six sectors- trade, technology, energy, transport, tourism and fisheries were included for sectoral cooperation which was later expanded to 14 areas of cooperation.
- Agriculture is one of the 14 sectors. As about 1.7 billion+ people i.e., 22 per cent of the global population live in BIMSTEC countries, agriculture & allied activities are central to the economic and social development of the region.

Unmanned Aerial Vehicle

In news

Ministry of Defence and US Department of Defence signed a Project Agreement (PA) for Air-Launched Unmanned Aerial Vehicle (ALUAV) under the Joint Working Group Air Systems in the Defence Technology and Trade Initiative (DTTI).

Aim

The main aim of DTTI is to bring sustained leadership focus to promote collaborative technology exchange and create opportunities for co-production and co-development of future technologies for Indian and US military forces.

Details

- The PA for ALUAV falls under the Research, Development, Testing and Evaluation (RDT&E) Memorandum of Agreement between Ministry of Defence and US Department of Defence, which was first signed in January 2006 and renewed in January 2015.
- The agreement is a significant step towards deepening defence technology collaboration between the two nations through co-development of defence equipment.
- Under DTTI, Joint Working Groups on land, naval, air, and aircraft carrier technologies have been established for focus on mutually agreed projects in respective domains.
- The PA for co-development of ALUAV has been overseen by the Joint Working Group on Air Systems and is a major accomplishment for DTTI.
- The PA outlines the collaboration between Air Force Research Laboratory, Indian Air Force, and Defence Research and Development Organisation towards design, development, demonstration, testing and evaluation of systems to co-develop an ALUAV Prototype.
- The Aeronautical Development Establishment (ADE) at DRDO and the Aerospace Systems Directorate at the Air Force Research Laboratory (AFRL), along with the Indian and US Air Forces, are the principal organisations for execution of PA.

'Samudra Setu' and 'Mission Sagar'

In news

The Indian Navy has invested significant effort in meeting all regional commitments and furthering our diplomatic engagements with friends and partners in the Indo-Pacific.

Details

- With missions like Operation 'Samudra Setu' and 'Mission Sagar', the Navy was a key instrument of India's COVID outreach, delivering assistance and support to our maritime neighbours and partners in the Indian Ocean Region"

- The prompt and effective deployment of the Indian Navy in the time of crisis, has underscored India's vision of being the 'Preferred Security Partner' and 'First Responder' in the Indian Ocean Region.
- Indian Naval Aviation has contributed through numerous Humanitarian Assistance and Disaster Relief operations during which it has provided relief to fellow citizens like the recently conducted rescue operations off Mumbai during Cyclone Tauktae in May 2021.

Operation 'Samudra Setu'

- Operation Samudra Setu, which was launched on 05 May 2020 as part of the national effort to repatriate Indian citizens from overseas during the COVID-19 pandemic has culminated after successfully bringing 3,992 Indian citizens back to their homeland by sea.
- Indian Naval Ships Jalashwa (Landing Platform Dock), and Airavat, Shardul and Magar (Landing Ship Tanks) participated in this operation which lasted over 55 days and involved traversing more than 23,000 kilometers by sea.
- Indian Navy has previously undertaken similar evacuation operations as part of Operation Sukoon in 2006 (Beirut) and Operation Rahat in 2015 (Yemen).

Mission SAGAR

- **Security and Growth for All in the Region (SAGAR)** was launched in 2015. It is India's strategic vision for the Indian Ocean Region (IOR).
- Through SAGAR, India seeks to deepen **economic and security cooperation** with its maritime neighbours and assist in building their **maritime security capabilities**.
- Further, India seeks to safeguard its **national interests** and ensure Indian Ocean region to become **inclusive, collaborative and respect international law**.
- The key relevance of SAGAR emerges when seen in conjunction with India's other policies impacting the maritime domain like Act East Policy, Project Sagarmala, Project Mausam, India as 'net security provider', focus on Blue Economy etc.

MoU between ICAI & CAAR

In news

Cabinet approves Memorandum of Understanding between The Institute of Chartered Accountants of India (ICAI) and The Chamber of Auditors of the Republic of Azerbaijan (CAAR)

Details

- Mutual Co-operation in the areas of Member Management, Professional Ethics, Technical Research, CPD, Professional Accountancy Training, Audit Quality Monitoring, Advancement of Accounting Knowledge, Professional and Intellectual Development will be implemented.
- ICAI and CAAR also intend to undertake study on application of new innovative methods in the field of audit and accounting including application of blockchain, smart contract system, transition from Traditional Accounting to Cloud Accounting and also intend to have joint cooperation in the fight against corruption and money laundering.

Impact

- ICAI members are holding middle to top level positions in various organisations across the countries and can influence the decision/policy making strategies of respective organisations of a country.
- This MoU will lead to focus attention towards exchange of knowledge and strengthen best practices in both jurisdictions including application of new innovative methods and technologies in the field of accountancy.

Benefits

- ICAI through its vast network of Chapters and Representative Offices in 69 cities of 45 countries of the world is committed to play an important role by sharing the prevalent practices in these countries so that the Government of India can adopt the best practices being followed there to attract foreign investment and to encourage them to establish their setup in India.
- With this MoU, ICAI would be able to strengthen the partnership with Azerbaijan by providing the export of services in accountancy profession.

Background

- The Institute of Chartered Accountants of India (ICAI) is a statutory body established under the Chartered Accountants Act, 1949 for the regulation of the profession of Chartered Accountants in India.
- ICAI has contributed immensely in the field of education, professional development, maintenance of high accounting, auditing and ethical standards in furtherance of the profession of Chartered Accountants, which is recognized globally.
- The Chamber of Auditors of the Republic of Azerbaijan (CAAR) was established in accordance with the Law on Audit of 1994 as amended in 2004 to regulate the audit profession in the Republic of Azerbaijan.

Climate Action and Finance Mobilization Dialogue (CAFMD)

In news

India and the United States of America (USA) launched the “**Climate Action and Finance Mobilization Dialogue (CAFMD)**”

Details

- The CAFMD is one of the two tracks of the India-U.S. Climate and Clean Energy Agenda 2030 partnership launched at the Leaders' Summit on Climate in April 2021.
- The dialogue will not only strengthen India-US bilateral cooperation on climate and environment but will also help to demonstrate how the world can align swift climate action with inclusive and resilient economic development, taking into account national circumstances and sustainable development priorities.
- India and the United States are natural partners with shared values and our agenda encompasses all major pillars of our strategic priorities - including defence, security, energy, technology, education and healthcare.
- The US Climate envoy lauded India's leadership role in demonstrating how economic development and clean energy can go hand in hand and stated that urgent Global Climate Action is the need of the hour.

The launch was preceded by a bilateral meet where both sides discussed at length a wide range of climate issues relating to COP26, Climate Ambition, Climate Finance, Global Climate Initiatives including International Solar Alliance (ISA), Agriculture Innovation Mission for Climate (AIM4C).

Navy gives on lease Passenger Variant Dornier aircraft to Mauritius

In news

Taking a leap forward in its “**Neighbourhood First Policy**” India has delivered a Passenger Variant Dornier (PVD) to Mauritius Police Force on lease.

Details

- MSN 4059 has been leased to MPF by the Indian Navy on a gratis basis to support the current increased load of air operations.

- HAL shall be handing over a brand new State-of-the-Art PVD to Mauritius and this purchase has been facilitated by the Line of Credit under the Government of Mauritius.

Neighbourhood first policy

- It is part of India's foreign policy that actively focuses on improving ties with India's immediate neighbours which is being termed as Neighbourhood first policy in the media.
- It was started well by inviting all heads of state/heads of government of South Asian countries in his inauguration of PM Modi first term and later held bilateral talks with all of them individually which was dubbed as a mini SAARC summit.
- PM Modi made his first foreign visit to Bhutan in his first term.

Schemes & Policies, Social Issues

Swachh Survekshan Grameen 2021

In news

Swachh Survekshan Grameen aims to support acceleration of ODF plus interventions and results in the country.

Details

- An expert agency has been hired to conduct the Survekshan 2021.
- As part of the Survekshan, Villages, Districts and States would be ranked using key parameters.
- As part of Swachh Survekshan Grameen, 17,475 villages in 698 Districts across the country will be covered. 87,250 public places namely schools, anganwadis, public health centres, haat/bazaars/religious places in these villages will be visited for survey.
- Around 1,74,750 Households will be interviewed for their feedback on SBM related issues.
- Also, citizens will be mobilised to provide feedback on sanitation related issues online using an application developed for the purpose.
- The Department of Drinking Water and Sanitation (DDWS) had commissioned "Swachh Survekshan Gramin (SSG)- earlier in 2018 and 2019.
- It is pertinent to mention that SSG is not just a ranking exercise but has been a vehicle for creating a Janandolan (people's movement).
- A detailed protocol has been developed to guide the ranking of Districts based on their performance on key quality and quantitative parameters.

E-Shram portal

In news

The Ministry of Labour Welfare and Employment is organizing various camps for registration of the unorganized workers on the E-shram portal.

Aim

The government aims to register 38 crore unorganised workers, such as construction labourers, migrant workforce, street vendors and domestic workers, among others.

Details

- The workers will be issued an e-Shram card containing a 12 digit unique number, which, going ahead, will help in including them in social security schemes.
- The registration of workers on the portal will be coordinated by the Labour Ministry, state governments, trade unions and CSCs, officials said.
- Awareness campaigns would be planned across the country to enable nationwide registration of workers.

Transport and Marketing Assistance (TMA) scheme

In news

Centre has revised "Transport and Marketing Assistance" (TMA) scheme for Specified Agriculture Products.

Revision of the scheme

- Dairy products, which were not covered under the earlier scheme, will be eligible for assistance.
- Rates of assistance have been increased, by 50% for exports by sea and by 100% for exports by air.
- The scheme was initially applicable for exports effected during the period from 01.03.2019 to 31.03.2020 and was later extended for exports effected up to 31.03.2021.
- Enhanced assistance under the revised scheme is expected to help Indian exporters of agricultural products to meet rising freight and logistics costs.

Objective of schemes

- The scheme aims to provide assistance for the international component of freight and marketing of agricultural produce.
- To mitigate disadvantage of higher cost of transportation of export of specified agriculture products due to trans-shipment.
- To promote brand recognition for Indian agricultural products in the specified overseas markets.

Impact

This scheme is likely to mitigate the disadvantage of higher cost of transportation of export of specified agriculture products due to trans-shipment and to promote brand recognition for Indian agricultural products in the specified overseas markets.

POSHAN Maah

In news

Union WCD Minister to grace 'POSHAN Maah' Celebrations at Manipur on 11th and 12th September, 2021.

Details

- Union WCD Minister To Distribute Medicinal Plants To Anganwadi Workers/Helpers & Nutri-Kits To Beneficiaries Of Anganwadi Centres Including Pregnant Women, Lactating Mothers & Adolescent Girls.
- Union WCD Minister To Also Undertake Plantation Of Medicinal Plants And Fruit Bearing Trees & Launch An Anaemia Camp.

POSHAN Abhiyaanis

- POSHAN Abhiyaanis Government of India's flagship programme to improve nutritional outcomes for children, adolescent Girls, pregnant women and lactating mothers. Launched by the Prime Minister Shri Narendra Modi on the occasion of International Women's Day on 8 March, 2018.

- POSHAN Abhiyaan is a Jan Andolan or “People’s Movement” by incorporating inclusive participation of public representatives of local bodies, government departments of the States/UTs, social organizations and the public and private sector at large.
- In order to ensure community mobilization and bolster people’s participation, every year, the month of September is celebrated as POSHAN Maah across the country.

Seva Samarpan Abhiyaan

In news

Union Minister Dr Jitendra Singh launches countrywide free Telemedicine facility to mark “*Seva Samarpan Abhiyaan*”

Details

- The Minister also announced that “JIGYASA”, a student- scientist connect programme of the Ministry of Science & Technology will be extended to cover schools in over 700 districts of India within one year.
- The programme jointly executed with Kendriya Vidyalaya Sangathan is currently operational in 170 districts of the country.
- A countrywide free telemedicine facility will overcome the problems of Accessibility, Availability and Affordability.
- All three obstacles like quality of services, doctors and assistance, distance of traveling and cost of consultation/treatment are targeted and solved efficiently through this facility.
- Telemedicine services like SAATH and E-Sanjeevani add a meta-layer to the primary health sector, thus helping upgrade the entire health care system of India.
- Telemedicine will not only help the patients save their time and money, but also the doctors who can quickly assist their patients over a call for the same and actively engage in promptly treating patients with major ailments.
- To make this possible, the majority of the people living in the country will have to embrace telemedicine services.

SAUBHAGYA completes FOUR years

In news

SAUBHAGYA completes FOUR years of successful implementation.

Details

- 2.82 crore households have been electrified since the launch of SAUBHAGYA.
- SAUBHAGYA is one of the largest household electrification drives in the world.

About the schemes

- SAUBHAGYA was announced by the Prime Minister Shri Narendra Modi on 25th September 2017.
- The objective of the scheme was achieving Universal Household Electrification in the country, through last mile connectivity and providing access to electricity to all un-electrified households in rural areas and poor households in urban areas.
- The focus of the scheme was on strengthening & augmentation the existing infrastructure and metering of existing feeders/distribution transformers to improve the quality and reliability of power supply in rural areas.

- Pradhan Mantri Sahaj Bijli Har Ghar Yojana - Saubhagya envisioned providing energy access to all by last mile connectivity and electricity connections to all remaining un-electrified households in rural as well as urban areas to achieve universal household electrification in the country.
- The electricity connection to households included the release of electricity connections by drawing a service cable from the nearest pole to the household premise, installation of an energy meter, wiring for a single light point with LED bulb, and a mobile charging point.

Way forward

- While the set objectives of the scheme have been achieved, team SAUBHAGYA has continued its work of providing 24x7 quality power supply to all.
- All states have been requested to launch special campaigns in their respective states to identify any left out un-electrified household and subsequently provide electricity connections to them.
- A dedicated toll-free helpline has also been launched for that purpose.

NIDHI 2.0

In news

Ministry of Tourism launches 'NIDHI 2.0' & India Tourism Statistics – At a Glance, 2021.

Details

- India is in unlocking phase and domestic tourism has re-started slowly and steadily.
- The Covid-19 pandemic has had an immense socio-economic impact worldwide and gradual increase in the domestic tourism will help for recovery and growth in many folds of the society.
- Tourism has the potential to contribute to inclusive growth by creating opportunities for all different groups, ethnicity, religion and across sectors such as agriculture, arts & crafts etc., services to contribute and benefit from economic growth.
- Celebrated every September 27 around the world, the purpose of World Tourism Day (WTD) is to foster awareness among the international community on the importance of tourism and its social, cultural, political and economic value.

Objectives

- To take forward student innovations in IEDC / NewGen IEDC programme to commercialization stage.
- To promote student startups.
- To accelerate the journey of idea to prototype by providing initial funding assistance.

Defence & Security

DefExpo-2022

In news

Raksha Mantri Shri Rajnath Singh and Gujarat Chief Minister Shri Vijay Rupani jointly reviewed the preparations of DefExpo-2022, at Kevadia, Gujarat on September 02, 2021.

Aim

- The aim of DefExpo-2022 is to build upon the vision to achieve 'Aatmanirbharta' in defence and reach USD five billion defence exports target by 2024.
- Keeping with future warfare in mind, the event aims to recognise the impact of disruptive technologies on conflicts and its consequent impact on the equipment and platforms required.
- The Gujarat Government aims to utilise the opportunity to further its aerospace & defence vision and seek foreign investments.

Objective

The objective is to make India a major destination of land, naval, air & homeland security systems and defence engineering.

Details

- The 12th edition of DefExpo, which is India's flagship event showcasing the land, naval, air as well as homeland security systems, will be held in Gandhinagar, Gujarat between March 10-13, 2022.
- the previous edition of DefExpo, which was held at Uttar Pradesh capital Lucknow in February 2020, was a tremendous success due to the seamless jointmanship between Government of India and the State Government.
- It was agreed that as DefExpo-2022 is coinciding with the 75th year of Independence, being celebrated as 'Azadi Ka Amrit Mahotsav', the event needs more active participation and synchronised efforts at all levels.
- The DefExpo-2022 will be a hybrid business event, with the exhibition planned at the Helipad Exhibition Centre and seminars at Mahatma Mandir Convention and Exhibition Centre.

Hansa New Generation (NG) aircraft

In news

Hansa New Generation (NG) aircraft, designed and developed by CSIR-National Aerospace Laboratories (NAL), Bangalore a constituent lab of CSIR, has successfully made its maiden flight on 3 September 2021.

Details

- The aircraft took off from HAL airport at 2 09 PM and flew at an altitude of 4000 ft. and gained a speed of 80 knots before it made a successful landing after about 20 minutes.
- The unique features of Hansa-NG are glass cockpit with cabin comfort, high efficient digitally controlled engine, electrically operated flaps, Long endurance, low acquisition and Low operating cost.
- CSIR-NAL has already received 72 Letters of Intent from various Flying Clubs and the aircraft will be certified within the next 4 months before it gets inducted into service.
- The flight was monitored in telemetry by senior officers and scientists / engineers from Directorate General of Civil Aviation (DGCA), Centre for Military Airworthiness & Certification (CEMILAC) and CSIR-NAL.

28th EDITION OF SINGAPORE-INDIA MARITIME BILATERAL EXERCISE 'SIMBEX'

In news

The 28th edition of Singapore-India Maritime Bilateral Exercise (SIMBEX) was conducted from 02 to 04 Sep 21.

Details

- The Indian Navy was represented by Guided Missile Destroyer INS Ranvijay with a ship borne helicopter, ASW Corvette INS Kiltan and Guided Missile Corvette INS Kora and one P8I Long Range Maritime Patrol Aircraft.
- Participants from the RSN included one Formidable Class Frigate, RSS Steadfast, embarked with an S-70B naval helicopter, one Victory Class Missile Corvette, RSS Vigour, one Archer Class Submarine and one Fokker-50 Maritime Patrol Aircraft.
- Four F-16 fighter aircraft of the Republic of Singapore Air Force (RSAF) also participated in the exercise during the Air Defence Drills.
- This year's edition of SIMBEX is also a special occasion as it takes place during the ongoing celebrations of the 75th year of India's independence.
- The success of SIMBEX-2021 is yet another demonstration of the mutual resolve on both sides to strengthen the bilateral partnership further in the years ahead.

Background

- Initiated in 1994, SIMBEX is the Indian Navy's longest uninterrupted bilateral maritime exercise with any foreign navy.
- Sustaining the continuity of this significant engagement despite the challenges of the ongoing pandemic further underscores the strength of bilateral defence ties between both countries.
- Despite these constraints during the planning stages, both navies could achieve seamless and safe execution of several challenging evolutions including live weapon firing and advanced naval warfare serials, including anti-submarine, anti-air and anti-surface warfare drills.
- The scale and complexity of the drills is ample testimony to the interoperability achieved between both Navies.

India & Singapore

- India-Singapore Defence relations remain a very significant aspect of the overall bilateral relationship and cover a very wide spectrum of collaboration from conventional military-to-military exchanges to HADR and cyber security.
- Both navies have a representation in each other's Maritime Information Fusion Centres and have also recently signed an agreement on mutual submarine rescue support and coordination.

INS TABAR'S VISIT TO ALEXANDRIA

In news

As part of her ongoing overseas deployment, INS Tabar entered Alexandria harbour in Egypt on 03 Sep 21.

Details

- The ship was received by officials from the Egyptian Navy and the Indian Defence Attache.
- Later, in the evening, a reception was hosted onboard, for which Rear Admiral Ayman al-Daly, Commander of Alexandria Naval Base, was the Chief Guest.
- The event was attended by a number of senior officers from the Egyptian Navy, the Alexandria government and a large number from the Indian diaspora.
- In addition, Commanding Officers and officers of Hellenic Navy ships Hydra and Lesbos and Cyprus Navy ship Andreas Loannides, which are visiting Alexandria for Exercise Bright Star with Egypt, were also present for the reception.

INS Tabar

- It is a Talwar-class stealth frigate and forms part of the Indian Navy's Western Fleet which is based at Mumbai under the Western Naval Command.
- The ship was built for the Indian Navy in Russia and was commissioned at St Petersburg in April 2004.
- Along with her sister ships INS Talwar ("sword" in Sanskrit) and INS Trishul ("trident" in Sanskrit), INS Tabar is assigned to Indian Navy's Western Naval Command, head-quartered in Mumbai.
- INS Tabar is a well-equipped warship that has the ability to handle air/surface/sub-surface missions or defending herself operating either independently on maritime missions or supporting a larger naval task force.

INS HANSA MARKS DIAMOND JUBILEE

In news

INS Hansa, the Indian Navy's premier air station, is celebrating its diamond jubilee on 05 Sep 2021.

Details

- The Naval Jet Flight set up at Coimbatore in 1958 with Sea Hawk, Alize and Vampire aircraft, was later commissioned as INS Hansa on 05 September 1961.
- After the liberation of Goa, Dabolim airfield was taken over by the Navy in Apr 1962 and INS Hansa shifted to Dabolim June 1964.
- Commissioned as a modest air station with only a few aircraft, INS Hansa has increased its prowess over the last six decades and is presently operating over 40 military aircraft, clocking an average yearly flying of over 5000 hours.
- The air station also supports civil aviation by handling domestic and international flights 24x7, with an average of 29000 flights in a year.

INS Hansa

- It is the abode of the Indian Navy's frontline air squadrons - INAS 310 'Cobras' with Dornier-228 aircraft, INAS 315 'Winged Stallions' with the long range maritime patrol aircraft IL-38SD, INAS 339 'Falcons' with the airborne early warning Kamov-31 helicopter; INAS 303 'Black Panthers' and INAS 300 'White Tigers' with the supersonic carrier-borne MiG 29K fighters, and INAS 323 'Harriers' with ALH Mk III helicopters.
- The air station will soon operate the Boeing P8I long range maritime reconnaissance aircraft with the commissioning of INAS 316.
- The base has also provided substantial aid to civil authorities in the form of search and rescue, HADR, flood relief, community activities and numerous Vande Bharat flights.

EXERCISE – 'AUSINDEX'

In news

Indian Navy Task Group comprising IN Ships Shivalik and Kadmatt, under the Command of Flag Officer Commanding, Eastern Fleet, Rear Admiral Tarun Sobti, VSM is participating in the 4th edition of AUSINDEX.

Details

- This edition of AUSINDEX includes complex surface, sub-surface and air operations between ships, submarines, helicopters and Long Range Maritime Patrol Aircraft of the participating Navies.
- The participating Indian Naval Ships *Shivalik* and *Kadmatt* are the latest indigenously designed and built Guided Missile Stealth Frigate and Anti-Submarine Corvette respectively.

- Commenced in 2015 as a bilateral IN-RAN maritime exercise, AUSINDEX has grown in complexity over the years and the 3rd edition of the exercise, held in 2019 in the Bay of Bengal, included anti-submarine drills for the first time.
- The exercise will provide an opportunity for both Navies to further bolster inter-operability, gain from best practices and develop a common understanding of procedures for Maritime Security Operations.

Significance

- To combat transnational crime, terrorism, people smuggling and illegal fishing.
- To enjoy a peaceful and prosperous Indian Ocean region.

MARITIME PARTNERSHIP EXERCISE WITH EGYPTIAN NAVY

In news

INS Tabar undertook a maritime partnership exercise with ENS Alexandria, a frontline frigate of the Egyptian Navy, in the Mediterranean Sea.

Details

- The exercise involved multiple activities covering a wide range of naval operations.
- These included drills for transit through asymmetric threat environment, operations for interdicting suspect vessels at sea, communication procedures, joint development of maritime domain picture and replenishment at sea drills.
- A highlight of the exercise was the cross-deck helo operations that involved helo recovery procedures and airborne light replenishment drills between the two ships.
- The exercise was significantly beneficial in enhancing interoperability between the two navies and widened the scope for combined operations against common maritime threats in future.
- The maritime partnership exercise culminated with a '*Steam Past*' between the two ships, as per naval custom.

Insurgency free and prosperous North East

In news

In a significant boost to the Naga peace process, the Government of India has entered into a Ceasefire Agreement with National Socialist Council of Nagaland (K)Niki Group, with effect from 08th September, 2021 for a period of one year and more than 200 cadres of this group along with 83 weapons joined the peace process.

Details

- The Ceasefire Agreement and Agreed Ceasefire Ground Rules were signed on 08th September, 2021.
- The Government of India has already signed a Framework Agreement with NSCN(IM) and Ceasefire Agreements with other Naga groups namely, NSCN(NK), NSCN(R) and NSCN(K)-Khango.
- Nagas are a **hill people who are estimated to number about 2.5 million** and living between the Indian state of Assam and Burma.

Earlier Agreement

- Government of India had signed Agreement with NLFT(SD) in August, 2019 by which 88 cadres along with 44 weapons joined the mainstream of society in Tripura.
- In January 2020, with the signing of Bodo Agreement, more than 2,250 cadres of insurgent groups, including all factions of NDFB, along with 423 weapons and huge quantity of ammunition surrendered in Assam and joined the mainstream.

- On 23.02.2021, 1040 leaders/cadres of various underground Karbi groups of Assam surrendered along with 338 weapons which was followed by signing of KarbiAnglong Agreement on 04.09.2021.

Nagaland Peace Accord

The Nagaland Peace Accord is a peace treaty, signed, on 3 August 2015, between the Government of India, and the National Socialist Council of Nagaland (NSCN), to end the insurgency in the state of Nagaland in Northeast India.

EXERCISE ZAPAD 2021

In news

The Exercise ZAPAD 2021 commenced on 04th September 2021 at Nizhniy in Russia with an aim to train troops to undertake joint operations in conventional battlefield scenario

Aim

The exercise aims at strengthening long standing strategic partnership between India and Russia and also enhance better understanding, cooperation with all other participating Nations.

Details

- The opening ceremony was conducted in Mulino Training Ground near Nizhniy in Novgograd region, Russia at 1000 hours on 09 September 2021.
- The ceremony commenced with Guard of Honour by Russian Army followed by march past of participating Contingents.
- As part of the exercise, important lectures, drills and demonstrations related to both Counter Terrorism and Conventional operations will be conducted.
- The Armies of all participating nations will also be sharing their valuable experiences in varied theatres as also refine their drills and procedures for joint operations.
- The exercise will culminate on 16th September 2021 with a Fire Power Demonstration by the Russian Armed Forces. During the course of the exercise, the Contingents will also participate in various sporting and cultural events.

INDO-KAZAKHSTAN JOINT TRAINING EXERCISE KAZIND – 21

In news

The 5th edition of Indo-Kazakhstan Joint Training Exercise, EXERCISE KAZIND-21 culminated today at Training Node Aisha Bibi, Kazakhstan after 12 days of mutual learning.

Details

- The exercise is a joint training between both the Armies, which will boost the bilateral relations between India and Kazakhstan.
- In the Joint Exercise which began on 31 August 2021, training was focused on Counter Insurgency/ Counter Terrorism operations in urban scenario as well as sharing of expertise on skills at arms.
- The exercise also provided an opportunity to troops of both Armies to foster everlasting professional and social bonding.
- After intense military training, the joint exercise concluded with both Armies exhibiting their combat power and dominance over the terrorist groups during the Validation Exercise.
- The closing ceremony showcased the immense talent with unique traditional touch of both Nations.

- The bonhomie, esprit-de-corps and goodwill generated during the exercise will go a long way in future strengthening the bonds between the Armed Forces of both countries.

Representatives

The Indian Army contingent was represented by a battalion of The Bihar Regiment consisting of a total of 90 personnel led by a Contingent Commander. The Kazakhstan Army was represented by a company group.

Scope

The scope of Joint Exercise includes professional exchange, planning & execution of the operation in counterterrorism environment at sub-unit level and sharing expertise on skills at arms, combat shooting and experiences in Counter Insurgency/ Counter-Terrorism operations.

India–Africa defence relations

In news

The foundation of India–Africa defence relations are based on the two guiding principles namely '**SAGAR**', Security and Growth for All in the Region' and '**Vasudhaiva Kutumbakam**', The World is One Family.

Details

- The first-ever India Africa Defence Ministers Conclave (IADMC) was held in Lucknow, Uttar Pradesh in conjunction with DefExpo on February 06, 2020, co-organised by Ministry of Defence and Ministry of External Affairs.
- This was the first in the series of Pan Africa events at the Ministerial level in the run-up to India Africa Forum Summit IV.
- A Joint Declaration, 'Lucknow Declaration' was adopted after conclusion of IADMC 2020 as an outcome document of the Conclave.
- In furtherance of the declaration and in consultation with stakeholders, India proposes to institutionalise the India Africa Defence Dialogue during successive DefExpos to be held once every two years.

Significance

Institutionalisation of the India Africa Defence Dialogue will help building on the existing partnerships between African countries & India and to explore new areas of convergence for mutual engagements including areas like capacity building, training, cyber security, maritime security and counter terrorism.

Way forward

- Raksha Mantri Shri Rajnath Singh will host the Defence Ministers of African Nations in the next India – Africa Defence Dialogue on the sidelines of the DefExpo that is scheduled to be held at Gandhinagar, Gujarat in March 2022.
- The broad theme of this India Africa Defence Dialogue will be 'India – Africa: Adopting Strategy for Synergizing and Strengthening Defence and Security Cooperation'.

EXERCISE ZAPAD-2021

In news

Exercise ZAPAD-2021, a seven day long Multilateral 'Joint Strategic Exercise' which saw participation from seven countries culminated at Mulino in the Novgorod Region of Russia.

Details

- As part of the Exercise, strategic planning, tactical actions and manoeuvres were rehearsed and executed jointly in conventional operational scenarios.
- The Joint Strategic Exercise included defensive & offensive manoeuvres by the Coalition Forces to restore territorial integrity under simulated combat conditions.
- New generation weapon systems and equipment were also demonstrated by Russian Armed Forces during the exercise.
- The closing ceremony conducted on 15 September 2021 highlighted the importance of joint military training and close defence cooperation amongst the Contingents. The magnificent ceremony was presided over by Lieutenant General Yunus-Bek Evkurov, Deputy Defence Minister of the Russian Federation, who expressed his gratitude to the members of all participating contingents and observers.

Other activity

- Besides military training and exercise, the participating contingents showcased their skills in a number of extra-curricular & sports activities including Football, Volleyball, Kettle Bell lifting, Arm Wrestling, Tug of War and the cultural program.
- The exercise has promoted synergy and inter-operability amongst the Armed Forces, and will help in forging closer military ties between the nations.
- All contingent commanders expressed immense satisfaction in the conduct of the joint exercise in terms of standards achieved and lessons learnt.

6th Edition of Exercise SCO Peaceful Mission 2021

In news

Joint Counter Terrorism Exercise PEACEFUL MISSION is a Multilateral Exercise, which is conducted biennially as part of military diplomacy between Shanghai Cooperation Organisation (SCO) member states.

Details

- The 6th edition of Exercise PEACEFUL MISSION is being hosted by Russia in the Orenburg Region of South West Russia from 13 to 25 September 2021.
- The aim of the exercise is to foster close relations between SCO member states and to enhance abilities of the military leaders to command multi-national military contingents.
- The Indian military contingent comprising of an all arms combined force of 200 personnel to include 38 personnel from the Indian Air Force is participating in the Exercise PEACEFUL MISSION -2021.

Significance

- The exercise will enable sharing of best practices between the Armed Forces of SCO nations.
- The exercise will also provide an opportunity to the Armed Forces of SCO Nations to train in Counter-Terrorism Operations in an urban scenario in a multinational and joint environment.
- Exercise PEACEFUL MISSION 2021 is a landmark event in military interactions and global cooperation to counter-terrorism.

Scope

The scope of the exercise includes professional interaction, mutual understanding of drills & procedures, establishment of joint command & control structures and elimination of terrorist threats.

Miscellaneous

BRICS Energy Report 2021

In news

The Energy Ministers of BRICS Countries and delegates attended the virtual meeting. During the Meeting, BRICS Energy Report 2021, BRICS Energy Technology Report 2021 and BRICS Energy Research Directory 2021 were launched virtually

Details

- This was the 6th meeting of BRICS Energy Ministers and a joint communique was adopted.
- India is committed to improving the quality of life of its citizens by ensuring adequacy of electricity availability.
- The 'Power for All' by 2022 program is a major step in this direction.
- The Ministers from other BRICS countries, Russia, China, Brazil and South Africa also highlighted their targets and achievements in the field of energy transition and climate change.
- This Energy Ministers' Summit of BRICS countries was the concluding event as part of the energy dialogue between member countries, since April 2021.
- Various events like hydrogen webinar, building energy efficiency and battery storage were conducted and saw participation of large number of experts from these countries.

BRO to carry out road safety audit

In news

The BRO has now prepared a blueprint for reducing the accident potential of its constructed roads and bridges and has embarked on an extensive exercise to audit the existing roads and bridges.

Aim

- The BRO aims to conduct the exercise of road safety audit in a graduated manner commencing with a phase wise internal audit of existing roads which will be performed by its core experts.
- This will lead to identifying potential accident prone sites, irregularities in road geometric and propose improvement of roadside signage and other roadside furniture, etc.

Issues

- The roads constructed by Border Roads Organisation (BRO) are used not only by the Armed Forces and Paramilitary Forces but traversed extensively by the tourists and adventure seekers from all over the country.
- The advancement of construction technology and practices in road infrastructure is being prepared to sustain traffic volume for all weather, altitudes and season.