

# OFFICERS' PULSE

Issue no. 24 | 8th November to 14th November, 2020

## COVERAGE.

The Hindu

The Indian Express

PIB

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## AT A GLANCE & IN DEPTH.

Polity and Social Issues

Economy

International Relations

Environment

Science and Tech

Culture

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# News @ a glance

## POLITY

### 1) Competition Commission of India

#### Competition Act, 2002

- The Competition Act, 2002, as amended by the Competition (Amendment) Act, 2007, prohibits anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control and Mergers and acquisitions), which causes or likely to cause an appreciable adverse effect on competition within India.
- The objectives of the Act are sought to be achieved through the **Competition Commission of India**, which has been established by the Central Government in 2003.

#### About CCI

- The Competition Commission of India (CCI) is a **statutory body** established under the **Competition Act, 2002** for the administration, implementation and enforcement of the Act.
- CCI consists of a **Chairperson and 6 Members** appointed by the Central Government.
- The following are the objectives of the Commission.
  1. To prevent practices having adverse effects on competition.
  2. To promote and sustain competition in markets.
  3. To protect the interests of consumers and
  4. To ensure freedom of trade
- The Commission is also required to give opinion on competition issues on a reference received from a statutory authority established under any law and to undertake competition advocacy, create public awareness and impart training on competition issues.
- **Why in News?**
- The Competition Commission of India ordered a detailed probe against Google

for abuse of its dominant position, primarily with regard to its digital payments application GPay.

### 2) Special Marriage Act

#### About the Act

- The Special Marriage Act, 1954 (SMA) was enacted to facilitate the marriage of couples professing different faiths and preferring a civil wedding. However, some practical problems arise in registering such marriages.

#### What are the features of the SMA?

- Under the SMA, parties to an intended marriage should give **notice to the 'marriage officer'** of the district in which one of them had resided for at least 30 days. The notice will have to be entered in a 'Marriage Notice Book' and a copy of it **displayed at a conspicuous place** in the office. The Notice Book is open for inspection at all reasonable times without a fee.
- The law also provides for **objections to the marriage**. Any person can object to the marriage **within 30 days** of the publication of the notice on the ground that it contravenes one of the conditions for a valid marriage.
- The marriage officer has to inquire into the objection and give a decision within 30 days. If he refuses permission for the marriage, an appeal can be made to the district court. The court's decision will be final.
- Also, the Act says that when a member of an undivided family who professes **Hindu, Buddhist, Sikh or Jaina religions**, gets married under SMA, it results in his or her "severance" from the family.

#### What are the hurdles faced by couples?

- The provisions relating to notice, publication and objection have rendered it difficult for many people intending to solemnise **inter-faith marriages**.

- Publicity in the local registration office may mean that family members objecting to the union **may seek to stop it by coercion**. In many cases, there may be a **threat to the lives of the applicants**.
- There have been reports of some groups opposed to inter-faith marriages keeping a watch on the notice boards of marriage offices and taking down the details of the parties so that they can be dissuaded or coerced into abandoning the idea.
- These provisions have been challenged in the Supreme Court recently on the grounds that they **violate the privacy of the couples, their dignity and right to marry**.
- In the case of **Hindu and Muslim marriage laws**, there is no requirement of prior notice and, therefore, such a requirement in the SMA, say experts, violates the right to equality of those opting for marriage under it.

#### What are the other options for registration of inter-faith marriages?

- Many opt for inter-faith marriages through the relevant personal law of the faith of one of the parties. This will involve one of them **converting to the religion professed by the other**.
- While conversion to Islam and Christianity has formal means, there is no prescribed ceremony for conversion to Hinduism.
- The Hindu Marriage Act is also applicable to “any person who is a convert or re-converts to the **Hindu, Buddhist, Jaina or Sikh religion**”.

### 3) Regulation of OTT platforms

#### What are OTT platforms?

- OTT stands for “over-the-top” and refers to the productized practice of streaming audio and video content to customers directly over the web.
- These platforms started out as content hosting platforms, but soon branched out into the production and release of short movies, feature films, documentaries and web-series themselves.
- Most OTT platforms generally offer some content for free and charge a monthly subscription fee for premium content which is generally unavailable elsewhere.

#### Why in News?

- The government has brought video streaming over-the-top (OTT) platforms such as Netflix, Amazon’s Prime Video, Hotstar, and others **under the ambit of the Ministry of Information and Broadcasting**.
- These platforms were so far under the purview of the Ministry of Electronics and Information Technology.
- This will give the government control over OTT platforms, which were unregulated till now.

#### What are the laws regulating OTT platforms?

- At present, the **Press Council of India** regulates the print media, the **News Broadcasters Association (NBA)** represents the news channels, the **Advertising Standards Council of India** regulates advertising, while the **Central Board of Film Certification (CBFC)** monitors films.
- However, so far, there are **no laws or rules regulating OTT platforms** as it is a relatively new medium of entertainment. Unlike television, print or radio, which follows guidelines released by governments, OTT platforms, **classified as digital media or social media**, had little to no regulation on the choice of content they offered, the subscription rates, certification for adult movies and others.
- Following pressure to regulate the content being made available on these streaming platforms, eight video streaming services had signed a **self-regulatory code** that laid down a set of guiding principles for content on these platforms.
- The proposal, however, was **rejected by the Ministry of Information and Broadcasting, which will now oversee these platforms**.

#### What happens now to the OTT platforms?

- With the government deciding to regulate films and audio-visual programmes made available by online content providers, the first challenge before the **OTT platforms would be keeping a check on their content**.
- The latest move could also mean that these platforms would have to **apply for certification and approval of the content** they wish to stream.

- This in itself could give rise to many conflicts as most OTT platforms have content that could otherwise be censored by the certification boards in India.
- OTT platforms are likely to resist any plans to censor the content being provided and streamed by them as these platforms have often chosen to produce movies and documentaries on politically sensitive but relevant topics.
- It will also have to be seen as to what guidelines, if any, does the I&B ministry

put in place for regulating these OTT platforms.

#### **Significance**

- According to reports, with a market size of nearly Rs 500 crores at the end of March 2019, the online video streaming platforms may become a Rs 4000-crore revenue market by the end of 2025.
- At the end of 2019, India had as many as 17 crores OTT platform users.

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# ENVIRONMENT

## 1) Green crackers

### Why in the news?

- Many states like Karnataka are asking the public to use green crackers in their diwali preparation.

### What are green crackers?

- Developed by the **Council for Scientific and Industrial Research (CSIR)-NEERI as per the court's directions**, green crackers emit pollutants at a 30% lesser rate than their conventional counterparts.
- Green crackers reduce particulate matter Nitrogen Dioxide (NO<sub>2</sub>) and Sulphur Dioxide (SO<sub>2</sub>) by 30 to 35 per cent.
- While regular crackers emit about 160 decibels of sound, green crackers' emission rate is limited to 110-125 decibels.
- Manufacturers need to take a license from **CSIR** in order to make fireworks using the green cracker formulation.
- Green crackers release water vapour and don't allow the dust particles to rise.

### There are 3 types of green crackers:

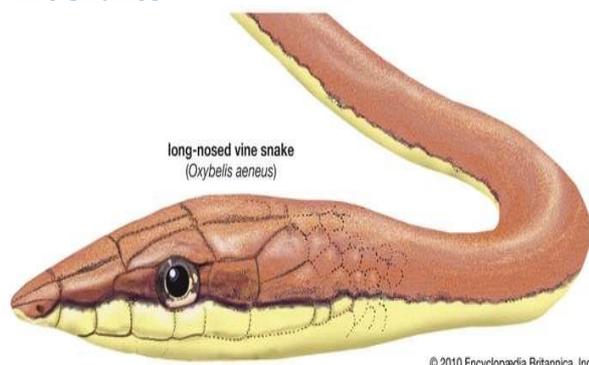
- Safe Water Releaser (SWAS)
- Safe Minimal Aluminium (SAFAL)
- Safe Thermite Cracker (STAR)

## 2) New species of vine snakes discovered

### Centre for Ecological Sciences

- Founded in 1983 by the Ministry of Environment, this institute is a part of IISc Bangalore.
- It does extensive research in ecology and its sub-fields.

### Vine Snakes



- One of the most distributed snake groups.
- It occurs in the semi-urban and forest region.

- They have slender bodies, narrow heads, and pointed snouts.

### Why in the news?

- A study published in journal Zootaxa, reveals that IISc Bangalore's Centre for Ecological Sciences have found new species of Vine Snakes in peninsular India.
- The common green vine snake was thought to be a single species, but the research found that **it was a complex species** and there were several species within this one. The scientists believe that they must have developed due to geographical or ecological isolation.
- These new species are similar morphologically but differ genetically.
- The discovery will help to trace the evolution of the vine snakes.

## 3) Panel set up to study Kasturirangan report

### What is the Kasturirangan report?

- To conserve and protect the biodiversity of **Western Ghats** while allowing for sustainable and inclusive development of the region, Government of India had constituted a High Level Working Group under the Chairmanship of **Dr. Kasturirangan in 2012**.
- The Committee had recommended that identified geographical areas falling in the six States of Kerala, Karnataka, Goa, Maharashtra, Gujarat and Tamil Nadu may be declared as **Ecologically Sensitive Areas (ESA)**.
- This committee was formed to re-examine the **Gadgil Committee** report on Western Ghats and its conservation.
- The report tries to achieve a fine balance between environmental conservation and politico-economic expediency. The report categorized areas on the basis of their ecological sensitivity and activities that affect the ecology negatively shall be either totally banned or restricted in highly sensitive zones.
- The Kasturirangan report only brought about **37% of the total areas of the Ghats under the jurisdiction of the ESA**. Under this report, a complete ban on mining was

brought about and thermal and hydropower projects were allowed only after a detailed study.

- Various highly polluting **Red Industries** were pointed out and strictly ruled out and banned. The Kasturirangan report made several farmer-friendly recommendations such as excluding the farmer- inhabited regions from the Ecological Sensitive Areas
- But the states expressed their concerns regarding activities and extent of area mentioned in the report and the Ministry of Environment, Forests and Climate Change is taking the concerned states into trust to implement the report.

#### Why in the news?

- Karnataka Government has set a committee to recommend Centre regarding the implementation of Kasturirangan report.

### 4) Snow leopard census to resume

#### About Snow Leopard

- These spotted leopards live in the mountains **across a vast range of Asia**. According to IUCN, they are given **Vulnerable** status.
- Snow leopards play a key role as both top predators and as an **indicator of the health of their high-altitude habitat**.
- Snow leopards are found in 12 countries— including **Afghanistan, Bhutan, China, India, Kazakhstan, Kyrgyz Republic, Mongolia, Nepal, Pakistan, Russian Federation, Tajikistan, and Uzbekistan**.
- In India, these Big cats are found across the states of Ladakh, Himachal Pradesh and Uttarakhand but are also found in Jammu & Kashmir, Sikkim and Arunachal Pradesh.
- According to an estimate there are around 600 snow leopards in India.



#### Why in the news?

- First time a scientific census is done in Uttarakhand to count snow leopards.
- The scientific estimate is being carried out by the **Uttarakhand Forest department**

**and Wildlife Institute of India (WII)**, and will focus on sightings by residents of hilly areas, who migrate to the plains during the winter, and paramilitary personnel.

- Questionnaires, geographical coordinates, etc are used in the census. After population estimation, the data will be used to spread public awareness and conserve snow leopard habitats.

### 5) Operation Thunder 2020

#### What is it?

- Coordinated by **INTERPOL** and the **World Customs Organization (WCO)**, Operation Thunder 2020 rallied 103 countries **against environmental crime**.
- This exercise has been held since 2017 and this year it was held in the month of September and October.
- Participating countries focused on particularly vulnerable species protected under the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**, an international agreement aimed at ensuring the international trade in wild animals and plants does not threaten their survival.
- India too participated in the exercise. A large amount of Red Sandalwood was seized when it was illegally trafficked to UAE.
- The operation is conducted to put a check on Wildlife and forestry crimes.
- Wildlife and forestry crime is the world's fourth largest illegal trade — a lucrative illegal business with far-reaching and devastating consequences not just for the environment but also for society, public health and global economics.

#### About CITES

- CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an **international agreement between governments**.
- Although CITES is **legally binding** on the Parties, it **does not take the place of national laws**. Rather it provides a **framework to be respected by each Party**, which has to adopt its own domestic legislation to ensure that CITES, is implemented at the national level.

- It aims to ensure that **international trade** in specimens of wild animals and plants **does not threaten their survival**.
- It **does not** aims to conserve only those **species which are declared 'endangered'** under the International Union for Conservation of Nature (IUCN) Red list.
- Rather it has **listed species in three CITES Appendices**. The species are grouped in

the Appendices **according to the level of threat faced by them** due to international trade.

- Roughly **5,000 species of animals and 28,000 species of plants are protected**. Bears, dolphins, cacti, corals and orchids are some examples.

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# ECONOMY

## 1) Viability Gap Funding

### What is VGF?

- The main constraint in India's infrastructure sector is the **lack of source for finance**. More than the overall difficulty of securing funds, some projects may not be financially viable though they are economically justified and necessary. This is the nature of several infrastructural projects which are long term and development oriented.
- For the successful completion of such projects, the government has designed Viability Gap Funding (VGF). It means a grant one-time or deferred, provided to support infrastructure projects that are **economically justified but fall short of financial viability**.
- Through the provision of a catalytic grant assistance of the capital costs, several projects may become bankable and help mobilise private investment in infrastructure.

### Present status

- The **Department of Economic Affairs, Ministry of Finance** introduced "**the Scheme for Financial Support to PPPs in Infrastructure**" (**Viability Gap Funding Scheme**) in 2006 with a view to support infrastructure projects undertaken through Public Private Partnership (PPP) mode.
- VGF **up to 40 per cent of the total project cost** is provided by the central government and the sponsoring authority in the form of capital grant at the stage of project construction.
- Support under this scheme is available **only for infrastructure projects** where private sector sponsors are **selected through a process of competitive bidding**.
- The project agreements must also follow the best practices that would secure value for public money. Regular monitoring and evaluation should be done by the lead financial institutions for the disbursement of the grants.

### Why in News?

- The government has expanded the provision of financial support by means of viability gap funding for public private partnerships (PPPs) in infrastructure projects to include **critical social sector investments** in sectors such as **health, education, water and waste treatment**.
- The government also approved the continuation of the scheme for financial support to PPPs in infrastructure till 2024-25.
- A total of ₹8,100 crore has been allocated under this programme between 2020-21 and 2024-25, of which ₹2,100 crore will be devoted to social sector projects.

## 2) Dumping of pepper

### Dumping and Anti-dumping duties

- Dumping is the practice of selling a product in a foreign market at an unfairly low price (*a price that is lower than the cost in the home market, or which is lower than the cost of production*) in order to gain a competitive advantage over other suppliers.
- An anti-dumping duty is a tariff that a domestic government imposes on foreign imports that it believes are priced below fair market value.
- Countries use anti-dumping duty to curb the ill effects caused by dumping on domestic industries, as well as to promote and establish fair trade.

### Why in News?

- Plantation body representatives have urged the Centre to take quick measures to curb misuse of pepper imports.
- They cited that Indian pepper has suffered sharp erosion in domestic prices as unrestricted dumping of Vietnamese pepper — via Nepal and Sri Lanka — has gained momentum in the last couple of years.
- The Indian spice that commanded a price as high as ₹694 per kg in 2016-17 had been hovering in the ₹350-400 range in the last couple of years before it declined further to ₹322 at the start of November.

### Misuse of FTAs

- Under the Free Trade Agreement (FTA), Sri Lanka can export up to 2,500 tonnes per year at zero duty, while the duty is 8% under the SAARC agreement and 50% under the ASEAN pact.
- Since most pepper-producing countries are in the ASEAN region, plantation bodies allege that there is a possibility that pepper from those countries, including Vietnam, is routed through Sri Lanka and Nepal for availing of lower import duty.
- India produces 61,000 tonnes of black pepper and Karnataka accounts for half of the production, followed by Kerala at 20,000 tonnes.

### 3) Technical Recession

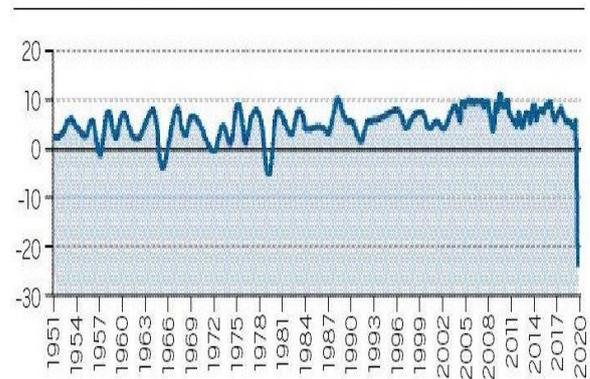
#### What's in the news?

- A 'nowcast' (a forecast that estimates the outcome of a near-term event) in the latest monthly bulletin of the RBI projected that **India's GDP contracted by 8.6% in the July-September quarter** of the financial year ending in March 2021.
- According to the bulletin, **India has entered a technical recession** in the first half of 2020-21 for the first time in its history with the second quarter of the current financial year likely to record the second successive quarter of GDP contraction.
- GDP had shrunk by 23.9% in the first quarter.
- To better understand the term "technical recession", one must distinguish it from two other phrases — a recession and a recessionary phase of an economy.

#### What is a recessionary phase?

- When the overall output of goods and services — typically measured by the GDP — increases from one quarter (or month) to another, the economy is said to be in an **expansionary phase**. And when the GDP contracts from one quarter to another, the economy is said to be in a **recessionary phase**.
- Together, these two phases create what is called a "**business cycle**" in any economy. A full business cycle could last anywhere between one year and a decade.

#### INDIA GDP ANNUAL GROWTH RATE, 1951-2020



- The above line graph maps India's quarterly real GDP growth since 1951. The peaks and troughs show the different expansionary and recessionary phases of the economy. As the graph shows, there have been several expansionary and recessionary phases in India's history.

#### How is a recession different?

- When a recessionary phase sustains for long enough, it is called a recession. In other words, when the GDP contracts for a long enough period, the economy is said to be in a recession.
- There is, however, **no universally accepted definition of a recession** — as in, for how long should the GDP contract before an economy is said to be in a recession. But most economists agree with the definition that the **National Bureau of Economic Research (NBER)** in the United States uses.
- According to NBER, "During a recession, a significant decline in economic activity spreads across the economy and can **last from a few months to more than a year**".
- NBER typically looks at **various variables** — employment, consumption etc — apart from GDP growth to arrive at a decision. It also looks at the "depth, diffusion, and duration" of decline in economic activity to determine whether an economy is in a recession or not.

#### What is a technical recession?

- A technical recession is a term used to describe **two consecutive quarters of decline in output**. In the case of a nation's economy, the term usually refers to back-to-back contractions in real GDP.
- The most significant difference between a '**technical recession**' and a '**recession**' is

that while the former term is mainly used to **capture the trend in GDP**, the latter expression encompasses an **appreciably more broad-based decline in economic activity** that covers several economic variables including employment, household and corporate incomes and sales at businesses.

- Another key feature of a technical recession is that it is **most often caused by a one-off event** (in this case, the COVID-19 pandemic and the lockdowns imposed to combat it) and is **generally shorter in duration**.

**How long do recessions last?**

- Typically, recessions last for a few quarters. If they continue for years, they are referred to as “**depressions**”. But a depression is quite rare; the last one was during the 1930s in the US.
- In the current scenario, the key determinant for any economy to come out of recession is to control the spread of Covid-19.
- In India’s case, Finance Minister Nirmala Sitharaman has expressed hope that India’s recession could be already over and that the economy may register positive growth in the current quarter.

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# INTERNATIONAL RELATIONS

## 1) Nagorno-Karabakh Dispute

### What is it?

- Straddling western Asia and Eastern Europe, the landlocked mountainous region of Nagorno-Karabakh is the subject of an unresolved dispute between **Azerbaijan**, in which it lies, and its ethnic **Armenian** majority, backed by neighbouring Armenia.
- Nagorno-Karabakh is internationally recognised as part of Azerbaijan, but most of the region is controlled by Armenian separatists.
- In 1988, towards the end of Soviet rule, Azerbaijani troops and Armenian secessionists began a bloody war which left the de facto independent state in the hands of ethnic Armenians when a truce was signed in 1994.
- It is today governed by separatist Armenians who have declared it a republic called the **"Nagorno-Karabakh Autonomous Oblast"**. While the Armenian government does not recognise Nagorno-Karabakh as independent, it supports the region politically and militarily.



- The **Organization for Security and Co-operation in Europe (OSCE) Minsk Group**, chaired by France, Russia and the

US, has tried to get the two countries to reach a peace agreement for several years.

- However, negotiations have so far failed to produce a permanent peace agreement, and the dispute remains one of post-Soviet Europe's **"frozen conflicts."**

### What is the role of ethnicity in the conflict between the two countries?

- Ethnic tensions from decades ago have a crucial role in the dispute.
- While the Azeris claim that the disputed region was under their control in known history, Armenians maintain that Karabakh was a part of the Armenian kingdom.
- At present, the disputed region consists of a majority Armenian Christian population, even though it is internationally recognised as a part of Muslim-majority Azerbaijan.

### Why in News?

- Russia has brokered a new peace deal between Armenia and Azerbaijan, the two countries that have been in a military conflict for over six weeks over the disputed region of Nagorno-Karabakh in the South Caucasus.
- The recent clashes reignited concern about instability in the **South Caucasus**, a corridor for pipelines transporting oil and gas to world markets.

### What is the new peace deal?

- As per the new peace deal, both sides will now maintain positions in the areas that they currently hold, which will mean a significant gain for Azerbaijan as it has reclaimed over 15-20 per cent of its lost territory during the recent conflict.
- Further, under this agreement, all military operations are suspended, Russian peacekeepers will be deployed along the line of contact in Nagorno-Karabakh and along the Lachin corridor that connects the region to Armenia. These Russian peacekeepers with a force of roughly 2,000 will be deployed in the area for a period of five years.

## 2) India, Maldives sign four MoUs

- **What's in the news?**

- India and Maldives recently signed four agreements during Foreign Secretary Harsh Vardhan Shringla's visit to the Maldives.

#### About the agreements

- In addition to two Memorandums of Understanding (MOUs) for **"high impact" community development projects**, the countries signed an MoU on **cooperation in sports and youth affairs** and another for the \$100 million grant, which is part of India's "\$500 million package" for the **Greater Male Connectivity Project (GMCP)**.
- GMCP will be the **largest civilian infrastructure project** in Maldives, connecting Malé (the capital) with three neighbouring islands — Villingili, Gulhifalhu (where a port is being built under Indian line of credit) and Thilafushi (new industrial zone) – by construction of a bridge-and-causeway link spanning 6.7 km.
- Last month, the two governments inked a deal for a \$400 million line of credit from the Exim Bank of India.

#### Strategic significance

- Amid New Delhi's growing concern over China's growing influence in the region, the ties with the Maldives have remained under sharp focus.
- The MoUs are emblematic of the strong development partnership which is multi-faceted and designed to meet the specific requirements of the government and people of Maldives.
- Indian Foreign Secretary said that India deeply appreciates the government of President Solih for its **'India First'** foreign policy. This is reciprocated in full measure by India's **'Neighbourhood First'** policy in which the Maldives enjoys a very special and central place.

### 3) Sichuan-Tibet Railway

#### What's in the news?

- China has begun work on a strategically significant railway line - its second major rail link to Tibet - that will **link the country's southwest Sichuan province to Linzhi in Tibet close to the Indian border in Arunachal Pradesh**.
- Linzhi, also known as **Nyingchi**, is located close to Arunachal Pradesh border.



#### Strategic significance

- The India-China border dispute covers the 3,488-km-long Line of Actual Control, the de-facto border between the two countries. China claims Arunachal Pradesh as part of south Tibet which is firmly rejected by India.
- Like the **Qinghai-Tibet railway line**, which in 2006 connected Lhasa (capital of the Tibet Autonomous Region (TAR)) to the hinterland, this will be the second such route linking the TAR to the hinterland.
- The Sichuan-Tibet Railway starts from Chengdu, capital of Sichuan province and enters Tibet via Qamdo, shortening the journey from Chengdu to Lhasa from 48 hours to 13 hours.
- If a scenario of a crisis happens at the border, the railway can act as a 'fast track' for the delivery of strategic materials.
- As the railway runs near China's southwest border areas, it will largely improve the efficiency and convenience of military personnel and material transportation and logical supplies.

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## SCIENCE AND TECHNOLOGY

### 1) Delivery of COVID vaccine

#### How will the delivery be made?

- The government recently said it will procure the vaccine and distribute it under a special COVID-19 immunisation programme to four categories of people, free-of-charge.
- The **priority groups** named are **healthcare professionals** including doctors, nurses and ASHA workers, a **second** category that includes **frontline workers** including **police and armed forces**.
- The **third** category of those **aged above 50**. The **fourth** category will be those **below 50 years of age with co-morbidities**.

#### Issues faced in delivery of medicines

- A bigger **challenge** comes in the form of **keeping the vaccines at ultralow temperatures** during distribution.
- Most of the COVID-19 vaccines, the RNA vaccines in particular that are in the advanced stage of Phase-3 trials require – 70 degrees Celsius to –80 degree Celsius cold-chain.
- In **India** we do not have this kind of storage requirement and building the infrastructure for ultra cold storage requires considerable resources, because we need not just the freezers, but also **uninterrupted power supply**.
- Hence, the decision to use a COVID-19 vaccine will need to take into consideration **logistics and infrastructure** needed to distribute and deliver vaccines, which goes beyond financial resources to purchase vaccines.
- The next biggest challenge might be in **vaccinating people with two doses four weeks apart** during the pandemic. Most of the vaccines at advanced stages of Phase-3 trial use two doses of the vaccine to achieve best results.

#### Additional Details

##### India's Immunization Program

- Universal Immunisation Programme (UIP) is a vaccination program launched by the **Government of India in 1985**.

- It became a part of Child Survival and Safe Motherhood Programme in 1992 and is currently one of the key areas under National Rural Health Mission since 2005.
- Under UIP, immunization is providing free of cost against **12 vaccine preventable diseases**:
  - **Nationally against 9 diseases** - Diphtheria, Pertussis, Tetanus, Polio, Measles, Rubella, severe form of Childhood Tuberculosis, Hepatitis B and Meningitis & Pneumonia caused by Hemophilus Influenza type B
  - **Sub-nationally against 3 diseases** - Rotavirus diarrhoea, Pneumococcal Pneumonia and Japanese Encephalitis (JE); of which Rotavirus vaccine and Pneumococcal Conjugate vaccine are in process of expansion while JE vaccine is provided only in endemic districts.

#### Mission Indradhanush

- The aim is to fully immunize more than 89 lakh children who are either unvaccinated or partially vaccinated under UIP.
- It **targets children under 2 years of age and pregnant women** for immunization.
- The **Intensified Mission Indradhanush (IMI)** was launched by the Government of India in 2017 to reach each and every child under two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme.
- To boost the routine immunization coverage in the country, Government of India has introduced **Intensified Mission Indradhanush 2.0** to ensure reaching the unreached with all available vaccines and accelerate the coverage of children and pregnant women in the identified districts and blocks.

### 2) India's m-RNA vaccine

#### Why in News?

- India's very own **m-RNA (messenger-RNA) vaccine** could be ready by March 2020.

#### About the vaccine:

- Pune-based Genovva Biopharmaceutical's novel m-RNA vaccine candidate was

approved for funding in July, 2020 by the Department of Biotechnology (DBT).

- Being a biological product that requires genetic manipulation, it needs to be cleared by the Review Committee on Genetic Manipulation (RCGM), a DBT body, before it can approach the Drug Controller General of India (DCGI) for human trials.

#### What is m-RNA vaccine?

- An **m-RNA** or simply “RNA vaccine” uses the **genetic sequence of a portion of the virus that can be injected into the body**.
- Once taken in by the body’s cells, the hope is that **it makes an antigen to which the immunity machinery can manufacture antibodies**. In this way, the **adverse reactions** that can result from the traditional approach **of introducing an actual virus**, or a piece of it, **can be avoided**.
- **Another advantage** of m-RNA vaccines is that they **can be made in large quantities** quicker than traditional vaccines as they don’t need to be cultured in chicken or mammalian cells.

#### Challenges

- A challenge, for **M-RNA vaccines require extremely cold temperatures** (less than minus 50 degrees C) that make them challenging to distribute in most of the world.
- India has issues with continuous power supply in many parts of the country

#### Additional Details

##### Department of Biotechnology (DBT)

- The Department of Biotechnology (DBT) is an Indian government department, under the Ministry of Science and Technology responsible for **administrating**

**development and commercialisation in the field of modern biology and biotechnology** in India. It was set up in 1986

#### DCGI

- Drugs Controller General of India (DCGI) is a **department of the Central Drugs Standard Control Organization** of the Government of India **responsible for approval of licences** of specified categories of **drugs** such as **blood and blood products, IV fluids, vaccines, and sera in India**.
- Drugs Controller General of India, comes under the **Ministry of Health & Family Welfare**.
- DCGI also sets standards for **manufacturing, sales, import, and distribution** of drugs in India.
- DCGI lays down the **standard and quality of manufacturing, selling, import and distribution of drugs in India**.
  1. Acting as **appellate** authority in case of any dispute regarding the quality of drugs.
  2. **Preparation and maintenance** of national reference standard.
  3. To bring about the **uniformity** in the enforcement of the Drugs and Cosmetics Act.
  4. **Training** of Drug Analysts deputed by State Drug Control Laboratories and other Institutions
  5. **Analysis** of Cosmetics received as survey samples from CDSCO (central drug standard control organisation)

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# DEFENCE

## 1) Scorpene class submarine

### Why in News?

- The fifth Scorpene conventional submarine, Vagir, built by the Mazagon Docks Limited (MDL) with technology transfer from France was launched into water recently.

### About Vagir

- Indian Naval Ship (INS) **Vagir** is the **fifth among the six Kalvari-class submarines**.
- The other vessels in the class are **INS Kalvari, INS Khanderi, INS Karanj, INS Vela and INS Vagsheer**.
- This class of submarines have Diesel Electric transmission systems and these are **primarily attack submarines or 'hunter-killer' type** which means they are designed to target and sink adversary naval vessels.
- The Kalvari-class submarines have capability of operating in a wide range of Naval combat including **anti-warship and anti-submarine operations, intelligence gathering and surveillance and naval mine laying**.
- The Kalvari class of submarines are capable of launching various types of torpedoes and missiles and are equipped with a **range of surveillance and intelligence gathering mechanisms**.
- The state-of-art technology used in the submarine has ensured superior **stealth features such as advanced acoustic absorption techniques, low radiated noise levels, and hydro- dynamically optimised shape** and also the ability to attack the enemy using precision guided weapons.
- The attack can be launched with both torpedoes and tube launched anti-ship missiles, whilst underwater or on surface

### Project 75

- It is a programme by the Indian Navy that entails building six **Scorpene-Class attack submarines**.
- The submarines in the P75 Scorpene-Class are **powered by the conventional diesel-electric propulsion system**.

- Two submarines of the ongoing Project-75 Scorpene programme at MDL, Kalvari and Khanderi, have been commissioned into the Indian Navy. The third submarine, Karanj, is in the last phase of rigorous sea trials. The fourth Scorpene, Vela, has commenced her sea trials, whilst the sixth and last submarine, Vagsheer, is being readied for boot together.
- The modern variants of the Scorpence class of submarines have what is called the **Air Independent Propulsion (AIP)** which **enables non-nuclear submarines to operate for a long time without access to surface oxygen**. It also needs to be noted that the Defence Research and Development Organisation (DRDO) has an ongoing programme to build a fuel cell-based AIP system for Indian Naval Submarines.

### Need for the submarines

- The nuclear powered and diesel electric submarines have their designated roles in the Carrier Battle Groups, which are formations of ships and submarines with Aircraft Carriers at the lead role.
- As per the basic principles of submarine deployment and minimum requirement for **India to create a strategic deterrence**, there is a specific number of submarines of both types that India needs to have in active service.
- Currently **India has less number of submarines** than what is required with some more of those from both types being at various stages of construction.

### What do the names mean?

- Like Kalvari – which means Tiger Shark, **Vagir** has been named after a **Sand Fish**, a predatory marine species.
- Khanderi has been named after an Island Fort built by Chhatrapati Shivaji, which played a key role in his Navy. Karanj has also been named after an Island located South of Mumbai.

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# ART & CULTURE

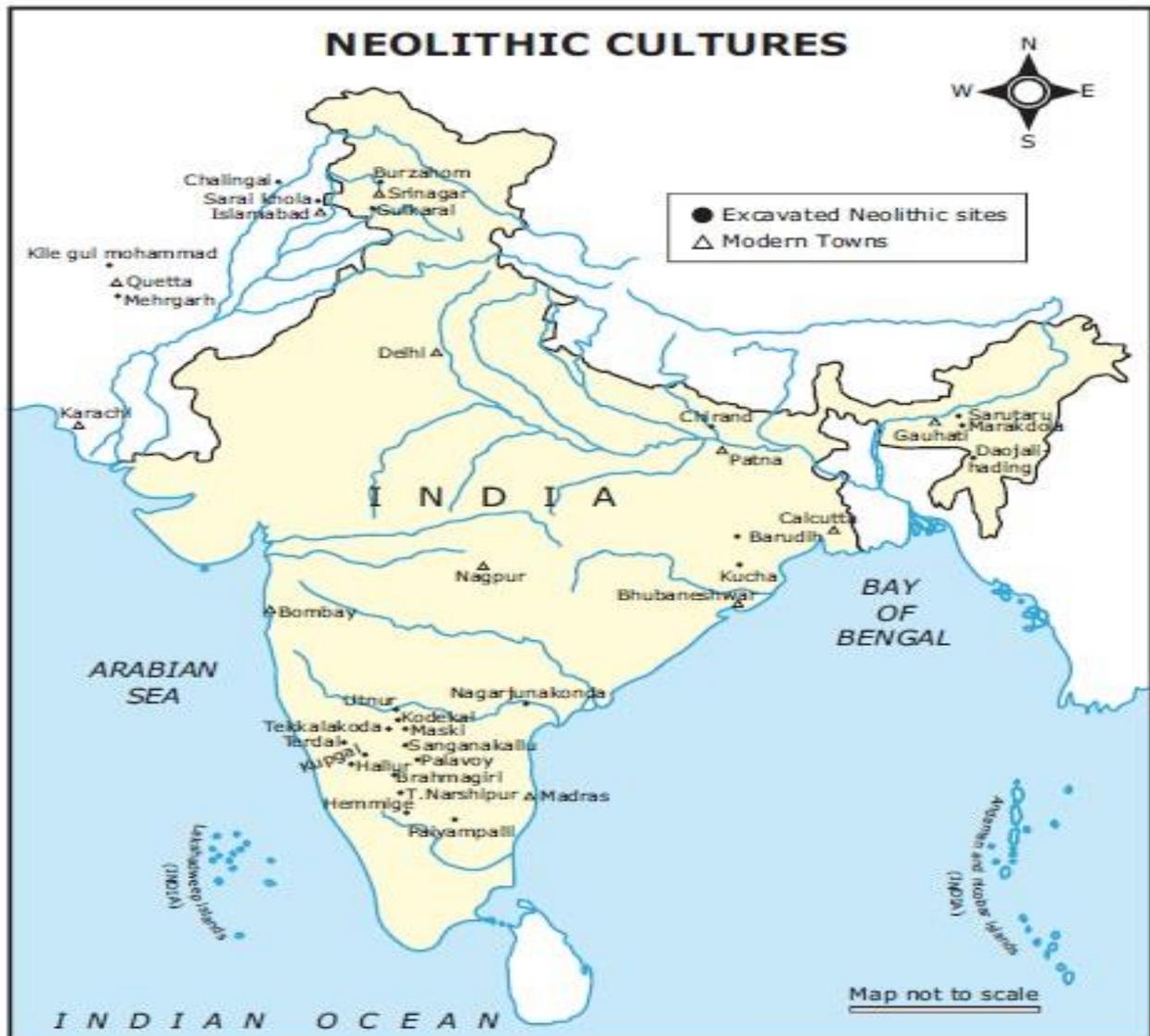
## 1) Prehistoric skeletons

### Neolithic Period

- The Neolithic (also known as the "New Stone Age"), the **final division of the Stone Age**, began about 12,000 years ago when the first developments of farming appeared in the Epipalaeolithic Near East, and later in other parts of the world.
- The Neolithic division lasted until the transitional period of the Chalcolithic from

about 6,500 years ago (4500 BC), marked by the **development of metallurgy, leading up to the Bronze Age and Iron Age.**

- The Neolithic comprises a progression of **behavioral and cultural characteristics and changes**, including the use of wild and **domestic crops and of domesticated animals.**



Neolithic sites of India.

### India and the Neolithic Era

- The Neolithic-agriculture based regions (in Indian), can be categorized into four groups

1. Indus system and its western borderland;
2. Ganga valley;
3. Western India and the northern Deccan; and
4. Southern Deccan.

- **Settled life**, encompassing the transition from **foraging to farming and pastoralism**, began in South Asia in the region of Balochistan, Pakistan, around 7,000 BCE. At the site of Mehrgarh, Balochistan, presence can be documented of the **domestication of wheat and barley, rapidly followed by that of goats, sheep, and cattle.**
- The people used **microlithic blades** in addition to tools made of polished stones as well as bones. They used **axes, adzes, chisels, and celts.**
- Pottery first appeared in this age and included grey ware, **black burnished ware, and mat-impressed ware**
- The Neolithic settlements have been found in **North-Western part** (Such as Kashmir), **Southern part** (Karnataka, Tamil Nadu, and Andhra Pradesh), **North Eastern frontier** (Meghalaya), and **Eastern part** (Bihar and Odisha) of India.
- Some of the important Neolithic settlements are **Mehrgarh** (located in Baluchistan, Pakistan), **Burzahom** (Kashmir), **Gufkral** (Kashmir), **Chirand** (Bihar), and **Utnur** (Andhra Pradesh).
- In South India, the Neolithic began by 6500 BC and lasted until around 1400 BC when the Megalithic transition period began. South Indian Neolithic is characterized by Ash mounds from 2500 BC in Karnataka region, expanded later to Tamil Nadu

#### Why in News?

- German researchers are piecing together the life of a **prehistoric woman** who died more than 5,000 years ago in the **Neolithic period.**

#### About the discovery

- The skeletal remains have been named as The **"Lady of Bietikow,"** and was found near a village of the same name in northeastern Germany's Uckermark region.
- The skeleton had been buried in a settlement in a squatting position, one of the oldest known forms of burial
- Investigations have shown that **she was between 30 and 45 years old** and died more than 5,000 years ago.
- That means that she lived during the same period as **Oetzi the Iceman**, the stunningly preserved corpse found by tourists in the Alps in the 1990s.

- It was during the Neolithic period that humans first **introduced grains into their diet**, since they could be stored more easily than meat and could also be used as a means of payment

## 2) Veeramamunivar

### About Veeramamunivar

- **Veeramamunivar**, the **Jesuit priest**, is known in the Tamil literary world for his epic **Thembavani.**
- The **Christian missionary** also wrote minor literary works including a **Thevaram**, on the **lines of hymns sung by Saivaite saints.**
- Veeramamunivar was attracted by the Bhakti movement that flourished in Tamil Nadu and the singing of the hymns of the Nayanmars and Azhwars.

### Why in News?

- Veeramamunivar's 140th birth anniversary was celebrated on November 8.

### About Bhakti Movement

- The **Bhakti movement** refers to the theistic devotional trend that emerged in **medieval Hinduism** and later acted as the de facto catalyst to the formation of Sikhism.
- It originated in **eighth-century south India (now Tamil Nadu and Kerala)**, and spread northwards. It swept over east and north India from the 15th century onwards, reaching its zenith between the **15th and 17th century CE.**
- The movement started with the **Saiva Nayanars and the Vaisnava Alvars**, who lived between 5th and 9th century CE. Their efforts ultimately helped spread bhakti poetry and ideas throughout India by the 12th–18th century CE.
- The movement was inspired by many poet-saints, who championed a wide range of philosophical positions ranging from theistic dualism of Dvaita to absolute monism of Advaita Vedanta.
- The Bhakti movement began with the aim of **reforming Hinduism.**

## 3) Parliament building

### What's in the News?

- New Parliament building in design will be bigger in size and have more amenities.

### About the changes

- Every member will have a desk in front, which is currently available only for the front rows. Enough space behind the seat for free movement, and a digital system and touch screen for each member are some of the new features.
- Also, the assembly halls will have an **intuitive multilingual graphical user interface**, dual authentication based biometrics and **RFID**, and digital Ink based nameplates with automatic naming.
- There are plans to obtain a five-star **GRIHA** rating for its sustainable building practices and waste management systems.

#### About the building

- At a distance of 750 meters from Rashtrapati Bhavan, it is located along Sansad Marg which crosses the Central Vista; this is **surrounded by the India Gate, war memorial, prime minister's office and residence, ministerial buildings** and other administrative units of Indian government.
- The existing building draws **inspiration from Ekattarso Mahadeva temple** and was built under British empire for its Imperial Legislative Council in 1927.
- **The Chausath Yogini Temple, also known as Ekattarso Mahadeva Temple**, is an **11th-century** temple in Morena district in the Indian state of **Madhya Pradesh**. It is one of the few well-preserved **Yogini temples in India**.
- Originally called the House of Parliament, it was **designed** by the **British architects** Sir Edwin Lutyens and Sir Herbert Baker in 1912-1913 as part of their wider mandate to construct a new administrative capital city for British India.
- Construction of the Parliament House began in 1921 and it was completed in 1927.
- The **opening ceremony** of the Parliament House, which then housed the Imperial Legislative Council, was performed by **Lord Irwin**, Viceroy of India.

#### Additional Details

##### GRIHA

- GRIHA is an acronym for **Green Rating for Integrated Habitat Assessment**.
- GRIHA is a **national rating system for green buildings** that is adopted while designing and evaluating new buildings.

- It was conceived by The Energy and Resources Institute (TERI) and developed with the **Ministry of New and Renewable Energy**.

#### 4) Toy museum

##### Traditional toys of India

##### Kondapalli Toys – Andhra Pradesh

- These toys are made with the softwood from the **Tella Poniki tree**, which the skilled artisans craft into toys based on many themes, especially **Indian mythology**. The toys showcase animals, life scenes, rural folks, gods and characters from epics. **Soldiers, Ambari elephants, Dasavatar set and pen stands** are some of the more popular items.

##### Thanjavur Dolls – Tamil Nadu

- The craft of the doll is an ancient skill where few or no tools are used to handcraft the figurines. The unique feature about the **Thanjavur Doll** is that it is a combination of **roly-poly and bobblehead dolls**. The heritage doll is traditionally made with terracotta and cast as a pair of king and queen in a doll-like semblance which symbolises the dynasties that ruled Thanjavur.

##### The Wooden Toys of Varanasi – Uttar Pradesh

- **Made without any joints**, the beautiful toys are an ancient craft and are cast in shapes of animals, birds, musicians and dancers.
- Using knives, chisels and hammers, the artisans cut, peel and shape shisham or eucalyptus wood to create these toys which can be spherical, and cylindrical or the more traditional and religious articles, vermilion cases, or deities.

##### Asharikandi Terracotta toys – Assam

- The traditional toys in Assam are **made with clay, bamboo, pith, cloth and mud** in the figures of brides and grooms, animals, birds and deities. Located 2,500 km east of the ancient city of Harappa lies the village of Asharikandi in Assam's Dhubri district. Its nearness, and the consequent influence of the prehistoric Indus Valley Civilisation site is evinced in the heritage craft of terracotta toys.

##### Natungram Dolls – West Bengal

- Crafted from a piece of **wood chiselled** to the requisite length, the doll gets the face

and its attire painted on it and preserves a rustic beauty. The Gour-Nitai dolls are one of the distinct types of these dolls which came from the wave of Bhakti movement in Bengal in the 15 and 16th century. These dolls were a pair of male figures with hands outstretched over their heads representing Chaitanya Mahaprabhu (Gour) and his disciple Nityananda.

#### **Dolls of Vilachery – Tamil Nadu**

- The skilled craftsmen mould the **dolls as gods, goddesses, and characters from epics, folk tales and mythology**. They are then sun-dried. The artisans then paint them with two coats of bright colours and can complete a doll in three to five days.
- The golu dolls are of sentimental value to the people who buy them and are cherished for their aesthetics.

#### **Why in News?**

- The Gujarat government plans to build the largest toy museum in the world, showcasing 11 lakh toys from across the country.
- The project has been envisaged with an aim to give a **push to India's homemade toy industry**.

### **5) “Iconic structure” at the proposed New India Garden**

#### **Why in News?**

- The Central Public Works Department (CPWD) has launched a design competition for an “iconic structure” at the proposed

New India Garden along the Yamuna near **Purana Qila**.

#### **About the competition**

- The Ministry of Housing and Urban Affairs said the competition would be held to crowd-source implementable ideas for the conceptual architectural and structural design of the iconic structure at **Nav Bharat Udyan (New India Garden)**, New Delhi to commemorate 75th year of Indian Independence.
- The features in the garden would showcase historical and cultural heritage and symbolise unity in diversity and aspirations of the New India.

#### **Purana Qila**

- Purana Qila, also formerly called **Shergarh & Sher Fort** is one of the oldest forts in Delhi, India. The site has been **continuously inhabited for 2,500 years** and remains dating from the **Pre-Mauryan period have been found**.
- The **present citadel** was begun in the time of Humayun and its construction continued under **Sher Shah Suri**.
- The site is **often identified with the site of Indraprastha**, the capital of the kingdoms of the Pandavas from the Mahabharata.

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## PIB ANALYSIS

### 1) Anti Satellite (A-SAT) Missile

#### About:

- ASAT is a **missile-based system to attack moving satellites**. It is of 2 kinds— based on launching from **the ground or from planes**. Defence Research and Development Organisation (DRDO) has developed Anti-satellite (ASAT) completely indigenously.

#### Mission Shakti:

- Mission Shakti was the country's first-ever Anti-Satellite (ASAT) Missile Test successfully conducted on 27th March 2019 from Dr APJ Abdul Kalam Island in Odisha.
- During the mission, a fast-moving Indian orbiting target satellite in **Low Earth Orbit (LEO)** was neutralized with pinpoint accuracy.
- This was a highly complex mission, conducted at extremely high speed with remarkable precision.
- The successful conduct of Mission Shakti made **India the fourth nation in the world with the capability to defend its assets in outer space**.

#### Why in News?

- A model of Anti Satellite (A-SAT) Missile installed inside the DRDO Bhawan premises was unveiled by the Minister of Defence recently.

### 2) Saffron Cultivation extends to North-East

#### Background:

- Saffron production has long been restricted to a limited geographical area in the Union territory of **Jammu & Kashmir**.
- Pampore region**, in India, commonly known as **Saffron bowl of Kashmir**, is the main contributor to saffron production, followed by Budgam, Srinagar, and Kishtiwari districts of Kashmir.
- Saffron has traditionally been associated with the famous Kashmiri cuisine.
- Its medicinal values were considered as part of the rich cultural heritage of Kashmir.

- As saffron growing was confined to very specific areas in Kashmir, its production remained limited.
- Though the **National Mission on Saffron** focused on several measures to improve its farming, the measures were still limited to the specified areas of Kashmir.

#### Climatic conditions for Saffron

- In India, saffron corms are cultivated during the months of June and July and at some places in August and September. It starts flowering in October.
- Saffron grows well at **an altitude of 2000 meters above sea level**. It needs a **photoperiod (sunlight) of 12 hours**.
- For saffron cultivation, we need an explicit climatological summer and winter with temperatures ranging from no more than **35 or 40 degree Celsius in summer** to about **-15 or -20 degree Celsius in winter**.
- It also requires adequate rainfall that is **1000-1500 mm** per annum.
- It grows in many different soil types but thrives best in **calcareous, humus-rich and well-drained soil** with a **pH between 6 and 8**.

#### Why in News?

- Saffron cultivation in India, which was so far confined to Kashmir, may soon expand to the North East of India. Plants from seeds transported from Kashmir to Sikkim and acclimatized there are now flowering in Yangyang in the Southern part of Sikkim.

#### Pilot Project in North East

- North East Centre For Technology Application and Reach (NECTAR)** is an autonomous body under the Department of Science & Technology.
- It has supported a pilot project to explore the feasibility of growing saffron in North East region of India, with the same quality and higher quantity.
- The Botany and Horticulture department of Sikkim Central University carried out tests to understand the soil and actual pH conditions of Yangyang of Sikkim.
- They found it comparable to saffron growing places of Kashmir.

- The project also focused on post-harvest management and value addition of saffron so that quality saffron drying and efficient post-harvest processing can improve saffron recovery, thereby improving its production.

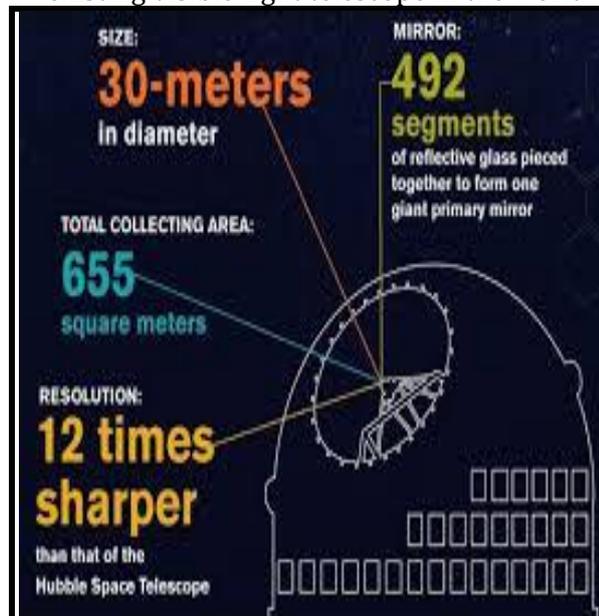
### Benefits

- The annual demand of the saffron in India is 100 tonnes per year, but its average production is about 6-7 tonnes per year.
- To meet this demand, saffron is imported from countries like Iran and Afghanistan. So the extension of saffron production will help in meeting the annual demand in india.
- It will help in reducing imports and it will also diversify agriculture and provide new opportunities to the farmers in the North-East.

## 3) Thirty Meter Telescope

### About

- The Thirty Meter Telescope (TMT) is a new class of extremely large telescopes that will allow us to see **deeper into space and observe cosmic objects** with unprecedented sensitivity.
- With its **30 m prime mirror diameter**, TMT will be three times as wide, with nine times more area, than the largest currently existing visible-light telescope in the world.



- This will provide unparalleled resolution with TMT images more than 12 times sharper than those from the Hubble Space Telescope.

- The Thirty Metre Telescope is a joint venture (JV) involving following countries namely, **USA, Japan, China, India and Canada.**

### Benefits of TMT

- It will allow astronomers to explore the mysterious period in the life of the universe when the first **stars and galaxies** were formed.
- One of its key uses will be the **study of exoplanets**, many of which have been detected in the last few years, and whether their atmospheres contain water vapour or methane — the signatures of possible life.
- TMT will also observe the formation and development of the large-scale structures by looking at faint **distant galaxies** and the intergalactic medium.
- It has capability to detect and investigate **black holes** that reside in the center of many distant galaxies, as well as study in detail the black hole in the center of our own Milky Way.

### Why in News?

- The Department of Science & Technology said that 2020 Physics Nobel Laureate Prof. Andrea Ghez had worked closely with Indian astronomers on the design of back-end instruments and possible science prospects of the Thirty Meter Telescope (TMT) project being installed at Maunakea in Hawaii.

## 4) Hunar Haat

### About:

- Hunar Haat is an **exhibition of handicrafts and traditional products** made by artisans from the **minority communities.**
- These are organised by the **Ministry of Minority Affairs under USTTAD (Upgrading the Skills & Training in Traditional Arts/Crafts for Development) scheme.**
- It aims to provide **employment opportunities at national as well international markets** for thousands of master artisans, craftsmen and culinary experts.
- It also provides a market and opportunity to master artisans and craftsmen from remote areas of the country, and has become a credible brand of rare exquisite indigenous handmade products.

- The **USTTAD** scheme aims to preserve the heritage of traditional arts and crafts of minority communities and build capacity of traditional crafts persons and artisans and establish linkages of traditional skills with the global market.



#### Why in News?

- Hunar Haat is about to restart after a gap of about 7 months due to the Corona pandemic.
- The Ministry of Minority Affairs is planning to organise Hunar Haat at Delhi Haat at Pitampura with the theme of “**Vocal for Local**”.

## 5) Shanghai Cooperation Organisation

### About SCO:

- The Shanghai Cooperation Organisation or the Shanghai Pact, is an **economical-political military organisation founded in 2001 in Shanghai, China**.
- **China, Kazakhstan, Kyrgyzstan, Russia and Tajikistan** were the original 5 founding members of the organisation who found the Shanghai Five Group. The group was then renamed to Shanghai Cooperation Organisation with **Uzbekistan** joining the organisation in 2001.
- There are **eight member states in the SCO at present, namely, China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, Pakistan and India (both joined in 2017)**.
- There are about four observer states and six dialogue partners in the SCO at present:

- **Observer States:** Afghanistan, Belarus, Iran and
- **Dialogue Partners:** Armenia, Azerbaijan, Cambodia, Nepal, Sri Lanka and Turkey.

### Objectives of the SCO:

- To strengthen mutual trust among the neighbouring member states.
- To promote effective cooperation in various fields like economy, trade, politics, culture and research and technology.
- To ensure peace, prosperity, security and stability in the region, and
- To establish a democratic, fair and rational international eco-political order.

### Organisational Structure of the SCO:

- The supreme decision-making body in the Shanghai Cooperation Organisation is the Heads of State Council.
- The second highest body of the SCO is the Heads of Government Council.
- The **SCO secretariat**, Beijing and the **Executive Committee of the Regional Anti-Terrorist Structure (RATS)**, Tashkent are the two permanent bodies of the SCO.

### Why in News?

- The 20th Summit of SCO Council of Heads of State was held recently via Video Conference. The Meeting was chaired by the President of the Russian Federation Mr. Vladimir Putin. Prime Minister Narendra Modi led the Indian delegation.

### Highlights of Indian Prime Minister's address:

- **Reformed multilateralism:** India, as a non-permanent member of the UNSC, will focus on the theme of reformed multilateralism to bring about desirable changes in global governance.
- This is imperative to meet the expectation of a world suffering from the social and financial after-effects of the pandemic.
- **India's firm belief in regional peace:** This will promote security and prosperity and raising voice against terrorism, smuggling of illegal weapons, drugs and money-laundering.
- **Respect territorial integrity and sovereignty:** In an indirect reference to the Chinese infrastructure projects in Pakistan Occupied Kashmir, India urged members of the SCO to respect “territorial integrity” and “sovereignty”.

- **Strong cultural and historical connect:** India has strong links with the SCO region and has a firm commitment towards strengthening connectivity in the region with initiatives like International North-South Transport Corridor, Chabahar Port and Ashgabat Agreement.
- **SCO Year of Culture:** India also extended full support to observing the 20th anniversary of SCO in 2021 as the "SCO Year of Culture".

#### Related Information

##### Regional Anti-Terrorist Structure

- The Regional Anti-Terrorist Structure (RATS) is a permanent organ of the SCO which serves to promote cooperation of member states against the three evils of terrorism, separatism and extremism.
- It is headquartered in Tashkent.
- The head of RATS is elected for a three-year term.

## 6) Quick Reaction Surface-to-Air Missile (QRSAM) Missile System

#### About:

- The QRSAM, is a **canister-based system**, which means that it is **stored and operated from specially designed compartments**.
- In the canister, the inside environment is controlled, thus along with making its transport and storage easier, the shelf life of weapons also improves significantly.



#### Key Features

- The QRSAM is a **short range surface-to-air missile (SAM)** system, primarily designed and developed by **DRDO** to provide a protective shield to moving armoured columns of the Army from enemy aerial attacks.
- The entire weapon system has been configured on a **mobile and manoeuvrable platform** and is capable of providing air defence on the move.

- It has been designed for induction into the Army and has a range of **25 to 30 km**.
- The QRSAM weapon ensemble, which functions on the move, consists of a fully automated command and control system, two radars — Active Array Battery Surveillance Radar, Active Array Battery Multifunction Radar — and one launcher.
- Both radars have 360-degree coverage with "search on move" and "track on move" capabilities. The system is compact, uses a single stage solid propelled missile and has a mid-course inertial navigation system with two-way data link and terminal active seeker developed indigenously by DRDO.

#### Benefits:

- The system is capable of detecting and tracking targets on the move and engaging targets with short halts.
- The system is designed to give air defence coverage against strike columns of Indian Army.

#### Why in News?

- Quick Reaction Surface to Air Missile (QRSAM) System has achieved a major milestone by a direct hit on a Banshee Pilotless target aircraft at medium range & medium altitude.

## 7) Ek Bharat Shreshtha Bharat

#### About Ek Bharat Shreshtha Bharat:

- The Prime Minister announced the Ek Bharat Shreshtha Bharat initiative on October 31, 2015 -- Rashtriya Ekta Diwas -- to commemorate the birth anniversary of **Sardar Patel to revive a sense of 'nationhood'**.
- The broad objectives of the initiative are as follows
- **To CELEBRATE** the Unity in Diversity of our Nation and to maintain and strengthen the fabric of traditionally existing emotional bonds between the people of our Country;
- **To PROMOTE** the spirit of national integration through a deep and structured engagement between all Indian States and Union Territories through a year-long planned engagement between States;
- **To SHOWCASE** the rich heritage and culture, customs and traditions of either State for enabling people to understand and appreciate the diversity that is India, thus fostering a sense of common identity

- **TO ESTABLISH** long-term engagements and,
- **TO CREATE** an environment which promotes learning between States by sharing best practices and experiences?

#### Why in News?

- Various programmes and events are being conducted under Ek Bharat Shreshtha Bharat.

## 8) PM-KUSUM Scheme

### About the scheme

- **Ministry of New and Renewable Energy** launched the Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM KUSUM) Scheme for farmers for **installation of solar pumps and grid connected solar and other renewable power plants** in the country.
- The scheme aims to add solar and other renewable capacity of 25,750 MW by 2022 with total central financial support of Rs. 34,422 Crore including service charges to the implementing agencies.
- The Scheme consists of three components:
  1. Component A: 10,000 MW of Decentralized Ground Mounted Grid Connected Renewable Power Plants of individual plant size up to 2 MW.
  2. Component B: Installation of 17.50 lakh standalone Solar Powered Agriculture Pumps of individual pump capacity up to 7.5 HP.
  3. Component C: Solarisation of 10 Lakh Grid-connected Agriculture Pumps of individual pump capacity up to 7.5 HP.

### Benefits of the Scheme:

- The Scheme will have substantial environmental impact in terms of savings of CO<sub>2</sub> emissions. All three components of the Scheme combined together are likely to result in saving about 27 million tonnes of CO<sub>2</sub> emission per annum.
- Further, Component-B of the Scheme on standalone solar pumps may result in saving of 1.2 billion liters of diesel per annum and associated savings in the foreign exchange due to reduction of import of crude oil.

- The scheme has direct employment potential. Besides increasing self-employment the proposal is likely to generate employment opportunities equivalent to 6.31 lakh job years for skilled and unskilled workers.

### Why in News?

- The 33rd Annual General Meeting (AGM) of Indian Renewable Energy Development Agency Ltd. (IREDA) , the PSU under the Ministry of New & Renewable Energy, was held recently.
- The meeting highlighted Green Energy portfolio of the country is consistently growing in terms of both quantity and quality; and is expected to get a further boost with various policy initiatives of the Government, such as **PM-KUSUM scheme, Solar & Wind hybrid technologies, Biofuels such as Ethanol and Compressed Bio Gas (CBG), E-mobility and associated infrastructure, Off-shore Wind energy, Solar Roof-top programme etc.**

### About IREDA

- IREDA is India's leading financial institution dedicated to clean energy expansion. Since its founding in 1987, IREDA has financed the largest share of renewable energy projects in India. The Indian Renewable Energy Development Agency (IREDA) is a Non-Banking Financial Institution under the administrative control of the **Ministry of New and Renewable Energy (MNRE)**

### Key Objectives

- To give financial support to specific projects and schemes for generating electricity and / or energy through new and renewable sources and conserving energy through energy efficiency.
- To maintain its position as a leading organisation to provide efficient and effective financing in renewable energy and energy efficiency / conservation projects.
- To increase IREDA's share in the renewable energy sector by way of innovative financing.

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# News in Depth

## AIR NEWS

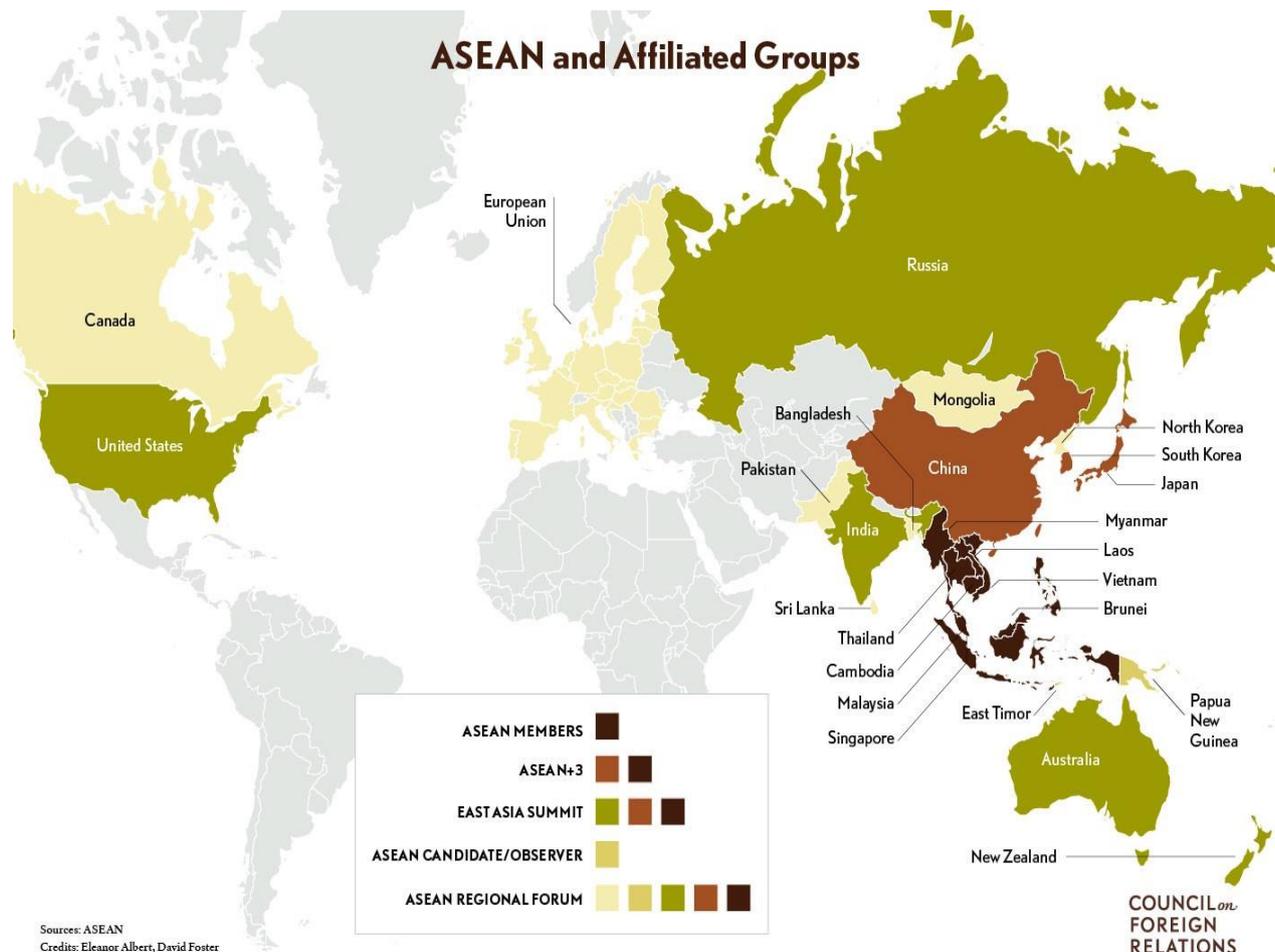
### 1) East Asia Summit

- The East Asia Summit is a **premier forum in the Asia-Pacific region dealing with issues relating to security and defence.**
- Since its inception in 2005, it has been playing a significant role in the strategic, geopolitical and economic evolution of East Asia.
- East Asia Summit is considered as the **leaders-led forum to exchange views on strategic issues** and for adhering to international law, respecting territorial

integrity and sovereignty, and promoting a rules-based global order.

- **Member countries**
- It includes **10 ASEAN member states plus India, China, Japan, Republic of Korea, Australia, New Zealand, United States and Russia.**
- **Why in News ?**
- **The 15th East Asia Summit was held recently in Hanoi, Vietnam.**

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## THE HINDU EDITORIALS

### 1) Rethinking America's electoral system

GS Paper 2- Comparison of the Indian constitutional scheme with that of other countries.

What is the debate around the poll process and why are questions being raised about its viability?

The story so far:

- The 2020 U.S. presidential election has been one of the most bitterly polarised democratic exercises in recent memory.
- Despite this election having seen one of the **highest turnout numbers since 1960** the final outcome hinged on **narrow vote margins** in a handful of 'swing States'.
- These circumstances have fuelled anger over the **lack of direct representation in the electoral system** and have raised questions surrounding the viability of the institution, the 'Electoral College', that renders the **popular vote insufficient to determine the victor**.

How does the Electoral College work?

- The Electoral College refers to the process by which the winner of the popular vote in each State is allocated a **pre-specified number of electoral delegates**, or electors, per U.S. State, and these electors go on to decide who the President of the country will be.
- The electors of each State are appointed by the Democratic and Republican Parties (and third parties, where applicable) of the State.
- The college follows a **winner-takes-all rule** for the popular vote, giving the first candidate past the post all of the electors of that State. For example, if more than 50% of the voters in North Carolina vote for the Republican Party, then all the electors allocated to that State will be Republican.
- Each State has the same number of electors as it does members in its Congressional delegation, namely one for each member in the House of Representatives and two Senators.
- Across the U.S., there are **538 electors**.

- To win the presidency, a candidate would be required to secure **at least 270 votes in the Electoral College**.

Are there any exceptions and caveats to this system?

- The minor exceptions to this system are **Maine and Nebraska**, which **appoint individual electors** based on the winner of the popular vote for **each Congressional district** and then two electors based on the winner of the overall State-wide popular vote.
- Once the votes are in, the electors are required to meet on the **first Monday after the second Wednesday** of December to cast ballots for the President and the Vice-President.
- In 2020, that will be on **December 14**.
- A caveat in the Electoral College system that might end up being salient to the **2020 election** is that while an overwhelming majority of electors cast their vote for the President based on their prior party affiliation, there have been occasions in the past, howsoever rare, when the electors have surprised the college by picking another candidate than the one they were pledged to choose. These electors are known as "**faithless electors**".
- If Mr. Biden had not won a significant number of Electoral College votes, a few such faithless electors might have endangered his prospects of entering the Oval Office.

Why is there frustration over the Electoral College today?

- At the broadest level, there are **two reasons** why the Electoral College, as a mechanism for representing the will of the people, might be **considered suboptimal**.

Few voters matter

- Under this system, surprisingly **few voters truly matter** in an election.
- The reason is that except for a handful of 'swing States', which have the potential to flip from one party to the other, all the others have historically only voted for the same party.
- According to some analyses, the proportion of voters actually determining the outcome

of the U.S. presidential election is well **below 10% of the total population.**

#### Contingent proceedings

- The Electoral College also comes packaged with complex and potentially self-defeating contingency proceedings in unusual election circumstances, some of which have occurred in the 2020 election.
- A determination that neither candidate has secured a majority of electoral votes would trigger a “contingent election” under the 12th Amendment of the Constitution. That means the House of Representatives chooses the next president, while the Senate selects the vice president.
- Given that red States outnumber blue States in this election, such a process might have led to Mr. Trump, rather than Mr. Biden, being confirmed by Congress as President.
- However, according to the Congressional record, only two presidential elections have been decided in the House, in 1800 and 1824 respectively.

#### How did the Electoral College come into being and why has it not been replaced by direct representation?

- **Alexander Hamilton, endorsed the Electoral College system in 1788** on the grounds that it guaranteed that U.S. Presidents would be “characters preeminent for ability and virtue” and not merely adept at “the little arts of popularity”.
- Congressional proposals to pass a constitutional amendment to abolish the Electoral College in favour of a direct, popular election, were put forth in **1969**, and again a decade later, but the measures never reached the required two-thirds majority. Efforts by Democratic Senators to revive this discussion in 2019 have not advanced either.
- Resistance to such change comes **not only from swing States**, but also from **smaller States** with relatively minuscule populations, who fear **loss of voice in the federal government** system, if the Electoral College is abolished.

#### Conclusion

- If the **Electoral College were done away with**, and the **popular vote** at the county level became the criterion for victory in a presidential election, this would

considerably expand the extent to which the **preferences** of the voting population were **truly represented** in the choice of political leaders.

## 2) Lessons from Vietnam and Bangladesh

### GS Paper 3- Economy

#### Context:

- While **Bangladesh** has become the **second largest apparel exporter** after China, **Vietnam’s exports** have grown by about **240%** in the past eight years. This article explains how the two nations achieved this and what India should learn from them.

#### Two nations and their success stories

##### Reason for Vietnam’s success story

- An **open trade policy, a less inexpensive workforce, and generous incentives** to foreign firms contributed to Vietnam’s success.

##### Open trade policy

- Vietnam pursues an open trade policy mainly through **Free Trade Agreements (FTAs)** which ensure that its **important trading partners** like the U.S., the EU, China, Japan, South Korea and India **do not charge import duties** on products made in Vietnam.

##### Domestic laws attractive for foreign firms

- Vietnam has agreed to change its domestic laws to make the country attractive to investors.

##### Foreign firms can compete for local businesses.

- For example, EU firms can open shops, enter the retail trade, and bid for both government and private sector tenders.
- They can take part in electricity, real estate, hospital, defence, and railways projects.

##### Export strategy

- Last year, Vietnam received investments exceeding **\$16 billion**, as a result of which Vietnam’s **exports rose** from \$83.5 billion in 2010 to \$279 billion in 2019.

##### Reason for Bangladesh’s success

- In Bangladesh, large exports of apparels to the EU and the U.S. make the most of the country’s export story.
- The EU allows the import of apparel and other products from **least developed countries (LDCs)** like Bangladesh duty-free.

- Sadly, Bangladesh may not have this facility in four to seven years as its per capita income rises and it loses the LDC status.
- Bangladesh is working smartly to **diversify its export basket**. India, as a good neighbour, accepts all Bangladesh products duty-free (except alcohol and tobacco).

### Which elements of Vietnam and Bangladesh models should India emulate?

#### Support large firms

- The key learning from Bangladesh is the **need to support large firms** for a quick turnover.
- Large firms are better positioned to invest in brand building, meeting quality requirements, and marketing. Small firms begin as suppliers to large firms and eventually grow.

#### Focus on specific sectors

- Vietnam has changed domestic rules to meet the needs of investors. Yet, most of Vietnam's exports happen in five sectors. In contrast, India's exports are more diversified.
- To promote manufacturing and investment, India could set up **sectoral industrial zones** with pre-approved factory spaces.

#### Conclusion

- With **reforms promoting innovation and lowering the cost of doing business**, India is poised to attract the best investments and integrate further with the global economy.

### 3) Providing quick psychosocial support

#### GS paper 2- Issues related to social sector

#### Need for psychosocial support

##### Increasing number of mental illnesses

- The number of people with **mental illnesses** had been **increasing** across the world even before the pandemic.

##### Less number of mental health professionals

- Despite mental health issues constituting a significant percentage of the health burden in India, the country does **not have enough mental health professionals**, especially psychiatrists and clinical psychologists.

##### Pandemic induced mental illness

- According to a recent review in the Journal of the American Academy of Child and Adolescent Psychiatry, children whose

movements have been severely restricted are at a higher risk of experiencing **feelings of loneliness, depression and anxiety** during the pandemic.

- Though the pandemic has a deep psychological impact on people of all age groups, **children** are especially vulnerable to adverse mental health conditions during such times.

#### UNICEF survey findings

- In the early stages of the pandemic, **UNICEF** had conducted a survey of children, parents, teachers and caregivers in 104 countries on how the event was affecting their lives, particularly their **mental health and psychosocial well-being**.
- It pointed out that there is an urgency to work for the mental health and psychosocial well-being of the world's children and lend **support to parents and caregivers** as well.
- As the pandemic rages on, it is important to monitor young people's mental health status and provide psychosocial support whenever and wherever necessary.

#### Psychosocial support in Odisha

- Odisha had some experience of psychosocial support in the **aftermath of the super cyclone in 1999 and a severe cyclonic storm in 2019** where volunteers were trained in providing psychosocial support.
- Children were encouraged to participate in various activities like painting, music, storytelling, dance, quizzing, toy-making. They were also encouraged to share their emotions.
- It was possible, through **structured counselling**, to improve the coping capacity of disoriented children.
- These experiments were found to be useful in **bolstering their confidence** and getting them back to school.

#### Way forward

##### Create community volunteers

- The availability of mental health professionals being unlikely to match the requirements of a growing number of people suffering from mental illness, **creating a cadre of community volunteers** to reduce the burden on health workers can be considered.
- The experiences of countries such as Zimbabwe, Canada and New Zealand show

that community volunteers with some **basic training** can supplement regular mental health services.

#### Talk therapy

- The inadequacy of mental health professionals in Western countries as highlighted by some economists says that as a result, two-third of people with a mental health problem do not receive any treatment.
- In such a scenario, **'talk therapy', recommended by the World Health Organization**, could be the first line of treatment which can be delegated to community volunteers.

#### Conclusion

- In India, where basic health infrastructure is weak, access to mental health services is a far cry.
- The pandemic has once again exposed this weakness and it is time for **greater attention to be paid to the availability of adequate mental health services** both in urban and rural areas.

### 4) Strategic comfort with the Maldives

#### GS Paper 2- Bilateral relations

##### Context:

- The visit of Foreign Secretary **Harsh Vardhan Shringla to the Maldives** is significant for taking forward bilateral relations.

##### Significance of the visit

- Under Maldivian President **Ibrahim Solih**, bilateral cooperation, especially on the economic front, has become a 'model' that New Delhi can adopt to make Prime Minister Narendra Modi's **'Neighbourhood First' a sustained success**.
- Given ex-President Yameen's tilt towards China and bias against India when in power, India can take **respite in the 'strategic comfort'** of the 'India First' policy of the Solih government.

##### India- Maldives bilateral relations

- India and the Maldives have had **bilateral relations for centuries**.
- **Technology** has made connectivity easier for everyday contact and exchanges.
- Maldivian students attend educational institutions in India and patients fly here for superspeciality healthcare, aided by a

**liberal visa-free regime** extended by India.

- **Tourism** being the mainstay of Maldivian economy, it serves as a major tourist destination for some Indians and a job destination for others.
- Given the geographical limitations imposed on the Maldives, India has **exempted the nation from export curbs** on essential commodities.

##### Emergency assistance

- Through the decades, India has rushed **emergency assistance** to the Maldives, whenever sought.
- **Operation cactus**
- In **1988**, when armed mercenaries attempted a coup against President Maumoon Abdul Gayoom, India sent **paratroopers and Navy vessels** and restored the legitimate leadership under Operation Cactus.

##### Tsunami assistance

- The 2004 tsunami and the **drinking water crisis** in Male a decade later were other occasions when India rushed assistance.

##### COVID-19 assistance

- At the peak of the continuing **COVID-19 disruption**, India rushed **\$250 million aid** along with medical supplies to the Maldives, a new cargo ferry and also opened an air travel bubble, the first such in South Asia.

##### Challenges for India

- Ex-President Yameen's camp has launched an **'India Out' campaign** against New Delhi's massive developmental funding for creating physical, social and community infrastructure.
- India should be concerned about the **protests** as well as the occasional rumblings within the ruling Maldivian Democratic Party (MDP).

##### Conclusion

- Given this background and India's increasing geostrategic concerns in the shared seas, taking forward the **multifaceted cooperation to the next stage quickly** could also be at the focus of Mr. Shringla's visit.

### 5) The cost of clearing the air

#### GS Paper 3- Environmental Pollution

##### Context:

- In February, Finance Minister Nirmala Sitharaman announced a **Rs. 4,400 crore package for 2020-21 to tackle air pollution** in 102 of India's most polluted cities.
- The funds would be used to **reduce particulate matter by 20%-30%** from 2017 levels by 2024 under the **National Clean Air Programme (NCAP)**.

### Concerns

#### Inadequate allocation

- Though it was the **largest-ever yearly allocation** by a government to specifically tackle air pollution, the fine print revealed that **only half the money was finally allotted** to 15 States (and 42 cities in them) in November.
- The rest will be given in January based on how cities achieve certain **'performance parameters'** that are still being worked out by the Centre.

#### The scale of the problem

- It is unclear if this amount is adequate to handle the task of improving air quality since the **scale of the problem is unknown**.

#### Air quality monitors

- Several of the States with the most polluted cities that have been allotted NCAP funds are expected to **spend a substantial fraction in the act of measurement**.
- Only **Delhi** has managed to firmly install an extensive network of continuous **ambient air quality monitors** about 37 and the highest in the country managed by several government or allied bodies.

#### Lack of data availability

- An analysis by research agencies Carbon Copy and Respirer Living Sciences recently found that **only 59 out of 122 cities had PM 2.5 data available**.

#### Usage of old machines

- Historically, cities have used manual machines to **measure specific pollutants** and their use has been inadequate.
- Now manual machines are being replaced by **automatic** ones and India is still largely **reliant on imported machines** though efforts are underway to make and install low-cost ones.

#### Cleaning up

- The funds **don't account for the trained manpower and the support system** necessary to effectively maintain the

systems and these costs are likely to be significant.

- Pollution clean-up activities have been assigned 50% of this budget and another Rs. 11 crore is allotted for mechanical street sweepers. Therefore, budgetary allocations alone **don't reflect the true cost of reducing air pollution**.

#### Money alone doesn't work

- In the case of the National Capital Region, at least Rs. 600 crore was spent by the Ministry of Agriculture over two years to provide **subsidised equipment** to farmers in Punjab and Haryana and dissuade them from burning paddy straw.
- Yet this year, there have been **more farm fires than in the previous year** and their contribution to Delhi's winter air woes remain unchanged.

### Conclusion

- While funds are critical, **proper enforcement, adequate staff and stemming the sources of pollution** on the ground are vital to the NCAP meeting its target.

### About National Clean Air Programme (NCAP)

- Launched in January 2019, it is the first ever effort in the country to frame a national framework for air quality management with a time-bound reduction target.
- The plan includes 102 non-attainment cities, across 23 states and Union territories, which were identified by Central Pollution Control Board (CPCB) on the basis of their ambient air quality data between 2014 and 2018
- Non-attainment cities are those which have been consistently showing poorer air quality than the National Ambient Air Quality Standards. These include Delhi, Varanasi, Bhopal, Kolkata, Noida, Muzaffarpur, and Mumbai

### Key features

- **Target:** Achieve a national-level target of **20-30% reduction** (80-90 %) of PM<sub>2.5</sub> and PM<sub>10</sub> concentration by between 2017 and 2024.
- **Implementation:** **Central Pollution Control Board (CPCB) will execute this nation-wide programme** in consonance with the section 162 (b) of the Air (Prevention and Control of Pollution) Act.

- As part of the programme, **the Centre also plans to scale up the air quality monitoring network across India.** At least 4,000 monitors are needed across the country, instead of the existing 101 real-time air quality (AQ) monitors, according to an analysis.
- The plan proposes a **three-tier system**, including **real-time physical data collection, data archiving, and an action trigger system** in all 102 cities, besides extensive plantation plans, research on clean-technologies, landscaping of major arterial roads, and stringent industrial standards.
- It also proposes **state-level plans of e-mobility** in the two-wheeler sector, rapid augmentation of charging infrastructure, **stringent implementation of BS-VI norms**, boosting public transportation system, and adoption of third-party audits for polluting industries.

## 6) COVID-19, climate and carbon neutrality

### Context

- The COVID-19 crisis and its aftermath can be seen either as a **pause on the economic growth** or as an opportunity for reset, recalibration and rethink. COVID-19 is undoubtedly a public health catastrophe which **reflects fundamental ecological disequilibrium.**

### Ecological disequilibrium

- **Loss of biodiversity** and ever-increasing human incursions into the natural world have contributed heavily to the outbreak and **spread of epidemic** diseases.
- **Environmental problems** such as air pollution, water pollution, chemical contamination, deforestation, waste generation and accumulation, land degradation and excessive use of pesticides — all have **profound public health consequences** both in terms of morbidity and mortality and hence demand urgent actions.

### Effects of climate change

- Uncertainties in the monsoon
- Frequency of extreme events
- Retreat of the Himalayan glaciers and
- Increase in mean sea levels.

### Need to address climate change

- A recent report of the **Ministry of Earth Sciences** called 'Assessment of climate change over the Indian region' points to the need for making our future science and technology strategy in different areas anchored in an understanding of the impacts of climate change caused by continued emissions of greenhouse gases.
- This scientific understanding is essential for what may be a solution at one point of time but becomes a problem at another point and may even become a threat in a different context.
- For example HFCs, or **hydrofluorocarbons**, were at one time seen as the **panacea to fix the depletion of the ozone layer.** The depletion of the ozone layer has been fixed more or less, but HFCs are a potent **threat from a climate change perspective** since their global warming potential is a thousand times that of carbon dioxide.
- COVID-19 also reinforces the need to pay far greater attention to the **biosciences that underpin agriculture, health and the environment** that are going to be profoundly impacted by the current pandemic.

### Carbon neutrality targets by other countries

- In September 2018, the American State of **California**, the world's fifth largest economy in itself, was the first to commit itself to **carbon neutrality** which is to be **achieved by 2045.**
- In December 2019, a few weeks before the world became aware of the COVID-19 catastrophe, the **European Union** followed California's example but with the **year 2050** in mind.
- In September 2020, **China** stunned the world by declaring its goal of carbon neutrality by **2060** and just a few weeks ago, **Japan and South Korea** joined the club by announcing their intention to do so by **2050**, like the EU.

### India's targets

- At the **Paris climate change conference** in December 2015, we committed to having 40% of our electricity-generating capacity from non-fossil fuel sources by the year 2030.
- However, India is still thinking very seriously about its level of ambition in

carbon neutrality especially since this will have public health consequences as well.

#### Post-COVID-19 world

- The post-COVID-19 world is an opportunity for us to switch gears and make a radical departure from the past to make **economic growth ecologically sustainable**.
- Carbon neutrality is a far bolder and worthwhile goal, the attainment of which has to be consciously engineered. It will involve **massive scientific invention and technological innovation** especially when it comes to removing greenhouse gases from the atmosphere.
- Though GDP growth is a must, apart from getting back to 7%-8% steady growth path, in this post-COVID-19 world, we should

also make **efforts to ensure that the 'G' in GDP is not 'Gross' but 'Green'**.

#### What is carbon neutrality?

- Carbon neutrality means having a **balance between emitting carbon and absorbing carbon** from the atmosphere in carbon sinks.
- Removing carbon dioxide from the atmosphere and then storing it is known as carbon sequestration. In order to achieve net zero emissions, all worldwide greenhouse gas emissions will have to be **counterbalanced by carbon sequestration**.

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## *INDIAN EXPRESS EXPLAINED*

### 1) EOS-01, India's latest earth observation satellite launched

#### Why in the news?

- The EOS-01 along with nine satellites from foreign countries were launched by a **PSLV rocket** from Sriharikota. Four each one of the foreign countries are from the United States and Luxembourg, while another is a technology demonstrator from Lithuania.

#### Earth Observation satellite

- An Earth observation satellite or Earth remote sensing satellite is a satellite used or **designed for Earth observation (EO)** from orbit, including spy satellites and similar ones intended for non-military uses such as environmental monitoring, meteorology, cartography and others.

#### EOS-01

- EOS is a new nomenclature developed by ISRO which means Earth Observation Satellite.
- An ISRO satellite, EOS-01 is an earth observation satellite, intended for applications in agriculture, forestry and disaster management support.
- EOS-01, is just another **Radar Imaging Satellite (RISAT)**, and like its RISAT-2B and RISAT-2BR1, uses synthetic aperture radars to produce high-resolution images of the land.
- One big advantage of these radar imaging over optical instruments is that it is unaffected by weather, cloud or fog, or the lack of sunlight. It can produce high-quality images in all conditions and at all times.

### 2) What is the PLI scheme & which sectors will be under it?

#### Why in the news?

- Government has declared that it is soon going to expand the PLI scheme to 9-10 more sectors such as auto and auto components, drug manufacturing, telecom, textiles, food, solar photovoltaic modules, white goods like air conditioners and LEDs,

specialty steel, electronics and advanced chemistry cell batteries.

#### Production- Linked Incentive Scheme

- It is a Union government **SUBSIDY** scheme to encourage the domestic production of goods under its Atma Nirbhar programme.
- This scheme was started in March 2020 for 3 sectors namely,
  - **Mobile manufacturing and specified electronics components ,**
  - **Drug intermediates and**
  - **Active pharmaceutical ingredients and medical devices**
- Under this scheme, cash subsidies will be provided to companies as a percentage of incremental sales of domestically manufactured products from the base year (the year the scheme is launched).
- After a certain period when the industry is well established the incentives are withdrawn.

#### Need of the PLI scheme

- The idea of PLI is important. The sectors which it aims are large ones and are both labour and capital intensive sectors.
- The government cannot continue making investments in these capital intensive sectors as they need longer times to start giving the returns.
- Instead, what it can do is to **invite global companies** with adequate capital to set up capacities in India.
- The scheme is strategically directed towards those sectors that have shown either global competence, the potential to grow or high import dependency.
- Thus it helps to cut import bills and pull companies from other countries to start production in India. It also boosts local jobs and production.
- But **one of the major drawbacks** is, the scheme will extend to only those who are able to prove that they had incremental sales every year for the next five years.

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## *RSTV BIG PICTURE*

### 1) New rules for other service providers

- Recently, the Ministry of Communications has announced simplified guidelines for Business Process Outsourcing (BPOs) and IT enabled services players to reduce compliance burden for the industry.
- The registration requirement for Other service Providers (OSPs) is done away and the BPO industry engaged in data related work is now out of ambit of OSP regulation.

#### Other service Providers

- OSPs are entities providing applications, IT enabled or any kind of outsourcing services using telecom resources.
- It refers to BPOs, KPOs, ITES, call centres etc.

#### Need for reform

- In the past, there were **unrealistic conditions** applied to OSPs for allowing the employees to work from home.
- Eg: Getting permission from Government and bank guarantee for employees to work from home.
- The **level of employment provided by OSPs is very high** which was necessary to grasp for economic development.
- The current reform has **reduced the regulation burden** especially for call centres due to which a **space is provided to OSPs** in order to flourish on their own.
- Around 55% of outsourcing work is done by India and 40% of capability centres are in India which shows that the **scope for India is very high** in terms of digital economy.

#### Advantages

- The main advantage is for the employees staying and working in different parts of the country because now onwards **anybody can work from anywhere making it more reliable for employees.**
- It will lead to **expansion of industries** as well as the **cost of operation will come down.**
- The employment in **small cities and villages might increase** which will lead to **reduction in congestion in urban areas.**
- **Individual's talent** might be leveraged on a Pan India basis.

- It will further **push India in ease of doing business.**

#### Challenges

- **Internet connectivity** in smaller towns and villages.
- Telecom sector is **over burdened by taxes** paid to the government.
- **Special economic zone regulations on OSPs need to be clarified** especially on work from home aspect.
- New labour code is missing the aspect of **remote working.**
- **Balancing of work and family** for employees working from home.

#### Economic Impact created by the current reform

- The regulations are simplified and a **free hand is given to industries** for flourishing on their own.
- It will create a **large number of jobs** especially in small towns and villages.
- The industries will become **competitive.**

#### Way Forward

- The **tier-2 and tier -3 cities need connectivity** and bandwidth for employees to work from home.
- The **licensing of E and B bands** needs to be done which provides virtual type of optical fibre.
- The **equality of services** needs to be given to the consumers.

#### Conclusion

- It is a liberation and an exponential reform aimed at providing **impetus to the Industries and positioning India as one of the most competitive** IT jurisdictions in the world and India may witness a uniform growth ahead.

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