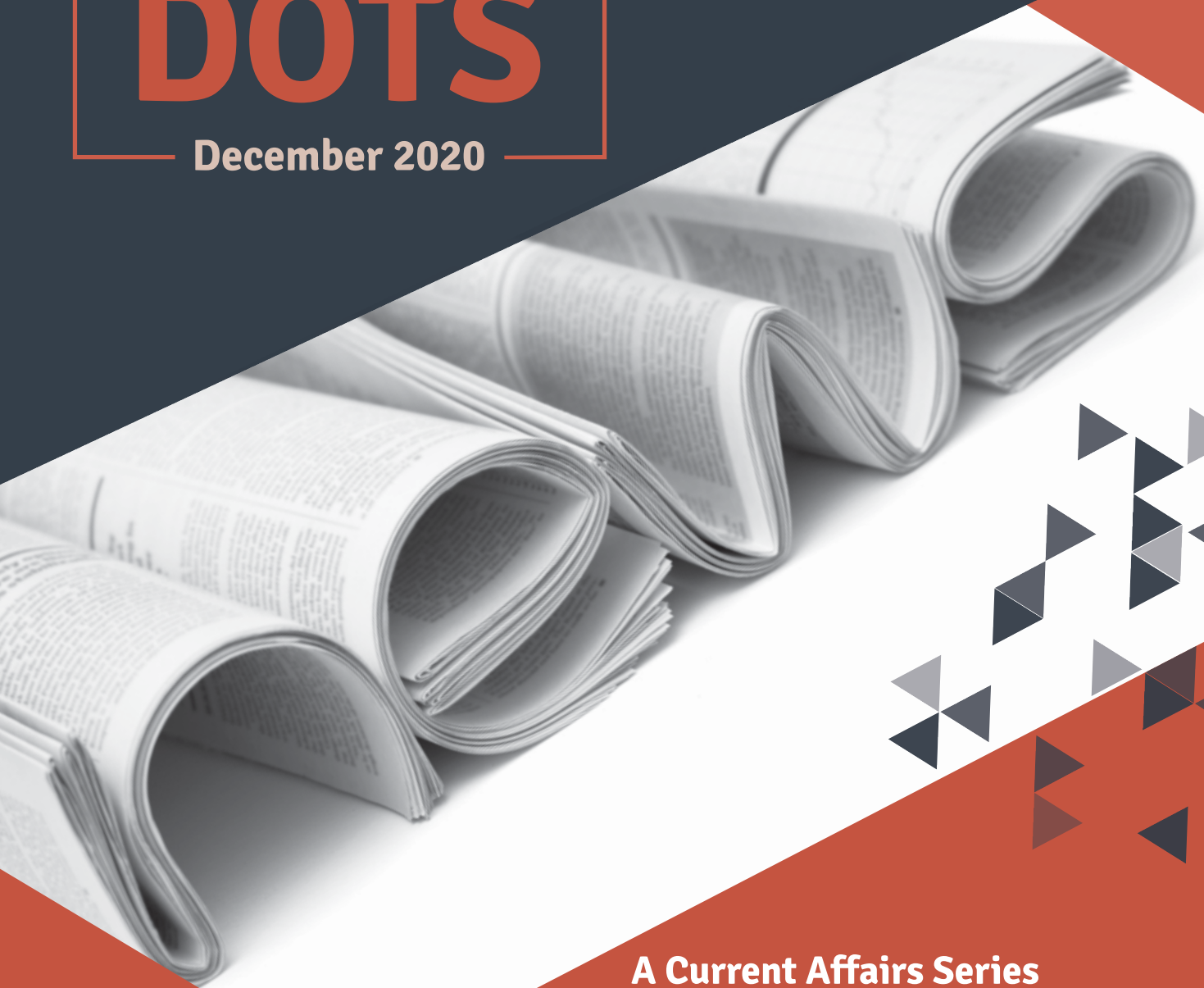


# JOIN THE DOTS

December 2020



## A Current Affairs Series for UPSC Examination

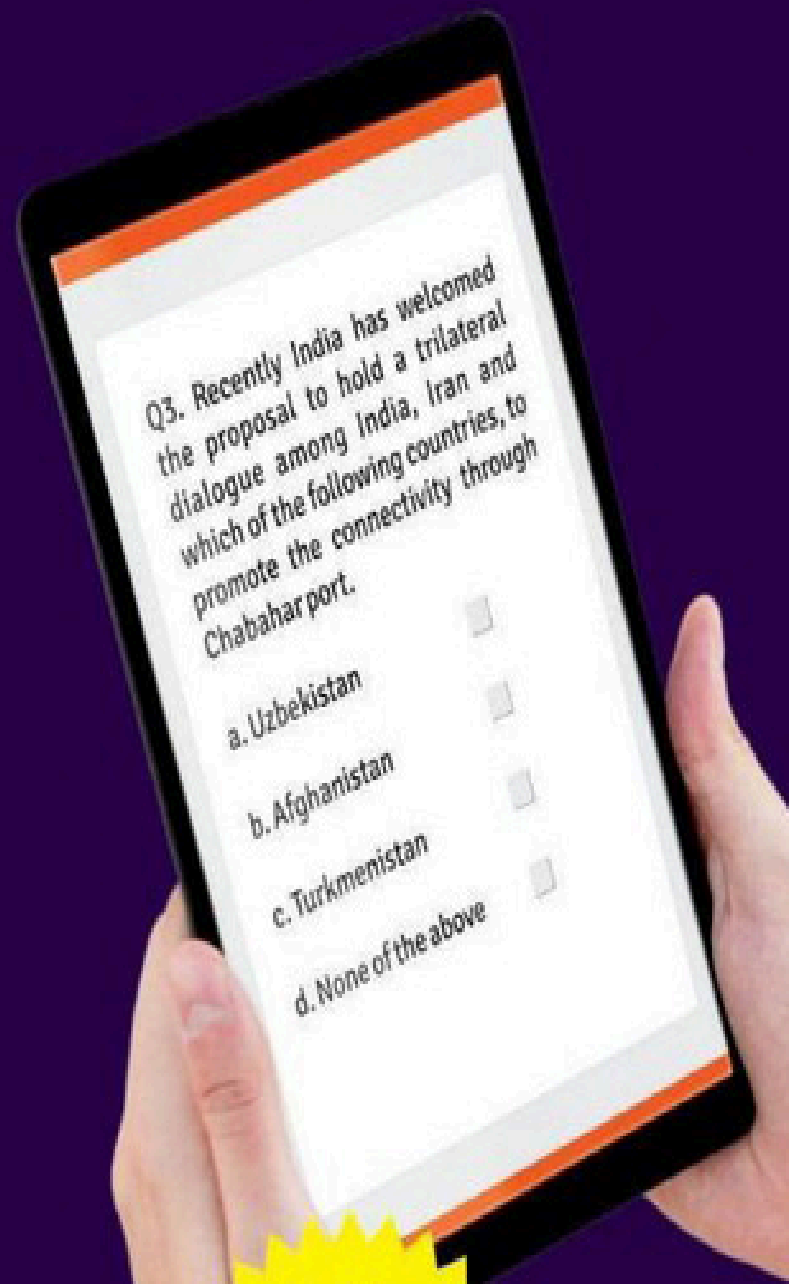
- PM-WANI
- Vision 2035: Public Health Surveillance in India Released by NITI Aayog
- Country's first Pneumococcal Conjugate Vaccine Inaugurated
- Communication Satellite CMS-01 Launched
- International Blue Flag Hoisted at 8 Beaches Across the Country
- Cyclone Burevi
- Status of Leopard in India Report Released

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## Compendium – December 2020

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**Dear Students,**

With the present examination pattern of UPSC Civil Services Examination, General Studies papers require a lot of specialization with 'Current Affairs'. Moreover, following the recent trend of UPSC, almost all the questions are based on news as well as issues. CL IAS has now come up with **'JOIN THE DOTS! DECEMBER 2020'** series which will help you pick up relevant news items of the day from various national dailies such as The Hindu, Indian Express, Business Standard, LiveMint, PIB and other important sources.

**'JOIN THE DOTS! DECEMBER 2020'** series will be helpful for prelims as well as Mains Examination. We are covering every issue in a holistic manner and covered every dimension with detailed facts. This edition covers all important issues that were in news in the month of June 2019. Also, we have introduced Prelim base question for Test Your Knowledge which shall guide you for better revision. In addition, it would benefit all those who are preparing for other competitive examinations.

We have prepared this series of documents after some rigorous deliberations with Toppers and also with aspirants who have wide experience of preparations in the Civil Services Examination.

For more information and more knowledge, you can go to our website

**<https://www.careerlauncher.com/upsc/>**

**"Set your goals high, and don't stop till you get there"**

**All the best!!**

**Team CL**

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# **Prelims Perspicuous Pointers**

# Join the dots!

## A current affairs series for UPSC Examination

### Glistening 'blue tide' spotted along Mumbai, Sindhudurg coasts

**Relevance IN – Prelims (about Bioluminescence + dinoflagellates)**

#### What's the NEWS

- The tide that produces a fluorescent blue hue—bioluminescence—made an appearance on Juhu beach in Mumbai and Devgad beach in Sindhudurg along Maharashtra's coastline.

#### Bioluminescence

- Bioluminescence has been an annual occurrence along the west coast since 2016 during the months of November and December.
- The natural phenomenon is characterised by the emission of light produced by phytoplanktons (microscopic marine plants), commonly known as dinoflagellates.
- This occurrence could be taking place along several areas on the west coast during this time of the year



### Prelims Factoids: The first ever SCO Online International Exhibition on Shared Buddhist Heritage

**Relevance IN – Prelims (all about SCO online International exhibition)**

#### What's the NEWS

- Shri M. Venkaiah Naidu, Vice President of India & Chair of the SCO Council of Heads of Government in 2020, launched the first ever SCO Online Exhibition on Shared Buddhist Heritage, during the 19<sup>th</sup> Meeting of the SCO Council of Heads of Government (SCO CHG), held today in New Delhi, in videoconference format.

#### SCO online International exhibition

- This SCO online International exhibition, first ever of its kind, is developed and curated by National Museum, New Delhi, in active collaboration with SCO member countries.
- The exhibition deploys state of the art technologies like 3D scanning, WebGL platform, virtual space utilization, innovative curation and narration methodology etc.
- The exhibition can be accessed at <https://nmvirtual.in/> for worldwide viewing.
- Buddhist philosophy and art of Central Asia connects Shanghai Cooperation Organization (SCO) countries to each other.
- This online international exhibition presents an excellent opportunity for visitors to access, appreciate and **compare Buddhist art antiquities from SCO countries** on a single platform and from the comfort of their home.
- The international exhibition gives a glimpse of the artistic wealth displayed in various museums across Asia, and represents the artistic excellence embedded within an eclectic historical timeline spanning across the development of different Schools of Buddhism.
- The participating institutions are National Museum (New Delhi), Indian Museum (Kolkata), National Museum of Kazakhstan, Dun Huang Academy (China), National Historical Museum of the Kyrgyz Republic, Museums of Pakistan, State Museum of Oriental Art, Moscow (Russia), National Museum and National Museum of Antiquities, Tajikistan and renowned archaeological sites of Uzbekistan.



## Prelims Factoids: Hornbill Festival

### *Relevance IN – Prelims (about Hornbill Festival)*

#### What's the NEWS

- Nagaland will be taking its 21<sup>st</sup> edition of the Hornbill Festival to a virtual platform from December 1 to 5, on three national and regional audio visual news channels.

#### Know! about the festival

- It is a 10-day annual cultural and tourism extravaganza that elaborately showcases the rich and diverse Naga ethnicity through folk dances, traditional music, local cuisine, handicrafts, art, craft workshops highlighting indigenous textiles and designs, among various other Naga experiences.
- To encourage inter-tribal interaction and to promote cultural heritage of Nagaland, the Government of Nagaland organizes the Hornbill Festival every year in the first week of December.
- Organized by the State Tourism and Art & Culture Departments, Hornbill Festival showcases a mélange of cultural displays under one roof. This festival usually takes place between the 1<sup>st</sup> and the 7<sup>th</sup> of December every year in Kohima.
- Hornbill Festival is held at Naga Heritage Village, Kisama which is about 12 km from Kohima. All the tribes of Nagaland take part in this festival.
- The Festival is named after the Indian Hornbill, the large and colourful forest bird which is displayed in folklore in most of the state's tribes.
- Hornbill bird is common in tropical and subtropical Asia, Africa and Melanesia.



#### Know! about Naga Morungs

- Naga Morungs exhibition is also organised during the festival.
- Naga Morungs or Nagas are the ethnic groups native to North Western Myanmar and North Eastern India.
- These groups have similar culture and form the majority of population in Nagaland and Naga self-administered zone.
- Nagas are various ethnic groups native to the northeastern India and northwestern Myanmar. The groups have similar cultures and traditions, and form the majority of population in the Indian state of Nagaland and Naga Self- Administered Zone
- The Naga self-administered zone is located in the Naga Hills of Sagaing region of Myanmar.

## State Specific: Duare Sarkar

### *Relevance IN – Prelims (about Duare Sarkar outreach programme)*

#### What's the NEWS

- Mamata Banerjee rolls out 'Duare Sarkar' outreach programme for doorstep delivery of govt schemes
- The Mamata Banerjee government in Bengal has launched a massive outreach programme named "Duare Sarkar" or Government at your doorstep.

#### Know! more about it

- Benefits of at least 11 state government-run schemes will be made available to eligible people at camps to be set up for the 'Duare Sarkar' (government at doorsteps) programme
- The flagship schemes include the globally acclaimed 'Kanyashree' (a cash transfer scheme aimed at retaining girls in schools and preventing their early marriage), besides 'Khadya Sathi' (for ensuring that almost 90 per cent of the population comes under food security), 'Sikshashree' (one time grant given to SC and ST students from class 5 to class 8 to go to schools).



- Other government schemes like 'Rupashree (one-time financial grant of Rs 25,000 for economically stressed families at the time of their daughter's marriage), 'Jai Johar' (for the betterment of ST people), 'Taposili Bondhu' (pension scheme for SC people), 'Akhyashree' (a scheme that provides scholarships to students of minority communities in the state) and MGNREGS will also be included

## State Specific: Roshni Act

### *Relevance IN – Prelims (all about Roshni act)*

#### **What's the NEWS**

- The Jammu & Kashmir administration has recently released a series of lists of alleged beneficiaries of the Roshni Act of 2001, now scrapped, which gave ownership rights to the unauthorised occupants of state land against payment of a premium.
- Following a recent order by the Jammu & Kashmir High Court, the administration has annulled the Act (it was earlier repealed prospectively) and decided to retrieve land transferred under the Roshni scheme.

#### **Know! about Roshni Act**

- Formally the Jammu and Kashmir State Land (Vesting of Ownership to the Occupants) Act, 2001, it was passed by the then National Conference government led by Farooq Abdullah to give ownership to people in possession of state land, with a cut-off of 1990, and against a payment as determined by the government.
- Since the aim was to generate resources for hydroelectric power projects, it was called Roshni (Light) Act.
- In its 2014 report, the CAG termed the scheme a Rs-25,000-crore scam.
- It flagged irregularities and said arbitrary reduction of prices by a standing committee was done to benefit politicians and influential people.
- In October 2018, then Governor Satya Pal Malik repealed the Roshni Act prospectively.
- In October this year, the High Court declared the Roshni Act "illegal, unconstitutional and unsustainable" and held allotments under the Act as void ab initio.
- It ordered a CBI probe into transfer of ownership, sought action against bureaucrats involved, and asked the government to make public the names of prominent people allotted land.

## Economy: IFSCA obtains Membership of International Association of Insurance Supervisors (IAIS)

### *Relevance IN – Prelims (about International Association of Insurance Supervisors (IAIS)).*

#### **What's the NEWS**

- The International Financial Services Centres Authority (IFSCA) obtained membership of International Association of Insurance Supervisors (IAIS).

#### **International Association of Insurance Supervisors (IAIS).**

- Established in 1994, the IAIS headquartered in Switzerland is a voluntary membership organization of insurance supervisors and regulators from more than 200 jurisdictions, constituting 97% of the world's insurance premiums.
- It is the international standard-setting body responsible for developing and assisting in the implementation of principles, standards and other supporting material for the supervision of the insurance sector.
- The IAIS also provides a forum for Members to share their experiences and understanding of insurance supervision and insurance markets.
- In recognition of its collective expertise, the IAIS is routinely called upon by the G20 leaders and other international standard setting bodies.
- With this membership IFSCA would have access to IAIS's global network and would be able to exchange ideas and information with other global regulators.
- This would help in developing a vibrant global Insurance hub in IFSC at GIFT City.
- Currently, 17 leading Insurance entities are operating from GIFT IFSC undertaking offshore Insurance and Reinsurance business.

- This membership would go a long way in connecting IFSC with global insurance institutions and would facilitate IFSCA in joint development of global insurance business with other global centres.
- Some of the leading members of IAIS are United Kingdom- Financial Conduct Authority (FCA), USA- National Association of Insurance Commissioners (NAIC), USA- Federal Insurance Office of the Insurance of the United States Department of Treasury (FIO), Singapore- Monetary Authority of Singapore (MAS), **India- Insurance Regulatory and Development Authority of India (IRDAI)**.

## Miscellaneous: Advertising Standards Council of India (ASCI)

**Relevance IN – Prelims (about ASCI and its new guidelines)**

### What's the NEWS

- The Ministry of Information and Broadcasting has issued an advisory asking all private television broadcasters to follow guidelines issued by the Advertising Standards Council of India (ASCI) for advertisements relating to online gaming, fantasy sports etc.
- The Ministry has advised that the advertisements should not promote any activity prohibited by statute or law.
- A large number of advertisements on Online Gaming, Fantasy Sports, etc have been appearing on the television.
- Such advertisements appear to be misleading and are not in strict conformity with the Advertising Code laid down under Cable Television Networks (Regulation) Act, 1995 and the Consumer Protection Act, 2019

### ASCI guidelines

- ASCI guidelines require that every such gaming advertisement must carry the following disclaimer: "This game involves an element of financial risk and may be addictive. Please play responsibly and at your own risk".
- Such a disclaimer should occupy at least 20% of the advertisement space.
- The guidelines also state that gaming advertisements cannot depict users under the age of 18 years as engaged in playing a game of "online gaming for real money winnings" or suggest that such users can play these games.
- The advertisements should neither suggest that online gaming presents an income generating opportunity as an alternative to employment nor depict a person playing such games is more successful than others.

### Advertising Standards Council of India

- The Advertising Standards Council of India, established in 1985, is a Mumbai based self-regulatory voluntary organization of the advertising industry in India.
- It seeks to ensure that advertisements conform to its Code for Self-Regulation.
- Under the Cable Television Networks (Regulation) Act, 1995 it is mandatory for television networks to follow the advertising code laid down by ASCI.

## Miscellaneous: India Mobile Congress 2020

**Relevance IN – Prelims (about India Mobile Congress 2020 – facts for Prelims)**

### What's the NEWS

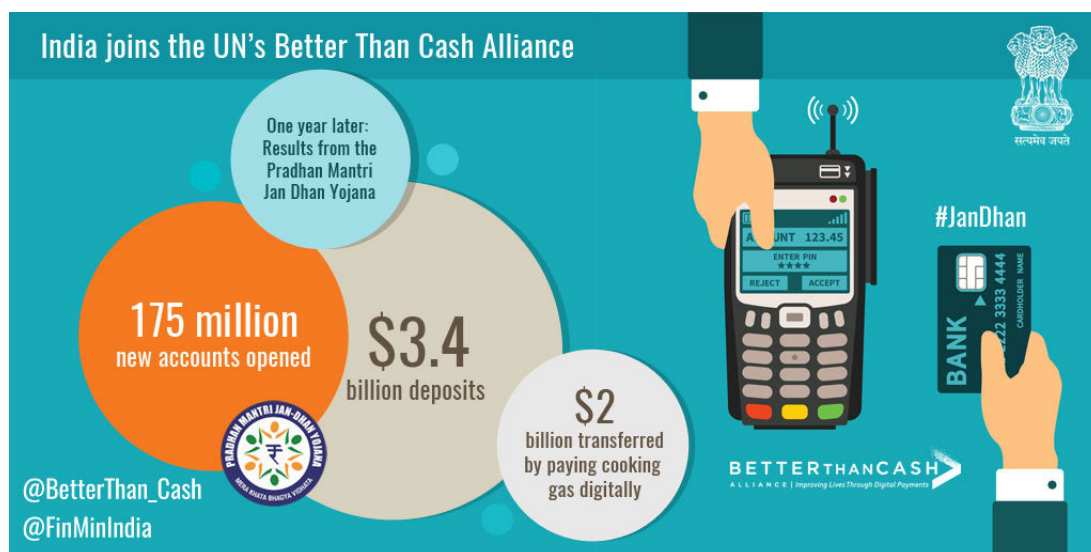
- Prime Minister delivered inaugural address at the virtual India Mobile Congress (IMC) 2020 through video conference.
- The theme for IMC 2020 is "Inclusive Innovation - Smart, Secure, Sustainable".
- It aims to align to the Prime Minister's vision to promote 'AatmaNirbhar Bharat', 'Digital Inclusivity', and 'Sustainable development, entrepreneurship & innovation'.
- It also aims to drive foreign and local investments, encourage R&D in the telecom and emerging technology sectors.



## Know! about India mobile congress

- India Mobile Congress is the largest digital technology forum in South Asia.
- Organised by the Department of Telecommunications (DoT) and Cellular Operator Association of India (COAI), India Mobile Congress 2020 is scheduled for 8 December through 10 December 2020 & will be held virtually.
- IMC has established itself as a leading platform for bringing together the industry, Government, academia, and other ecosystem players, to discuss and display the latest in the technology world.
- Not only is India Mobile Congress the biggest technology event in South Asia, it is also the biggest networking event in India in the digital technology space.
- IMC comprises of India's biggest technology exhibition, an international conference on digital technology and B2B/B2G networking meets; all this during three action packed days at New Delhi, India.
- The scale and scope of IMC makes it one of the biggest events in India, across various domains and sectors.

## Miscellaneous: Better Than Cash Alliance



### Relevance IN – Prelims (about better than cash alliance)

#### What's the NEWS

- Department of Economic Affairs (DEA), Ministry of Finance hosted a learning session “**Accelerating Responsible Digital Payments: Unlocking the Role of Fintech in Last Mile Service Delivery**” with leaders from States and Union Territories across India.
- This Peer Exchange is a result of the tremendous success and opportunities highlighted during COVID-19 and is co-organized with the UN-based Better Than Cash Alliance.

#### Know! more about the Better Than Cash Alliance

- United Nations, the Better Than Cash Alliance is a partnership of over 75 governments, companies and international organizations committed to accelerate the transition from cash to digital payments to advance the Sustainable Development Goals.
- India became a member of the Better Than Cash Alliance in 2015 to digitize payments to achieve financial inclusion and to share success stories from Pradhan Mantri Jan Dhan Yojana, the world's largest financial inclusion program.
- Alliance is working with several state governments towards the goal of building knowledge and programs where people, governments, and businesses can make and receive digital payments.
- The Digital Payment Infrastructure established by Government of India including Jandhan accounts, Aadhaar and Mobile phone (JAM) was put to excellent use during the pandemic.
- The Government of India has taken several initiatives to foster innovation and adoption of technology to bring in greater inclusive growth. Globally, India is being viewed as a model in implementing initiatives where the barrier to technology is at its lowest ever.

## Prelims Factoids: International Bharati Festival, 2020

**Relevance IN – Prelims (about International Bharati Festival + about Mahakavi Subramanya Bharati)**

### What's the NEWS

- Prime Minister address the International Bharati Festival, 2020
- This year the festival is being organised in virtual mode and will see participation of several national and international poets and artists.
- The festival is being organised by Vanavil Cultural Centre to celebrate the 138<sup>th</sup> birth anniversary of Mahakavi Subramanya Bharati

### Know! about Mahakavi Subramanya Bharati

- He was a Tamil writer, poet, journalist, Indian independence activist, social reformer and polyglot.
- Popularly known as “Mahakavi Bharathi” (“Great Poet Bharathi”), he was a pioneer of modern Tamil poetry and is considered one of the greatest Tamil literary figures of all time.
- His numerous works included fiery songs kindling patriotism during the Indian Independence movement.
- He wrote many books and poems on how Tamil is beautiful in nature Indian writer of the nationalist period who is regarded as the father of the modern Tamil style.
- Exposure to political affairs led to his involvement in the extremist wing of the Indian National Congress party, and, as a result, he was forced to flee to Pondicherry (now Puducherry), a French colony, where he lived in exile from 1910 to 1919.
- During this time Bharati's nationalistic poems and essays were popular successes. Upon his return to India in 1919 he was briefly imprisoned and later rejoined Swadesamitran. He was killed by a temple elephant in Madras.
- Bharati's best-known works include Kannan pattu (1917; Songs to Krishna), Panchali sapatham (1912; Panchali's Vow), and Kuyil pattu (1912; Kuyil's Song).
- Many of his English works were collected in Agni and Other Poems and Translations and Essays and Other Prose Fragments (1937).

## PM to address International Bharati Festival on 11th December 2020

December 9th, 2020



**Prime Minister Shri Narendra Modi will address the International Bharati Festival, 2020 on December 11, 2020 at 04:30 PM via video conferencing.**

## International: Asia-Pacific Vaccine Access Facility (APVAX)

**Relevance IN – Prelims (about APVAX)**

### What's the NEWS

- The Asian Development Bank (ADB) has launched a USD 9-billion initiative that will offer support to its developing member economies to procure and deliver COVID-19 vaccines.

### Asia-Pacific Vaccine Access Facility (APVAX)

- ADB has launched a USD 9-billion vaccine initiative, the Asia-Pacific Vaccine Access Facility (APVAX), offering support to its developing members as they procure and deliver vaccines for COVID-19
- ADB is also making available a USD 500-million vaccine import facility to support the efforts of the developing members to secure safe and effective vaccines, as well as the goods that support distribution and inoculation.
- APVAX provides a comprehensive framework and resource envelope for supporting Asia's vaccine programmes
- Under this, the Rapid Response Component will provide timely support for critical vaccine diagnostics, procurement of vaccines and transporting vaccines from the place of purchase to ADB's developing members.



- The Project Investment Component will support investments in systems for successful distribution, delivery and administration of vaccines along with associated investments in building capacity, community outreach and surveillance.
- This may include such areas as cold-chain storage and transportation, vehicles, distribution infrastructure, processing facilities, and other physical investments.
- The component may also be used to develop or expand vaccine manufacturing capacity in developing members
- The ADB's financing for vaccines will be provided in close coordination with other development partners including the World Bank Group, World Health Organization (WHO), COVID-19 Vaccines Global Access Facility (COVAX), GAVI, and bilateral and multilateral partners.
- For a vaccine to be eligible for financing, it must meet one of three criteria, that it must be procured via COVAX, prequalified by WHO, or authorised by a stringent regulatory authority.
- The USD 500-million vaccine import facility is part of ADB's trade and supply chain finance programme. Co-financing with private sector partners could result in the import facility supporting USD 1 billion in vaccine and related imports within a year.

## Prelims Factoids: ABTO (Association of Buddhist Tour Operators) International Convention

### Relevance IN – Prelims (about ABTO)

#### What's the NEWS

- The Tourism Minister virtually inaugurated the ABTO (Association of Buddhist Tour Operators) International Convention

#### Know! about ABTO Convention

- ABTO Convention a three-day event is being held in partnership with Ministry of Tourism from 10-12 Dec 2020 in Bodhgaya, Bihar.
- Association of Buddhist Tour Operators (ABTO) is a forum of the Buddhist Pilgrimage Travel industry. It was established in 2015 in Nalanda
- The objectives of the convention is to promote the Buddhist tourism in the country, to boost up the nations integration via cultural links and to provide information about tours and travels through portals
- It has close connections and constant interaction with other Buddhist associations in the world, and is increasing its international networking with professional bodies for better facilitation to national or international Buddhist Pilgrims and travellers visiting Buddhist heritage sites in the region.

#### Steps taken by the government to promote Buddhist tourism

- Government has been making special efforts to promote Buddhist tourism in the country.
- Government has taken several measures like **Swadesh Darshan Scheme and PRASHAD Yojana**.
- The Ministry has sanctioned more than Rs 350 cr for the development of Buddhist Sites under the Swadesh Darshan Scheme and more than Rs.900 crore have been sanctioned under the PRASHAD Scheme.
- The Tourism Ministry is making efforts to register accommodation units in the country in the Ministry's portal **National Integrated Database of Hospitality Industry (NIDHI)**.
- Till date, around 32000 accommodation units have been registered on the portal which was activated this year.

## Prelims Factoids: Tharu tribe

### *Relevance IN – Prelims (about Tharu tribe)*

#### **What's the NEWS**

- The Uttar Pradesh government has recently embarked upon a scheme to take the unique culture of its ethnic Tharu tribe across the world.
- The intention is to put Tharu villages on the tourism map, and to create jobs and bring economic independence to the tribal population.

#### **Know! about the scheme**

- The state government is working to connect Tharu villages in the districts of Balrampur, Bahraich, Lakhimpur and Pilibhit bordering Nepal, with the home stay scheme of the UP Forest Department.
- The idea is to offer tourists an experience of living in the natural Tharu habitat, in traditional huts made of grass collected mainly from the forests.
- The Uttar Pradesh Forest Corporation will train the Tharu people to communicate effectively with visitors, and encourage villagers to acquaint them with aspects of safety and cleanliness, and with the rules of the forest.
- Tharu homeowners will be able to charge tourists directly for the accommodation and home-cooked meals.
- The UP government expects both domestic and international tourists to avail of the opportunity to obtain a taste of the special Tharu culture by staying with them, observing their lifestyle, food habits, and attire.
- The homestay scheme will be expanded to include the Tharu villages in a few weeks' time,

#### **Know! about the Tharu people**

- The community belongs to the Terai lowlands, amid the Shivaliks or lower Himalayas. Most of them are forest dwellers, and some practice agriculture.
- The word tharu is believed to be derived from sthavir, meaning followers of Theravada Buddhism.
- The Tharus live in both India and Nepal. In the Indian terai, they live mostly in Uttarakhand, Uttar Pradesh, and Bihar.
- According to the 2011 census, the Scheduled Tribe population in Uttar Pradesh was more than 11 lakh; this number is estimated to have crossed 20 lakh now.
- The biggest chunk of this tribal population is made up of Tharus.
- Members of the tribe survive on wheat, corn and vegetables grown close to their homes. A majority still lives off the forest.
- They speak various dialects of Tharu, a language of the Indo-Aryan subgroup, and variants of Hindi, Urdu, and Awadhi. In central Nepal, they speak a variant of Bhojpuri, while in eastern Nepal, they speak a variant of Maithili.
- Tharus worship Lord Shiva as Mahadev, and call their supreme being "Narayan", who they believe is the provider of sunshine, rain, and harvests.
- Tharu women have stronger property rights than is allowed to women in mainstream North Indian Hindu custom.

## International Relations: Bhasan Char

### *Relevance IN – Prelims (about bhasan char – location + about Rohingya)*

#### **What's the NEWS**

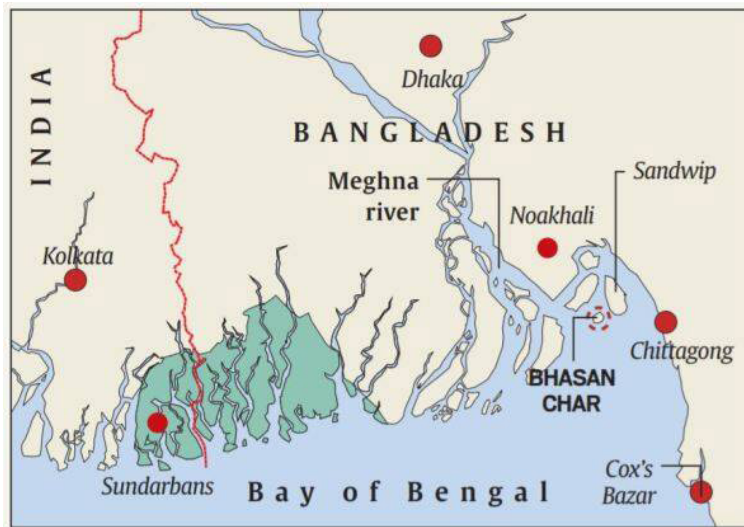
- Bhasan Char, the site where Bangladesh has begun sending Rohingya refugees from the overcrowded camps at Cox's Bazar, is an island formed by sedimentation (char is Bengali for sediment) close to the coast.
- It is estimated that more than 8 lakh Rohingya, who fled an army crackdown in Myanmar's Rakhine Province in 2016, live in the camps at Cox's Bazar in unhygienic conditions.
- Bangladesh's plan is to move some 1 lakh refugees to Bhasan Char, 39 km from Naokhali on the mainland.

#### **Know! about Bhasan Char**

- Bhasan Char is less an island and more mud flat, and is vulnerable to going under water from tides and flooding.



- Much of it is submerged during the monsoon. Located near the mouth of the river Meghna where it flows into the Bay of Bengal, Bhasan Char surfaced only in 2006 from the sediment deposited by the river.
- Located close to the much larger Sandwip, Bhasan Char spans 40 sq km. The government has built shelters, hospitals and masjids.



### Know! about Rohingya and the developments so far

- **Rohingya** are an ethnic group, largely comprising Muslims, who predominantly live in the Western Myanmar province of Rakhine. They speak a dialect of Bengali, as opposed to the commonly spoken Burmese language
- The Rohingya speak Rohingya or Ruaingga, a dialect that is distinct to others spoken throughout Myanmar.
- They are not considered one of the country's 135 official ethnic groups and have been denied citizenship in Myanmar since 1982, which has effectively rendered them stateless.
- Nearly all of the Rohingya in Myanmar live in the western coastal state of Rakhine and are not allowed to leave without government permission.
- It is one the poorest states in the country, with ghetto-like camps and a lack of basic services and opportunities.
- Due to ongoing violence and persecution, hundreds of thousands of Rohingya have fled to neighbouring countries either by land or boat over the course of many decades.
- Myanmar, which does not recognise Rohingya as an indigenous group and refers to them only as Bengalis, has not reacted to the relocation to Bhasan Char.
- Two years ago, Myanmar had reluctantly agreed to take back some Rohingya, but hardly any went back.
- Last November, Gambia, with backing from the Organisation of Islamic Cooperation, took Myanmar to the International Court of Justice (ICJ) for violating the 1948 Genocide Convention.
- In January, the ICJ passed a provisional order directing Myanmar to take "all measures within its power" to prevent atrocities against members of the minority Rohingya Muslim community, in accordance with its obligations under the **Convention on the Prevention and Punishment of the Crime of Genocide**.
- The orders are not binding on Myanmar

## Prelims Factoids: Havana syndrome

**Relevance IN – Prelims (about Havana syndrome + about microwave weapons)**

### What's the NEWS

- Nearly four years after a mysterious neurological illness, referred to as "Havana syndrome", started to afflict American diplomats and intelligence operatives in Cuba, China, and other countries, a report by the National Academies of Sciences (NAS) has found "directed" microwave radiation to be its "plausible" cause.

### Microwave weapons

- "Microwave weapons" are supposed to be a type of direct energy weapons, which aim highly focused energy in the form of sonic, laser, or microwaves, at a target.

- People exposed to high-intensity microwave pulses have reported a clicking or buzzing sound, as if seeming to be coming from within your head.
- It can have both acute and long-term effects — without leaving signs of physical damage.

### **Havana syndrome**

- In late 2016, US diplomats and other employees stationed in Havana reported feeling ill after hearing strange sounds and experiencing odd physical sensations in their hotel rooms or homes.
- The symptoms included nausea, severe headaches, fatigue, dizziness, sleep problems, and hearing loss, which have since come to be known as “Havana Syndrome”.
- American diplomats and members of their families in Cuba and China and at least 14 Canadian citizens in Havana reportedly have experienced similar symptoms.

## **Prelims Factoids: Aurora borealis**

**Relevance IN – Prelims (about aurora borealis + aurora + about solar activities)**

### **What’s the NEWS**

- Northern Lights, also known as aurora borealis, are usually witnessed far up in the polar regions or the high latitude regions of Europe, like in Norway.
- But, this time they could be visible in regions that are more to the south, such as in the northern parts of Illinois and Pennsylvania in the US.
- This is happening due to a solar flare, which emerged from a Sunspot
- The flare is accompanied by a Coronal Mass Ejection (CME) — a large bubble of radiation and particles emitted by the Sun that explodes into space at high speed.
- The electromagnetic storm could be growing to major status causing the Northern Lights to be visible in more number of areas than usual.



### **Know! about aurora**

- Auroras occur when charged particles ejected from the Sun’s surface — called the solar wind — enter the Earth’s atmosphere.
- While flowing toward Earth, the fast-moving solar wind carries with it the Sun’s magnetic field, which disrupts the magnetosphere — the region of space around Earth in which the magnetic field of our planet is dominant.
- When the Sun’s magnetic field approaches Earth, the protective magnetic field radiating from our planet’s poles deflects the former, thus shielding life on Earth.
- However, as this happens, the protective fields couple together to form funnels, through which charged solar wind particles are able to stream down to the poles.
- At the north and south poles, the charged particles interact with different gases in the atmosphere, causing a display of light in the sky.
- This display, known as an aurora, is seen from the Earth’s high latitude regions (called the auroral oval), and is active all year round.
- In the northern part of our globe, the polar lights are called aurora borealis or Northern Lights, and are seen from the US (Alaska), Canada, Iceland, Greenland, Norway, Sweden and Finland.
- In the south, they are called aurora australis or southern lights, and are visible from high latitudes in Antarctica, Chile, Argentina, New Zealand and Australia.
- Generally, the auroral oval is confined to the polar regions. But occasionally, the oval expands, and the lights become visible at lower latitudes, as is expected to happen this time.
- This happens during periods of high solar activity, such as the arrival of solar storms.

## Know! about solar activities

- Solar activities include solar flares, solar energetic particles, high-speed solar wind and Coronal Mass Ejections (CME). These influence the space weather which originates from the Sun.
- Large storms usually occur at the peak of the **11-year solar cycle**, or during the three years after the peak.

## Defence: INS Kalvari class

### Relevance IN – Prelims (about the submarine – INS Kalvari class)

#### What's the NEWS

- The Indian Navy celebrated Submarine Day on December 8.
- It was on December 8 that the Indian Naval Ensign was unfurled on INS Kalvari, the first submarine to be inducted in the Indian Navy, at Riga in Latvia, the erstwhile USSR, in 1967.
- The Kalvari was decommissioned in 1996 after 29 years of service.

#### Know! all about INS Kalvari

- INS Kalvari was a diesel-electric submarine of the Foxtrot Class from the erstwhile USSR.
- It was a 91.3-metre-long submarine, which carried a crew of 75.
- It had a surface speed of 16 knots while the submerged speed was 15 knots.
- After INS Kalvari, three more submarines — Karanj, Khanderi and Kursura — were commissioned in the Indian Navy along with submarine support vehicle Amba.
- A submarine rescue ship, INS Nistar, was also commissioned in 1972.
- The Indian Navy is inducting several submarines in Kalvari Class, named after the very first submarine inducted into service.
- INS Kalvari, a diesel-electric submarine of Scorpene-class, was inducted into service in 2017 after having being built at the Mazagon dock in Mumbai.
- It has been designed by French company DCNS.
- INS Khanderi is the other submarine of Kalvari class currently in service.
- The other submarines slated to join service under this class are Vela, Karanj, Vaghir and Vaghsheer.

## Prelims Factoids: 9<sup>th</sup> edition of Sustainable Mountain Development Summit



### Relevance IN – Prelims (about SMDS)

#### What's the NEWS

- The ninth edition of the Sustainable Mountain Development Summit (SMDS) in Dehradun has begun
- The theme for this year is Emerging Pathways for Building a Resilient Post COVID-19 Mountain Economy, Adaptation, Innovation and Acceleration.
- The summit will focus on the overall objective of building pathways toward a resilient and sustainable mountain economy in the context of a post COVID-19 scenario and Climate Change.

#### Know! about the Summit

- The summit was organised by Indian Mountain Initiative. The summit aimed to deliberate on issues such as water security, migration, climate resilience and innovative solutions for disaster risk reduction and farm sector in the Indian Himalayas. The first edition of the summit was launched in 2011 in Nainital.



## Prelims Factoids: Electronics and Mechanical Engineers (EME)

**Relevance IN – Prelims (about Society of Indian Defence Manufacturers (SIDM))**

### What's the NEWS

- Indian Army in partnership with the Society of Indian Defence Manufacturers (SIDM) held a one day **Webinar** on “**Agile EME : Facilitating Boots on Ground through Aggressive Industrial Outreach**”.
- The initiative will help the Indian Army to plan modernisation of its Repair Echelons in line with latest technology trends worldwide and also promote indigenisation to reduce dependency on imports and cut cost on repairs.
- The initiative will help reduce the time for which critical equipment of the field army remains unserviceable awaiting some critical spares/components to come from abroad (new or repaired)
- The three distinct sessions and panel discussions of webinar were dedicated to indigenisation, modernisation of Electronics and Mechanical Engineers (EME) Workshops and use of Condition Based Monitoring for repair of equipment.

### Know! about SIDM

- The Society of Indian Defence Manufacturers (SIDM) is a not-for-profit association formed to be the apex body of the Indian defence industry.
- SIDM plays a proactive role as an advocate, catalyst, and facilitator for the growth and capability building of the defence industry in India.
- SIDM invites membership from companies registered in India, academic institutions, R&D institutions, government bodies as well as societies.

## Prelims Factoids: Hydroponics, the art of soil-less farming, is trending this year

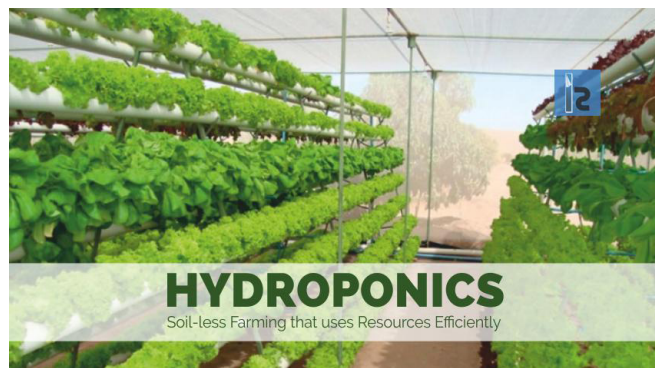
**Relevance IN – Prelims (about Hydroponics)**

### What's the NEWS

- With this gardening technique, soil is replaced with a solution of water and nutrients for plants to grow.
- One can have a constant yield at all times if the correct amount of nutrients are continuously supplied
- In the absence of soil, water goes to work providing nutrients, hydration, and oxygen to plant life.

### Know! all about Hydroponics

- Hydroponics is the cultivation of plants without using soil. Hydroponic flowers, herbs, and vegetables are planted in inert growing media and supplied with nutrient-rich solutions, oxygen, and water.
- This system fosters rapid growth, stronger yields, and superior quality. When a plant is grown in soil, its roots are perpetually searching for the necessary nutrition to support the plant.
- If a plant's root system is exposed directly to water and nutrition, the plant does not have to exert any energy in sustaining itself.
- The energy the roots would have expended acquiring food and water can be redirected into the plant's maturation.
- As a result, leaf growth flourishes as does the blooming of fruits and flowers.
- Plants sustain themselves by a process called photosynthesis. Plants capture sunlight with chlorophyll (a green pigment present in their leaves). They use the light's energy to split water molecules they've absorbed via their root system.
- The hydrogen molecules combine with carbon dioxide to produce carbohydrates, which plants use to nourish themselves.
- Oxygen is then released into the atmosphere, a crucial factor in preserving our planet's habitability.
- Plants do not need soil to photosynthesize. They need the soil to supply them with water and nutrients.



- When nutrients are dissolved in water they can be applied directly to the plant's root system by flooding, misting, or immersion.
- Hydroponic innovations have proven direct exposure to nutrient-filled water can be a more effective and versatile method of growth than traditional irrigation.

## Miscellaneous: Indian Institute of Heritage to be set up soon

**Relevance IN – Prelims (about IIH + about initiatives taken by the ministry of tourism)**

### What's the NEWS

- The Minister of State for Culture and Tourism (IC), chaired a meeting of the National Museum Institute Society in New Delhi, relating to announcement of Government to establish Indian Institute of Heritage (IIH), and also to deliberate upon changing the nomenclature of existing National Museum Institute Society to Indian Institute of Heritage Society (IIHS)
- The Union Budget 2020-21 it was announced that the government would set up IIH.

### Indian Institute of Heritage (IIH)

- As per the proposal of Culture Ministry, the certificate/diploma courses which were hitherto being run by the Institutions under the Ministry of Culture namely; Institute of Archaeology, IGNCA, National Archives of India and NRLC-Lucknow, will be brought under the umbrella of Indian Institute of Heritage along with the degree courses of National Museum Institute, for imparting research & higher education in the field of cultural heritage & conservation.
- It is to be established as a centre of excellence in arts and heritage studies and is to have the status of a 'deemed university'
- The institute would offer MA, Ph.D., diploma and certificate courses in History of Art, Conservation, Museology, Archival Studies, Archaeology, Preventive Conservation, Epigraphy & Numismatics, Manuscriptology, and related fields, as well as training for in-service employees.
- It was decided that members would send their suggestions for setting up the new Institute within a period of 15 days, after which the Culture Ministry would take necessary actions for setting up of Indian Institute of Heritage (IIH) in accordance with the Societies Registration Act, 1860, and the prevalent UGC guidelines for setting up of institutes of higher education in India.
- It is to be set up in accordance with Societies Registration Act, 1860 and the UGC guidelines for setting up HEIs.
- The Finance Minister allocated Rs 3,150 crores for the Ministry of Culture to set up the museum and other activities.

### Other initiatives of the Ministry of Culture and Tourism

- To set up a tribal museum in Ranchi, Jharkhand.
- The government proposes to set up an Indian Institute of Heritage and Conservation under the Ministry of Culture, and develop five archaeological sites as "iconic sites" with onsite museums in Rakhigarhi (Haryana), Hastinapur (Uttar Pradesh), Sivasagar (Assam), Dholavira (Gujarat) and Adichanallur (Tamil Nadu).

### Rakhigarhi

- It is located in Haryana. It is one of the five townships of Harappan civilization. Around sixty-two graves of Harappan civilization were discovered here.

### Hastinapur

- It is located in Meerut district of Uttar Pradesh. The most significant discovery made at this site was the new ceramic industry. It was named Painted Grey Ware and were used by the early Indo-Aryans.

### Sivasagar

- Excavation at this site was conducted in 2007-08. The structural remains found at this site were vessels, bowls, dishes, vases, terracotta smoking pipes.

### Dholavira

- It is located in Gujarat. The site is unique as a complete water system was found at this site. It belongs to Harappan Civilization.

## Adichnallur

- It is located in Tamil Nadu. The site gains importance for its three important findings namely discovery of ancient Tamil-Brahmi script, fragment of broken earthenware and remains of living quarters.

## Prelims Factoids: Legion of Merit Award from US

### Relevance IN – Prelims (about Legion of Merit award)

#### What's the NEWS

- The Legion of Merit, awarded by United States president Donald Trump to Narendra Modi is the latest among a host of international honours bestowed on the prime minister since 2014.
- Taranjit Singh Sandhu, India's Ambassador to the US, accepted the award on behalf of the prime minister from National Security Advisor Robert O'Brien at the White House.
- The award was also presented to Japanese prime minister Shinzo Abe and Australian prime minister Scott Morrison
- Together, India, the US, Australia and Japan constitute the 'Quad' group of countries, which has been seen as a counter to Chinese dominance in the Indo-Pacific region.

#### Know! about Legion of Merit

- The Legion of Merit was instituted in 1942 by former US president Franklin D Roosevelt, as noted in an article in The Hindu.
- The Legion of Merit is the only US military decoration that has distinct ranks, and the first US medal to be awarded to citizens of other nations
- The Legion of Merit, in the highest degree of the Chief Commander, is a prestigious award conferred by the President of the United States, typically upon Heads of State or Heads of Government of other countries.
- Trump on 18 September awarded the Legion of Merit, Degree Chief Commander, to Sheikh Sabah Al-Ahmed Al-Jaber Al-Sabah, the Emir of Kuwait.

## Miscellaneous: 8 Khelo India State Centres of Excellence inaugurated

### Relevance IN – Prelims (about the role of KISCEs + about Khelo India)

#### What's the NEWS

- Union Minister of Sports & Youth Affairs inaugurated 8 Khelo India State Centres of Excellence (KISCEs) across India in the presence of distinguished State Sports Ministers on The 8 States include: Manipur, Arunachal Pradesh, Mizoram, Kerala, Telangana, Nagaland, Karnataka and Odisha.



- The Sports Ministry had identified sports facilities in these 8 states to be upgraded to the Khelo India State Centre of Excellence (KISCE).



*The centres identified are:*

1. Nagaland- State Sports Academy, IG Stadium Kohima
2. Manipur - Khuman Lampak Sports Complex, Imphal
3. Arunachal Pradesh - Sangey Lhaden Sports Academy, Chimpu Itanagar
4. Mizoram - Rajiv Gandhi Stadium, Aizawl
5. Odisha - Kalinga Stadium, Bhubaneswar
6. Telangana - Regional Sports School Hakimpet
7. Karnataka - Sh. Jayaprakash Narayan National Youth Centre Bangalore
8. Kerala - GV Raja Sr. Sec. Sports School Thiruvananthapuram

### **Khelo India State Centres of Excellence**

- With a vision to make India one of the top 10 countries in 2028 Olympics, the Khelo India State Centres of Excellence will ensure that athletes proficient in a certain sport can be given the world-class specialised training and these centers become the best facilities in the country to train athletes in the priority sport for which they have been earmarked.
- The support to the centers will be in the form of infrastructure upgradation, setting up of sports science centres and also soft component in the form of quality coaches and sports science human resources like physiotherapists, strength & conditioning experts and so on.
- The Centres will also have High performance Managers to ensure quality of sports science input and performance management.
- The setting up of the KISCE will also help to broad-base talent identification, since the states and UTs will also identify and develop talent in each sport for which funding is received.

## **Government Schemes: PMJAY - SEHAT scheme**

### ***Relevance IN – Prelims (about PMJAY - SEHAT scheme)***

#### **What's the NEWS**

- Prime Minister Narendra Modi will launch the PMJAY - SEHAT scheme on December 26 for Jammu and Kashmir.

#### **Know! about SEHAT Scheme**

- According to the Department of Information and Public Relations, Government of Jammu and Kashmir, SEHAT scheme stands for Social, Endeavour for Health and Telemedicine, a health insurance scheme for the Union Territory.
- All the inhabitants of the Union Territory will receive free cashless health cover up to Rs 5 lakhs.
- The scheme will cover the remaining population which has not been covered under the Ayushman Bharat Scheme.
- SEHAT - Health Insurance scheme for the entire J&K to cover the remaining One crore population which was not covered under Ayushman Bharat scheme

## **Prelims Factoids: Target Olympic Podium Scheme (TOPS)**

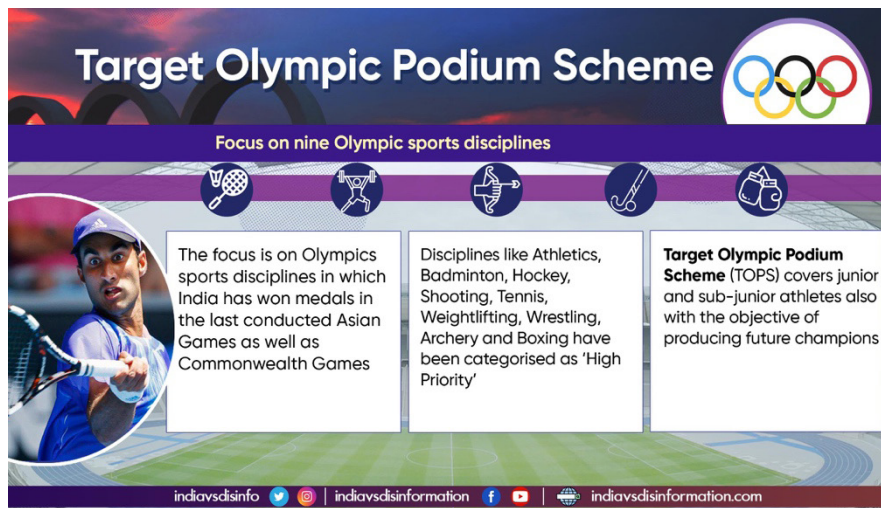
### ***Relevance IN – Prelims (about Target Olympic Podium Scheme)***

#### **What's the NEWS**

- The Government through the Target Olympic Podium Scheme (TOPS) has sanctioned a 40 day training camp for wrestler Vinesh Phogat along with her personal coach and her physiotherapist

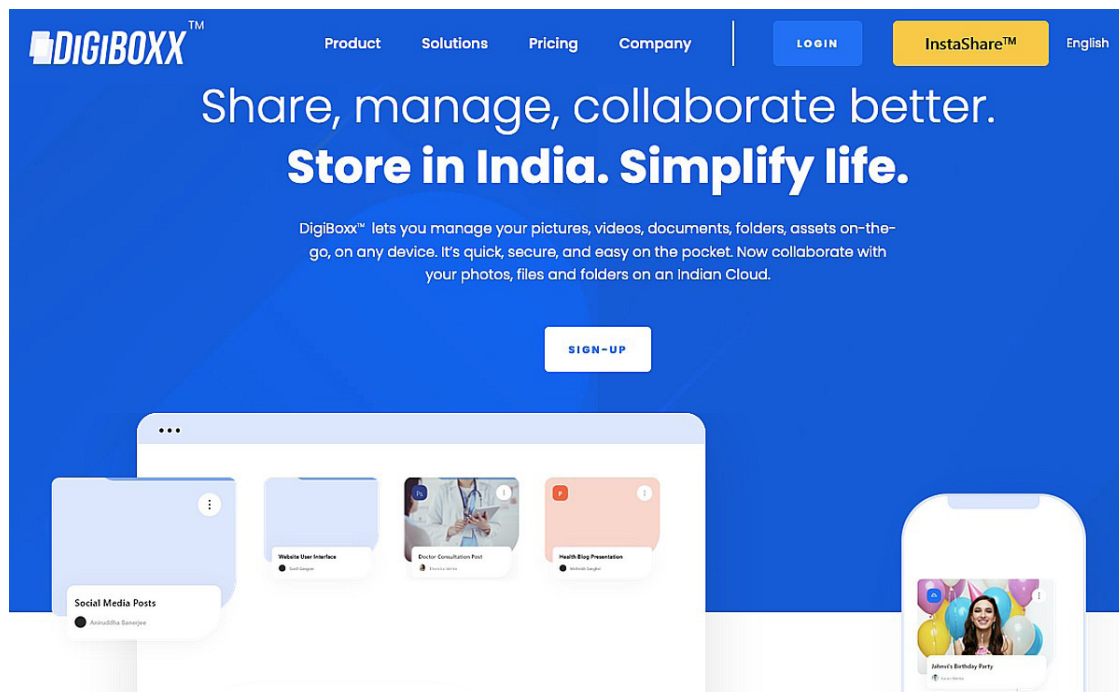
#### **Know! about TOPS – Objective of the Scheme**

- The Target Olympic Podium Scheme is a flagship program of the Ministry of Youth Affairs and Sports which is an attempt to provide assistance to India's top athletes.



- The Scheme looks to add a premium to the preparations of these athletes so that they can win Olympic medals in 2020 and 2024 Olympics.
- Under the Scheme, the Department of Sports shall identify athletes who are potential medal winners in 2020 / 2024 Olympics.
- The idea of the Scheme is to also keep an eye in the future and fund a Developmental Group of Athletes who are medal prospects for the Olympic Games in Paris in 2024 and Los Angeles Games in 2028.

## Miscellaneous: NITI Aayog launches DigiBoxx



### Relevance IN – Prelims (about DigiBoxx)

#### What's the NEWS

- Homegrown data storage and management platform DigiBoxx has been launched by NITI Aayog and it will provide affordable services to both regular users as well as businesses.
- DigiBoxx is very affordable and a user can opt for a plan for as low as Rs 30 per month.

## Know! all about DigiBoxx

- India now has its own cloud storage platform, DigiBoxx.
- A potential alternative to Google Drive, Dropbox, and Microsoft OneDrive, the indigenous cloud service is seen as a step that furthers the initiative of 'Atmanirbhar Bharat.'
- The homegrown data storage and management platform has been launched by NITI Aayog and it will provide affordable services to both regular users as well as businesses.
- All the data will be encrypted and stored in servers in India.
- The cloud storage platform is available on Android and iOS and can be accessed on computers through the web.
- The most interesting feature of the service DigiBoxx is that it allows users to share files even when they don't have a DigiBoxx account.
- The feature has been named InstaShare and allows users to share up to 2 GB of content for free.
- All you need to have is your mobile number or email-ID. Once you upload your file, a link will be generated that can be used by the recipient to download the content.
- The data remains available on the link for 45 days post which it will be deleted and the link becomes invalid
- Users can search for their content using tags and can even edit it in real-time.
- DigiBoxx supports several popular file formats and gives users a filter option that will allow them to better organise their personal files.

## Miscellaneous: National Medicinal Plants Board Launches Consortia for Medicinal Plants

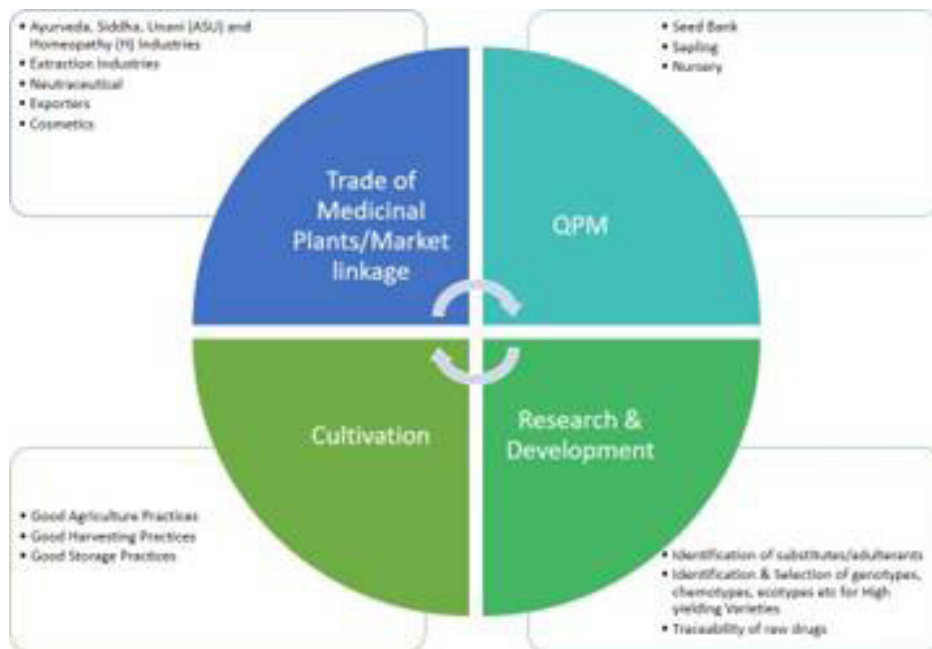
### *Relevance IN – Prelims (about NMPB + about NMPB Consortia)*

#### What's the NEWS

- National Medicinal Plants Board (NMPB), Ministry of AYUSH envisages the necessity of connectivity between stakeholders in the supply chain and value chain of Medicinal Plants.

#### NMPB Consortia

- NMPB Consortia will address on Quality Planting Material, Research & Development, Cultivation, Trade of medicinal plants/market linkage etc.
- To establish the linkage between the farmers and manufacturers, a 'Seed to Shelf' approach is being introduced, wherein, aspects related to Quality Planting Materials (QPM), Good Agriculture Practices (GAP's), Good Post Harvest Practices (GPHP's) would be addressed.



- In the first phase NMPB consortia is proposed for medicinal plant species - Ashwagandha (*Withania somnifera*), Pippali (*Piper longum*), Aonla (*Phyllanthus emblica*), Guggulu (*Commiphora wightii*), Satavari (*Asparagus racemosus*).
- Registration link for NMPB Consortia is available on the website of NMPB wherein, eligible organizations viz, Farmers/ FPOs/ FPCs/QPM centres/ Seed banks/ Nurseries/ SHGs/ NGOs/ Traders/manufactures/Exporters/ Pharma/Research institutes / Agriculture Universities can register to be part of consortia.

### **Know! about National Medicinal Plants Board**

- In order to promote medicinal plants sector, Government of India set up National Medicinal Plants Board (NMPB) on 24<sup>th</sup> November 2000.
- Currently the board is working under the Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homoeopathy), Government of India.
- The primary mandate of NMPB is to develop an appropriate mechanism for coordination between various ministries/ departments/ organization and implementation of support policies/programs for overall (conservation, cultivation, trade and export) growth of medicinal plants sector both at the Central /State and International level.
- NMBP focusses on in-situ & ex-situ conservation and augmenting local medicinal plants and aromatic species of medical significance.
- The NMPB also promote research & development, capacity building through trainings, raising awareness through promotional activities like creation of Home/School herbal gardens.

## **Prelims Factoids: Giant Rock Bee Honey, a Unique Variant of Honey Sourced From Malayali Tribes of Tamil Nadu**

### **Relevance IN – Prelims (about Malayali Tribes)**

#### **What's the NEWS**

- More than 35 new, attractive, immunity-boosting tribal products have found a new home in Tribes India outlets and website in the 8<sup>th</sup> edition of "From Our Home to your Home" campaign.
- The campaign had been launched 8 weeks back by TRIFED under Ministry of Tribal Affairs in order to source as many effective, natural, and attractive products from diverse indigenous tribes across the country so that these can reach a wide variety of audience.
- Key among the products are the natural, fresh, organic produce from the Malayali tribes of Tamil Nadu, such as Giant Rock Bee Honey, honey, variants of millet rice, tamarind and black pepper.

#### **Malayali tribes of Tamil Nadu**

- Malayali is a tribal group from the Eastern Ghats in North Tamil Nadu. With a population of around 3,58,000 people they are the largest Scheduled tribes in that region. The tribals are usually hill farmers and they cultivate different types of millet.

## **Defence: Maiden Flight Trial of SAHAYAK-NG, Air Droppable Container**



### **Relevance IN – Prelims (about SAHAYAK-NG)**

#### **What's the NEWS**

- Defence Research and Development Organisation (DRDO) along with Indian Navy conducted the successful maiden test trial of 'SAHAYAK-NG' India's first indigenously designed and developed Air Dropped Container from IL 38SD aircraft (Indian Navy) off the coast of Goa.



### **Know! about SAHAYAK-NG**

- The trial was conducted by Indian Navy to enhance its operational logistics capabilities and provide critical engineering stores to ships which are deployed more than 2000 km from the coast.
- It reduces the requirement of ships to come close to the coast to collect spares and stores.
- Two DRDO laboratories i.e. NSTL, Visakhapatnam and ADRDE, Agra were involved in the development of SAHAYAK-NG container along the industry partner M/s Avantel for GPS integration.
- SAHAYAK-NG is an advanced version of SAHAYAK Mk I.
- The newly developed GPS aided air dropped container is having the capability to carry a payload that weighs upto 50 kg and can be dropped from heavy aircraft.

### **Defence: Induction of Indigenous Bridging System into the Indian Army**



#### ***Relevance IN – Prelims (about short span bridges)***

##### **What's the NEWS**

- Indian Army has inducted first three sets of 10-metre short span bridges.
- The equipment will meet the important requirement of providing mobility to own forces by speedy bridging of gaps during operations.

##### **Know! the benefits of short span bridges.**

- The bridge is indigenously designed and developed in close coordination between the Corps of Engineers and the DRDO laboratory in Pune
- The Indian Army has inducted three sets of 10-metre short span bridges, which were formally handed over on 29 December 2020 at the Talegaon facility of Larsen & Toubro Limited.
- The equipment will meet the important requirement of providing mobility to own forces by speedy bridging of gaps during operations.
- This accomplishment is a step towards weaning away our armed forces from foreign manufactured equipment with the the Bridge indigenously designed, developed and delivered as per schedule.
- The bridge is one of the numerous indigenous projects of Corps of Engineers which have made significant progress.

### **Prelims Factoids: First pollinator park of India inaugurated in Uttarakhand**

#### ***Relevance IN – Prelims (about the first pollinator park + importance of pollinator)***

##### **What's the NEWS**

- Sprawling across four acres, India's first pollinator park was inaugurated at Haldwani in Nainital district of Uttarakhand.



- The park has around 50 different pollinator species which include various species of butterflies honeybees birds and other insects
- The park was inaugurated by Peter Smetacek, a butterfly expert and it has around 50 different pollinator species, which include various species of butterflies, honeybees, birds and other insects.

### **Know! about the Pollinator Park**

- The objective is to conserve various pollinator species, to create awareness among the public about the importance of pollination and to promote further research on its various aspects including a threat to habitat and impact of pollution, use of pesticides or insecticides and relation between various pollinators and plant species
- At present, between 75-95 per cent of all flowering plants on earth depend on pollinators to provide pollination services to over 180,000 different plant species.
- In this park, habitat has been created for various pollinators, including plantation of nectar and pollination producing plants, like marigold, rose, hibiscus, jasmine for various honeybee and butterfly, bird and moth species and also host plants to provide shelter to eggs, larvae and pupa, like curry leaf plant, citrus species, cassia species and lantana.
- Apart from that, to attract various bird and butterfly species, bird feeders and nests along with many fruit trees have been placed throughout the park for various bird species.
- Use of all type of chemicals, including pesticides and insecticides have been totally stopped in the park and neighbouring area, the statement informed.

### **Know! about Pollinator**

- **Pollination** is the act of transferring pollen grains from the male anther of a flower to the female stigma.
- **Pollinators** are responsible for assisting over 80% of the world's flowering plants to reproduce
- A pollinator is an animal that moves pollen from the male anther of a flower to the female stigma of a flower.
- This helps to bring about fertilization of the ovules in the flower by the male gametes from the pollen grains.

## **Personalities/Indian National Movement: PM remembers Netaji Subhas Chandra Bose on 75<sup>th</sup> Anniversary of tricolor hoisting at Port Blair**

***Relevance IN – Prelims (about the renaming of three islands of Andaman and Nicobar +75<sup>th</sup> Anniversary of tricolor hoisting at Port Blair)***

### **What's the NEWS**

- The Prime Minister, Shri Narendra Modi has remembered Netaji Subhas Chandra Bose on 75<sup>th</sup> Anniversary of tricolor hoisting at Port Blair.
- On 30<sup>th</sup> December 1943 the brave Netaji Subhas Bose unfurled the Tricolour at Port Blair.





Image tweeted by @narendramodi

### Connect to the Past

- On 31<sup>st</sup> December 2018 Prime minister Narendra announced the renaming of three islands of Andaman and Nicobar archipelago as a tribute to Netaji Subhas Chandra Bose.
- The Ross Island was renamed as Netaji Subhas Chandra Bose Dweep, the Neil Island as Shaheed Dweep and the Havelock Island as Swaraj Dweep.
- On December 30, 1943, Bose had suggested that Andaman and Nicobar Islands be renamed as Shahid and Swaraj Dweep respectively.
- During World War II, the Japanese had captured the Andaman and Nicobar Islands, and Netaji came here as the Azad Hind Fauz led by him was an ally of the Japanese force.
- The Government of India renamed three islands of Andaman Group. It was to commemorate Netaji Subhas Chandra Bose visit to the Andaman as the Commander of Azad Hind Fauz in December 1943.
- British colonized the islands since 1858. However, during the World War II, Japanese occupied the islands as allies of Indian National Army.

## Defence: Passage Exercise (PASSEX) between Russian Federation Navy and Indian Navy in Eastern Indian Ocean Region

### Relevance IN – Prelims (about PASSEX)

#### What's the NEWS

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

#### Know! more about the exercise

- The exercise involves participation of RuFN guided missile cruiser *Varyag*, large anti-submarine ship *Admiral Panteleyev* and medium ocean tanker *Pechenga*.
- IN is being represented by indigenously constructed guided missile frigate *Shivalik* and anti-submarine corvette *Kadmatt* along with integral helicopters.
- The exercise is aimed at enhancing interoperability, improving understanding and imbibing best practices between both the friendly navies



- PASSEXs are conducted regularly by *IN* with units of friendly foreign navies, whilst visiting each other's ports or during a rendezvous at sea.
- This exercise is being conducted on the occasion of 'Navy Day' of the *IN* on 4<sup>th</sup> December, which emphasizes the strong bonds of friendship shared between the two friendly militaries.
- The two navies have built a robust relationship through regular exercises such as INDRA Navy conducted biennially, with the last edition held in the Northern Indian Ocean Region from 4 to 5 September 2020.

## Miscellaneous: Fourth South Asia Forum on SDGs

**Relevance IN – Prelims (about 4<sup>th</sup> South Asian Forum of Sustainable Development Goal (SDG), UNESCAP) + Mains (GS II international organisations)**

### What's the NEWS

- In the backdrop of the 4<sup>th</sup> South Asian Forum of Sustainable Development Goal (SDG), UNESCAP South Asia and Pacific virtually organised a special dialogue on disaster and climate resilience in South Asia
- The key objectives of the High Level meeting were to identify the opportunities and imperatives to overcome the challenges in implementing the systemic approach to disaster and public health risk management.
- In addition, other objectives were to formulate the strategies for capitalizing on existing regional and sub-regional cooperation mechanism including the South Asian Forum on SDG to scale up multi-hazard and multi-sectoral preparedness systems for future cascading disasters.

### Steps taken by India

- The Prime Minister of India took the initiative for the coalition for resilient infrastructure and announced the **global Coalition for Disaster Resilient Infrastructure (CDRI)**, at the UN Climate Action Summit 2019.
- India is also hosting SAARC Disaster Management Centre, it works closely with Universities of SAARC and BIMSTEC member States.

### Know! about UNESCAP

- The Economic and Social Commission for Asia and the Pacific (ESCAP) serves as the United Nations' regional hub promoting cooperation among countries to achieve inclusive and sustainable development.
- The largest regional intergovernmental platform with **53 Member States and 9 associate members**, ESCAP has emerged as a strong regional think-tank offering countries sound analytical products that shed insight into the evolving economic, social and environmental dynamics of the region.
- The Commission's strategic focus is to deliver on the 2030 Agenda for Sustainable Development, which is reinforced and deepened by promoting regional cooperation and integration to advance responses to shared vulnerabilities, connectivity, financial cooperation and market integration.
- The overall objective of ESCAP is to promote inclusive and sustainable economic and social development in the Asia-Pacific region, with priority accorded to the implementation of the 2030 Agenda for Sustainable Development and the achievement of the Sustainable Development Goals.

02-03 DECEMBER 2020  
14.00-17.00 (IST)

Invitation to Virtual  
**Fourth South Asia Forum on SDGs**  
Fostering Sustainable and Resilient Recovery from  
COVID-19 in South Asia

organized jointly with the  
Ministry of National Planning, Housing and Infrastructure, Government of Maldives

**2 December 2020 - Session 1: Opening Session**

**Opening Remarks**

H.E. Ms. Armita S. Aisjahanna  
Executive Secretary  
UNESCAP

H.E. Ms. Catherine Howell  
UN Resident Coordinator  
Republic of Maldives

H.E. Mr. Esala Ruvan Meerakoon  
Secretary-General  
SAARC

H.E. Mr. Mohamed Aslam  
Minister of National Planning, Housing  
and Infrastructure  
Republic of Maldives

**Moderator**

Dr. Nagesh Kumar  
Director  
UNESCAP-SSWA

**Web Launch**  
South Asia Network on Sustainable Development Goals (SANS) Portal

**Register Now**

## Miscellaneous: QCI Launches Recognition Scheme for Hygiene Rating Audit Agencies

**Relevance IN – Prelims (about Food Hygiene Rating Scheme and its objective)**

### What's the NEWS

- Quality Council of India (QCI) at the behest of the FSSAI has come out with a **Scheme for approval of Hygiene Rating Audit Agencies** to scale up Hygiene Rating by increasing the number of recognised Hygiene Rating Audit Agencies in the country.

### Food Hygiene Rating Scheme

- FSSAI's initiative of 'Food Hygiene Rating Scheme' is a certification system for food businesses supplying food directly to consumers, either on or off premise.
- The food establishments are rated based on food hygiene and safety conditions observed at the time of audit.
- The hygiene rating will be in the form of smileys (1 up to 5) and the certificate should be displayed prominently in the consumer facing area.
- The recognised Hygiene Rating Audit Agencies will be responsible for verifying the compliance with food hygiene and safety procedures laid by FSSAI and get Hygiene Rating.
- The scheme aims to allow consumers to make informed choices/decisions pertaining to the food outlets where they eat by encouraging food businesses to improve their hygiene and safety standards.
- Currently, this scheme is applicable for Food service establishments (such as hotels, restaurants, cafeteria, dhabhas, etc), sweet shops, bakeries and meat retail stores.
- The recognised Hygiene Rating Audit Agency will verify the compliance with food hygiene and safety procedures laid by FSSAI.
- Hygiene Rating and its recognition scheme is an excellent initiative of FSSAI and QCI, and will help in improving the confidence of the Indian consumer and food service operators in the basic hygiene and quality of the food.



## Defence: India successfully test-fires surface-to air missile (MRSAM)

**Relevance IN – Prelims (about MRSAM)**

### What's the NEWS

- Defence Research and Development Organisation (DRDO) achieved a major milestone today with the maiden launch of Medium Range Surface to Air Missile (MRSAM), Army Version from Integrated Test Range, Chandipur, off the Coast of Odisha
- The missile completely destroyed a high speed unmanned aerial target which was mimicking an aircraft with a direct hit.

### Know! all about MRSAM

- Army version of MRSAM is a surface to Air Missile developed jointly by DRDO, India and IAI, Israel for use of the Indian Army.
- MRSAM Army weapon system comprises of Command post, Multi-Function Radar and Mobile Launcher system.
- The complete Fire Unit has been used during the launch in the deliverable configuration.





- Number of range instruments such as Radar, Telemetry and Electro-Optical Tracking System were deployed and captured the complete mission data, validating the weapon system performance including the destruction of the target.
- The entire mission trajectory from the launch to plunging into the sea was monitored by various radars and electro-optico instruments
- An unmanned air vehicle (UAV), 'Banshee', was first flown into the air, which was hit by the MRSAM.
- The missile has been jointly developed by DRDO and Israel Aerospace Industries and has been manufactured by Bharat Dynamics limited. It is capable of engaging multiple aerial targets with a range exceeding 50 km.
- The missile was fired from a ground mobile launcher and as part of its test successfully shot down an unmanned air vehicle (UAV).
- The deadly missile is expected to be a boon for Indian Armed Forces' combat effectiveness after its induction.
- In 2019 the Indian Navy had successfully test fired a MRSAM marking a major feat towards enhancing its anti-air warfare capabilities.
- After its induction into the Indian army, the missile will significantly enhance the combat effectiveness of the defence forces

## Miscellaneous: Cabinet approves Revision in guidelines for providing Direct to Home (DTH) Services in India

**Relevance IN – Prelims (about the revised guidelines)**

### What's the NEWS

- The Union Cabinet has approved the proposal for revision of the guidelines for obtaining license for providing Direct-To-Home (DTH) broadcasting service in India.

#### The salient features of the decision are:

- i. License for the DTH will be issued for a period of 20 years in place of present 10 years. Further the period of License may be renewed by 10 years at a time.
- ii. License fee has been revised from 10% of GR to 8% of AGR. AGR will be calculated by deduction of GST from GR.
- iii. License Fee will be collected on quarterly basis in lieu of presently annual basis.
- iv. DTH operators shall be permitted to operate .to a maximum of 5% of its total channel carrying capacity as permitted platform channels.
- v. The cap of 49% FDI in the existing DTH guidelines will be aligned with the extant Government (DPIIT's) policy on FDI as amended from time to time.

### Benefits

- The amended DTH guidelines, with longer license period and clarity on renewals, relaxed FDI limits, etc., will ensure fair degree of stability and new investments in the DTH sector along with employment opportunities.

## Miscellaneous: National Consumer Rights Day 2020

**Relevance IN – Prelims (about National Consumer Rights Day +Consumer Protection Act 1986 + Consumer Protection Act 2019) + Mains (GS II) Government policies and interventions for development in various sectors and issues arising out of their design and implementation**

### What's the NEWS

- National Consumer Rights Day is observed on December 24, every year in India.
- The Consumer Protection Act 1986 came into effect on this day.
- The CPA 1986 was enforced so that consumers can be more aware of their entitled rights.
- The theme of the National Consumer Day is 'The Sustainable Consumer'. The theme is in view of the urgent need for action to approach the worldwide crisis, global temperature change and biodiversity loss.

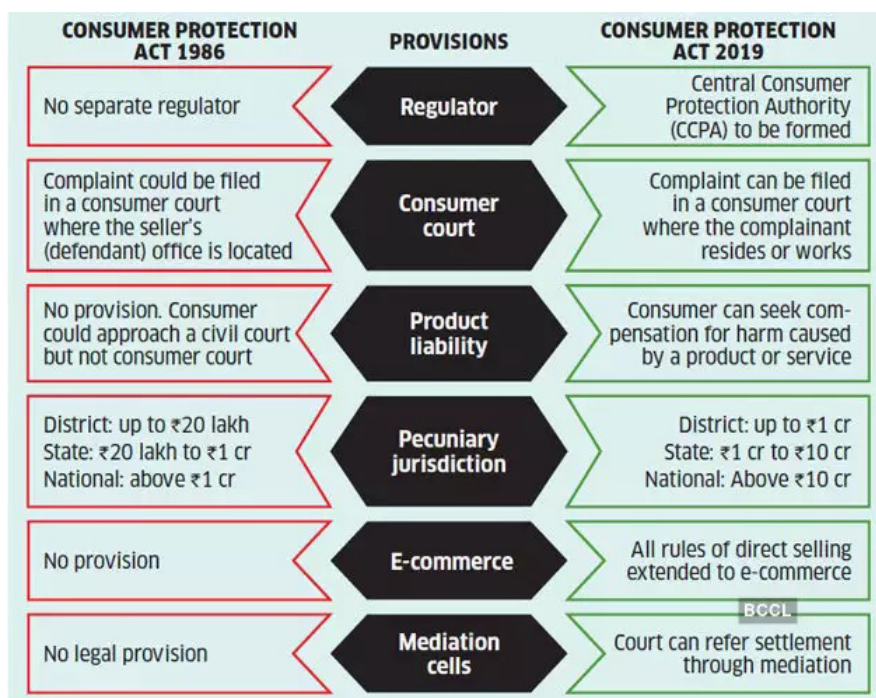


## National Consumer Rights Day 2020

- On December 24, 1986, Consumer Protection Act 1986, regarded as the 'Magna Carta', received the approval of the President of India. Consumer Protection Act 1986 in the field of consumer protection came into force for checking unfair trade practices.
- Consumers are provided protection from the damages brought about to them due to different unfair trade practices.
- The act has ensured speedy settlements of consumer disputes by establishing a widespread and effective network of redressal forums.
- The appellate courts all across India also ensure inexpensive resolution of consumer discrepancies.
- It has empowered consumers to a greater extent and also had a significant impact on how businesses deal with such complaints.
- The rights recognized under the Consumer Protection Act, 1986 provided in the UN charter are Right to Protection, Right of Information, Right of Choice, Right of Hearing, Right of Redressal, and Right of Education

### Consumer Protection Act 2019 – highlights

- The Consumer Protection Act 2019 is in to force from 20<sup>th</sup> July 2020.
- The Act will empower consumers and help them in protecting their rights through its various notified Rules and provisions like Consumer Protection Councils, Consumer Disputes Redressal Commissions, Mediation, Product Liability and punishment for manufacture or sale of products containing adulterant / spurious goods.
- The Act includes establishment of the Central Consumer Protection Authority (CCPA) to promote, protect and enforce the rights of consumers.
- The CCPA will be empowered to conduct investigations into violations of consumer rights and institute complaints / prosecution, order recall of unsafe goods and services, order discontinuance of unfair trade practices and misleading advertisements, impose penalties on manufacturers/endorsers/publishers of misleading advertisements.



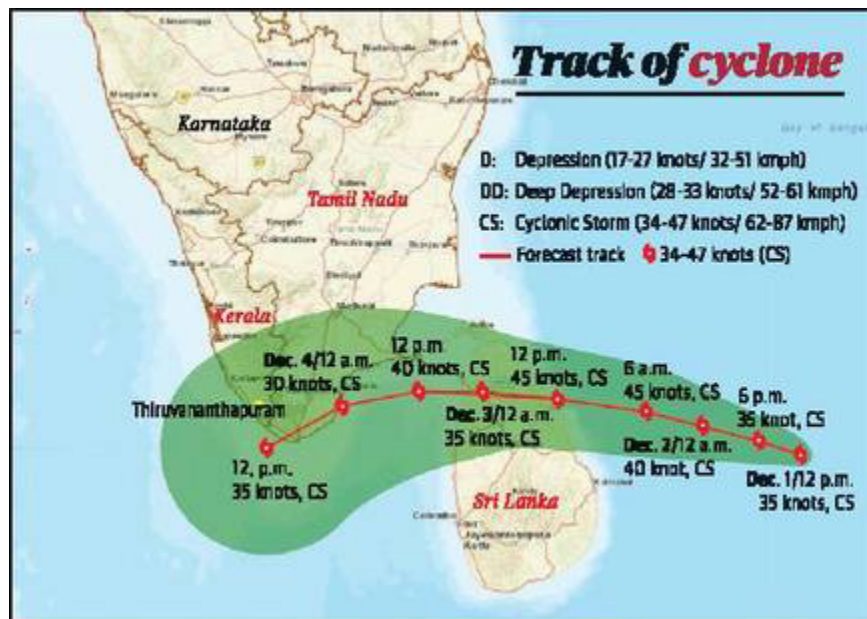
- Under this act every e-commerce entity is required to provide information relating to return, refund, exchange, warranty and guarantee, delivery and shipment, modes of payment, grievance redressal mechanism, payment methods, security of payment methods, charge-back options, etc. including country of origin which are necessary for enabling the consumer to make an informed decision at the pre-purchase stage on its platform.
- Also, the e-commerce platforms have to acknowledge the receipt of any consumer complaint within forty-eight hours and redress the complaint within one month from the date of receipt under this Act.

- The Act introduces the concept of product liability and brings within its scope, the product manufacturer, product service provider and product seller, for any claim for compensation.
- The Act provides for simplifying the consumer dispute adjudication process in the consumer commissions, which include, among others, empowerment of the State and District Commissions to review their own orders, enabling a consumer to file complaints electronically and file complaints in consumer Commissions that have jurisdiction over the place of his residence, videoconferencing for hearing and deemed admissibility of complaints if the question of admissibility is not decided within the specified period of 21 days.
- An Alternate Dispute Resolution mechanism of Mediation has been provided in the new Act. This will simplify the adjudication process.
- A complaint will be referred by a Consumer Commission for mediation, wherever scope for early settlement exists and parties agree for it.
- Mediation will be held in the Mediation Cells to be established under the aegis of the Consumer Commissions. There will be no appeal against settlement through mediation.
- As per the Consumer Disputes Redressal Commission Rules, there will be no fee for filing cases upto Rs. 5 lakh.
- The CCPA may impose a penalty on a manufacturer or an endorser of up to Rs 10 lakh and imprisonment for up to two years for a false or misleading advertisement.
- In case of a subsequent offence, the fine may extend to Rs 50 lakh and imprisonment of up to five years.

# **GENERAL STUDIES I**

**Indian Heritage and Culture,  
History and Geography of the  
World and Society**

## Geophysical phenomena: Cyclone Burevi



**Relevance IN – Prelims (about Cyclone Burevi + facts about recent cyclones and their naming) + Mains (GS I Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc.)**

### What's the NEWS

- Seven days after Cyclone Nivar hit the Karaikal coast, another cyclone, Burevi, named by the Maldives, is expected to cross Tamil Nadu's southernmost district of Kanyakumari later this week.
- As a cyclonic storm, Burevi is expected to first cross the Sri Lankan coast near Trincomalee and thereafter, it will trace a west-northwestwards track, reach Gulf of Mannar and inch closer to Indian mainland's southernmost tip.

### Cyclone Burevi will not be as strong as Cyclone Nivar

- Developed in the Bay of Bengal, the very severe cyclone Nivar, with wind speeds of 89 to 117 km/hr, had hit near Karaikal on November 25.
- Unstable sea conditions, in the southwest region of Bay of Bengal, continue due to the recent crossing of Nivar. The overall sea conditions currently remain disturbed.
- This is why meteorologists say there is a high possibility that Cyclone Burevi would not strengthen beyond the intensity of a cyclonic storm.
- Due to upwelling caused by Nivar, Cyclone Burevi will have limited intensity
- When such consecutive systems develop in the same region of the ocean, the predecessor system leads to upwelling — the process in which cooler waters from lower ocean surfaces are pushed towards upper ocean surfaces.
- In the absence of warm sea surface conditions, any cyclone, in this case Burevi, will not get enough fuel to intensify further while at sea.
- The IMD has indicated that Burevi will remain a cyclonic storm (wind speed 62 to 88 km/hr) till December 5, before it weakens into a deep depression.

**Additional info (connect to the past cyclone events and Prelims facts about cyclone)**

### Cyclone Amphan

- Cyclone Amphan (named by Thailand) is a tropical cyclone formed over Bay of Bengal that has intensified and likely to turn into a “**super cyclonic storm** (maximum wind speed is 120 knots)”.



- According to the India Meteorological Department forecast, it made landfall as a very severe cyclone **between the Sagar islands of West Bengal and the Hatiya islands of Bangladesh.**

**The Indian Meteorological Department classifies Cyclones based on their wind speeds.**

- When the wind speed is around 31-50 km/hr, it is called depression.
- When the wind speed is between 51-62 km/hr, it is called Deep Depression. Beyond these speeds, the depression becomes storm.

**The wind speeds of different storms as follows**

- Cyclonic Storm: 63-88 km/hr
- Severe Cyclonic Storm: 89-117 km/hr
- Very Severe Cyclonic Storm: 118-165 km/hr
- Extremely Severe Cyclonic Storm: 166-220 km/hr
- Super cyclonic Storm: greater than 220 km/hr

**Why Is The Bay of Bengal So Prone To Cyclones?**

- Tropical cyclones—also called typhoons or hurricanes—are intense water-rotating systems formed by **strong winds** (of speeds **at least 62 kilometres/hour**) around **low-pressure areas**.
- They have a spiral, **anticlockwise movement**. Additional weather conditions like high sea surface temperature, vertical changes in wind speed inside the spiral, and high relative humidity help cyclones form and intensify.
- Since sea surface temperatures and humidity both directly correlate with chances of cyclone formation, the Bay of Bengal is a more likely target because it gets higher rainfall, and because the sluggish winds around it keep temperatures relatively high: about 28 degrees around the year.
- Warm air currents enhance this surface temperature and aid the formation of cyclones.
- In addition, the Bay receives higher rainfall and constant inflow of fresh water from the Ganga and Brahmaputra rivers.
- This means that the Bay's surface water keeps getting refreshed, making it impossible for the warm water to mix with the cooler water below, making it ideal for a depression.
- On the other hand, the Arabian Sea receives stronger winds that help dissipate the heat, and the lack of constant fresh water supply helps the warm water mix with the cool water, reducing the temperature.

**How tropical cyclones are named**

- In 2000, a group of nations called WMO/ESCAP (World Meteorological Organisation/United Nations Economic and Social Commission for Asia and the Pacific), which comprised Bangladesh, India, the Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand, decided to start naming cyclones in the region.
- After each country sent in suggestions, the WMO/ESCAP Panel on Tropical Cyclones (PTC) finalised the list
- The WMO/ESCAP expanded to include five more countries in 2018-Iran, Qatar, Saudi Arabia, United Arab Emirates and Yemen.
- The list of 169 cyclone names released by IMD last month, in April, were provided by these countries — 13 suggestions from each of the 13 countries.
- The India Meteorological Department (IMD) recently released a list of 169 names of future tropical cyclones that would emerge in the Bay of Bengal and the Arabian Sea.
- The new list of 169 names will begin after Cyclone Amphan.

**The role of RSMCs and TCWCs**

- Cyclones that form in every ocean basin across the world are named by the regional specialised meteorological centres (RSMCs) and Tropical Cyclone Warning Centres (TCWCs).
- There are six RSMCs in the world, including the India Meteorological Department (IMD), and five TCWCs.
- As an RSMC, the IMD names the cyclones developing over the north Indian Ocean, including the Bay of Bengal and Arabian Sea, after following a standard procedure.
- The IMD is also mandated to issue advisories to 12 other countries in the region on the development of cyclones and storms.

## Cyclonic Storm NISARGA

- A low pressure over east-central Arabian Sea and the Lakshadweep Islands intensified into a depression and a cyclonic circulation
- A low pressure area is the first stage of any cyclone.
- The cyclone crossed north Maharashtra and south Gujarat coasts between Harihareshwar town in Maharashtra's Raigad district and Daman as a severe cyclonic storm
- "Nisarga", which means nature and was termed by India's neighbouring country -- **Bangladesh**.
- The name was accorded in a list formulated by a group of countries.
- IMD recently released a list of cyclone names in April, 2020.
- The new list included the last name from the previous list "Amphan" as it remained unused at the time of release.
- After "Amphan", "Nisarga" name was picked up for the ensuing cyclone

## Indian National Movement: High Level Committee headed by Union Home Minister to commemorate the 125<sup>th</sup> Birth Anniversary of Netaji Subhas Chandra Bose

***Relevance IN – Prelims (about High Level Committee objective + initiative taken by the government towards conserving Netaji Subhas Chandra Bose heritage) + Mains (GS I The Freedom Struggle – its various stages and important contributors /contributions from different parts of the country.***

### What's the NEWS

- The Government has decided to constitute a High Level Committee to commemorate the 125<sup>th</sup> Birth Anniversary of Netaji Subhas Chandra Bose.
- This High Level Committee will decide on the activities for a one year long commemoration starting 23<sup>rd</sup> January, 2021.

### Know! about the High Level Committee

- The High Level Committee will be headed by the Union Home Minister
- The Commemoration is being held as a tribute and as a mark of gratitude to the colossal contribution Netaji made to India's freedom struggle.
- The members of the High Level Commemoration Committee will include experts, historians, authors, family members of Netaji Subhas Chandra Bose, as well as eminent persons associated with Azad Hind Fauj/INA.
- The Committee will also lend guidance to the commemoration activities in Delhi, Kolkata and other places associated with Netaji and Azad Hind Fauj, both in India as well as overseas.
- Government of India has taken several steps towards preserving and conserving the precious heritage of Netaji Subhas Chandra Bose.

### Steps taken by the government towards conserving Netaji Subhas Chandra Bose heritage

- A museum has been set up on Netaji at Red Fort, New Delhi, which was inaugurated by the Prime Minister on 23.01.2019.
- A permanent exhibition and a Light and Sound show on Netaji has been planned to be set up at Kolkata in the historic Victoria Memorial building.
- In 2015, Government of India decided to declassify the files relating to Netaji Subhas Chandra Bose and make them accessible to public.
- Prime Minister visited Andaman and Nicobar Islands in 2018, to join the programme to mark 75<sup>th</sup> anniversary of hoisting Tricolour by Netaji Bose.
- The Prime Minister paid tributes to Subhas Chandra Bose's Provisional Government of Azad Hind, which administered the Islands during World War II.

- The Prime Minister renamed 3 islands in Andaman and Nicobar. The Ross Island was renamed as Netaji Subhas Chandra Bose Dweep; the Neil Island as Shaheed Dweep; and the Havelock Island as SwarajDweep.

### **know! all about Subhas Chandra Bose**

- An Indian revolutionary prominent in the independence movement against British rule of India.
- He also led an Indian national force from abroad against the Western powers during World War II.
- He was a contemporary of Mohandas K. Gandhi, at times an ally and at other times an adversary.
- Bose was known in particular for his militant approach to independence and for his push for socialist policies.
- Bose joined the non cooperation movement started by Mohandas K. Gandhi, who had made the Indian National Congress a powerful nonviolent organization.
- Bose was advised by Gandhi to work under Chitta Ranjan Das, a politician in Bengal.
- There Bose became a youth educator, journalist, and commandant of the Bengal Congress volunteers.
- His activities led to his imprisonment in December 1921. In 1924 he was appointed chief executive officer of the Calcutta Municipal Corporation, with Das as mayor.
- Bose was soon after deported to Burma (Myanmar) because he was suspected of connections with secret revolutionary movements.
- Released in 1927, he returned to find Bengal Congress affairs in disarray after the death of Das, and Bose was elected president of the Bengal Congress.
- Shortly thereafter he and Jawaharlal Nehru became the two general secretaries of the Indian National Congress.
- Together they represented the more militant, left-wing faction of the party against the more compromising, right-wing Gandhian faction.
- In 1938 he was elected president of the Indian National Congress and formed a national planning committee, which formulated a policy of broad industrialization.
- In 1939, when he defeated a Gandhian rival for re election but he felt bound to resign because of the lack of Gandhi's support.
- He founded the Forward Bloc, hoping to rally radical elements, but was again incarcerated in July 1940.
- All India Forward Bloc was a left wing nationalist political party in India which emerged as a faction within the India Congress in 1939, led by Subhas Chandra Bose.
- The prime objective of the Forward Bloc was to bring all radical elements of the Congress party.
- On January 26, 1941, though closely watched, he escaped from his Calcutta residence in disguise and, traveling via Kabul and Moscow, eventually reached Germany in April to work for India's Independence.
- In 1943, he came to Singapore to lead the Indian Independence league and rebuild the Indian National Army (Azad Hind Fauj) to make it an effective instrument for the freedom of India.
- In 1943 he assumed leadership of the Indian Independence Movement in East Asia and proceeded, with Japanese aid and influence, to form a trained army of about 40,000 troops in Japanese-occupied Southeast Asia.
- On October 21, 1943, Bose proclaimed the establishment of a provisional independent Indian government, and his so-called Indian National Army (Azad Hind Fauj), alongside Japanese troops, advanced to Rangoon (Yangon) and thence overland into India, reaching Indian soil on March 18, 1944, and moving into Kohima and the plains of Imphal.
- In a stubborn battle, the mixed Indian and Japanese forces, lacking Japanese air support, were defeated and forced to retreat; the Indian National Army nevertheless for some time succeeded in maintaining its identity as a liberation army, based in Burma and then Indochina. With the defeat of Japan, however, Bose's fortunes ended.

### **Subhas Chandra Bose and Indian National Army (INA) or Azad Hind Fauz**

- An important development in the struggle for freedom during the Second World War was the formation and activities of the Azad Hind Fauj, also known as the Indian National Army, or INA.
- Rash Behari Bose, an Indian revolutionary who had escaped from India and had been living in Japan for many years, set up the Indian independence league with the support of Indians living in the countries of south-east Asia.

- When Japan defeated the British armies and occupied almost all the countries of south-East Asia, the league formed the Indian National Army from among the Indian prisoners of war with the aim of liberating India from the British rule.
- General Mohan Singh, who had been an officer in the British Indian army, played an important role in organizing this army.
- The Azad Hind Fauj comprised of about 45,000 soldiers, among who were Indian prisoners of war as well as Indians who were settled in various countries of south-east Asia.
- On 21 October 1943, Subhas Bose, who was now popularly known as Netaji, proclaimed the formation of the provisional government of independent India (Azad Hind) in Singapore.
- Netaji went to the Andaman which had been occupied by the Japanese and hoisted there the flag of India.
- In early 1944, three units of the Azad Hind Fauj (INA) took part in the attack on the north-eastern parts of India to oust the British from India.



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# **GENERAL STUDIES II**

**Governance, Constitution,  
Polity, Social Justice and  
International relations**

# International Organisations: SCO council of heads of government meeting

**Relevance IN – Prelims (all about SCO + BRI initiative) + Mains (GS II Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests)**

## What's the NEWS

- Prime Minister Narendra Modi didn't participate in the Shanghai Cooperation Organisation's (SCO) council of heads of government summit.
- The virtual summit was chaired by Vice president M Venkaiah Naidu.
- Apart from the SCO member states, the four observer states of the SCO -- Afghanistan, Belarus, Iran, and Mongolia also participated in the summit.
- India assumed the chair of the SCO Council of Heads of Government on November 2 last year as per rotation from the previous chair - Uzbekistan - and will complete its year-long tenure on November 30 by hosting the summit.
- The **council of heads of government is SCO's second highest body** and is responsible for handling the trade and economic agenda.
- This was the first time India hosted a meeting of the body since it was admitted into the eight-member grouping in 2017.



## Council of heads of government meeting takeaways

- India didn't join other members of the Shanghai Cooperation Organisation (SCO) in backing China's Belt and Road Initiative (BRI), which New Delhi has consistently opposed as a key part of it passes through Pakistan-occupied Kashmir (PoK).
- BRI or the "One Belt, One Road" initiative, President Xi Jinping's flagship programme for trade and connectivity, was backed by Kazakhstan, Kyrgyz Republic, Pakistan, Russia, Tajikistan and Uzbekistan in a joint communiqué issued at the end of the SCO council of heads of government meeting hosted by India.
- India has repeatedly said it will not join BRI because it does not offer a level playing ground to the country's businesses.
- It has also opposed BRI because a key component – the China-Pakistan Economic Corridor (CPEC) – passes through PoK.
- India proposed the creation of a special working group on innovation and start-ups and an expert working group on traditional medicine.

## Know! all about the Shanghai Cooperation Organisation (SCO)

- It is a permanent intergovernmental international organisation, the creation of which was announced on 15 June 2001 in Shanghai (China) by the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan. It was preceded by the Shanghai Five mechanism.
- The Shanghai Cooperation Organisation Charter was signed during the St.Petersburg SCO Heads of State meeting in June 2002, and entered into force on 19 September 2003.
- The historical meeting of the Heads of State Council of the Shanghai Cooperation Organisation was held on 8-9 June 2017 in Astana.
- On the meeting the status of a full member of the Organization was granted to the Republic of India and the Islamic Republic of Pakistan.

- The **Heads of State Council (HSC)** is the supreme decision-making body in the SCO.
- It meets once a year and adopts decisions and guidelines on all important matters of the organisation.
- The SCO Heads of Government Council (HGC) meets once a year to discuss the organisation's multilateral cooperation strategy and priority areas, to resolve current important economic and other cooperation issues, and also to approve the organisation's annual budget.
- The SCO's official languages are Russian and Chinese.
- The organisation has two permanent bodies — the SCO Secretariat based in Beijing and the Executive Committee of the Regional Anti-Terrorist Structure (RATS) based in Tashkent.
- The SCO Secretary-General and the Director of the Executive Committee of the SCO RATS are appointed by the Council of Heads of State for a term of three years.
- Currently SCO comprises eight member states, namely the Republic of India, the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Islamic Republic of Pakistan, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan;
- The SCO counts four observer states, namely the Islamic Republic of Afghanistan, the Republic of Belarus, the Islamic Republic of Iran and the Republic of Mongolia;
- The SCO has six dialogue partners, namely the Republic of Azerbaijan, the Republic of Armenia, the Kingdom of Cambodia, the Federal Democratic Republic of Nepal, the Republic of Turkey, and the Democratic Socialist Republic of Sri Lanka.

### China's Belt and Road Initiative (BRI)



- It is one of the most ambitious infrastructure projects ever conceived. Launched in 2013 by President Xi Jinping, the vast collection of development and investment initiatives would stretch from East Asia to Europe, significantly expanding China's economic and political influence.
- The plan was two-pronged: the overland Silk Road Economic Belt and the Maritime Silk Road. The two were collectively referred to first as the One Belt, One Road initiative but eventually became the Belt and Road Initiative.
- China wants to build infrastructure such as ports, bridges and rail lines in over 150 countries spanning Asia, Africa and Europe.
- While China claims it is solely an economic initiative, not many countries, including India, are willing to buy that argument. The countries opposing the project fear this could a China-centered sphere of influence and lead to "debt traps".



# Health: WHO World Malaria Report 2020

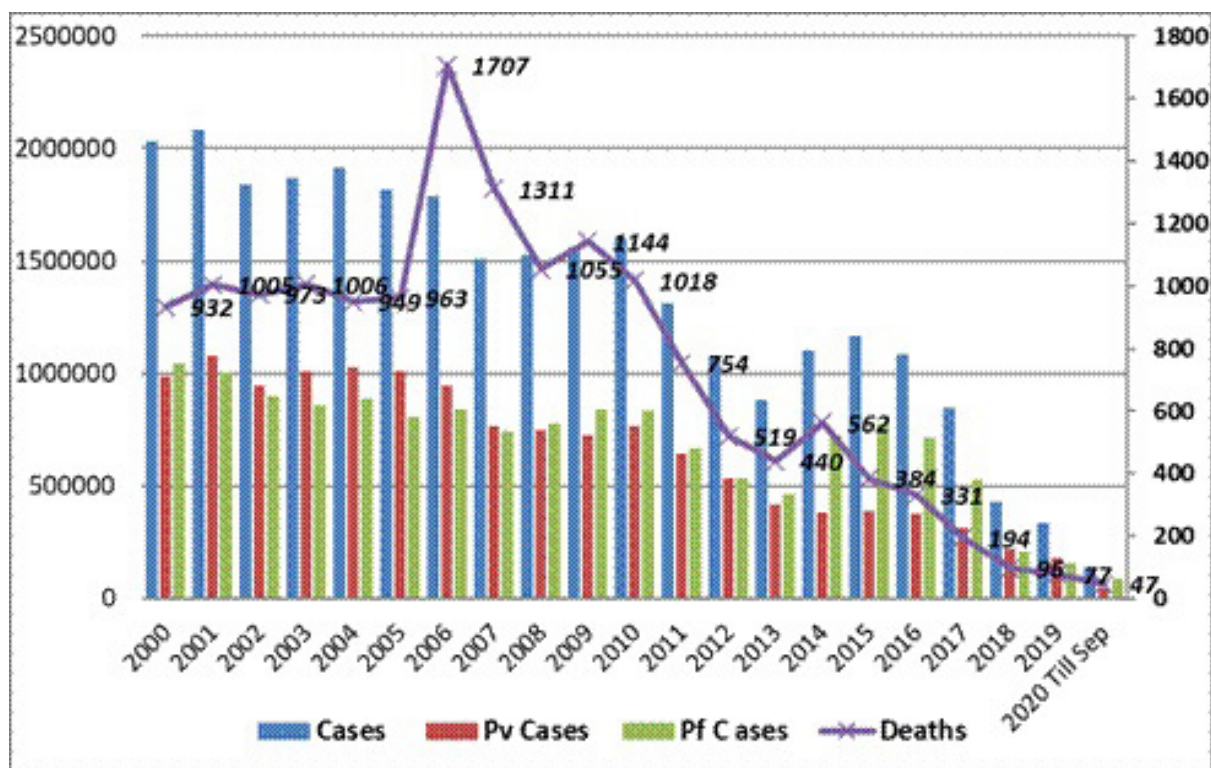
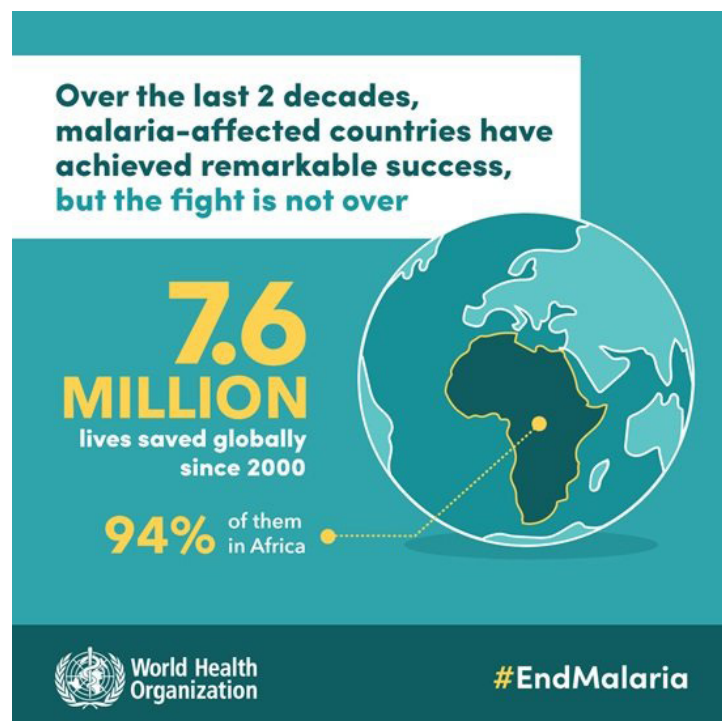
**Relevance IN – Prelims (about World Malaria Report highlights + terms associated with it)**

## What's the NEWS

- The World Malaria Report (WMR) 2020 released by WHO, which gives the estimated cases for malaria across the world, based on mathematical projections, indicates that India has made considerable progress in reducing its malaria burden.

## Know! the report highlights (takeaways for Prelims)

- India is the only high endemic country which has reported a decline of 17.6% in 2019 as compared to 2018.
- The Annual Parasitic Incidence (API) reduced by 27.6% in 2018 compared to 2017 and by 18.4% in 2019 as compared to 2018.
- India has sustained API less than one since year 2012.
- India has also contributed to the largest drop in cases region-wise, from approximately 20 million to about 6 million.
- The percentage drop in the malaria cases was 71.8% and deaths was 73.9% between 2000 to 2019.
- India achieved a reduction of 83.34% in malaria morbidity and 92% in malaria mortality between the year 2000 and 2019 thereby achieving Goal 6 of the Millennium Development Goals (50-75% decrease in case incidence between 2000 and 2019).



- The cases and fatalities have declined significantly by 21.27% and 20% in the year 2019 as compared to 2018
- The total number of malaria cases reported in 2020, has further decreased by 45.02 percent as compared to corresponding period of 2019
- States of Odisha, Chhattisgarh, Jharkhand, Meghalaya and Madhya Pradesh disproportionately accounted for nearly 45.47 percent of malaria cases and 70.54 percent of *falciparum* Malaria cases in 2019.

### **Know! the initiatives taken by the government**

- Malaria Elimination efforts were initiated in the country in 2015 and were intensified after the launch of National Framework for Malaria Elimination (NFME) in 2016 by the Ministry of Health and Family Welfare.
- National Strategic Plan for Malaria Elimination (2017-22) was launched by the Health Ministry in July, 2017 which laid down strategies for the next five years.

### **Long Lasting Insecticidal Nets**

- Due to the efforts made by the Government of India in provision of microscopes, rapid diagnostics Long Lasting Insecticidal Nets (LLINs) – about 5 crores have been distributed in 7 North-East States, Chhattisgarh, Jharkhand, Madhya Pradesh and Odisha up to 2018-19 and another 2.25 crore LLINs are being supplied/ distributed during current financial year to high burden areas leading to reduction in endemicity in these otherwise very high endemic states.
- Additional procurement of 2.52 crore LLINs is initiated. Use of LLINs has been accepted by the community at large and has been one of the main contributors to the drastic malaria decline in the country.

### **High Burden to High Impact (HBHI) initiative**

- WHO has initiated the High Burden to High Impact (HBHI) initiative in 11 high malaria burden countries, including India.
- Implementation of “High Burden to High Impact (HBHI)” initiative has been started in four states i.e. West Bengal and Jharkhand, Chhattisgarh and Madhya Pradesh in July, 2019.
- A key strategy to reignite progress is the “High burden to high impact” (HBHI) response, catalyzed in 2018 by WHO and the RBM Partnership to End Malaria continued to make impressive gains in India, with 18% reductions in cases and 20% reductions in death respectively, over the last 2 years.

### **Know! the terminologies**

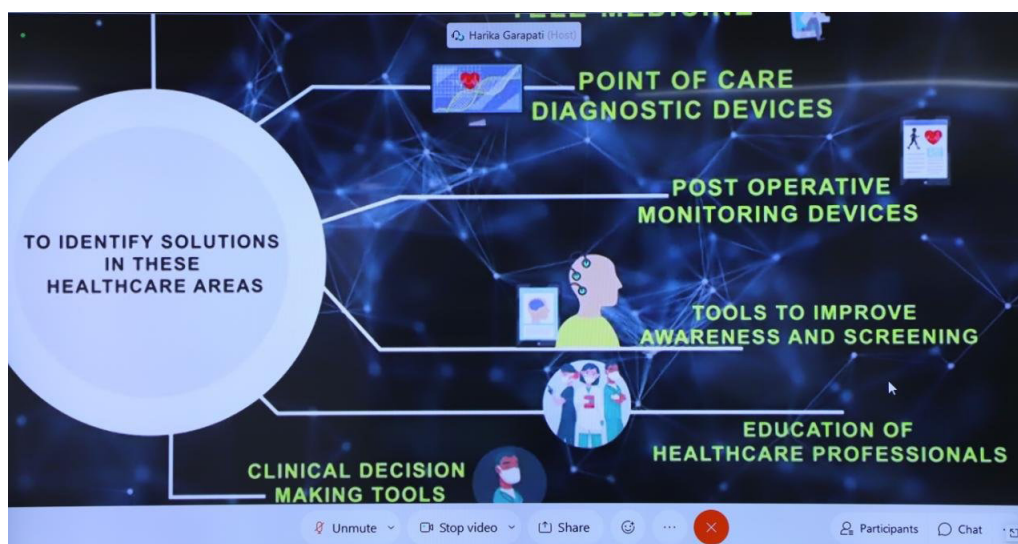
#### ***Annual parasite index (API)***

- The number of confirmed new cases from malaria registered in a specific year, expressed per 1,000 individuals under surveillance, for a given country, territory, or geographic area. Annual parasite index (API) refers to high and moderate malaria transmission risk areas.

#### ***Long lasting insecticidal nets (LLINs)***

- Long lasting insecticidal nets (LLINs) are being promoted by WHO and Roll Back Malaria partners as a cost effective and sustainable method for protection against malaria.
- LLINs are nets treated in the factory with an insecticide incorporated into the net fabric which makes the insecticide last at least 20 washes in standard laboratory testing and three years of recommended use under field conditions.
- Long-lasting insecticidal nets (LLINs) have played an important role in the remarkable success in reducing malaria burden over the past decade. They are a core prevention tool, and widely used by people at risk of malaria.

## Health: Inaugural session of the India Sweden Healthcare Innovation Centre



### ***Relevance IN – Prelims (about India Sweden Healthcare Innovation Centre) + Mains (GS II Issues relating to development and management of Social Sector/Services relating to Health)***

#### **What's the NEWS**

- Union Minister of Health & Family Welfare chaired the inaugural session of the annual conference of the India Sweden Healthcare Innovation Centre – ‘health talks,’ under Sweden India Nobel memorial week.

#### **India-Sweden Healthcare Innovation Centre**

- The cooperation in the field of health between the two countries has been long standing for which the 10<sup>th</sup> year celebration took place in 2019
- The India-Sweden Healthcare Innovation Centre was inaugurated by King of Sweden Gustaf the 16<sup>th</sup> in 2019.
- The India Sweden Healthcare Innovation Centre is also in the process of setting up a Centre of Excellence at AIIMS Jodhpur on Cancer Care.

#### **Innovation challenge**

- India-Sweden Healthcare Innovation Centre virtually announced the winners of the Innovation challenge, that aimed to identify and support innovative solutions that can impact the treatment of non-communicable and communicable diseases and help regress critical problems in the healthcare delivery landscape of India.
- The innovation challenge included a rigorous evaluation process by a panel of experts from AIIMS Delhi, AIIMS Jodhpur, ICMR, The Swedish Trade Commissioners office to India, AstraZeneca, AIM, C-CAMP and other partners. This committee had shortlisted 14 compelling solutions
- The winning start-ups will now work with the India-Sweden Healthcare Innovation Centre platform which will enable faster scale-up, by providing them access to cross-country mentorship, guidance on funding, and ability to ideate with like-minded innovator, access to state-of-the-art incubation centre located within AIIMS Jodhpur campus, their lab facilities and beyond.
- The challenge focused on innovative solutions in 8 challenge areas including Digital Tools/Platforms - Med-Tech, Tele-Medicine, and Artificial Intelligence backed solutions to support new ways of working to improve the efficiencies of healthcare

#### **India-Sweden Healthcare Innovation Centre**

- The India-Sweden Healthcare Innovation Centre is a tripartite collaboration between AIIMS Delhi, AIIMS Jodhpur and Swedish Trade Commissioner's office.
- The platform is envisioned to develop an ecosystem of open innovation that start-ups and the healthcare delivery stakeholders can use to collaborate and address current and future challenges in the healthcare sector in India.
- This platform will enable development and scale up of solutions through frugal innovation for affordable and accessible healthcare in line with the objectives of the Government of India.



- The Innovation Centre is an initiative under the MOU of Health between India and Sweden and works under strategic guidance from Government of India's Ministry of Health and Family Welfare, Indian Council of Medical Research (ICMR), Government of Sweden's Ministry of Health and Social Affairs and Embassy of Sweden in India.
- It also has a strong network of ecosystem partners - Atal Innovation Mission, Invest India, AGNII, Start-up India, and, knowledge partners – AstraZeneca, NASSCOM and VINNOVA

## Bilateral Relations: U.S.-India Counternarcotics Working Group

**Relevance IN – Prelims (about about U.S.-India Counternarcotics Working Group (CNWG))**

### What's the NEWS

- The officials of India and United States of America met virtually for the inaugural meeting of the U.S.-India Counternarcotics Working Group (CNWG)
- The respective delegations engaged in wide-ranging deliberations focused on increasing collaboration on counternarcotics regulation and law enforcement.



### CNWG meeting highlights

- The two sides identified areas for joint action and resolved to continue their close coordination on this important issue.
- The two countries also agreed to enhance their data sharing operations to combat the production, distribution, diversion, and export/import of drugs and precursor chemicals.
- Both sides exchanged views on the broad array of narcotics-related challenges facing India and United States.
- They committed to strengthening their cooperation in curtailing the illegal production, manufacturing, trafficking, and distribution of pharmaceutical and illicit drugs, as well as the precursor chemicals used to manufacture them.
- India and United States agreed to enhance their data sharing operations to combat the production, distribution, diversion, and export/import of drugs and precursor chemicals. Both sides agreed to continue these discussions at the CNWG meeting in the spring of 2021.

## Health: AYUSH Export Promotion Council

**Relevance IN – Prelims (about AEPC)**

### What's the NEWS

- The Ministry of Commerce and Industry and the Ministry of AYUSH have decided to work together to set up an Export Promotion Council to boost AYUSH exports.
- It was also decided in the review that the entire AYUSH sector will work together to achieve price and quality competitiveness to boost AYUSH exports.

### Know! the action points that emerged from the meeting:

1. Ministry of AYUSH and Ministry of Commerce and Industry will work together for establishing an AYUSH Export Promotion Council (AEPC). The proposed AEPC can be housed at Ministry of AYUSH.
2. Standardisation of HS code for AYUSH will be expedited.
3. Ministry of AYUSH will work in collaboration with Bureau of Indian standards to develop international standards for AYUSH products as well as services.
4. Ministry of AYUSH and AYUSH industry will identify best practices/ success stories and promote them amongst the public.
5. AYUSH industry will work on ensuring quality and standards of AYUSH products as well as to become price-competitive.
6. AYUSH will figure in the Brand India activities.



## Know! about HS code

- The Harmonized Commodity Description and Coding System, also known as the Harmonized System (HS) of tariff nomenclature is an internationally standardized system of names and numbers to classify traded products.
- It came into effect in 1988 and has since been developed and maintained by the World Customs Organization (WCO) (formerly the Customs Co-operation Council), an independent intergovernmental organization based in Brussels, Belgium, with over 200 member countries.
- The HS is organized logically by economic activity or component material.

## NITI Aayog: Online Dispute Resolution(ODR)

**Relevance IN – Prelims (about the role and importance of ODR) + Mains (GS II governance)**

### What's the NEWS

- NITI Aayog in association with Patna High Court, **organized the inaugural meeting in a broader engagement on efficient and affordable access to justice for all**, through the interplay of technology, law and innovation in the post pandemic world.
- This meeting was held with a focus on Online Dispute Resolution (ODR)
- Over 1000 attendees participated in the online meeting, with participation from the entire Bihar Judiciary .
- At the meeting, the participants deliberated on the way forward for ensuring equitable and effective justice delivery for one and all.

### Online Dispute Resolution (ODR)

- ODR is the resolution of disputes, particularly small and medium value cases, using digital technology and techniques of alternate dispute resolution (ADR), such as negotiation, mediation, and arbitration.
- While courts are becoming digitized through the efforts of the judiciary, more effective, scalable, and collaborative mechanisms of containment and resolution are urgently needed. ODR can help resolve disputes efficiently and affordably.
- NITI Aayog to outline a plan for finding a solution and ensure justice is both effective and expeditious.
- NITI Aayog made a presentation on the **Draft Report for Formulating an Action Plan for ODR in India**, under the chairmanship of Hon'ble Justice (Retd.) A.K. Sikri.
- Center for Online Resolution of Disputes, expanded on the technology services that a wide range of ODR service providers have initiated in India in his presentation.
- The common theme was a multi-stakeholder agreement to work collaboratively to ensure efforts are taken to scale online dispute resolution in India.
- Covid-19 has instilled an urgent need for ODR that requires decisive action, with the likelihood of a spurt in disputes before the courts—most notably in lending, credit, property, commerce, and retail.
- In the coming months, ODR could be the mechanism that helps with achieving expedient resolution.

## International Organisations: Inter Ministerial Conference by Partners in Population and Development (PPD)

**Relevance IN – Prelims (about PPD + South-South Cooperation) + Mains (GS II international organisations)**

### What's the NEWS

- Union Minister for Health and Family Welfare digitally addressed the Inter Ministerial Conference by Partners in Population and Development (PPD)

### Conference on South-South Cooperation in Population and Development - Inter Ministerial Conference highlights

- Exchanging knowledge, skills, and technical expertise through South-South Cooperation has proven to be effective in addressing development challenges in member countries
- India lauds the efforts of Partners in Population and Development in promoting cooperation in key areas of reproductive health, population and development.

## 17<sup>th</sup> International Inter-Ministerial Conference

on South-South Cooperation in Population and Development:  
Nairobi Commitments and the 2030 Agenda: Taking stock and  
looking ahead in post COVID-19 crisis



### Registration Open !



**Technical Session 1: Implementation of the Nairobi Commitments Through South-South Cooperation in the post-COVID-19 era** - Tuesday, 19 November 2020 1:30 p.m. - 3:00 p.m. GMT

**Technical Session 2: Youth Engagement through South-South Cooperation in Advocacy and Innovative Programming** - Friday, 27 November 2020, 1:30 p.m. - 3:00 p.m. GMT

**Ministerial Session: Promoting South-South Cooperation for Attaining Nairobi Commitments and the Agenda 2030** - Tuesday, 8 December 2020, 1:00 p.m. - 3:00 p.m. GMT

- As a valued member of PPD, India is steadfast in its reaffirmation of the commitments made at the Nairobi Summit, to work towards ending all maternal deaths, fulfilling unmet needs for family planning, reducing gender-based violence and ending harmful practices against women and girls.
- The timeline for achieving these targets has been stipulated at 2030.
- India is committed to ensuring Universal Health Coverage through its Flagship Programme, 'Ayushman Bharat'.
- For achieving the Sustainable Development Goal target for reducing Maternal Mortality Rate to less than 70 by 2030 India has implemented a program called SUMAN which means Safe Motherhood Assurance.

### Partners in Population and Development (PPD)

- It is an intergovernmental initiative created specifically for the purpose of expanding and improving South-to-South collaboration in the fields of reproductive health, population, and development.
- PPD was launched at the 1994 International Conference on Population and Development (ICPD), when ten developing countries from Asia, Africa and Latin America formed an intergovernmental alliance to help implement the Cairo Program of Action (POA).
- This POA, endorsed by 179 nations, stresses the need to establish mechanisms to promote development through the sharing of experiences in reproductive health (RH) and family planning (FP) within and among countries and to promote effective partnerships among the governments, Non- Governmental-Organizations (NGOs), research institutions and the private sector.
- During the five-year review of the implementation of the POA ("Cairo+5"), representatives at the June 1999 Special Session of the United Nations General Assembly not only documented renewed commitment to the goals of the ICPD, but also encouraged intensified support of South- South Collaboration.
- The PPD is the "only organization in the world fully dedicated to South-South partnerships.

### South-South cooperation

- **South-South cooperation** refers to the technical **cooperation** among developing countries in the **Global South**.
- It is a broad framework of collaboration among countries of the South in the political, economic, social, cultural, environmental and technical domains.
- Involving two or more developing countries, it can take place on a bilateral, regional, intraregional or interregional basis.
- Developing countries share knowledge, skills, expertise and resources to meet their development goals through concerted efforts.
- Recent developments in South-South cooperation have taken the form of increased volume of South-South trade, South-South flows of foreign direct investment, movements towards regional integration, technology transfers, sharing of solutions and experts, and other forms of exchanges.

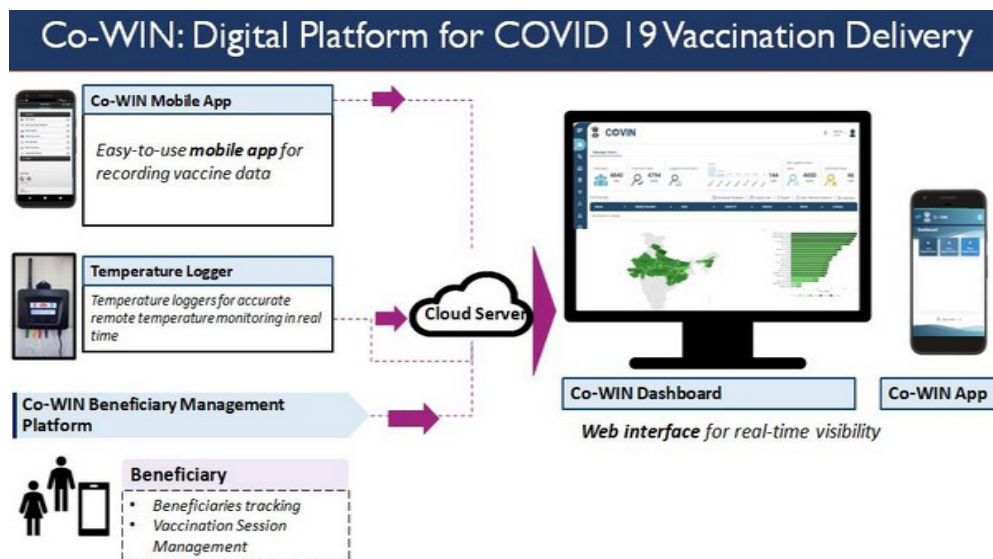
## Health: Free mobile app Co-WIN to self-register for Covid-19 vaccine

**Relevance IN – Prelims (about CoWIN app + about the vaccination programme + Mains (GS II government interventions + governance)**

### What's the NEWS

- Health secretary revealed the details of CoWIN app through which one would be able to self register for vaccine
- With three vaccine-makers, including Pfizer, having applied for emergency use authorisation of their vaccine candidates in India, the vaccination drive is likely to begin shortly.
- The health ministry revealed details of how the entire vaccination programme will be conducted
- The Centre has created an application which will monitor the process from the beginning to the end.
- Co-WIN, the new app which will be available for free download, is an upgraded version of the Electronic Vaccine Intelligence Network (eVIN).
- The app will also send real-time data of the temperature of the cold-storage units to the main server.


### Know more about the app



- This app will be useful for all those engaged in the process — administrators, vaccinators and people who are going to receive these vaccine shots.
- The government will be vaccinating priority groups in the first two phases: frontline workers including all healthcare professionals in the first stage and emergency workers in the second stage.
- While the data of these people are already being compiled by the state governments, from the third stage onwards where people with co-morbidity will be given vaccines, self-registration will be introduced. And that will happen through the Co-WIN app.
- There are five modules in Co-WIN app: Administrator module, registration module, vaccination module, beneficiary acknowledgement module and report module.
- The administrator module is for the administrators who will be conducting these vaccination sessions. Through this module, they can create sessions and the respective vaccinators and managers will be notified.
- Registration module is for people to get registered for vaccination. It will upload bulk data on co-morbidity provided by local authorities or by surveyors.
- The vaccination module will verify beneficiary details and update vaccination status.
- Beneficiary acknowledgement module will send SMS to beneficiaries. It will also generate QR-based certificates after one gets vaccinated.
- Report module will prepare reports of how many vaccine sessions have been conducted, how many people have attended those, how many people have dropped out etc.



## Government Schemes: PM-WANI



**PM-WANI (Public Wi-Fi Access Network Interface)**  
**Salient Features**

1. Public Data Office (PDO) will establish, maintain, and operate only WANI compliant Wi-Fi Access Points & deliver broadband services.
2. Public Data Office Aggregator (PDOA) will be an aggregator of PDOs and perform functions relating to authorization and accounting.
3. App Provider will develop App to register users & discover WANI compliant Wi-Fi hotspots for accessing internet service.
4. Central Registry will maintain the details of App Providers, PDOAs, and PDOs.

**Relevance IN – Prelims (about PM-WANI) + Mains (GS II government policies and interventions + GS III infrastructure development)**

### What's the NEWS

- The Union Cabinet approved Centre's plan to launch massive wi-fi network in India. The cabinet gave nod to the setting up of public wi-fi networks to provide public wi-fi service through Public Data Offices(PDOs) without levy of any license fee.
- This Central government's scheme is called the Prime Minister Wi-Fi Access Network Interface (PM-WANI) and is being seen as an attempt by the government to elevate wireless internet connectivity in the country.

### Know! about PM-WANI

- Public Data Offices (PDOs) will be established on the lines of Public Call Offices (PCOs). These PDOs will establish, operate, and maintain only the WANI compliant Wi-Fi access points to deliver broadband services to its subscribers.
- These PDOs will either provide internet on their own or will lease from some other Internet Service Provider (ISP). PDO Aggregators (PDOAs) will also be set up.
- These will perform the function of authorisation and accounting of the numerous PDOs.
- The government will develop an application which will register the users on to the network.
- The application will also help them discover WANI-compliant Wi-Fi hotspots in nearby areas
- A central registry will be set-up which will maintain details of all app providers, PDOAs and PDOs. The registry will be handled by the Centre for Development of Telematics (C-DoT).
- A customer wanting to access the network from a PDO's premise can do so only after an eKYC authentication
- The eKYC authentication can be done through an app provider. All the customer would have to do is to download the app provider's app from an app store once they enter the PDO premise.
- No license fee will be charged for providing broadband internet services.

## Government Schemes: Atmanirbhar Bharat Rozgar Yojana

**Relevance IN – Prelims (about Atmanirbhar Bharat Rozgar Yojana) +Mains (GS II Government policies and interventions for development in various sectors and issues arising out of their design and implementation)**

### What's the NEWS

- Cabinet has approves Rs 22,810 crore outlay for Atmanirbhar Bharat Rozgar Yojana that aims at encouraging businesses to do fresh hiring.



# ATMANIRBHAR BHARAT ROZGAR YOJANA (1/3)

*New Scheme to incentivise creation of new employment opportunities during the COVID recovery phase.*

Central Govt. to provide subsidy for two years in respect of new eligible employees engaged on or after 01.10.2020 at following scale:

Establishments employing up to 1000 employees	Establishments employing more than 1000 employees
Employee's contributions (12% of Wages) Employer's contributions (12% of wages) Total- 24% of wages	Only Employee's EPF contributions (12% of EPF wages)

**Scheme to be operational till 30th June 2021**

- Under the Atmanirbhar Bharat Rojgar Yojana, the government will for two years provide employee and employer contribution to the retirement fund for new hires by businesses and entities
- The scheme would till 2023 entail an outgo of Rs 22,810 crore and would benefit around 58.5 lakh employees.
- The ABRY would boost employment in the formal sector and incentivize the creation of new employment opportunities during the Covid recovery phase under Atmanirbhar Bharat Package 3.0.

## Salient features of ABRY

- The government will provide subsidy for two years in respect of new employees engaged on or after 1<sup>st</sup> October 2020 and up to 30<sup>th</sup> June 2021
- The government will pay both 12% employees' contribution and 12% employers' contribution i.e. 24% of wages towards EPF in respect of new employees in establishments employing up to 1000 employees for two years
- The government will pay only employees' share of EPF contribution i.e. 12% of wages in respect of new employees in establishments employing more than 1000 employees for two years.
- An employee drawing monthly wage of less than Rs 15000/- who was not working in any establishment registered with the Employees' Provident Fund Organisation (EPFO) before 1<sup>st</sup> October 2020 and did not have a Universal Account Number or EPF Member account number prior to 1<sup>st</sup> October 2020 will be eligible for the benefit.
- Any EPF member possessing Universal Account Number (UAN) drawing monthly wage of less than Rs 15000/- who made exit from employment during Covid pandemic from March 1, 2020, to September 30, 2020, and did not join employment in any EPF covered establishment up to September 30, 2020, will also be eligible to avail benefit.
- EPFO will credit the contribution in the Aadhaar seeded account of members in an electronic manner.

## Health: Indian Railways Launches Hospital Management Information System Trial Project



**Relevance IN – Prelims (about HMIS and its application) + Mains (GS II Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources)**

### What's the NEWS

- Indian Railways has launched another major IT initiative towards according priority for the well-being of its work force.
- The Hospital Management Information System (HMIS) has been launched
- The HMIS will bring a paradigm shift in the health care systems maintained by Indian Railways.
- The new system will improve the quality of health services and aid in utilization of resources in a transparent manner.
- Patients waiting time at the hospitals will be minimized and medical records will be available to the team of doctors at all the times.

### Know! about HMIS IN Railways

- The HMIS in Railways has been developed by Indian Railways in coordination with RailTel Corporation Limited.
- The objective of the HMIS is to provide a single window of clearance of hospital administration activity such as clinical, diagnostics, pharmacy, examinations, industrial health etc.

### The primary objectives of envisaged solution are:

- Effectively manage all the health facilities & its resources
- Monitor performance of hospitals across the administrative channel
- Impart quality health care services to its beneficiaries
- Improve the patient turn-around time
- Generate and maintain EMR (electronic medical records) of all patients

## Bilateral Relations: India, Qatar set up task force to identify projects for investment

**Relevance IN – Prelims (facts about the task force) + Mains (GS II bilateral relations)**

### What's the NEWS

- The Task Force on Energy, represented by VP of Qatar Petroleum and a senior officer from the Petroleum Ministry to identify specific projects in India's energy sector for Qatari investments

- Qatar Petroleum, the national oil company of the Gulf nation, will be represented by the vice president (VP) in the task force, while the Indian side would be represented by a senior official from the Ministry of Petroleum and Natural Gas.

### Know! about India – Qatar Relations

- Cash-rich Qatar Investment Authority is looking to invest in India, particularly in the energy and infrastructure sector.
- India is the world's third-largest oil and LNG importer.
- India and its biggest LNG supplier Qatar agreed to set up a task force to identify projects in India for investment by the gas-rich Gulf nation
- India imports 8.5 million tonnes per annum of gas in its liquid form (LNG) from Qatar under a long-term contract. It also buys LPG to meet the fast-expanding cooking gas requirements in the country.
- India wants to significantly boost its gas consumption and expand its gas infrastructure. An investment of USD 66 billion is lined up in developing gas infrastructure which includes pipelines, city gas distribution and LNG re-gasification terminals
- India is targeting to raise the share of natural gas in its energy basket to 15 per cent by 2030 from the current 6.3 per cent.
- India had sought Qatari investment in India's oil and gas exploration and production as well as its participation in the building of the second phase of strategic oil reserves.

## Bilateral Relations: India and Uzbekistan virtual summit

**Relevance IN–Prelims (highlights about the virtual summit) + Mains (GS II bilateral relations)**

### What's the NEWS

- India and Uzbekistan attended a virtual summit to discuss bilateral relations and strengthen cooperation in the post-Covid world.
- Prime Minister Narendra Modi and Uzbekistan President Shavkat Mirziyoyev discussed regional and global issues of mutual interest.
- This is the first bilateral virtual summit between India and a Central Asian country
- The visits of the Prime Minister to Uzbekistan in 2015 and 2016 and President Mirziyoyev to India in 2018 and 2019 have imparted a new dynamism to the strategic partnership,
- PM Modi has already attended virtual summits with leaders of the EU, Italy, Australia, Sri Lanka, Denmark, and Luxembourg is expected to conduct more such in the near future.
- A virtual summit with Bangladesh is scheduled for December 17.



### India and Uzbekistan virtual summit - takeaways

- New Delhi and Tashkent at a virtual summit decided to explore connectivity routes via International North–South Transport Corridor (INSTC) – a 7,200-km multi-mode ship, rail, and road freight route connecting India, Iran, Azerbaijan and Russia – and Chabahar port in Iran



- India and Uzbekistan have been engaging under various formats including India Central Asia Dialogue at the foreign minister's level.
- Under the line of credit announced by India during the virtual FMs meet earlier this year, a number of projects are being mulled in the country.
- India will provide expertise according to country's development needs like in infrastructure, IT, training, capacity building, education, health.
- India's western Gujarat state and Uzbekistan's Andijan already have cooperation and now the focus is on cooperation between the Haryana and Fergana.
- Indian Prime Minister had visited the doubly landlocked central Asian country in 2015 and 2016, followed by visits of Uzbek President Mirziyoyev to India in 2018 and 2019.
- During the summit, India confirmed its approval of 448 million USD line of Credit to be extended to four development projects of Uzbekistan in the field of sewerage treatment, road construction, Information Technology.
- India welcomed Uzbek proposal to hold a trilateral dialogue among India, Iran and Uzbekistan to promote the connectivity through Chabahar port.
- India also requested Uzbekistan to join the North-South Transport Corridor. This will provide India an overall improvement of connectivity in the Eurasian space.
- India thanked Uzbekistan for its support to Indian candidature for the United Nations Security Council.
- India congratulated Uzbekistan for its successful election to the United Nations Human Rights Council (2021-23).
- India and Uzbekistan signed three Memorandum of Understandings in the field of Defence in 2019 to enhance cooperation in military medicine and military education.
- Dustlik 2019 - It is the joint military exercise held between India and Uzbekistan. The first Dustlik military exercise was held in 2019.
- In January 2019, India and Uzbekistan signed a nuclear deal for long term of supply of Uranium to India.
- Uzbekistan is the seventh largest exporter of Uranium in the world. After Kazakhstan, Uzbekistan is the second central Asian country to export Uranium to India.
- India has offered a line of credit of 40 million USD for procurement of goods and services by Uzbekistan from India.

## **NITI Aayog: NITI Aayog releases 'Vision 2035: Public Health Surveillance in India'**

***Relevance IN – Prelims (about the Public Health Surveillance highlights – facts for prelims) + Mains (GS II Issues relating to development and management of Social Sector/ Services relating to Health, Education, Human Resources.+ governance – can be used as fodder in Health related questions of GS II)***

### **What's the NEWS**

- NITI Aayog today released a white paper: Vision 2035: Public Health Surveillance in India with the vision:
- To make India's public health surveillance system more responsive and predictive to enhance preparedness for action at all levels.
- Citizen-friendly public health surveillance system will ensure individual privacy and confidentiality, enabled with a client feedback mechanism.
- Improved data-sharing mechanism between Centre and states for better disease detection, prevention, and control.
- India aims to provide regional and global leadership in managing events that constitute a public health emergency of international concern.

### **Vision 2035: Public Health Surveillance – Important takeaways for fodder**

- 'Vision 2035: Public Health Surveillance in India is a continuation of the work on health systems strengthening.
- It contributes by suggesting mainstreaming of surveillance by making individual electronic health records the basis for surveillance.



- Public health surveillance (PHS) is an important function that cuts across primary, secondary, and tertiary levels of care. Surveillance is ‘Information for Action’.
- It envisions a citizen-friendly public health system, which will involve stakeholders at all levels, be it individual, community, health care facilities or laboratories, all while protecting the individual’s privacy and confidentiality.’
- The white paper lays out India’s vision 2035 for public health surveillance through the integration of the three-tiered public health system into Ayushman Bharat.
- It also spells out the need for expanded referral networks and enhanced laboratory capacity.
- The building blocks for this vision are an interdependent federated system of governance between the Centre and states, a new data-sharing mechanism that involves the use of new analytics, health informatics, and data science including innovative ways of disseminating ‘information for action’.

## Health: Regulatory provisions for approval of vaccines in India

**Relevance IN – Prelims (about CDSCO and its role in approving the emergency use of vaccine + CDSCO guidelines and its comparison with FDA guidelines)**

### What’s the NEWS

- Three vaccine developers have now made applications to the Central Drug Standard Control Organisation (CDSCO), India’s drug regulator, seeking emergency use approval for their candidate Covid-19 vaccines which are still under trials.

### Vaccine candidates

#### COVISHIELD:

- Pune-based Serum Institute of India has sought approval for its version of the vaccine developed by Oxford University and AstraZeneca, which it has been testing in India for the last few months.
- The candidate is currently in phase-III trials in India. In its application, Serum has submitted the safety data from phase I and phase II trials, while the effectiveness data has been sourced from phase-III trials of the same vaccine in the UK and Brazil.

#### COVAXIN:

- Bharat Biotech, a Hyderabad-based company which is developing a vaccine, Covaxin, in collaboration with National Institute of Virology, an ICMR institute in Pune, has started phase-III trials only recently, and is yet to enrol all the participants as per its design.
- Its application is based mainly on the safety data from phase-I and phase-II trials.

#### BNT162b2:

- US pharmaceutical major Pfizer hasn’t carried out clinical trials in India of its vaccine, developed in collaboration with BioNTech, but has still sought an approval to use it here based on the results of the trials conducted in the US.
- The Pfizer-BioNTech vaccine is the first one to receive the regulator’s approval anywhere in the world, having been granted emergency use authorisation in the UK last week.

### Know! the regulatory provisions for approval of vaccines in India

- Clinical trials of new drugs and vaccines, and their approvals, are governed by the New Drugs and Clinical Trials Rules, 2019.
- These Rules do not use the term “emergency use authorisation”.
- This term is used mainly by the regulatory agencies in the US and some other countries, and has become popular in the context of the current epidemic.
- In Indian regulatory system the 2019 rules provide for “accelerated approval process” in several situations that would include the one like the current pandemic.
- In such situations, there is a provision for granting approval to a drug that is still in clinical trials
- Accelerated approval may also be granted to a new drug if it is intended for the treatment of a serious, or life-threatening condition, or disease of special relevance to the country, and addresses unmet medical needs

- It makes it clear that a new drug, or a vaccine, can be considered for approval if “remarkable” effectiveness is reported even from phase-II trials.
- It may be considered for grant of marketing approval by the central licensing authority based on phase-II clinical trial data.
- In such cases, additional post licensure studies may be required to be conducted after approval to generate the data on larger population
- The approval granted to drugs or vaccines that are still in clinical trials is temporary, and valid only for one year.
- The 2019 Rules do not say anything specific about whether data from a trial conducted in another country can be considered while assessing an application for accelerated approval to a drug or vaccine to be used in India.

### **US Food and Drugs Administration (FDA) guidelines**

- The FDA has made it clear that an emergency use authorisation can be considered only after sufficient data from phase-3 trials are generated, and an application cannot be made on the basis of data only from phase-1 or phase-2 trials.
- It has also said that preliminary phase-3 data should show at least 50% effectiveness in preventing the disease, and that this data needed to be generated from “well over” 3,000 trial participants.

## **Bilateral Relations: Mount Everest new height declared**

***Relevance IN – Prelims (about Mt. Everest and its new height declaration by China -Nepal)***

### **What’s the NEWS**

- The Foreign Ministers of Nepal and China jointly certified the elevation of Mount Everest at 8,848.86 metres above sea level — **86 cm higher** than what was recognised since 1954.
- The common declaration meant that the two countries have shed their long-standing difference in opinion about the mountain’s height — 29,017 feet (8,844 m) claimed by China and 29,028 ft (8,848 m) by Nepal.
- In feet, the new elevation is about 29,031 ft, or about 3 ft higher than Nepal’s previous claim.

### **Know! about the earlier measurement of 8,848 m**

- This was determined by the **Survey of India in 1954**, using instruments like theodolites and chains, with GPS still decades away.
- The elevation of 8,848 m came to be accepted in all references worldwide — except by China. Mount Everest rises from the border between Nepal and China.

### **New measurement**

- The devastating earthquake of April 2015 triggered a debate among scientists on whether it had affected the height of the mountain.
- The government subsequently declared that it would measure the mountain on its own, instead of continuing to follow the Survey of India findings of 1954.
- New Zealand, which shares a bond with Nepal over the mountain, provided technical assistance.

## **Bilateral Relations: Haldibari – Chilahati rail link**

***Relevance IN – Prelims (about Haldibari - Chilahati rail link- geographical location) + Mains (GS II bilateral relations)***

### **What’s the NEWS**

- India and Bangladesh as a major step towards boosting people to people contact jointly inaugurated a railway link between Haldibari in India and Chilahati in Bangladesh during the PM level virtual bilateral summit.
- A goods train was flagged off by the Railway Minister of Bangladesh from Chilahati station which entered India passing through the international border thus heralding a new era for the people living in both the countries.
- The rail services between Haldibari in West Bengal and Chilahati in Bangladesh resumed in Coochbehar after a gap of 55 years.
- The railway line from Haldibari (West Bengal) to Chilahati (Bangladesh) has been defunct since 1965, after rail-links between India and then East-Pakistan had broken.



## India -Bangladesh Rail connection

- The railway network of India and Bangladesh are mostly inherited from British Era Indian Railways.
- After partition in 1947, 7 rail links were operational between India and the then East Pakistan (up to 1965).
- Presently, there are 4 operational rail links between India and Bangladesh. They are, Petrapole (India) - Benapole (Bangladesh), Gede (India) – Darshana (Bangladesh), Singhabad (India)-Rohanpur (Bangladesh), Radhikapur (India)–Birol (Bangladesh).
- The Haldibari – Chilahati rail link being made functional from 17.12.2020 is the 5<sup>th</sup> rail link between India and Bangladesh.
- The Haldibari – Chilahati rail link was operational till 1965. This was part of the Broad Gauge main route from Kolkata to Siliguri during partition.
- Trains traveling to Assam and North Bengal continued to travel through the then East Pakistan territory even after partition.

## The Haldibari – Chilahati rail link (benefits)

- Haldibari - Chilahati route opened on 17.12.2020 will be beneficial for transit into Bangladesh from Assam and West Bengal.
- This newly opened rail link will enhance rail network accessibility to the main ports, dry ports, and land borders to support the growth in regional trade and to encourage economic and social development of the region.
- Common people and businessman of both the countries will be able to reap the benefit of both goods and passenger traffic, once passenger trains are planned in this route.
- With this new link coming into operation, tourist from Bangladesh will be able to visit places like Darjeeling, Sikkim, Dooars apart from countries like Nepal, Bhutan etc easily.
- Economic activities of these South Asian countries will also be benefitted from this new rail link.
- The resumption of railway services in this route will help boost trade, as well as trans-border railway connectivity. Apart from this, the 75-kilometre long track will also help better integrate the rest of the country with the Siliguri corridor, also known as the 'Chicken's Neck.'
- The Chicken's Neck got its name from the stretch of land being only 22 kilometers wide. This is the only piece of land connecting India with its northeastern states, also known as the 'Seven Sisters.'

## Defence: India-Maldives Defence Cooperation Webinar and Expo

### *Relevance IN – Prelims (about the webinar between the two nations)*


#### What's the NEWS

- A webinar and Expo between India and Maldives were held recently
- The Theme of webinar was 'Joint Indo Maldives High Level Defence Engagement'.
- It was organised under the aegis of Department of Defence Production (DDP), Ministry of Defence (MoD) through Federation of Indian Chambers of Commerce and Industry (FICCI).




- This webinar is the part of Aero India 21 series of webinars which is being organised to boost defence cooperation and engagements with friendly foreign countries.

## Government Schemes: Defining Convergence Mechanism in Implementation of PMFME Scheme for Micro Food Processing Industries



### Cabinet approves "Scheme for formalisation of Micro Food Processing Enterprises (FME)"



**Objectives:**

- Increase in access to finance by micro food processing units.
- Increase in revenues of target enterprises.
- Enhanced compliance with food quality and safety standards.
- Strengthening capacities of support systems.
- Transition from the unorganized sector to the formal sector.
- Special focus on women entrepreneurs and Aspirational districts.

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**Relevance IN – Prelims (about Joint Communique highlights + about PMFME Scheme) + Mains (GS II Welfare schemes for vulnerable sections of the population by the Centre and States)**

### What's the NEWS

- A "Joint Communique" was signed between the Ministry of Tribal Affairs and the Minister for Food Processing Industries
- The Joint communique addressed to States clearly defining Convergence mechanism in implementation of Pradhan Mantri Formalization of Micro Food Processing Enterprises (PMFME) Scheme of MoFPI and role of both Central Ministries and their respective departments at State level.
- The tribal areas are rich in raw material and natural resources but do not have the platform and the linkages for processing their forest produce.
- With the help of this MoU, it will now be possible to process the tribal produce, give it a marketable form and create proper linkages so that the product reaches the people who require it.
- TRIFED of the Ministry of Tribal Affairs is closely associated in this entire chain of value addition and marketing of tribal products and will be working actively for setting up the micro food processing enterprises.
- The MoU between the two ministries will help in better utilisation of funds by MoFPI allotted under the STC to various Central ministries

### The features of 'Joint Communique' are as under PM FME Scheme.

- The scheme being implemented by MoFPI is a landmark initiative under Aatma Nirbhar Bharat Abhiyan to support Micro Level Food Entrepreneurs, FPOs/SHGs/ Co- operatives.
- The program has four major components i.e., Support to individual and groups of micro enterprises; Branding and Marketing support; Strengthening institutional support and setting up robust project management frameworks with Tribal Sub plan being one of the important elements.
- M/oFood Processing Industries(MoFPI) would fund for development by incubation centers in tribal focused districts under PMFME Scheme for common processing and training to tribal entrepreneurs.
- PMFME Scheme provides for seed capital of up to Rs.40000/- to be given to members of SHGs and others engaged in food processing for working capital and purchase of tools.



- M/o Tribal Affairs (MoTA) would identify the tribal enterprises and groups (existing/potential to be engaged) in food processing sector including minor forest produce.
- MoTA through state, district and field level staff would train and build capacity for supporting and handholding of identified beneficiaries to be benefitted under PMFME scheme.
- TRIFED would provide handholding support to Tribal SHGs and Van Dhan SHG groups
- MoFPI and MoTA will review the status and implementation modalities from time to time.

### **Schedule Tribe Component (STC)**

- Ministry of Tribal Affairs is the nodal Ministry for the welfare of tribals.
- At the same time, there are 37 other Ministries, who have to spend assigned percentage of their budget as per mechanism designed by NITI Aayog, under Tribal sub Plan or Schedule Tribe Component (STC) for welfare of tribals.
- NITI Aayog and M/o Tribal Affairs have been monitoring STC component of such Ministries regularly as per the mandate given to the MoTA in 2017.
- The present collaboration between MoFPI and MoTA will go a long way in socio-economic development of STs across the country and strengthen STC mechanism.

## **Health: Black Fungus or Mucormycosis**

### ***Relevance IN – Prelims (about Mucormycosis fungus)***

#### **What's the NEWS**

- Doctors have witnessed more than 12 cases of Covid-19 triggered Mucormycosis fungus — which causes loss of eyesight, removal of the nose and jaw bone, and 50 per cent mortality in cases where it affects the brain — within 15 days.

#### **Mucormycosis fungus**

- Black Fungus or Mucormycosis, previously called zygomycosis, is a serious but rare fungal infection caused by a group of molds called mucormycetes which exist in the environment.
- Mucormycosis mainly affects people who have health problems or take medicines that lower the body's ability to fight germs and sickness.
- Black Fungus or Mucormycosis is caused by a group of molds called mucormycetes.
- Mucor-mycosis mainly affects people who have health problems or take medicines that lower the body's ability to fight germs and sickness.
- Covid triggered mucormycosis with high morbidity and mortality is alarming.
- The symptoms are face numbness, one-side nose obstructions or swelling of eyes, or pain.
- The ENT surgeons take samples for culture and start definitive medical treatment which might prevent medical loss.

## **Government Schemes: “JSA II: Catch the Rain” Awareness Generation Campaign launched**

### ***Relevance IN – Prelims (about Awareness Generation Campaign + about NWM + about NYKS) + Mains (GS II government policies and interventions)***

#### **What's the NEWS**

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

#### **Know! more about the campaign**

- The campaign was launched jointly by Union Minister of Jal Shakti, Youth Affairs & Sports and Minister of State, Minority Affairs
- As a preparatory phase of JSA-II, the Ministry has involved Nehru Yuva Kendra Sangathan (NYKS) for undertaking ‘Catch the Rain’ awareness campaign to cover 623 districts.

- NWM has launched a campaign "Catch the rain" with tag line "catch the rain, where it falls, when it falls" in order to nudge all stake-holders to create Rain Water Harvesting Structures (RWHS) suitable to the climatic conditions and sub-soil strata to store rain water as rains falling in the four/five months of monsoon are the only source of water for most parts of the country.
- The collaboration with NYKS is a step to engage people at the grassroots through effective campaigning & IEC activities for implementation of the campaign.

### **National Action Plan on Climate Change (NAPCC)**

- The National Action Plan on Climate Change (NAPCC) has been prepared by the Government of India, which has been released by the Prime Minister on 30<sup>th</sup> June 2008.

The NAPCC has laid down the principles and has identified the approach to be adopted to meet the challenges of impact of climate change through eight National Missions namely,

- (a) National Solar Mission,
- (b) National Mission for Enhanced Energy Efficiency,
- (c) National Mission on Sustainable Habitat,
- (d) National Water Mission,
- (e) National Mission for Sustaining the Himalayan Eco-system,
- (f) National Mission for a Green India,
- (g) National Mission for Sustainable Agriculture, and
- (h) National Mission on Strategic Knowledge for Climate Change.

### **National Water Mission**

- The Government of India has established National Water Mission as one of the eight National Missions under the National Action Plan on Climate Change.
- The main objective of NWM is "conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management".

### **NWM has identified five goals as under:**

- a. Comprehensive water data base in public domain and assessment of the impact of climate change on water resource,
- b. Promotion of citizen and state actions for water conservation, augmentation and preservation,
- c. Focused attention to vulnerable areas including over-exploited areas,
- d. Increasing water use efficiency by 20%, and
- e. Promotion of basin level integrated water resources management.

### **Nehru Yuva Kendras**

- Nehru Yuva Kendras were established in the year 1972 with the objective of providing rural youth avenues to take part in the process of nation building as well providing opportunities for the development of their personality and skills.
- In the year 1987-88, Nehru Yuva Kendra Sangathan(NYKS) was set up as an autonomous organization under the Government of India, Ministry of Youth Affairs and Sports, to oversee working of these Kendras.
- NYKS is the largest grassroots level youth organization; one of its kind in the world. It channelizes the power of youth on the principles of voluntarism, self-help and community participation.
- NYKS has targeted to identify areas of harnessing youth power for development by forming Youth Clubs, which are village level voluntary action groups of youth at the grassroots level to involve them in nation building activities.



- The core strength of NYKS lies in its network of youth clubs. Youth Clubs are village based organizations working for community development and youth empowerment.
- The basic objective for creation of youth clubs is to render community support through developmental initiatives involving activities with particular focus on youth empowerment.

#### **Objectives of NYKS are two fold:**

- To involve the rural youth in nation building activities.
- To develop such skills and values in them with which they become responsible and productive citizens of a modern, secular and technological nation.

## **Bilateral Relation: India-Vietnam Leaders' Virtual Summit**



### ***Relevance IN – Prelims (about the summit highlights) + Mains (GS II bilateral relations)***

#### **What's the NEWS**

- Prime Minister Shri Narendra Modi held a Virtual Summit with H.E. Nguyen Xuan Phuc, Prime Minister of the Socialist Republic of Vietnam.
- The two Prime Ministers reviewed ongoing bilateral cooperation initiatives, and also discussed regional and global issues.

#### **Know! the summit highlights**

- A 'Joint Vision for Peace, Prosperity and People' document was adopted during the Summit, to guide the future development of the India-Vietnam Comprehensive Strategic Partnership.
- Both leaders also welcomed the signing of a Plan of Action for period 2021-2023 to implement the Joint Vision.

#### **Steps taken by the government of India**

- Successful implementation of the US\$ 100 million Defence Line of Credit extended by Government of India to Vietnam, and the completion of seven Development Projects with Indian 'Grant-in-Aid' Assistance for the benefit of local community in Vietnam's Ninh Thuan province.
- Restoration and conservation work of the My Son temple complex in Vietnam, recently carried out by Archaeological Survey of India (ASI), and offered to work with Vietnam in other similar projects.
- The Prime Minister reaffirmed India's commitment to its development and capacity building partnership with Vietnam, through initiatives such as Quick Impact Projects, ITEC and e-ITEC initiatives, PhD fellowships, as well as projects to support Vietnam's SDGs, digital connectivity and heritage conservation efforts.

#### **List of Outcomes: India - Vietnam Virtual Summit**

- Agreement for US\$ 5 million Indian Grant Assistance for Army Software Park at National Telecommunications University, Nha Trang, Vietnam between Embassy of India, Hanoi and Telecommunications University, Ministry of National Defence, Vietnam.

- To facilitate setting up of IT infrastructure at the Army Software Park in Telecommunications University, Nha Trang, with provision for training and services in the field of software applications.
- MOU between India's Atomic Energy Regulatory Board (AERB) and Vietnam Agency for Radiation and Nuclear Safety (VARANS).
- Implementation of the High Speed Guard Boat (HSGB) Manufacturing Project for Vietnam Border Guard Command under the US\$ 100 million Defence Line of Credit extended by Government of India to Vietnam; handing over of one completed HSGB to Vietnam; launch of two HSGBs manufactured in India; and keel-laying of seven HSGBs to be manufactured in Vietnam.
- Completion and handing over of seven Development Projects with Indian 'Grant-in-Aid' Assistance of US\$ 1.5 million for the benefit of local community in Vietnam's Ninh Thuan province.
- Enhancing the number of annual Quick Impact Projects (QIPs) from currently five to ten commencing FY 2021-2022.
- Three new Development Partnership projects in heritage conservation in Vietnam (F-block of Temple at My Son; Dong Duong Buddhist Monastery in Quang Nam province; and Nhan Cham Tower in Phu Yen province).
- Launch of bilateral project for preparing an Encyclopedia on India - Vietnam

## **Governance: Andhra Pradesh and Madhya Pradesh take the lead in undertaking Urban Local Bodies reforms**

***Relevance IN – Prelims (about the ULB reforms specified by Finance Ministry + about Scheme for Financial Assistance to States for Capital Expenditure) + Mains (GS II governance + GS III Economic developments)***

### **What's the NEWS**

- Andhra Pradesh and Madhya Pradesh have taken the lead in undertaking the Urban Local Bodies (ULB) reforms.
- The two States have successfully completed the set of reforms in functioning of ULBs, as specified by the Department of Expenditure, Ministry of Finance.

### **Know! more about it**

- To motivate the States to undertake reforms in various citizen centric sectors, the Ministry of Finance has linked a part of additional borrowing permission granted to the States to completion of reforms.
- In view of the resource requirement to meet the challenges posed by the COVID-19 pandemic, the Government of India had on 17<sup>th</sup> May, 2020 enhanced the borrowing limit of the States by 2 percent of their Gross States Domestic Product (GSDP).
- Half of this special dispensation was linked to undertaking citizen centric reforms by the States.
- The States get permission to raise additional funds equivalent to 0.25 percent of GSDP on completion of reforms in each sector.

### **The four citizen centric areas identified for reforms were**

- (a) Implementation of One Nation One Ration Card System,
  - (b) Ease of doing business reform,
  - (c) Urban Local body/ utility reforms and
  - (d) Power Sector reforms.
- On successfully undertaking the ULBs reforms, Andhra Pradesh and Madhya Pradesh have been granted permission to mobilise additional financial resources to the tune of Rs.4,898 crore through open market borrowings.

### **Reforms in the urban local bodies**

- Reforms in the urban local bodies and the urban utilities reforms are aimed at financial strengthening of ULBs in the State and to enable them to provide better public health and sanitation services.
- Economically rejuvenated ULBs will also be able to create good civic infrastructure.



## Scheme for Financial Assistance to States for Capital Expenditure

- Besides additional borrowing permissions, the States completing three out of the four reforms are entitled to get additional financial assistance under the “Scheme for Financial Assistance to States for Capital Expenditure”.
- The Scheme was announced by the Finance Minister on 12<sup>th</sup> October, 2020 as part of Aatma Nirbhar Bharat Package.
- It is aimed at boosting capital expenditure by the State Governments who are facing difficult financial environment this year due to the shortfall in tax revenue arising from the COVID-19 pandemic.
- Under the scheme, an amount of Rs.2,000 crore is earmarked to reward the States who undertake the prescribed citizen centric reforms.

## Defence: Boeing F-18 Super Hornet shows ability to ski-jump off India's carrier ramp

**Relevance IN–Prelims (about F/A-18 Super Hornet fighter jet) + Mains (GS II bilateral relations)**

### What's the NEWS

- American aircraft giant Boeing's F/A-18 Super Hornet fighter jet has successfully performed the ski-jump, making it suitable for the Indian Navy's aircraft carrier.
- F/A-18 Block III Super Hornet will offer the Indian Navy advanced warfighter technologies, superior economics and enhance naval aviation cooperation with the US Navy
- The Indian Navy could potentially acquire the aircraft to operate from the INS Vikramaditya (former Soviet Admiral Gorshkov) and the upcoming INS Vikrant, an indigenous carrier, both using the Short Take-Off But Arrested Recovery (STOBAR) system.
- The Indian Naval Air Arm currently operates a fleet of over 40 MiG-29K fighter aircraft.
- The decision on a purchase is expected to be known in 2021.
- As part of Boeing's proposed 'By India, for India' sustainment program, the Block III Super Hornets can be serviced in partnership with the Indian Navy as well as India and US based partners throughout the lifecycle of the aircraft



### F/A-18 Super Hornet

- The first successful and safe launch of the F/A-18 Super Hornet from a ski jump begins the validation process to operate effectively from Indian Navy aircraft carriers
- The F/A-18 Block III Super Hornet will not only provide superior warfighting capability to the Indian Navy but also create opportunities for cooperation in naval aviation between the United States and India.
- The Block III is the latest and most advanced version of the F/A-18E/F Super Hornet, featuring an Advanced Cockpit System, and capability upgrades that include greater range, reduced radar signature, and improved communication system.
- Two flight-test aircraft were delivered to the U.S. Navy in June 2020, with the Block III capabilities to be available from 2021.
- Boeing is offering the F/A-18 Super Hornet in single seater (E-Variant) and two-seater variant (F-Variant) to the Navy. Kanaglekar said that it will act as a force multiplier for the Navy as “it can interface with (Navy's) P-8I aircraft and other US origin assets”.

## STOBAR (“Short Take-Off But Arrested Recovery” or “Short Take-Off, Barrier Arrested Recovery”)

- It is a system used for the launch and recovery of aircraft from the deck of an aircraft carrier, combining elements of “short take-off and vertical landing” (STOVL) with “catapult-assisted take-off but arrested recovery” (CATOBAR).
- Aircraft launch under their own power using a ski-jump to assist take-off (rather than using a catapult).

## Farm Sector: PM flags off 100<sup>th</sup> Kisan Rail

**Relevance IN – Prelims (about Kisan Rail) + Mains (GS II government policies and interventions + GS III farmer’s welfare + food processing industry)**

### What’s the NEWS

- The Prime Minister flagged off the 100<sup>th</sup> Kisan Rail from Sangola in Maharashtra to Shalimar in West Bengal today via video conferencing.
- 100 Kisan Rails were launched in the last 4 months.
- No minimum quantity has been fixed to transport through Kisan Rail so that, even the smallest produce will be able to reach the big market properly at a low price.
- Farmers can now sell their crops in other states as well, in which farmers’ rail (Kisan Rail) and agriculture flights (Krishi Udaan) have a big role.

### Know! all about Kisan Rail

- It is a mobile cold storage to move perishable things like fruits, vegetables, milk, fish, etc., with complete security.
- This facility is available to the farmer as well as the local small businessman.
- Perishable rail cargo centres are being constructed in the vicinity of railway stations where farmers can store their produce.
- The effort is to supply as much fruits and vegetables as possible to the household.
- The first service of the “multi-commodity” Kisan Rail was launched on August 7
- The service was launched between Maharashtra’s Devlali and Danapur in Bihar and was later expanded to Muzaffarpur in the eastern state following a good response.
- The ‘Kisan Rail’ is a weekly service that will help in transporting agricultural produce, especially perishable commodities, at cheaper rates and aid farmers in getting the right price for their crops.
- The weekly train will provide seamless connectivity among farmers, markets and consumers. All the required measures have been taken to safely transport perishable vegetables and fruits.
- Any farmer, or any other interested party, can directly book their consignments on this train without any lower limit on the size of the consignment.
- The consignment can be as small as 50-100 kgs, and can be booked from any stopping station to any other stopping station.
- Since its launch, the Kisan Rail service has transported 27,000 tonnes of agro-services. The Centre has also extended a subsidy of 50% on the transportation of fruits and vegetables.
- Kisan Rail trains shall be run with multi commodities, multi consignors as well as multi consignees.
- The Kisan Rail train service shall be operated between fixed Origin – Destination pairs with enroute halts, as well as loading and unloading shall be permitted at any of the enroute stoppages.

MINISTRY OF AGRICULTURE & FARMERS WELFARE  
GOVERNMENT OF INDIA

Game Changer in Ensuring Fast Transportation of Agriculture Produce

**PM Modi to Flag off 100<sup>th</sup> Kisan Rail on 28<sup>th</sup> December**

- PM Modi to flag off the Kisan Rail from Sangola, Maharashtra to Shalimar, West Bengal on 28<sup>th</sup> Dec at 4:30 PM via VC
- The multi-commodity train service will provide a seamless supply chain of perishable produce
- Loading & unloading of perishable commodities will be permitted at all enroute stoppages with no bar on size of consignment
- The Govt has also extended a subsidy of 50% on transportation of fruits & vegetables

Dated: 27 December, 2020

- The Origin – Destination pairs, halts, routes, and frequency of the Kisan Rail train shall be jointly decided by the Ministry of Railways and Ministry of Agriculture and Farmers' Welfare.

## Government Schemes: National Jal Jeevan Mission Launches Innovation Challenge for Developing Portable Devices to Test Drinking Water Quality



**Relevance IN – Prelims (about National Jal Jeevan Mission + about the innovation challenge) + Mains (GS II government policies and interventions)**

### What's the NEWS

- The National Jal Jeevan Mission has launched an innovation challenge in partnership with Department of Promotion of Industry and Internal Trade to develop portable devices for water testing.

### Know! about the innovation challenge

- The main objective of the exercise is to bring an innovative, modular, and cost-effective solution to develop portable devices that can be used at the household level to test the drinking water quality instantly, easily and accurately.
- Water quality testing is one of the priority areas under Jal Jeevan Mission, the flagship programme of Union Government.
- The aim of the innovation challenge is to ensure that water sources are tested at various locations, at different levels; thereby, helping the policy framers to design programs which address the water contamination issues.
- Since announcement of the Jal Jeevan Mission, till 23<sup>rd</sup> December, 2020, so far 2.90 Crore households have been provided tap water connections





- People receiving piped water supply in their homes do not have any means to test the potability of water coming from their taps.
- The challenge aims to address these issues in an innovative, modular and cost-effective manner.
- Drinking water supply in rural areas is from both from groundwater (80%) and surface water (20%) sources.
- For both groundwater and surface waterbased rural drinking water supply systems, it is important to measure relevant area-specific contaminations to ensure access to potable water.
- The Uniform Drinking Water Quality Protocol, 2019 has specified some important parameters to be monitored for assuring portability of drinking water as per BIS IS 10500:2012 and subsequent amendments.

### **Jal Jeevan Mission**

- Jal Jeevan Mission is under implementation in partnership with the States to enable every rural home to have tap water connection by 2024.
- The aim of the mission is to provide every rural household potable tap water in adequate quantity and of prescribed quality on a regular and long-term basis.
- The National Jal Jeevan Mission invites applicants to join the Innovation Challenge to develop portable devices for water testing and become a part of this life changing Jan Aandolan.

## **Governance: e-HRMS brochure on Good Governance Day launched**

### ***Relevance IN – Prelims (about Good governance)***

#### **What's the NEWS**

- The progress report of e-HRMS launched by the Union Minister of State for Personnel, Public Grievances & Pensions
- The Electronic-Human Resource Management System (e-HRMS) launched by Dr. Jitendra Singh had 25 applications of 5 modules of the system.

#### **Know! about Good governance**

- Good governance is observed annually on December 25.
- The day aims to let the citizens, the students, who are the future of the country know about the government's responsibilities and duties that it needs to fulfill.
- The day is also celebrated to commemorate the birth anniversary of India's former Prime Minister, Atal Bihari Vajpayee.
- On December 23, 2014, Atal Bihari Vajpayee and Pandit Madan Mohan Malaviya (posthumously) were announced as recipients of India's highest civilian award, Bharat Ratna.
- Following the announcement, the government announced that the birth anniversary of the former Prime Minister would be treated as Good Governance Day. Since then the day is celebrated throughout the country every year on December 25.
- Good Governance Day acts as a reminder to the present government that it should be unbiased, transparent and development-oriented.

## **Miscellaneous: Indian Institute of Skills**

### ***Relevance IN – Prelims (about Indian Institute of Skills) + Mains (GS II government policies and interventions)***

#### **What's the NEWS**

- With the vision of propelling India to the forefront of skill development and job creation under Skill India Mission and to provide an impetus to Skill India programme through private sector participation, the first batch of trainings at the Tata-Indian Institute of Skills, Mumbai was launched

#### **Indian Institute of Skills**

- The institute is a joint initiative between Ministry of Skill Development & Entrepreneurship (MSDE), Government of India and Tata Indian Institute of Skills. Formal agreement for setting up institute has been signed between MSDE and TATA IIS on 11<sup>th</sup> November, 2020.



- The first batch at TATA-Indian Institute of Skills will commence training with two courses in Factory Automation, with duration ranging from 1 to 4 weeks, depending upon the pre-qualification profile of the trainee.
- The institute envisages partnerships with multiple private organizations who are leaders in their respective fields, two of which are currently in place, with FESTO, a global leader in industrial automation and SMC Corporation, Japan, world's largest manufacturer of pneumatic components, for trainings.
- The primary goal behind setting up the institute is to create industry-ready workforce as per the evolving demands of the national and global markets.
- It aspires to be one of the most premier training institutions in the country and will be equipped with world-class vocational training facilities.
- The institute plans to provide trainings in highly specialized areas such as defense, oil & gas, aerospace, and other emerging businesses to meet industry demands.

## Government Schemes: DPIIT to organise global summit on startups

***Relevance IN – Prelims (about the summit + about Start up India) + Mains (GS II government policies and interventions + good governance)***

### What's the NEWS

- The commerce and industry ministry will be organising a global summit on startups on January 15 and 16 next year with a view to promoting the growth of the sector
- Startups from Asian countries, domestic players and global entrepreneurs would participate in the virtual summit which is going to be organised by the Department for Promotion of Industry and Internal Trade (DPIIT)
- Global and domestic venture capital funds, regulatory authorities like SEBI (Securities and Exchange Board of India), Reserve Bank of India, Central Board and taxation agencies – CBDT (Central Board of Direct Taxes) and CBIC (Central Board of Indirect Taxes and Customs) would also participate in the summit.
- The government has taken several measures to strengthen startup ecosystem in the country to promote innovation.
- The department is also working on setting up credit guarantee fund and national seed fund for the sector.

### Startup India

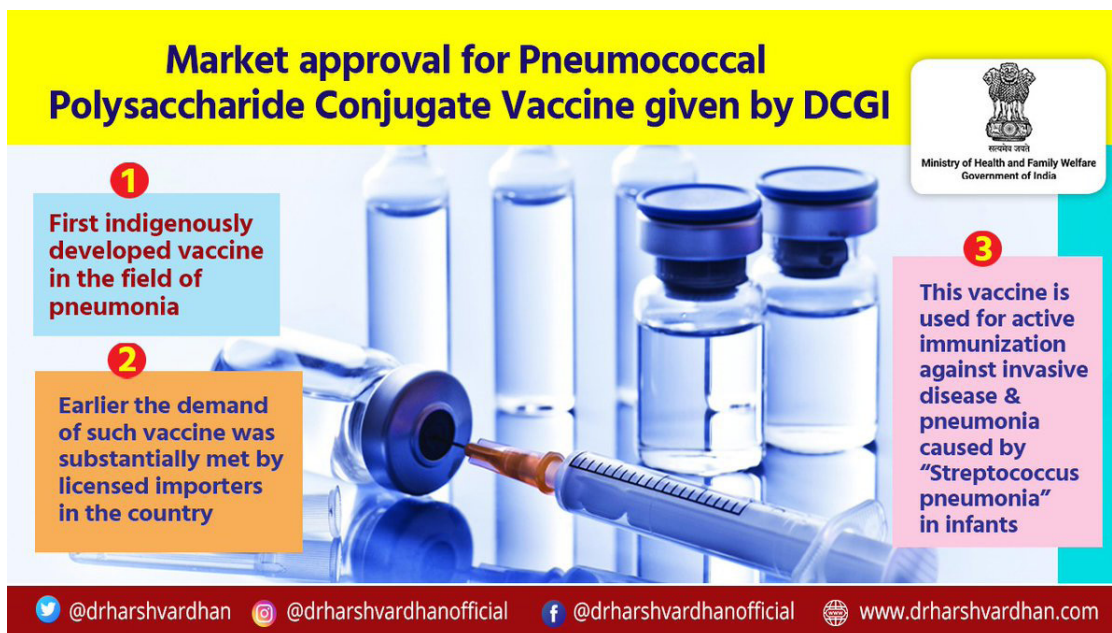
- Startup India is a flagship initiative of the government launched in January 2016, intends to build a strong ecosystem for the growth of startup businesses, to drive sustainable economic growth and generate employment opportunities.
- Startup India is a Government of India flagship initiative to build Startups and nurture innovation.
- Through this initiative, the Government plans to empower Startup ventures, to boost entrepreneurship, economic growth and employment across India.
- The Government's Action Plan will help accelerate the growth of Startups throughout India, across all important sectors – in Tier 1, 2 and 3 cities, including semi-urban and rural areas – and includes promoting entrepreneurship among SCs/STs and women communities.
- The 19-point Action Plan, organized by the Department of Industrial Policy & Promotion (DIPP), focuses both on restricting hindrances and promoting faster growth by way of:
  1. Simplification and Handholding
  2. Funding Support and Incentives
  3. Industry-Academia Partnership and Incubation
- The 19-point Action Plan envisages several incubation centres, easier patent filing, tax exemptions, ease of setting-up of business, a ₹ 10,000 crore corpus fund, a faster exit mechanism, among others.

### Definition of a Startup (a Startup means an entity)

- incorporated or registered in India not prior to five years
- with an annual turnover not exceeding ₹ 25 crore in any preceding financial year
- working towards innovation, development, deployment or commercialization of new products, processes or services driven by technology or intellectual property

## Health: Country's First Pneumococcal Conjugate Vaccine inaugurated

### Market approval for Pneumococcal Polysaccharide Conjugate Vaccine given by DCGI



**1**  
First indigenously developed vaccine in the field of pneumonia

**2**  
Earlier the demand of such vaccine was substantially met by licensed importers in the country

**3**  
This vaccine is used for active immunization against invasive disease & pneumonia caused by "Streptococcus pneumonia" in infants

Ministry of Health and Family Welfare  
Government of India

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### Relevance IN – Prelims (about pneumococcal conjugate vaccine (PCV) + about *Pneumosil*)

#### What's the NEWS

- Union Minister for Health and Family Welfare inaugurated India's first pneumococcal conjugate vaccine (PCV).
- The vaccine "Pneumosil" has been developed by the Serum Institute of India Private Limited (SIPL) in collaboration with partners like the Bill and Melinda Gates Foundation.

#### Know! all about *Pneumosil*

- SIPL developed and got license of first indigenous Pneumococcal Conjugate Vaccine (PCV) from Government of India during COVID-19 pandemic
- Serum Institute's first Indigenous Pneumococcal Conjugate Vaccine will be available in the market under brand name "*Pneumosil*" at an affordable price in single dose (vial and pre-filled syringe) and Multidose (vial) presentations.
- *Pneumosil* has been extensively evaluated in 5 randomized controlled clinical trials and has demonstrated comparable safety and immunogenicity against licensed pneumococcal vaccines across diverse populations of India and Africa, where *Pneumosil* was administered to adults, toddlers and infants using different vaccination schedules.
- *Pneumosil* was found to be safe and effective in the prevention of Pneumonia disease and based on which *Pneumosil* has been licensed by Drugs Controller General (India) in July 2020 after approval from Subject Expert Committee (SEC)
- Till now we are fully dependent on Pneumococcal Conjugate Vaccine manufactured by Foreign Manufacturers which are available at very high prices
- The vaccine will make SII the world's third supplier of PCVs under the pneumococcal Advance Market Commitment, and the first developing country vaccine manufacturer to access the global PCV market.

#### Know! about Pneumonia

- Pneumonia is the single largest infectious cause of death among children under five years of age worldwide, accounting for nearly 10 lakhs deaths globally.
- Pneumococcal disease is a significant contributor under-five mortality rate worldwide. In view of its widespread fatality, the World Health Organization in 2018 recommended the inclusion of the pneumococcal conjugate vaccine (PCV) in routine childhood immunisation programmes in all countries.
- **Pneumonia** is an infection that inflames the air sacs in one or both lungs.

- The air sacs may fill with fluid or pus (purulent material), causing cough with phlegm or pus, fever, chills, and difficulty breathing.
- A variety of organisms, including bacteria, viruses and fungi, can cause **pneumonia**.
- Pneumococcal conjugate vaccine is a pneumococcal vaccine and a conjugate vaccine used to protect infants, young children, and adults against disease caused by the bacterium *Streptococcus pneumoniae*.
- The unique feature of the WHO pre-qualified PCV is its composition which is specially tailored to the serotype of the bacterium, *S pneumoniae*, in India and other regions of the world
- The vaccine targets the pneumococcal bacterium, which causes pneumonia and other serious life-threatening diseases such as meningitis and sepsis, and is estimated to cause nearly four lakh deaths in children under five years of age each year worldwide.

## Health: The 7<sup>th</sup> NHM National Summit on Good, Replicable Practices

**Relevance IN – Prelims (about 7<sup>th</sup> National Summit on Good, Replicable Practices – objective and highlights)**

### What's the NEWS

- Union Minister of Health and Family Welfare digitally inaugurated the 7<sup>th</sup> National Summit on Good, Replicable Practices
- Ministry of Health & Family Welfare holds the National Summit on Good, Replicable Practices and Innovations in Public Healthcare Systems in India.

### National Summit on Good & Replicable Practices & Innovations in Public Health Care System

- National Consultations are organized by Ministry of Health & Family Welfare to capture and share the best practices and innovations at various levels of health services delivery under National Health Mission.
- The consultations are attended by officials of MoHFW who are involved in providing technical support to states; State officials who share their experiences; and stakeholders who contribute to implementation of best practices
- The first National summit was held in 2013 at Srinagar to recognize, showcase and document various best practices and innovations in public healthcare system
- In the year 2020, 210 new initiatives were uploaded by the States and UTs in the National Healthcare Innovation Portal.
- The ultimate goal of these innovations is to improve the health status of the people on one hand and strengthen Public Health Systems in a sustainable manner on the other.
- The National Summit on Good, Replicable Practices and Innovations in Public Healthcare Systems in India, has, in a short space of time, become an institutional mechanism for the sharing of innovations supported by the National Health Mission.
- The 7<sup>th</sup> summit captures 98 best practices and innovations, including health programmes, medical devices and technologies.
- They span programmatic areas ranging from health systems, maternal and new-born health, family planning, tuberculosis and other communicable diseases, non-communicable diseases and mental health.

### Additional info: National Health Innovation Portal

- It is being launched to serve as a platform in public domain to facilitate collection and dissemination of good practices and innovations that are found to be replicable.
- This portal would serve as a gateway for integrating innovations into mainstream healthcare and has potential to bring about transformative improvements in healthcare delivery by accelerating the uptake of successful innovations of products, processes and programs.

### National Health Systems Resource Centre

- National Health Systems Resource Centre (NHSRC) has been set up under the National Rural Health Mission (NRHM) of Government of India to serve as an apex body for technical assistance.
- Established in 2007, the National Health Systems Resource Centre's mandate is to assist in policy and strategy development in the provision and mobilisation of technical assistance to the states and in capacity building for the Ministry of Health and Family Welfare (MoHFW) at the centre and in the states

## Science & Technology/Health: 2<sup>nd</sup> Cancer Genome Atlas (TCGA) 2020 Conference

**Relevance IN – Prelims (about TCGA and ICGA) + Mains (GS II Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources)**

### What's the NEWS

- The Minister of Science and Technology virtually inaugurated the 2<sup>nd</sup>TCGA 2020 conference
- Oncologists, Researchers, Scientists, and Academicians from India, USA, UK and Bangladesh are participating in international conference
- The Union Minister acknowledged the efforts of the consortium comprising of scientists and clinicians from across the world, who have come together to build an Indian Cancer Genomics Atlas (ICGA).
- Several large-scale mission mode projects taken by the Government such as Genome India, IndiGene Nutrition Mission etc. All these aimed at improving clinical outcomes in the cancer and other chronic diseases

### Know! about TCGA and ICGA

- TCGA is a landmark cancer genomics program that molecularly characterized over 20,000 primary cancer and matched normal samples spanning 33 cancer types.
- This joint effort between the US- National Cancer Institute and the National Human Genome Research Institute began in 2006, bringing together researchers from diverse disciplines and multiple institutions.
- Over the years, TCGA generated over 2.5 petabytes of genomic, epigenomic, transcriptomic, and proteomic data.
- The data, which has already led to improvements in the ability to diagnose, treat, and prevent cancer, will remain publicly available for anyone in the research community to use.
- On similar lines, the establishment of an '**Indian Cancer Genomics Atlas (ICGA)**' has been initiated by a consortium of key stakeholders in India led by CSIR, Government of India in which several government agencies, cancer hospitals, academic institutions and private sector partners.

## Health: Grand Challenge for strengthening the COVID Vaccine Intelligence Network (CoWIN) system

**Relevance IN – Prelims (about CoWIN system + grand challenge to strengthen CoWIN platform) + Mains (GS II Government policies and interventions for development in various sectors + Issues relating to development and management of Social Sector/Services relating to Health)**

### What's the NEWS

- Ministry of Health and Family Welfare (MoHFW) along with Ministry of Electronics and Information Technology (MeitY) has announced the launching of "CoWIN", a Grand Challenge for strengthening the COVID Vaccine Intelligence Network (CoWIN) system, a digitalised platform to be used to effectively roll out and scale up the mechanism for COVID Vaccine Distribution System, nationally.
- Union Minister invited the innovators and startups for grand challenge to strengthen CoWIN platform for roll out of COVID19 vaccination program across India.

### Know! about the challenge

- To be launched on the MSH (MeitY Startup Hub) portal, a collaborative platform developed under the aegis of MeitY towards building meaningful synergies in the Indian tech startup space, the challenge invites participation from talented and innovative startups and emerging technology specialists to augment and scale the CoWIN platform.
- MoHFW has identified seven (07) focus areas of technology development to holistically address the likely limitations associated with complete and effective vaccine distribution system (VDS) and its seamless administration across India.
- These challenges try to broadly address the priority areas relating to infrastructure, monitoring and management, dynamic learning and information systems, constraints of human resources-including technical capacities,



vaccine logistics management and tracking enlisted beneficiaries for any adverse event following immunization on real time basis.

- The Challenge kickstarts with registration process at <https://meitystartuphub.in> on 23<sup>rd</sup> December 2020 and is open for participants to apply till 15<sup>th</sup> January 2021.
- The top 5 applicants will be provided the CoWIN APIs (Application Programming Interface) to prove the efficacy of their solutions for possible integration with the platform.
- Each shortlisted applicant at this stage stands a chance to win Rs. 2 Lakhs covering their logistical requirements.
- The solutions once integrated with the platform through open APIs will be assessed for robustness and scalability.
- Top 2 contestants from the challenge will be rewarded with Rs. 40 Lakh and 20 Lakh respectively post successful migrations of the developed solutions on the cloud on which the CoWIN is hosted, apart from their integration with CoWIN.

## **Governance: Cabinet approves Merger of Five Film Media Units**

***Relevance IN – Prelims (about NFDC and the four film media units) + Mains (GS II governance, transparency and accountability)***

### **What's the NEWS**

The Union Cabinet has approved to merge four of its film media units, namely

- Films Division
- Directorate of Film. Festivals
- National Film Archives of India, and
- Children's Film Society, India

with the National Film Development Corporation (NFDC) Ltd. by expanding the Memorandum of Articles of Association of NFDC, which will then carry out all the activities hitherto performed by them.

### **Know! about these media units and about NFDC**

- The merger of Film Media Units under one corporation will lead to convergence of activities and resources and better coordination, thereby ensuring synergy and efficiency in achieving the mandate of each media unit.
- Films Division, a subordinate office of M/o I&B, was established in 1948, primarily to produce documentaries and news magazines for publicity of Government programmes and cinematic record of Indian history.
- Children's Film Society, India, an autonomous organisation, was founded in 1955 under the Societies Act with the specific objective of providing children and young people value-based entertainment through the medium of films.
- National Film Archives of India, a subordinate office of M/o I&B, was established as a media unit in 1964 with the primary objective of acquiring and preserving Indian cinematic heritage.
- Directorate of Film Festivals, as attached office of M/o I&B was set up in 1973 to promote Indian films and cultural exchange.

### **Know! about NFDC and its new role**

- NFDC is a Central Public Sector Undertaking, incorporated in the year 1975 with the primary object of planning and promoting an organized, efficient and integrated development of the Indian Film Industry.
- The umbrella organization, NFDC, consequent upon the merger of Film Media Units will be uniquely placed with regard to promotion, production & preservation of filmic content - all under one management.
- The vision of the new entity will be to ensure balanced and focused development of Indian cinema in all its genres-feature films, including films /content for the OTT platforms, children's content, animation, short films and documentaries.
- The merger of Film Media Units under a single corporation will lead to synergy amongst the various activities with better and efficient utilization of existing infrastructure and manpower.
- This will lead to reduction in duplication of activities and direct savings to the exchequer.

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# **GENERAL STUDIES III**

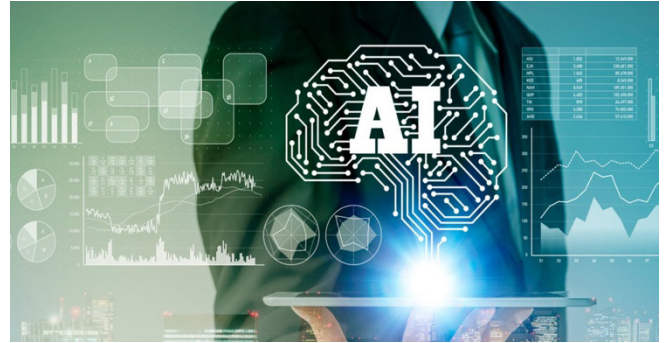
**Science & Technology Economic  
Developments, Biodiversity,  
Environment, Internal Security and  
Disaster management**

## Science & Technology: ARTPARK

**Relevance IN – Prelims (about AI & Robotics Technologies Park – objective + about National Mission ICPS) + Mains (GS III awareness in the field of science and technology)**

### What's the NEWS

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



### Know! about ARTPARK

- ARTPARK, is a unique not-for-profit foundation established by Indian Institute of Science (IISc), Bengaluru with support from AI Foundry in a public-private model.
- With seed funding of Rs. 170 Cr (\$22 mn) from Department of Science & Technology(DST), Govt. of India, under the National Mission on Inter-disciplinary Cyber-Physical Systems (NM-ICPS), it will bring about collaborative consortium of partners from industry, academia and government bodies.
- This will lead to cutting edge innovations in terms of new technologies, standards, products, services and intellectual properties.
- The National Mission ICPS with its 25 Hubs has a unique architecture that envisages a strong collaboration and co-ownership among the triple helix of industry, academia and government with full flexibility.
- Generous additional support of the Government of Karnataka to the ARTPARK Hub brings extraordinary value in increasing its effectiveness, reach and use.
- It also sets a template of centre-state partnership in the frontier areas of technology-- a theme which will receive focus in the soon to be released Science, Technology and Innovation Policy 2020

### Know! the applications of ARTPARK

- ARTPARK will develop AI & Robotics facilities to support technology innovations as well as capacity building through advanced skills training of students and professionals in these areas.
- Some of these facilities will be key enablers for whole new sets of technologies, products and services.
- It will develop DataSetu - that will enable confidentiality and privacy-preserving framework to share data and run analytics spurring the data-sharing ecosystem and create a data marketplace, boosting AI applications and solutions.
- One such service will be BhashaSetu - that will enable real-time Indic language translation, both of speech to speech and speech to text.**
- This will further unlock the economic potential of the country, and enable all Indian citizens to equitably participate in the economic progress, regardless of their language.

### Additional info: The National Mission Interdisciplinary Cyber Physical Systems (ICPS)

- DST has launched a new programme “Interdisciplinary Cyber Physical Systems (ICPS)” to foster and promote R&D in this emerging field of research.

### Cyber Physical System (CPS)

- Cyber Physical Systems (CPS) are new class of engineered systems that integrate computation and physical processes in a dynamic environment.
- CPS encompasses technology areas of Cybernetics, Mechatronics, Design and Embedded systems, Internet of Things (IoT), Big Data, Artificial Intelligence (AI) and many more.
- A Cyber Physical System (CPS) is a mechanism controlled or monitored by computer-based algorithms, tightly integrated with internet and its users.
- It is an engineered system that are build from and depend upon, the seamless integration of computational algorithms and physical components.



- In general Cyber means computation, communication and control that are discrete and logical. Physical means natural and human-made systems governed by the laws of physics and operating in continuous time.
- Computing and communication systems bridges with the physical world are referred to as Cyber Physical Systems.
- CPS are physical and engineered systems whose operations are monitored, coordinated, controlled and integrated by a computing and communication core.
- The CPS systems are intelligent, autonomous and efficient and are expected to drive innovation in sectors as diverse as agriculture, water, energy, transportation, infrastructure, security, health and manufacturing.

### **National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)**

- To harness the potential of this new wave of technology and make India a leading player in CPS, the Union Cabinet approved the launch of National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) to be implemented by the Department of Science & Technology (DST) with a total outlay of Rs. 3660 Crore for a period of five years.
- The Mission aims to create a strong foundation and a seamless ecosystem for CPS technologies by coordinating and integrating nationwide efforts encompassing knowledge generation, human resource development, research, technology and product development, innovation and commercialization.
- The mission will be implemented through a network of 15 Technology Innovation Hubs (TIHs), 6 Sectoral Application Hubs (SAHs) and 4 Technology Translation Research Parks (TTRPs). Each hubs and technology parks will follow a technology life cycle approach, addressing all stages viz.

*The first Phase of NM-ICPS will focus on establishing six Technology Innovation Hubs (TIHs) in the following domain areas:*

1. Artificial Intelligence and Machine Learning
  2. Technologies for Internet of Things and Everything (IOT & IOE), Sensors, Activators and Control
  3. Databanks & Data Services, Data Analytics
  4. Advanced Communication Systems
  5. Robotics & Autonomous Systems
  6. Cyber Security and Cyber Security for Physical Infrastructure
- The first phase of NM-ICPS will be implemented by Science and Engineering Research Board (SERB).
  - Technology Innovation Hubs (TIHs) will be the nodal centres spearheading the activities in a specific domain.

### **Specific Objectives**

- Knowledge Generation
- Technology/Product Development and Commercialisation
- HRD and Skill Development
- Innovation, Entrepreneurship and Start-up Ecosystem
- International Collaboration

## **Science & Technology: DST INSPIRE Faculty fellow working to develop improved disease-resistant banana plants**

***Relevance IN – Prelims (about Fusarium + about INSPIRE Faculty fellowship)***

### **What's the NEWS**

- An improved understanding of *Fusarium*, a root pathogen infection in banana plant may soon help develop strategies to prevent the disease that causes wilting of the fruit crop that is grown in at least 5 major states of India.
- India is the leading producer of banana in the world and the present cultivation is vulnerable to this fungal disease which dwells in soil as a saprophyte and shifts to the parasitic mode in presence of host roots.
- Scientists are trying to understand the disease paradigm for developing innovative management strategies.

## ***Fusarium***

- INSPIRE Faculty fellowship, of the Department of Science & Technology, Government of India, is using genetic approaches to decipher the molecular cross-talk between banana and *Fusarium* during infection.
- The team is focusing on studying the transcriptional factors that regulate the expression of virulence genes in *Fusarium oxysporumcubense*(*Foc*), the fungal plant pathogen, that causes Panama disease of banana. His research work could lead to improved disease-resistant in plants.

### **Know! about INSPIRE**

- The Department of Science and Technology, Government of India, has launched the “Innovation in Science Pursuit for Inspired Research (INSPIRE)” program in 2008.
- The program aims to attract talent for study of science and careers with research. INSPIRE includes many components. INSPIRE Faculty Scheme offers a contractual research awards to young achievers and opportunity for independent research in the near term and emerge as a future leader in the long term.
- Indian citizens and people of Indian origin including NRI/PIO status with PhD (in science, mathematics, engineering, pharmacy, medicine, and agriculture-related subjects) from any recognized university in the world.

## **Science & Technology: Government Launches Mission COVID Suraksha to accelerate Indian COVID-19 Vaccine Development**

***Relevance IN – Prelims (about Mission COVID Suraksha- The Indian COVID-19 Vaccine Development Mission) + Mains (GS II government policies and interventions)***

### **What's the NEWS**

- The Government of India (GOI) has announced the third stimulus package of Rs. 900 Crore for the ***Mission COVID Suraksha- The Indian COVID-19 Vaccine Development Mission***.
- This grant will be provided to the Department of Biotechnology (DBT) for Research & Development of Indian COVID-19 vaccines.

### **Know! about the mission**

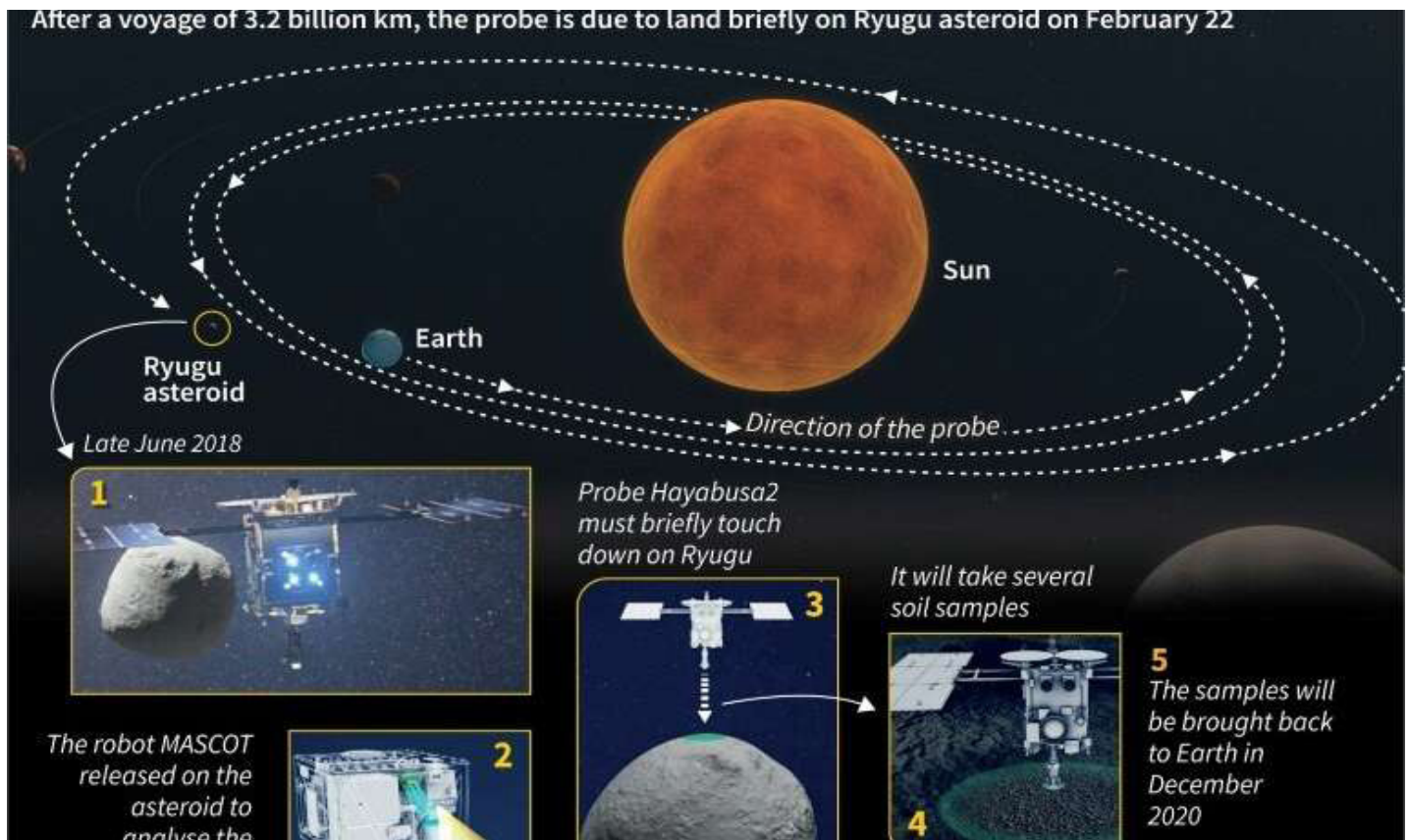
- The COVID-19 Vaccine development Mission with end-to-end focus from preclinical development through clinical development and manufacturing and regulatory facilitation for deployment, would consolidate all available and funded resources towards an accelerated product development.
- This will help accelerate development of approx. 5-6 vaccine candidates and ensure that these are brought closer to licensure and introduction in market for consideration of regulatory authorities for introduction in public health systems, to combat further spread of COVID infection.
- Led by Department of Biotechnology and implemented by a dedicated Mission Implementation Unit at Biotechnology Industry Research Assistance Council (BIRAC), the existing activities under National Bio Pharma Mission (NBM) and Ind-CEPI Mission will provide complementary strengths to this Mission.
- Phase-I of the COVID Suraksha Mission has been allotted Rs.900 Crore for a period of 12 months.
- A total of 10 vaccine candidates have been supported by Department of Biotechnology so far at both academia and industry and as on date, 5 vaccine candidates are in human trials including the Russian Vaccine Sputnik-V with at least 3 more in advanced stages of preclinical to enter human trials shortly.

## **Space Awareness: Japan's Hayabusa2 spacecraft carrying asteroid soil samples nears Earth**

***Relevance IN – Prelims (about asteroid Ryugu + Hayabusa2 spacecraft) + Mains (GS III awareness in the field of space)***

### **What's the News**

- A Japanese spacecraft is nearing Earth after a yearlong journey home from a distant asteroid with soil samples and data that could provide clues to the origins of the solar system.



### Know! more about the space mission

- The Hayabusa2 spacecraft left the asteroid Ryugu, about 300 million kilometers (180 million miles) from Earth, a year ago and is expected to reach Earth and drop a capsule containing the precious samples in southern Australia on December 6.
- Scientists at the Japan Aerospace Exploration Agency believe the samples, especially those taken from under the asteroid's surface, contain valuable data unaffected by space radiation and other environmental factors.
- JAXA, the space agency, plans to drop the capsule containing the samples onto a remote, sparsely populated area in Australia from 220,000 kilometers (136,700 miles) away in space, a big challenge requiring precision control.
- The capsule, protected by a heat shield, will turn into a fireball during re-entry in the atmosphere at 200 kilometers (125 miles) above ground.
- At about 10 kilometers (6 miles) above ground, a parachute will open to prepare for landing, and beacon signals will be transmitted to indicate its location.

### Know! about Hayabusa2

- For Hayabusa2, it's not the end of the mission it started in 2014. After dropping the capsule, it will return to space and head to another distant small asteroid called 1998KY26 on a journey slated to take 10 years.
- Hayabusa2 touched down on Ryugu twice, despite its extremely rocky surface, and successfully collected data and samples during the 1½ years after it arrived there in June 2018.
- In the first touchdown in February 2019, it collected surface dust samples. In July, it collected underground samples from the asteroid for the first time in space history after landing in a crater that it had earlier created by blasting the asteroid's surface.
- Asteroids, which orbit the sun but are much smaller than planets, are among the oldest objects in the solar system and therefore may help explain how Earth evolved.

## Environment: Four sites in India get World Heritage Irrigation Structure tag

### Country wise list of World Heritage Irrigation Structures

JAPAN	42	EGYPT	02
CHINA	23	MEXICO	02
INDIA	06	THAILAND	02
IRAN	06	USA	02
SRI LANKA	06	PAKISTAN	01
KOREA	05	RUSSIA	01
ITALY	04	MALAYSIA	01

**Relevance IN – Prelims (about WHIS new sites – location and advantage + about ICDS)**

### What's the NEWS

- Four sites in India have received the World Heritage Irrigation Structure (WHIS) tag this year.
- The sites are Cumbum Tank, Kurnool-Cuddapah Canal, Porumamilla Tank (Anantharaja Sagaram) in Andhra Pradesh and 490-year-old Dhamapur Lake in Maharashtra's Sindhudurg district.
- In 2018, Pedda Cheru Tank in Kamareddy district and Sadarmat Anicut in Nirmal district, both in Telangana, were named as WHIS sites.
- Other recognised sites this year globally included four structures in China, two from Iran, three in Japan.
- So far, Japan (42) has the highest number of WHIS sites followed by China (23). India, Iran and Sri Lanka have 6 each.

### Recognized World Heritage Irrigation Structures 2020

01. Tianbao Weir, China
02. Longshou Canal and Ancient Luohe River Irrigation District, China
03. Weirs of Baishaxi Stream, China
04. Sangyuanwei Polder Embankment System, China
- 05. Cumbum Tank, Andhra Pradesh, India**
- 06. KC Canal (Kurnool-Cuddapah Canal), Andhra Pradesh, India**
- 07. Porumamilla Tank (Anantharaja Sagaram), Andhra Pradesh, India**
- 08. Dhamapur Lake (Sindhudurg), Maharashtra, India**
09. Zarch Qanat, Iran
10. Moon Qanat, Iran
11. Tenguwa Irrigation System, Japan
12. Bizenkyo Irrigation System, Japan
13. Jyosai-Gokuchi Irrigation System, Japan
14. Goseong Dumbeong (Goseong Coastal Area Pond Irrigation System), Republic of Korea

Source: International Commission on Irrigation and Drainage

### Know! about ICDS and WHIS

- The International Commission on Irrigation and Drainage (ICID), a global network of irrigation, drainage, and flood management experts, annually recognises irrigation structures of international significance on the lines of World Heritage Sites recognised by the UNESCO.
- Every country has a national committee and they share the information about their sites with ICID, which then passes it to an international jury.



- Major criteria for WHIS entails that a structure should be more than 100 years old, should be functional, achieving food security and have archival value.
- Each site is evaluated based on its merits first by the state government.
- The proposal is then sent to the Centre and a team from CWC carries out an on-ground survey to verify details.
- Findings are presented before the national committee, which finally submits the proposal in the prescribed format (with Central government inputs and on-field photographs) to the international jury

## **Environment: Apex Committee for Implementation of Paris Agreement (AIPA)**

***Relevance IN – Prelims (about AIPA and its objective) + Mains (GS III Environment conservation – steps taken by the government)***

### **What's the NEWS**

- The Ministry of Environment, Forest and Climate Change (MoEFCC) has constituted a high-level inter-ministerial Apex Committee for Implementation of Paris Agreement (AIPA) under the chairmanship of Secretary, MoEFCC.

### **Know! about AIPA**

- The purpose of AIPA is to generate a coordinated response on climate change matters that ensures India is on track towards meeting its obligations under the Paris Agreement including its Nationally Determined Contributions (NDC).
- Senior officials from fourteen ministries will serve as Members to AIPA who will oversee the progress in implementation of India's NDC and receive periodic information updates to monitor, review and revisit climate goals to fulfil the requirements of the Paris Agreement.
- AIPA will operate as a National Authority to regulate carbon markets in India under Article 6 of the Paris Agreement, formulate guidelines for consideration of projects or activities under Article 6 of the Paris Agreement, issue guidelines on carbon pricing, market mechanism, and other similar instruments that have a bearing on climate change and NDCs.
- It will take note of the contributions of the private sector as well as multi-/bi-lateral agencies in the field of climate change and provide guidance for aligning their climate actions with national priorities.
- The year 2021 would mark the beginning of implementation of the Paris Agreement and constitution of AIPA is central to strengthening the national systems and institutional arrangements for implementation and monitoring of climate actions.
- It will also ensure that India maintains its climate leadership as one the few countries in the world whose climate actions are consistent with the goals of the Paris Agreement.

### **Know! India's NDC**

- India has pledged to improve the emissions intensity of its GDP by 33 to 35 per cent by 2030 below 2005 levels.
- It has also pledged to increase the share of non-fossil fuels-based electricity to 40 per cent by 2030.
- It has agreed to enhance its forest cover which will absorb 2.5 to 3 billion tonnes of carbon dioxide (CO<sub>2</sub>, the main gas responsible for global warming) by 2030.

### **Know! about Dhamapur Lake**

- The Dhamapur Lake is one of the top 100 wetlands in India identified by the Union government for rapid restoration and improvement.
- It is expected to be proposed as a Ramsar site (wetland of international significance) by the Maharashtra government. There are 193 floral and 247 faunal species in this wetland.
- The Dhamapur Lake irrigates 237 ha land every year. There are 64 streamlets that feed it. Two outlets emerging from Kavadevadi dam and Guramvadi dam also feed water to it. The site was built in 1530 by villagers of Dhamapur and Kalse.
- Size of these lakes or dams is not a criteria for WHIS as Dhamapur is much smaller than other dams that have been awarded this recognition this year or in the past but what is most astonishing is this lake is almost 500 years old.

## Know! about ICID

- The International Commission on Irrigation and Drainage (ICID), **established in 1950** is a leading scientific, technical, international not-for-profit, non-governmental organization.
- ICID is a professional network of experts from across the world in the field of irrigation, drainage, and flood management.
- The main mission is to promote 'Sustainable agriculture water management' to achieve 'Water secure world free of poverty and hunger through sustainable rural development'.
- ICID is a knowledge sharing platform dedicated to issues that covers the entire spectrum of agricultural water management practices ranging from rainfed agriculture to supplemental irrigation, land drainage, deficit irrigation to full irrigation, etc.
- In addition, drainage of agricultural lands forms the core theme of commission's activities. Floods and drought; the two extremes of increasingly variable climate as a result of potential climate change, also form the focus of activities.

## Environment Conservation: Bihar plans migratory bird festival to raise awareness about them

**Relevance IN – Prelims (about the bird festival and about Vikramshila Dolphin Sanctuary – location)**

### What's the NEWS

- Bihar is holding a bird festival for the first time as part of its initiative to save migratory birds that arrive in the state in large numbers every year.

### Know! about the fest

- The three-day festival is being organised in eastern Bihar's Bhagalpur district and will tentatively start from December 11, 2020.
- The festival is being jointly organised by the Bhagalpur forest division, non-profit Bombay Natural History Society and the local Mandar Nature Club.
- This was because the 60-kilometre-long stretch of the Vikramshila Dolphin Sanctuary between Sultanganj and Kahalgaon had long been a hub of migratory birds.
- Migratory birds normally come during November and stay till March, finding the region favourable for spending the winter, according to environmentalists.
- A large number of migratory birds arrive in Bhagalpur every year the prime objective behind holding the bird festival is to create awareness among people about the importance of migratory birds
- Ornithologists have found Bhagalpur to be a 'bird paradise' with a number of migratory birds reaching there every year.
- Some prominent migratory birds arriving in Bhagalpur include bar-headed goose, steppe eagle, Ferruginous duck, Eurasian curlew, white wagtail, great crested grebe, common greenshank and Eurasian coot.
- The main attractions for migratory birds in the eastern part of the country were plenty of water bodies, such as Vikramshila Dolphin Sanctuary on the Ganga river, Jagatpur lake and Kanwar lake,

### Vikramshila Gangetic Dolphin Sanctuary (VGDS)

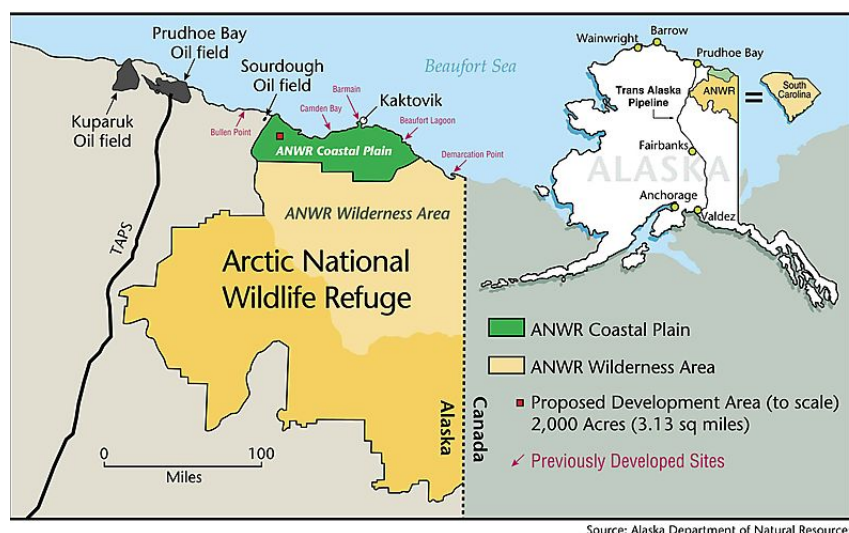
- The Bihar government is setting up India's first observatory for the mammals in Bhagalpur district.
- Construction at the Vikramshila Gangetic Dolphin Sanctuary (VGDS) in the state's Bhagalpur district is scheduled to be completed by early next year.
- The endangered Gangetic dolphin, India's national aquatic animal, has reportedly become more visible in the VGDS due to minimum human activity on the Ganga during the ongoing novel coronavirus disease (COVID-19) lockdown.
- The last survey of Bihar's dolphin population was conducted in 2018. It was found that there were 1,363 dolphins in the rivers in the state.
- Going by this number, Bihar is home to around half of the estimated 2,500-3,000 Gangetic dolphins in India.

- The state government should build another dolphin observatory at the confluence of the Ganga and Punpun rivers near Fatuha in Patna

### **Ganges river dolphin (IUCN – Endangered)**

- The Ganges river dolphin was officially discovered in 1801. Ganges river dolphins once lived in the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh. But the species is extinct from most of its early distribution ranges.
- The Ganges river dolphin can only live in freshwater and is essentially blind.
- They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to “see” an image in their mind.
- They are frequently found alone or in small groups, and generally a mother and calf travel together.
- Calves are chocolate brown at birth and then have grey-brown smooth, hairless skin as adults.
- Females are larger than males and give birth once every two to three years to only one calf.
- The Ganges river dolphin has been recognized by the government of India as its National Aquatic Animal

## **Environment: Alaska’s Arctic National Wildlife Refuge**



### **Relevance IN – Prelims (about Alaska’s Arctic Wildlife Refuge)**

#### **What’s the NEWS**

- The Trump administration announced that it will auction off drilling rights in the Arctic National Wildlife Refuge in just over a month, setting up a final showdown with opponents before President-elect Joe Biden takes office.
- The sale, which is now set for Jan. 6, could cap a bitter, decades-long battle over whether to drill in the coastal plain, a 19-million-acre expanse that’s home to Native tribes as well as caribou, polar bears and other wildlife.

#### **Alaska’s Arctic Wildlife Refuge.**

- Arctic National Wildlife Range was established in 1960 to preserve unique wildlife, wilderness and recreational values.
- In 1980, the Alaska National Interest Lands Conservation Act (ANILCA) re-designated the Range as part of the Arctic National Wildlife Refuge, and provided four purposes that guide management of the entire Refuge: to conserve animals and plants in their natural diversity, ensure a place for hunting and gathering activities, protect water quality and quantity, and fulfill international wildlife treaty obligations.
- The Arctic National Wildlife Refuge covers approximately 19.64 million acres of land and water in northeastern Alaska.
- It is administered by the U.S. Fish and Wildlife Service as a unit of the National Wildlife Refuge System.
- Arctic Refuge contains the largest area of designated Wilderness within the National Wildlife Refuge System. “Where the earth and its community of life are untrammelled by man.” [The Wilderness Act, 1964]

# Space Awareness: Japan retrieves asteroid samples in hunt for origins of planets

**Relevance IN – Prelims (about Hayabusa2 space mission) + Mains (GS III awareness in the field of space)**



## What's the NEWS

- A Japanese capsule carrying the world's first asteroid subsurface samples landed successfully in the remote Australian Outback, completing a mission to provide clues to the origin of the solar system and life on Earth.

## Know! all about the mission

- The spacecraft Hayabusa2 released the small capsule and sent it toward Earth to deliver samples from a distant asteroid. Capsule collection at the landing site was completed
- JAXA hopes to find clues to how the materials are distributed in the solar system and are related to life on Earth.
- Scientists say they believe the samples, especially ones taken from under the asteroid's surface, contain valuable data unaffected by space radiation and other environmental factors. They are particularly interested in analyzing organic materials in the samples.
- JAXA hopes to find clues to how the materials are distributed in the solar system and are related to life on Earth.

## Know! about Hayabusa2

- For Hayabusa2, it's not the end of the mission it started in 2014. It is now heading to a small asteroid called 1998KY26 on a journey slated to take 10 years one way, for possible research including finding ways to prevent meteorites from hitting Earth.
- So far, its mission has been fully successful. It touched down twice on Ryugu despite the asteroid's extremely rocky surface, and successfully collected data and samples during the 1½ years it spent near Ryugu after arriving there in June 2018.
- In its first touchdown in February 2019, it collected surface dust samples. In a more challenging mission in July that year, it collected underground samples from the asteroid for the first time in space history after landing in a crater that it created earlier by blasting the asteroid's surface.
- Asteroids, which orbit the sun but are much smaller than planets, are among the oldest objects in the solar system and therefore may help explain how Earth evolved.

## Recent Space events

- The success of the mission and the science it produces will raise Japan's status as a central player in deep space exploration, together with NASA, the European Space Agency and Russia. JAXA currently has a spacecraft in orbit around Venus studying that planet's hellish climate and is collaborating with the Europeans on a mission that is on its way to Mercury.
- In the coming years, Japan plans to bring back rocks from Phobos, a moon of Mars, and contribute to NASA's Artemis program to send astronauts to Earth's moon.
- The capsule's return came weeks after NASA's OSIRIS-REx spacecraft made a successful touch-and-go grab of surface samples from the asteroid Bennu.
- China, meanwhile, announced last week that its lunar lander collected underground samples and sealed them within the spacecraft for return to Earth, as space developing nations compete in their missions.



# Environment: Two new Zoos one each in Bihar and Uttar Pradesh granted recognition by Central government

**Relevance IN – Prelims (about the two new zoos – features and location + about CZA) + Mains (GS III Environment conservation)**

## What's the NEWS

- At the 37<sup>th</sup> General Body meeting of Central Zoo Authority chaired by Union Minister for Environment, Forest and Climate Change, two new zoos the Rajgir Zoo Safari in Nalanda, Bihar and Shaheed Ashfaq Ullah Khan Prani Udyaan in Gorakhpur, Uttar Pradesh were granted recognition.

### Rajgir Zoo Safari, Nalanda, Bihar

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

### Shaheed Ashfaq Ullah Khan Prani Udyaan, Gorakhpur, U.P.

- Shaheed Ashfaq Ullah Khan Prani Udyaan, Gorakhpur, U.P. was granted recognition during the General Body meeting of the Central Zoo Authority on December 07, 2020.
- With this, the state of Uttar Pradesh has a total of 9 zoos. The establishment of the zoo is personally monitoring by the Chief Minister of the state.
- The zoo is situated in the spiritual land of Gorakhpur and has a high visitation. The zoo features enclosures for a range of birds, herbivores and carnivores.
- The zoo aims to create awareness through naturalistic enclosures and create long-lasting visitor experience through state-of-the-art visitor facilities like 4D Theatre, battery-operated train and accessibility to Divyangjan.

## Know! about Central Zoo Authority

- The Central Zoo Authority (CZA) is the body of the government of India responsible for oversight of zoos.
- The CZA is a statutory body chaired by the Environment Minister and tasked with regulating zoos across the country.
- It is an affiliate member of the World Association of Zoos and Aquariums (WAZA).
- The CZA was formed to bring Indian zoos up to international standards.
- The Central Zoo Authority has been constituted under the section 38A of Wild Life (Protection) Act 1972.
- The Authority consists of a Chairman, ten members and a Member Secretary.
- The main objective of the authority is to complement the national effort in conservation of wild life. Standards and norms for housing, upkeep, health care and overall management of animals in zoos has been laid down under the Recognition of Zoo Rules, 1992.
- Every zoo in the country is required to obtain recognition from the Authority for its operation.
- The Authority evaluates the zoos with reference to the parameters prescribed under the Rules and grants recognition accordingly.
- Zoos which have no potential to come up to the prescribed standards and norms may be refused recognition and asked to close down.
- The Authority's role is more of a facilitator than a regulator. It, therefore, provides technical and financial assistance to such zoos which have the potential to attain the desired standard in animal management.



Congratulations to Rajgir Zoo Safari at Nalanda and Shaheed Ashfaq Ullah Khan Prani Udyaan in Gorakhpur. Approved their recognition in the Central Zoo Authority meeting today. The state-of-the-art facilities in these zoos will help bring people closer to nature.



## Miscellaneous: United Nations Declares Invest India The Winner of the Investment Promotion Award 2020



**Relevance IN – Prelims (about UNCTAD + IP awards of UNCTAD + about Invest India) + Mains (GS III infrastructure development + GS II government policies and interventions)**

### What's the NEWS

- The United Nations (UNCTAD) has declared Invest India- the National Investment Promotion Agency of India- as a winner of the 2020 United Nations Investment Promotion Award.
- The award ceremony took place on 7<sup>th</sup> December 2020 at UNCTAD Headquarters in Geneva.

### Know! more about United Nations Investment Promotion Award

- The award recognizes and celebrates the outstanding achievements and best practices of Investment Promotion Agencies (IPAs) across the globe.
- The evaluation was based on UNCTAD's assessment of work undertaken by 180 Investment Promotion Agencies.
- In March 2020, UNCTAD constituted a team to monitor the response of IPAs to the pandemic.
- UNCTAD reported best practices from Investment Promotion Agencies in the *IPA Observer* publications in April and July 2020.
- The response of IPAs to the pandemic became the basis for the evaluation of the 2020 United Nations Investment Promotion Award.
- UNCTAD highlighted good practices followed by Invest India, such as *the Business Immunity Platform*, *Exclusive Investment Forum* webinar series
- Invest India has also shared long-term strategies and practices being followed for investment promotion, facilitation and retention at UNCTAD's high-level brainstorming sessions.
- This United Nations Investment Promotion Award is the most coveted award for Investment Promotion Agencies.
- UNCTAD is a central agency that monitors performance of IPAs and identifies global best practices. Germany, South Korea and Singapore have been some of the past winners of the award.

### Know! about UNCTAD

- The United Nations Conference on Trade and Development (UNCTAD) was established in 1964 as a permanent intergovernmental body.
- UNCTAD is the part of the United Nations Secretariat dealing with trade, investment, and development issues.
- The organization's goals are to: "maximize the trade, investment and development opportunities of developing countries and assist them in their efforts to integrate into the world economy on an equitable basis".
- UNCTAD was established by the United Nations General Assembly in 1964 and it reports to the UN General Assembly and United Nations Economic and Social Council.
- The primary objective of UNCTAD is to formulate policies relating to all aspects of development including trade, aid, transport, finance and technology.

- The conference ordinarily meets once in four years; the permanent secretariat is in Geneva.
- One of the principal achievements of UNCTAD (1964) has been to conceive and implement the Generalised System of Preferences (GSP).
- The developed countries formulated the GSP scheme under which manufacturers' exports and import of some agricultural goods from the developing countries enter duty-free or at reduced rates in the developed countries.
- The United Nations Conference on Trade and Development was established to provide a forum where the developing countries could discuss the problems relating to their economic development.
- Currently, UNCTAD has 195 member states and is headquartered in Geneva, Switzerland.

### **Know! about Invest India**

- Invest India, set up in 2009, is a non-profit venture under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India.
- As the national investment promotion and facilitation agency, Invest India focuses on sector-specific investor targeting and development of new partnerships to enable sustainable investments in India.
- In addition to a core team that focuses on sustainable investments, Invest India also partners with substantial investment promotion agencies and multilateral organizations.
- Invest India also actively works with several Indian states to build capacity as well as bring in global best practices in investment targeting, promotion and facilitation areas.

## **Infrastructure Development: NHRCL adopts aerial LiDAR Survey technique to conduct the ground survey for Delhi-Varanasi High Speed Rail Corridor**

**Relevance IN – Prelims (about NHRCL + about LiDAR technology + about DV HSRC + Mains (GS III infrastructure development)**

### **What's the NEWS**

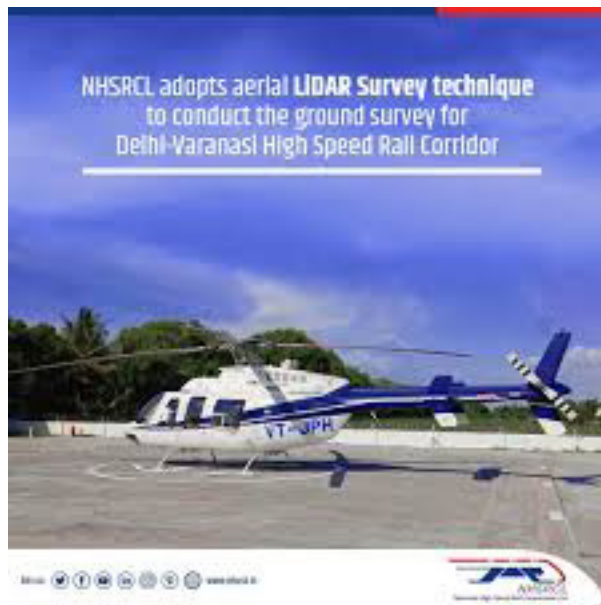
- National High Speed Rail Corporation Limited will be adopting Light Detection and Ranging Survey (LiDAR) technique using Laser enabled equipment mounted on a Helicopter for conducting ground survey for the preparation of **Detailed Project Report for the proposed Delhi-Varanasi HSR corridor.**
- The alignment or ground survey is a crucial activity for any linear infrastructure project as the survey provides accurate details of areas around the alignment.
- This technique uses a combination of Laser data, GPS data, flight parameters and actual photographs to give accurate survey data.

### **Aerial LiDAR survey technique**

- The aerial LiDAR survey technique, for the first time for any railway project in India, was adopted for the Mumbai-Ahmedabad High Speed Rail Corridor primarily because of its high accuracy.
- The ground survey using aerial LiDAR for MAHSR alignment was done only in 12 weeks against the 10-12 months if had been done through traditional survey methods.

### **Know! about LIDAR (sometimes also written as “LiDAR”, “Lidar”, or “LADAR”)**

- Lidar is a method for measuring distances by illuminating the target with laser light and measuring the reflection with a sensor.
- Differences in laser return times and wavelengths can then be used to make digital 3-D representations of the target. It has terrestrial, airborne, and mobile applications.
- **LiDAR works** in a similar way to Radar and Sonar yet uses light waves from a laser, instead of radio or sound waves.

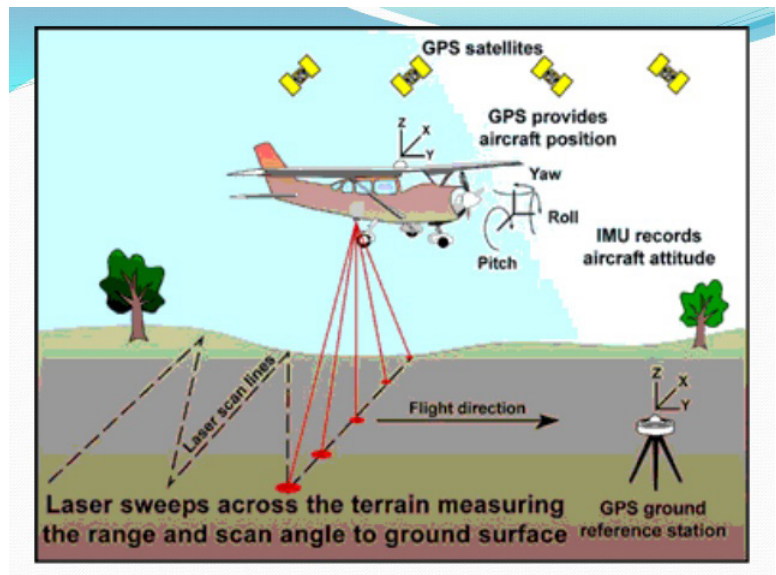




- A **LiDAR** system calculates how long it takes for the light to hit an object or surface and reflect back to the scanner. The distance is then calculated using the velocity of light\*
- It is **used** in a wide range of land management and planning efforts, including hazard assessment (including lava flows, landslides, tsunamis, and floods), forestry, agriculture, geologic mapping, and watershed and river surveys.

### Delhi-Varanasi HSR

- The proposed Delhi-Varanasi HSR alignment covers mixed terrains including densely populated urban and rural areas, Highways, Roads, Ghats, Rivers, Green fields etc, which makes this activity more challenging.
- NHRCL has been entrusted with the work for preparing Detailed Project Report for the Delhi-Varanasi HSR Corridor by the Ministry of Railways.
- The tentative length of the corridor is about 800 km, the alignment and stations will be decided in consultation with the government.



### National High-Speed Rail Corporation Limited (NHRCL)

- NHRCL was incorporated on 12<sup>th</sup> February 2016 under the Companies Act, 2013 with an object to finance, construct, maintain and manage the High Speed Rail Corridor in India.
- The Company has been modelled as 'Special Purpose Vehicle' in the joint sector with equity participation by Central Government through Ministry of Railways and two State Governments viz. Government of Gujarat and Government of Maharashtra.
- The High-Speed Rail (HSR) project apart from being a technological marvel, would afford many quantifiable benefits like saving in travel time, vehicle operation cost, reduction in pollution, job creation, reduction in accidents/ enhanced safety, imported fuel substitution, and reduction in pollutants.
- The project would also boost the infrastructure and add to the growth of economy.
- HSR would be an integrated system having overall optimization of various components, viz. Hardware, Software, Human-ware, and their interface, etc.
- The Company would be ushering India into the category of few countries of the world (about 15) using High Speed Railway System.

## Science & Technology: Indigenous mRNA vaccine gets Drug Controller nod to initiate Human clinical trials

**Relevance IN – Prelims (about mRNA vaccine + about Ind-CEPI mission + about BIRAC) + Mains (GS III awareness in the field of science and technology)**

### What's the NEWS

- India's first indigenous mRNA vaccine candidate has received approval from Indian Drug regulators to initiate Phase I/II human clinical trial.
- The novel mRNA vaccine candidate, HGCO19 has been developed by Gennova, Pune and supported with seed grant under the Ind-CEPI mission of Department of Biotechnology of M/o Science & Technology.
- Gennova, in collaboration with HDT Biotech Corporation, Seattle, USA, has worked together to develop an mRNA vaccine candidate.

### Know! about mRNA vaccine

- The mRNA vaccines do not use the conventional model to produce immune response. Instead, mRNA vaccine carries the molecular instructions to make the protein in the body through a synthetic RNA of the virus.



- The host body uses this to produce the viral protein that is recognized and thereby making the body mount an immune response against the disease.
- mRNA-based vaccines are scientifically the ideal choice to address a pandemic because of their rapid developmental timeline.
- The mRNA vaccine is considered safe as is non-infectious, non-integrating in nature, and degraded by standard cellular mechanisms.
- They are expected to be highly efficacious because of their inherent capability of being translatable into the protein structure inside the cell cytoplasm.
- Additionally, mRNA vaccines are fully synthetic and do not require a host for growth, e.g., eggs or bacteria.
- Therefore, they can be quickly manufactured in an inexpensive manner under cGMP conditions to ensure their “availability” and “accessibility” for mass vaccination on a sustainable basis.

### Know! about the Ind CEPI mission

- The Department of Biotechnology, Ministry of Science & Technology, Government of India is implementing the IndCEPI mission ‘India Centric Epidemic Preparedness through Rapid Vaccine Development: Supporting Indian Vaccine Development’ which is aligned with the Global Initiative of CEPI and aims to strengthen the development of vaccines and associated competencies/technologies for the diseases of epidemic potential in India.
- The Ind-CEPI mission of DBT is implemented by its PSU, Biotechnology Industry Research Assistance Council (BIRAC).

### Know! about BIRAC

- Biotechnology Industry Research Assistance Council (BIRAC) is a not-for-profit Public Sector Enterprise, set up by Department of Biotechnology (DBT), Government of India as an Interface Agency to strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs.
- BIRAC is a industry-academia interface and implements its mandate through a wide range of **impact initiatives**, be it providing access to risk capital through targeted funding, technology transfer, IP management and handholding schemes that help bring **innovation excellence** to the biotech firms and make them globally competitive.
- BIRAC has initiated several schemes, networks and platforms that help to **bridge the existing gaps** in the industry-academia Innovation research and facilitate novel, high quality affordable products development through cutting edge technologies.
- BIRAC has initiated partnerships with several national and global partners to collaborate and deliver the salient features of its mandate.

## Government Schemes: Kamdhenu Chair

**Relevance IN – Prelims (about Kamdhenu chair + about Rashtriya Kamdhenu Aayog + about Rashtriya Gokul Mission) + Mains (GS III System- objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing).**

### What’s the NEWS

- Rashtriya Kamdhenu Aayog organized a National Webinar on ‘Kamdhenu Chair in Universities and Colleges’ in association with UGC, AICTE and Association of Indian Universities (AIU).
- To educate the youth about agriculture, Health, Social, Economic and Environmental importance of our Indigenous Cows.
- There is need to bring forth the Science related to Indigenous Cows and our Education system should provide platform as well as push in Research on benefits mentioned about Cows with modern scientific and process oriented approach.
- The move will promote evidence based scientific mind set on many things that we know but need to prove and make acceptable to all scientifically.



**RASHTRIYA KAMDHENU AAYOG**  
Ministry of Animal Husbandry, Dairying and Fisheries, Govt of India





*You are Cordially Invited for the*  
**NATIONAL WEBINAR ON KAMDHENU CHAIR**  
**Monday 14th Dec 2020 From 12 Noon to 1:30 pm**

**Chief Guest**  
**Shri Sanjay Shamrao Dhotre** **Dr. Vallabhkhair Kathiria**  
Hon'ble Minister Of State For Education  
Communications, Electronics & IT, Govt. of India  
Chairman, Rashtriya Kamdhenu Aayog,  
Govt. of India

**Coordinator :**  
Shri. Vijay Tiwari, Mob : 7834936611  
Email : shandilyavtiwari@gmail.com





**Rashtriya Kamdhenu Aayog**  
Mob : 88535 84715 / 63933 03738  
Email : rkamdhenu-aayog@gmail.com

### Rashtriya Kamdhenu Aayog

- The Government of India has constituted the “Rashtriya Kamdhenu Aayog” to organize animal husbandry on modern and scientific lines and to take steps for preserving and improving breeds, and prohibiting the slaughter, of cows and calves and other milch and draught cattle.
- It is an apex advisory body to address the issues related to conservation, protection and development of cows and their progeny, proper implementation of laws with respect to prohibition of slaughter and / or cruelty to cows and to provide policy and direction to the cattle conservation and development programmes in the country.
- The Aayog is a high powered permanent apex advisory body with mandate to help the Central Government to develop appropriate programmes for conservation, sustainable development and genetic upgradation of Indigenous breeds of cows.
- The Aayog will review existing laws, policies as well as suggest measures for optimum economic utilization of cow wealth for enhanced production and productivity, leading to higher farm income and better quality of life for the dairy farmers.
- It also aims at transmission and application of improved technology and management practices at the farmers' doorstep through coordination with dairy cooperatives, farmer producer companies and dairy industry as well as research institutions.
- Rashtriya Kamdhenu Aayog will function as an integral part of Rashtriya Gokul Mission.

### Rashtriya Gokul Mission.

- Rashtriya Gokul Mission has been initiated by Government of India in December 2014 with the aim of development and conservation of indigenous bovine breeds, genetic upgradation of bovine population and enhancing milk production and productivity of bovines thereby making milk production more remunerative to the farmers.
- The scheme comprises of two components namely National Programme for Bovine Breeding (NPBB) and National Mission on Bovine Productivity (NMBP).

### Conservation of Indigenous breeds (why it is vital?)

- India has 299.6 million bovine population out of which 190.9 million are cattle and 108.7 million are buffaloes. Of this, 80% of cattle are indigenous and Non- descript breeds.
- The bovine genetic resource of India is represented by 41 registered indigenous breeds of cattle and 13 registered buffalo breeds.
- Indigenous bovine are robust and resilient and are particularly suited to the climate and environment of their respective breeding tracts. The milk of indigenous animals is high in fat and SNF content.

- The productivity of indigenous breeds will be impacted to a much lesser extent than exotic animals due to climate change. However, the number of indigenous animals is declining and some breeds like Punganur have become threatened. For this purpose RGM has been initiated to promote conservation and development of indigenous breeds.

### **Gokul Gram:**

The Rashtriya Gokul Mission also envisages establishment of integrated cattle development centres 'Gokul Grams' to develop indigenous breeds including upto 40% nondescript breeds.

- To promote indigenous cattle rearing and conservation in a scientific manner.
- To propagate high genetic merit bulls of indigenous breeds.
- To optimize modern Farm Management practices and promote Common Resource

### **National Kamdhenu Breeding Centre:**

- Under RGM, two "National Kamdhenu Breeding Centres" (NKBC) are being established as Centres of Excellence to develop and conserve Indigenous Breeds in a holistic and scientific manner.

## **Economy: Financial Stability and Development Council**

***Relevance IN – Prelims (about FSDC and its role + Mains (GS III economic activity)***

### **What's the NEWS**

- Union Minister for Finance & Corporate Affairs Smt. Nirmala Sitharaman chaired the 23<sup>rd</sup> Meeting of the Financial Stability and Development Council (FSDC)
- The meeting reviewed the major macroeconomic developments and Financial Stability issues (global and domestic) with special reference to vulnerability related issues
- The Council discussed the challenges involved in smooth transition of London Interbank Offer Rate (LIBOR) based contracts and noted that a multipronged strategy involving relevant stakeholder institutions and departments is required in this regard.
- The Council also took note of the activities undertaken by the FSDC Sub-Committee chaired by the Governor of RBI and the action

### **Financial Stability and Development Council (FSDC)**

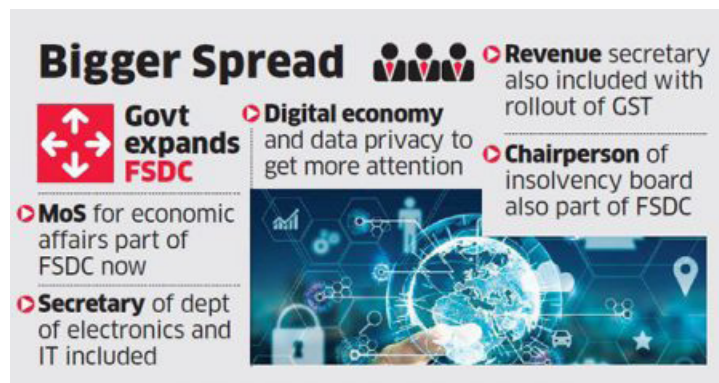
- It is an apex-level body constituted by the government of India. The idea to create such a super regulatory body was first mooted by the Raghuram Rajan Committee in 2008.
- It has been setup such an autonomous body dealing with macro prudential and financial regularities in the entire financial sector of India.
- An apex-level FSDC is not a statutory body.
- The recent global economic meltdown has put pressure on governments and institutions across the globe to regulate their economic assets.
- This council is seen as India's initiative to be better conditioned to prevent any economic meltdown incidents in future.
- The new body envisages to strengthen and institutionalise the mechanism of maintaining financial stability, financial sector development, inter-regulatory coordination along with monitoring macro-prudential regulation' of economy.
- No funds are separately allocated to the council for undertaking its activities.

### ***Composition of the council***

- Chairperson: The Union Finance Minister of India

### ***Members:***

- FSDC was formed to bring greater coordination among financial market regulators.



- The council is headed by the finance minister and has the Reserve Bank of India (RBI) governor and chairpersons of the Securities and Exchange Board of India, Insurance Regulatory and Development Authority and Pension Fund Regulatory and Development Authority as other members along with finance ministry officials.

### London Interbank Offered Rate (LIBOR)

- The **London Interbank Offered Rate (LIBOR)** is a benchmark interest **rate** at which major global banks lend to one another in the international **interbank** market for short-term loans.
- LIBOR is actually a set of several benchmarks that reflect the average interest rate at which large global banks can borrow from each other.
- The leading indicator used to price loans and other debt instruments, it is produced once a day by the Intercontinental Exchange (ICE) and regulated by the Financial Conduct Authority.

### Space Awareness: Communication satellite CMS-01



**Relevance IN – Prelims (about PSLV- C50 and CMS -01) + Mains (GS III awareness in the field of space)**

#### What's the NEWS

- The Indian Space Research Organisation (ISRO) is all set to launch a communication satellite on 17 December from the Second Launch Pad (SLP) of Satish Dhawan Space Centre at Sriharikota.
- The communication satellite CMS-01 will be onboard the Polar Satellite Launch Vehicle (PSLV-C50).

#### PSLV-C50

- PSLV-C50 is the 22<sup>nd</sup> flight of the PSLV in the 'XL' configuration, and the 52<sup>nd</sup> PSLV flight.
- ISRO added that this will be the 77<sup>th</sup> launch vehicle mission from SDSC, SHAR.



- The PSLV is 44-metre-high and has four stages with six strap-on booster motors on to the first stage that gives it's a higher thrust during the initial flight moments.
- ISRO has developed and used different PSLV variants, including ones with either two or four strap-on motors, or the Core Alone variant without any strap-on motors.
- As the PSLV is not a reusable rocket, the first stage won't be reclaimed and it will crash into the Indian Ocean.

#### **The payload: CMS-01**

- CMS-01 is the 42<sup>nd</sup> communication satellite from India and weighs around 1,410 kgs.
- It will be replacing the ageing GSAT-12 satellite that was launched in 2011
- It will provide telecom services in the Extended-C Band of the frequency spectrum.
- The Extended-C Band coverage will include Indian mainland, Andaman-Nicobar and Lakshadweep Islands.
- Twenty minutes into the flight, it will be set in the Geostationary Orbit (GEO) at 83° inclination.
- The expected mission life of this spacecraft is supposed to be seven years or more.
- The PSLV-C50 rocket launch will be followed by the launch of the new Small Satellite Launch Vehicle (SSLV) carrying the Earth Observation Satellite (EOS-02) and the Geosynchronous Satellite Launch Vehicle-F10 (GSLV) carrying the EOS-3.
- The other Indian satellites that are ready for launch are GISAT and Microsat-2A.

### **Disaster Management: Coalition for Disaster Resilient Infrastructure (CDRI) and UN Office for Disaster Risk Reduction (UNDRR)**



***Relevance IN – Prelims (about CDRI and its role)+ Mains (GS III Disaster and disaster management)***

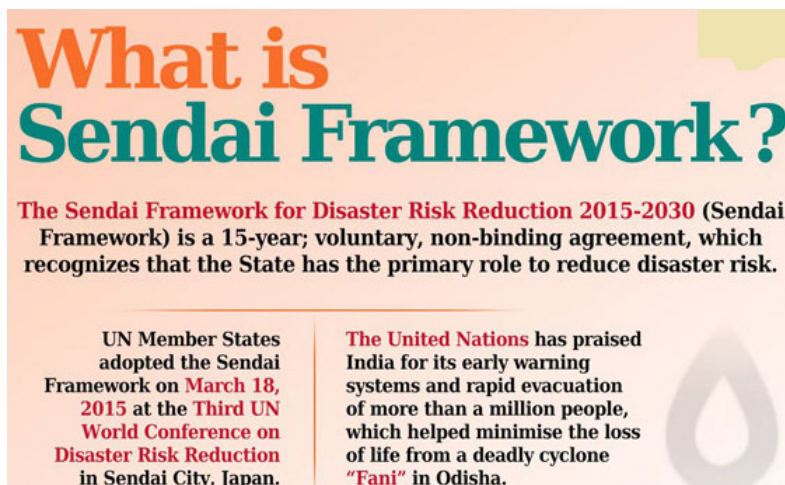
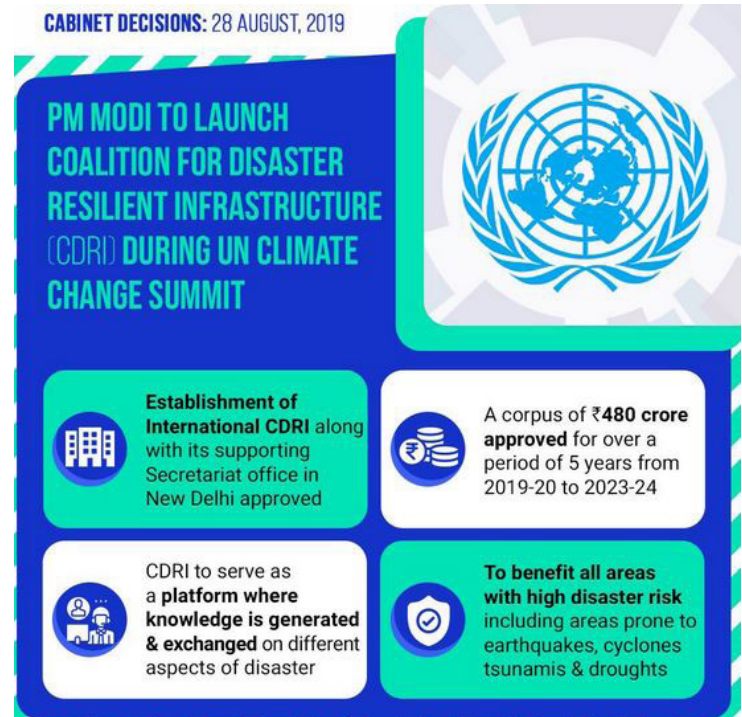
#### **What's the NEWS**

- Union Minister for Health and Family Welfare digitally addressed an event by Coalition for Disaster Resilient Infrastructure (CDRI) and UN Office for Disaster Risk Reduction (UNDRR)
- The theme of the event was “Build Back Better: building resilient health infrastructure and supply chains.”

#### **Coalition for Disaster Resilient Infrastructure (CDRI)**

- Prime Minister of India, Shri Narendra Modi, announced the global Coalition for Disaster Resilient Infrastructure (CDRI), at the UN Climate Action Summit 2019 held in New York City on 23 September 2019.
- The Coalition for Disaster Resilient Infrastructure (CDRI) is a multi-stakeholder global partnership of national governments, UN agencies and programmes, multilateral development banks and financing mechanisms, the private sector, and academic and knowledge institutions. It aims to address the challenges of building resilience into infrastructure systems and development associated with it.

- Developed through consultations with more than 35 countries, CDRI envisions enabling measurable reduction in infrastructure losses from disasters, including extreme climate events.
- CDRI thus aims to enable the achievement of objectives of expanding universal access to basic services and enabling prosperity as enshrined in the Sustainable Development Goals, while also working at the intersection of the Sendai Framework for Disaster Risk Reduction and the Paris Climate Agreement.
- Established as a platform for generating and exchanging knowledge, CDRI will conduct country-specific and global activities.
- CDRI will provide member countries technical support and capacity development, research and knowledge management, and advocacy and partnerships to facilitate and encourage investment in disaster resilient infrastructure systems.
- In its formative stage, CDRI will focus on developing resilience in ecological infrastructure, social infrastructure with a concerted emphasis on health and education, and economic infrastructure with special attention to transportation, telecommunications, energy, and water.
- Within 2-3 years, the coalition aims to have a 3-fold impact of achieving considerable changes in member countries' policy frameworks, future infrastructure investments and high reduction in economic losses from climate-related events and natural disasters across sectors.
- CDRI will uphold the UN Agenda 2030 principle of leaving no one, no place, and no ecosystem behind, focusing on the most vulnerable regions and populations, while enabling inclusive and deliberative processes that recognize national and local efforts as primal.



## Energy: 8<sup>th</sup> Producing Basin of India - Bengal Basin, dedicated to the nation

**Relevance IN – Prelims (about Asokenagar-1, Bengal Basin + other basins – geographical location) + Mains (GS III infrastructure development)**

### What's the NEWS

- The Ministry for Petroleum & Natural Gas and Steel dedicated the Bengal Basin, the 8<sup>th</sup> producing basin of India, to the nation.



### Know! about Asokenagar-1, Bengal Basin

- ONGC took a major step by commencing oil production from the well Asokenagar-1, Bengal Basin in 24 Paragana district.
- The well Asokenagar-1 was completed as an oil producer under Early-Monetization Plan issued by Government of India.
- This makes ONGC having discovered and put to production seven out of the eight producing basins of India covering 83 percent of established oil & gas reserves.
- ONGC is India's largest oil and gas producer contributing 72 percent of the country's hydrocarbon production.
- The well Asokenagar-1 has heralded the end of painstaking search for hydrocarbons in the region by ONGC by sending its first hydrocarbon consignment produced during well testing to IOCL's Haldia Oil Refinery done earlier on 5 November 2020.

### Major Sedimentary Basins in India.

- India has 26 sedimentary basins covering an area of 3.14 million square kilometres. The sedimentary basins of India, onland and offshore up to the 200m isobath, have an areal extent of about 1.79 million sq. km.
- In the deepwater beyond the 200m isobath, the sedimentary area has been estimated to be about 1.35 million sq. km. Thus, the total works out to 3.14 million sq. km.
- Broadly Indian sedimentary basins have been divided into four categories based on their degree of prospectivity as presently known. The categorization based on the prospectivity of the basin as presently known is as under:

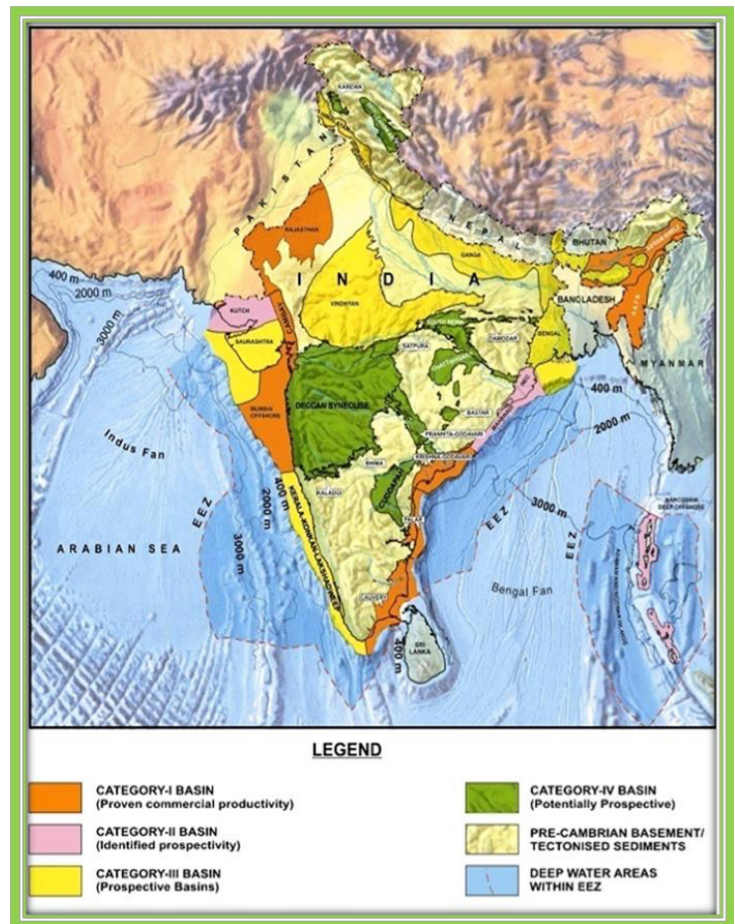
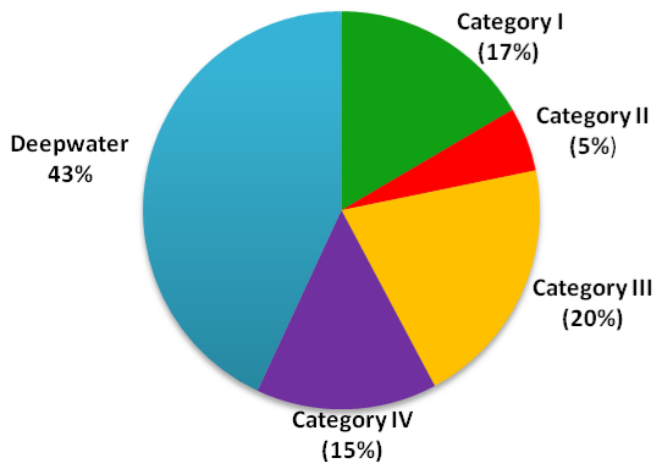
### Categories of Indian sedimentary basins

Type of basins	Area (Sq. KM)	Hydrocarbons Prospectivity	Basins/ Region
Category I (7 Basins)	518500	Established commercial production	Cambay, Assam Shelf, Mumbai offshore, Krishna Godavari, Cauvery, Assam Arakan Fold Belt and Rajasthan
Category II (3 Basins)	164000	Known accumulation of hydrocarbons but no commercial production as yet	Kutch, Mahanadi-NEC & Andaman-Nicobar
Category III (6 Basins)	641000	Indicated hydrocarbon shows that are considered geologically prospectivity.	Himalayan Foreland, Ganga, Vindhyan, Saurashtra, Kerala-Konkan-Lakshadweep & Bengal
Category IV (10 basins)	461200	Uncertain potential which may be prospective by analogy with similar basins in the world.	Karewa, Spiti-Zaskar, Satpura- South Rewa-Damodar, Narmada, Deccan Syneclise, Bhima-Kaladgi, Cuddapah, Pranhita-Godavari, Bastar, Chhattisgarh



- Crude oil & natural gas production in the country is from 7 basins under category-I and deepwater areas. In category-II basins, hydrocarbon discoveries have been made but commercial production is yet to commence.
- The distribution of total Indian sedimentary area of 3.14 million square kilometre under different categories and deepwater is presented as under:

#### Indian Sedimentary Map of India



## Infrastructure Development: World Bank approves 4 India projects worth USD 800 million

**Relevance IN – Prelims (about these 4 projects + about DRIP -2) + Mains (GS III infrastructure development)**

### What's the NEWS

- The World Bank approved four India projects worth over USD 800 million to support development initiatives.

### The projects that have been approved are:

- Chhattisgarh Inclusive Rural and Accelerated Agriculture Growth Project (CHIRAAG)
- Nagaland: Enhancing Classroom Teaching and Resources Project; and
- Second Dam Improvement and Rehabilitation Project (DRIP-2).
- The projects support a range of development initiatives – strengthening India's social protection architecture, promoting nutrition-supportive agriculture for tribal households in Chhattisgarh, enhancing quality education in Nagaland and improving the safety and performance of existing dams across various states in India

### Second Dam Improvement and Rehabilitation Project (DRIP-2)

- The USD 250 million Second Dam Improvement and Rehabilitation Project (DRIP-2) will improve the safety and performance of existing dams across various states of India
- It will strengthen dam safety by building dam safety guidelines; bring in global experience; and introduce newer technologies.

### Nagaland: Enhancing Classroom Teaching and Resources Project

- Nagaland: Enhancing Classroom Teaching and Resources Project (USD 68 million) will improve classroom instruction; create opportunities for the professional development of teachers; and build technology systems to provide students and teachers with more access to blended and online learning as well as allow better monitoring of policies and programs, it said.



## **CHIRAAG project**

- The USD 100 million CHIRAAG project will develop sustainable production systems that allow tribal households in remote areas of Chhattisgarh to practice round-the-year production of diversified and nutritious food.
- It will be implemented in the southern tribal-majority region of the state where a large population is undernourished and poor.
- The project will benefit over 180,000 households from about 1,000 villages in eight districts of Chhattisgarh

## **Know! more about Dam Rehabilitation and Improvement Project (DRIP II)**

- It is being implemented with the loan assistance from the World Bank.
- The project was initially launched in seven states namely Karnataka, Jharkhand, Kerala, Karnataka, Madhya Pradesh, Odisha, Uttarakhand and Tamil Nadu. It was launched in 2012.

*The Project consists of three main components as follows*

1. Rehabilitation and Improvement of Dams and associated appurtenances
  2. Dam Safety Institutional Strengthening
  3. Project Management
- Under DRIP-II, the safety of the dams is to be improved. Also, operational performance of selected dams is to be enhanced.
  - The project is to be implemented for ten years between 2020 and 2030.
  - The project is to be supervised by Central Water Commission.
  - The total budget outlay of the project is 1.5 billion USD. Of this, the World Bank is to fund one billion USD.
  - The six-year project was funded by the World Bank at a cost of Rs 2100 cr.
  - Later in 2018, the Government revised the cost to Rs 3466 crores along with 2-year extension.
  - 223 dam projects were originally selected to be developed under the scheme, which was also increased to 257.

## **Status of Dam Safety in India**

- Around 80% of the large dams in India are twenty-five years old.
- Around 209 dams are 100 years old.
- These dams were built in an era when design practices and safety considerations were much below the safety norms.
- Thus, several dams are facing distress and are in need of attention for ensuring operational efficiency and structural safety.
- India ranks third globally in dam operation after China and USA. There are 5,334 large dams in the country and around 411 are under construction. The total storage capacities of these dams is 283 billion cubic metres.

## **Connect to the Past**

### **DRIP Phase II & Phase III**

- The Cabinet Committee on Economic in October has approved the Dam Rehabilitation and Improvement Project (DRIP) Phase II & Phase III with the financial assistance of the World Bank (WB), and Asian Infrastructure Investment Bank (AIIB) to improve the safety and operational performance of selected dams across the whole country, along with institutional strengthening with system wide management approach.
- The project cost is Rs 10,211 crore. The Project will be implemented over a period of 10 years duration in two Phases, each of six years duration with two years overlapping from April, 2021 to March, 2031.
- The share of external funding is Rs 7,000 crore of the total project cost, and balance Rs 3,211 crore is to be borne by the concerned Implementing Agencies (IAs).
- The contribution of Central Government is Rs 1,024 crore as loan liability and Rs 285 crore as counter-part funding for Central Component.

### **DRIP Phase II & Phase III envisages the following objectives:-**

- To improve the safety and performance of selected existing dams and associated appurtenances in a sustainable manner.
- To strengthen the dam safety institutional setup in participating states as well as at central level, and

- iii. To explore the alternative incidental means at few of selected dams to generate the incidental revenue for sustainable operation and maintenance of dams

**To achieve the above objectives, DRIP Phase II & Phase III has following components:**

- Rehabilitation and improvement of dams and associated appurtenances
- Dam safety institutional strengthening in participating States and Central agencies,
- Exploration of alternative incidental means at few of selected dams to generate the incidental revenue for sustainable operation and maintenance of dams, and
- Project management.

## Science and Technology: High-Resolution Aquifer Mapping & Management in Arid Region of North-Western India

**MEMORANDUM OF AGREEMENT**  
**BETWEEN**

 **CENTRAL GROUND WATER BOARD** & **CSIR-NATIONAL GEOPHYSICAL RESEARCH INSTITUTE**  

**for**  
**High Resolution Aquifer Mapping & Management in Arid Region of North Western India**

**Date** **December 21, 2020** **Time** **05.00 PM**

**WATCH LIVE**  <https://facebook.com/drharshvardhanofficial>  
 <https://twitter.com/drharshvardhan>  
 <http://app.drharshvardhan.com/download>

**Relevance IN – Prelims (about Aquifer Mapping Programme + ministries involved) + Mains (GS III awareness in the field of science and technology)**

### What's the NEWS

- A Memorandum of Agreement (MoA) was between Central Ground Water Board (CGWB), Ministry of Jal Shakti and CSIR-NGRI, Hyderabad for use of advanced heliborne geophysical survey and other scientific studies in parts of the States of Rajasthan, Gujarat and Haryana under the Aquifer Mapping Programme.
- Under phase- I of the project, an area of nearly 1 lakh sq km spreading over nearly 65,500 sq km of western arid Rajasthan 32,000 Sq. Km arid parts of Gujarat and nearly 2500 sq km of Haryana would be covered at an estimated cost of 54 Crores.

### Aquifer Mapping Programme.

- The major objectives of the study include High resolution aquifer mapping using heliborne geophysical studies, including identification of Sites for artificial recharge, 3D Geophysical model, Geophysical Thematic maps at horizontal and vertical plains, Aquifer Geometry of principal aquifer with demarcation of de-saturated and saturated aquifers, Aquifer system with relatively fresh and saline zones; Spatial and depth wise distribution of paleochannel network if any and its linkage with aquifer system; Selecting suitable sites for groundwater withdrawal and water conservation through artificial or managed aquifer recharge.
- This is the first time Ministry of Jal Shakti has decided to use the state of the art technology for identification of aquifers in such a large arid/semi-arid area of the country.
- The study is likely to generate groundwater data in very short time period and will help CGWB in expeditiously finalizing the groundwater management plan in above mentioned water stressed areas.

- The findings of the study would help in formulating site specific plans for improving ground water levels in the water stressed areas and charter the road map for sustainable management of ground water resources.

## Infrastructure Development: World Bank Signs \$500 Million Project to Develop Green, Resilient and Safe Highways in India

**Relevance IN – Prelims (about Green National Highways Corridors Project) + Mains (GS III infrastructure development + environment conservation)**

### What's the NEWS

- The Government of India and the World Bank today signed a \$500 million project to build safe and green national highway corridors in the states of Rajasthan, Himachal Pradesh, Uttar Pradesh and Andhra Pradesh.
- The project will also enhance the capacity of the Ministry of Road Transport and Highways (MoRTH) in mainstreaming safety and green technologies.

### Green National Highways Corridors Project

- The Green National Highways Corridors Project will support MoRTH construct 783 km of highways in various geographies by integrating safe and green technology designs such as local and marginal materials, industrial byproducts, and other bioengineering solutions.
- The project will help reduce GHG emissions in the construction and maintenance of highways.
- This project will set new standards in the construction of safe motorable roads.
- The selected stretches in the states of Uttar Pradesh, Andhra Pradesh, Rajasthan and Himachal Pradesh will also help improve connectivity and promote economic development.
- The ultimate objective of transport infrastructure is to provide seamless connectivity and reduce logistics costs.
- The project will support the ministry with an in-depth analysis of gender-related issues in the transport sector along with help in creating jobs for women by training women-led micro enterprises and women collectives to implement green technologies in the highway corridors.
- The project will strengthen and widen existing structures; construct new pavements, drainage facilities and bypasses; improve junctions; and introduce road safety features.
- Disaster risk assessment of about 5,000 km of the National Highway network will also be undertaken under the project along with support to ministry for mainstreaming climate resilience aspects in project design and implementation.
- The \$500 million loan from the International Bank for Reconstruction and Development (IBRD), has a maturity of 18.5 years including a grace period of five years.

## Science & Technology: India International Science Festival-2020 inaugurated

**Relevance IN – Prelims (about IISF 2020) + Mains (GS II government policies and interventions + GS III awareness in the field of science and technology)**

### What's the NEWS

- The India International Science Festival (IISF)-2020 got off to a grand start with the inaugural address by the Prime Minister, Shri Narendra Modi in the presence of Minister of Science & Technology, Earth Sciences and Health & Family Welfare
- This year's festival is being organised in a virtual mode and is being held from 22-25 December, 2020.
- More than 40 science laboratories and educational institutions are participating in organising this festival

### IISF 2020 - highlights

- IISF-2020 will attempt 5 Guinness Book of World Records, one of which---maximum students making the Sun Dial simultaneously---was attempted this morning where 6,874 students from 189 schools participated
- The sixth edition of this mega science festival will take place from December 22 -25, 2020 with the theme 'Science for Self-Reliant India and Global Welfare'.
- It aims to celebrate the achievements of India's scientific and technological advancements with students and innovators.



- This virtual edition of the festival will also engage with the public, showing them how science, technology, engineering, and mathematics (STEM) play a pivotal role by providing solutions to improve our lives.
- IISF 2020 is being organized jointly by Council of Scientific and Industrial Research (CSIR), Department of Science and Technology (DST), Ministry of Earth Sciences, Department of Biotechnology (DBT), Indian Council of Medical Research (ICMR) in association with VijnanaBharati.
- The nodal institution for science festival this year is CSIR-National Institute of Science, Technology and Development Studies (NISTADS), New Delhi.

## Science & Technology: Role of Genomics highlighted during Vigyan Yatra

### Relevance IN – Prelims (about Vigyan Yatra and Jigyasa + Ayurgenomics)

#### What's the NEWS

- In the run up to the India International Science Festival 2020, CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB), New Delhi participated in the Vigyan Yatra
- CSIR-IGIB, kicked off the online program with a reminder of Article 5A(h) of the Indian Constitution which states that it is the duty of every citizen of India to develop the scientific temper, humanism and the spirit of enquiry and reform, stressing how the solution to many problems of the modern world lie in science.

The banner for Vigyan Yatra 2020 features the logos of the India International Science Festival 2020, IGIB (Institute of Genomics & Integrative Biology), and CSIR. It highlights the participation of Prof. K. VijayRaghavan, Principal Scientific Advisor to the Government of India, and Dr. Anurag Agrawal, Director of CSIR-IGIB. The program includes a welcome address by Dr. Anurag Agrawal, an IGIB S&T Showcase, a keynote address by Prof. K. VijayRaghavan, and a vote of thanks. The event is scheduled for 21 December, 2020, from 3:30 to 5:30 pm. Logos for the Ministry of Science and Technology, Ministry of Earth Sciences, Ministry of Health & Family Welfare, Government of India, CSIR-NISTADS, and Vijnana Bharati are also present.

Programme	
Welcome address by Dr. Anurag Agrawal, Director, CSIR - IGIB	
IGIB at glance and IGIB S&T Showcase	
Keynote address by Prof. K. VijayRaghavan	
Vote of thanks	
To Join	<a href="https://youtu.be/78MxHPoAAg">https://youtu.be/78MxHPoAAg</a> <a href="https://www.facebook.com/igibofficial">https://www.facebook.com/igibofficial</a>

21 December, 2020  
Time: 3:30 to 5:30 pm

#### Achievements of IGIB in the areas of genomic medicine

- IGIB has a major focus on genomics with special emphasis on genomics of human diseases; from the sequencing of the first Indian genome in 2009 to sequencing the genome of 1000 Indians, to creating a reference database of Indian genomes for precision medicine development.
- The expertise in genomics also allowed the institute to rapidly sequence large numbers of COVID-19 samples when the pandemic struck India early this year.
- CSIR-IGIB has also been leading the fight against COVID-19 by developing a paper-based RNA diagnostic system called FELUDA based on the CRISPR-Cas9 system.
- This development was the result of already ongoing research into developing CRISPR-diagnostics for sickle cell anemia.
- IGIB is also using stem cell technology to correct genetic diseases such as sickle cell anemia and thalassemia, which has a wide prevalence in the country.

#### Ayurgenomics

- Research at CSIR-IGIB has led to the birth of a modern scientific discipline known as Ayurgenomics.
- Ayurvedic doctors and genomics scientists have over the years worked together to identify a genomic correlate for the Prakriti-based stratification of population used in Ayurveda.



## Vigyan Yatra and Jigyasa

- CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) and Vigyan Bharati (VIBHA) organised the 'Vigyan Yatra' as part of the 6<sup>th</sup> India International Science Festival (IISF-2020) and Jigyasa: Student-Scientist Connect Program to nurture scientific temper and inspire young minds.
- The Vigyan Yatra was organised to showcase the scientific activities virtually. Students and teachers from Kendriya Vidyalayas, Navodaya Vidyalayas, Government Schools, etc. from Maharashtra, Madhya Pradesh, Chhattisgarh and other parts of India prominently participated in this programme.

## Environment: Status of Leopard in India report

**Relevance IN – Prelims (about the report highlights) + Mains (GS III Environment conservation)**

### What's the NEWS

- The Union Minister of Environment, Forest and Climate Change released the status of Leopard.
- India's population of leopards has gone up 60 per cent and the country now has 12,852 leopards.
- The "Status of Leopard in India" report which recorded a surge in the population of leopards in the country.

### Status of Leopard in India 2018 report

- India now has 12,852 leopards as compared to the previous estimate of 7910 conducted 2014.
- More than 60 per cent increase in population has been recorded. The States of Madhya Pradesh, Karnataka and Maharashtra recorded the highest leopard estimates at 3,421; 1,783 and 1,690 respectively
- India's world record tiger survey also estimated the population of leopards and the tiger range was found home to 12,852 (12,172-13,535) leopards.
- They occur in prey rich protected areas as well as multi-use forests.
- A total of 5,240 adult individual leopards were identified in a total of 51,337 leopard photographs using pattern recognition software.
- Madhya Pradesh reported the highest number of leopards followed by Karnataka and Maharashtra.

### Know! about Leopards

- The Indian leopard (*Panthera pardus fusca*) is a leopard subspecies widely distributed on the Indian subcontinent.
- The Indian leopard is one of the big cats occurring on the Indian subcontinent, apart from the Asiatic lion, Bengal tiger, snow leopard and clouded leopard.
- Leopards are listed as "Vulnerable" in IUCN Red List of Threatened Species.
- Under CITES (Convention on International Trade of Endangered Species of Wild Fauna and Flora) they are listed under Appendix I.
- They are protected under Schedule I of the Wildlife (Protection) Act, 1972.
- They are found in every type of habitat from rain forests to desert. They are also found in temperate regions.
- They are distributed from Trans-Himalayas to Gangetic plains. In the desert regions of India, they are found in Mukundara, Sariska and Ranthambore.

## Environment: International Blue Flag hoisted at 8 beaches across the Country



## **Relevance IN – Prelims (about International Blue Flag Certification + about BEAMS) + Mains (GS III environment conservation)**

### **What's the NEWS**

- Minister for Environment, Forest and Climate Change virtually hoisted the international blue flags in 8 beaches across the country.
- India secured the International Blue Flag Certification for these beaches on 6<sup>th</sup> October 2020, when an International Jury comprising of member organizations UNEP, UNWTO, UNESCO, IUCN, ILS, FEE etc. announced the award at Copenhagen, Denmark.

### **Blue Flag certification**

- Blue Flag certification is a globally recognised eco-label accorded by “Foundation for Environment Education in Denmark” based on 33 stringent criteria.
- The beaches where the International Blue Flags were hoisted are: Kappad (Kerala), Shivrajpur (Gujarat), Ghoghla (Diu), Kasarkod and Padubidri (Karnataka), Rushikonda (Andhra Pradesh), Golden (Odisha) and Radhanagar (Andaman & Nicobar Islands).
- The Flags were also simultaneously hoisted on these beaches physically by state ministers and senior officials of the respective state and Union territories.

### **BEAMS(Beach Environment & Aesthetics Management Services)**

- India started its journey of sustainable development of coastal regions on World Environment Day in June' 2018 by launching its beach cleaning campaign – I-AM- SAVING-MY-BEACH simultaneously at 13 coastal states and thereafter implementing ministry's coveted program BEAMS(Beach Environment & Aesthetics Management Services).
- The introduction of BEAMS program in 10 coastal states have resulted into international level of cleanliness at beaches with over 500 tonnes of solid waste collected, recycled and scientifically disposed at these beaches reducing the menace of marine litter by over 78% and marine plastic by over 83%.
- Approximately 11000 KL of water was saved by recycling & reuse with BEAMS program, which has resulted into an increase in footfall at these beaches by over 85% cumulative.

### **Know! about Blue Flag certification**

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



# Infrastructure Development: Global Housing Technology Challenge-India (GHTC-India)

**Relevance IN – Prelims (about GHTC + about NAVARITIH + The Light House Projects+ ASHA-India + PMAY-U Mission) + Mains (GS III Infrastructure development)**

## What's the NEWS

- Prime Minister will lay the foundation stone of Light House Projects (LHPs) under Global Housing Technology Challenge-India (GHTC-India) at six sites across six States on 1<sup>st</sup> January 2021.
- Prime Minister will also announce winners under Affordable Sustainable Housing Accelerators - India (ASHA-India) and give out annual awards for excellence in implementation of Pradhan Mantri Awas Yojana - Urban (PMAY-U) Mission.
- Prime Minister will also release a certificate course on innovative construction technologies named NAVARITIH (New, Affordable, Validated, Research Innovation Technologies for Indian Housing) and a compendium of 54 innovative housing construction technologies identified through GHTC-India.

## Light House Projects

- The Light House Projects (LHPs) showcase the best of new-age alternate global technologies, materials and processes in the construction sector for the first time in the country at such a large scale.
- They are being constructed under GHTC-India which envisages to provide an ecosystem for adoption of innovative technologies in the housing construction sector in a holistic manner.
- The LHPs are being constructed at Indore (Madhya Pradesh), Rajkot (Gujarat), Chennai (Tamil Nadu), Ranchi (Jharkhand), Agartala (Tripura) and Lucknow (Uttar Pradesh).
- They comprise about 1000 houses at each location along with allied infrastructure facilities.
- These projects will demonstrate and deliver ready to live houses at an expedited pace within twelve months, as compared to conventional brick and mortar construction, and will be more economical, sustainable, of high quality and durability.
- The LHPs will serve as live laboratories for facilitating transfer of technology to the field and its further replication.
- This includes planning, design, production of components, construction practices and testing for both faculty and students of IITs, NITs, other Engineering colleges, Planning and Architecture colleges, builders, professionals of private and public sectors and other stakeholders.

## ASHA-India

- Affordable Sustainable Housing Accelerators - India (ASHA-India) aims to promote domestic research and entrepreneurship by providing incubation and acceleration support to potential future technologies.

### Home solution

The Global Housing Technology Challenge is aimed at introducing best technologies to construct houses quickly and at a lower cost

- 6 winners will design and build projects of 1,000 housing units each
- The State and the Centre each will provide assistance of ₹1.5 lakh

- The Centre will give an additional technology grant of ₹2.5 lakh for each house
- Incubation facilities will be provided to develop building technologies with support from four IITs



- The approved technologies will be displayed by Central Public Works Department along with the rates



GLOBAL HOUSING TECHNOLOGY CHALLENGE INDIA

## Light House Projects

Laying of Foundation Stone at 6 Locations  
(through video conferencing)  
by  
**Shri Narendra Modi**  
Hon'ble Prime Minister of India

Date: January 1, 2021 | Time 11:00 AM

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## LIGHT HOUSE PROJECTS

LHPs are model housing projects of houses built with shortlisted alternate technology along with physical and social infrastructure facilities suitable to the geo-climatic and hazard conditions of the region. These LHPs shall be able to demonstrate and deliver ready to live-in houses expeditiously than the normal conventional construction which are cost effective, economical, sustainable and superior with better quality of construction.



- Under ASHA-India initiative, five ASHA-India Centers have been set up for providing incubation and acceleration support.
- The potential technology winners under acceleration support will be announced by the Prime Minister.
- The technologies, processes and materials identified through this initiative will provide a major fillip to young creative minds, start-ups, innovators and entrepreneurs.

### PMAY-U Mission

- Pradhan Mantri Awas Yojana - Urban (PMAY-U) Mission has been designed to achieve the vision of "Housing For All by 2022".
- In order to recognize the outstanding contribution by States, UTs, Urban Local Bodies and beneficiaries, the Ministry of Housing and Urban Affairs has introduced annual awards for excellence in implementation of PMAY-Urban.
- The winners of PMAY(Urban) Awards-2019 will be felicitated during the event.



## Governance: India Post Payments

### Bank launches its digital payments' services 'DakPay'

**Relevance IN – Prelims (about Dak Pay + India Post Payments Bank + meghdoot awards) + Mains (GS II e governance, transparency and accountability + GS III financial inclusion)**

### What's the NEWS

- Department of Posts (DoP) and India Post Payments Bank (IPPB) unveiled a new digital payment app 'DakPay'
- The App is launched as part of its ongoing efforts to provide Digital Financial inclusion at the last mile across India.

### Know! all about DakPay app

- DakPay is not just a digital payment app but a suite of digital financial and assisted banking services provided by India Post & IPPB through the trusted Postal ('Dak') network across the nation to cater to the financial needs ('Pay') of various sections of the society – be it sending money to the loved ones (Domestic Money Transfers – DMT), Scan QR code and make payment for services/merchants digitally (Virtual debit card & with UPI), enabling cashless ecosystem through biometrics, providing interoperable banking services to the customers of ANY BANK (AePS) and Utility Bill Payment services.
- DakPay UPI app allows users to create UPI ID and link multiple accounts across banks in a single mobile app.
- The app facilitates instant money transfers, QR based payments in merchant stores and online shopping on e-commerce websites.





- Dak Pay brings simplified payment solutions to all by offering all customers access to the banking and payments products and services either through an App or in assisted mode with the help of the trusted Postman.

### About India Post Payments Bank

- India Post Payments Bank (IPPB) has been established under the Department of Posts, Ministry of Communication with 100% equity owned by Government of India.
- IPPB was launched by the Prime Minister on September 1, 2018.
- The bank has been set up with the vision to build the most accessible, affordable and trusted bank for the common man in India.
- The fundamental mandate of India Post Payments Bank is to remove barriers for the unbanked & underbanked and reach the last mile leveraging the Postal network comprising 155,000 Post Offices (135,000 in rural areas) and 300,000 Postal employees.
- IPPB's reach and its operating model is built on the key pillars of India Stack – enabling Paperless, Cashless and Presence-less banking in a simple and secure manner at the customers' doorstep, through a CBS-integrated smartphone and biometric device.
- IPPB delivers simple and affordable banking solutions through intuitive interfaces available in 13 languages.

### Meghdoot awards

- Department of Posts conducted Meghdoot Award Function 2020
- The Meghdoot award is given every year for excellence in postal service.

### Common Service Centres(PO-CSCs)” in Post Offices.

- In a major step towards providing the citizen centric services, a memorandum of Understanding was signed by Department of Posts with CSC e-Governance Services India Limited.
- This will give a flip to setting a common service centres in more than 10000 Post Offices across the country for providing various G2C (Government to Citizen) and B2C (Business to Citizens) services to citizens in rural and remote areas of the country thus enabling the Government's mandate of a socially, financially and digitally inclusive society.
- The B2C (Business to Citizens) Services offered includes Bharat Bill Payment System Bills (Electric, Gas, Water bills etc.).
- Through this agreement, Department of Posts intends to provide a one-stop solution for all e-Governance services on assisted model through its “Common Service Centres(PO-CSCs)” in Post Offices.
- These “PO-CSCs” will also contribute to ease of living and ease of business to the nearby digitally deprived rural and semi-urban population by leveraging the strengths of its network, digitally skilled manpower in synergy with digital services of CSC e-Governance Services India Limited.

## Science and Technology: Tropical Meteorology(TROPMET-2020)

**Relevance IN – Prelims (about TROPMET-2020 and its objective) + Mains (GS III awareness in the field of science and technology)**

### What's the NEWS

- Indian Meteorological Society (IMS) in collaboration with North Eastern Space Applications Centre (NESAC), Shillong, is organizing a four-day Virtual Symposium on Tropical Meteorology(TROPMET-2020) under the theme “Weather and Climate Services over Mountainous Regions” at NESAC, Shillong during 14-17 December 2020.

- The symposium is an important event for fostering coordination on adapting the weather and climate services to meet evolving needs of mountain and downstream regions

### **Weather and Climate Services over Mountainous Regions**

- The importance of weather and climate services for the mountainous regions including the complex Himalayan and other mountainous regions was deliberated by various speakers.
- North Eastern Council stressed on the importance of improved services and enhancement of observatories to address the challenge posed by severe weather and climate change that can derail the livelihood options for the indigenous population living in the mountainous regions.
- The Society and the weather & climate service up-gradation in the Himalayan region and High mountain ranges through impact based forecasting and risk based warning, sectoral applications and Research & Development through establishment of Regional Climate Centre (RCC) for Third Pole (Himalayan) region during next five years.
- There was a consensus that different agencies including centre, state and governmental agencies need to join hands to address the complex problems of weather and climate services over the mountainous regions.
- The Himalayan region is warming faster than the world average, melting of glaciers is a major concern, a changing climate could mean more devastating impacts on the very fragile biodiversity of the Himalayas.
- It could also impact availability of water, food, agriculture and health in the region

### **Initiatives taken by IMD and MoES**

- Deployment of Doppler Weather Radar (DWR) and Automatic Weather Station (AWS) as well as setting up of Himansh observatory in Western Himalaya.

### **North-Eastern Space Applications Centre**

- It is a regional space centre established in September, 2000 by joint initiative of Department of space, Government of India and North Eastern Council to expedite the usage of remote sensing technology to discover natural minerals uncovered in the North-Eastern states of India and to promote overall growth of North Eastern states of India using space science and technology.
- North-Eastern Space Applications Centre was set up with a joint initiative of DOS and NEC in September, 2000 at Shillong in Meghalaya, India. The centre has been declared a protected area by the state government.
- The objective of NESAC is to search and utilize the natural resources present in the region using remote sensing, provide the North-Eastern states access to satellite services, and promote research in the space technology in the region by tying up with the academic institutions in the region.

### **Indian Institute of Tropical Meteorology, Pune**

- The Institute was founded as the Institute of Tropical Meteorology (ITM) on 17 November, 1962 at Pune (the then Poona), as a distinct unit of the India Meteorological Department (IMD).
- The Institute was transformed into an autonomous organization on 1<sup>st</sup> April 1971 under the name Indian Institute of Tropical Meteorology (IITM).
- It was brought under the Department of Science and Technology (DST) of the Ministry of Science & Technology and now, with effect from 12 July 2006 the IITM has been under the administrative control of the specially formed Ministry of Earth Sciences (MoES).
- The objective is to Make IITM a world Centre of Excellence in Basic Research on the Ocean-Atmosphere Climate System required for improvement of Weather and Climate Forecasts

## **Government Schemes: Implementation of Component-C of PM-KUSUM**

***Relevance IN – Prelims (about PM-KUSUM Scheme and its three components) + Mains (GS II government policies and interventions + GS III Infrastructure development – energy)***

### **What's the NEWS**

- Ministry of New and Renewable (MNRE), after consultation with state governments, has decided to issue Guidelines for Implementation of Feeder Level Solarisation under Component-C of PM-KUSUM Scheme.

- The Cabinet Committee on Economic Affairs had approved PM-KUSUM scheme in its meeting held on 19.2.2019.

### **The Scheme consists of three components.**

- The Component-A includes installation of Decentralized Ground Mounted Grid Connected Renewable Power Plants
- Component-B includes installation of standalone Solar Powered Agriculture Pumps and
- Component-C includes Solarisation of Grid-connected Agriculture Pumps.

### **Guidelines for implementation of Component-C**

- Ministry had issued detailed Guidelines for implementation of Component-C of PM-KUSUM Scheme on 8 November 2019.
- As per provisions of the PM-KUSUM Scheme, the grid connected agriculture pumps can be solarised with central and state subsidy of 30% each and farmer's contribution of 40%.
- The solar capacity allowed is upto two times of the pump capacity in kW and surplus power will be purchased by DISCOM.
- Based on discussions held with states it has been decided to also include feeder level solarisation under Component-C of PM-KUSUM Scheme.
- The Distribution Company (DISCOM)/Power Department will be the implementing agency for feeder level solarisation in their respective areas.

### **Implementation under CAPEX Model:**

- For installation of feeder level solar power plant CFA of 30% (50% in case of NE States, hilly states/UTs and Island UTs) will be provided by central Government and balance will be met through loan from NABARD/PFC/REC.

### **Implementation under RESCO Model:**

- For installation of feeder level solar power plants through RESCO model, the developers will be selected on the basis of lowest tariff offered for supply of required solar power for a period of 25 years.

### **Water saving and enhancing farmers' income:**

- The objective of Component-C of PM-KUSUM Scheme is to provide reliable day-time power to farmers, enhancing their income by purchasing surplus solar power and thus incentivising them for saving water.
- In case of feeder level solarisation, farmers will get daytime reliable solar power for irrigation, but there is no provision of selling surplus solar power. Therefore, farmers can be incentivised for saving water and enhancing their income.

### **Benchmark consumption.**

- The DISCOMs shall assess the average power requirement by farmers of an area depending upon various factors. This power requirement will be treated as their benchmark consumption.
- The DISCOMs shall incentivise farmers for consuming power less than benchmark consumption.
- Such saving of power shall be treated as surplus power injected by farmers and they will be paid by DISCOMs against this saved power at pre-determined tariff. This will be an important measure for conserving groundwater level.

### **Allocation of capacity and Service Charges:**

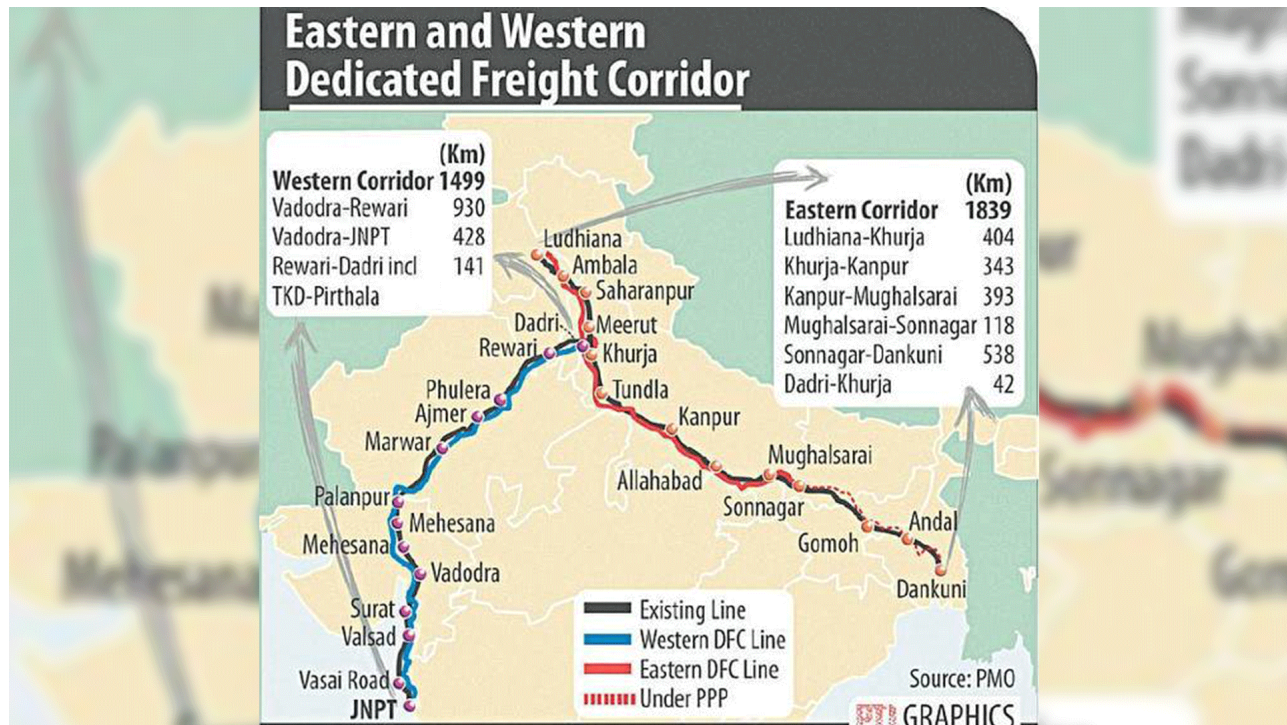
- Under Component-C of PM-KUSUM Scheme solarisation of total 4 lakh grid connected pumps are targeted for sanction by 2020-21 and 50% of these are to be solarised through feeder level solarisation and balance 50% through individual pump solarisation.

### **Monitoring**

- It will be mandatory for DISCOMs to monitor solar power generation and performance of the solar power plant through online system.
- The online data will be integrated with central monitoring portal which will extract data from the State portals for monitoring of the scheme.



## Infrastructure Development: New Bhaupur- New Khurja section and the Operation Control Centre of Eastern Dedicated Freight Corridor inaugurated



**Relevance IN – Prelims (about EDFC + about OCC + about DFCCIL) + Mains (GS III Infrastructure development)**

### What's the NEWS

- Prime Minister will inaugurate the 'New Bhaupur- New Khurja section' of Eastern Dedicated Freight Corridor (EDFC) on 29<sup>th</sup> December, 2020
- Prime Minister will also inaugurate EDFC's Operation Control Centre (OCC) at Prayagraj.

### Know! the benefits of EDFC

- The 351 km New Bhaupur- New Khurja section of EDFC is situated in Uttar pradesh and is built at a cost of Rs 5,750 crores.
- The section will open new vistas of opportunity for the local industries such as aluminium industry (Pukhrayan region of Kanpur Dehat district), dairy sector (Auraiya district), textile production/block printing (Etawah district), glassware industry (Firozabad district), pottery products (Khurja of Bulandshahr district), asafoetida or 'hing' production (Hathras district) and locks and hardware (Aligarh district).
- The section will also decongest the existing Kanpur-Delhi main line and will enable Indian Railways to run faster trains.

### Know! about OCC

- A state-of-the-art Operation Control Centre (OCC) at Prayagraj will act as the command centre for the entire route length of the EDFC.
- The OCC is one of the largest structures of its type globally, with modern interiors, ergonomic design and best-in-class acoustics.
- The building is environment-friendly with a Green Building rating of GRIHA4 and is built as per norms of the 'Sugamya Bharat Abhiyan'.

### Know! about Eastern Dedicated Freight Corridor (EDFC)

- The EDFC (1856 route km) starts from Sahnewal near Ludhiana (Punjab) and will pass through the states of Punjab, Haryana, Uttar Pradesh, Bihar and Jharkhand to terminate at Dankuni in West Bengal.



- It is being constructed by Dedicated Freight Corridor Corporation of India Limited (DFCCIL), that has been set up as a special purpose vehicle to build and operate Dedicated Freight Corridors.
- DFCCIL is also constructing the Western Dedicated Freight Corridor (1504 route km) that connects Dadri in Uttar Pradesh to Jawaharlal Nehru Port in Mumbai and will traverse through the states of UP, Haryana, Rajasthan, Gujarat and Maharashtra.

### **Know! about DFCCIL**

- The Dedicated Freight Corridor Corporation of India Limited (DFCCIL) is a Public Sector Undertaking (PSU) corporation run by the Government of India's Ministry of Railways to undertake planning, development, and mobilisation of financial resources and construction, maintenance and operation of the "Dedicated Freight Corridors" (DFC).
- The DFCCIL was registered as a company under the Companies Act 1956 in 2006.
- First 2 DFC, Western Dedicated Freight Corridor (WDFC), from Uttar Pradesh to Mumbai and Eastern Dedicated Freight Corridor (EDFC), Ludhiana in Punjab to Dankuni in West Bengal, which will decongest railway network by moving 70% of India's goods train to these two corridors, are both on track for completion in December 2021.



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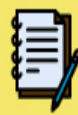
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